Department of Defense
Fiscal Year (FY) 2021 Budget Estimates

February 2020

Navy

Justification Book Volume 2 of 3

Aircraft Procurement, Navy

Budget Activity 05

The estimated cost of this report for the Department of the Navy (DON) is $152,757.

The estimated total cost for supporting the DON budget justification material is approximately $2,970,459 for the 2020 fiscal year. This includes $82,977 in supplies and $2,887,482 in labor.

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Aircraft Procurement, Navy

For construction, procurement, production, modification, and modernization of aircraft, equipment, including ordnance, spare parts, and accessories therefore; specialized equipment; expansion of public and private plants, including the land necessary therefore, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, $17,160,619,000, to remain available for obligation until September 30, 2023.

FY 2021 Overseas Contingency Operations funding can be separated into the following categories:

- OCO for Direct War Costs ($33,241,000): Direct War costs are those combat or direct combat support costs that will not continue to be expended once combat operations end at major contingency locations.

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Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation	FY 2019 (Base + OCO)	FY 2020 Base Enacted	FY 2020 Emergency	FY 2020 OCO Enacted
Aircraft Procurement, Navy	20,264,005	19,605,513		95,153
Total Department of the Navy	20,264,005	19,605,513		95,153

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation	FY 2020 Total Enacted (Base+Emerg+ OCO)	FY 2021 Base	FY 2021 OCO for Base Requirements	FY 2021 OCO for Direct War and Enduring Costs
Aircraft Procurement, Navy	19,700,666	17,127,378		33,241
Total Department of the Navy	19,700,666	17,127,378		33,241

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation	FY 2021 Total OCO	FY 2021 Total (Base + OCO)
Aircraft Procurement, Navy	33,241	17,160,619
Total Department of the Navy	33,241	17,160,619

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2019 (Base + OCO)	FY 2020 Base Enacted	FY 2020 Emergency	FY 2020 OCO Enacted
01. Combat Aircraft	13,245,998	11,704,149		
03. Trainer Aircraft		247,265		
04. Other Aircraft	1,640,192	1,535,519		61,029
05. Modification of Aircraft	3,166,154	3,262,529		34,124
06. Aircraft Spares and Repair Parts	1,678,794	2,168,602		
07. Aircraft Support Equip & Facilities	532,867	687,449		
Total Aircraft Procurement, Navy	20,264,005	19,605,513		95,153

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2020 Total Enacted (Base+Emerg+ OCO)	FY 2021 Base	FY 2021 OCO for Base Requirements	FY 2021 OCO for Direct War and Enduring Costs
01. Combat Aircraft	11,704,149	8,511,268		
03. Trainer Aircraft	247,265	269,867		
04. Other Aircraft	1,596,548	1,280,112		7,921
05. Modification of Aircraft	3,296,653	4,029,300		25,320
06. Aircraft Spares and Repair Parts	2,168,602	2,198,460		
07. Aircraft Support Equip & Facilities	687,449	838,371		
Total Aircraft Procurement, Navy	19,700,666	17,127,378		33,241

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: Aircraft Procurement, Navy

Budget Activity	FY 2021 Total OCO	FY 2021 Total (Base + OCO)
01. Combat Aircraft		8,511,268
03. Trainer Aircraft		269,867
04. Other Aircraft	7,921	1,288,033
05. Modification of Aircraft	25,320	4,054,620
06. Aircraft Spares and Repair Parts		2,198,460
07. Aircraft Support Equip & Facilities		838,371
Total Aircraft Procurement, Navy	33,241	17,160,619

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity	FY 2019 (Base + OCO) Cost	FY 2020 Base Enacted Quantity	FY 2020 Base Enacted Cost	FY 2020 Emergency Quantity	FY 2020 Emergency Cost	FY 2020 OCO Enacted Quantity	FY 2020 OCO Enacted Cost	Sec
	Budget Activity 01: Combat Aircraft										
	Combat Aircraft										
1	F/A-18E/F (Fighter) Hornet	A	24	(1,922,275)	24	(1,762,775)					U
	Less: Advance Procurement (PY)			(-52,971)		(-53,977)					U
				1,869,304		1,708,798					
2	F/A-18E/F (Fighter) Hornet										
	Advance Procurement (CY)			53,977		53,154					U
	C (FY 2019 for FY 2020) (M)			(53,977)							
	C (FY 2020 for FY 2021) (M)					(53,154)					
3	Joint Strike Fighter CV	A	15	(2,254,122)	20	(2,321,012)					U
	Less: Advance Procurement (PY)			(-196,411)		(-206,711)					U
				2,057,711		2,114,301					
4	Joint Strike Fighter CV										
	Advance Procurement (CY)			140,010		339,053					U
	C (FY 2019 for FY 2020) (M)			(140,010)							
	C (FY 2020 for FY 2021) (M)					(280,530)					
	C (FY 2020 for FY 2022) (M)					(30,834)					
	C (FY 2020 for FY 2023) (M)					(27,689)					
	C (FY 2021 for FY 2022) (M)										
	C (FY 2021 for FY 2023) (M)										

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+ OCO) Quantity	FY 2020 Total Enacted (Base+Emerg+ OCO) Cost	FY 2021 Base Quantity	FY 2021 Base Cost	FY 2021 OCO for Base Requirements Quantity	FY 2021 OCO for Base Requirements Cost	FY 2021 OCO for Direct War and Enduring Costs Quantity	FY 2021 OCO for Direct War and Enduring Costs Cost	Sec
	Budget Activity 01: Combat Aircraft										
	Combat Aircraft										
1	F/A-18E/F (Fighter) Hornet	A	24	(1,762,775)	24	(1,814,300)					U
	Less: Advance Procurement (PY)			(-53,977)		(-53,154)					U
				1,708,798		1,761,146					
2	F/A-18E/F (Fighter) Hornet										
	Advance Procurement (CY)			53,154							U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(53,154)							
3	Joint Strike Fighter CV	A	20	(2,321,012)	21	(2,462,310)					U
	Less: Advance Procurement (PY)			(-206,711)		(-280,530)					U
				2,114,301		2,181,780					
4	Joint Strike Fighter CV										
	Advance Procurement (CY)			339,053		330,386					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(280,530)							
	C (FY 2020 for FY 2022) (M)			(30,834)							
	C (FY 2020 for FY 2023) (M)			(27,689)							
	C (FY 2021 for FY 2022) (M)					(253,609)					
	C (FY 2021 for FY 2023) (M)					(76,777)					

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO Quantity	FY 2021 Total OCO Cost	FY 2021 Total (Base + OCO) Quantity	FY 2021 Total (Base + OCO) Cost	Sec
	Budget Activity 01: Combat Aircraft						
	Combat Aircraft						
1	F/A-18E/F (Fighter) Hornet	A			24	(1,814,300)	U
	Less: Advance Procurement (PY)					(-53,154)	U
				----------		----------	
						1,761,146	
2	F/A-18E/F (Fighter) Hornet						
	Advance Procurement (CY)						U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
3	Joint Strike Fighter CV	A			21	(2,462,310)	U
	Less: Advance Procurement (PY)					(-280,530)	U
				----------		----------	
						2,181,780	
4	Joint Strike Fighter CV						
	Advance Procurement (CY)					330,386	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2020 for FY 2022) (M)						
	C (FY 2020 for FY 2023) (M)						
	C (FY 2021 for FY 2022) (M)					(253,609)	
	C (FY 2021 for FY 2023) (M)					(76,777)	

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity	FY 2019 (Base + OCO) Cost	FY 2020 Base Enacted Quantity	FY 2020 Base Enacted Cost	FY 2020 Emergency Quantity	FY 2020 Emergency Cost	FY 2020 OCO Enacted Quantity	FY 2020 OCO Enacted Cost	Sec
5	JSF STOVL		22	(2,943,711)	16	(2,217,079)					U
	Less: Advance Procurement (PY)			(-322,264)		(-319,678)					U
				2,621,447		1,897,401					
6	JSF STOVL										
	Advance Procurement (CY)			228,492		291,804					U
	C (FY 2019 for FY 2020) (M)			(228,492)							
	C (FY 2020 for FY 2021) (M)					(249,554)					
	C (FY 2020 for FY 2022) (M)					(21,125)					
	C (FY 2020 for FY 2023) (M)					(21,125)					
	C (FY 2021 for FY 2022) (M)										
	C (FY 2021 for FY 2023) (M)										
7	CH-53K (Heavy Lift)	A	7	(1,134,645)	6	(1,008,671)					U
	Less: Advance Procurement (PY)			(-127,046)		(-161,079)					U
				1,007,599		847,592					
8	CH-53K (Heavy Lift)										
	Advance Procurement (CY)			161,079		215,014					U
	C (FY 2019 for FY 2020) (M)			(161,079)							
	C (FY 2020 for FY 2021) (M)					(215,014)					
	C (FY 2021 for FY 2022) (M)										
9	V-22 (Medium Lift)		13	(1,157,717)	14	(1,266,314)					U
	Less: Advance Procurement (PY)			(-23,380)		(-28,755)					U
				1,134,337		1,237,559					
10	V-22 (Medium Lift)										
	Advance Procurement (CY)			28,755		26,083					U
	C (FY 2019 for FY 2020) (M)			(28,755)							
	C (FY 2020 for FY 2021) (M)					(26,083)					
	C (FY 2021 for FY 2022) (M)										

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+ OCO) Quantity	FY 2020 Total Enacted (Base+Emerg+ OCO) Cost	FY 2021 Base Quantity	FY 2021 Base Cost	FY 2021 OCO for Base Requirements Quantity	FY 2021 OCO for Base Requirements Cost	FY 2021 OCO for Direct War and Enduring Costs Quantity	FY 2021 OCO for Direct War and Enduring Costs Cost	Sec
5	JSF STOVL		16	(2,217,079)	10	(1,358,947)					U
	Less: Advance Procurement (PY)			(-319,678)		(-249,554)					U
				1,897,401		1,109,393					
6	JSF STOVL										
	Advance Procurement (CY)			291,804		303,035					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(249,554)							
	C (FY 2020 for FY 2022) (M)			(21,125)							
	C (FY 2020 for FY 2023) (M)			(21,125)							
	C (FY 2021 for FY 2022) (M)					(239,660)					
	C (FY 2021 for FY 2023) (M)					(63,375)					
7	CH-53K (Heavy Lift)	A	6	(1,008,671)	7	(1,028,338)					U
	Less: Advance Procurement (PY)			(-161,079)		(-215,014)					U
				847,592		813,324					
8	CH-53K (Heavy Lift)										
	Advance Procurement (CY)			215,014		201,188					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(215,014)							
	C (FY 2021 for FY 2022) (M)					(201,188)					
9	V-22 (Medium Lift)		14	(1,266,314)	9	(960,876)					U
	Less: Advance Procurement (PY)			(-28,755)		(-26,083)					U
				1,237,559		934,793					
10	V-22 (Medium Lift)										
	Advance Procurement (CY)			26,083		39,547					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(26,083)							
	C (FY 2021 for FY 2022) (M)					(39,547)					

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO Quantity	FY 2021 Total OCO Cost	FY 2021 Total (Base + OCO) Quantity	FY 2021 Total (Base + OCO) Cost	Sec
5	JSF STOVL				10	(1,358,947)	U
	Less: Advance Procurement (PY)					(-249,554)	U
				----------		----------	
						1,109,393	
6	JSF STOVL						
	Advance Procurement (CY)					303,035	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2020 for FY 2022) (M)						
	C (FY 2020 for FY 2023) (M)						
	C (FY 2021 for FY 2022) (M)					(239,660)	
	C (FY 2021 for FY 2023) (M)					(63,375)	
7	CH-53K (Heavy Lift)	A			7	(1,028,338)	U
	Less: Advance Procurement (PY)					(-215,014)	U
				----------		----------	
						813,324	
8	CH-53K (Heavy Lift)						
	Advance Procurement (CY)					201,188	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2021 for FY 2022) (M)					(201,188)	
9	V-22 (Medium Lift)				9	(960,876)	U
	Less: Advance Procurement (PY)					(-26,083)	U
				----------		----------	
						934,793	
10	V-22 (Medium Lift)						
	Advance Procurement (CY)					39,547	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2021 for FY 2022) (M)					(39,547)	

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity	FY 2019 (Base + OCO) Cost	FY 2020 Base Enacted Quantity	FY 2020 Base Enacted Cost	FY 2020 Emergency Quantity	FY 2020 Emergency Cost	FY 2020 OCO Enacted Quantity	FY 2020 OCO Enacted Cost	Sec
11	H-1 Upgrades (UH-1Y/AH-1Z)	A	25	(782,437)		(43,982)					U
	Less: Advance Procurement (PY)			(-42,082)							U
				740,355		43,982					
12	MH-60R (MYP)	A				894					U
13	P-8A Poseidon	A	10	(1,865,465)	9	(1,848,073)					U
	Less: Advance Procurement (PY)			(-146,612)		(-180,000)					U
				1,718,853		1,668,073					
14	P-8A Poseidon										
	Advance Procurement (CY)			180,000							U
	C (FY 2019 for FY 2020) (M)			(180,000)							
15	E-2D Adv Hawkeye	A	6	(1,143,116)	6	(1,201,365)					U
	Less: Advance Procurement (PY)			(-99,771)		(-131,128)					U
				1,043,345		1,070,237					
16	E-2D Adv Hawkeye										
	Advance Procurement (CY)			260,734		190,204					U
	C (FY 2019 for FY 2020) (M)			(131,128)							
	C (FY 2019 for FY 2021) (M)			(43,202)							
	C (FY 2019 for FY 2022) (M)			(43,202)							
	C (FY 2019 for FY 2023) (M)			(43,202)							
	C (FY 2020 for FY 2021) (M)					(122,290)					
	C (FY 2020 for FY 2022) (M)					(33,957)					
	C (FY 2020 for FY 2023) (M)					(33,957)					
	C (FY 2021 for FY 2022) (M)										
	C (FY 2021 for FY 2023) (M)										
Total Combat Aircraft				13,245,998		11,704,149					

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+ OCO) Quantity	FY 2020 Total Enacted (Base+Emerg+ OCO) Cost	FY 2021 Base Quantity	FY 2021 Base Cost	FY 2021 OCO for Base Requirements Quantity	FY 2021 OCO for Base Requirements Cost	FY 2021 OCO for Direct War and Enduring Costs Quantity	FY 2021 OCO for Direct War and Enduring Costs Cost	Sec
11	H-1 Upgrades (UH-1Y/AH-1Z)	A		(43,982)		(7,267)					U
	Less: Advance Procurement (PY)										U
				---		---		---		---	
				43,982		7,267					
12	MH-60R (MYP)	A		894							U
13	P-8A Poseidon	A	9	(1,848,073)		(80,134)					U
	Less: Advance Procurement (PY)			(-180,000)							U
				---		---		---		---	
				1,668,073		80,134					
14	P-8A Poseidon										
	Advance Procurement (CY)										U
	C (FY 2019 for FY 2020) (M)										
15	E-2D Adv Hawkeye	A	6	(1,201,365)	4	(791,601)					U
	Less: Advance Procurement (PY)			(-131,128)		(-165,492)					U
				---		---		---		---	
				1,070,237		626,109					
16	E-2D Adv Hawkeye										
	Advance Procurement (CY)			190,204		123,166					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2019 for FY 2021) (M)										
	C (FY 2019 for FY 2022) (M)										
	C (FY 2019 for FY 2023) (M)										
	C (FY 2020 for FY 2021) (M)			(122,290)							
	C (FY 2020 for FY 2022) (M)			(33,957)							
	C (FY 2020 for FY 2023) (M)			(33,957)							
	C (FY 2021 for FY 2022) (M)					(117,697)					
	C (FY 2021 for FY 2023) (M)					(5,469)					
				---		---		---		---	
Total Combat Aircraft				11,704,149		8,511,268					

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO Quantity	FY 2021 Total OCO Cost	FY 2021 Total (Base + OCO) Quantity	FY 2021 Total (Base + OCO) Cost	Sec
11	H-1 Upgrades (UH-1Y/AH-1Z)	A				(7,267)	U
	Less: Advance Procurement (PY)						U
				----------		----------	
						7,267	
12	MH-60R (MYP)	A					U
13	P-8A Poseidon	A				(80,134)	U
	Less: Advance Procurement (PY)						U
				----------		----------	
						80,134	
14	P-8A Poseidon						
	Advance Procurement (CY)						U
	C (FY 2019 for FY 2020) (M)						
15	E-2D Adv Hawkeye	A			4	(791,601)	U
	Less: Advance Procurement (PY)					(-165,492)	U
				----------		----------	
						626,109	
16	E-2D Adv Hawkeye						
	Advance Procurement (CY)					123,166	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2019 for FY 2021) (M)						
	C (FY 2019 for FY 2022) (M)						
	C (FY 2019 for FY 2023) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2020 for FY 2022) (M)						
	C (FY 2020 for FY 2023) (M)						
	C (FY 2021 for FY 2022) (M)					(117,697)	
	C (FY 2021 for FY 2023) (M)					(5,469)	
				----------		----------	
Total Combat Aircraft						8,511,268	

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity	FY 2019 (Base + OCO) Cost	FY 2020 Base Enacted Quantity	FY 2020 Base Enacted Cost	FY 2020 Emergency Quantity	FY 2020 Emergency Cost	FY 2020 OCO Enacted Quantity	FY 2020 OCO Enacted Cost	Sec
	Budget Activity 03: Trainer Aircraft										
	Trainer Aircraft										
17	Advanced Helicopter Training System	A			32	247,265					U
	Total Trainer Aircraft					247,265					
	Budget Activity 04: Other Aircraft										
	Other Aircraft										
18	KC-130J	A	2	(175,930)	3	(270,853)					U
	Less: Advance Procurement (PY)			(-25,497)		(-30,013)					U
				150,433		240,840					
19	KC-130J										
	Advance Procurement (CY)			102,013		66,061					U
	C (FY 2019 for FY 2020) (M)			(30,013)							
	C (FY 2019 for FY 2021) (M)			(20,000)							
	C (FY 2019 for FY 2022) (M)			(20,000)							
	C (FY 2019 for FY 2023) (M)			(32,000)							
	C (FY 2020 for FY 2021) (M)					(66,061)					
	C (FY 2021 for FY 2022) (M)										
20	F-5	A			22	39,676					U

Department of the Navy
FY 2021President's Budget
Exhibit P-1 FY 2021 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+ OCO) Quantity	FY 2020 Total Enacted (Base+Emerg+ OCO) Cost	FY 2021 Base Quantity	FY 2021 Base Cost	FY 2021 OCO for Base Requirements Quantity	FY 2021 OCO for Base Requirements Cost	FY 2021 OCO for Direct War and Enduring Costs Quantity	FY 2021 OCO for Direct War and Enduring Costs Cost	Sec
	Budget Activity 03: Trainer Aircraft										
	Trainer Aircraft										
17	Advanced Helicopter Training System	A	32	247,265	36	269,867					U
	Total Trainer Aircraft			247,265		269,867					
	Budget Activity 04: Other Aircraft										
	Other Aircraft										
18	KC-130J	A	3	(270,853)	5	(467,045)					U
	Less: Advance Procurement (PY)			(-30,013)		(-86,061)					U
				240,840		380,984					
19	KC-130J										
	Advance Procurement (CY)			66,061		67,022					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2019 for FY 2021) (M)										
	C (FY 2019 for FY 2022) (M)										
	C (FY 2019 for FY 2023) (M)										
	C (FY 2020 for FY 2021) (M)			(66,061)							
	C (FY 2021 for FY 2022) (M)					(67,022)					
20	F-5	A	22	39,676							U

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Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO Quantity	FY 2021 Total OCO Cost	FY 2021 Total (Base + OCO) Quantity	FY 2021 Total (Base + OCO) Cost	Sec
	Budget Activity 03: Trainer Aircraft						
	Trainer Aircraft						
17	Advanced Helicopter Training System	A			36	269,867	U
	Total Trainer Aircraft					269,867	
	Budget Activity 04: Other Aircraft						
	Other Aircraft						
18	KC-130J	A			5	(467,045)	U
	Less: Advance Procurement (PY)					(-86,061)	U
						380,984	
19	KC-130J						
	Advance Procurement (CY)					67,022	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2019 for FY 2021) (M)						
	C (FY 2019 for FY 2022) (M)						
	C (FY 2019 for FY 2023) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2021 for FY 2022) (M)					(67,022)	
20	F-5	A					U

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Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity	FY 2019 (Base + OCO) Cost	FY 2020 Base Enacted Quantity	FY 2020 Base Enacted Cost	FY 2020 Emergency Quantity	FY 2020 Emergency Cost	FY 2020 OCO Enacted Quantity	FY 2020 OCO Enacted Cost	Sec
21	MQ-4 Triton	A	3	(596,283)	2	(478,288)					U
	Less: Advance Procurement (PY)			(-57,266)		(-42,555)					U
				539,017		435,733					
22	MQ-4 Triton										
	Advance Procurement (CY)			58,522		20,139					U
	C (FY 2019 for FY 2020) (M)			(42,555)							
	C (FY 2019 for FY 2021) (M)			(15,967)							
	C (FY 2020 for FY 2021) (M)					(20,139)					
23	MQ-8 UAV	B		89,061		44,957					U
24	STUASL0 UAV			52,131		32,819				7,921	U
25	MQ-9A Reaper	A							2	53,108	U
26	VH-92A Executive Helo		6	649,015	6	640,994					U
27	Other Support Aircraft				1	14,300					U
Total Other Aircraft				1,640,192		1,535,519				61,029	

Budget Activity 05: Modification of Aircraft

Modification of Aircraft

28	F-18 A-D Unique	A									U
29	F-18E/F and EA-18G Modernization and Sustainm	A									U
30	AEA Systems			40,182		33,843					U
31	AV-8 Series	A		54,726		38,231					U
32	Infrared Search and Track (IRST)	A									U
33	Adversary	A		14,606		3,415					U

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Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+ OCO) Quantity	FY 2020 Total Enacted (Base+Emerg+ OCO) Cost	FY 2021 Base Quantity	FY 2021 Base Cost	FY 2021 OCO for Base Requirements Quantity	FY 2021 OCO for Base Requirements Cost	FY 2021 OCO for Direct War and Enduring Costs Quantity	FY 2021 OCO for Direct War and Enduring Costs Cost	Sec
21	MQ-4 Triton	A	2	(478,288)		(186,676)					U
	Less: Advance Procurement (PY)			(-42,555)		(-36,106)					U
				435,733		150,570					
22	MQ-4 Triton										
	Advance Procurement (CY)			20,139							U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2019 for FY 2021) (M)										
	C (FY 2020 for FY 2021) (M)			(20,139)							
23	MQ-8 UAV	B		44,957		40,375					U
24	STUASL0 UAV			40,740		30,930				7,921	U
25	MQ-9A Reaper	A	2	53,108							U
26	VH-92A Executive Helo		6	640,994	5	610,231					U
27	Other Support Aircraft		1	14,300							U
Total Other Aircraft				1,596,548		1,280,112				7,921	

Budget Activity 05: Modification of Aircraft

Modification of Aircraft

28	F-18 A-D Unique	A				208,261					U
29	F-18E/F and EA-18G Modernization and Sustainm	A				468,954					U
30	AEA Systems			33,843		21,061					U
31	AV-8 Series	A		38,231		34,082					U
32	Infrared Search and Track (IRST)	A				158,055					U
33	Adversary	A		3,415		42,946					U

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Appropriation: 1506N Aircraft Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO Quantity	FY 2021 Total OCO Cost	FY 2021 Total (Base + OCO) Quantity	FY 2021 Total (Base + OCO) Cost	Sec
21	MQ-4 Triton	A				(186,676)	U
	Less: Advance Procurement (PY)					(-36,106)	U
				----------		----------	
						150,570	
22	MQ-4 Triton						
	Advance Procurement (CY)						U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2019 for FY 2021) (M)						
	C (FY 2020 for FY 2021) (M)						
23	MQ-8 UAV	B				40,375	U
24	STUASL0 UAV			7,921		38,851	U
25	MQ-9A Reaper	A					U
26	VH-92A Executive Helo				5	610,231	U
27	Other Support Aircraft						U
				----------		----------	
Total Other Aircraft				7,921		1,288,033	

Budget Activity 05: Modification of Aircraft

Modification of Aircraft

28	F-18 A-D Unique	A				208,261	U
29	F-18E/F and EA-18G Modernization and Sustainm	A				468,954	U
30	AEA Systems					21,061	U
31	AV-8 Series	A				34,082	U
32	Infrared Search and Track (IRST)	A				158,055	U
33	Adversary	A				42,946	U

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Appropriation: 1506N Aircraft Procurement, Navy

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34	F-18 Series	A		1,157,961		1,129,318					U
35	H-53 Series	A		66,070		68,385					U
36	MH-60 Series	A		128,523		141,612					U
37	H-1 Series	A		86,995		114,059					U
38	EP-3 Series	A		9,013		8,655				5,488	U
39	P-3 Series	A		803							U
40	E-2 Series	A		82,902		117,059					U
41	Trainer A/C Series	A		11,597		5,616					U
42	C-2A	A		8,261		13,747					U
43	C-130 Series	A		70,463		91,093					U
44	FEWSG	A		597		509					U
45	Cargo/Transport A/C Series	A		8,932		8,767					U
46	E-6 Series	A		164,511		153,573					U
47	Executive Helicopters Series	A		19,566		8,933					U
48	Special Project Aircraft	A		9,785						3,498	U
49	T-45 Series	A		193,334		174,526					U
50	Power Plant Changes	A		25,043		16,136					U
51	JPATS Series	A		26,470		21,824					U
52	Aviation Life Support Mods	A		15,864		39,762					U
53	Common ECM Equipment	A		197,049		155,410				3,406	U

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34	F-18 Series	A		1,129,318		379,351					U
35	H-53 Series	A		68,385		74,771					U
36	MH-60 Series	A		141,612		131,584					U
37	H-1 Series	A		114,059		185,140					U
38	EP-3 Series	A		14,143		26,602					U
39	P-3 Series	A									U
40	E-2 Series	A		117,059		175,540					U
41	Trainer A/C Series	A		5,616		7,085					U
42	C-2A	A		13,747		9,525					U
43	C-130 Series	A		91,093		141,705					U
44	FEWSG	A		509		684					U
45	Cargo/Transport A/C Series	A		8,767		8,911					U
46	E-6 Series	A		153,573		197,206					U
47	Executive Helicopters Series	A		8,933		29,086					U
48	Special Project Aircraft	A		3,498							U
49	T-45 Series	A		174,526		155,745					U
50	Power Plant Changes	A		16,136		24,633					U
51	JPATS Series	A		21,824		22,682					U
52	Aviation Life Support Mods	A		39,762		40,401					U
53	Common ECM Equipment	A		158,816		138,480				3,474	U

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34	F-18 Series	A				379,351	U
35	H-53 Series	A				74,771	U
36	MH-60 Series	A				131,584	U
37	H-1 Series	A				185,140	U
38	EP-3 Series	A				26,602	U
39	P-3 Series	A					U
40	E-2 Series	A				175,540	U
41	Trainer A/C Series	A				7,085	U
42	C-2A	A				9,525	U
43	C-130 Series	A				141,705	U
44	FEWSG	A				684	U
45	Cargo/Transport A/C Series	A				8,911	U
46	E-6 Series	A				197,206	U
47	Executive Helicopters Series	A				29,086	U
48	Special Project Aircraft	A					U
49	T-45 Series	A				155,745	U
50	Power Plant Changes	A				24,633	U
51	JPATS Series	A				22,682	U
52	Aviation Life Support Mods	A				40,401	U
53	Common ECM Equipment	A		3,474		141,954	U

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54	Common Avionics Changes	A		117,487		82,978					U
55	Common Defensive Weapon System	A		5,200		2,100				3,274	U
56	ID Systems	A		39,133		41,437					U
57	P-8 Series			67,352		74,610					U
58	MAGTF EW for Aviation	A		11,590		26,536					U
59	MQ-8 Series			37,907		31,686					U
60	V-22 (Tilt/Rotor ACFT) Osprey	B		197,838		325,367					U
61	Next Generation Jammer (NGJ)	A									U
62	F-35 STOVL Series	A		41,218		65,585					U
63	F-35 CV Series	A		25,483		15,358					U
64	QRC	A		103,909		163,373				18,458	U
65	MQ-4 Series	A		53,278		27,994					U
66	RQ-21 Series	A		21,019		61,032					U
67	DON Other 3 (TTNT)	A		1,337							U
68	DON Other 4 (TTNT)	A		37,150							U
69	DON Other 6 (TTNT)	A		13,000							U
Total Modification of Aircraft				3,166,154		3,262,529				34,124	

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54	Common Avionics Changes	A		82,978		143,322					U
55	Common Defensive Weapon System	A		5,374		2,142				3,339	U
56	ID Systems	A		41,437		35,999					U
57	P-8 Series			74,610		180,530					U
58	MAGTF EW for Aviation	A		26,536		27,794					U
59	MQ-8 Series			31,686		28,774					U
60	V-22 (Tilt/Rotor ACFT) Osprey	B		325,367		334,405					U
61	Next Generation Jammer (NGJ)	A				176,638					U
62	F-35 STOVL Series	A		65,585		153,588					U
63	F-35 CV Series	A		15,358		105,452					U
64	QRC	A		181,831		126,618				18,507	U
65	MQ-4 Series	A		27,994		12,998					U
66	RQ-21 Series	A		61,032		18,550					U
67	DON Other 3 (TTNT)	A									U
68	DON Other 4 (TTNT)	A									U
69	DON Other 6 (TTNT)	A									U
Total Modification of Aircraft				3,296,653		4,029,300				25,320	

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54	Common Avionics Changes	A				143,322	U
55	Common Defensive Weapon System	A		3,339		5,481	U
56	ID Systems	A				35,999	U
57	P-8 Series					180,530	U
58	MAGTF EW for Aviation	A				27,794	U
59	MQ-8 Series					28,774	U
60	V-22 (Tilt/Rotor ACFT) Osprey	B				334,405	U
61	Next Generation Jammer (NGJ)	A				176,638	U
62	F-35 STOVL Series	A				153,588	U
63	F-35 CV Series	A				105,452	U
64	QRC	A		18,507		145,125	U
65	MQ-4 Series	A				12,998	U
66	RQ-21 Series	A				18,550	U
67	DON Other 3 (TTNT)	A					U
68	DON Other 4 (TTNT)	A					U
69	DON Other 6 (TTNT)	A					U
Total Modification of Aircraft				25,320		4,054,620	

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Budget Activity 06: Aircraft Spares and Repair Parts											
	Aircraft Spares and Repair Parts										
70	Spares and Repair Parts	A		1,678,794		2,168,602					U
	Total Aircraft Spares and Repair Parts			1,678,794		2,168,602					
Budget Activity 07: Aircraft Support Equip & Facilities											
	Aircraft Support Equip & Facilities										
71	Common Ground Equipment	A		413,150		448,288					U
72	Aircraft Industrial Facilities	A		24,496		71,335					U
73	War Consumables	A		42,035		32,086					U
74	Other Production Charges	A		1,444							U
75	Special Support Equipment	A		49,489		135,740					U
76	First Destination Transportation	A		1,951							U
77	Cancelled Account Adjustments	A		302							U
	Total Aircraft Support Equip & Facilities			532,867		687,449					
	Total Aircraft Procurement, Navy			20,264,005		19,605,513				95,153	

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Budget Activity 06: Aircraft Spares and Repair Parts											
	Aircraft Spares and Repair Parts										
70	Spares and Repair Parts	A		2,168,602		2,198,460					U
Total Aircraft Spares and Repair Parts				2,168,602		2,198,460					
Budget Activity 07: Aircraft Support Equip & Facilities											
	Aircraft Support Equip & Facilities										
71	Common Ground Equipment	A		448,288		543,559					U
72	Aircraft Industrial Facilities	A		71,335		75,685					U
73	War Consumables	A		32,086		40,633					U
74	Other Production Charges	A				21,194					U
75	Special Support Equipment	A		135,740		155,179					U
76	First Destination Transportation	A				2,121					U
77	Cancelled Account Adjustments	A									U
Total Aircraft Support Equip & Facilities				687,449		838,371					
Total Aircraft Procurement, Navy				19,700,666		17,127,378				33,241	

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Budget Activity 06: Aircraft Spares and Repair Parts							
Aircraft Spares and Repair Parts							
70	Spares and Repair Parts	A				2,198,460	U
Total Aircraft Spares and Repair Parts						2,198,460	
Budget Activity 07: Aircraft Support Equip & Facilities							
Aircraft Support Equip & Facilities							
71	Common Ground Equipment	A				543,559	U
72	Aircraft Industrial Facilities	A				75,685	U
73	War Consumables	A				40,633	U
74	Other Production Charges	A				21,194	U
75	Special Support Equipment	A				155,179	U
76	First Destination Transportation	A				2,121	U
77	Cancelled Account Adjustments	A					U
Total Aircraft Support Equip & Facilities						838,371	
Total Aircraft Procurement, Navy				33,241		17,160,619	

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33	05	01	0522	Adversary	Volume 2 - 101
34	05	01	0525	F-18 Series	Volume 2 - 119
35	05	01	0528	H-53 Series	Volume 2 - 257
36	05	01	0530	MH-60 Series	Volume 2 - 303
37	05	01	0532	H-1 Series	Volume 2 - 337
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58	05	01	0587	MAGTF EW for Aviation	Volume 2 - 833
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60	05	01	0590	V-22 (Tilt/Rotor Acft) Osprey	Volume 2 - 861
61	05	01	0591	Next Generation Jammer (NGJ)	Volume 2 - 911

Appropriation 1506N: Aircraft Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
62	05	01	0592	F-35 STOVL Series	Volume 2 - 917
63	05	01	0593	F-35 CV Series	Volume 2 - 951
64	05	01	0595	QRC	Volume 2 - 979
65	05	01	0596	MQ-4 Series	Volume 2 - 981
66	05	01	0598	RQ-21 Series	Volume 2 - 1003

Appropriation 1506N: Aircraft Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
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Line #	BA	BSA	Line Item Number	Line Item Title	Page
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72	07	01	0715	Aircraft Industrial Facilities	Volume 3 - 73

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73	07	01	0720	War Consumables	Volume 3 - 81
74	07	01	0725	Other Production Charges	Volume 3 - 91
75	07	01	0735	Special Support Equipment	Volume 3 - 99
76	07	01	0740	First Destination Transportation	Volume 3 - 101
77	07	01	0790	Cancelled Account Adjustments	Volume 3 - 103

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V-22 (Medium Lift), Advance Procurement	0164	10	01	01	Volume 1 - 79
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VH-92A Executive Helo	0455	26	04	01	Volume 1 - 211
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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	208.261	0.000	208.261	270.670	258.088	183.565	188.986	568.916	1,678.486
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	208.261	0.000	208.261	270.670	258.088	183.565	188.986	568.916	1,678.486
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**208.261**	**0.000**	**208.261**	**270.670**	**258.088**	**183.565**	**188.986**	**568.916**	**1,678.486**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LI 0502 was established in FY2021 in order to provide greater transparency of F-18A-D modification efforts. OSIPs 11-99, 21-00, & 10-21 can be found in LI-0525 for FY20 and prior; while FY21-out now reside in LI-0502.

This line item funds modifications to the F/A-18 A-D aircraft.

The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, the single seat aircraft include a night attack capability. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since fighter capabilities are available in either mission, a robust self-defense capability is retained.
NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog. Funds in this budget request are required for on-going modifications to address OOR aircraft.

Current aircraft inventory and Flight hours flown as of 19 June 2019:
F/A-18A (Lots 7 - 9) - 50 (22 Active, 28 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 11 hours (current); 2,011 hours (extended)
F/A-18B (Lots 1 - 6) - 0 (0 Active, 0 Reserve): service life 6,000 hours (current); average service life remaining 474 (current)
F/A-18B (Lots 7 - 9) - 3 (3 Active, 0 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 883 (current); 2,883 (extended)
F/A-18C - 279 (230 Active, 49 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 510 (current); 2,510 (extended)
F/A-18D - 112 (106 Active, 6 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 588 (current); 2,588 (extended)

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+ (SAFETY / LIFE EXTENSION)				- / 0.000	- / 0.000	- / 0.000	- / 86.436	- / 0.000	- / 86.436
P-3a	2 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00) (AVIONICS UPGRADE)				- / 0.000	- / 0.000	- / 0.000	- / 69.213	- / 0.000	- / 69.213
P-3a	3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21) (Readiness)				- / 0.000	- / 0.000	- / 0.000	- / 52.612	- / 0.000	- / 52.612
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 208.261**	**- / 0.000**	**- / 208.261**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+ (SAFETY / LIFE EXTENSION)				- / 95.461	- / 115.593	- / 111.147	- / 113.073	- / 209.006	- / 730.716
P-3a	2 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00) (AVIONICS UPGRADE)				- / 109.948	- / 77.258	- / 3.986	- / 5.413	- / 34.984	- / 300.802
P-3a	3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21) (Readiness)				- / 65.261	- / 65.237	- / 68.432	- / 70.500	- / 324.926	- / 646.968
P-40	**Total Gross/Weapon System Cost**				**- / 270.670**	**- / 258.088**	**- / 183.565**	**- / 188.986**	**- / 568.916**	**- / 1,678.486**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The overall goal of the modifications budgeted in FY 2021 is to implement commonality/capability and structural safety and reliability improvements. OSIPs 11-99, 21-00, & 10-21 can be found in LI-0525 for FY20 and prior; while FY21-out now reside in LI-0502.

OSIP 11-99 F/A-18 Aircraft Structural Life Management Plan (SLMP) incorporates structural enhancements and changes required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2030.

OSIP 21-00 USMC F/A-18 Upgrade supports United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics capabilities, including both hardware and software. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft Integration Plan.

OSIP 10-21 F/A-18 Air Vehicle A-D Readiness supports the correction of readiness degraders impacting F/A-18 A/B/C/D aircraft cost per flight hour; Reliability, Maintainability, and Availability (RM&A); obsolescence; and reduction of life-cycle costs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	86.436	0.000	86.436	95.461	115.593	111.147	113.073	209.006	730.716
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	86.436	0.000	86.436	95.461	115.593	111.147	113.073	209.006	730.716
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**86.436**	**0.000**	**86.436**	**95.461**	**115.593**	**111.147**	**113.073**	**209.006**	**730.716**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Incorporation of structural enhancements and changes is required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2030. Structural enhancements and changes include resolution of discrepancies identified as a result of structural test-16 and in-service experience. These Service Life Extension Program (SLEP) enhancements and changes to extend the life from 6,000 hours to 10,000 hours include: modifications to allow the entire airframe to extend flight hours; modifications to ensure structures currently limited to 78% of design life can achieve 100% life; modifications to ensure landing gear, catapult and attachment components can extend total landings. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. Center Barrel Replacement Plus (CBR+) is applicable to F/A-18A/B/C/Ds. Engineering Change Proposal (ECP) 904 Part 1 is the basic center barrel kit. ECP 904 Part 2 is required to extend Wing Root Fatigue Life Expended (WRFLE) and is not required for all aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Currently all Lot VI through XVII aircraft have 78% life limits without the structural life management plan modifications to bring them to 100% airframe life. The Fleet Readiness Center North Island developed ECP 904NI (CBR+) which was approved on 27 April 2000. Validation started October 2000 and was completed in August 2001. Verification started August 2001 and was completed June 2002.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY / LIFE EXTENSION	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 904 CBR+ WRFLE SLEP -Day/Night Attack - NonOrganic *Installation 1 of 7*	74 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	74 / 0.000
1.1.2) ECP 1099 AFC-579 NLG Retract Actuator Supports - NonOrganic *Installation 2 of 7*	- / -	- / -	- / -	1 / 0.001	- / -	1 / 0.001	1 / 0.001	1 / 0.001	1 / 0.001	1 / 0.001	- / -	5 / 0.005
1.1.3) ECP 627 - AFC-648 Bulkhead Beaded Panel, Y357.500 - NonOrganic *Installation 3 of 7*	30 / 0.000	- / -	- / -	- / -	- / -	- / -	10 / 0.093	10 / 0.095	- / -	- / -	- / -	50 / 0.188
1.1.4) ECP-0629 AFC-651 FCF 700 Upper Skin - NonOrganic *Installation 4 of 7*	21 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.000
1.1.5) ECP-630 - AFC-652 Crease Longeron Straps (Y453 & Y488) - NonOrganic *Installation 5 of 7*	2 / 0.000	60 / 0.000	60 / 0.000	60 / 4.391	- / -	60 / 4.391	60 / 4.497	58 / 4.416	- / -	- / -	- / -	300 / 13.304
1.1.6) ECP-630R2 - AFC-685 Adapter - Misslie Launcher, Y488 - Y497 - NonOrganic *Installation 5 of 7*	- / -	- / -	60 / 0.000	60 / 5.630	- / -	60 / 5.630	60 / 5.541	60 / 5.856	60 / 5.973	- / -	- / -	300 / 23.000
1.1.7) ECP-630R2 - AFC-686 Longeron Former-Upper Segment Y518 - NonOrganic *Installation 5 of 7*	- / -	- / -	60 / 0.000	60 / 9.500	- / -	60 / 9.500	60 / 9.389	60 / 9.883	60 / 10.080	- / -	- / -	300 / 38.852
1.1.8) ECP-630R2 - AFC-687 Support, Floor-Fuel Bay, Y470.5 - Y488 - NonOrganic *Installation 5 of 7*	- / -	- / -	10 / 0.000	10 / 0.064	- / -	10 / 0.064	10 / 0.065	10 / 0.067	10 / 0.068	8 / 0.056	- / -	58 / 0.320
1.1.9) ECP-630R2 - AFC-688 Upper 701 Skin Former, Fuselage Upper-Center Y534 - NonOrganic *Installation 5 of 7*	- / -	- / -	60 / 0.000	60 / 2.034	- / -	60 / 2.034	60 / 2.050	60 / 2.117	60 / 2.159	- / -	- / -	300 / 8.360
1.1.10) ECP 631 AYC-1725 IW Multiple Locations L&R - NonOrganic *Installation 6 of 7*	- / -	- / -	- / -	5 / 2.852	- / -	5 / 2.852	5 / 2.884	9 / 5.341	10 / 6.540	21 / 13.967	- / -	50 / 31.584
1.1.11) ECP 631C1 - AYC-1744 Spar-Rear, Wing Panel, Inner - NonOrganic *Installation 6 of 7*	- / -	- / -	2 / 0.000	5 / 0.479	- / -	5 / 0.479	5 / 0.488	9 / 0.896	10 / 1.016	19 / 1.969	- / -	50 / 4.848
1.1.12) ECP 631R1 - AYC-1725 Inner Wing Rib #6 - NonOrganic *Installation 6 of 7*	- / -	- / -	2 / 0.000	5 / 0.105	- / -	5 / 0.105	5 / 0.107	9 / 0.197	10 / 0.223	19 / 0.432	- / -	50 / 1.064
1.1.13) ECP 632C1 AYC-1745 Multi Locations, Intermediate 1, 2, Rear Spars - NonOrganic *Installation 6 of 7*	- / -	- / -	2 / 0.000	5 / 2.282	- / -	5 / 2.282	5 / 2.303	9 / 4.274	10 / 4.844	19 / 9.637	- / -	50 / 23.340
1.1.14) ECP-632R1 - AYC-1736/AYC-1736R1 Forward Spar & Missile Rib Support (OC) - NonOrganic	- / -	- / -	2 / 0.000	5 / 2.282	- / -	5 / 2.282	5 / 2.303	9 / 4.274	10 / 4.843	19 / 9.636	- / -	50 / 23.338

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY / LIFE EXTENSION	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 7 of 7												
1.1.15) ECP 633 AFC-650 AF Door 68 Doubler L&R - NonOrganic *Installation 7 of 7*	66 / 0.000	- / -	- / -	75 / 0.937	- / -	75 / 0.937	73 / 0.465	- / -	- / -	- / -	- / -	214 / 1.402
1.1.16) ECP 633C1 - AFC-668 AFT Lower Longeron; Above Door 68 L&R - NonOrganic *Installation 7 of 7*	- / -	60 / 0.000	60 / 0.000	50 / 1.612	- / -	50 / 1.612	60 / 1.948	60 / 2.012	- / -	- / -	- / -	290 / 5.572
2.1.1) Fuel Cell, Nacelle, and CBR+ - Over and Above (RIM start FY08) - Organic(*) (1)	- / -	- / -	- / -	8 / 0.662	- / -	8 / 0.662	6 / 0.675	8 / 0.688	8 / 0.702	- / -	- / -	30 / 2.727
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 32.831*	*- / -*	*- / 32.831*	*- / 32.809*	*- / 40.117*	*- / 36.449*	*- / 35.698*	*- / 0.000*	*- / 177.904*
Support												
3.1) Support Equipment	- / -	- / -	- / -	- / 1.114	- / -	- / 1.114	- / 1.605	- / 2.370	- / 1.558	- / 1.673	- / 8.882	- / 17.202
3.2) ILS	- / -	- / -	- / -	- / 5.962	- / -	- / 5.962	- / 6.728	- / 6.861	- / 6.994	- / 7.137	- / 33.961	- / 67.643
3.3) Other Support	- / -	- / -	- / -	- / 20.106	- / -	- / 20.106	- / 21.416	- / 22.018	- / 21.667	- / 22.050	- / -	- / 107.257
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 27.182*	*- / -*	*- / 27.182*	*- / 29.749*	*- / 31.249*	*- / 30.219*	*- / 30.860*	*- / 42.843*	*- / 192.102*
Installation												
Installation 1 of 7: GRP: CBR ECP 904	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.107	- / 8.087	- / 8.269	- / 8.570	- / 143.738	- / 173.771
Installation 2 of 7: ECP 1099 AFC-579 NLG Retract Actuator Supports	- / -	- / -	- / -	- / 0.137	- / 0.000	- / 0.137	- / 0.140	- / 0.143	- / 0.146	- / 0.149	- / 0.000	- / 0.715
Installation 3 of 7: GRP: ECP-0627 FWD Fuselage & LEX	- / -	- / -	- / -	- / 1.759	- / 0.000	- / 1.759	- / 1.794	- / 1.830	- / 1.866	- / 1.904	- / 0.000	- / 9.153
Installation 4 of 7: GRP: ECP-0629 FWD Center Fuselage	- / -	- / -	- / -	- / 0.076	- / 0.000	- / 0.076	- / 0.077	- / 0.079	- / 0.080	- / 0.082	- / 0.903	- / 1.297
Installation 5 of 7: GRP: ECP-0630 AFT Center Fuselage	- / -	- / -	- / -	- / 20.732	- / 0.000	- / 20.732	- / 18.190	- / 27.174	- / 22.935	- / 23.646	- / 0.589	- / 113.266
Installation 6 of 7: GRP: ECP-0631 Inner Wing	- / -	- / -	- / -	- / 1.149	- / 0.000	- / 1.149	- / 4.245	- / 4.329	- / 7.950	- / 9.210	- / 19.312	- / 46.195
Installation 7 of 7: GRP: ECP-0632 Outer Wing	- / -	- / -	- / -	- / 2.570	- / 0.000	- / 2.570	- / 3.350	- / 2.585	- / 3.233	- / 2.954	- / 1.621	- / 16.313
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 26.423*	*- / -*	*- / 26.423*	*- / 32.903*	*- / 44.227*	*- / 44.479*	*- / 46.515*	*- / 166.163*	*- / 360.710*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**86.436**	**0.000**	**86.436**	**95.461**	**115.593**	**111.147**	**113.073**	**209.006**	**730.716**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 7: GRP: CBR ECP 904

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: CBR ECP 904

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.107	4 / 8.087	4 / 8.269	4 / 8.570	60 / 143.738	74 / 173.771
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.107	4 / 8.087	4 / 8.269	4 / 8.570	60 / 143.738	74 / 173.771

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	60	74
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	60	74

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 7: ECP 1099 AFC-579 NLG Retract Actuator Supports

Manufacturer Information

Manufacturer Name: North Island - ECP 1099 NLG Retract Actuator Supports | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP 1099 AFC-579 NLG Retract Actuator Supports

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.137	0 / 0.000	1 / 0.137	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.137
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.140	- / -	- / -	- / -	0 / 0.000	1 / 0.140
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.143	- / -	- / -	0 / 0.000	1 / 0.143
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.146	- / -	0 / 0.000	1 / 0.146
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.149	0 / 0.000	1 / 0.149
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.137	0 / 0.000	1 / 0.137	1 / 0.140	1 / 0.143	1 / 0.146	1 / 0.149	0 / 0.000	5 / 0.715

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	5
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	5

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 7: GRP: ECP-0627 FWD Fuselage & LEX

Manufacturer Information

Manufacturer Name: Boeing - ECP-0627 FWD Fuselage & LEX | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Jan 2023		
Delivery Dates				Oct 2022	Oct 2023		

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0627 FWD Fuselage & LEX

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	10 / 1.759	0 / 0.000	10 / 1.759	10 / 1.794	10 / 1.830	- / -	- / -	0 / 0.000	30 / 5.383
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.866	- / -	0 / 0.000	10 / 1.866
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.904	0 / 0.000	10 / 1.904
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	10 / 1.759	0 / 0.000	10 / 1.759	10 / 1.794	10 / 1.830	10 / 1.866	10 / 1.904	0 / 0.000	50 / 9.153

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	2	2	3	3	2	2	3	3	2	2	3	3	2	2	3	3	2	2	3	3	-	50
Out	-	-	-	-	-	-	-	-	-	2	2	3	3	2	2	3	3	2	2	3	3	2	2	3	3	2	2	3	3	-	50

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 7: GRP: ECP-0629 FWD Center Fuselage

Manufacturer Information

Manufacturer Name: Boeing -ECP-0629 FWD Center Fuselage | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0629 FWD Center Fuselage

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	2 / 0.076	0 / 0.000	2 / 0.076	2 / 0.077	2 / 0.079	2 / 0.080	2 / 0.082	11 / 0.903	21 / 1.297
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 0.076	0 / 0.000	2 / 0.076	2 / 0.077	2 / 0.079	2 / 0.080	2 / 0.082	11 / 0.903	21 / 1.297

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	11	21
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	11	21

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 7: GRP: ECP-0630 AFT Center Fuselage

Manufacturer Information

Manufacturer Name: Boeing - ECP-0630 AFT Center Fuselage | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0630 AFT Center Fuselage

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	2 / 0.354	0 / 0.000	2 / 0.354	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.354
FY 2019	- / -	- / -	- / -	60 / 9.765	0 / 0.000	60 / 9.765	- / -	- / -	- / -	- / -	0 / 0.000	60 / 9.765
FY 2020	- / -	- / -	- / -	190 / 10.613	0 / 0.000	190 / 10.613	60 / 7.136	- / -	- / -	- / -	0 / 0.000	250 / 17.749
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	190 / 11.054	60 / 15.741	- / -	- / -	0 / 0.000	250 / 26.795
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	190 / 11.433	60 / 11.119	- / -	0 / 0.000	250 / 22.552
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	190 / 11.816	58 / 11.494	0 / 0.000	248 / 23.310
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	190 / 12.152	0 / 0.000	190 / 12.152
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.589	8 / 0.589
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	252 / 20.732	0 / 0.000	252 / 20.732	250 / 18.190	250 / 27.174	250 / 22.935	248 / 23.646	8 / 0.589	1,258 / 113.266

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	63	64	62	63	62	63	62	63	62	63	62	63	62	63	62	63	62	62	62	62	8	1,258
Out	-	-	-	-	-	-	-	-	-	47	63	63	64	62	63	62	63	62	63	62	63	77	63	62	63	62	62	62	62	8	1,258

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 7: GRP: ECP-0631 Inner Wing

Manufacturer Information

Manufacturer Name: Boeing - ECP-0631 Inner Wing | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0631 Inner Wing

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	6 / 1.149	0 / 0.000	6 / 1.149	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.149
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	20 / 4.245	- / -	- / -	- / -	0 / 0.000	20 / 4.245
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 4.329	- / -	- / -	0 / 0.000	20 / 4.329
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 7.950	- / -	0 / 0.000	36 / 7.950
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 9.210	0 / 0.000	40 / 9.210
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	78 / 19.312	78 / 19.312
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 1.149	0 / 0.000	6 / 1.149	20 / 4.245	20 / 4.329	36 / 7.950	40 / 9.210	78 / 19.312	200 / 46.195

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	3	3	-	-	8	4	4	4	8	4	4	4	8	8	8	12	8	12	8	12	78	200
Out	-	-	-	-	-	-	-	-	-	2	2	1	1	8	4	4	4	8	4	4	4	8	8	8	12	8	12	8	12	78	200

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 1 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 7: GRP: ECP-0632 Outer Wing

Manufacturer Information

Manufacturer Name: Boeing -ECP-0632 Outer Wing | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0632 Outer Wing

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	33 / 0.477	0 / 0.000	33 / 0.477	33 / 0.486	- / -	- / -	- / -	0 / 0.000	66 / 0.963
FY 2019	- / -	- / -	- / -	60 / 1.934	0 / 0.000	60 / 1.934	- / -	- / -	- / -	- / -	0 / 0.000	60 / 1.934
FY 2020	- / -	- / -	- / -	2 / 0.159	0 / 0.000	2 / 0.159	60 / 1.972	- / -	- / -	- / -	0 / 0.000	62 / 2.131
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.892	87 / 2.171	- / -	- / -	0 / 0.000	130 / 3.063
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.414	133 / 2.473	- / -	0 / 0.000	138 / 2.887
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.760	60 / 2.093	0 / 0.000	69 / 2.853
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.861	0 / 0.000	10 / 0.861
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 1.621	19 / 1.621
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	95 / 2.570	0 / 0.000	95 / 2.570	136 / 3.350	92 / 2.585	142 / 3.233	70 / 2.954	19 / 1.621	554 / 16.313

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	24	24	23	24	36	33	34	33	24	23	22	23	35	35	36	36	17	18	17	18	19	554
Out	-	-	-	-	-	-	-	-	-	24	24	23	24	36	33	34	33	24	23	22	23	35	35	36	36	17	18	17	18	19	554

Footnotes:

(1) Funding for RIM is budgeted based on known repair requirements that will occur each time an F/A-18 is opened to install the CBR+ structural components. These issues are inherent and expected during a modification of this scope where areas of the aircraft are being disassembled that were never intended to be disassembled when originally manufactured.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 2 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	69.213	0.000	69.213	109.948	77.258	3.986	5.413	34.984	300.802
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	69.213	0.000	69.213	109.948	77.258	3.986	5.413	34.984	300.802
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**69.213**	**0.000**	**69.213**	**109.948**	**77.258**	**3.986**	**5.413**	**34.984**	**300.802**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) upgrades United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics including both hardware and software capabilities. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft Integration Plan. The avionics upgrade includes avionics subsystems already incorporated or being incorporated into USMC F/A-18 aircraft. ECP 1153 incorporates the Navy Aircrew Common Ejection Seat (NACES) for utilization with the Joint Helmet Mounted Cueing System (JHMCS) system on C+ aircraft. ECP 1153 adds the following capabilities to C+ aircraft: MIDS LVT; color displays; JHMCS; ALE-47; Tactical Aircraft Moving Map Capability (TAMMAC); and Advanced Memory Unit (AMU).

This OSIP will implement hardware and software upgrades required to maintain the relevance of and to extend the operational life of the F/A-18 A-D beyond design life. These upgrades include radars, displays, data transfer units, NAVWAR, and mission computers. This OSIP will also implement Automated Ground Collision Avoidance System (Auto-GCAS) as a software upgrade to the mission computer, digital map computer, and the flight control computer. The USMC Active Electronically Scanned Array (AESA) radar effort will upgrade the USMC F/A-18 C/D aircraft with an AESA radar replacement to the APG-73 radar. The AESA radar replacement will improve USMC F/A-18 C/D survivability and supportability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 2 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** AVIONICS UPGRADE	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) AGCAS A KIT - Organic(*)	- / -	- / -	- / -	4 / 0.001	- / -	4 / 0.001	75 / 0.019	71 / 0.018	- / -	- / -	- / -	150 / 0.038
1.2.1) Installation Kits N/R - Organic(*)	- / -	- / -	- / -	- / 0.063	- / -	- / 0.063	- / 4.962	- / -	- / -	- / -	- / -	- / 5.025
2.1.1) USMC AESA Radars - Organic(*)	- / -	- / -	- / -	20 / 67.580	- / -	20 / 67.580	22 / 76.563	21 / 73.813	- / -	- / -	- / -	63 / 217.956
2.1.2) NAVWAR - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.644	10 / 1.314	10 / 1.341	20 / 2.735	70 / 10.017	115 / 16.051
2.2.1) 31C SCS - Organic(*) (2)	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.569	- / -	- / -	- / -	- / -	- / 21.569
2.2.2) NAVWAR NRE - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.590	- / -	- / -	- / -	- / -	- / 4.590
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 67.644*	*- / -*	*- / 67.644*	*- / 108.347*	*- / 75.145*	*- / 1.341*	*- / 2.735*	*- / 10.017*	*- / 265.229*
Support												
3.1) ILS	- / -	- / -	- / -	- / 0.549	- / -	- / 0.549	- / 0.561	- / 0.572	- / 0.584	- / 0.595	- / 7.281	- / 10.142
3.2) Other Support	- / -	- / -	- / -	- / 1.020	- / -	- / 1.020	- / 1.040	- / 1.061	- / 1.082	- / 1.104	- / 8.372	- / 13.679
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 1.569*	*- / -*	*- / 1.569*	*- / 1.601*	*- / 1.633*	*- / 1.666*	*- / 1.699*	*- / 15.653*	*- / 23.821*
Installation												
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.480*	*- / 0.979*	*- / 0.979*	*- / 9.314*	*- / 11.752*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**69.213**	**0.000**	**69.213**	**109.948**	**77.258**	**3.986**	**5.413**	**34.984**	**300.802**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 2 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Footnotes:

(2) FY22 31C SCS funding is for integration of AESA Radar into the F/A-18.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	52.612	0.000	52.612	65.261	65.237	68.432	70.500	324.926	646.968
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	52.612	0.000	52.612	65.261	65.237	68.432	70.500	324.926	646.968
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**52.612**	**0.000**	**52.612**	**65.261**	**65.237**	**68.432**	**70.500**	**324.926**	**646.968**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) 10-21 is established for the correction of readiness degraders impacting F/A-18 A/B/C/D aircraft cost per flight hour, Reliability Maintainability and Availability (RM&A), obsolescence, and reduction of life-cycle costs. These modifications will be accomplished by field retrofit and implemented to coincide with resources and aircraft availability. In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals. The reliability and readiness initiatives included in the proposed OSIP are projected to have a significant positive impact to the F/A-18 A/B/C/D Aircraft platform. Modifications for the F/A-18 A/B/C/D aircraft include flight controls, software, forward fuselage, aft fuselage, wing, critical structures, electrical, hydraulic, Environmental Control Systems (ECS), launch and recovery, fuel, mechanical, secondary power, and other modification efforts.

Engineering Change Proposals (ECPs) completed but have installs remaining from OSIP 11-84:
ECP 608 Crease Longeron, ECP 609 Inner Wing Conversion/ Modification - Fuel Improvements, ECP-609C1 Inner wing/Wing Fuel Transfer Manifold (AYC-1768), ECP 796 Wing Fuel Dams, ECP 973 Fuel Cell Floor Crack, ECP 1034 NI Aileron Attach Lug Bushing (AYC-1481), ECP-1095NI MLG Side Brace Downlock Actuator Connecting Link (AYC-1548), ECP 1098NI F/A-18 A-D Y615 Former and Bootstrap, ECP 1100 F/A-18 A-D Keel Beam Web Retrofit, ECP 1101 Inner Wing AFT Closure Rib, ECP 1102 Y508 Former Shear Tie Fastener Holes Retrofit, ECP 1118NI F/A-18 A-D Y580.5/Y590.5 Former Replacement Modline, ECP 1120NI F/A-18 A-D Upper O/B Longeron Y453/Y508 Fw Section Splice, ECP 1121 F/A-18 A-D MLG Critical Components Retrofit, ECP 1122 F/A-18 A-D NLG Critical Components Retrofit, ECP 1125 F/A-18 A-D Y470 Inner Wing Panel Lug, ECP 1137NI Fire Extinguisher Temp Compensating Pressure Switch, ECP-1140NI AIL SERVOCYLINDER MAIN RAM (AYC-1603), ECP-1142NI Y326.5 Lead Edge Ext (LEX) Spt Fitting & Substructure, ECP-1142C1NI Y394.2 LEX Connecting Link Retrofit, ECP-1142C2 LEX Support Assy 74T030317 Replacement, ECP 1148NI Speed Brake Arresting Hook Actuator Fitting Retrofit, ECP-1155 NI Fuel Tank Four Cavity Foam Material Change, ECP 1155C1 NI Motive Flow Bulkhead Replacement, ECP 1159 - Y557.5 Bulkhead Tub Retrofit, ECP-1169NI Arresting Hook Point Bolt Material Change (AYC-1734), ECP 1176 NI OWP Missile Support Rib Retrofit, ECP-1186NI NLG Uplock Dash Number & Serialization (AFC-680), ECP-1208 NI Disabling Cabin Exit Air System (AFC 676), ECP-1209 Outer Wing Panel 68% Spare, ECP-1211 Replacing Aging Fraying Flight Control and Brake Cables, ECP 6217 Cockpit Pressurization Warning System, ECP 6321R1 F/A-18 A-D Main Landing Gear Door Hinge Pins, ECP-6431 In-Flight RefueL Probe Timer Bellcrank Fitting (AFC-623 PT2), ECP-6495: Servocylinder Test Station Obsolescence Upgrade, ECP JAX F-18-001 NFDS mods, C&D Conversion (Blue Angels), ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A/B/C/D	**Modification Type:** Readiness	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-608 Crease Longeron - NonOrganic	42 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.000
1.1.2) ECP-609 Inner Wing Conversion/Modification - Fuel Improvements - NonOrganic	37 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 0.000
1.1.3) ECP 609 Inner Wing Conversion/Modification - NonOrganic	30 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.000
1.1.4) ECP 973 Fuel Cell Floor Crack - NonOrganic	63 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	63 / 0.000
1.1.5) ECP 1034 NI Trailing Edge Flap (AYC-1460) - NonOrganic	204 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	204 / 0.000
1.1.6) ECP 1034 NI Aileron Attach Lug Bushing (AYC-1481) - NonOrganic	245 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	245 / 0.000
1.1.7) ECP 1100 F/A-18 A-D Keel Beam Web Retrofit - NonOrganic	96 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	96 / 0.000
1.1.8) ECP 1101 Inner Wing AFT Closure Rib - NonOrganic	111 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	111 / 0.000
1.1.9) ECP 1102 Y508 Former Shear Tie Fastener Holes Retrofit - NonOrganic	137 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	137 / 0.000
1.1.10) ECP 1118 NI F/A-18 A-D Y580/Y590.5 Former Replacement Modline - NonOrganic	156 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 0.000
1.1.11) ECP 1125 F/A-18 A-D Y470 Inner Wing Panel Lug - NonOrganic	131 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	131 / 0.000
1.1.12) ECP 1137 NI Fire Extinguisher Temp Compensating Pressure Switch - NonOrganic	353 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	353 / 0.000
1.1.13) ECP 1142 NI Y326.5 Lead Edge Ext (LEX) Spt Fitting & Substructure - NonOrganic	547 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	547 / 0.000
1.1.14) ECP 1148 NI Speed Brake Arresting Hook Actuator Fitting Retrofit - NonOrganic	129 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	129 / 0.000
1.1.15) ECP 1159 Y557.5 Bulkhead Tub Retrofit - NonOrganic	331 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	331 / 0.000
1.1.16) ECP 1209 NI Outer Wing Panel 68% Spar Mod (AYC-1816) - NonOrganic	402 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	402 / 0.000
1.1.17) ECP 6217 Cockpit Pressurization Warning System - NonOrganic	143 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	143 / 0.000
1.1.18) ECP 6321R1 F/A-18 A-D Main Landing Gear Door Hinge Pins - NonOrganic	415 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	415 / 0.000
1.1.19) ECP 1120 NI F/A-18 A-D Upper O/B Longeron Y453/ Y508 Fw Section Splice - NonOrganic *Installation 1 of 11*	84 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 2.846	36 / 1.152	180 / 3.998
1.1.20) ECP 1121 F/A-18 A-D MLG Critical Components Retrofit - Organic(*)	- / -	- / -	- / -	24 / 3.528	- / -	24 / 3.528	42 / 6.311	10 / 1.533	- / -	- / -	- / -	76 / 11.372

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A/B/C/D	**Modification Type:** Readiness	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.21) ECP 1122 F/A-18 A-D NLG Critical Components Retrofit - Organic(*)	- / -	- / -	- / -	24 / 1.344	- / -	24 / 1.344	42 / 2.399	10 / 0.583	- / -	- / -	- / -	76 / 4.326
1.1.22) ECP 1142 C1 Y394.2 LEX Connecting Link Retrofit - NonOrganic *Installation 2 of 11*	80 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	158 / 0.096	238 / 0.096
1.1.23) ECP-1142NI C2 LEX Support ASSY 74T030317 MOD (AFC-XXX) - NonOrganic *Installation 3 of 11*	80 / 0.000	- / -	- / -	80 / 0.066	- / -	80 / 0.066	80 / 0.067	80 / 0.069	80 / 0.070	50 / 0.081	- / -	450 / 0.353
1.1.24) ECP 1176 OWP Missile Support Rib - NonOrganic *Installation 4 of 11*	- / -	- / -	- / -	12 / 2.602	- / -	12 / 2.602	28 / 6.267	24 / 5.471	42 / 9.810	2 / 0.479	- / -	108 / 24.629
1.1.25) ECP 1211 Replacing Aging Fraying Flight Control and Brake Cables - NonOrganic *Installation 5 of 11*	240 / 0.000	- / -	- / -	- / -	- / -	- / -	60 / 0.050	40 / 0.034	- / -	- / -	- / -	340 / 0.084
1.1.26) ECP XXX26 Structural Stress Corrosion Crack Issues - NonOrganic *Installation 6 of 11*	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.720	42 / 0.736	42 / 0.750	60 / 2.293	264 / 5.135	450 / 9.634
1.1.27) ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issue - NonOrganic *Installation 7 of 11*	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.576	42 / 0.589	42 / 0.601	60 / 2.075	264 / 4.111	450 / 7.952
1.1.28) ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues - NonOrganic *Installation 8 of 11*	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.353	42 / 0.361	42 / 0.368	60 / 1.737	264 / 2.520	450 / 5.339
1.1.29) ECP XXX30 F/A-18 A-D Flight Control Surfaces Issues - NonOrganic *Installation 9 of 11*	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.141	42 / 0.145	42 / 0.148	60 / 1.415	264 / 1.010	450 / 2.859
1.1.30) ECP XXX29 F/A-18 A-D Fuel Related Upgrade Issues - NonOrganic *Installation 10 of 11*	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.144	42 / 0.148	42 / 0.151	60 / 1.420	264 / 1.031	450 / 2.894
1.1.31) ECP XXX33 F/A-18 A-D NACES Retrfit Upgrade - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.175	42 / 0.179	42 / 0.183	60 / 1.466	264 / 1.249	450 / 3.252
1.1.32) ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75) - NonOrganic *Installation 11 of 11*	8 / 0.000	- / -	- / -	60 / 0.101	- / -	60 / 0.101	60 / 0.103	60 / 0.105	60 / 0.107	25 / 0.096	- / -	273 / 0.512
1.1.33) CKA Material Line - Organic(*)	- / -	- / -	- / -	- / 1.251	- / -	- / 1.251	- / 1.514	- / 1.092	- / 1.479	- / 2.739	- / 4.575	- / 12.650
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 8.892*	*- / -*	*- / 8.892*	*- / 18.820*	*- / 11.045*	*- / 13.667*	*- / 16.647*	*- / 20.879*	*- / 89.950*
Support												
3.5) ILS	- / -	- / -	- / -	- / 11.235	- / -	- / 11.235	- / 11.969	- / 12.183	- / 12.427	- / 12.676	- / 73.639	- / 134.129
3.6) Other Support	- / -	- / -	- / -	- / 12.965	- / -	- / 12.965	- / 13.735	- / 14.009	- / 14.289	- / 14.575	- / 77.367	- / 146.940
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 24.200*	*- / -*	*- / 24.200*	*- / 25.704*	*- / 26.192*	*- / 26.716*	*- / 27.251*	*- / 151.006*	*- / 281.069*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A/B/C/D	**Modification Type:** Readiness	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation												
Installation 1 of 11: ECP 1120 NI F/A-18 A-D Upper O/B Longeron Y453/Y508 Fw Section Splice	- / -	- / -	- / -	- / 4.004	- / 0.000	- / 4.004	- / 4.084	- / 4.166	- / 4.249	- / 2.892	- / 23.657	- / 43.052
Installation 2 of 11: ECP 1142 C1 Y394.2 LEX Connecting Link Retrofit	- / -	- / -	- / -	- / 0.011	- / 0.000	- / 0.011	- / 0.011	- / 0.012	- / 0.013	- / 0.014	- / 0.130	- / 0.191
Installation 3 of 11: ECP-1142NI C2 LEX Support ASSY 74T030317 MOD (AFC-XXX)	- / -	- / -	- / -	- / 0.031	- / 0.000	- / 0.031	- / 0.653	- / 0.666	- / 0.679	- / 0.693	- / 0.442	- / 3.164
Installation 4 of 11: ECP 1176 OWP Missile Support Rib	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.294	- / 0.700	- / 0.612	- / 1.092	- / 0.053	- / 2.751
Installation 5 of 11: ECP 1211 Replacing Aging Fraying Flight Control and Brake Cables	- / -	- / -	- / -	- / 0.712	- / 0.000	- / 0.712	- / 0.726	- / 0.700	- / 0.320	- / -	- / 0.000	- / 2.458
Installation 6 of 11: ECP XXX26 Structural Stress Corrosion Crack Issues	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.630	- / 0.643	- / 0.655	- / 5.392	- / 7.320
Installation 7 of 11: ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issue	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.050	- / 1.071	- / 1.092	- / 8.592	- / 11.805
Installation 8 of 11: ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.470	- / 1.499	- / 1.529	- / 12.216	- / 16.714
Installation 9 of 11: ECP XXX30 F/A-18 A-D Flight Control Surfaces Issues	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.890	- / 1.928	- / 1.966	- / 15.759	- / 21.543
Installation 10 of 11: ECP XXX29 F/A-18 A-D Fuel Related Upgrade Issues	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.310	- / 2.356	- / 2.403	- / 19.199	- / 26.268
Installation 11 of 11: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75)	- / -	- / -	- / -	- / 0.010	- / 0.000	- / 0.010	- / 0.694	- / 0.708	- / 0.722	- / 0.736	- / 0.313	- / 3.183
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 19.520*	*- / -*	*- / 19.520*	*- / 20.737*	*- / 28.000*	*- / 28.049*	*- / 26.602*	*- / 153.041*	*- / 275.949*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**52.612**	**0.000**	**52.612**	**65.261**	**65.237**	**68.432**	**70.500**	**324.926**	**646.968**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 11: ECP 1120 NI F/A-18 A-D Upper O/B Longeron Y453/Y508 Fw Section Splice

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP 1120 NI F/A-18 A-D Upper O/B Longeron Y453/Y508 Fw Sectio

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	18 / 4.004	0 / 0.000	18 / 4.004	18 / 4.084	18 / 4.166	18 / 4.249	12 / 2.892	0 / 0.000	84 / 19.395
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 14.668	60 / 14.668
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 8.989	36 / 8.989
Total	- / -	- / -	- / -	18 / 4.004	0 / 0.000	18 / 4.004	18 / 4.084	18 / 4.166	18 / 4.249	12 / 2.892	96 / 23.657	180 / 43.052

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	4	4	5	5	4	4	5	5	4	4	5	5	4	4	5	5	3	3	3	3	96	180
Out	-	-	-	-	-	-	-	-	-	4	4	5	5	4	4	5	5	4	4	5	5	4	4	5	5	3	3	3	3	96	180

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 11: ECP 1142 C1 Y394.2 LEX Connecting Link Retrofit

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP 1142 C1 Y394.2 LEX Connecting Link Retrofit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	16 / 0.011	0 / 0.000	16 / 0.011	16 / 0.011	16 / 0.012	16 / 0.013	16 / 0.014	0 / 0.000	80 / 0.061
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	158 / 0.130	158 / 0.130
Total	- / -	- / -	- / -	16 / 0.011	0 / 0.000	16 / 0.011	16 / 0.011	16 / 0.012	16 / 0.013	16 / 0.014	158 / 0.130	238 / 0.191

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	158	238
Out	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	158	238

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 11: ECP-1142NI C2 LEX Support ASSY 74T030317 MOD (AFC-XXX)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP-1142NI C2 LEX Support ASSY 74T030317 MOD (AFC-XXX)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	80 / 0.031	0 / 0.000	80 / 0.031	- / -	- / -	- / -	- / -	0 / 0.000	80 / 0.031
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.653	- / -	- / -	- / -	0 / 0.000	80 / 0.653
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.666	- / -	- / -	0 / 0.000	80 / 0.666
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.679	- / -	0 / 0.000	80 / 0.679
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.693	0 / 0.000	80 / 0.693
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.442	50 / 0.442
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	80 / 0.031	0 / 0.000	80 / 0.031	80 / 0.653	80 / 0.666	80 / 0.679	80 / 0.693	50 / 0.442	450 / 3.164

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	50	450
Out	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	50	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 11: ECP 1176 OWP Missile Support Rib

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates				Dec 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP 1176 OWP Missile Support Rib

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.294	- / -	- / -	- / -	0 / 0.000	12 / 0.294
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 0.700	- / -	- / -	0 / 0.000	28 / 0.700
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.612	- / -	0 / 0.000	24 / 0.612
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.092	0 / 0.000	42 / 1.092
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.053	2 / 0.053
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.294	28 / 0.700	24 / 0.612	42 / 1.092	2 / 0.053	108 / 2.751

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	7	7	7	7	6	6	6	6	10	10	10	12	2	108
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	7	7	7	7	6	6	6	6	10	10	10	12	2	108

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 11: ECP 1211 Replacing Aging Fraying Flight Control and Brake Cables

Manufacturer Information

Manufacturer Name: TBD (3) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP 1211 Replacing Aging Fraying Flight Control and Brake Cab

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	100 / 0.712	0 / 0.000	100 / 0.712	100 / 0.726	40 / 0.280	- / -	- / -	0 / 0.000	240 / 1.718
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.420	- / -	- / -	0 / 0.000	60 / 0.420
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.320	- / -	0 / 0.000	40 / 0.320
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	100 / 0.712	0 / 0.000	100 / 0.712	100 / 0.726	100 / 0.700	40 / 0.320	- / -	0 / 0.000	340 / 2.458

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10	-	-	-	-	-	340
Out	-	-	-	-	-	-	-	-	-	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10	-	-	-	-	-	340

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 11: ECP XXX26 Structural Stress Corrosion Crack Issues

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2023	Dec 2024	Dec 2025
Delivery Dates					Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP XXX26 Structural Stress Corrosion Crack Issues

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.630	- / -	- / -	0 / 0.000	42 / 0.630
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.643	- / -	0 / 0.000	42 / 0.643
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.655	0 / 0.000	42 / 0.655
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.979	60 / 0.979
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 4.413	264 / 4.413
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.630	42 / 0.643	42 / 0.655	324 / 5.392	450 / 7.320

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 11: ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issue

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2023	Dec 2024	Dec 2025
Delivery Dates					Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP XXX27 F/A-18 A-D Subsystems Retrofit Upgrades Issue

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.050	- / -	- / -	0 / 0.000	42 / 1.050
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.071	- / -	0 / 0.000	42 / 1.071
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.092	0 / 0.000	42 / 1.092
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.591	60 / 1.591
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 7.001	264 / 7.001
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.050	42 / 1.071	42 / 1.092	324 / 8.592	450 / 11.805

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 8 of 11: ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2023	Dec 2024	Dec 2025
Delivery Dates					Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP XXX28 F/A-18 A-D ECS Subsystems Upgrade Issues

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.470	- / -	- / -	0 / 0.000	42 / 1.470
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.499	- / -	0 / 0.000	42 / 1.499
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.529	0 / 0.000	42 / 1.529
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 2.226	60 / 2.226
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 9.990	264 / 9.990
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.470	42 / 1.499	42 / 1.529	324 / 12.216	450 / 16.714

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 9 of 11: ECP XXX30 F/A-18 A-D Flight Control Surfaces Issues

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2023	Dec 2024	Dec 2025
Delivery Dates					Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP XXX30 F/A-18 A-D Flight Control Surfaces Issues

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.890	- / -	- / -	0 / 0.000	42 / 1.890
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.928	- / -	0 / 0.000	42 / 1.928
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.966	0 / 0.000	42 / 1.966
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 2.876	60 / 2.876
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 12.883	264 / 12.883
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 1.890	42 / 1.928	42 / 1.966	324 / 15.759	450 / 21.543

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 10 of 11: ECP XXX29 F/A-18 A-D Fuel Related Upgrade Issues

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2023	Dec 2024	Dec 2025
Delivery Dates					Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP XXX29 F/A-18 A-D Fuel Related Upgrade Issues

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 2.310	- / -	- / -	0 / 0.000	42 / 2.310
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 2.356	- / -	0 / 0.000	42 / 2.356
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 2.403	0 / 0.000	42 / 2.403
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 3.500	60 / 3.500
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 15.699	264 / 15.699
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 2.310	42 / 2.356	42 / 2.403	324 / 19.199	450 / 26.268

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	12	10	10	10	12	10	10	10	12	324	450

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0502 / F-18 A-D Unique	**Modification Number / Title:** 3 / F/A-18 Air Vehicle A/B/C/D Readiness (OSIP 10-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 11 of 11: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

Installation Information

Method of Implementation: NAVY DRIVE IN MOD:: Installation Name: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 7

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	8 / 0.010	0 / 0.000	8 / 0.010	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.010
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.694	- / -	- / -	- / -	0 / 0.000	60 / 0.694
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.708	- / -	- / -	0 / 0.000	60 / 0.708
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.722	- / -	0 / 0.000	60 / 0.722
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.736	0 / 0.000	60 / 0.736
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 0.313	25 / 0.313
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	8 / 0.010	0 / 0.000	8 / 0.010	60 / 0.694	60 / 0.708	60 / 0.722	60 / 0.736	25 / 0.313	273 / 3.183

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	2	2	2	2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	25	273
Out	-	-	-	-	-	-	-	-	-	2	2	2	2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	25	273

Footnotes:

(3) Prior year kits procured under OSIP 11-84

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	468.954	0.000	468.954	558.476	844.065	847.521	826.835	488,591.834	492,137.685
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	468.954	0.000	468.954	558.476	844.065	847.521	826.835	488,591.834	492,137.685
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**468.954**	**0.000**	**468.954**	**558.476**	**844.065**	**847.521**	**826.835**	**488,591.834**	**492,137.685**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LI 0505 was established in FY2021 in order to provide greater transparency of F-18E/F AND EA-18G modernization and sustainment efforts. OSIPs 11-10, 11-13, 14-03, & 20-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0505.

This line item funds modifications to the F/A-18 E/F and EA-18G aircraft.

The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, both the single seat and two-seat F/A-18s include a night attack capability. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since fighter capabilities are available in either mission, a robust self-defense capability is retained.

The EA-18G has the capability to operate autonomously or as a major node in a network centric operation. The performance of the aircraft is compatible with the primary strike/fighter aircraft inventory, allowing it to be fully integrated into specific strike packages. It also has the capacity to provide broad area coverage for extended periods of time to support numerous strikes or other air operations in a federated context. The EA-18G is a scalable, flexible solution facilitating "Task Organized" force structures. Task organized force structures employ adequate forces to accomplish a specific task while maintaining operational and personnel tempo at acceptable levels. The EA-18G is designed to perform a range of Electronic Warfare/Electronic Attack functions either simultaneously or independently. EA-18G man in the loop operation and advanced information display system allow real time assessment of the tactical situation and the appropriate response executed in accordance with the rules of engagement. The EA-18G electronic attack upgrades meet or exceed EA-6B Airborne (with ALQ-218, ALQ-99, USQ-113) Electronic Attack capability to detect, identify, locate and suppress hostile emitters; provide enhanced connectivity to National, Theater and strike assets; and provide organic precision emitter targeting for employment of onboard suppression weapons to fulfill operational requirements.

NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog. Funds in this budget request are required for on-going modifications to address OOR aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Current aircraft inventory and Flight hours flown as of 19 June 2019:
F/A-18E - 293 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 3,044 (current); 7,044 (extended)
F/A-18F - 258 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 2,303 (current); 6,303 (extended)
EA-18G - 161 (156 Active, 5 Reserve): service life 7,500 hours (current); average service life remaining 5,886 (current)

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / EA-18G Unique OSIP (011-10) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 96.023	- / 0.000	- / 96.023
P-3a	2 / Power and Propulsion (11-13) (Safety, Readiness, Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 36.428	- / 0.000	- / 36.428
P-3a	3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03) (SAFETY /RELIABILITY/IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 162.221	- / 0.000	- / 162.221
P-3a	4 / F/A-18E/F and EA-18G SLEP (OSIP 020-14) (SAFETY / LIFE EXTENSION)				- / 0.000	- / 0.000	- / 0.000	- / 174.282	- / 0.000	- / 174.282
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 468.954**	**- / 0.000**	**- / 468.954**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / EA-18G Unique OSIP (011-10) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 102.695	- / 118.080	- / 115.468	- / 112.274	- / 225.896	- / 770.436
P-3a	2 / Power and Propulsion (11-13) (Safety, Readiness, Reliability)				- / 32.726	- / 30.262	- / 51.640	- / 38.856	- / 482,708.587	- / 482,898.499
P-3a	3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03) (SAFETY /RELIABILITY/IMPROVEMENT)				- / 173.563	- / 314.535	- / 319.475	- / 324.971	- / 1,934.129	- / 3,228.894
P-3a	4 / F/A-18E/F and EA-18G SLEP (OSIP 020-14) (SAFETY / LIFE EXTENSION)				- / 249.492	- / 381.188	- / 360.938	- / 350.734	- / 3,723.222	- / 5,239.856
P-40	**Total Gross/Weapon System Cost**				**- / 558.476**	**- / 844.065**	**- / 847.521**	**- / 826.835**	**- / 488,591.834**	**- / 492,137.685**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The overall goal of the modifications budgeted in FY 2021 is to implement commonality/capability and structural safety and reliability improvements. OSIPs 11-10, 11-13, 14-03, & 20-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0505.

OSIP 11-10 EA-18G Unique supports the required safety-of-flight modifications, mitigation of obsolescence issues, and incorporation of system improvements.
OSIP 11-13 Power and Propulsion incorporates safety and life-limiting propulsion and power corrective actions to resolve safety and readiness concerns. Corrections to design deficiencies found during post production test and evaluation, and discovered during fleet operations, that have resulted in safety and reliability degradation, must be corrected.
OSIP 14-03 E/F & EA-18G Correction of Operational Discrepancies provides resources to correct aircraft discrepancies and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. These efforts are specific to F/A-18E/F and EA-18G aircraft.
OSIP 20-14 F/A-18E/F and EA-18G SLEP incorporates structural and sub-systems enhancements and changes required to extend the F/A-18E/F and EA-18G service life, and maintain sufficient aircraft inventory, to meet fleet operational requirements through FY2046.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	96.023	0.000	96.023	102.695	118.080	115.468	112.274	225.896	770.436
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	96.023	0.000	96.023	102.695	118.080	115.468	112.274	225.896	770.436
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**96.023**	**0.000**	**96.023**	**102.695**	**118.080**	**115.468**	**112.274**	**225.896**	**770.436**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

With EA-18G aircraft achieving initial operational capability in FY2009, an Operational, Safety and Improvement Program (OSIP) to perform required safety of flight modifications, address obsolescence issues, and incorporate system improvements was established. Funding supports the retrofit of the ALQ-99 tactical jamming system. ECP 6360, the Joint Tactical Terminal-Receiver (JTT-R) was developed to replace the Multi-Mission Advanced Tactical Terminal (MATT) to address MATT obsolescence and capability deficiencies. OSIP funding was used to retrofit the aircraft with JTT-R at the completion of the development program. Future SATCOM (i.e. JTT-R) modifications will exist on EA-18G and will require funding for software and hardware updates. OSIP funding will also support a common configuration and airborne electronic attack (AEA) I-level standup which includes the procurement and fielding of operational test program sets (OTPS) as support equipment for the I-level stand up. Funds are required to support Weapons Replaceable Assemblies (WRAs) and Shop Replaceable Assemblies (SRAs) to achieve depot standup SRA/WRA capability. EA-18G software modifications are budgeted to support and stay abreast with emerging electronic warfare threats and the software modifications required to react to those threats. OSIP funding will be used to retrofit ALQ-218(V)2 hardware and software on board the EA-18G for increased emitter detection (ECP 6482 Airborne Electronic Attack Systems Enhancements (ASE)). ECP 6312 (EA-18G AESA Blanking Wire Group and CCS Mid-board Group A) supports Counter Communications Set (CCS)/ AESA Blanking capabilities during future jamming operations for EA-18G. This ECP adds CCS provisional wiring as well as a blanking wire from the AESA/Electronic Interface Blanking Unit (EIBU) to the ALQ-218(V)2 onboard the EA-18G. ECP 6444 is part of the weight reduction initiative in order to support future EA-18G modifications and jamming capabilities. ECP 6479 is an EA-18G aircraft wiring modification supporting the software upgrade of Time Difference of Arrival (TDOA) one pulse per second signal. ECP 6464 addresses EIBU obsolescence and incorporates the Radio Frequency Blanking Unit (RFBU) as a form, fit, function replacement to the EIBU to support EA-18G operations.

Funds are provided for integrating Reactive Electronic Attack Measures (REAM) capability. This technology and hardware upgrade of the Electronic Attack Unit (EAU) will bring Cognitive Electronic Warfare capability to the platform and is the start to EA-18G BLK II modernization as well as development and integration of special mission pods in support of BLK II modernization.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
REAM development is funded out of RDT&E; procurement to follow.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:** 0604269N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A - NonOrganic *Installation 1 of 6*	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
1.1.2) ECP 6444 - EA-18G Weight Reduction Initiative - NonOrganic *Installation 2 of 6*	- / -	- / -	12 / 0.000	32 / 3.662	- / -	32 / 3.662	32 / 3.735	32 / 3.810	18 / 2.186	14 / 1.701	7 / 0.884	147 / 15.978
1.1.3) ECP 6482 - ASE (ALQ-218 Modifications) - NonOrganic *Installation 3 of 6*	- / -	- / -	12 / 0.000	32 / 0.533	- / -	32 / 0.533	32 / 0.543	32 / 0.554	18 / 0.318	14 / 0.252	7 / 0.128	147 / 2.328
1.1.4) ECP 6472 EA-18G NGJ-MB - NonOrganic (1) *Installation 4 of 6*	- / -	- / -	- / -	44 / 5.406	- / -	44 / 5.406	32 / 4.010	32 / 4.091	18 / 2.318	14 / 1.803	7 / 0.902	147 / 18.530
2.1.1) ECP 6464 - RFBU - Organic(*)	- / -	- / -	- / -	38 / 1.899	- / -	38 / 1.899	130 / 6.627	140 / 7.280	123 / 6.524	- / -	- / -	431 / 22.330
2.1.2) ECP 6482 ASE - (ALQ-218 Modifications (WRAs)) - NonOrganic (2) *Installation 5 of 6*	- / -	- / -	28 / 0.000	25 / 25.495	- / -	25 / 25.495	32 / 33.286	32 / 33.951	26 / 28.137	24 / 26.492	- / -	167 / 147.361
2.1.3) ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP)) - NonOrganic *Installation 6 of 6*	- / -	- / -	24 / 0.000	25 / 3.190	- / -	25 / 3.190	32 / 4.164	32 / 4.248	26 / 3.520	24 / 3.314	- / -	163 / 18.436
2.1.4) Special Capability Pod (SCP) Interface Kit ECP XXXX - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.039	40 / 2.080	40 / 2.122	40 / 2.164	- / -	160 / 8.405
2.1.5) Growler Block 2: AEA ECP XXXX - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 7.155	28 / 10.227	32 / 11.922	79 / 30.494	147 / 59.798
2.1.6) Growler Block 2: ECP XXXX - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.795	28 / 8.109	32 / 9.453	79 / 24.179	147 / 45.536
2.2.1) Installation Equipment N/R - Organic(*)	- / -	- / -	- / -	- / 12.298	- / -	- / 12.298	- / -	- / -	- / -	- / -	- / -	- / 12.298
2.2.2) EA-18G SCS- H20 - Organic(*) (3)	- / -	- / -	- / -	- / 2.030	- / -	- / 2.030	- / -	- / -	- / -	- / -	- / -	- / 2.030
2.2.3) EA-18G SCS- H22 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.931	- / -	- / -	- / -	- / 6.931
2.2.4) Software - Organic(*)	- / -	- / -	- / -	- / 8.847	- / -	- / 8.847	- / 9.024	- / 5.134	- / 11.518	- / 23.119	- / 6.956	- / 64.598
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 63.360*	*- / -*	*- / 63.360*	*- / 63.428*	*- / 79.029*	*- / 74.979*	*- / 80.220*	*- / 63.543*	*- / 424.559*
Support												
3.1) Data (4)	- / -	- / -	- / -	- / 1.975	- / -	- / 1.975	- / 2.014	- / -	- / -	- / -	- / -	- / 3.989
3.2) Training Equipment	- / -	- / -	- / -	- / 0.612	- / -	- / 0.612	- / -	- / -	- / -	- / -	- / -	- / 0.612
3.3) ILS	- / -	- / -	- / -	- / 3.434	- / -	- / 3.434	- / 3.360	- / 2.611	- / 2.632	- / 2.302	- / 13.308	- / 27.647
3.4) Other Support	- / -	- / -	- / -	- / 15.589	- / -	- / 15.589	- / 16.044	- / 16.524	- / 17.543	- / 17.894	- / 135.690	- / 219.284
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 21.610*	*- / -*	*- / 21.610*	*- / 21.418*	*- / 19.135*	*- / 20.175*	*- / 20.196*	*- / 148.998*	*- / 251.532*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:** 0604269N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation												
Installation 1 of 6: ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A	- / -	- / -	- / -	- / 0.215	- / 0.000	- / 0.215	- / -	- / -	- / -	- / -	- / 0.000	- / 0.215
Installation 2 of 6: ECP 6444 - EA-18G Weight Reduction Initiative	- / -	- / -	- / -	- / 0.979	- / 0.000	- / 0.979	- / 2.663	- / 2.717	- / 2.771	- / 1.590	- / 1.904	- / 12.624
Installation 3 of 6: ECP 6482 - ASE (ALQ-218 Modifications)	- / -	- / -	- / -	- / 0.563	- / 0.000	- / 0.563	- / 1.531	- / 1.562	- / 1.593	- / 0.914	- / 1.095	- / 7.258
Installation 4 of 6: ECP 6472 EA-18G NGJ-MB	- / -	- / -	- / -	- / 2.821	- / 0.000	- / 2.821	- / 7.673	- / 7.827	- / 7.983	- / 4.580	- / 5.487	- / 36.371
Installation 5 of 6: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))	- / -	- / -	- / -	- / 5.912	- / 0.000	- / 5.912	- / 5.384	- / 7.029	- / 7.170	- / 4.114	- / 4.196	- / 33.805
Installation 6 of 6: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))	- / -	- / -	- / -	- / 0.563	- / 0.000	- / 0.563	- / 0.598	- / 0.781	- / 0.797	- / 0.660	- / 0.673	- / 4.072
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 11.053*	*- / -*	*- / 11.053*	*- / 17.849*	*- / 19.916*	*- / 20.314*	*- / 11.858*	*- / 13.355*	*- / 94.345*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**96.023**	**0.000**	**96.023**	**102.695**	**118.080**	**115.468**	**112.274**	**225.896**	**770.436**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A

Manufacturer Information

Manufacturer Name: Not Specified. | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP 6312 - EA-18G AESA Blanking Wire Group A and C

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	1 / 0.215	0 / 0.000	1 / 0.215	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.215
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.215	0 / 0.000	1 / 0.215	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.215

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 6: ECP 6444 - EA-18G Weight Reduction Initiative

Manufacturer Information

Manufacturer Name: Boeing - ECP 6444	Manufacturer Location: St. Louis
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6444 - EA-18G Weight Reduction Initiative

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	12 / 0.979	0 / 0.000	12 / 0.979	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.979
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	32 / 2.663	- / -	- / -	- / -	0 / 0.000	32 / 2.663
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 2.717	- / -	- / -	0 / 0.000	32 / 2.717
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 2.771	- / -	0 / 0.000	32 / 2.771
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 1.590	0 / 0.000	18 / 1.590
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.261	14 / 1.261
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.643	7 / 0.643
Total	- / -	- / -	- / -	12 / 0.979	0 / 0.000	12 / 0.979	32 / 2.663	32 / 2.717	32 / 2.771	18 / 1.590	21 / 1.904	147 / 12.624

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147
Out	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 6: ECP 6482 - ASE (ALQ-218 Modifications)

Manufacturer Information

Manufacturer Name: Boeing - ECP 6482 - ASE (ALQ-218 Modifications) | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 - ASE (ALQ-218 Modifications)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	12 / 0.563	0 / 0.000	12 / 0.563	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.563
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.531	- / -	- / -	- / -	0 / 0.000	32 / 1.531
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.562	- / -	- / -	0 / 0.000	32 / 1.562
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.593	- / -	0 / 0.000	32 / 1.593
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.914	0 / 0.000	18 / 0.914
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.725	14 / 0.725
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.370	7 / 0.370
Total	- / -	- / -	- / -	12 / 0.563	0 / 0.000	12 / 0.563	32 / 1.531	32 / 1.562	32 / 1.593	18 / 0.914	21 / 1.095	147 / 7.258

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147
Out	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 6: ECP 6472 EA-18G NGJ-MB

Manufacturer Information

Manufacturer Name: Northrop Grumman- ECP 6472 NGJ (5)

Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	
Delivery Dates		Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024	

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6472 EA-18G NGJ-MB

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	12 / 2.821	0 / 0.000	12 / 2.821	32 / 7.673	- / -	- / -	- / -	0 / 0.000	44 / 10.494
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 7.827	- / -	- / -	0 / 0.000	32 / 7.827
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 7.983	- / -	0 / 0.000	32 / 7.983
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 4.580	0 / 0.000	18 / 4.580
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.634	14 / 3.634
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.853	7 / 1.853
Total	- / -	- / -	- / -	12 / 2.821	0 / 0.000	12 / 2.821	32 / 7.673	32 / 7.827	32 / 7.983	18 / 4.580	21 / 5.487	147 / 36.371

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147
Out	-	-	-	-	-	-	-	-	-	-	-	4	8	8	8	8	8	8	8	8	8	8	8	8	8	4	4	4	6	21	147

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 6: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))

Manufacturer Information

Manufacturer Name: Northrop Grumman - ECP 6482 WRAs	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	28 / 5.912	0 / 0.000	28 / 5.912	- / -	- / -	- / -	- / -	0 / 0.000	28 / 5.912
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	25 / 5.384	- / -	- / -	- / -	0 / 0.000	25 / 5.384
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 7.029	- / -	- / -	0 / 0.000	32 / 7.029
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 7.170	- / -	0 / 0.000	32 / 7.170
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 4.114	0 / 0.000	26 / 4.114
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.196	24 / 4.196
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	28 / 5.912	0 / 0.000	28 / 5.912	25 / 5.384	32 / 7.029	32 / 7.170	26 / 4.114	24 / 4.196	167 / 33.805

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	7	7	7	7	8	8	5	4	12	8	8	4	12	8	8	4	8	8	6	4	24	167
Out	-	-	-	-	-	-	-	-	-	7	7	7	7	8	8	5	4	12	8	8	4	12	8	8	4	8	8	6	4	24	167

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 6 of 6: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))

Manufacturer Information

Manufacturer Name: Northrop Grumman - ECP 6482 GBP	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	24 / 0.563	0 / 0.000	24 / 0.563	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.563
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	25 / 0.598	- / -	- / -	- / -	0 / 0.000	25 / 0.598
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.781	- / -	- / -	0 / 0.000	32 / 0.781
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.797	- / -	0 / 0.000	32 / 0.797
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.660	0 / 0.000	26 / 0.660
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.673	24 / 0.673
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	24 / 0.563	0 / 0.000	24 / 0.563	25 / 0.598	32 / 0.781	32 / 0.797	26 / 0.660	24 / 0.673	163 / 4.072

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	7	7	6	4	8	8	5	4	8	8	8	8	8	8	8	8	8	8	7	3	24	163
Out	-	-	-	-	-	-	-	-	-	7	7	6	4	8	8	5	4	8	8	8	8	8	8	8	8	8	8	7	3	24	163

Footnotes:

(1) Beginning in FY 2021 NGJ-MB A-kit procurement and installation funding (ECP 6472) will be realigned from BLI 0591 OSIP 002-19 (Next Generation Jammer Mid-Band) to BLI 0525 OSIP 011-10 (EA-18G Unique). NGJ-MB A-kits are wiring and cables to be installed into the EA-18G aircraft as part of the H-16 Growler Capability Mod (GCM). Performing these hardware installations simultaneously will provide cost and schedule efficiencies as aircraft are removed from service, run through major disassembly and reassembly only once, rather than multiple times. 20 kits procured in FY20 BLI 0591 will be installed in FY21 BLI 0525.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 1 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) Funding in FY20 - FY22 includes costs for the Low Band Dedicated Receiver (LBDR) Weapons Replaceable Assembly (WRA).

(3) Funding supports EA-18G H20 block upgrades as well as interoperability with Growler Block 2/Reactive Electronic Attack Measures (REAM).

(4) Data increases from FY21-FY22 support Cognitive EW/Advanced Modes and Reactive Electronic Attack Measures (REAM) efforts.

(5) FY2021 kit installs reflect QTY 20 kits procured by BLI 0591. Beginning in FY2021 NGJ-MB A-Kit procurement and installation funding (ECP 6472) will be realigned from BLI 0591 OSIP 002-19 to BLI 0525 OSIP 11-10.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 2 / Power and Propulsion (11-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	36.428	0.000	36.428	32.726	30.262	51.640	38.856	482,708.587	482,898.499
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	36.428	0.000	36.428	32.726	30.262	51.640	38.856	482,708.587	482,898.499
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**36.428**	**0.000**	**36.428**	**32.726**	**30.262**	**51.640**	**38.856**	**482,708.587**	**482,898.499**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This OSIP incorporates safety and life-limiting propulsion and power corrective actions to resolve safety and readiness concerns. Corrections to design deficiencies found during post production test and evaluation and discovered during fleet operations that have resulted in safety and reliability degradation must be corrected. The requirement to upgrade or modify the engine, system secondary power system, electrical system, and fuel systems is critical in maintaining sustainable fleet reliability, safety, and performance and is necessary to meet mission requirements. Modifications include Generator Convertor Units (GCUs), GCU Peculiar Support Equipment (PSE), electrical power and secondary power systems for service life extension.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 2 / Power and Propulsion (11-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Safety, Readiness, Reliability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.2) GCU Reliability Upgrade midterm Pt 3 (ECP 6421) G4 - Organic(*)	- / -	- / -	- / -	128 / 32.510	- / -	128 / 32.510	109 / 28.231	32 / 8.416	- / -	- / -	- / -	269 / 69.157
2.1.3) GCU Reliability Upgrade Midterm (ECP 6421) Pt3 G5 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	116 / 31.257	133 / 36.419	1,603 / 482,691.000	1,852 / 482,758.676
2.2.1) Installation Equipment N/R - Organic(*)	- / -	- / -	- / -	- / 1.581	- / -	- / 1.581	- / 1.050	- / 19.435	- / 6.342	- / -	- / -	- / 28.408
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 34.091*	*- / -*	*- / 34.091*	*- / 29.281*	*- / 27.851*	*- / 37.599*	*- / 36.419*	*- / 482,691.000*	*- / 482,856.241*
Support												
3.1) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / 0.300
3.2) Support Equipment (6)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.591	- / -	- / -	- / 11.591
3.3) ILS	- / -	- / -	- / -	- / 0.311	- / -	- / 0.311	- / 0.306	- / 0.303	- / 0.300	- / 0.306	- / 0.957	- / 2.483
3.4) Other Support	- / -	- / -	- / -	- / 2.026	- / -	- / 2.026	- / 2.839	- / 2.108	- / 2.150	- / 2.131	- / 16.630	- / 27.884
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 2.337*	*- / -*	*- / 2.337*	*- / 3.445*	*- / 2.411*	*- / 14.041*	*- / 2.437*	*- / 17.587*	*- / 42.258*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**36.428**	**0.000**	**36.428**	**32.726**	**30.262**	**51.640**	**38.856**	**482,708.587**	**482,898.499**

Footnotes:

(6) Support equipment increases in FY24 for depot stand up of OSIP 14-03 ECP 6480.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	162.221	0.000	162.221	173.563	314.535	319.475	324.971	1,934.129	3,228.894
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	162.221	0.000	162.221	173.563	314.535	319.475	324.971	1,934.129	3,228.894
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**162.221**	**0.000**	**162.221**	**173.563**	**314.535**	**319.475**	**324.971**	**1,934.129**	**3,228.894**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Corrections to discrepancies discovered during testing and development can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Corrections to the following items/conditions are required to meet Commander, Naval Air Force directed transitions as promulgated in the current Master Aviation Plan. This Operational, Safety and Improvement Program (OSIP) will correct operational discrepancies discovered during testing and evaluations, sustainment activities, engineering analysis, standard depot level evaluations, and during normal fleet operations. This OSIP provides resources to correct such issues via Engineering Change Proposal (ECP) and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. Modifications are to include: Air Frame Structural Upgrades, such as Flight Controls Surfaces, Forward Fuselage, Aft Fuselage, Inner/Outer Wing, Critical Structures; and Aircraft Subsystem Upgrades, such as Electrical, Hydraulic, Environmental Control Systems (ECS), Fuel, Launch & Recovery, Critical Structures, Mechanical, Secondary Power, Fire Suppression Systems, Blue Angels modifications, and other sustainment activities. This OSIP will provide modifications and upgrades to various subsystems to address diminishing manufacturing sources and material shortages (DMSMS), as well as fielding and retrofit of completed development efforts to include Flight Control Computer (FCC) and Conformal Fuel Tanks (CFT).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Each change has been or will be tested prior to installation in the F/A-18E/F and EA-18G.

NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog.

ECPs (6416, 6477, 6478, and 6488) for Physiological Episodes (PE) efforts are realigned from OSIP 14-03 to OSIP 13-19 beginning in FY19.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-1049 Fuel Pressurization System Check Valve Failure - NonOrganic *Installation 1 of 10*	32 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000
1.1.2) ECP-1137NI: Fire Extinguisher Temp Compensating Pressure Switch (TCPS) - NonOrganic *Installation 1 of 10*	11 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.000
1.1.3) ECP-5046C1 BALD Transponder Rotation - Change Incorporation Level - NonOrganic *Installation 1 of 10*	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
1.1.4) ECP-5073: Retrofit of the Trailing Edge Flap Fastener Hole Cold Working - NonOrganic *Installation 1 of 10*	55 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	55 / 0.000
1.1.5) ECP-6089R1 Engine Bay Door Strut Redesign - NonOrganic *Installation 1 of 10*	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.000
1.1.6) ECP-6106R1 Exhaust Overtemp Final Fix/Bard Stacks - NonOrganic *Installation 1 of 10*	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
1.1.7) ECP-6118 Keel Access Cover @ Y631-Y645 - NonOrganic (7) *Installation 1 of 10*	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000
1.1.8) ECP-6188 Y436 Inlet Former - NonOrganic *Installation 1 of 10*	9 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.000
1.1.9) ECP-6193R1/R2 (LEX) Lwr Surface/Structure Cracks Redesign Y286 / Y294 - NonOrganic *Installation 1 of 10*	96 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	96 / 0.000
1.1.10) ECP-6198 Radar Bay Vent Valve Fail - MSP 862 - NonOrganic *Installation 1 of 10*	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
1.1.12) ECP-6227C2/C3 Inlet Nacelle Bleed Plate Crack - NonOrganic *Installation 1 of 10*	228 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	228 / 0.000
1.1.14) ECP-6240R1 / FT50 18K MLG Sidebrace Fitting Failure - NonOrganic *Installation 1 of 10*	209 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	209 / 0.000
1.1.15) ECP-6322 Dry Bay Fire Suppression System (DBFSS) - NonOrganic *Installation 1 of 10*	116 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	116 / 0.000

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.16) ECP-6325R1 Y618 Inbrd Former / Keel Longeron Arrestment Load - NonOrganic *Installation 1 of 10*	125 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 0.000
1.1.17) ECP-6353 F/A-18E/F Lower Wing Hinge Corrosion Improvements - NonOrganic *Installation 1 of 10*	53 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 0.000
1.1.18) ECP-6366 Outer-Wing Inboard Aileron Hinge and SPAR 4 - NonOrganic *Installation 1 of 10*	64 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 0.000
1.1.19) ECP-6388 Outer-Wing Water Drainage Provisions - NonOrganic *Installation 1 of 10*	115 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	115 / 0.000
1.1.20) ECP-6394R1: F/A-18E/F Horizontal Stab Gang Channel Corrosion-AYC-1682 - NonOrganic (8) *Installation 1 of 10*	305 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	305 / 0.000
1.1.24) ECP-6428 Removal of Vertical Tail Drain Common to Fuel Vent Tank - NonOrganic (9) *Installation 1 of 10*	151 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	151 / 0.000
1.1.39) ECP-6495 STS Electrohydraulic Test Stand Obsolescence Upgrade - NonOrganic *Installation 1 of 10*	8 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.000
1.1.43) Fatigue Test (FT) 50 (Structures) Prior Year ECPs - NonOrganic (10) *Installation 1 of 10*	446 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	446 / 0.000
1.1.44) Fatigue Test (FT) 76/77/78 (Wing) Prior Year ECPs - NonOrganic (11) *Installation 1 of 10*	136 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	136 / 0.000
1.1.45) Main Landing Gear (MLG) Prior Year ECPs - NonOrganic (12) *Installation 1 of 10*	22 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.000
2.1) ECP 6506 CPOMS Improvements - NonOrganic *Installation 1 of 10*	112 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	112 / 0.000
1.1.11) ECP-6213R2 / TEF Redesign - Organic(*)	- / -	- / -	- / -	32 / 29.737	- / -	32 / 29.737	32 / 30.332	48 / 46.408	60 / 59.170	60 / 60.353	58 / 59.508	290 / 285.508
1.1.13) ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing - NonOrganic *Installation 2 of 10*	37 / 0.000	- / -	30 / 0.000	30 / 0.308	- / -	30 / 0.308	30 / 0.314	30 / 0.321	30 / 0.327	30 / 0.334	43 / 0.491	260 / 2.095
1.1.21) ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717 - NonOrganic *Installation 3 of 10*	32 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.131	15 / 0.133	15 / 0.136	- / -	77 / 0.400

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
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ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.22) ECP-6392C2 F/A-18E/F & EA-18G Alternate Angle-of-Attack Transmitter - Organic(*)	- / -	- / -	- / -	120 / 5.868	- / -	120 / 5.868	120 / 5.982	- / -	- / -	- / -	- / -	240 / 11.850
1.1.23) ECP-6416 Environment Control Sys Anti-Ice Duct Bracket - NonOrganic (13) *Installation 4 of 10*	- / -	88 / 0.000	- / -	89 / 0.896	- / -	89 / 0.896	- / -	- / -	- / -	- / -	- / -	177 / 0.896
1.1.25) ECP-6430 Enhancement of the Aft Pivot Support Fitting - NonOrganic *Installation 5 of 10*	288 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.706	72 / 0.720	71 / 0.724	- / -	503 / 2.150
1.1.26) ECP-XX12 FT50 Teardown Bulkhead Cracking - NonOrganic *Installation 6 of 10*	- / -	- / -	72 / 0.000	72 / 1.016	- / -	72 / 1.016	72 / 1.036	72 / 1.057	37 / 0.554	- / -	- / -	325 / 3.663
1.1.27) ECP-XX33 / Hydraulics Components Improvement - NonOrganic *Installation 6 of 10*	- / -	- / -	72 / 0.000	72 / 0.071	- / -	72 / 0.071	72 / 0.073	72 / 0.074	11 / 0.012	- / -	- / -	299 / 0.230
1.1.28) ECP-XX45 / FT50 Structural Related Issues - NonOrganic *Installation 6 of 10*	- / -	- / -	72 / 0.000	72 / 6.504	- / -	72 / 6.504	72 / 6.634	72 / 6.766	72 / 6.902	37 / 3.618	- / -	397 / 30.424
1.1.29) ECP-XX47 Flight Control Surfaces Failures - NonOrganic *Installation 6 of 10*	- / -	- / -	72 / 0.000	72 / 4.596	- / -	72 / 4.596	72 / 4.688	72 / 4.782	72 / 4.877	37 / 2.557	- / -	397 / 21.500
1.1.30) ECP-XX48 / Fuel Tank Wiring Retrofit Improvements - NonOrganic *Installation 6 of 10*	- / -	- / -	72 / 0.000	72 / 0.460	- / -	72 / 0.460	72 / 0.469	72 / 0.479	72 / 0.488	72 / 0.498	109 / 0.774	541 / 3.168
1.1.31) ECP-XX50: F/A-18E/F Fuel Related Upgrade Issues - Organic(*)	- / -	- / -	- / -	100 / 0.640	- / -	100 / 0.640	100 / 0.652	100 / 0.665	100 / 0.679	100 / 0.692	- / -	500 / 3.328
1.1.32) ECP-XX51 / F/A-18E/F ECS Subsystem Upgrade Issues - NonOrganic *Installation 7 of 10*	- / -	- / -	72 / 0.000	72 / 0.520	- / -	72 / 0.520	72 / 0.531	72 / 0.541	72 / 0.552	72 / 0.563	140 / 1.128	572 / 3.835
1.1.33) ECP-XX52 / F/A-18E/F Subsystem Retrofit Upgrade Issues - NonOrganic *Installation 7 of 10*	- / -	- / -	72 / 0.000	72 / 0.651	- / -	72 / 0.651	72 / 0.664	72 / 0.677	72 / 0.691	72 / 0.704	140 / 1.411	572 / 4.798
1.1.34) ECP-XX53 / F/A-18E/F Structure Stress Corrosion Cracking Issues - NonOrganic *Installation 7 of 10*	- / -	- / -	72 / 0.000	72 / 1.734	- / -	72 / 1.734	72 / 1.769	72 / 1.804	72 / 1.840	72 / 1.877	140 / 3.759	572 / 12.783
1.1.35) ECP-XX60: NACES Retrofit Upgrades - Organic(*)	- / -	- / -	- / -	100 / 1.754	- / -	100 / 1.754	100 / 1.789	100 / 1.825	100 / 1.862	100 / 1.899	- / -	500 / 9.129
1.1.36) ECP-XX61 BLK III CFT Upgrade - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 143.000	40 / 145.860	40 / 148.777	320 / 1,565.810	440 / 2,003.447
1.1.37) ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket - NonOrganic (14) *Installation 8 of 10*	- / -	- / -	72 / 0.000	72 / 0.440	- / -	72 / 0.440	72 / 0.449	72 / 0.458	72 / 0.467	48 / 0.317	- / -	408 / 2.131

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
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ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.38) ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet - NonOrganic *Installation 9 of 10*	- / -	6 / 0.000	- / -	6 / 5.695	- / -	6 / 5.695	3 / 2.904	6 / 5.925	3 / 3.022	- / -	- / -	24 / 17.546
1.1.40) ECP-6499 Update of the Lateral Stick Position Sensor - NonOrganic *Installation 10 of 10*	- / -	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
1.1.41) ECP6508 Automatic Drain Valve - Organic(*)	- / -	- / -	- / -	329 / 1.747	- / -	329 / 1.747	329 / 1.782	- / -	- / -	- / -	- / -	658 / 3.529
1.1.42) ECP6530 TORQU Shaft Seals - Organic(*)	- / -	- / -	- / -	601 / 1.500	- / -	601 / 1.500	- / -	- / -	- / -	- / -	- / -	601 / 1.500
1.2.1) Installation Kits N/R - Organic(*)	- / -	- / -	- / -	- / 13.962	- / -	- / 13.962	- / 13.589	- / 13.506	- / 12.926	- / 34.218	- / 35.162	- / 123.363
1.2.2) Software - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.000	- / 1.981	- / 2.169	- / 2.582	- / 14.201	- / 23.933
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 78.099*	*- / -*	*- / 78.099*	*- / 76.657*	*- / 231.106*	*- / 243.251*	*- / 259.849*	*- / 1,682.244*	*- / 2,571.206*
Support												
3.1) Support Equipment	- / -	- / -	- / -	- / 1.443	- / -	- / 1.443	- / 3.228	- / 3.287	- / 3.264	- / 3.323	- / 24.994	- / 39.539
3.2) ILS	- / -	- / -	- / -	- / 16.330	- / -	- / 16.330	- / 16.493	- / 16.600	- / 16.783	- / 16.795	- / 105.890	- / 188.891
3.3) Other Support	- / -	- / -	- / -	- / 8.671	- / -	- / 8.671	- / 8.845	- / 9.022	- / 9.202	- / 9.386	- / 73.748	- / 118.874
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 26.444*	*- / -*	*- / 26.444*	*- / 28.566*	*- / 28.909*	*- / 29.249*	*- / 29.504*	*- / 204.632*	*- / 347.304*
Installation												
Installation 1 of 10: GRP: Prior Year Procurements	- / -	- / -	- / -	- / 49.389	- / 0.000	- / 49.389	- / 48.197	- / 37.312	- / 26.592	- / 18.988	- / 13.376	- / 193.854
Installation 2 of 10: ECP-6234C1 Horizontal Stabilator/ Fuselage Rubbing	- / 0.000	- / -	- / -	- / 0.180	- / 0.000	- / 0.180	- / 0.170	- / 0.306	- / 0.326	- / 0.332	- / 1.540	- / 2.854
Installation 3 of 10: ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717	- / -	- / -	- / -	- / 0.349	- / 0.000	- / 0.349	- / 0.051	- / -	- / 0.206	- / 0.210	- / 0.214	- / 1.030
Installation 4 of 10: ECP-6416 Environment Control Sys Anti-Ice Duct Bracket	- / -	- / -	- / -	- / 1.040	- / 0.000	- / 1.040	- / 1.073	- / -	- / -	- / -	- / 0.000	- / 2.113
Installation 5 of 10: ECP-6430 Enhancement of the Aft Pivot Support Fitting	- / -	- / -	- / -	- / 1.469	- / 0.000	- / 1.469	- / 1.496	- / 1.523	- / 1.550	- / -	- / 4.816	- / 10.854
Installation 6 of 10: GRP: E/F/G Concurrent Installs	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.104	- / 11.519	- / 12.096	- / 11.785	- / 17.769	- / 64.273
Installation 7 of 10: GRP: E/F Concurrent Installs	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.600	- / 1.631	- / 1.663	- / 1.697	- / 8.745	- / 15.336
Installation 8 of 10: ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket	- / -	- / -	- / -	- / 0.274	- / 0.000	- / 0.274	- / 0.281	- / -	- / -	- / 0.287	- / 0.793	- / 1.635
Installation 9 of 10: ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet	- / -	- / -	- / -	- / 4.282	- / 0.000	- / 4.282	- / 4.368	- / 2.229	- / 4.542	- / 2.319	- / 0.000	- / 17.740

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ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 10 of 10: ECP-6499 Update of the Lateral Stick Position Sensor	- / -	- / -	- / -	- / 0.695	- / 0.000	- / 0.695	- / -	- / -	- / -	- / -	- / 0.000	- / 0.695
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 57.678*	*- / -*	*- / 57.678*	*- / 68.340*	*- / 54.520*	*- / 46.975*	*- / 35.618*	*- / 47.253*	*- / 310.384*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**162.221**	**0.000**	**162.221**	**173.563**	**314.535**	**319.475**	**324.971**	**1,934.129**	**3,228.894**

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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 10: GRP: Prior Year Procurements

Manufacturer Information

Manufacturer Name: Not Specified. (15) Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: Prior Year Procurements

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	699 / 49.389	0 / 0.000	699 / 49.389	632 / 48.197	395 / 37.312	225 / 26.592	176 / 18.988	188 / 13.376	2,315 / 193.854
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	699 / 49.389	0 / 0.000	699 / 49.389	632 / 48.197	395 / 37.312	225 / 26.592	176 / 18.988	188 / 13.376	2,315 / 193.854

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	174	178	175	172	158	162	158	154	99	99	100	97	57	56	56	56	45	45	44	42	188	2,315
Out	-	-	-	-	-	-	-	-	-	174	178	175	172	158	162	158	154	99	99	100	97	57	56	56	56	45	45	44	42	188	2,315

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 10: ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing

Manufacturer Information

Manufacturer Name: Boeing - ECP 6234/C1 Horizontal Stabilator/Fuselage Rubbing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025
Delivery Dates		Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026	Sep 2027

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.000	- / -	- / -	18 / 0.180	0 / 0.000	18 / 0.180	17 / 0.170	- / -	- / -	- / -	0 / 0.000	37 / 0.350
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.306	- / -	- / -	0 / 0.000	30 / 0.306
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.326	- / -	0 / 0.000	30 / 0.326
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.332	0 / 0.000	30 / 0.332
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.339	30 / 0.339
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.345	30 / 0.345
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.352	30 / 0.352
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.504	43 / 0.504
Total	2 / 0.000	- / -	- / -	18 / 0.180	0 / 0.000	18 / 0.180	17 / 0.170	30 / 0.306	30 / 0.326	30 / 0.332	133 / 1.540	260 / 2.854

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	-	-	-	-	-	-	-	-	3	3	6	6	2	3	6	6	7	7	8	8	7	7	8	8	7	7	8	8	133	260
Out	2	-	-	-	-	-	-	-	-	3	3	6	6	2	3	6	6	7	7	8	8	7	7	8	8	7	7	8	8	133	260

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 10: ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717

Manufacturer Information

Manufacturer Name: Boeing - ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717 | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Mar 2023	Mar 2024	Mar 2025
Delivery Dates					Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6394R1 Horizontal Stabilator Gang Channel Cor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	28 / 0.349	0 / 0.000	28 / 0.349	4 / 0.051	- / -	- / -	- / -	0 / 0.000	32 / 0.400
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.206	- / -	0 / 0.000	15 / 0.206
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.210	0 / 0.000	15 / 0.210
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.214	15 / 0.214
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	28 / 0.349	0 / 0.000	28 / 0.349	4 / 0.051	- / -	15 / 0.206	15 / 0.210	15 / 0.214	77 / 1.030

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	7	7	7	7	4	-	-	-	-	-	-	-	3	4	4	4	3	4	4	4	15	77
Out	-	-	-	-	-	-	-	-	-	7	7	7	7	4	-	-	-	-	-	-	-	3	4	4	4	3	4	4	4	15	77

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 10: ECP-6416 Environment Control Sys Anti-Ice Duct Bracket

Manufacturer Information

Manufacturer Name: Boeing - ECP-6416 Environment Control Sys Anti-Ice Duct Bracket (16)	Manufacturer Location: St. Louis, MO
Administrative Leadtime *(in Months)*: 12	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Sep 2019		Nov 2020				
Delivery Dates	Sep 2020		Sep 2021				

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-6416 Environment Control Sys Anti-Ice Duct Brack

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	88 / 1.040	0 / 0.000	88 / 1.040	- / -	- / -	- / -	- / -	0 / 0.000	88 / 1.040
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	89 / 1.073	- / -	- / -	- / -	0 / 0.000	89 / 1.073
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	88 / 1.040	0 / 0.000	88 / 1.040	89 / 1.073	- / -	- / -	- / -	0 / 0.000	177 / 2.113

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	22	22	22	22	22	22	22	23	-	-	-	-	-	-	-	-	-	-	-	-	-	177
Out	-	-	-	-	-	-	-	-	-	22	22	22	22	22	22	22	23	-	-	-	-	-	-	-	-	-	-	-	-	-	177

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 10: ECP-6430 Enhancement of the Aft Pivot Support Fitting

Manufacturer Information

Manufacturer Name: Boeing - ECP 6430 Enhancement of the Aft Pivot Support Fitting

Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 12

Production Leadtime *(in Months)*: 19

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Sep 2023	Sep 2024	Sep 2025
Delivery Dates					Apr 2025	Apr 2026	Apr 2027

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6430 Enhancement of the Aft Pivot Support Fitt

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	72 / 1.469	0 / 0.000	72 / 1.469	72 / 1.496	72 / 1.523	72 / 1.550	- / -	0 / 0.000	288 / 6.038
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.581	72 / 1.581
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.613	72 / 1.613
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 1.622	71 / 1.622
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	72 / 1.469	0 / 0.000	72 / 1.469	72 / 1.496	72 / 1.523	72 / 1.550	- / -	215 / 4.816	503 / 10.854

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	-	-	-	-	215	503
Out	-	-	-	-	-	-	-	-	-	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	-	-	-	-	215	503

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 10: GRP: E/F/G Concurrent Installs

Manufacturer Information

Manufacturer Name: Boeing - E/F A-kits | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	
Delivery Dates		Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025	

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: E/F/G Concurrent Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	360 / 11.104	- / -	- / -	- / -	0 / 0.000	360 / 11.104
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	360 / 11.325	- / -	- / -	0 / 0.000	360 / 11.325
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.194	288 / 11.552	- / -	0 / 0.000	360 / 11.746
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.544	360 / 11.785	0 / 0.000	360 / 12.329
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 11.604	264 / 11.604
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	146 / 5.910	146 / 5.910
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	109 / 0.255	109 / 0.255
Total	- / -	- / -	- / -	- / -	- / -	- / -	360 / 11.104	432 / 11.519	288 / 12.096	360 / 11.785	519 / 17.769	1,959 / 64.273

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	90	90	90	90	108	108	108	108	72	72	72	72	90	90	90	90	519	1,959
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	90	90	90	90	108	108	108	108	72	72	72	72	90	90	90	90	519	1,959

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 10: GRP: E/F Concurrent Installs

Manufacturer Information

Manufacturer Name: Various - E/F Concurrent Installs | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	
Delivery Dates		Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: E/F Concurrent Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.600	- / -	- / -	- / -	0 / 0.000	216 / 1.600
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.631	- / -	- / -	0 / 0.000	216 / 1.631
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.663	- / -	0 / 0.000	216 / 1.663
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.697	0 / 0.000	216 / 1.697
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.730	216 / 1.730
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 3.543	216 / 3.543
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	420 / 3.472	420 / 3.472
Total	- / -	- / -	- / -	- / -	- / -	- / -	216 / 1.600	216 / 1.631	216 / 1.663	216 / 1.697	852 / 8.745	1,716 / 15.336

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	852	1,716
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	852	1,716

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 8 of 10: ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket

Manufacturer Information

Manufacturer Name: Boeing - ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: ECP-6475 Aux Power Unit Hydraulic Accumulator Suppor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	72 / 0.274	0 / 0.000	72 / 0.274	- / -	- / -	- / -	- / -	0 / 0.000	72 / 0.274
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.281	- / -	- / -	- / -	0 / 0.000	72 / 0.281
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.287	0 / 0.000	72 / 0.287
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.292	72 / 0.292
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.298	72 / 0.298
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.203	48 / 0.203
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	72 / 0.274	0 / 0.000	72 / 0.274	72 / 0.281	- / -	- / -	72 / 0.287	192 / 0.793	408 / 1.635

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	18	18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	18	18	18	18	192	408
Out	-	-	-	-	-	-	-	-	-	18	18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	18	18	18	18	192	408

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 9 of 10: ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet

Manufacturer Information

Manufacturer Name: Various - ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6480: Navy Flight Demo Squadron (Blue Angels)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	6 / 4.282	0 / 0.000	6 / 4.282	- / -	- / -	- / -	- / -	0 / 0.000	6 / 4.282
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 4.368	- / -	- / -	- / -	0 / 0.000	6 / 4.368
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.229	- / -	- / -	0 / 0.000	3 / 2.229
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 4.542	- / -	0 / 0.000	6 / 4.542
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.319	0 / 0.000	3 / 2.319
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 4.282	0 / 0.000	6 / 4.282	6 / 4.368	3 / 2.229	6 / 4.542	3 / 2.319	0 / 0.000	24 / 17.740

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	2	2	1	1	2	2	1	1	1	-	1	1	2	2	1	1	1	-	-	24
Out	-	-	-	-	-	-	-	-	-	1	1	2	2	1	1	2	2	1	1	1	-	1	1	2	2	1	1	1	-	-	24

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 10 of 10: ECP-6499 Update of the Lateral Stick Position Sensor

Manufacturer Information

Manufacturer Name: Boeing - ECP 6499 | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019					
Delivery Dates		Sep 2020					

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-6499 Update of the Lateral Stick Position Sensor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.695	0 / 0.000	1 / 0.695	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.695
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.695	0 / 0.000	1 / 0.695	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.695

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Footnotes:

(7) Kits were procured under LI-0525 OSIP 19-01, starting in FY10, installs are funded under OSIP 14-03

(8) ECP-6394R1 AYC-1682 is a drain hole, and there is no cost for kits.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 3 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(9) All kits were provided by OEM as in warranty. In FY18 procurement of 200 "on-condition" fittings ($143K) via FRCSE Manufacturing.

(10) This cost element includes the following ECPs related to Fatigue Test (FT) 50 for Structures: ECP-6183R1 FT50 Failure of Upper Wing Skin Splice Plate; ECP-6239R1 FT50 18K Fuselage Outboard Formal @Y679 Failure; ECP-6247R1 FT50 18K Y520 Former Cracks at Lower Drop Link; ECP-6266 FT50 18K Y555.5 and Y568 Former Cracks at Keel Longeron Life Limit; ECP-6303R1 FT50 18K Y577 Former Redesign; ECP-6304R1 FT50 18K Web and Wing Drag Longeron Redesign; ECP-6306R1 FT50 18K Y618 Inboard Former (74A342314) Redesign; ECP-6326 FT50 Fuel Barrier Web at Y510; ECP-6408C1 F/A-18 E/F FT50 Y233 Bulkhead Z90 Floor Attachment Retrofit; ECP-6411 F/A-18 E/F FT50 Inner-Wing Upper Splice Fitting @ Aft Fastner Skin on

(11) This cost element includes the following ECPs related to Fatigue Tests (FTs) 76/77/78 for Wings: ECP-6243 FT76 Jackpoint Support Fitting Life Limit; ECP-6275C1 FT77 Wing Inboard Closure Rib Life Limit; ECP-6282 FT50/FT77 Post CRI Inner Wing Retrofit; ECP-6285C1: FT77 Lower Wing Skin Splice Fitting Life Limit; ECP-6292 FT76 Avionics Bay 3 & 4 Door Hinges; ECP-6295 FT77 Wing Spar 6 Life Limit; ECP-6309 FT77 Retrofit ECP for the Outer Wing; ECP-6341 FT77/78 Aileron Retrofit

(12) This cost element includes the following ECPs related to the Main Landing Gear (MLG): ECP-6104 MLG Door Bushing Migration ECP-6194 MLG Trunnion Bearing Loose Retention Nut ECP-6196C1 MLG R/H Upper Planing Link Attach Fitting Failure

(13) Future funding for this ECP has been realigned to OSIP 13-19 in FY19 for better visibility of PE efforts.

(14) Prior year qty of 22 are OEM provided as in-warranty kits so do not have a cost.

(15) ECP 6506 installed under OSIP 13-19

(16) Intial procurement requires longer Admnistrative and Production Leadtimes; 12 months each. For subsequent procurements (FY21) Adminstrative and Production Leadtimes are reduced to 2 months and 10 months, respectively.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 4 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	174.282	0.000	174.282	249.492	381.188	360.938	350.734	3,723.222	5,239.856
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	174.282	0.000	174.282	249.492	381.188	360.938	350.734	3,723.222	5,239.856
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**174.282**	**0.000**	**174.282**	**249.492**	**381.188**	**360.938**	**350.734**	**3,723.222**	**5,239.856**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Incorporation of structural and sub-systems enhancements and changes are required to extend the F/A-18E/F service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY2046. Enhancements and changes include resolution of discrepancies identified as a result of Service Life Assessment Program (SLAP) analysis and in-service experience. These enhancements and changes include modifications to the entire airframe and aircraft sub-systems to extend flight hours, as well as modifications to ensure landing gear, catapult and attachment components can extend total landings. These modifications include: Block 1 Forward Fuselage, Block 2 Forward Fuselage, Inner Wing Panel (Pre-CRI), Inner Wing Panel (CRI), Outer Wing Panel (Pre-CRI), Outer Wing Panel (CRI), Center Fuselage, Aft Fuselage, Vertical Tail, Hydraulic Systems, Landing Gear Systems, Fuel Delivery Systems, Environmental Control Systems, Mechanical Systems, and the low observable paint re-baseline. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft and to not correct the structural defects discovered on fatigue test articles. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. SLAP analyzes the critical structural and sub-system areas to determine crack initiation. Service Life Extension Program (SLEP) will transition into a full turn-key operation to install SLEP kits, safety of flight technical directives(TDs) and other relevant TDs, funded from other OSIPs to achieve the Service Life Modification (SLM). The aircraft will be inducted by the Original Equipment Manufacturer (OEM) and returned to the fleet as a fully modified aircraft with an extended service life to achieve fleet missions.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Currently all Lot 21 through 42 aircraft have service life limits established by the F/A-18 and EA-18G Service Life Bulletin not inclusive of service life management plan modifications to extend the service life. The OEMs are currently performing structures and sub-systems SLAP. As SLAP analysis is completed, "hot spots" are reviewed to determine the best approach for extending specific areas of concern. Until FY18, NRE for service life modifications were grouped into one of five series of Zonal ECPs (6465, 6466, 6467, 6468, and 6469) according to aircraft block and location. Zonal ECP NRE will continue through FY22, and subsystems ECPs beyond; but starting in FY18 will begin a transition to a holistic SLM effort based on the entire aircraft. In an effort to reduce exigent procurement lead times and resulting high out-of-reporting rates associated with traditional, disparate piece part kit procurements and installation, SLM relies on a turn-key approach utilizing the OEM to extend aircraft service life. SLM includes all material / kit and labor / installation costs to modify service life from 6,000 flight hours to 7,500 flight hours. NRE will continue until a SLEP full kit is developed and the aircraft service life will be extended to 10,000 flight hours.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 4 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: F/A-18E/F and EA-18G **Modification Type:** SAFETY / LIFE EXTENSION **Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-6469: Inner Wing Panel (Pre-CRI) - NonOrganic *Installation 1 of 1*	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
1.1.2) ECP-6469: Outer Wing Panel (Pre-CRI) - NonOrganic *Installation 1 of 1*	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000
1.1.3) Service Life Extension (SLEP) kits - Organic(*) (17)	- / -	- / -	- / -	28 / 142.951	- / -	28 / 142.951	31 / 211.200	40 / 335.570	40 / 316.432	40 / 300.819	411 / 3,412.771	590 / 4,719.743
1.2.1) Installation Kit N/R - Organic(*) (18)	- / -	- / -	- / -	- / 10.645	- / -	- / 10.645	- / 16.641	- / 22.136	- / 21.036	- / 25.932	- / 155.182	- / 251.572
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 153.596*	*- / -*	*- / 153.596*	*- / 227.841*	*- / 357.706*	*- / 337.468*	*- / 326.751*	*- / 3,567.953*	*- / 4,971.315*
Support												
3.1) ILS	- / -	- / -	- / -	- / 3.323	- / -	- / 3.323	- / 4.148	- / 5.629	- / 5.259	- / 5.410	- / 14.422	- / 38.191
3.2) Other Support	- / -	- / -	- / -	- / 17.160	- / -	- / 17.160	- / 17.503	- / 17.853	- / 18.211	- / 18.573	- / 140.847	- / 230.147
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 20.483*	*- / -*	*- / 20.483*	*- / 21.651*	*- / 23.482*	*- / 23.470*	*- / 23.983*	*- / 155.269*	*- / 268.338*
Installation												
Installation 1 of 1: GRP: ECP 6469 Wing Panel SLEP Installs (1 year leadtime)	- / -	- / -	- / -	- / 0.203	- / 0.000	- / 0.203	- / -	- / -	- / -	- / -	- / 0.000	- / 0.203
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.203*	*- / -*	*- / 0.203*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.203*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**174.282**	**0.000**	**174.282**	**249.492**	**381.188**	**360.938**	**350.734**	**3,723.222**	**5,239.856**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0505 / F-18E/F and EA-18G Modernization and Sustainment	**Modification Number / Title:** 4 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: ECP 6469 Wing Panel SLEP Installs (1 year leadtime)

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP 6469 Wing Panel SLEP Installs (1 year leadtime)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	4 / 0.203	0 / 0.000	4 / 0.203	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.203
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	4 / 0.203	0 / 0.000	4 / 0.203	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.203

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

Footnotes:

(17) Unit cost varies based on the series (E/F/G) of aircraft planned for induction.

(18) NRE is required in future years due to development of multiple ECPs as locations of the aircraft are determined to need extension. Each structural zone ECP will require multiple revisions for multiple requirements. Each of these efforts will require NRE. FY21 NRE is required for a third site stand up.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0513 / AEA Systems

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	380.259	40.182	33.843	21.061	0.000	21.061	27.203	25.002	25.103	25.394	99.004	677.051
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	380.259	40.182	33.843	21.061	0.000	21.061	27.203	25.002	25.103	25.394	99.004	677.051
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**380.259**	**40.182**	**33.843**	**21.061**	**0.000**	**21.061**	**27.203**	**25.002**	**25.103**	**25.394**	**99.004**	**677.051**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to Airborne Electronic Attack (AEA) products used on multiple platforms. Modifications budgeted and programmed include: procurement and enhancement of the AN/ALQ-99 Tactical Jamming System (TJS) and Low Band Transmitter Antenna Group (LBT AG) inventory, AN/ALQ-99 TJS upgrades and related sustainability, capability, and viability modifications. AEA will support procurement of new technologies and equipment as needed to combat emerging and evolving electronic warfare technology and systems.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0513 / AEA Systems

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11) (RELIABILITY / MISSION CAPABILITY)				- / 367.859	- / 40.182	- / 33.843	- / 21.061	- / 0.000	- / 21.061
P-3a	2 / Inactive OSIPS (RELIABILITY / MISSION CAPABILITY)				- / 12.400	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 380.259**	**- / 40.182**	**- / 33.843**	**- / 21.061**	**- / 0.000**	**- / 21.061**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11) (RELIABILITY / MISSION CAPABILITY)				- / 27.203	- / 25.002	- / 25.103	- / 25.394	- / 99.004	- / 664.651
P-3a	2 / Inactive OSIPS (RELIABILITY / MISSION CAPABILITY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 12.400
P-40	**Total Gross/Weapon System Cost**				**- / 27.203**	**- / 25.002**	**- / 25.103**	**- / 25.394**	**- / 99.004**	**- / 677.051**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The Department of the Navy has been tasked with accomplishing the Nation's AEA mission in various theaters of operation over the last few decades. The AEA capability fielded by the Navy on the EA-18G Growler has been a high demand, low density asset. The Marine Corps has transitioned to an organic capability utilizing electronic warfare payloads flown on Marine Corps aircraft. Stable investment in AEA systems will ensure continued availability of AEA capability to meet warfighter demand. Investment in the AN/ALQ-99 TJS will ensure continued system availability until Next Generation Jammer (NGJ) achieves Full Operational Capability across all bands of the Electromagnetic Spectrum (EMS).

AEA System procurements and related efforts are required to combat emerging electronic warfare technology and systems. Investment in AEA System efforts will ensure that sufficient AEA capability is available to meet warfighter requirements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	367.859	40.182	33.843	21.061	0.000	21.061	27.203	25.002	25.103	25.394	99.004	664.651
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	367.859	40.182	33.843	21.061	0.000	21.061	27.203	25.002	25.103	25.394	99.004	664.651
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**367.859**	**40.182**	**33.843**	**21.061**	**0.000**	**21.061**	**27.203**	**25.002**	**25.103**	**25.394**	**99.004**	**664.651**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational and Safety Improvement Program covers system modifications required to improve AN/ALQ-99 reliability, maintainability, availability, resolve obsolescence issues, and correct deficiencies found in testing or in the field. Engineering changes are needed to enhance mission capability and integration of evolving Electronic Warfare systems to address increased mission requirements and emerging threats in support of EA-18G aircraft. The out of production transmitter inventory is static and is being stretched due to increasing electronic warfare aircraft numbers and mission requirements. The AN/ALQ-99 TJS consists of six transmitters that are mission configurable depending on target threat. Reconstitution of reclaimed United States Air Force (USAF) EF-111 Band 4 through 8 transmitters to United States Navy (USN) configuration will alleviate significant jammer inventory shortfalls for the EA-18G platform.

B KITS: AN/ALQ-99 TJS hardware procurements include the Universal Exciter Upgrade (UEU), Band 8 and Band 9/10 Transmitters and Antennas, Vertical Polarized (VPOL) Antenna, Low Band Transmitter Antenna Group (LBT AG) and Radomes to include procurement of EA-18G Extended Low Band Radome (GELBR) and Universal High Band Radome (UHBR).

INSTALLATION EQUIPMENT N/R: AN/ALQ-99 TJS obsolescence mitigation efforts, capability and reliability enhancements require non-recurring engineering (NRE) for AN/ALQ-99 TJS components such as the UEU, LBT AG, Band 8 and Band 9/10 Transmitters, and Antennas. Prior year installation equipment N/R includes NRE for AN/ALQ-99 TJS components such as the Hardback, PIU, Band 2, Band 4, Band 5/6, Band 7, Ram Air Turbine and Radomes.

SUPPORT EQUIPMENT: Introduction of new/modified AN/ALQ-99 pod equipment requires new/modified organizational, intermediate, and depot level support equipment; such as modifications and additions to the AN/ALQ-99 pod test set to support LBT AG, modifications to the High Power Device Test Set to extend frequency coverage to test Band 9/10 Transmitters, and Enhanced Tactical Pod Tester (E-TPT).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MULTIPLE PLATFORMS	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Airborne Electronic Attack (AEA) Systems (OSIP 007-11)												
B Kits												
Recurring												
2.1.1) Transmitters - Organic [1]	146 / 30.070	- / -	- / -	- / -	- / -	- / -	- / -	74 / 11.301	70 / 8.405	81 / 9.604	192 / 19.593	563 / 78.973
2.1.2) Vertical Polarized (VPOL) Antenna - Organic	- / -	22 / 2.042	64 / 6.059	96 / 9.271	- / -	96 / 9.271	39 / 3.841	- / -	- / -	- / -	- / -	221 / 21.213
2.1.3) Radomes - Organic	60 / 8.966	6 / 1.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 9.991
2.1.4) Universal Exciter Upgrade (UEU) - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.684	80 / 5.475	80 / 5.585	200 / 13.744
2.1.5) Cong. Add: ALQ-99 Band 6S Jammer - Organic	- / -	- / 15.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.000
2.1.6) Archived Mods - Organic	413 / 132.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	413 / 132.066
Subtotal: Recurring	*- / 171.102*	*- / 18.067*	*- / 6.059*	*- / 9.271*	*- / -*	*- / 9.271*	*- / 3.841*	*- / 11.301*	*- / 11.089*	*- / 15.079*	*- / 25.178*	*- / 270.987*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic [2]	- / 76.026	- / 2.350	- / 0.450	- / 3.757	- / -	- / 3.757	- / 8.434	- / -	- / -	- / -	- / -	- / 91.017
2.2.2) Installation Equipment N/R LBC - Organic [3]	- / 51.002	- / 2.278	- / 2.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 55.440
Subtotal: Non-Recurring	*- / 127.028*	*- / 4.628*	*- / 2.610*	*- / 3.757*	*- / -*	*- / 3.757*	*- / 8.434*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 146.457*
Subtotal: Airborne Electronic Attack (AEA) Systems (OSIP 007-11)	*619 / 298.130*	*28 / 22.695*	*64 / 8.669*	*96 / 13.028*	*- / -*	*96 / 13.028*	*39 / 12.275*	*74 / 11.301*	*110 / 11.089*	*161 / 15.079*	*272 / 25.178*	*1,463 / 417.444*
Subtotal: Procurement, All Modification Items	*- / 298.130*	*- / 22.695*	*- / 8.669*	*- / 13.028*	*- / -*	*- / 13.028*	*- / 12.275*	*- / 11.301*	*- / 11.089*	*- / 15.079*	*- / 25.178*	*- / 417.444*
Support *(All Modification Items)*												
3.1) Engineering Change Orders	- / 8.937	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.937
3.2) Data	- / 0.222	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.222
3.3) Support Equipment [4]	- / 17.494	- / 4.932	- / 11.668	- / -	- / -	- / -	- / 6.619	- / 5.226	- / 5.369	- / 1.498	- / 1.875	- / 54.681
3.4) Integrated Logistics Support	- / 13.712	- / -	- / 0.677	- / 0.421	- / -	- / 0.421	- / 0.544	- / 0.555	- / 0.566	- / 0.577	- / 4.711	- / 21.763
3.5) Other Support	- / 29.364	- / 12.555	- / 12.829	- / 7.612	- / -	- / 7.612	- / 7.765	- / 7.920	- / 8.079	- / 8.240	- / 67.240	- / 161.604
Subtotal: Support	*- / 69.729*	*- / 17.487*	*- / 25.174*	*- / 8.033*	*- / -*	*- / 8.033*	*- / 14.928*	*- / 13.701*	*- / 14.014*	*- / 10.315*	*- / 73.826*	*- / 247.207*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MULTIPLE PLATFORMS	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**367.859**	**40.182**	**33.843**	**21.061**	**0.000**	**21.061**	**27.203**	**25.002**	**25.103**	**25.394**	**99.004**	**664.651**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 1 / Airborne Electronic Attack (AEA) Systems (OSIP 007-11)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Airborne Electronic Attack (AEA) Systems (OSIP 007-11)		

Footnotes:

(1) Yearly unit cost varies based on type and quantity of transmitter/antenna procured. Based on updated readiness requirements, additional Band 8 antennas, Band 9/10 transmitters and Low Band Transmitter Antenna Group (LBT AG) are being procured from FY 2023 through the FYDP.

(2) Non-Recurring funding increases in FY 2021 for Non-Recurring Engineering (NRE) associated with the Band 9/10 microprocessor and in FY 2022 to address UEU obsolescence, LBT I/O 1 and mircoprocessor .

(3) LBC procurement is no longer planned beginning in FY 2021 based on the updated ALQ-99 readiness requirements, and AEA priorities.

(4) FY 2022 - FY 2025 addresses obsolescence of depot test stations as well as creation of the Operational Test Program Sets (OTPS) to offload work from legacy test sets to Consolidated Automatic Support System (CASS).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 2 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	12.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.400
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	12.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.400
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**12.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**12.400**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0513 / AEA Systems	**Modification Number / Title:** 2 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MULTIPLE PLATFORMS	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) INACTIVE OSIPS - Organic(*)	- / 12.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.400
Subtotal: Procurement	*- / 12.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 12.400*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**12.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**12.400**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0514 / AV-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 530		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,413.300	54.726	38.231	34.082	0.000	34.082	32.713	38.126	36.682	37.483	97.159	1,782.502
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,413.300	54.726	38.231	34.082	0.000	34.082	32.713	38.126	36.682	37.483	97.159	1,782.502
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,413.300**	**54.726**	**38.231**	**34.082**	**0.000**	**34.082**	**32.713**	**38.126**	**36.682**	**37.483**	**97.159**	**1,782.502**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to T/AV-8B aircraft. The AV-8B is a single engine, single crew member (two crew members for the trainer variant) aircraft capable of vertical/short take-off and landing operations. The AV-8B meets the Marine Corps requirements for a light attack aircraft to provide responsive offensive air power that can operate from ships and austere forward bases in direct support of ground forces. The overall goal of the modifications budgeted in FY 2021 is to continue incorporation of Obsolescence Replacement (OR)/Readiness Management Plan (RMP) systems, electrical and structural changes; inventory sustainment and upgrade efforts to offset obsolescence and attrition; incorporation of LITENING Pod upgrades, to include a forward section upgrade, an Advanced Tactical Data Link (ATDL)and release of associated software upgrades; incorporation of AV-8B F402-RR-408 engine safety and operational changes and crypto-modernization upgrade of a digitally interoperable Link 16 capability and associated software upgrades.

The AV-8B active inventory (June 2019) consists of 4 configurations:
16 Two-Seat T/AV-8B Aircraft
34 Night Attack Aircraft
54 RADAR Remanufacture Aircraft
20 RADAR Production Aircraft

Retrofit quantities of each Engineering Change Proposal (ECP) vary by aircraft configuration type & inventory when the change was introduced into production. Retrofit quantities of each ECP also vary depending on whether the ECP applies to the airframe or an individual Weapons Replaceable Assembly. Non-recurring Engineering (NRE) varies from year to year based on complexity of ECPs and upgrades being engineered for implementation in a given year. Publications and Integrated Logistics Support (ILS) also vary from year to year based on complexity of logistics elements and number of publications required to be updated for each individual ECP.

NOTE:
Service Life - 2028.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0514 / AV-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 530

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AV-8B LITENING POD (OSIP 023-00) (Upgrade)				- / 641.959	- / 26.285	- / 18.908	- / 20.004	- / 0.000	- / 20.004
P-3a	2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04) (Upgrade)				- / 67.667	- / 3.858	- / 3.002	- / 2.661	- / 0.000	- / 2.661
P-3a	3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06) (TBD)				- / 196.389	- / 20.080	- / 13.967	- / 7.605	- / 0.000	- / 7.605
P-3a	4 / DIGITAL INTEROPERABILITY (OSIP 014-16) (Upgrade)				- / 21.394	- / 4.503	- / 2.354	- / 3.812	- / 0.000	- / 3.812
P-3a	5 / INACTIVE OSIPS (TBD)				- / 485.891	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,413.300**	**- / 54.726**	**- / 38.231**	**- / 34.082**	**- / 0.000**	**- / 34.082**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AV-8B LITENING POD (OSIP 023-00) (Upgrade)				- / 22.086	- / 27.826	- / 26.152	- / 26.722	- / 61.027	- / 870.969
P-3a	2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04) (Upgrade)				- / 2.729	- / 3.258	- / 3.336	- / 3.414	- / 14.177	- / 104.102
P-3a	3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06) (TBD)				- / 4.968	- / 7.042	- / 7.194	- / 7.347	- / 21.955	- / 286.547
P-3a	4 / DIGITAL INTEROPERABILITY (OSIP 014-16) (Upgrade)				- / 2.930	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 34.993
P-3a	5 / INACTIVE OSIPS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 485.891
P-40	**Total Gross/Weapon System Cost**				**- / 32.713**	**- / 38.126**	**- / 36.682**	**- / 37.483**	**- / 97.159**	**- / 1,782.502**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2021 funding will continue to fund LITENING COFP V4 software upgrade required to utilize ATDL, and associated firmware validation and logistics elements to include training and support equipment. COFP V4 will integrate new data sets to the aircraft mission and weapon systems computers, and will integrate Pod Datalink encryption. FY 2021 will also continue procurement of the ATDL, will provide LITENING forward section upgrade and will fund non-recurring engineering efforts for the LITENING Digital Port Upgrade. FY 2021 funding will also continue incorporation of AV-8B F402-RR-408 engine safety and operational changes; will continue incorporation of OR/RMP systems, electrical and structural changes to include Leading Edge Root Extension (LERX), Onboard Oxygen Generating System upgrade, and Fuel Quantity Indicator Engineering Change Proposals (ECPs) and inventory sustainment and upgrade efforts to offset obsolescence and attrition. FY 2021 funding supports the continuation of upgrading Link 16 Small Tactical Terminals (STTs) to meet crypto modernization standards.

The FY 2021 funding request was reduced by $5.685M to account for the availability of prior year execution balances.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 1 / AV-8B LITENING POD (OSIP 023-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	641.959	26.285	18.908	20.004	0.000	20.004	22.086	27.826	26.152	26.722	61.027	870.969
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	641.959	26.285	18.908	20.004	0.000	20.004	22.086	27.826	26.152	26.722	61.027	870.969
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**641.959**	**26.285**	**18.908**	**20.004**	**0.000**	**20.004**	**22.086**	**27.826**	**26.152**	**26.722**	**61.027**	**870.969**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The system integrates and procures an external targeting pod that includes an infrared and low-light television targeting device capable of detecting, classifying, auto-tracking, and designating air-to-surface targets. The system will support first-pass autonomous delivery of conventional, precision guided and accurate munitions to include Laser Maverick, Guided Bomb Unit (GBU)-12, GBU-16, and Joint Direct Attack Munitions. The system will provide targeting capabilities for the AV-8B Fleet of Night Attack and RADAR aircraft through the end of its service life. The AV-8B Program Office is the single management authority, procuring, integrating, and managing the LITENING Pod program on all United States Marine Corps (USMC) (AV-8B/F/A-18) platforms in order to maintain commonality within USMC Tactical Air (TACAIR) for LITENING capabilities. Under this structure, the G4 LITENING pod is being procured and integrated on the AV-8B and F/A-18 platforms via aircraft-specific Operational Flight Programs (OFPs). The G4 upgrade vastly improves combat capabilities through increased coverage, expanded Improvised Explosive Device detection capability, and expanding range of video downlink to support ground units equipped with Remote Operated Video Enhanced Receiver (ROVER) and Video Scout ground stations. Theater Joint Tactical Air Requests are specifically requesting LITENING Datalink capabilities for Intelligence, Surveillance, and Reconnaissance. The upgrade doubles the Forward Looking Infrared resolution, and adds Laser Target Image Processing (LTIP) for enhanced detection and targeting capability; increasing the survivability and effectiveness of ground forces. Further upgrades to the Pod Common USMC OFP, such as COFP V4 and V5, will be integrated in follow-on AV-8B and F/A-18 platform OFPs. Future upgrades are planned to the LITENING Datalink. The Advanced Tactical Datalink (ATDL), in conjunction with COFP V4, will permit collaborative and networked payloads to communicate with each other and determine appropriate action against multiple targets simultaneously. It will enable usage of multiple data waveforms for information exchange in both air-to-air and air-to-ground environments among an increasing number of contributors, providing the ability to link ground forces into a digital interoperable, robust, and flexible network architecture. The ATDL will serve as a conduit between disparate networks and waveforms and off-board relative and pertinent data to maneuvering forces in real time and will provide wireless networking capability. Support equipment will include portable power units, trouble shooting support equipment and video viewing devices. The associated V4 software upgrade will integrate tracking Algorithm updates providing more reliable tracking of moving targets, improvements to the passive ranging, improvements to Pod focus and mode selection process, and image overlay mode. The G4 to SE Pod Forward Section Upgrade will upgrade LITENING Pod forward sections component with a Forward-Looking Infra-Red (FLIR) improvement that will mitigate emergent threats. The LITENING Digital Port Upgrade and associated V5 software to enable this upgrade will enable the LITENING pod to connect to the aircraft via high speed Ethernet connection, which will enable transmission of high definition LITENING pod video to a tablet display in the cockpit via an aircraft wiring kit. This will enable aircrew to view pod video in high definition in order to better identify threats and positively identify targets.

FY21 continues funding COFP V4 software upgrade, required to utilize ATDL, and associated firmware validation and logistics elements to include training and support equipment. COFP V4 will integrate new data sets to the aircraft mission and weapon systems computers, and will integrate Pod Datalink encryption. FY21 continues the procurement of the ATDL and Gen 4 to SE forward section upgrades, will begin non-recurring engineering efforts for the LITENING Digital Port (LDP) Upgrade, and will fund COFP V5 software required for the LDP upgrade.

All LITENING modifications, software/firmware validation, and associated logistics elements support both USMC TACAIR Expeditionary platforms that are currently supporting Overseas Contingency Operations (OCO) combat operations, and all Commandant of the Marine Corps directed pre-deployment training requirements. COFP costs will fluctuate between years due to software/firmware upgrade complexity for specific software upgrades, as well as differences in scope between early contractor efforts for Pod software, and following Organic efforts for aircraft software coding and integration. Conduct mitigations for parts obsolescence in the LITENING pod and associated training and support equipment. Funds will be utilized to manage, process, and incorporate LITENING upgrades and implement changes to sustain

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 1 / AV-8B LITENING POD (OSIP 023-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

and improve the digital interoperability systems readiness including safety, mission availability, system employment, and component reliability, maintainability, and obsolescence conditions as these emerging deficiencies arise and require modification. This funding will ensure that software is upgraded and integrated, and logistically supported to ensure the LITENING capabilities are integrated with aircraft OFPs.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The LITENING Targeting Pod is a non-developmental item. FY21 baseline funding continues Common OFP V4 upgrade efforts to include integration into platform OFPs, continue procurement of ATDLs and Gen 4 to SE forward section upgrades, conducts engineering effort associated with LITENING Digital Port Upgrade and COFP V5 software effort required for LDP upgrade, performs software/firmware validation and associated logistics elements to include publications, training equipment and support equipment. The LITENING pod will be in service past the out of service date of the AV-8B, as the Expeditionary USMC LITENING pod will remain in service and require ongoing upgrades to support its use on the USMC F/A-18 platform through its service life.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 1 / AV-8B LITENING POD (OSIP 023-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AV-8B Night Attack & Radar/Reman	**Modification Type:** Upgrade	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-TBD AV-8B LITENING Video to Cockpit Wiring A Kit - NonOrganic *Installation 1 of 1*	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.314	13 / 1.041	10 / 0.817	31 / 2.583	15 / 1.201	73 / 5.956
1.2.1) Installation Kits N/R - Organic(*) (1)	- / -	- / -	- / 1.759	- / 0.997	- / -	- / 0.997	- / 0.135	- / -	- / -	- / -	- / -	- / 2.891
2.1.1) Pod Upgrade Kits (BLOCK 1 to GEN4) - Organic(*)	42 / 62.289	4 / 7.456	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 69.745
2.1.2) G4 to SE Pod Forward Section Upgrade - Organic(*) (2)	- / -	5 / 1.250	7 / 1.785	11 / 2.861	- / -	11 / 2.861	14 / 3.714	16 / 4.245	16 / 4.330	23 / 6.224	129 / 21.386	221 / 45.795
2.1.3) Common OFP V4 - Organic(*) (3)	- / 9.782	- / 8.513	- / 7.513	- / 3.686	- / -	- / 3.686	- / -	- / -	- / -	- / -	- / -	- / 29.494
2.1.4) Advanced Tactical Datalink (ATDL) WRA - Organic(*) (4)	- / -	3 / 1.200	7 / 2.857	17 / 7.076	- / -	17 / 7.076	30 / 12.737	34 / 14.724	29 / 12.810	5 / 2.209	- / -	125 / 53.613
2.1.5) Common OFP V5 - LITENING Digital Port - Organic(*) (5)	- / -	- / -	- / 1.179	- / 2.073	- / -	- / 2.073	- / 1.436	- / 0.166	- / 0.215	- / 0.221	- / -	- / 5.290
2.1.6) LITENING Digital Port Pod Upgrade - Organic(*) (6)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.463	13 / 4.850	10 / 3.731	30 / 11.416	63 / 23.504	120 / 44.964
2.1.7) Archived ECPs - Organic(*)	272 / 416.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	272 / 416.832
2.2.1) Installation Equipment N/R - Organic(*) (7)	- / 56.372	- / 4.451	- / 1.402	- / 1.651	- / -	- / 1.651	- / 1.222	- / 1.275	- / 1.250	- / 1.333	- / 4.609	- / 73.565
Subtotal: Procurement	*- / 545.275*	*- / 22.870*	*- / 16.495*	*- / 18.344*	*- / -*	*- / 18.344*	*- / 21.021*	*- / 26.301*	*- / 23.153*	*- / 23.986*	*- / 50.700*	*- / 748.145*
Support												
3.1) Engineering Change Orders	- / 1.748	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.748
3.2) Data (8)	- / 1.601	- / 0.052	- / 0.202	- / 0.053	- / -	- / 0.053	- / 0.054	- / 0.056	- / 0.056	- / 0.057	- / 0.173	- / 2.304
3.3) Training Equipment (9)	- / 21.704	- / 2.747	- / 1.584	- / 0.353	- / -	- / 0.353	- / 0.360	- / 0.363	- / 0.348	- / 0.365	- / 1.091	- / 28.915
3.4) Support Equipment (10)	111 / 7.771	- / 0.084	- / 0.085	- / 0.702	- / -	- / 0.702	- / 0.088	- / -	- / -	- / -	- / -	111 / 8.730
3.5) ILS	- / 4.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.504
3.6) Other Support	- / 59.356	- / 0.532	- / 0.542	- / 0.552	- / -	- / 0.552	- / 0.563	- / 0.663	- / 0.676	- / 0.690	- / 2.093	- / 65.667
Subtotal: Support	*- / 96.684*	*- / 3.415*	*- / 2.413*	*- / 1.660*	*- / -*	*- / 1.660*	*- / 1.065*	*- / 1.082*	*- / 1.080*	*- / 1.112*	*- / 3.357*	*- / 111.868*
Installation												
Installation 1 of 1: ECP-TBD AV-8B LITENING Video to Cockpit Wiring A Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.443	- / 1.919	- / 1.624	- / 6.970	- / 10.956
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.443*	*- / 1.919*	*- / 1.624*	*- / 6.970*	*- / 10.956*
Total												
Total Cost (Procurement + Support + Installation)	**641.959**	**26.285**	**18.908**	**20.004**	**0.000**	**20.004**	**22.086**	**27.826**	**26.152**	**26.722**	**61.027**	**870.969**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 1 / AV-8B LITENING POD (OSIP 023-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: ECP-TBD AV-8B LITENING Video to Cockpit Wiring A Kit

Manufacturer Information

Manufacturer Name: FRC East	Manufacturer Location: Cherry Point, NC
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jun 2022	Jun 2023	Jun 2024	Jun 2025
Delivery Dates				Jun 2023	Jun 2024	Jun 2025	Jun 2026

Installation Information

Method of Implementation: [none specified]:: Installation Name: ECP-TBD AV-8B LITENING Video to Cockpit Wiring A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.443	1 / 0.148	- / -	0 / 0.000	4 / 0.591
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.771	1 / 0.151	0 / 0.000	13 / 1.922
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.473	0 / 0.000	10 / 1.473
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 4.697	31 / 4.697
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 2.273	15 / 2.273
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.443	13 / 1.919	11 / 1.624	46 / 6.970	73 / 10.956

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	6	6	1	-	5	5	46	73
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	6	6	1	-	5	51	73

Footnotes:

(1) Installation Kits N/R: Non-recurring engineering to perform complex NRE/verification required to procure and install ECP-TBD AV-8B LITENING Video to Cockpit Wiring A Kit.

(2) G4 to SE Pod Forward Section Upgrade: Total quantity of 221 LITENING Pods used by AV-8B and F/A-18 platforms will receive upgrade.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 1 / AV-8B LITENING POD (OSIP 023-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) Common OFP V4: COFP V4 will incorporate ATDL software. This upgrade will be implemented in aircraft via platform ECPs for AV-8B and F/A-18. Costs fluctuate from year to year due to varying costs of contractor efforts to write Pod software, and following multiple-year Government efforts to write aircraft side software to integrate with contractor Pod software. FY 21 cost decreases as platform OFPs mature and software effort decreases. Quantity is not reflected as each platform will produce software that will be incorporated via ECP at the O-level in all aircraft capable of utilizing the LITENING pod.

(4) Advanced Tactical Datalink (ATDL) WRA: Increase in quantity from FY19 through FY23 required to permit collaborative and networked payloads to communicate with each other and determine appropriate action against multiple targets simultaneously.

(5) Common OFP V5 - LDP: Funding supports software modification required for LITENING Digital Port upgrade.

(6) LITENING Digital Port Pod Upgrade: Increase in kit procurements from FY22 to FY23 as testing is completed and aircraft induction rates ramp up.

(7) Installation Equipment N/R: NRE supports integration of COFP V4, as well as NRE for Advanced Tactical Datalink (ATDL). Firmware validations also performed under this line. NRE fluctuates from year to year based on the complexity of the effort undergoing NRE.

(8) Data: Amounts fluctuate per fiscal year due to changes in publication efforts planned for each year, and depending on the types of upgrades in work in a given year. Costs change due to number, type, and complexity of hardware/software/firmware updates planned each year. This OSIP is made up of multiple upgrades, and each upgrade is not in the same state each year, nor does each upgrade impact the same number of pages in publications.

(9) Training Equipment: Trainer funding is required for COFP V4 and ATDL trainer upgrades. Costs fluctuate from year to year due to changing levels of effort required organically and by contracts to support COFP V4 as well as ATDL. As the effort progresses, the funds required fluctuate from year to year.

(10) Support Equipment: Increase in FY21 is due to requirement to upgrade support equipment utilized to playback LITENING video.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	67.667	3.858	3.002	2.661	0.000	2.661	2.729	3.258	3.336	3.414	14.177	104.102
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	67.667	3.858	3.002	2.661	0.000	2.661	2.729	3.258	3.336	3.414	14.177	104.102
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**67.667**	**3.858**	**3.002**	**2.661**	**0.000**	**2.661**	**2.729**	**3.258**	**3.336**	**3.414**	**14.177**	**104.102**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AV-8B is a single engine aircraft with unique capabilities. The Vertical/Short Take-off Landing environment is very unforgiving and allows no tolerance for engine problems. The Engine Life Management Program (ELMP)is a comprehensive program to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. Funding provided is to incorporate Engineering Change Proposals (ECP) to increase safety of flight and operational readiness of the F-402-RR-408 Engine and accessories.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Operational, Safety and Improvement Program 02-04 supports the Harrier AV-8B ELMP through Aircraft Procurement, Navy funding. Power Plant changes are required throughout the aircraft service life as the aircraft ages and operationally revealed deficiencies are discovered, researched, and solutions engineered. The power plant program procures the necessary kits, installation, non-recurring engineering, peculiar support equipment, and technical data. The kits provided are for engine, propulsion accessories and related hardware to support the AV-8B F402-RR-408 engine. The purpose of the program is to increase safety of flight and reliability of the AV-8B F402-RR-408 Engine. This OSIP also provides funding for the Integrated Logistics Support program whose primary objective is to achieve an effective, affordable and supportable program for the engine that fulfills its readiness and fleet operational requirements at the lowest Life Cycle Cost.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AV-8B Night Attack & Radar/Reman	**Modification Type:** Upgrade	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)												
A Kits												
Recurring												
1.1.1) ECP TBD EVICS Interrogator / Obsolescence - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	194 / 6.000	194 / 6.000
1.1.2) ECP TBD LPC1 Upgrade - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.300	3 / 0.300
1.1.3) ECP TBD - Front ECS Filter - Organic	- / -	- / -	16 / 0.192	32 / 0.384	- / -	32 / 0.384	42 / 0.504	12 / 0.144	12 / 0.144	8 / 0.100	- / -	122 / 1.468
1.1.4) ECP TBD #2 Bearing Upgrade - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.300	3 / 0.300
1.1.5) ECP TBD CCOC Thermocouples - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.300	3 / 0.300
1.1.6) ECP TBD FMU Obsolescence - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	192 / 3.000	192 / 3.000
1.1.7) ECP TBD MK107 Conversion to 408B - Organic	2 / 1.070	1 / 0.538	1 / 0.078	1 / 0.080	- / -	1 / 0.080	1 / 0.082	5 / 0.425	3 / 0.255	1 / 0.100	- / -	15 / 2.628
1.1.8) Archived ECPs - Organic	492 / 13.179	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	492 / 13.179
Subtotal: Recurring	*- / 14.249*	*- / 0.538*	*- / 0.270*	*- / 0.464*	*- / -*	*- / 0.464*	*- / 0.586*	*- / 0.569*	*- / 0.399*	*- / 0.200*	*- / 9.900*	*- / 27.175*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 0.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.104
Subtotal: Non-Recurring	*- / 0.104*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.104*
B Kits												
Non-Recurring												
2.1.1) Installation Equipment N/R - Organic	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400
Subtotal: Non-Recurring	*- / 0.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.400*
Subtotal: ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)	*494 / 14.753*	*1 / 0.538*	*17 / 0.270*	*33 / 0.464*	*- / -*	*33 / 0.464*	*43 / 0.586*	*17 / 0.569*	*15 / 0.399*	*9 / 0.200*	*395 / 9.900*	*1,024 / 27.679*
Subtotal: Procurement, All Modification Items	*- / 14.753*	*- / 0.538*	*- / 0.270*	*- / 0.464*	*- / -*	*- / 0.464*	*- / 0.586*	*- / 0.569*	*- / 0.399*	*- / 0.200*	*- / 9.900*	*- / 27.679*
Support *(All Modification Items)*												
3.3) Data	- / 5.124	- / 0.119	- / 0.162	- / 0.100	- / -	- / 0.100	- / 0.168	- / 0.130	- / 0.155	- / 0.140	- / 1.417	- / 7.515
3.4) Support Equipment (11)	- / 19.080	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.280
3.5) ILS	- / 22.672	- / 2.152	- / 1.283	- / 1.356	- / -	- / 1.356	- / 1.204	- / 2.017	- / 2.177	- / 2.440	- / 2.053	- / 37.354
3.6) Other Support	- / 5.338	- / 0.849	- / 1.287	- / 0.741	- / -	- / 0.741	- / 0.771	- / 0.542	- / 0.605	- / 0.634	- / 0.807	- / 11.574
3.8) Archived Support Costs	- / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.700

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AV-8B Night Attack & Radar/Reman	**Modification Type:** Upgrade	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Support	- / 52.914	- / 3.320	- / 2.732	- / 2.197	- / -	- / 2.197	- / 2.143	- / 2.689	- / 2.937	- / 3.214	- / 4.277	- / 76.423
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**67.667**	**3.858**	**3.002**	**2.661**	**0.000**	**2.661**	**2.729**	**3.258**	**3.336**	**3.414**	**14.177**	**104.102**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 2 / ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: ENGINE LIFE MANAGEMENT PROGRAM (OSIP 002-04)		

Footnotes:

(11) Removal of funding in FY20 and out reflects realignment of Support Equipment funding to APN-7 for PSE associated with out-of-production aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	196.389	20.080	13.967	7.605	0.000	7.605	4.968	7.042	7.194	7.347	21.955	286.547
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	196.389	20.080	13.967	7.605	0.000	7.605	4.968	7.042	7.194	7.347	21.955	286.547
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**196.389**	**20.080**	**13.967**	**7.605**	**0.000**	**7.605**	**4.968**	**7.042**	**7.194**	**7.347**	**21.955**	**286.547**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Obsolescence Replacement provides for maintaining the reliability of the AV-8B weapons system until its projected end of service, which is now 2028 or until replaced by short take-off and vertical landing (STOVL) operations F-35B. This requires the airframe and integrated systems to exceed planned service life and requires both systems modifications and obsolescence solutions. Funds will be utilized to procure kits and kit components, incorporate Engineering Change Proposals (ECPs) and implement changes to sustain and improve AV-8B weapons system reliability including safety, mission availability, structural integrity, air-to-ground and air-to-air weapon system employment, stores expansion, and component (avionics/systems) reliability, maintainability, and obsolescence conditions, including peculiar support equipment. This program may be required to provide emergent, timely remedial action for any aircraft system, component or structure. Depot level modification installations will be planned and programmed concurrent with Planned Maintenance Interval (PMI) scheduled depot overhaul events to minimize aircraft out-of-service periods, unless safety or aircraft availability require stand-alone installations, or depot lack of capacity requires contracted modification installations.

With the end of service life currently being 2028, OSIP 06-06 Obsolescence Replacement continues to focus on those ECPs that maintain the readiness of the AV-8B weapons system with consideration for cost and schedule. Determination of ECP kit quantities is based off of fleet requirements as outlined in the A-II as well as information from the TYCOM which reflects the squadron transition plan for the AV-8B fleet.

Support costs required for Obsolescence ECPs do not correlate significantly with the quantity or unit cost of kits procured.

In FY 21 non-recurring engineering and integrated logistic support (ILS) work continues for ECPs, procurements and installations for new and ongoing obsolescence and reliability requirements. Key efforts include Leading Edge Root Extension (LERX), Onboard Oxygen Generating System, Fuel Quantity Indicator and other ECPs that address safety, integrity, obsolescence and reliability issues. Additional safety and reliability modifications include Dual Handle Raft and OSP3R processor card obsolescence replacement. Other efforts include weapons capability ECPs and obsolescence mitigation ECPs, the integration and logistics elements required for use of Common Avionics Procured KY-58 obsolescence replacement and data/ILS updates for ECPs. Includes support equipment upgrades driven by ECP requirements. Various kit procurements and installations will continue throughout the Future Years Defense Plan. NRE will fluctuate due to mix and complexity of Readiness Management Plan ECPs being written and verified in each year. All ECPs do not require the same level of NRE.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP PMA-257-2008-0004 Frame 43 Bushings - NonOrganic *Installation 1 of 1*	110 / 0.804	14 / 0.124	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	124 / 0.928
1.1.2) ECP-MDC-AV-8B-00332 Canopy Latch - NonOrganic *Installation 1 of 1*	114 / 2.448	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	114 / 2.448
1.1.3) ECP-PMA-257-2010-0002 Frame 29 Structure Modification - NonOrganic *Installation 1 of 1*	40 / 2.416	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.416
1.1.7) ECP-257-2017-0007 Utility Test Panel Upgrade - NonOrganic *Installation 1 of 1*	75 / 3.323	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 3.323
1.1.4) ECP-PMA257-2011-0001 Frame 20-21 - Organic(*)	- / -	14 / 3.256	5 / 1.318	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 4.574
1.1.5) ECP-CP-049 Leading Edge Root Extension (LERX) - Organic(*)	64 / 1.149	24 / 0.239	16 / 0.177	16 / 0.180	- / -	16 / 0.180	- / -	- / -	- / -	- / -	- / -	120 / 1.745
1.1.6) ECP-CHPT-0053 Seat Armed Indicator - Organic(*)	4 / 0.630	51 / 0.343	95 / 0.635	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 1.608
1.1.9) ECP-PMA257_2014-0002 GR-9 IFR Probe Conversion - Organic(*)	- / -	20 / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.136
1.1.10) ECP-TBD Universal Wing - Organic(*)	- / -	2 / 0.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.352
1.1.11) ECP-TBD AIM-9X Wiring Kit - Organic(*)	110 / 1.650	72 / 1.152	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	182 / 2.802
1.1.12) ECP-TBD Dual Handle Raft - Organic(*)	- / -	- / -	73 / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	73 / 0.066
1.1.13) ECP-PMA-257-2019-0004 OBOGS - Organic(*)	- / -	1 / 0.247	61 / 1.243	61 / 1.267	- / -	61 / 1.267	- / -	- / -	- / -	- / -	- / -	123 / 2.757
1.1.14) ECP-TBD Oil Caution Light - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.960	25 / 1.000	26 / 1.025	- / -	74 / 2.985
1.1.15) ECP-TBD Fuel Quantity Indicator - Organic(*)	- / -	- / -	81 / 3.588	42 / 1.805	- / -	42 / 1.805	- / -	- / -	- / -	- / -	- / -	123 / 5.393
1.1.16) CDP-PMA-257-2019-0001 Frame 41 - Organic(*)	- / -	5 / 0.401	7 / 0.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.948
1.1.17) ECP - TBD Unclassified RMM - Organic(*)	- / -	30 / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.260
1.1.19) ECP-TBD-Radome Replacement - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.714	9 / 0.961	10 / 0.971	10 / 0.995	80 / 21.955	117 / 25.596
1.1.20) A Kits/Recurring - ARCHIVED ECPs - Organic(*)	- / 38.516	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 38.516
1.2.1) Installation Kits N/R - Organic(*)	- / 23.857	- / 0.039	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.896
2.1.1) ECP-TBD Open System Processor Version 3r (OSP3R) - Organic(*)	- / -	124 / 3.720	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	124 / 3.720
2.1.2) T-HUD Camera - Organic(*)	32 / 1.952	- / -	13 / 0.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 2.732

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.1.4) B Kits Recurring - ARCHIVED ECPs - Organic(*)	128 / 30.236	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	128 / 30.236
2.2.1) Installation Equipment N/R - Organic(*)	- / 27.884	- / 1.188	- / 0.100	- / -	- / -	- / -	- / 0.041	- / -	- / -	- / -	- / -	- / 29.213
Subtotal: Procurement	*- / 134.865*	*- / 11.457*	*- / 8.454*	*- / 3.252*	*- / -*	*- / 3.252*	*- / 0.755*	*- / 1.921*	*- / 1.971*	*- / 2.020*	*- / 21.955*	*- / 186.650*
Support												
3.2) Data	- / 1.382	- / 0.416	- / 0.057	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.855
3.3) Training Equipment	- / 1.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.054
3.4) Support Equipment (12)	- / 5.566	- / 1.161	- / 0.864	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.591
3.5) ILS	- / 4.837	- / 0.791	- / 0.750	- / 0.645	- / -	- / 0.645	- / 0.594	- / 0.609	- / 0.624	- / 0.640	- / -	- / 9.490
3.6) Other Support	- / 39.517	- / 5.087	- / 3.376	- / 3.708	- / -	- / 3.708	- / 3.619	- / 4.512	- / 4.599	- / 4.687	- / -	- / 69.105
Subtotal: Support	*- / 52.356*	*- / 7.455*	*- / 5.047*	*- / 4.353*	*- / -*	*- / 4.353*	*- / 4.213*	*- / 5.121*	*- / 5.223*	*- / 5.327*	*- / 0.000*	*- / 89.095*
Installation												
Installation 1 of 1: GRP: OBSOLESCENCE REPLACEMENT (OSIP 006-06)	- / 9.168	- / 1.168	- / 0.466	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 10.802
Subtotal: Installation	*- / 9.168*	*- / 1.168*	*- / 0.466*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.802*
Total												
Total Cost (Procurement + Support + Installation)	**196.389**	**20.080**	**13.967**	**7.605**	**0.000**	**7.605**	**4.968**	**7.042**	**7.194**	**7.347**	**21.955**	**286.547**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 3 / OBSOLESCENCE REPLACEMENT (OSIP 006-06)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: OBSOLESCENCE REPLACEMENT (OSIP 006-06)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 10 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019						
Delivery Dates	Jan 2020						

Installation Information

Method of Implementation: Safety:: Installation Name: OBSOLESCENCE REPLACEMENT (OSIP 006-06)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	287 / 9.168	52 / 1.168	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	339 / 10.336
FY 2019	- / -	- / -	14 / 0.466	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 0.466
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	287 / 9.168	52 / 1.168	14 / 0.466	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	353 / 10.802

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	287	18	17	9	8	-	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353
Out	287	18	17	9	8	-	-	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353

Footnotes:

(12) Reduction from FY20 to FY21 reflects realignment of Support Equipment funding to APN-7 for PSE associated with out-of-production aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 4 / DIGITAL INTEROPERABILITY (OSIP 014-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	21.394	4.503	2.354	3.812	0.000	3.812	2.930	0.000	0.000	0.000	0.000	34.993
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	21.394	4.503	2.354	3.812	0.000	3.812	2.930	0.000	0.000	0.000	0.000	34.993
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**21.394**	**4.503**	**2.354**	**3.812**	**0.000**	**3.812**	**2.930**	**0.000**	**0.000**	**0.000**	**0.000**	**34.993**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AV-8B is required to be digitally interoperable with other U.S. and Allied platforms via MIL-STD-6016 (Link 16) waveform. Airborne tactical Datalink messaging will be enabled via Link 16 waveform, providing the ability for the AV-8B to provide Precise Participant Location and Identification (PPLI), send and receive targeting information, view the common air/surface picture, and view Link surveillance tracks. This tactical data communication between the AV-8B, ground units, and joint assets will provide increased interoperability; improved safety/situational awareness/de-confliction, reduced kill timelines, and digital interoperability. Link 16 A and B kits were incorporated into the aircraft via ECP. ECPs to include the Auxiliary Communications Navigation Identification Panel (ACNIP), Interference Blanker Unit (IBU) and the Mission Systems Computer (MSC) were required to be installed prior to or with Link 16 in order to utilize the capability, as will the APX-123 ECP, to be procured by PMA213. All ECPs will require NRE and logistics support elements to include tech data/pubs, ILS, training equipment/upgrade, support equipment procurement/modification and other support. This OSIP will also be used to perform efforts to address certifications and spectrum assignments of these systems, as well as parts obsolescence. This OSIP will fund ECPs to the STT (Link 16 B-kit) required to meet crypto-modernization mandate and to provide additional upgrades to the STT.

FY21 will accomplish Link 16 upgrades to meet crypto modernization standards, will continue NRE required to procure STT upgrades in FY 2021-2022, and will address logistics elements, to include trainer upgrades associated with the H7.0 software ECPs that will incorporate the Link 16 capability upgrade. As the Link 16 functionality is enabled by H6.2 software, and Link 16 capability is upgraded by the H7.0 software, this OSIP supports the validation and configuration management of the Link 16 and aircraft OFP software as impacted by Link 16. Technology upgrades at COTS vendor drives software changes to Link 16, which will be integrated via H7.0. Funds will be utilized to manage, process, and incorporate digital interoperability ECPs and implement changes to sustain and improve the digital interoperability systems readiness including safety, mission availability, system employment, and component reliability, maintainability, and obsolescence conditions as these emerging deficiencies arise and require modification. This funding will ensure that software is upgraded and integrated to ensure the LINK 16 capabilities are integrated with aircraft OFPs.

Support costs required for Link 16 Crypto Modernization and STT upgrades do not correlate significantly with the quantity or unit cost of kits procured.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Crypto Modernization upgrade NRE began in FY18, and upgrades will occur in FY20 and FY21 to meet crypto modernization standards, as well as H7.0 trainer upgrades to incorporate upgraded Link 16 capability. NRE for upgrade to incorporate additional functionality in the STT began in FY20. Procurement and related ECP logistics support element updates begin in FY21 and FY22.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 4 / DIGITAL INTEROPERABILITY (OSIP 014-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AV-8B Night Attack, Day Attack Upgrade, Radar/Reman & TAV-8B	**Modification Type:** Upgrade	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DIGITAL INTEROPERABILITY (OSIP 014-16)												
A Kits												
Recurring												
1.1.1) A Kits Recurring - Archived ECPs - Organic	301 / 5.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	301 / 5.431
Subtotal: Recurring	*- / 5.431*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.431*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 4.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.011
Subtotal: Non-Recurring	*- / 4.011*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.011*
B Kits												
Recurring												
2.1.1) ECP-TBD Link 16 Crypto Modern Upgrade - Organic	- / -	45 / 0.675	30 / 0.459	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 1.134
2.1.2) ECP-TBD STT Upgrades - Organic	- / -	- / -	- / -	44 / 2.288	- / -	44 / 2.288	31 / 1.645	- / -	- / -	- / -	- / -	75 / 3.933
Subtotal: Recurring	*- / 0.000*	*- / 0.675*	*- / 0.459*	*- / 2.288*	*- / -*	*- / 2.288*	*- / 1.645*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.067*
Non-Recurring												
2.2.1) ECP-TBD Link 16 Crypto Modern Upgrade - Organic	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.100
2.2.2) ECP-TBD STT Upgrades - Organic [13]	- / -	- / -	- / 0.352	- / 0.206	- / -	- / 0.206	- / 0.043	- / -	- / -	- / -	- / -	- / 0.601
Subtotal: Non-Recurring	*- / 0.000*	*- / 0.100*	*- / 0.352*	*- / 0.206*	*- / -*	*- / 0.206*	*- / 0.043*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.701*
Subtotal: DIGITAL INTEROPERABILITY (OSIP 014-16)	*301 / 9.442*	*45 / 0.775*	*30 / 0.811*	*44 / 2.494*	*- / -*	*44 / 2.494*	*31 / 1.688*	*- / -*	*- / -*	*- / -*	*- / -*	*451 / 15.210*
Subtotal: Procurement, All Modification Items	*- / 9.442*	*- / 0.775*	*- / 0.811*	*- / 2.494*	*- / -*	*- / 2.494*	*- / 1.688*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 15.210*
Support *(All Modification Items)*												
3.1) Data	- / 0.236	- / -	- / 0.060	- / 0.100	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / 0.396
3.2) Training Equipment	- / 5.612	- / 2.530	- / 0.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.430
3.3) Support Equipment	- / 0.583	- / 0.184	- / 0.113	- / 0.116	- / -	- / 0.116	- / 0.118	- / -	- / -	- / -	- / -	- / 1.114
3.4) ILS	- / 2.202	- / 0.482	- / 0.492	- / 0.501	- / -	- / 0.501	- / 0.511	- / -	- / -	- / -	- / -	- / 4.188
3.5) Other Support	- / 3.319	- / 0.532	- / 0.590	- / 0.601	- / -	- / 0.601	- / 0.613	- / -	- / -	- / -	- / -	- / 5.655
Subtotal: Support	*- / 11.952*	*- / 3.728*	*- / 1.543*	*- / 1.318*	*- / -*	*- / 1.318*	*- / 1.242*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 19.783*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 4 / DIGITAL INTEROPERABILITY (OSIP 014-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AV-8B Night Attack, Day Attack Upgrade, Radar/Reman & TAV-8B	**Modification Type:** Upgrade	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**21.394**	**4.503**	**2.354**	**3.812**	**0.000**	**3.812**	**2.930**	**0.000**	**0.000**	**0.000**	**0.000**	**34.993**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 4 / DIGITAL INTEROPERABILITY (OSIP 014-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: DIGITAL INTEROPERABILITY (OSIP 014-16)		

Footnotes:

(13) Funding for integration of STT upgrade.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 5 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	485.891	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	485.891
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	485.891	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	485.891
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**485.891**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**485.891**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0514 / AV-8 Series	**Modification Number / Title:** 5 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1) Inactive Osips - Organic(*)	- / 485.891	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 485.891
Subtotal: Procurement	*- / 485.891*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 485.891*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**485.891**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**485.891**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0515 / Infrared Search and Track (IRST)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**158.055**	**0.000**	**158.055**	**209.592**	**193.459**	**203.338**	**21.634**	**53.618**	**839.696**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LI 0515 was established in FY2021 in order to provide greater transparency of Infrared Search and Track (IRST) modernization efforts. OSIP 04-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0515.

This line item funds modifications to the F/A-18 E/F aircraft.

The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing tactical aircraft in a dynamic scenario. The Infrared Search and Track (IRST) will provide the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment.

Current aircraft inventory and Flight hours flown for Lot 26 and up as of 26 August 2019:
F/A-18E - 240 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 3,076 (current); 7,076 (extended)
F/A-18F - 186 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 4,893 (current); 8,893 (extended)

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0515 / Infrared Search and Track (IRST)

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 0.000	- / 0.000	- / 0.000	- / 158.055	- / 0.000	- / 158.055
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 158.055**	**- / 0.000**	**- / 158.055**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 209.592	- / 193.459	- / 203.338	- / 21.634	- / 53.618	- / 839.696
P-40	**Total Gross/Weapon System Cost**				**- / 209.592**	**- / 193.459**	**- / 203.338**	**- / 21.634**	**- / 53.618**	**- / 839.696**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The overall goal of the modifications budgeted in FY 2021 is to implement IRST. OSIP 04-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0515.

OSIP 04-14 Infrared Search and Track (IRST) provides the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0515 / Infrared Search and Track (IRST)	**Modification Number / Title:** 1 / Infrared Search and Track (IRST) (04-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**158.055**	**0.000**	**158.055**	**209.592**	**193.459**	**203.338**	**21.634**	**53.618**	**839.696**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description:

The Infrared Search and Track (IRST) will provide the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment. IRST is an evolutionary program using a block approach. This Operational, Safety and Improvement Program (OSIP) is used to procure Block I IRST systems [Low Rate Initial Production (LRIP) lots 1 and 2], Infrared Optimized Configuration (IROC) and AV6+ modifications, Block II Engineering Change Proposal (ECP) modifications and incorporation including retrofit and forward fit [LRIP lots 3 through 6 and FRP] as well as all initial integrated logistics support activities to include special tooling, support equipment, production test equipment, I Level stand-up, reliability, maintainability, obsolescence and reliability growth activities in support of system Block II modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

IRST development began in FY2008. IRST Block I Milestone B occurred on 17 June 2011 and the Acquisition Decision Memorandum was signed 12 July 2011. Block I Milestone C occurred on 02 December 2014 and the Acquisition Decision Memorandum (ADM) was signed 24 March 2015. IRST was reclassified as an Acquisition Category IC Major Defense Acquisition Program (P510) on 5 November 2016. The ACAT IC APB was signed 13 February 2017. A successful MS-C review was conducted 4 December 2018. The Full Rate Production milestone decision review is scheduled for 3rd Quarter FY 2021 with Initial Operational Capability scheduled for 4th Quarter FY 2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0515 / Infrared Search and Track (IRST)	**Modification Number / Title:** 1 / Infrared Search and Track (IRST) (04-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F	**Modification Type:** CAPABILITY IMPROVEMENTS	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.1) IRST B-kits (Block II) - Organic(*) (1)	- / -	- / -	- / -	25 / 86.259	- / -	25 / 86.259	40 / 149.462	40 / 144.525	29 / 108.402	- / -	8 / 29.920	142 / 518.568
2.1.2) IRST B-Kits (Block I to Block II) - Organic(*) (2)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 6.003	9 / 6.123	- / -	18 / 12.126
2.2.1) Installation Equipment N/R - Organic(*) (3)	- / -	- / -	- / -	- / 23.250	- / -	- / 23.250	- / -	- / 4.009	- / 6.683	- / 4.050	- / -	- / 37.992
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 109.509*	*- / -*	*- / 109.509*	*- / 149.462*	*- / 148.534*	*- / 121.088*	*- / 10.173*	*- / 29.920*	*- / 568.686*
Support												
3.1) Data	- / -	- / -	- / -	- / 0.073	- / -	- / 0.073	- / 0.921	- / 2.199	- / 1.324	- / 2.268	- / 4.987	- / 11.772
3.2) Training Equipment	- / -	- / -	- / -	- / 3.400	- / -	- / 3.400	- / 0.464	- / -	- / -	- / 0.280	- / -	- / 4.144
3.3) Support Equipment (4)	- / -	- / -	- / -	- / 36.148	- / -	- / 36.148	- / 49.400	- / 33.296	- / 71.277	- / -	- / -	- / 190.121
3.4) ILS	- / -	- / -	- / -	- / 2.147	- / -	- / 2.147	- / 2.431	- / 2.378	- / 2.456	- / 1.576	- / 3.141	- / 14.129
3.5) Other Support	- / -	- / -	- / -	- / 6.778	- / -	- / 6.778	- / 6.914	- / 7.052	- / 7.193	- / 7.337	- / 15.570	- / 50.844
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 48.546*	*- / -*	*- / 48.546*	*- / 60.130*	*- / 44.925*	*- / 82.250*	*- / 11.461*	*- / 23.698*	*- / 271.010*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**158.055**	**0.000**	**158.055**	**209.592**	**193.459**	**203.338**	**21.634**	**53.618**	**839.696**

Footnotes:

(1) 2.1.1 LRIP III, IV and V quantities account for the production ramp up of the IRST Block II systems as required to meet a Full Rate Production (FRP) of 40 per year. IRST Block II production lead time is 24 to 27 months and Full Operational Capability (FOC) is 1st QTR FY2026.

(2) Quantity of 18 "Block I to Block II" kits will convert Block I kits to Block II kits.

(3) Funding increases in FY21 due to NRE required for ramp up of Block I retrofit security enhancements (Block I to Block II).

(4) Support Equipment increases in FY21 in order to modify the existing Electronic Consolidated Automated Support System (eCASS) to support I-Level Standup for the IRST system.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0522 / Adversary

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	70.534	14.606	3.415	42.946	0.000	42.946	162.382	135.769	120.385	68.799	73.201	692.037
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	70.534	14.606	3.415	42.946	0.000	42.946	162.382	135.769	120.385	68.799	73.201	692.037
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**70.534**	**14.606**	**3.415**	**42.946**	**0.000**	**42.946**	**162.382**	**135.769**	**120.385**	**68.799**	**73.201**	**692.037**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds the modifications to the Adversary aircraft. The Adversary aircraft are a combination of 43 F-5 Tiger IIs (40 F-5Ns and 3 F-5Fs), and Block 15 F-16 Fighting Falcon (10 F-16As and 4 F-16Bs), and the J85 Engine supporting the F-5F/N. The Adversary aircraft provide essential sorties in support of TOPGUN, Fleet Replacement Squadron, Carrier Strike Group, Carrier Air Wing and Unit Deployment Plan training both the F-5s and the F-16s are planned to be used as primary Adversary mission through 2035.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	14.606	3.415	42.946	-	42.946	162.382	135.769	120.385	68.799
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**14.606**	**3.415**	**42.946**	**-**	**42.946**	**162.382**	**135.769**	**120.385**	**68.799**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0522 / Adversary

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Structural Enhancement Program - Reserve Forces (OSIP 009-13) (Safety/Reliability)				- / 17.596	- / 3.416	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / F-5 System Safety and Sustainability OSIP 017-17 (Safety/ Reliability)				- / 1.062	- / 11.190	- / 3.415	- / 34.240	- / 0.000	- / 34.240
P-3a	3 / F-16 SLEP - OSIP 011-21 (Safety/Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 8.706	- / 0.000	- / 8.706
P-3a	4 / Inactive OSIPs (TBD)				- / 51.876	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 70.534**	**- / 14.606**	**- / 3.415**	**- / 42.946**	**- / 0.000**	**- / 42.946**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Structural Enhancement Program - Reserve Forces (OSIP 009-13) (Safety/Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 21.012
P-3a	2 / F-5 System Safety and Sustainability OSIP 017-17 (Safety/ Reliability)				- / 65.482	- / 55.496	- / 44.969	- / 24.145	- / 0.000	- / 239.999
P-3a	3 / F-16 SLEP - OSIP 011-21 (Safety/Reliability)				- / 96.900	- / 80.273	- / 75.416	- / 44.654	- / 73.201	- / 379.150
P-3a	4 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 51.876
P-40	**Total Gross/Weapon System Cost**				**- / 162.382**	**- / 135.769**	**- / 120.385**	**- / 68.799**	**- / 73.201**	**- / 692.037**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2021 funding reflects the modification of (22) F-5 aircraft purchased from the government of Switzerland into the USN configuration under OSIP 017-17 and creation of the F-16 Service Life Extension Program (SLEP) under OSIP 011-21.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 1 / Structural Enhancement Program - Reserve Forces (OSIP 009-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	17.596	3.416	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.012
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	17.596	3.416	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.012
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**17.596**	**3.416**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**21.012**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This OSIP incorporates the Falcon Up structural enhancement modification in 10 Navy F-16A Adversary aircraft. The Falcon Up modification is a safety modification that replaces known airframe fatigue sensitive structure. Incorporation of the Falcon Up kit extends the airframe service life from 3,665 flight hours to 4,250 flight hours and will extend the service life until approximately 2025.

Development Status/major milestones: The structural components on the Falcon Up kit have been qualified by the Air Force and approved for Navy use. No operational testing is required. A first article test, consisting of nondestructive critical measurements is complete. A firm fixed price contract for kits was awarded. The kits have been produced and delivered. The aircraft modification has been done as a drive in mod at Hill Air Force Depot and is complete.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 1 / Structural Enhancement Program - Reserve Forces (OSIP 009-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16 ADVERSARY SERIES	**Modification Type:** Safety/Reliability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Structural Enhancement Program - Reserve Forces (OSIP 009-13)												
A Kits												
Recurring												
1.1.2) Falcon UP Kits - NonOrganic	9 / 3.283	1 / 0.040	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.323
Subtotal: Recurring	*- / 3.283*	*- / 0.040*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.323*
Non-Recurring												
1.2.2) Non Recurring Engineering - Organic	- / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.200
Subtotal: Non-Recurring	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.200*
Subtotal: Structural Enhancement Program - Reserve Forces (OSIP 009-13)	*9 / 4.483*	*1 / 0.040*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*10 / 4.523*
Subtotal: Procurement, All Modification Items	*- / 4.483*	*- / 0.040*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.523*
Support *(All Modification Items)*												
3.1) Other Support	- / 1.063	- / 0.192	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.255
Subtotal: Support	*- / 1.063*	*- / 0.192*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.255*
Installation												
Modification Item 1 of 1: Structural Enhancement Program - Reserve Forces (OSIP 009-13)	- / 12.050	- / 3.184	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 15.234
Subtotal: Installation	*- / 12.050*	*- / 3.184*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 15.234*
Total												
Total Cost (Procurement + Support + Installation)	**17.596**	**3.416**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**21.012**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 1 / Structural Enhancement Program - Reserve Forces (OSIP 009-13)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Structural Enhancement Program - Reserve Forces (OSIP 009-13)

Manufacturer Information

Manufacturer Name: ES3 | Manufacturer Location: Ogden Utah

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018						
Delivery Dates	Feb 2019						

Installation Information

Method of Implementation: Organic Maintenance Facility Hill Air Force Depot:: Installation Name: Falcon UP Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	8 / 12.050	1 / 1.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 13.642
FY 2019	- / -	1 / 1.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.592
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 12.050	2 / 3.184	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 15.234

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	8	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.062	11.190	3.415	34.240	0.000	34.240	65.482	55.496	44.969	24.145	0.000	239.999
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.062	11.190	3.415	34.240	0.000	34.240	65.482	55.496	44.969	24.145	0.000	239.999
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.062**	**11.190**	**3.415**	**34.240**	**0.000**	**34.240**	**65.482**	**55.496**	**44.969**	**24.145**	**0.000**	**239.999**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds modifications to F-5 aircraft to implement safety updates as well as required upgrades to avionic systems for Federal Aviation Administration (FAA) compliance.

This OSIP includes efforts that address modifications to address safety, reliability, structural integrity, mission availability, maintainability, weapon system employment, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications include Airframe, sub-systems, weapon system, and avionics systems. Modifications, particularly to avionic systems, may also be driven by new cyber security requirements.

Initiatives include, but are not limited to: Stability Augmentation Components Assembly (SACA) Obsolescence ECPs, LN-260 Display Upgrades, Integrated ARC 210 Radios, Swiss Aircraft Reconfiguration to USN standard.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The LN 260 Display and ARC 210 efforts have been consolidated into the Cockpit Display Val/Ver. Swiss Reconfiguration NRE and kit procurement scheduled to begin in FY 2021 with installations starting in FY 2022.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-5 Adversary Series	**Modification Type:** Safety/Reliability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) A Kits ARC-210 Radio - Organic(*) (1)	- / -	- / -	8 / 0.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.160
1.1.2) A Kits Swiss Reconfiguration - NonOrganic (2) *Installation 1 of 2*	- / -	- / -	- / -	6 / 0.180	- / -	6 / 0.180	6 / 0.185	5 / 0.159	5 / 0.164	- / -	- / -	22 / 0.688
1.1.3) DADC/ADSB - NonOrganic (3) *Installation 1 of 2*	- / -	- / -	- / -	6 / 0.930	- / -	6 / 0.930	6 / 0.958	5 / 0.822	5 / 0.847	- / -	- / -	22 / 3.557
1.1.4) Cockpit Display Upgrade - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	6 / 0.160	- / -	6 / 0.160	6 / 0.160	5 / 0.143	5 / 0.142	- / -	- / -	22 / 0.605
2.1.1) B Kits ARC-210 - Organic(*)	- / -	- / -	8 / 1.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.120
2.1.2) LN 260 Display - Organic(*)	- / -	46 / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 3.500
2.1.3) SACA - Organic(*)	- / -	43 / 2.758	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 2.758
2.1.4) B Kits Swiss Reconfiguration - Organic(*) (4)	- / -	- / -	- / -	6 / 2.558	- / -	6 / 2.558	6 / 2.635	5 / 2.262	5 / 2.330	- / -	- / -	22 / 9.785
2.1.5) DADC/ADSB - Organic(*)	- / -	- / -	- / -	6 / 0.930	- / -	6 / 0.930	6 / 0.958	5 / 0.822	5 / 0.847	- / -	- / -	22 / 3.557
2.1.6) Ejection Seats - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	6 / 1.800	- / -	6 / 1.800	6 / 1.622	5 / 1.671	5 / 1.475	- / -	- / -	22 / 6.568
2.1.7) Cockpit Display Upgrade - Organic(*)	- / -	- / -	- / -	6 / 16.000	- / -	6 / 16.000	6 / 15.965	5 / 14.322	5 / 14.205	- / -	- / -	22 / 60.492
2.1.8) Radar - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 6.000	6 / 9.548	3 / 4.917	3 / 5.065	- / -	16 / 25.530
2.1.9) Simulator - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.460	- / -	- / -	- / -	- / -	2 / 6.460
2.2.1) Obsolesence - SACA NRE - Organic(*)	- / 1.062	- / 0.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.294
2.2.2) LN 260 Display Replacement NRE - Organic(*)	- / -	- / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.750
2.2.3) ARC 210 Radio NRE - Organic(*)	- / -	- / 2.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.550
2.2.4) Swiss Reconfiguration NRE - Organic(*) (5)	- / -	- / -	- / -	- / 2.200	- / -	- / 2.200	- / -	- / -	- / -	- / -	- / -	- / 2.200
2.2.5) Cockpit Display Upgrade NRE - Organic(*) (6)	- / -	- / -	- / -	- / 0.600	- / -	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / 0.600
2.2.6) Simulator NRE - Organic(*) (7)	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.540	- / -	- / -	- / -	- / -	- / 2.540
Subtotal: Procurement	*- / 1.062*	*- / 10.790*	*- / 1.280*	*- / 25.358*	*- / -*	*- / 25.358*	*- / 37.483*	*- / 29.749*	*- / 24.927*	*- / 5.065*	*- / 0.000*	*- / 135.714*
Support												
3.1) Other Support (8)	- / -	- / 0.215	- / 0.216	- / 5.282	- / -	- / 5.282	- / 6.016	- / 5.483	- / 2.345	- / 2.037	- / -	- / 21.594
3.2) ILS (9)	- / -	- / 0.185	- / 0.374	- / 1.886	- / -	- / 1.886	- / 1.748	- / 1.647	- / 1.430	- / 0.542	- / -	- / 7.812
3.3) Support Equipment (10)	- / -	- / -	- / 1.545	- / 1.714	- / -	- / 1.714	- / 1.928	- / -	- / -	- / -	- / -	- / 5.187

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-5 Adversary Series	**Modification Type:** Safety/Reliability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Support	- / 0.000	- / 0.400	- / 2.135	- / 8.882	- / -	- / 8.882	- / 9.692	- / 7.130	- / 3.775	- / 2.579	- / 0.000	- / 34.593
Installation												
Installation 1 of 2: GRP: Swiss Reconfiguration	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.107	- / 18.437	- / 16.081	- / 16.337	- / 0.000	- / 68.962
Installation 2 of 2: Ejection Seats	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.200	- / 0.180	- / 0.186	- / 0.164	- / 0.000	- / 0.730
Subtotal: Installation	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 18.307	- / 18.617	- / 16.267	- / 16.501	- / 0.000	- / 69.692
Total												
Total Cost (Procurement + Support + Installation)	**1.062**	**11.190**	**3.415**	**34.240**	**0.000**	**34.240**	**65.482**	**55.496**	**44.969**	**24.145**	**0.000**	**239.999**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: GRP: Swiss Reconfiguration

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Method:: Installation Name: Swiss Reconfiguration

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	18 / 18.107	- / -	- / -	- / -	0 / 0.000	18 / 18.107
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 18.437	- / -	- / -	0 / 0.000	18 / 18.437
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 16.081	- / -	0 / 0.000	15 / 16.081
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 16.337	0 / 0.000	15 / 16.337
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	18 / 18.107	18 / 18.437	15 / 16.081	15 / 16.337	0 / 0.000	66 / 68.962

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	3	6	3	6	3	6	3	6	3	3	3	6	3	3	-	66
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	3	6	3	6	3	6	3	6	3	3	3	12	66

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: Ejection Seats

Manufacturer Information

Manufacturer Name: Martin Baker | Manufacturer Location: Denham, United Kingdom

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	

Installation Information

Method of Implementation: [none specified]:: Installation Name: Ejection Seats

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.200	- / -	- / -	- / -	0 / 0.000	6 / 0.200
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.180	- / -	- / -	0 / 0.000	6 / 0.180
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.186	- / -	0 / 0.000	5 / 0.186
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.164	0 / 0.000	5 / 0.164
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.200	6 / 0.180	5 / 0.186	5 / 0.164	0 / 0.000	22 / 0.730

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2	1	2	1	2	1	2	1	1	1	2	1	1	-	22
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2	1	2	1	2	1	2	1	1	1	2	1	1	22

Footnotes:

(1) ARC 210 efforts will be consolidated into the Cockpit Display Upgrade Val/Ver.

(2) Procurement of the A Kits associated with previously integrated ECPs applicable to the USN configuration but not currently integrated on the Swiss aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 2 / F-5 System Safety and Sustainability OSIP 017-17
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) Current ECP's are funded by PMA 209 for the existing fleet of 43 aircraft. This effort will fund the procurement of 22 additional ECP's for the Swiss aircraft.

(4) Procurement of the B Kits associated with previously integrated ECPs applicable to the USN configuration but not currently integrated on the Swiss aircraft.

(5) Cost element funds initial non-recurring engineering in support of the reconfiguration of the 22 Swiss aircraft into the USN configuration.

(6) Cost element funds initial non-recurring engineering in support of the integration of the cockpit Display Upgrade in the 22 Swiss aircraft.

(7) Cost element funds the integration of the new cockpit display into the existing F-5 simulator.

(8) Increase in FY 2021 provides other support for Swiss aircraft reconfiguration efforts. Increase in FY 2022 provides other support for the installation of these efforts.

(9) Increase in FY 2021 provides logistic support for Swiss aircraft reconfiguration efforts.

(10) Increase in FY 2021 and FY 2022 procures support equipment applicable to the Swiss reconfiguration aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 3 / F-16 SLEP - OSIP 011-21
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	8.706	0.000	8.706	96.900	80.273	75.416	44.654	73.201	379.150
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	8.706	0.000	8.706	96.900	80.273	75.416	44.654	73.201	379.150
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**8.706**	**0.000**	**8.706**	**96.900**	**80.273**	**75.416**	**44.654**	**73.201**	**379.150**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-16 Service Life Extension Program (SLEP) Operational Safety Improvement Program (OSIP) funds the modifications to the (10) F-16A, (4) F-16B Adversary aircraft required to maintain sufficient aircraft inventory to meet fleet operational requirements. These modifications will increase the service life from 4,250 flight hours to 8,000 equivalent flight hours and extend service life through airframe strengthening, avionics upgrades, and just in time modifications to prevent aircraft grounding due to fatigue. Modifications include, but are not limited to, upgrading the airframe, upgrading the avionics, and modification of F100 engines.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The structural components have been qualified by the Air Force and approved for Navy Use. Non-Recurring Engineering (NRE) for the avionic upgrade scheduled to commence in FY21. Installation kit production purchases planned to start in FY22 with a 12-month delivery time. Installations will be performed as a Depot mod.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 3 / F-16 SLEP - OSIP 011-21
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16 ADVERSARY SERIES	**Modification Type:** Safety/Reliability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Falcon STAR (Structural Augmentation Roadmap) - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.987	2 / 3.077	3 / 4.753	3 / 4.896	3 / 5.043	13 / 20.756
1.1.2) Cockpit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.071	3 / 0.709	5 / 1.258	13 / 3.038
2.1.1) Cockpit - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 23.712	3 / 14.857	5 / 25.678	13 / 64.247
2.1.2) Radar - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	5 / 14.323	7 / 20.051	2 / 5.900	- / -	- / -	14 / 40.274
2.1.3) F100 Replacement - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	8 / 40.643	3 / 13.171	3 / 13.326	- / -	- / -	14 / 67.140
2.1.4) Simulator - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.900	- / -	- / -	1 / 3.900
2.2.1) Falcon STAR (Structural Augmentation Roadmap) NRE - Organic(*) (11)	- / -	- / -	- / -	- / 5.950	- / -	- / 5.950	- / 1.500	- / -	- / -	- / -	- / -	- / 7.450
2.2.2) Cockpit NRE - Organic(*) (12)	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.422	- / 8.409	- / -	- / -	- / -	- / 25.831
2.2.3) Simulator NRE - Organic(*) (13)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.000	- / -	- / -	- / -	- / 6.000
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 5.950*	*- / -*	*- / 5.950*	*- / 76.875*	*- / 50.708*	*- / 52.662*	*- / 20.462*	*- / 31.979*	*- / 238.636*
Support												
3.1) Other Support (14)	- / -	- / -	- / -	- / 2.756	- / -	- / 2.756	- / 6.469	- / 15.230	- / 11.472	- / 2.448	- / 3.472	- / 41.847
3.2) ILS (15)	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.948	- / 3.159	- / 3.033	- / 2.130	- / 1.632	- / 14.902
3.3) Support Equipment (16)	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.030	- / 2.114	- / 1.020	- / -	- / -	- / 8.164
3.4) Pubs (17)	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.578	- / 3.500	- / 1.500	- / -	- / -	- / 8.578
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 2.756*	*- / -*	*- / 2.756*	*- / 20.025*	*- / 24.003*	*- / 17.025*	*- / 4.578*	*- / 5.104*	*- / 73.491*
Installation												
Installation 1 of 2: Falcon STAR (Structural Augmentation Roadmap)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.562	- / 5.729	- / 8.851	- / 18.507	- / 38.649
Installation 2 of 2: Cockpit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.763	- / 17.611	- / 28.374
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.562*	*- / 5.729*	*- / 19.614*	*- / 36.118*	*- / 67.023*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**8.706**	**0.000**	**8.706**	**96.900**	**80.273**	**75.416**	**44.654**	**73.201**	**379.150**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 3 / F-16 SLEP - OSIP 011-21
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: Falcon STAR (Structural Augmentation Roadmap)

Manufacturer Information

Manufacturer Name: STAR	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates				Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: Falcon STAR (Structural Augmentation Roadmap)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.562	- / -	- / -	0 / 0.000	2 / 5.562
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.729	- / -	0 / 0.000	2 / 5.729
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 8.851	0 / 0.000	3 / 8.851
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 9.117	3 / 9.117
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 9.390	3 / 9.390
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.562	2 / 5.729	3 / 8.851	6 / 18.507	13 / 38.649

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	1	-	1	6	13
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	1	1	7	13

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 3 / F-16 SLEP - OSIP 011-21
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: Cockpit

Manufacturer Information

Manufacturer Name: Cockpit	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Nov 2023	Nov 2024
Delivery Dates						Nov 2024	Nov 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: Cockpit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.763	0 / 0.000	5 / 10.763
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.134	3 / 6.134
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 11.477	5 / 11.477
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.763	8 / 17.611	13 / 28.374

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	8	13
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	13

Footnotes:

(11) Cost element funds non-recurring engineering associated with the procurement and integration of STAR Val/Ver kit into USN block 15 aircraft in FY 2021. Non-recurring efforts in FY 2022 associated with the installation of the STAR Val/Ver kit.

(12) Cost element provides non-recurring engineering for the integration and installation of the cockpit upgrade in the F-16 (A) in FY 2022. The non-recurring engineering for the F-16 (B) integration will be funded in FY 2023.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 3 / F-16 SLEP - OSIP 011-21
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(13) Cost element funds the non-recurring engineering in support of the integration of the cockpit display into a new F-16 STAR simulator.

(14) Cost element funds other support for F-16 Falcon STAR and Cockpit Display Upgrade efforts. Increase in FY 2022 provides other support related to the cockpit upgrade, radar, and F100 replacement. Increase in FY 2023 & 2024 is associated with lab and flight testing of the integrated STAR and cockpit configuration.

(15) Cost element funds integrated logistics support for F-16 Falcon STAR and Cockpit Display Upgrade efforts.

(16) Cost element funds initial support equipment applicable to F-16 for Falcon STAR and Cockpit Display Upgrade efforts.

(17) Cost element funds incorporation of all configuration changes and maintenance requirements applicable for F-16 Falcon STAR and Cockpit Display Upgrade efforts.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	51.876	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51.876
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	51.876	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51.876
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**51.876**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**51.876**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0522 / Adversary	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 51.876	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 51.876
Subtotal: Procurement	*- / 51.876*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 51.876*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**51.876**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**51.876**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	11,085.679	1,157.961	1,129.318	379.351	0.000	379.351	393.554	593.626	638.606	877.957	4,782.680	21,038.732
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	11,085.679	1,157.961	1,129.318	379.351	0.000	379.351	393.554	593.626	638.606	877.957	4,782.680	21,038.732
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**11,085.679**	**1,157.961**	**1,129.318**	**379.351**	**0.000**	**379.351**	**393.554**	**593.626**	**638.606**	**877.957**	**4,782.680**	**21,038.732**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LI 0525 was restructured in FY2021 in order to provide greater transparency of F-18 series modifications.
OSIPs 11-99, 21-00, & 10-21 can be found in LI-0502 for FY2021 and out.
OSIPs 11-10, 11-13, 14-03, & 20-14 can be found in LI-0505 for FY2021 and out.
OSIPs 04-14 can be found in LI-0515 for FY2021 and out.

This line item funds modifications to all models of the F/A-18 and EA-18G aircraft.

The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, both the single seat and two-seat F/A-18s include a night attack capability. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since fighter capabilities are available in either mission, a robust self-defense capability is retained.

The EA-18G has the capability to operate autonomously or as a major node in a network centric operation. The performance of the aircraft is compatible with the primary strike/fighter aircraft inventory, allowing it to be fully integrated into specific strike packages. It also has the capacity to provide broad area coverage for extended periods of time to support numerous strikes or other air operations in a federated context. The EA-18G is a scalable, flexible solution facilitating "Task Organized" force structures. Task organized force structures employ adequate forces to accomplish a specific task while maintaining operational and personnel tempo at acceptable levels. The EA-18G is designed to perform a range of Electronic Warfare/Electronic Attack functions either simultaneously or independently. EA-18G man in the loop operation and advanced information display system allow real time assessment of the tactical situation and the appropriate response executed in accordance with the rules of engagement. The EA-18G electronic attack upgrades meet or exceed EA-6B Airborne (with ALQ-218, ALQ-99, USQ-113) Electronic Attack capability to detect, identify, locate and suppress hostile emitters; provide enhanced connectivity to National, Theater and strike assets; and provide organic precision emitter targeting for employment of onboard suppression weapons to fulfill operational requirements.

NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog. Funds in this budget request are required for on-going modifications to address OOR aircraft.

Current aircraft inventory and Flight hours flown as of 19 June 2019:
F/A-18A (Lots 7 - 9) - 50 (22 Active, 28 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 11 hours (current); 2,011 hours (extended)
F/A-18B (Lots 1 - 6) - 0 (0 Active, 0 Reserve): service life 6,000 hours (current); average service life remaining 474 (current)
F/A-18B (Lots 7 - 9) - 3 (3 Active, 0 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 883 (current); 2,883 (extended)
F/A-18C - 279 (230 Active, 49 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 510 (current); 2,510 (extended)
F/A-18D - 112 (106 Active, 6 Reserve): service life 8,000 hours (current); 10,000 hours (extended); average service life remaining 588 (current); 2,588 (extended)
F/A-18E - 293 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 3,044 (current); 7,044 (extended)
F/A-18F - 258 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 2,303 (current); 6,303 (extended)
EA-18G - 161 (156 Active, 5 Reserve): service life 7,500 hours (current); average service life remaining 5,886 (current)

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Correction of Discrepancies (OSIP 11-84) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 1,403.678	- / 56.364	- / 64.119	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / Digital Communications System (DCS) (OSIP 10-99) (CAPABILITY IMPROVEMENT)				- / 203.683	- / 18.914	- / 14.372	- / 0.238	- / 0.000	- / 0.238
P-3a	3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+ (SAFETY / LIFE EXTENSION)				- / 1,381.918	- / 64.328	- / 72.516	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / Multi-Functional Information Distribution System (MIDS) (OSIP 12-99) (CAPABILITY IMPROVEMENT)				- / 959.820	- / 14.634	- / 7.997	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00) (AVIONICS UPGRADE)				- / 429.072	- / 71.009	- / 32.993	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / Joint Helmet Mounted Cueing System (JHMCS) (OSIP 24-00) (CAPABILITY IMPROVEMENT)				- / 308.654	- / 2.826	- / 0.876	- / 0.226	- / 0.000	- / 0.226
P-3a	7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01) (CAPABILITY IMPROVEMENTS)				- / 961.666	- / 16.856	- / 9.763	- / 9.625	- / 0.000	- / 9.625
P-3a	8 / F/A-18C/D/E/F and EA-18G Training System (OSIP 006-02) (TRAINERS UPGRADE)				- / 271.133	- / 27.385	- / 29.770	- / 31.865	- / 0.000	- / 31.865
P-3a	9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03) (SAFETY /RELIABILITY/IMPROVEMENT)				- / 952.979	- / 117.148	- / 189.205	- / 0.000	- / 0.000	- / 0.000
P-3a	10 / Core Avionics Improvements / Upgrades (OSIP 023-04) (Capability and Reliability Improvements)				- / 622.271	- / 106.889	- / 108.772	- / 138.016	- / 0.000	- / 138.016
P-3a	11 / Litening AT Targeting Pod (OSIP 024-04) (CAPABILITY IMPROVEMENTS)				- / 164.422	- / 1.094	- / 1.004	- / 0.000	- / 0.000	- / 0.000
P-3a	12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07) (AVIONICS UPGRADE)				- / 1,224.080	- / 128.140	- / 87.786	- / 48.851	- / 0.000	- / 48.851
P-3a	13 / EW Unique (OSIP 021-08) (Capability Improvements)				- / 292.775	- / 34.136	- / 19.857	- / 18.068	- / 0.000	- / 18.068
P-3a	14 / Network Centric Operations: (OSIP 001-10) (Avionics Upgrade)				- / 257.325	- / 56.646	- / 56.434	- / 44.625	- / 0.000	- / 44.625
P-3a	15 / EA-18G Unique OSIP (011-10) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 171.303	- / 52.950	- / 90.550	- / 0.000	- / 0.000	- / 0.000
P-3a	16 / Power and Propulsion (11-13) (Safety, Readiness, Reliability)				- / 551.692	- / 58.747	- / 58.566	- / 0.000	- / 0.000	- / 0.000
P-3a	17 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 291.499	- / 60.195	- / 46.962	- / 0.000	- / 0.000	- / 0.000
P-3a	18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14) (SAFETY / LIFE EXTENSION)				- / 191.739	- / 164.463	- / 162.980	- / 0.000	- / 0.000	- / 0.000
P-3a	19 / Priority Stores Integration (OSIP 10-16) (CAPABILITY IMPROVEMENT)				- / 36.600	- / 12.689	- / 9.456	- / 11.063	- / 0.000	- / 11.063
P-3a	20 / Physiological Episode (PE) Mitigation (OSIP 13-19) (Safety)				- / 0.000	- / 21.248	- / 65.340	- / 51.521	- / 0.000	- / 51.521
P-3a	21 / Communication Systems (OSIP 11-21) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 25.253	- / 0.000	- / 25.253
P-3a	22 / Inactive OSIPs (TBD)				- / 409.370	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	23 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 71.300	- / 0.000	- / 0.000	- / 0.000	- / 0.000

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-40	**Total Gross/Weapon System Cost**				**- / 11,085.679**	**- / 1,157.961**	**- / 1,129.318**	**- / 379.351**	**- / 0.000**	**- / 379.351**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Correction of Discrepancies (OSIP 11-84) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,524.161
P-3a	2 / Digital Communications System (DCS) (OSIP 10-99) (CAPABILITY IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 237.207
P-3a	3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+ (SAFETY / LIFE EXTENSION)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,518.762
P-3a	4 / Multi-Functional Information Distribution System (MIDS) (OSIP 12-99) (CAPABILITY IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 982.451
P-3a	5 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00) (AVIONICS UPGRADE)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 533.074
P-3a	6 / Joint Helmet Mounted Cueing System (JHMCS) (OSIP 24-00) (CAPABILITY IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 312.582
P-3a	7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01) (CAPABILITY IMPROVEMENTS)				- / 7.460	- / 47.508	- / 48.332	- / 134.384	- / 171.596	- / 1,407.190
P-3a	8 / F/A-18C/D/E/F and EA-18G Training System (OSIP 006-02) (TRAINERS UPGRADE)				- / 44.319	- / 45.633	- / 62.368	- / 97.018	- / 181.511	- / 791.002
P-3a	9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03) (SAFETY /RELIABILITY/IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,259.332
P-3a	10 / Core Avionics Improvements / Upgrades (OSIP 023-04) (Capability and Reliability Improvements)				- / 145.086	- / 225.472	- / 235.108	- / 259.818	- / 1,180.549	- / 3,021.981
P-3a	11 / Litening AT Targeting Pod (OSIP 024-04) (CAPABILITY IMPROVEMENTS)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 166.520
P-3a	12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07) (AVIONICS UPGRADE)				- / 45.137	- / 71.495	- / 101.453	- / 121.784	- / 389.243	- / 2,217.969
P-3a	13 / EW Unique (OSIP 021-08) (Capability Improvements)				- / 10.985	- / 11.928	- / 12.078	- / 86.927	- / 1,806.038	- / 2,292.792
P-3a	14 / Network Centric Operations: (OSIP 001-10) (Avionics Upgrade)				- / 42.991	- / 67.826	- / 45.185	- / 45.684	- / 391.475	- / 1,008.191
P-3a	15 / EA-18G Unique OSIP (011-10) (SAFETY /RELIABILITY/ IMPROVEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 314.803
P-3a	16 / Power and Propulsion (11-13) (Safety, Readiness, Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 669.005
P-3a	17 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 398.656
P-3a	18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14) (SAFETY / LIFE EXTENSION)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 519.182

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	19 / Priority Stores Integration (OSIP 10-16) (CAPABILITY IMPROVEMENT)				- / 11.496	- / 12.427	- / 12.556	- / 12.921	- / 57.880	- / 177.088
P-3a	20 / Physiological Episode (PE) Mitigation (OSIP 13-19) (Safety)				- / 53.909	- / 57.150	- / 48.104	- / 44.525	- / 237.308	- / 579.105
P-3a	21 / Communication Systems (OSIP 11-21) (Capability Improvement)				- / 32.171	- / 54.187	- / 73.422	- / 74.896	- / 367.080	- / 627.009
P-3a	22 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 409.370
P-3a	23 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 71.300
P-40	**Total Gross/Weapon System Cost**				**- / 393.554**	**- / 593.626**	**- / 638.606**	**- / 877.957**	**- / 4,782.680**	**- / 21,038.732**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2020 enacted includes congressional rescissions of $71.3 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

The overall goal of the modifications budgeted in FY 2021 is to implement commonality/capability and structural safety and reliability improvements.

OSIPs 11-99, 21-00, & 10-21 can be found in LI-0502 for FY2021 and out.
OSIPs 11-10, 11-13, 14-03, & 20-14 can be found in LI-0505 for FY2021 and out.
OSIPs 04-14 can be found in LI-0515 for FY2021 and out.

OSIP 11-84 Correction of Discrepancies provides resources to correct aircraft discrepancies and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. These efforts are specific to F/A-18A-D aircraft.

OSIP 10-99 Digital Communications System (DCS)consists of an upgraded AN/ARC-210 Receiver Transmitter (RT) integrated into the F/A-18 weapons system. The DCS communicates with standard United States Marine Corps, United States Navy, and United States Air Force digital communications devices to facilitate close air support, deep air strike, and tactical air control missions.

OSIP 11-99 F/A-18 Aircraft Structural Life Management Plan (SLMP) incorporates structural enhancements and changes required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2030. Starting in FY2021 this OSIP can be found in BLI 0502 (F-18 A-D Unique).

OSIP 12-99 Multi-Functional Information Distribution (MIDS) provides secure digital data link communications and
Tactical Air Navigation (TACAN) capabilities to aircraft.

OSIP 21-00 USMC F/A-18 Upgrade supports United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics capabilities, including both hardware and software. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft Integration Plan. Starting in FY2021 this OSIP can be found in BLI 0502 (F-18 A-D Unique).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

OSIP 24-00 Joint Helmet Mounted Cueing System (JHMCS) is a multi-service system that provides United States Air Force (USAF), United States Navy (USN), and United States Marine Corps (USMC) aircraft the capability to cue and verify onboard weapons and weapons sensors to a specific azimuth/elevation and to confirm sensor line-of-sight. The intent is to reduce tasks required of aircrews, verify seeker/sensor position, and enhance weapons employment opportunities.

OSIP-12-01 Advanced Targeting Forward Looking Infrared (ATFLIR) provides F/A-18 A+/C/D/E/F and E/A-18G aircraft with the ability to detect, track, and engage air and ground targets, at extended ranges, using the infrared and visible light spectrums. Changes in F/A-18 air-to-air employment and continual improvements to air-to-ground standoff/precision strike weapons necessitate increased pod performance and reliability to support longer required detection/engagement distances.

OSIP 06-02 F/A-18C/D/E/F and EA-18G Training System supports compliance with fleet readiness and training requirements. These requirements mandate that training systems be concurrent with aircraft hardware, software, and system capabilities.

OSIP 14-03 E/F & EA-18G Correction of Operational Discrepancies provides resources to correct aircraft discrepancies and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. These efforts are specific to F/A-18E/F and EA-18G aircraft. Starting in FY2021 this OSIP can be found in BLI 0505 (F-18E/F and EA-18G Modernization and Sustainment).

OSIP 23-04 Core Avionics supports retrofit upgrades, mitigation of obsolescence issues, and improvements to various avionics systems that have been, or are being, incorporated into fleet aircraft. This OSIP provides updates to the Automated Maintenance Environment (AME) and the integrated electronic technical manuals, and provides mission planning updates.

OSIP 24-04 Litening AT Targeting Pod provides ongoing integration improvements to LITENING pod systems in support of evolving operational requirements.

OSIP 02-07 AESA/AN-APG-65/AN-APG-73 includes recurring and non-recurring efforts for reliability and operational safety improvements to, as well as obsolescence mitigation for, the APG-65 and APG-73 radars and associated software requirements.

OSIP 21-08 EW Unique supports required safety of flight modifications, addresses obsolescence issues, and incorporates system improvements for all electronic warfare-unique requirements, to include hardware and software modifications.

OSIP 01-10 Network Centric Operations will implement a common configuration of network centric capability across all F/A-18A-F and EA-18G aircraft.

OSIP 11-10 EA-18G Unique supports the required safety-of-flight modifications, mitigation of obsolescence issues, and incorporation of system improvements. Starting in FY2021 this OSIP can be found in BLI 0505 (F-18E/F and EA-18G Modernization and Sustainment).

OSIP 11-13 Power and Propulsion incorporates safety and life-limiting propulsion and power corrective actions to resolve safety and readiness concerns. Corrections to design deficiencies found during post production test and evaluation, and discovered during fleet operations, that have resulted in safety and reliability degradation, must be corrected. Starting in FY2021 this OSIP can be found in BLI 0505 (F-18E/F and EA-18G Modernization and Sustainment).

OSIP 04-14 Infrared Search and Track (IRST) provides the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment. Starting in FY2021 this OSIP can be found in BLI 0515 [Infrared Search and Track (IRST)].

OSIP 20-14 F/A-18E/F and EA-18G SLEP incorporates structural and sub-systems enhancements and changes required to extend the F/A-18E/F and EA-18G service life, and maintain sufficient aircraft inventory, to meet fleet operational requirements through FY2046. Starting in FY2021 this OSIP can be found in BLI 0505 (F-18E/F and EA-18G Modernization and Sustainment).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0525 / F-18 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

OSIP 10-16 Priority Stores facilitates aircraft capability upgrades to carry priority stores for F/A-18A-F and EA-18G aircraft. Priority Stores Integration contains fleet-required air to air and air to ground weapon configuration upgrades to support fleet requirements. This OSIP also provides for F/A-18A-F and EA-18G aircraft weapon systems software and aeromechanical hardware upgrades needed during fleet operations to ensure that mission readiness and safety of flight regimes are maintained.

OSIP 13-19 Physiological Episodes (PE) supports the mitigation of aircrew Physiological Episodes (PE) in F/A-18 A-F and E/A-18G by correcting aircraft deficiencies in aircrew life support systems, and addressing safety and reliability issues.

OSIP 10-21 F/A-18 Air Vehicle A-D Readiness supports the correction of readiness degraders impacting F/A-18 A/B/C/D aircraft cost per flight hour; Reliability, Maintainability, and Availability (RM&A); obsolescence; and reduction of life-cycle costs. Starting in FY2021 this OSIP can be found in BLI 0502 (F-18 A-D Unique).

OSIP 11-21 Communication Systems supports an upgraded AN/ARC-210 Receiver Transmitter (RT) integrated with the F/A-18 weapon system. The DCS communicates with standard United States Marine Corps, United States Navy, and United States Air Force digital communications devices to facilitate close air support, deep air strike, and tactical air control missions. This OSIP also provides secure digital data link communications and Tactical Air Navigation (TACAN) capabilities to aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,403.678	56.364	64.119	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,524.161
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,403.678	56.364	64.119	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,524.161
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,403.678**	**56.364**	**64.119**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,524.161**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the aircraft modification program. Additionally, aircraft discrepancies can be discovered during sustainment activities, engineering analysis, standard depot level evaluations, and/or during normal fleet operations. Not addressing these structural and system discrepancies will create maintenance and supply problems, and adversely impact safety of flight and operational readiness. This Operational, Safety and Improvement Program (OSIP) provides resources to correct such issues via Engineering Change Proposal (ECP) and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. Modifications for the F/A-18 A/B/C/D aircraft include: flight controls, forward fuselage, aft fuselage, wing, critical structures, electrical, hydraulic, Environmental Control Systems (ECS), launch and recovery, fuel, mechanical, secondary power, Blue Angel modifications, and other modification efforts.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Each change has been or will be tested prior to installation into the F/A-18.

Efforts funded under this OSIP were realigned to OSIP 10-21 F/A-18A-D Readiness beginning in FY21.

NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 608 Crease Longeron - NonOrganic [1] *Installation 1 of 4*	83 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 0.000
1.1.2) ECP 609 Inner Wing Conversion/ Modification - Fuel Improvements - NonOrganic *Installation 1 of 4*	47 / 0.782	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 0.782
1.1.3) ECP 609 Inner Wing Conversion/ Modification - NonOrganic *Installation 1 of 4*	30 / 4.195	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 4.195
1.1.4) ECP 973 Fuel Cell Floor Crack - NonOrganic *Installation 1 of 4*	450 / 2.991	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	450 / 2.991
1.1.5) ECP 1034 NI Trailing Edge Flap (AYC-1460) - NonOrganic *Installation 1 of 4*	618 / 4.369	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	618 / 4.369
1.1.6) ECP 1034 NI Aileron Attach Lug Bushing (AYC-1481) - NonOrganic *Installation 1 of 4*	618 / 1.771	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	618 / 1.771
1.1.7) ECP 1100 F/A-18 A-D Keel Beam Web Retrofit - NonOrganic *Installation 1 of 4*	189 / 0.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	189 / 0.160
1.1.8) ECP 1101 Inner Wing AFT Closure Rib - NonOrganic *Installation 1 of 4*	198 / 14.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	198 / 14.849
1.1.9) ECP 1102 Y508 Former Shear Tie Fastener Holes Retrofit - NonOrganic *Installation 1 of 4*	608 / 1.979	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	608 / 1.979
1.1.10) ECP 1118NI F/A-18 A-D Y580.5/Y590.5 Former Replacement Modline - NonOrganic *Installation 1 of 4*	202 / 15.572	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	202 / 15.572
1.1.11) ECP 1120NI F/A-18 A-D Upper O/B Longeron Y453/Y508 Fw Section Splice - NonOrganic *Installation 1 of 4*	170 / 4.463	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 4.463
1.1.14) ECP 1125 F/A-18 A-D Y470 Inner Wing Panel Lug - NonOrganic *Installation 1 of 4*	184 / 0.356	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	184 / 0.356
1.1.15) ECP 1137NI Fire Extinguisher Temp Compensating Pressure Switch - NonOrganic *Installation 1 of 4*	475 / 0.449	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	475 / 0.449
1.1.16) ECP-1142NI Y326.5 Lead Edge Ext (LEX) Spt Fitting & Substructure - NonOrganic *Installation 1 of 4*	523 / 1.256	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	523 / 1.256

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.17) ECP-1142C1NI Y394.2 LEX Connecting Link Retrofit - NonOrganic *Installation 1 of 4*	454 / 0.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	454 / 0.218
1.1.19) ECP 1148NI Speed Brake Arresting Hook Actuator Fitting Retrofit - NonOrganic *Installation 1 of 4*	370 / 3.508	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	370 / 3.508
1.1.20) ECP 1159 - Y557.5 Bulkhead Tub Retrofit - NonOrganic *Installation 1 of 4*	587 / 2.622	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	587 / 2.622
1.1.21) ECP-1209 Outer Wing Panel 68% Spar - NonOrganic (2) *Installation 1 of 4*	482 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	482 / 0.000
1.1.24) ECP 6217 Cockpit Pressurization Warning System - NonOrganic *Installation 1 of 4*	630 / 8.670	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	630 / 8.670
1.1.25) ECP 6321R1 F/A-18 A-D Main Landing Gear Door Hinge Pins - NonOrganic *Installation 1 of 4*	640 / 1.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	640 / 1.265
1.1.12) ECP 1121 F/A-18 A-D MLG Critical Components Retrofit - Organic(*)	8 / 71.025	41 / 5.806	76 / 10.738	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 87.569
1.1.13) ECP 1122 F/A-18 A-D NLG Critical Components Retrofit - Organic(*)	8 / 21.562	41 / 2.207	76 / 4.173	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 27.942
1.1.18) ECP-1142C2 LEX Support Assy 74T030317 Replacement - Organic *Installation 2 of 4*	- / -	- / -	80 / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.066
1.1.22) ECP-1211 Replacing Aging Fraying Flight Control and Brake Cables - NonOrganic *Installation 3 of 4*	240 / 1.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	240 / 1.018
1.1.23) ECP-1211 Replacing Aging Fraying Flight Control and Brake Cables 0505 - Organic(*) (3)	- / -	- / -	20 / 0.084	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.084
1.1.26) ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75) - Organic *Installation 4 of 4*	- / -	- / -	8 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.011
1.1.27) Archived ECPs - Organic(*)	- / 268.248	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 268.248
1.1.28) CKA Material Line - Organic(*)	- / 0.481	- / 1.500	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.481
1.2.1) Installation Kits N/R - Organic(*)	- / 87.628	- / 2.000	- / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 90.328
2.1.1) Installation Equipment - Organic(*)	- / 2.267	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.267
2.2.1) Installation Equipment N/R - Organic(*)	- / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.120

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Procurement	- / 521.824	- / 11.513	- / 17.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 550.609
Support												
3.2) Data	- / 17.603	- / 0.031	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.634
3.4) Support Equipment	- / 43.906	- / 2.937	- / 2.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 49.675
3.5) ILS	- / 384.704	- / 11.004	- / 12.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 408.328
3.6) Other Support	- / 136.889	- / 11.714	- / 11.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 160.202
3.8) Prior Year Installation Costs	36,016 / 226.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36,016 / 226.255
Subtotal: Support	- / 809.357	- / 25.686	- / 27.051	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 862.094
Installation												
Installation 1 of 4: GRP: Prior Year Procurements	- / 72.497	- / 19.165	- / 19.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 110.758
Installation 2 of 4: ECP-1142C2 LEX Support Assy 74T030317 Replacement	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -
Installation 3 of 4: ECP-1211 Replacing Aging Fraying Flight Control and Brake Cables	- / -	- / -	- / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.700
Installation 4 of 4: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -
Subtotal: Installation	- / 72.497	- / 19.165	- / 19.796	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 111.458
Total												
Total Cost (Procurement + Support + Installation)	**1,403.678**	**56.364**	**64.119**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,524.161**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: GRP: Prior Year Procurements

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: Prior Year Procurements

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	3,077 / 72.497	503 / 19.165	609 / 19.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3,369 / 0.000	7,558 / 110.758
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3,077 / 72.497	503 / 19.165	609 / 19.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3,369 / 0.000	7,558 / 110.758

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3,077	128	131	129	115	171	151	150	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,369	7,558
Out	3,077	128	131	129	115	171	151	150	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,369	7,558

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: ECP-1142C2 LEX Support Assy 74T030317 Replacement

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: ECP-1142C2 LEX Support Assy 74T030317 Replacement

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: ECP-1211 Replacing Aging Fraying Flight Control and Brake Cables

Manufacturer Information

Manufacturer Name: TBD [4] | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019					
Delivery Dates		Mar 2020					

Installation Information

Method of Implementation: [none specified]:: Installation Name: ECP-1211 Replacing Aging Fraying Flight Control and Brake Cabl

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	100 / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	140 / 0.000	240 / 0.700
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	100 / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	140 / 0.000	240 / 0.700

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	240
Out	-	-	-	-	-	-	-	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	240

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75)

Manufacturer Information

Manufacturer Name: TBD [5] | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: ECP-CP - F/A-18 - 0004 ECS Windshield Anti-Ice Valve (Item 75

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Footnotes:

[1] These are in-warranty kits so there is no kit cost. There is no lead time for kits.

[2] Kits are not required. Only templates and installs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 1 / Correction of Discrepancies (OSIP 11-84)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) Kits will be installed under BLI 0502 OSIP 10-21

(4) Kits will be installed under BLI 0502 OSIP 10-21

(5) Kits will be installed under OSIP 10-21

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 2 / Digital Communications System (DCS) (OSIP 10-99)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	203.683	18.914	14.372	0.238	0.000	0.238	0.000	0.000	0.000	0.000	0.000	237.207
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	203.683	18.914	14.372	0.238	0.000	0.238	0.000	0.000	0.000	0.000	0.000	237.207
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**203.683**	**18.914**	**14.372**	**0.238**	**0.000**	**0.238**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**237.207**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Digital Communications System (DCS) consists of an upgraded AN/ARC-210 Receiver Transmitter (RT) (with embedded digital message transfer capability and embedded communications security) installed in the F/A-18 and integrated with the F/A-18 weapons system (mission computer, controls and displays, and communication subsystem). The DCS utilizes pre-formatted messages to communicate with standard United States Marine Corps, United States Navy, and United States Air Force digital communications devices to facilitate close air support, deep air strike, and tactical air control missions. Joint Staff has specified new requirements for close air support platforms to improve interoperability between air and ground units in Digitally-Aided Close Air Support (DACAS) missions. These requirements are being satisfied with the upgrade of the DCS radio to the ARC-210 RT-1990 radio. DCS reduces voice communications requirements which tend to be slow, inaccurate, and susceptible to Meaconing, Interference, Jamming, and Intrusion. DCS will enhance mission effectiveness by decreasing pilot workload which allows the pilot more time to counter increased threat capabilities (operational requirements document# 486-88-98). The RT-1990 radio also supports the North Atlantic Treaty Organization (NATO) standard anti-jam waveform, Second generation Anti-jam Tactical UHF radio for NATO (SATURN), and will greatly improve communication in a jamming environment as compared to current anti-jam waveforms. The next version of ARC-210, RT-1990A, and the next version of the Comm1 external encryptor, KY-58M, will support National Security Agency cryptographic modernization mandates and the instruction CJCSI 6510.02E Cryptographic Modernization Planning. This operational safety improvement program will also be used to address parts obsolescence issues and to perform non-recurring work associated with network centric operations and interoperability requirements. The RT-2036 is the next version of the ARC-210, and supports Mobile User Objective System (MUOS) SATCOM.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
RT-2036 will be integrated into aircraft in FY21; fleet release in H18 SCS.

Note: FY21 and out efforts and funding have been moved to OSIP 11-21 with the exception of final installs of ECP 6486.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 2 / Digital Communications System (DCS) (OSIP 10-99)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 and EA-18G	**Modification Type:** CAPABILITY IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) RT-2036: SATCOM (ECP6486) E/F - NonOrganic *Installation 1 of 1*	12 / 1.142	- / -	2 / 0.177	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.319
1.1.2) ARCHIVED COSTS - Organic(*)	19 / 5.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 5.010
1.2.1) Installation Kits N/R - Organic(*)	- / 1.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.504
2.1.1) Amplifiers (HPA/LNA) (ECP6486) - Organic(*)	34 / 2.481	61 / 4.397	48 / 3.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	143 / 10.639
2.1.2) Archive Costs - Organic(*)	1,107 / 140.315	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,107 / 140.315
2.2.1) Install Equipment N/R - Organic(*)	- / 15.890	- / 0.638	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.528
2.2.2) H16 SCS - Organic(*)	- / 3.258	- / 1.330	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.588
2.2.3) H18 SCS - Organic(*)	- / -	- / 4.998	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.998
2.2.4) Software - Organic(*)	- / 7.592	- / 4.178	- / 5.659	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.429
Subtotal: Procurement	*- / 177.192*	*- / 15.541*	*- / 9.597*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 202.330*
Support												
3.1) Engineering Change Orders	- / 0.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.483
3.2) Data	- / 1.357	- / 0.485	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.842
3.3) Training Equipment	- / 1.165	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.165
3.4) Support Equipment	- / 1.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.013
3.5) ILS	- / 4.965	- / -	- / 0.596	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.561
3.6) Other Support	- / 16.414	- / 2.888	- / 3.089	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.391
3.7) Prior Year Kit Installation	13 / 0.894	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.894
Subtotal: Support	*- / 26.291*	*- / 3.373*	*- / 3.685*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 33.349*
Installation												
Installation 1 of 1: RT-2036: SATCOM (ECP6486) E/F	- / 0.200	- / -	- / 1.090	- / 0.238	- / 0.000	- / 0.238	- / -	- / -	- / -	- / -	- / 0.000	- / 1.528
Subtotal: Installation	*- / 0.200*	*- / -*	*- / 1.090*	*- / 0.238*	*- / -*	*- / 0.238*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.528*
Total												
Total Cost (Procurement + Support + Installation)	**203.683**	**18.914**	**14.372**	**0.238**	**0.000**	**0.238**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**237.207**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 2 / Digital Communications System (DCS) (OSIP 10-99)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: RT-2036: SATCOM (ECP6486) E/F

Manufacturer Information

Manufacturer Name: Boeing - ECP 6486 | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020					
Delivery Dates		Jul 2021					

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: RT-2036: SATCOM (ECP6486) E/F

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.200	- / -	10 / 1.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.290
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	2 / 0.238	0 / 0.000	2 / 0.238	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.238
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.200	- / -	10 / 1.090	2 / 0.238	0 / 0.000	2 / 0.238	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.528

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	-	-	-	-	-	-	-	10	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Out	2	-	-	-	-	-	-	-	10	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,381.918	64.328	72.516	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,518.762
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,381.918	64.328	72.516	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,518.762
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,381.918**	**64.328**	**72.516**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,518.762**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Incorporation of structural enhancements and changes is required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2030. Structural enhancements and changes include resolution of discrepancies identified as a result of structural test-16 and in-service experience. These Service Life Extension Program (SLEP) enhancements and changes to extend the life from 6,000 hours to 10,000 hours include: modifications to allow the entire airframe to extend flight hours; modifications to ensure structures currently limited to 78% of design life can achieve 100% life; modifications to ensure landing gear, catapult and attachment components can extend total landings. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. Center Barrel Replacement Plus (CBR+) is applicable to F/A-18A/B/C/Ds. Engineering Change Proposal (ECP) 904 Part 1 is the basic center barrel kit. ECP 904 Part 2 is required to extend Wing Root Fatigue Life Expended (WRFLE) and is not required for all aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Currently all Lot VI through XVII aircraft have 78% life limits without the structural life management plan modifications to bring them to 100% airframe life. The Fleet Readiness Center North Island developed ECP 904NI (CBR+) which was approved on 27 April 2000. Validation started October 2000 and was completed in August 2001. Verification started August 2001 and was completed June 2002.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY / LIFE EXTENSION	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 904 CBR+ WRFLE SLEP -Day/Night Attack - NonOrganic *Installation 1 of 4*	350 / 418.308	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	350 / 418.308
1.1.2) ECP 1099 AFC-579 NLG Retract Actuator Supports - NonOrganic *Installation 2 of 4*	6 / 0.166	2 / 0.002	2 / 0.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.170
1.1.3) ECP 627 - AFC-648 Bulkhead Beaded Panel, Y357.500 - Organic(*)	30 / 0.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.252
1.1.4) ECP-0629 AFC-651 FCF 700 Upper Skin - NonOrganic *Installation 3 of 4*	22 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.000
1.1.5) ECP-630 - AFC-652 Crease Longeron Straps (Y453 & Y488) - Organic(*) (6)	2 / 0.164	60 / 4.221	60 / 4.805	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	122 / 9.190
1.1.6) ECP-630R2 - AFC-685 Adapter - Misslie Launcher, Y488 - Y497 - Organic(*)	- / -	- / -	60 / 5.518	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 5.518
1.1.7) ECP-630R2 - AFC-686 Longeron Former-Upper Segment Y518 - Organic(*)	- / -	- / -	60 / 9.313	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 9.313
1.1.8) ECP-630R2 - AFC-687 Support, Floor-Fuel Bay, Y470.5 - Y488 - Organic(*)	- / -	- / -	10 / 0.063	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.063
1.1.9) ECP-630R2 - AFC-688 Upper 701 Skin Former, Fuselage Upper-Center Y534 - Organic(*)	- / -	- / -	60 / 1.995	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.995
1.1.10) ECP 631C1 - AYC-1744 Spar-Rear, Wing Panel, Inner - Organic(*)	- / -	- / -	2 / 0.291	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.291
1.1.11) ECP 631R1 - AYC-1725 Inner Wing Rib #6 - Organic(*)	- / -	- / -	2 / 0.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.067
1.1.12) ECP 632C1 AYC-1745 Multi Locations, Intermediate 1, 2, Rear Spars - Organic(*)	- / -	- / -	2 / 0.913	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.913
1.1.13) ECP-632R1 - AYC-1736/AYC-1736R1 Forward Spar & Missile Rib Support (OC) - Organic(*)	- / -	- / -	2 / 1.413	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.413
1.1.14) ECP 633 AFC-650 AF Door 68 Doubler L&R - NonOrganic *Installation 4 of 4*	202 / 0.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	202 / 0.001
1.1.15) ECP 633C1 - AFC-668 AFT Lower Longeron; Above Door 68 L&R - Organic(*)	- / -	60 / 1.859	60 / 2.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	120 / 4.255
1.1.16) A-Kits Archived - Organic(*)	602 / 8.852	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	602 / 8.852
1.2.1) Installation Kits N/R - Organic(*)	- / 263.542	- / 10.294	- / 6.399	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 280.235

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** SAFETY / LIFE EXTENSION	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.1.1) Fuel Cell, Nacelle, and CBR+ - Over and Above (RIM start FY08) - Organic(*) (7)	283 / 46.357	20 / 2.682	8 / 0.649	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	311 / 49.688
2.2.1) FRCSE MULTI SLEP NRE - Organic(*)	- / -	- / 5.486	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.486
2.2.2) Install Equipment N/R - Organic(*)	- / 16.300	- / 0.511	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.811
Subtotal: Procurement	*- / 753.942*	*- / 25.055*	*- / 34.824*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 813.821*
Support												
3.1) Data	- / 19.135	- / 1.884	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.019
3.2) Support Equipment	- / 3.941	- / 0.211	- / 0.231	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.383
3.3) Inventory Modeling	- / 14.456	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.456
3.4) ILS	- / 94.248	- / 6.338	- / 7.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 107.849
3.5) Other Support	- / 130.863	- / 17.977	- / 21.663	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 170.503
Subtotal: Support	*- / 262.643*	*- / 26.410*	*- / 29.157*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 318.210*
Installation												
Installation 1 of 4: GRP: CBR ECP 904	- / 364.631	- / 12.145	- / 7.762	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 384.538
Installation 2 of 4: ECP 1099 AFC-579 NLG Retract Actuator Supports	- / 0.702	- / 0.260	- / 0.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.231
Installation 3 of 4: GRP: ECP-0629 FWD Center Fuselage	- / -	- / -	- / 0.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.037
Installation 4 of 4: GRP: ECP-0632 Outer Wing	- / -	- / 0.458	- / 0.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.925
Subtotal: Installation	*- / 365.333*	*- / 12.863*	*- / 8.535*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 386.731*
Total												
Total Cost (Procurement + Support + Installation)	**1,381.918**	**64.328**	**72.516**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,518.762**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: GRP: CBR ECP 904

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: CBR ECP 904

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	261 / 364.631	5 / 12.145	4 / 7.762	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.000	350 / 384.538
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	261 / 364.631	5 / 12.145	4 / 7.762	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.000	350 / 384.538

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	261	2	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	350
Out	261	1	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	350

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: ECP 1099 AFC-579 NLG Retract Actuator Supports

Manufacturer Information

Manufacturer Name: North Island - ECP 1099 NLG Retract Actuator Supports | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019					
Delivery Dates	Nov 2019	Nov 2020					

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP 1099 AFC-579 NLG Retract Actuator Supports

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 0.702	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.702
FY 2019	- / -	2 / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.260
FY 2020	- / -	- / -	2 / 0.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.269
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 0.702	2 / 0.260	2 / 0.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.231

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	6	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: GRP: ECP-0629 FWD Center Fuselage

Manufacturer Information

Manufacturer Name: Boeing -ECP-0629 FWD Center Fuselage | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0629 FWD Center Fuselage

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	1 / 0.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.000	22 / 0.037
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 0.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.000	22 / 0.037

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	22
Out	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	22

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: GRP: ECP-0632 Outer Wing

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-0632 Outer Wing

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	64 / 0.458	72 / 0.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 0.000	202 / 0.925
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	64 / 0.458	72 / 0.467	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 0.000	202 / 0.925

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	16	16	16	16	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	202
Out	-	16	16	16	16	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	202

Footnotes:

(6) FY21 and out installs have been moved to BLI 0502.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 3 / F/A-18 Aircraft Structural Life Management Plan (SLMP) (OSIP 11-99) CBR+
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(7) Funding for RIM is budgeted based on known repair requirements that will occur each time an F/A-18 is opened to install the CBR+ structural components. These issues are inherent and expected during a modification of this scope where areas of the aircraft are being disassembled that were never intended to be disassembled when originally manufactured.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 4 / Multi-Functional Information Distribution System (MIDS) (OSIP 12-99)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	959.820	14.634	7.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	982.451
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	959.820	14.634	7.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	982.451
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**959.820**	**14.634**	**7.997**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**982.451**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) funds systems that provide secure digital data link communications and Tactical Air Navigation (TACAN) capabilities to aircraft. The Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) is an Engineering Change Proposal (ECP) upgrade to the MIDS-LVT (Low Volume Terminal) and offers the same functionality as MIDS-LVT (Link 16, tactical air navigation, and digital voice) in a software-controlled architecture, JTRS-compliant format, and provides the option of future expandability to host follow-on advanced tactical data links (i.e. Tactical Targeting Network Technology (TTNT). MIDS JTRS is approved for retrofit in Lots 26-31 F/A-18E/F and EA-18G aircraft and is funded for retrofit incorporation as MIDS JTRS 4-Net Concurrent Multi-Netting and Concurrent Contention Receive (CMN-4) in all MIDS-capable Navy F/A-18 and EA-18G aircraft. MIDS JTRS provides cryptographic modernization and frequency remapping capability. CMN-4 provides increased Link 16 capacity to support Navy Integrated Fire Control-Counter Air. With either MIDS-LVT or MIDS JTRS installed, F/A-18 is interoperable with all Link 16 equipped platforms in United States and Allied Nations. Retrofit incorporation of MIDS JTRS TTNT is planned for all EA-18G aircraft (Lot 30 and up) as part of Integrated Capability Package-3 (ICP-3) and for all Lot 26 and up F/A-18E/F aircraft. TTNT provides Internet Protocol (IP) and non-IP network connectivity at significantly increased throughput capacity compared to that of Link 16. This OSIP will also be used to perform efforts to address parts obsolescence and tactical modernization (MIDS Modernization Increments). Single MIDS Operational Requirements Document # 642-61-04 and MIDS JTRS Capability Production Document Change 1 Version 2.0 are germane.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
This OSIP was originally planned for incorporation of MIDS into F/A-18C/D (Lots 12-21) and F/A-18E/F (Lots 22-31), but is now applicable to all F/A-18A++/C/D/E/F and EA-18G aircraft. MIDS JTRS completed its VCD in March 2012. Full rate production approval for MIDS-LVT was granted on 25 September 2003 and for MIDS JTRS on 4 April 2012.

Note: FY21 and out efforts and funding have been moved to OSIP 11-21

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 4 / Multi-Functional Information Distribution System (MIDS) (OSIP 12-99)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 and EA-18G	**Modification Type:** CAPABILITY IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MIDS JTRS cable sets - Organic(*)	876 / 2.700	220 / 0.781	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,096 / 3.481
1.1.2) A-Kits Archive - Organic(*)	- / 262.817	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 262.817
1.2.1) Installation Kits N/R - Organic(*)	- / 0.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.194
2.1.1) ECP 577R3 - NonOrganic (8) *Installation 1 of 1*	72 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.000
2.1.2) B-Kits Archive - Organic(*)	951 / 532.784	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	951 / 532.784
2.2.1) Install Equipment N/R - Organic(*)	- / 53.806	- / 0.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.955
2.2.2) MIDS Software - Organic(*)	- / 6.657	- / 5.378	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.035
Subtotal: Procurement	*- / 858.958*	*- / 6.308*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 865.266*
Support												
3.1) Engineering Change Orders	- / 0.980	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.980
3.2) Data	- / 2.906	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.906
3.4) Support Equipment	- / 7.902	- / 0.170	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.072
3.5) ILS	- / 15.477	- / 0.686	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.523
3.6) Other Support	- / 73.353	- / 7.466	- / 7.616	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 88.435
Subtotal: Support	*- / 100.618*	*- / 8.322*	*- / 7.976*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 116.916*
Installation												
Installation 1 of 1: ECP 577R3	- / 0.244	- / 0.004	- / 0.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.269
Subtotal: Installation	*- / 0.244*	*- / 0.004*	*- / 0.021*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.269*
Total												
Total Cost (Procurement + Support + Installation)	**959.820**	**14.634**	**7.997**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**982.451**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 4 / Multi-Functional Information Distribution System (MIDS) (OSIP 12-99)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: ECP 577R3

Manufacturer Information

Manufacturer Name: Boeing - ECP 5773R3 | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP 577R3

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	53 / 0.244	1 / 0.004	10 / 0.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	64 / 0.269
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	53 / 0.244	1 / 0.004	10 / 0.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	64 / 0.269

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	53	-	1	-	-	2	2	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
Out	53	-	1	-	-	2	2	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64

Footnotes:

(8) Quantity of 72 kits were procured in prior years and are installed based on aircraft availability. 8 kits and installs were moved to OSIP 11-21. Installs through FY20 (64) are funded in OSIP 12-99 with the remainder (8) being funded in OSIP 11-21.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 5 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	429.072	71.009	32.993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	533.074
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	429.072	71.009	32.993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	533.074
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**429.072**	**71.009**	**32.993**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**533.074**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) upgrades United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics including both hardware and software capabilities. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft Integration Plan. The avionics upgrade includes avionics subsystems already incorporated or being incorporated into USMC F/A-18 aircraft. ECP 1153 incorporates the Navy Aircrew Common Ejection Seat (NACES) for utilization with the Joint Helmet Mounted Cueing System (JHMCS) system on C+ aircraft. ECP 1153 adds the following capabilities to C+ aircraft: MIDS LVT; color displays; JHMCS; ALE-47; Tactical Aircraft Moving Map Capability (TAMMAC); and Advanced Memory Unit (AMU).

This OSIP will implement hardware and software upgrades required to maintain the relevance of and to extend the operational life of the F/A-18 A-D beyond design life. These upgrades include radars, displays, data transfer units, and mission computers. This OSIP will also implement Automated Ground Collision Avoidance System (Auto-GCAS) as a software upgrade to the mission computer, digital map computer, and the flight control computer. The USMC Active Electronically Scanned Array (AESA) radar effort will upgrade the USMC F/A-18 C/D aircraft with an AESA radar replacement to the APG-73 radar. The AESA radar replacement will improve USMC F/A-18 C/D survivability and supportability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
ECP-1153 (USMC B+/C+ Upgrade) will complete in FY18. Auto-GCAS software upgrades began in FY18. USMC AESA Radar upgrade development began in October 2018 and radar retrofit procurements will begin in October 2019.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 5 / USMC F/A-18 Upgrade ECP-583 (OSIP 21-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 A/B/C/D	**Modification Type:** AVIONICS UPGRADE	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) A-Kits Archive - Organic(*)	476 / 89.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	476 / 89.540
1.2.1) Installation Kits N/R - Organic(*)	- / 34.836	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 34.836
2.1.1) USMC AESA Radars - Organic(*)	- / -	- / -	12 / 32.370	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 32.370
2.1.2) B-Kits Archive - Organic(*)	- / 245.776	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 245.776
2.2.1) Installation Equipment N/R - Organic(*) (9)	- / 1.744	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.744
2.2.2) 29C SCS - Organic(*)	- / -	- / 1.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.279
2.2.3) USMC NRE - Organic(*)	- / -	- / 59.672	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 59.672
2.2.4) NRE ARCHIVE - Organic(*)	- / 16.558	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.558
Subtotal: Procurement	*- / 388.454*	*- / 60.951*	*- / 32.370*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 481.775*
Support												
3.1) Data	- / 3.069	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.169
3.2) Training Equipment	- / 0.747	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.747
3.3) Support Equipment	- / 5.586	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.586
3.4) ILS	- / 3.812	- / 0.087	- / 0.440	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.339
3.5) Other Support	- / 27.404	- / 9.971	- / 0.083	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 37.458
Subtotal: Support	*- / 40.618*	*- / 10.058*	*- / 0.623*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 51.299*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**429.072**	**71.009**	**32.993**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**533.074**

Footnotes:

(9) NRE funding in FY20 is for USMC AESA Radars.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 6 / Joint Helmet Mounted Cueing System (JHMCS) (OSIP 24-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	308.654	2.826	0.876	0.226	0.000	0.226	0.000	0.000	0.000	0.000	0.000	312.582
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	308.654	2.826	0.876	0.226	0.000	0.226	0.000	0.000	0.000	0.000	0.000	312.582
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**308.654**	**2.826**	**0.876**	**0.226**	**0.000**	**0.226**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**312.582**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Joint Helmet-Mounted Cueing System (JHMCS) is a multi-service system that provides United States Air Force (USAF), United States Navy (USN), and United States Marine Corps aircraft the capability to cue and verify on-board weapons and weapons sensors to a specific azimuth/elevation determined by the pilot's head position and to confirm sensor line-of-sight. The intent is to reduce tasks required of aircrews, verify seeker/sensor position, and enhance weapons employment opportunities. The JHMCS incorporates an ejection-compatible helmet-mounted display system, with capability to cue and verify cueing of high off-axis sensors and weapons, on USAF and USN single seat and two seat fighter aircraft. JHMCS night vision cueing and display will provide the ability to cue and display weapons and sensors at night through the initial fielding of a narrow field of view night vision device that integrates the JHMCS cueing and display symbology. SJU-17B Navy Aircrew Common Ejection Seat (NACES), cockpit video recording system and tactical aircraft moving map capability digital map computer are required for retrofit installation of JHMCS. This OSIP also provides for the upgrade modification of SJU-17A NACES, and the replacement of SJU-5 ejection seats with retrofit SJU-17B NACES for Lot 12 F/A-18C aircraft. Installation of Aft Seat JHMCS capability for Lot 23-25 F/A-18F will be performed concurrent with the upgrade retrofit installation of the Type 2 Advanced Mission Computer (AMC) and the Solid State Recorder (SSR) in OSIP 23-04.

This OSIP has been extended through FY21 in order to accommodate installation schedule changes resulting from aircraft availability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

All developmental milestones have been completed. ECP-570R4 has completed its final aircraft integration milestones. AFC-400 Rev A for Lot 12 F/A-18C completed validation/verification and retrofit installation began in 2015. Retrofit installations for Lot 23-25 F/A-18F began in 2016 and will continue through 2021 concurrent with AMC and SSR (OSIP 23-04).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 6 / Joint Helmet Mounted Cueing System (JHMCS) (OSIP 24-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 and EA-18G	**Modification Type:** CAPABILITY IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) C/D A-Kit - NonOrganic (10) *Installation 1 of 1*	362 / 33.633	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	362 / 33.633
1.1.2) E/F A-Kit - NonOrganic *Installation 1 of 1*	178 / 16.609	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	178 / 16.609
1.1.3) A-Kits Archive - Organic(*)	1,141 / 4.924	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,141 / 4.924
1.2.1) Installation Kits N/R - Organic(*)	- / 18.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.832
2.1.1) B-Kits Archive - Organic(*)	3,470 / 112.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3,470 / 112.483
2.2.1) Installation Equipment N/R - Organic(*)	- / 1.281	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.281
2.2.2) 27C SCS - Organic(*)	- / 0.022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.022
Subtotal: Procurement	*- / 187.784*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 187.784*
Support												
3.1) Engineering Change Orders	- / 0.794	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.794
3.2) Data	- / 6.508	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.508
3.3) Support Equipment	174 / 19.585	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	174 / 19.585
3.4) ILS	- / 23.415	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.415
3.5) Other Support	- / 16.061	- / 0.005	- / 0.005	- / 0.004	- / -	- / 0.004	- / -	- / -	- / -	- / -	- / -	- / 16.075
Subtotal: Support	*- / 66.363*	*- / 0.005*	*- / 0.005*	*- / 0.004*	*- / -*	*- / 0.004*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 66.377*
Installation												
Installation 1 of 1: GRP: JHMCS Installs	- / 54.507	- / 2.821	- / 0.871	- / 0.222	- / 0.000	- / 0.222	- / -	- / -	- / -	- / -	- / 0.000	- / 58.421
Subtotal: Installation	*- / 54.507*	*- / 2.821*	*- / 0.871*	*- / 0.222*	*- / -*	*- / 0.222*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 58.421*
Total												
Total Cost (Procurement + Support + Installation)	**308.654**	**2.826**	**0.876**	**0.226**	**0.000**	**0.226**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**312.582**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 6 / Joint Helmet Mounted Cueing System (JHMCS) (OSIP 24-00)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: JHMCS Installs

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: JHMCS Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	475 / 54.507	45 / 2.821	16 / 0.871	4 / 0.222	0 / 0.000	4 / 0.222	- / -	- / -	- / -	- / -	0 / 0.000	540 / 58.421
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	475 / 54.507	45 / 2.821	16 / 0.871	4 / 0.222	0 / 0.000	4 / 0.222	- / -	- / -	- / -	- / -	0 / 0.000	540 / 58.421

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	475	10	11	12	12	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	540
Out	475	10	11	12	12	4	4	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	540

Footnotes:

(10) Install costs vary due to significant differences in work required by type/model/series and location performed. Labor rates vary depending upon whether work is performed Continental United States (CONUS) or Outside Continental United States (OCONUS).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	961.666	16.856	9.763	9.625	0.000	9.625	7.460	47.508	48.332	134.384	171.596	1,407.190
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	961.666	16.856	9.763	9.625	0.000	9.625	7.460	47.508	48.332	134.384	171.596	1,407.190
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**961.666**	**16.856**	**9.763**	**9.625**	**0.000**	**9.625**	**7.460**	**47.508**	**48.332**	**134.384**	**171.596**	**1,407.190**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Advanced Targeting Forward Looking Infrared (ATFLIR) pod (Operational Requirements Document# 700-88-06) provides F/A-18 A+/C/D/E/F and E/A-18G aircraft with the ability to detect, track, and engage air and ground targets, at extended ranges, using the infrared and visible light spectrums. Changes in F/A-18 air-to-air employment and continual improvements to air-to-ground standoff/precision strike weapons necessitate increased pod performance and reliability to support longer required detection/engagement distances. This Operational, Safety and Improvement Program (OSIP) supports efforts which address piece part obsolescence mitigation/avoidance in addition to examining/incorporating potential ATFLIR-related performance upgrades associated with network centric operations, interoperability and evolving electro-optic targeting capability requirements. The ATFLIR modernization program will utilize a set of ECPs designed to improve pod reliability and maintainability while mitigating numerous obsolescence issues (to include EO and IR cameras, optical path including dome and mirrors, various circuit card assemblies, laser hardware/software and pod firmware/software). Tracking/targeting improvements will be incorporated into the ATFLIR Operational Flight Profile (OFP) currently identified as 15X-530 with subsequent variants to be fielded. ATFLIR Rover Data Link (ARDL) modernization efforts include an encrypted, multi-band digital datalink (hardware/software) to better support network centric operations and the sharing of ATFLIR system imagery with forward air controllers to support the identification and prosecution of targets.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
ATFLIR development began in FY1997. Full rate production approval was given in October 2003. Full Operational Capability was met in July 2010. Motion Compensation and Electro-Optical Daylight Operations Improvement upgrades commenced June 2009 with completion planned for December 2019. Image Input Processor ECP-0043 efforts began in FY 2018 and will enable improved video processing and digital output. Laser improvement study (RDTE funded) which completed in FY 2018 will result in a future ECP to modify the laser receiver and laser transmitter/receiver firmware providing for more reliable laser performance with reduced maintenance and less off-wing time.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A+/C/D/E/F	**Modification Type:** CAPABILITY IMPROVEMENTS	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ARDL (A5, A6) Kits (ECP 6342) - NonOrganic *Installation 1 of 3*	472 / 1.527	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	472 / 1.527
1.1.2) ARDL (A3, A4, A8, A9) Kits (ECP 6342) - NonOrganic (11) *Installation 1 of 3*	974 / 8.437	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	974 / 8.437
1.1.3) ARDL Hardware Lot 40 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.045	- / -	- / -	- / -	5 / 0.045
1.1.4) ARDL Hardware Lot 41 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.130	- / -	- / -	- / -	14 / 0.130
1.1.5) ARDL Hardware Lot 42 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.219	- / -	- / -	- / -	23 / 0.219
1.2.1) Installation Kits N/R - Organic(*)	- / 5.861	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.861
2.1.1) ATFLIR EOSU ECP10 - RTOC - NonOrganic *Installation 2 of 3*	419 / 18.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	419 / 18.472
2.1.3) ATFLIR Modernization Upgrade - NonOrganic *Installation 2 of 3*	- / -	- / -	- / -	2 / 4.035	- / -	2 / 4.035	2 / 4.116	16 / 42.911	16 / 39.646	48 / 125.393	307 / 113.973	391 / 330.074
2.1.2) ECP-043 (I2P2) Production H/W - Organic(*)	13 / 4.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.431
2.1.4) ECP-042 I2P2 Circuit Card Assembly (CCA) - Organic(*)	10 / 2.231	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.231
2.1.5) ECP-0035 Daylight Ops - Organic(*)	210 / 25.525	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	210 / 25.525
2.1.6) ECP-6342C7 Atflir Video Downlink - NonOrganic *Installation 3 of 3*	- / -	37 / 0.164	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 0.164
2.1.7) B-Kits Archive - Organic(*)	- / 513.738	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 513.738
2.2.1) Installation Equipment N/R - Organic(*)	- / 88.854	- / 0.276	- / 7.803	- / 3.514	- / -	- / 3.514	- / -	- / -	- / -	- / -	- / -	- / 100.447
2.2.2) H-14 SCS - Organic(*)	- / -	- / 7.214	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.214
2.2.3) H16 SCS - Organic(*)	- / -	- / 1.978	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.978
2.2.4) H-18 SCS - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.582	- / -	- / -	- / -	- / 0.582
2.2.5) Software - Organic(*)	- / 0.040	- / 4.188	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.795	- / -	- / -	- / 5.023
Subtotal: Procurement	*- / 669.116*	*- / 13.820*	*- / 7.803*	*- / 7.549*	*- / -*	*- / 7.549*	*- / 4.116*	*- / 43.887*	*- / 40.441*	*- / 125.393*	*- / 113.973*	*- / 1,026.098*
Support												
3.1) Engineering Change Orders	- / 94.710	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 94.710
3.2) Data	- / 8.506	- / 0.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.591
3.3) Training Equipment	- / 4.315	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.315
3.4) Support Equipment	- / 86.061	- / 0.009	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 86.070
3.5) ILS	- / 74.273	- / 0.026	- / -	- / 0.134	- / -	- / 0.134	- / 0.164	- / -	- / -	- / -	- / -	- / 74.597

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A+/C/D/E/F	**Modification Type:** CAPABILITY IMPROVEMENTS	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.6) Other Support	- / 14.379	- / 2.699	- / 1.612	- / 1.642	- / -	- / 1.642	- / 1.646	- / 2.056	- / 2.099	- / 2.117	- / 13.120	- / 41.370
3.8) Prior Year Kit Installations	504 / 3.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	504 / 3.018
Subtotal: Support	*- / 285.262*	*- / 2.819*	*- / 1.612*	*- / 1.776*	*- / -*	*- / 1.776*	*- / 1.810*	*- / 2.056*	*- / 2.099*	*- / 2.117*	*- / 13.120*	*- / 312.671*
Installation												
Installation 1 of 3: GRP: ARDL	- / 5.928	- / 0.106	- / 0.078	- / 0.059	- / 0.000	- / 0.059	- / 0.041	- / 0.042	- / 0.014	- / 0.014	- / 1.935	- / 8.217
Installation 2 of 3: GRP: ATFLIR	- / 1.360	- / -	- / 0.270	- / 0.241	- / 0.000	- / 0.241	- / 1.493	- / 1.523	- / 5.778	- / 6.860	- / 42.568	- / 60.093
Installation 3 of 3: ECP-6342C7 Atflir Video Downlink	- / -	- / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.111
Subtotal: Installation	*- / 7.288*	*- / 0.217*	*- / 0.348*	*- / 0.300*	*- / -*	*- / 0.300*	*- / 1.534*	*- / 1.565*	*- / 5.792*	*- / 6.874*	*- / 44.503*	*- / 68.421*
Total												
Total Cost (Procurement + Support + Installation)	**961.666**	**16.856**	**9.763**	**9.625**	**0.000**	**9.625**	**7.460**	**47.508**	**48.332**	**134.384**	**171.596**	**1,407.190**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: GRP: ARDL

Manufacturer Information

Manufacturer Name: CKA | Manufacturer Location: Orange park, Fl

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: ARDL

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1,127 / 5.928	25 / 0.106	12 / 0.078	9 / 0.059	0 / 0.000	9 / 0.059	6 / 0.041	6 / 0.042	2 / 0.014	2 / 0.014	257 / 1.935	1,446 / 8.217
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,127 / 5.928	25 / 0.106	12 / 0.078	9 / 0.059	0 / 0.000	9 / 0.059	6 / 0.041	6 / 0.042	2 / 0.014	2 / 0.014	257 / 1.935	1,446 / 8.217

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	1,127	4	8	8	5	1	5	5	1	1	3	3	2	1	2	3	-	-	3	3	-	-	1	1	-	-	1	1	-	257	1,446
Out	1,127	4	8	8	5	1	5	5	1	1	3	3	2	1	2	3	-	-	3	3	-	-	1	1	-	-	1	1	-	257	1,446

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: GRP: ATFLIR

Manufacturer Information

Manufacturer Name: Raytheon | Manufacturer Location: Indianapolis, IN

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Navy Drive In Mod:: Installation Name: ATFLIR

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	233 / 1.360	- / -	48 / 0.270	42 / 0.241	0 / 0.000	42 / 0.241	48 / 0.281	48 / 0.287	- / -	- / -	0 / 0.000	419 / 2.439
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.212	- / -	- / -	- / -	0 / 0.000	2 / 1.212
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.236	- / -	- / -	0 / 0.000	2 / 1.236
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 5.778	- / -	0 / 0.000	16 / 5.778
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 6.860	0 / 0.000	16 / 6.860
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 6.997	48 / 6.997
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	307 / 35.571	307 / 35.571
Total	233 / 1.360	- / -	48 / 0.270	42 / 0.241	0 / 0.000	42 / 0.241	50 / 1.493	50 / 1.523	16 / 5.778	16 / 6.860	355 / 42.568	810 / 60.093

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	233	-	-	-	-	12	12	12	12	11	11	10	10	14	12	12	12	14	12	12	12	4	4	4	4	4	4	4	4	355	810
Out	233	-	-	-	-	12	12	12	12	11	11	10	10	14	12	12	12	14	12	12	12	4	4	4	4	4	4	4	4	355	810

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 7 / Advanced Targeting Forward Looking Infrared (ATFLIR) (OSIP 12-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: ECP-6342C7 Atflir Video Downlink

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018						
Delivery Dates	May 2019						

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: ECP-6342C7 Atflir Video Downlink

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	37 / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	37 / 0.111
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	37 / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	37 / 0.111

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	18	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37
Out	-	-	-	18	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37

Footnotes:

(11) The installation of ARDL (A3, A4, A8, A9) kits has been delayed due to aircraft availability based on the requirements needed to train and prepare for deployment.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 8 / F/A-18C/D/E/F and EA-18G Training System (OSIP 006-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	271.133	27.385	29.770	31.865	0.000	31.865	44.319	45.633	62.368	97.018	181.511	791.002
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	271.133	27.385	29.770	31.865	0.000	31.865	44.319	45.633	62.368	97.018	181.511	791.002
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**271.133**	**27.385**	**29.770**	**31.865**	**0.000**	**31.865**	**44.319**	**45.633**	**62.368**	**97.018**	**181.511**	**791.002**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

F/A-18C-F and EA-18G training system funds will be used to meet current fleet readiness squadrons and fleet training and readiness requirements. These requirements mandate that the training systems be concurrent with the aircraft hardware, software, and system capabilities. New components and software will be procured to prevent obsolescence of the various trainers throughout the service life of the platform. Funding will also be used to update courseware, computer based training, and maintenance trainers as Engineering Change Proposals (ECPs) are performed on the aircraft. Funds will be used to increase the simulation fidelity of any aircraft driven changes, implement these changes across a distributed architecture, and synthesize these changes into the simulated threat environment. Funds will also be used to enable live, virtual and constructive (LVC) training; linking aircrew training devices and synthetic injects with aircraft flying on live ranges. Funds will also provide rapid technology insertion upgrades to TOFTs and LVC devices to accommodate shifts in technology. Current trainer inventory is 44 maintenance trainers with 32 devices for F/A-18E/F and EA-18G and 12 devices for F/A-18C/D; and 65 aircrew training devices and 93 aircrew cockpits with 39 devices and 62 cockpits for F/A-18E/F and EA-18G and 26 devices and 31 cockpits for F/A-18C/D.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Trainers were procured with APN-1 funding and are modified with ECPs as required.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 8 / F/A-18C/D/E/F and EA-18G Training System (OSIP 006-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18C/D/E/F and EA-18G	**Modification Type:** TRAINERS UPGRADE	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.2.1) Installation Kits N/R - Organic(*)	- / 0.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.001
Subtotal: Procurement	*- / 0.001*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.001*
Support												
3.3) Training Equipment (12)	- / 268.582	- / 27.167	- / 29.489	- / 31.639	- / -	- / 31.639	- / 44.110	- / 45.419	- / 62.157	- / 96.807	- / 179.653	- / 785.023
3.5) ILS	- / 1.404	- / 0.146	- / 0.148	- / 0.151	- / -	- / 0.151	- / 0.154	- / 0.157	- / 0.161	- / 0.164	- / 1.243	- / 3.728
3.6) Other Support	- / 1.146	- / 0.072	- / 0.133	- / 0.075	- / -	- / 0.075	- / 0.055	- / 0.057	- / 0.050	- / 0.047	- / 0.615	- / 2.250
Subtotal: Support	*- / 271.132*	*- / 27.385*	*- / 29.770*	*- / 31.865*	*- / -*	*- / 31.865*	*- / 44.319*	*- / 45.633*	*- / 62.368*	*- / 97.018*	*- / 181.511*	*- / 791.001*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**271.133**	**27.385**	**29.770**	**31.865**	**0.000**	**31.865**	**44.319**	**45.633**	**62.368**	**97.018**	**181.511**	**791.002**

Footnotes:

(12) Aircrew devices are upgraded on a yearly cycle and the maintenance devices on a two to three year cycle.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	952.979	117.148	189.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,259.332
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	952.979	117.148	189.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,259.332
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**952.979**	**117.148**	**189.205**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,259.332**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Corrections to discrepancies discovered during testing and development can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Corrections to the following items/conditions are required to meet Commander, Naval Air Force directed transitions as promulgated in the current Master Aviation Plan. This Operational, Safety and Improvement Program (OSIP) will correct operational discrepancies discovered during testing and evaluations, sustainment activities, engineering analysis, standard depot level evaluations, and during normal fleet operations. This OSIP provides resources to correct such issues via Engineering Change Proposal (ECP) and other applicable procurement efforts by modifying, improving, and restoring aircraft structural safety and reliability to designed/required life limits. Modifications are to include: Air Frame Structural Upgrades, such as Flight Controls Surfaces, Forward Fuselage, Aft Fuselage, Inner/Outer Wing, Critical Structures; and Aircraft Subsystem Upgrades, such as Electrical, Hydraulic, Environmental Control Systems (ECS), Fuel, Launch & Recovery, Critical Structures, Mechanical, Secondary Power, Fire Suppression Systems, Blue Angels modifications, and other sustainment activities. This OSIP will provide modifications and upgrades to various subsystems to address diminishing manufacturing sources and material shortages (DMSMS), as well as fielding and retrofit of completed development efforts to include Flight Control Computer (FCC) and Conformal Fuel Tanks (CFT).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Each change has been or will be tested prior to installation in the F/A-18E/F and EA-18G.

NOTE: Kit procurements were budgeted and executed properly, in alignment with planned organic depot inductions. Aircraft inductions have exceeded depot capacity due to many aircraft reaching service life limits at the same time, increased turnaround time due to material degradation and corrosion repairs over and above planned modification efforts, and delays caused by sequestration which increased the number of Out of Reporting (OOR) aircraft. Due to these depot constraints, prior year kit procurements became misaligned with aircraft installations. Depot level kit installations have been impacted by depot throughput constraints and backlog. The install schedules reflected in this budget take into account the current constrained depot throughput and backlog.

ECPs (6416, 6477, 6478, and 6488) for Physiological Episodes (PE) efforts are realigned from OSIP 14-03 to OSIP 13-19 beginning in FY19.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-1049 Fuel Pressurization System Check Valve Failure - NonOrganic *Installation 1 of 7*	60 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.098
1.1.2) ECP-1137NI: Fire Extinguisher Temp Compensating Pressure Switch (TCPS) - NonOrganic *Installation 1 of 7*	14 / 0.062	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.062
1.1.3) ECP-5046C1 BALD Transponder Rotation - Change Incorporation Level - NonOrganic *Installation 1 of 7*	129 / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	129 / 0.090
1.1.4) ECP-5073: Retrofit of the Trailing Edge Flap Fastener Hole Cold Working - NonOrganic *Installation 1 of 7*	69 / 0.177	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	69 / 0.177
1.1.5) ECP-6089R1 Engine Bay Door Strut Redesign - NonOrganic *Installation 1 of 7*	58 / 0.003	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 0.003
1.1.6) ECP-6106R1 Exhaust Overtemp Final Fix/Bard Stacks - NonOrganic *Installation 1 of 7*	208 / 15.966	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	208 / 15.966
1.1.7) ECP-6118 Keel Access Cover @ Y631-Y645 - NonOrganic (13) *Installation 1 of 7*	41 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 0.000
1.1.8) ECP-6188 Y436 Inlet Former - NonOrganic *Installation 1 of 7*	177 / 1.912	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	177 / 1.912
1.1.9) ECP-6193R1/R2 (LEX) Lwr Surface/Structure Cracks Redesign Y286 / Y294 - NonOrganic *Installation 1 of 7*	130 / 27.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	130 / 27.472
1.1.10) ECP-6198 Radar Bay Vent Valve Fail - MSP 862 - NonOrganic *Installation 1 of 7*	90 / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 0.005
1.1.12) ECP-6227C2/C3 Inlet Nacelle Bleed Plate Crack - NonOrganic *Installation 1 of 7*	296 / 5.118	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	296 / 5.118
1.1.15) ECP-6240R1 / FT50 18K MLG Sidebrace Fitting Failure - NonOrganic *Installation 1 of 7*	286 / 13.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	286 / 13.430
1.1.16) ECP-6322 Dry Bay Fire Suppression System (DBFSS) - NonOrganic *Installation 1 of 7*	349 / 0.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	349 / 0.650

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.17) ECP-6325R1 Y618 Inbrd Former / Keel Longeron Arrestment Load - NonOrganic *Installation 1 of 7*	458 / 0.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	458 / 0.519
1.1.18) ECP-6353 F/A-18E/F Lower Wing Hinge Corrosion Improvements - NonOrganic *Installation 1 of 7*	204 / 1.995	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	204 / 1.995
1.1.19) ECP-6366 Outer-Wing Inboard Aileron Hinge and SPAR 4 - NonOrganic *Installation 1 of 7*	84 / 1.623	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	84 / 1.623
1.1.20) ECP-6372 Y233 Bulkhead Rudder / Break Pully Bracket Attachment - NonOrganic *Installation 1 of 7*	351 / 0.118	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	351 / 0.118
1.1.21) ECP-6388 Outer-Wing Water Drainage Provisions - NonOrganic *Installation 1 of 7*	338 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	338 / 0.000
1.1.22) ECP-6394R1: F/A-18E/F Horizontal Stab Gang Channel Corrosion-AYC-1682 - NonOrganic (14) *Installation 1 of 7*	427 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	427 / 0.000
1.1.27) ECP-6428 Removal of Vertical Tail Drain Common to Fuel Vent Tank - NonOrganic (15) *Installation 1 of 7*	437 / 0.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	437 / 0.143
1.1.44) Fatigue Test (FT) 50 (Structures) Prior Year ECPs - NonOrganic (16) *Installation 1 of 7*	2,481 / 13.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,481 / 13.104
1.1.45) Fatigue Test (FT) 76/77/78 (Wing) Prior Year ECPs - NonOrganic (17) *Installation 1 of 7*	944 / 31.675	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	944 / 31.675
1.1.46) Main Landing Gear (MLG) Prior Year ECPs - NonOrganic (18) *Installation 1 of 7*	137 / 0.606	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	137 / 0.606
2.1.1) ECP 6506 CPOMS Improvements - NonOrganic *Installation 1 of 7*	112 / 13.453	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	112 / 13.453
1.1.11) ECP-6213R2 / TEF Redesign - Organic(*)	209 / 179.076	33 / 29.476	48 / 43.731	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	290 / 252.283
1.1.13) ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing - NonOrganic *Installation 2 of 7*	2 / 0.323	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.323
1.1.14) ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing 0505 - Organic(*) (19)	- / -	- / -	30 / 0.303	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.000	65 / 0.303

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.23) ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717 - NonOrganic *Installation 3 of 7*	95 / 0.687	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	95 / 0.687
1.1.24) ECP-6392C2 F/A-18E/F & EA-18G Alternate Angle-of-Attack Transmitter - Organic(*)	180 / 7.161	120 / 4.870	120 / 5.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	420 / 17.781
1.1.25) ECP-6416 Environment Control Sys Anti-Ice Duct Bracket - NonOrganic (20) *Installation 4 of 7*	288 / 2.609	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	288 / 2.609
1.1.26) ECP-6416 Environment Control Sys Anti-Ice Duct Bracket 0505 - Organic(*) (21)	- / -	88 / 0.872	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	88 / 0.872
1.1.28) ECP-6430 Enhancement of the Aft Pivot Support Fitting - NonOrganic *Installation 5 of 7*	432 / 3.834	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	432 / 3.834
1.1.29) ECP-XX12 FT50 Teardown Bulkhead Cracking - Organic(*) (22)	- / -	- / -	72 / 0.996	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.996
1.1.30) ECP-XX33 / Hydraulics Components Improvement - Organic(*)	- / -	- / -	72 / 0.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.070
1.1.31) ECP-XX45 / FT50 Structural Related Issues - Organic(*)	- / -	- / -	72 / 6.376	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 6.376
1.1.32) ECP-XX47 Flight Control Surfaces Failures - Organic(*)	- / -	- / -	72 / 4.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 4.506
1.1.33) ECP-XX48 / Fuel Tank Wiring Retrofit Improvements - Organic(*)	- / -	- / -	72 / 0.451	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.451
1.1.34) ECP-XX50: F/A-18E/F Fuel Related Upgrade Issues - Organic(*)	- / -	- / -	100 / 0.627	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.627
1.1.35) ECP-XX51 / F/A-18E/F ECS Subsystem Upgrade Issues - Organic(*)	- / -	- / -	72 / 0.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.510
1.1.36) ECP-XX52 / F/A-18E/F Subsystem Retrofit Upgrade Issues - Organic(*)	- / -	- / -	72 / 0.638	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.638
1.1.37) ECP-XX53 / F/A-18E/F Structure Stress Corrosion Cracking Issues - Organic(*)	- / -	- / -	72 / 1.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.700
1.1.38) ECP-XX60: NACES Retrofit Upgrades - Organic(*)	- / -	- / -	100 / 1.720	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 1.720
1.1.39) ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket - NonOrganic (23) *Installation 6 of 7*	22 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.000
1.1.40) ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket 0505 - Organic(*) (24)	- / -	- / -	72 / 0.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.431

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.1.41) ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet - NonOrganic *Installation 7 of 7*	11 / 9.361	7 / 5.895	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 15.256
1.1.42) ECP-6495 STS Electrohydraulic Test Stand Obsolescence Upgrade - Organic(*)	8 / 10.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 10.928
1.1.43) ECP-6499 Update of the Lateral Stick Position Sensor - Organic(*)	- / -	- / -	1 / 0.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.695
1.1.47) Archived ECPs - Organic(*)	- / 104.293	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 104.293
1.2.1) Installation Kits N/R - Organic(*)	- / 131.234	- / 17.431	- / 33.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 182.069
1.2.2) Software - Organic(*)	- / 27.461	- / 1.690	- / 0.170	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 29.321
Subtotal: Procurement	*- / 605.186*	*- / 60.234*	*- / 102.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 767.498*
Support												
3.1) Data	- / 3.818	- / -	- / 0.101	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.919
3.2) Training Equipment	- / 0.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.001
3.3) Support Equipment	- / 32.373	- / 2.920	- / 7.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.622
3.4) ILS	- / 94.401	- / 15.710	- / 16.798	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 126.909
3.5) Other Support	- / 89.154	- / 10.820	- / 8.501	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 108.475
3.6) Prior Year Installation Cost (25)	257 / 20.697	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	257 / 20.697
Subtotal: Support	*- / 240.444*	*- / 29.450*	*- / 32.729*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 302.623*
Installation												
Installation 1 of 7: GRP: Prior Year Procurements	- / 104.300	- / 21.657	- / 47.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 173.434
Installation 2 of 7: ECP-6234C1 Horizontal Stabilator/ Fuselage Rubbing	- / 0.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.020
Installation 3 of 7: ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717	- / 0.000	- / 0.373	- / 0.343	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.716
Installation 4 of 7: ECP-6416 Environment Control Sys Anti-Ice Duct Bracket	- / 0.894	- / 1.272	- / 0.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.023
Installation 5 of 7: ECP-6430 Enhancement of the Aft Pivot Support Fitting	- / -	- / 1.418	- / 1.443	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.861
Installation 6 of 7: ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket	- / -	- / -	- / 0.084	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.084

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 7 of 7: ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet	- / 2.135	- / 2.744	- / 4.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.073
Subtotal: Installation	*- / 107.349*	*- / 27.464*	*- / 54.398*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 189.211*
Total												
Total Cost (Procurement + Support + Installation)	**952.979**	**117.148**	**189.205**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,259.332**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 7: GRP: Prior Year Procurements

Manufacturer Information

Manufacturer Name: Not Specified. (26) | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: Prior Year Procurements

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4,394 / 104.300	462 / 21.657	717 / 47.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,307 / 0.000	7,880 / 173.434
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4,394 / 104.300	462 / 21.657	717 / 47.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,307 / 0.000	7,880 / 173.434

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4,394	112	113	117	120	177	182	179	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,307	7,880
Out	4,394	112	113	117	120	177	182	179	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,307	7,880

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 7: ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: ECP-6234C1 Horizontal Stabilator/Fuselage Rubbing

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.020
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.020

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 7: ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717

Manufacturer Information

Manufacturer Name: Boeing - ECP-6394R1 Horizontal Stabilator Gang Channel Corrosion - AYC-1717 | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6394R1 Horizontal Stabilator Gang Channel Cor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	5 / 0.000	30 / 0.373	28 / 0.343	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000	95 / 0.716
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 0.000	30 / 0.373	28 / 0.343	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000	95 / 0.716

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	7	7	8	8	7	7	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	95
Out	5	7	7	8	8	7	7	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	95

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 7: ECP-6416 Environment Control Sys Anti-Ice Duct Bracket

Manufacturer Information

Manufacturer Name: TBD [27] Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-6416 Environment Control Sys Anti-Ice Duct Brack

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	102 / 0.894	112 / 1.272	74 / 0.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	288 / 3.023
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	102 / 0.894	112 / 1.272	74 / 0.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	288 / 3.023

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	102	28	28	28	28	18	18	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288
Out	102	28	28	28	28	18	18	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 7: ECP-6430 Enhancement of the Aft Pivot Support Fitting

Manufacturer Information

Manufacturer Name: Boeing - ECP 6430 Enhancement of the Aft Pivot Support Fitting

Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 12

Production Leadtime *(in Months)*: 19

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6430 Enhancement of the Aft Pivot Support Fitt

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	72 / 1.418	72 / 1.443	- / -	- / -	- / -	- / -	- / -	- / -	- / -	288 / 0.000	432 / 2.861
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	72 / 1.418	72 / 1.443	- / -	- / -	- / -	- / -	- / -	- / -	- / -	288 / 0.000	432 / 2.861

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	18	18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	432
Out	-	18	18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	432

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 7: ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket

Manufacturer Information

Manufacturer Name: Boeing - ECP-6475 Aux Power Unit Hydraulic Accumulator Support Bracket | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020					
Delivery Dates		Sep 2021					

Installation Information

Method of Implementation: Navy Drive-in Modification:: Installation Name: ECP-6475 Aux Power Unit Hydraulic Accumulator Suppor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	22 / 0.084	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 0.084
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	22 / 0.084	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 0.084

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	6	6	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Out	-	-	-	-	-	6	6	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 7: ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet

Manufacturer Information

Manufacturer Name: Various - ECP-6480: Navy Flight Demo Squadron (Blue Angels) Super Hornet

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 12

Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Sep 2019	Sep 2020					
Delivery Dates	Sep 2020	Sep 2021					

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP-6480: Navy Flight Demo Squadron (Blue Angels)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 2.135	4 / 2.744	5 / 3.495	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 8.374
FY 2019	- / -	- / -	1 / 0.699	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.000	7 / 0.699
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 2.135	4 / 2.744	6 / 4.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.000	18 / 9.073

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	2	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	18
Out	2	-	-	2	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	18

Footnotes:

(13) Kits were procured under OSIP 19-01, starting in FY10, installs are funded under OSIP 14-03

(14) ECP-6394R1 AYC-1682 is a drain hole, and there is no cost for kits.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 9 / E/F & EA-18G Correction of Operational Discrepancies (OSIP 14-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(15) All kits were provided by OEM as in warranty. In FY18 procurement of 200 "on-condition" fittings ($143K) via FRCSE Manufacturing.

(16) This cost element includes the following ECPs related to Fatigue Test (FT) 50 for Structures: ECP-6183R1 FT50 Failure of Upper Wing Skin Splice Plate; ECP-6239R1 FT50 18K Fuselage Outboard Formal @Y679 Failure; ECP-6247R1 FT50 18K Y520 Former Cracks at Lower Drop Link; ECP-6266 FT50 18K Y555.5 and Y568 Former Cracks at Keel Longeron Life Limit; ECP-6303R1 FT50 18K Y577 Former Redesign; ECP-6304R1 FT50 18K Web and Wing Drag Longeron Redesign; ECP-6306R1 FT50 18K Y618 Inboard Former (74A342314) Redesign; ECP-6326 FT50 Fuel Barrier Web at Y510; ECP-6408C1 F/A-18 E/F FT50 Y233 Bulkhead Z90 Floor Attachment Retrofit; ECP-6411 F/A-18 E/F FT50 Inner-Wing Upper Splice Fitting @ Aft Fastner Skin on

(17) This cost element includes the following ECPs related to Fatigue Tests (FTs) 76/77/78 for Wings: ECP-6243 FT76 Jackpoint Support Fitting Life Limit; ECP-6275C1 FT77 Wing Inboard Closure Rib Life Limit; ECP-6282 FT50/FT77 Post CRI Inner Wing Retrofit; ECP-6285C1: FT77 Lower Wing Skin Splice Fitting Life Limit; ECP-6292 FT76 Avionics Bay 3 & 4 Door Hinges; ECP-6295 FT77 Wing Spar 6 Life Limit; ECP-6309 FT77 Retrofit ECP for the Outer Wing; ECP-6341 FT77/78 Aileron Retrofit

(18) This cost element includes the following ECPs related to the Main Landing Gear (MLG): ECP-6104 MLG Door Bushing Migration ECP-6194 MLG Trunnion Bearing Loose Retention Nut ECP-6196C1 MLG R/H Upper Planing Link Attach Fitting Failure

(19) Kits will be installed under BLI 0505 OSIP 14-03

(20) Future funding for this ECP has been realigned to OSIP 13-19 in FY19 for better visibility of PE efforts.

(21) Future funding for this ECP has been realigned to OSIP 13-19 in FY19 for better visibility of PE efforts.

(22) Installs are being paid for in LI-0505 OSIP 14-03 in FY22

(23) Prior year qty of 22 are OEM provided as in-warranty kits so do not have a cost.

(24) Kits will be installed under BLI 0505 OSIP 14-03

(25) Installation costs vary by FY due to different ECPs being installed.

(26) ECP 6506 installed under OSIP 13-19

(27) Kits will be installed under BLI 0505 OSIP 14-03

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	622.271	106.889	108.772	138.016	0.000	138.016	145.086	225.472	235.108	259.818	1,180.549	3,021.981
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	622.271	106.889	108.772	138.016	0.000	138.016	145.086	225.472	235.108	259.818	1,180.549	3,021.981
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**622.271**	**106.889**	**108.772**	**138.016**	**0.000**	**138.016**	**145.086**	**225.472**	**235.108**	**259.818**	**1,180.549**	**3,021.981**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) is required to retrofit upgrades, manage obsolescence issues, and improvements to various avionics systems that have been or are being incorporated into fleet aircraft, to provide updates to Automated Maintenance Environment (AME) and the integrated electronic technical manuals, and to provide mission planning updates. Specifically for mission planning, the F/A-18 Unique Planning Component (UPC) for the Joint Mission Planning System (JMPS) must implement frequent software changes in conjunction with aircraft modifications. The JMPS and Airborne Electronic Attack (AEA) UPC changes required in conjunction with System Configuration Set (SCS) changes must include software regression tests to ensure proper operation and integration with other aircraft systems in JMPS components, and the core mission planning equipment and software procured elsewhere within the Navy budget.

Upgrades include replacement of the Hi-8mm video tape recorder with a retrofit of Solid State Recorder (SSR) (ECP-1146-12 and ECP-6212R1) into United States Navy and Marine Corps Lot 4-25 F/A-18A+/B/C/D/E/F aircraft. Installation of the Cockpit Video Recording System (CVRS) is a mandatory pre-requisite for the SSR upgrade for F/A-18C/D. This OSIP includes the retrofit completion of the CVRS in unmodified F/A-18C/D aircraft. Upgrades also include replacement of the black and white Heads Up Display (HUD) camera with a retrofit of a color HUD camera (ECP-6491) to address technology obsolescence and configuration differences introduced by the Joint Helmet Mounted Cueing System (JHMCS) in Lot 4-11 F/A-18A-D aircraft (Lot 7-9 F/A-18A++ will require wiring modification). Installation of the SSR for Lots 23-24 F/A-18E/F (ECP-6212R1) will be performed concurrent with the upgrade retrofit installation of the Type 2 Advanced Mission Computer (AMC) and the JHMCS in OSIP 24-00.

This OSIP includes replacement of the AN/AVQ-36 Head-Up Display (HUD) and the entire Block 2 F/A-18E/F and EA-18G display suite (5x5 and 8x10 Advanced Multipurpose Displays (AMPD), Multipurpose Color Display Replacement (MPCDR), Up Front Control Display Replacement (UFCDR), and Engine Fuel Display Replacement (EFDR)) with the Advanced Cockpit System (ACS) into United States Navy Lot 26 and up F/A-18E/F and EA-18G aircraft to address technology obsolescence and increase display capability required for the Advanced Capability Mission Computer (ACMC). The ACS consists of a Low-Profile HUD (LPHUD), 10x19 Large Area Display (LAD) and Low-Profile Engine Fuel Display (LPEFD). This OSIP also includes replacement for the SSR/USSR with a High Speed Video Network (HSVN) Digital Video Recorder (HDVR) (ECP-TBD) into United States Navy Lot 23 and up F/A-18E/F and EA-18G aircraft to address technology obsolescence and include Cyber Security Information Assurance through Type-1 data encryption capability. HDVR is required for installation of the ACS. Upgrades also include the Digital Video Mapping Computer (DVMC) which will provide additional graphics processing required by the ACS. HDVR and DVMC retrofit is being planned for Organizational level installation with no Depot labor requirements.

This OSIP also includes a requirement to retrofit the Deployable Flight Incident Recorder Set (DFIRS) (ECP-6273) to address component obsolescence including the search and rescue satellite aided tracking beacon. Upgrades include an F/A-18 retrofit installation of the AMC (ECP-6267R1) as a replacement for the AYK-14 computer. Upgrade includes Store Management Processor (SMP) AVC 5506 incorporation required to support ECP-6267R1. Upgrade includes a retrofit installation of the Advanced Capability Mission Computer (ACMC) (ECP-6459, ECP-6459C1) into EA-18G aircraft. Upgrades include a retrofit of the Fiber Channel Network Switch-24 (FCNS-24) (ECP-6456, ECP-6456C1) into EA-18G aircraft. Upgrades also include retrofit installation of various display hardware improvements to enable increased aircrew

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

situational awareness such as replacement of the Multipurpose Color Display (MPCD) with MPCD Replacement (MPCDR) (ECP-6220, ECP-6220C2, and ECP-6220C3) to meet hardware requirement for OFP display improvements.

Upgrades include retrofit of USMC F/A-18C/D aircraft with the ACMC, display upgrades including the left/right 5x5 advanced multi-purpose display, up-front control display-replacement, and MPCDR, stores management system upgrades, DTU and associated software and engineering requirements. Efforts include Upgrades of Type 2 and Type 3 Advanced Mission Computers (AMC) to meet increased OFP processing throughput requirements, including adding a 4th Processor Card to Type III AMC. The efforts will include integration of the hardware and the software as well as the Integrated Logistics Support (ILS) products.

The procurement of SCS represents the collection of software and hardware modifications that form a single, integrated aircraft software operational load. The SCS builds anticipated are used to support retrofit hardware and software configuration changes and associated testing driven by the Aircraft Procurement, Navy 5 (APN-5) funded OSIPs. SCS integration will comprise of OFP, recurring and non-recurring engineering associated with planned incremental software releases, emergent and rapid fleet driven improvements and/or integration efforts, Naval Integrated Fire Control - Counter Air (NIFC-CA) required interoperability modifications, Link 16 Inject modifications, support equipment and simulation equipment test program sets updates, operational analysis and functional retrofit implementation of aircrew and maintenance training systems, OFP memory loader verifier set personal computer memory card international association cards, and update of SCS to allow single point loading of software from the advanced memory unit or digital memory device and associated software licenses and data rights and publication updates.

This Operational, Safety and Improvement Program (OSIP) will cover F/A-18 A-D, E/F and EA-18G Automated Maintenance Environment (AME), which includes initial procurement of software licenses, data rights, and technical publication updates including Integrated Electronic Technical Manuals (IETMs). Modifications incorporated for AME integration are authorized via associated SCS software builds, SPAWAR Program Of Record (POR) Acquisition Decision Memorandums, and Engineering Change Proposals (ECPs).

The miniaturized airborne Global Positioning System (GPS) receiver retrofit implements an advanced GPS that increases platform navigation accuracy and smart weapon targeting solutions. This OSIP will implement a Precision Approach and Landing Capability (PALC) that will provide an onboard precision approach capability in the event of adverse weather conditions. The PALC requirement can be met with either the Civilian Instrument Landing System (C-ILS) or the Wide Area Augmentation System (WAAS). Efforts include verifying and validating altimetry data related to the Reduced Vertical Separation Minimum (RVSM) mandate which reduces the vertical separation between aircraft flying between FL290 (29,000 ft.) and FL410 (41,000 ft.) inclusive, from 2000-ft minimum to 1000-ft minimum.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
All Validation and Verification installs for SSR (ECP-1146-12) have been completed. HDVR is planned to begin USN aircraft integration beginning FY 2019 concurrent with Block III Super Hornet production.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-6212R1 F/A-18E SSR - NonOrganic [28] *Installation 1 of 8*	42 / 0.699	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.699
1.1.2) ECP-6212R1 F/A-18F SSR - NonOrganic [29] *Installation 1 of 8*	58 / 1.101	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 1.101
1.1.3) ECP 1146-12 (SSR Hi8) AFC-630 Lot 12-21 C Kits - NonOrganic *Installation 1 of 8*	276 / 2.081	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	276 / 2.081
1.1.4) ECP 1146-12 (SSR Hi8) AFC-631 Lot 12-21 D Kits - NonOrganic *Installation 1 of 8*	115 / 1.693	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	115 / 1.693
1.1.5) ECP 1146-12 (SSR Hi8) AFC-633 Lot 18-22 E/F - NonOrganic *Installation 1 of 8*	32 / 0.308	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.308
1.1.6) ECP 6380 A-kits - NonOrganic *Installation 2 of 8*	159 / 12.882	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	159 / 12.882
1.1.7) Type 2 Advanced Mission Computer (AMC) kits (ECP 6267R1) - NonOrganic [30] *Installation 3 of 8*	62 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 0.000
1.1.8) HDVR (ECP-6514) - Organic(*)	- / -	- / -	8 / 0.442	144 / 8.117	- / -	144 / 8.117	121 / 6.957	121 / 7.096	121 / 7.238	121 / 7.382	27 / 1.612	663 / 38.844
1.1.9) F/A-18E ACS (ECP-6516) BLK III - NonOrganic *Installation 4 of 8*	- / -	- / -	1 / 0.603	1 / 0.605	- / -	1 / 0.605	- / -	23 / 14.703	23 / 14.997	23 / 15.297	181 / 131.277	252 / 177.482
1.1.10) F/A-18F ACS (ECP-6516) BLK III - NonOrganic *Installation 5 of 8*	- / -	- / -	1 / 0.747	1 / 0.762	- / -	1 / 0.762	- / -	17 / 13.476	17 / 13.728	17 / 14.003	136 / 122.268	189 / 164.984
1.1.11) F/A-18 G ACS (ECP-6516) - NonOrganic *Installation 6 of 8*	- / -	- / -	1 / 0.747	1 / 0.762	- / -	1 / 0.762	- / -	32 / 25.367	32 / 25.857	32 / 26.374	65 / 55.199	163 / 134.306
1.1.12) DFIRS - Organic(*)	- / -	- / -	32 / 2.824	60 / 5.401	- / -	60 / 5.401	72 / 6.611	72 / 6.743	72 / 6.878	65 / 6.333	- / -	373 / 34.790
1.1.13) A-Kits Archive - Organic(*)	395 / 7.470	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	395 / 7.470
1.2.1) Installation Kits N/R - Organic(*)	- / 28.656	- / 3.516	- / 3.202	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 35.374
2.1.1) Stores Management Upgrade (SMUG) (ECP 6042) - NonOrganic [31] *Installation 7 of 8*	59 / 1.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 1.878
2.1.2) Display Improvements (DVMC-104) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	33 / 12.507	72 / 27.834	72 / 28.390	72 / 28.958	353 / 150.605	602 / 248.294
2.1.3) ECP 6459 Advanced Capability Mission Computer (ACMC) - Organic(*)	83 / 64.168	21 / 15.206	5 / 5.386	28 / 20.680	- / -	28 / 20.680	- / -	- / -	- / -	- / -	- / -	137 / 105.440

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.1.4) ECP 6456 Fibre Channel Network Switch (FCNS-24) - Organic(*)	73 / 14.912	26 / 4.798	61 / 3.793	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	160 / 23.503
2.1.5) Type 3 Mission Computer 4th Processor - NonOrganic *Installation 8 of 8*	- / -	- / -	342 / 11.543	100 / 3.443	- / -	100 / 3.443	343 / 12.395	261 / 9.348	6 / 0.219	- / -	- / -	1,052 / 36.948
2.1.6) PALC B-Kits - Organic(*)	- / -	- / -	32 / 1.632	60 / 3.121	- / -	60 / 3.121	60 / 3.184	60 / 3.247	60 / 3.312	60 / 3.378	274 / 16.393	606 / 34.267
2.1.7) B-Kits Archive - Organic(*)	930 / 157.756	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	930 / 157.756
2.2.1) Installation Equipment N/R - Organic(*)	- / 27.136	- / -	- / 3.841	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.977
2.2.2) MP/UPC Software - Organic(*)	- / 22.122	- / 3.048	- / 5.549	- / 5.202	- / -	- / 5.202	- / 5.000	- / 5.020	- / 5.110	- / 5.202	- / 39.135	- / 95.388
2.2.3) AME Software - Organic(*)	- / -	- / 23.059	- / 21.613	- / 21.607	- / -	- / 21.607	- / 22.008	- / 22.416	- / 22.832	- / 23.256	- / 175.342	- / 332.133
2.2.4) ALQ-214 JMPS UPC Software - Organic(*)	- / 21.307	- / 2.382	- / -	- / 4.000	- / -	- / 4.000	- / -	- / -	- / -	- / -	- / -	- / 27.689
2.2.5) SCS - Organic(*)	- / 29.617	- / 4.565	- / 3.473	- / 4.533	- / -	- / 4.533	- / 4.960	- / 5.015	- / 5.231	- / 5.108	- / 42.103	- / 104.605
2.2.6) H12 (SCS) - Organic(*)	- / 15.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.420
2.2.7) H14 (SCS) - Organic(*)	- / 7.457	- / 0.662	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.119
2.2.8) H16 (SCS) - Organic(*)	- / 19.235	- / 16.264	- / 5.723	- / 5.841	- / -	- / 5.841	- / 5.766	- / -	- / -	- / -	- / -	- / 52.829
2.2.9) H18 (SCS) - Organic(*)	- / -	- / -	- / 4.021	- / 9.907	- / -	- / 9.907	- / 11.002	- / 13.017	- / 9.207	- / 3.440	- / -	- / 50.594
2.2.10) H20 (SCS) - Organic(*)	- / -	- / -	- / -	- / 9.998	- / -	- / 9.998	- / 13.152	- / 13.603	- / 13.303	- / 13.864	- / -	- / 63.920
2.2.11) H22 (SCS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.259	- / 21.110	- / 23.330	- / 29.127	- / -	- / 81.826
2.2.12) H24 (SCS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.765	- / 38.882	- / 40.000	- / 95.647
2.2.13) H26 (SCS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 100.000	- / 100.000
Subtotal: Procurement	*- / 435.898*	*- / 73.500*	*- / 75.139*	*- / 103.979*	*- / -*	*- / 103.979*	*- / 111.801*	*- / 187.995*	*- / 196.397*	*- / 220.604*	*- / 873.934*	*- / 2,279.247*
Support												
3.1) Engineering Change Orders	- / 1.440	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.440
3.2) Data	- / 18.933	- / 6.038	- / 6.159	- / 6.118	- / -	- / 6.118	- / 6.240	- / 6.365	- / 6.492	- / 6.622	- / 50.214	- / 113.181
3.3) Training Equipment	- / 1.904	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.904
3.4) Support Equipment	- / 8.737	- / -	- / 0.760	- / 0.774	- / -	- / 0.774	- / 0.788	- / 0.802	- / 0.816	- / 0.831	- / 6.251	- / 19.759
3.5) ILS	- / 15.439	- / 1.124	- / 1.147	- / 1.326	- / -	- / 1.326	- / 1.350	- / 1.374	- / 1.399	- / 1.424	- / 7.742	- / 32.325
3.6) Other Support	- / 126.435	- / 23.948	- / 24.036	- / 22.738	- / -	- / 22.738	- / 23.248	- / 24.390	- / 24.905	- / 25.424	- / 205.081	- / 500.205
3.7) Prior Year Install Costs	391 / 3.491	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	391 / 3.491
Subtotal: Support	*- / 176.379*	*- / 31.110*	*- / 32.102*	*- / 30.956*	*- / -*	*- / 30.956*	*- / 31.626*	*- / 32.931*	*- / 33.612*	*- / 34.301*	*- / 269.288*	*- / 672.305*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation												
Installation 1 of 8: GRP: SSR Mod Installs	- / 1.420	- / 0.149	- / 0.067	- / 0.509	- / 0.000	- / 0.509	- / 0.378	- / 0.025	- / 0.003	- / -	- / 0.000	- / 2.551
Installation 2 of 8: ECP 6380 A-kits	- / 3.303	- / 0.794	- / 0.271	- / 0.275	- / 0.000	- / 0.275	- / 0.281	- / 0.286	- / -	- / -	- / 0.000	- / 5.210
Installation 3 of 8: Type 2 Advanced Mission Computer (AMC) kits (ECP 6267R1)	- / 5.251	- / 1.326	- / 1.182	- / 1.718	- / 0.000	- / 1.718	- / 0.676	- / -	- / -	- / -	- / 0.000	- / 10.153
Installation 4 of 8: F/A-18E ACS (ECP-6516) BLK III	- / -	- / -	- / -	- / 0.086	- / 0.000	- / 0.086	- / 0.087	- / 2.062	- / 2.104	- / 2.146	- / 18.415	- / 24.900
Installation 5 of 8: F/A-18F ACS (ECP-6516) BLK III	- / -	- / -	- / -	- / 0.102	- / 0.000	- / 0.102	- / 0.104	- / 1.804	- / 1.840	- / 1.877	- / 16.262	- / 21.989
Installation 6 of 8: F/A-18 G ACS (ECP-6516)	- / -	- / -	- / -	- / 0.026	- / 0.000	- / 0.026	- / 0.028	- / -	- / 0.866	- / 0.883	- / 2.650	- / 4.453
Installation 7 of 8: Stores Management Upgrade (SMUG) (ECP 6042)	- / 0.020	- / 0.010	- / 0.011	- / 0.012	- / 0.000	- / 0.012	- / -	- / -	- / -	- / -	- / 0.000	- / 0.053
Installation 8 of 8: Type 3 Mission Computer 4th Processor	- / -	- / -	- / -	- / 0.353	- / 0.000	- / 0.353	- / 0.105	- / 0.369	- / 0.286	- / 0.007	- / 0.000	- / 1.120
Subtotal: Installation	*- / 9.994*	*- / 2.279*	*- / 1.531*	*- / 3.081*	*- / -*	*- / 3.081*	*- / 1.659*	*- / 4.546*	*- / 5.099*	*- / 4.913*	*- / 37.327*	*- / 70.429*
Total												
Total Cost (Procurement + Support + Installation)	**622.271**	**106.889**	**108.772**	**138.016**	**0.000**	**138.016**	**145.086**	**225.472**	**235.108**	**259.818**	**1,180.549**	**3,021.981**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 8: GRP: SSR Mod Installs

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field mod Team:: Installation Name: SSR Mod Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	334 / 1.420	29 / 0.149	20 / 0.067	58 / 0.509	0 / 0.000	58 / 0.509	47 / 0.378	31 / 0.025	4 / 0.003	- / -	0 / 0.000	523 / 2.551
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	334 / 1.420	29 / 0.149	20 / 0.067	58 / 0.509	0 / 0.000	58 / 0.509	47 / 0.378	31 / 0.025	4 / 0.003	- / -	0 / 0.000	523 / 2.551

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	334	10	8	6	5	8	5	4	3	26	11	11	10	20	9	9	9	8	8	8	7	1	1	1	1	-	-	-	-	-	523
Out	334	10	8	6	5	8	5	4	3	26	11	11	10	20	9	9	9	8	8	8	7	1	1	1	1	-	-	-	-	-	523

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 8: ECP 6380 A-kits

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Modification:: Installation Name: ECP 6380 A-kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	124 / 3.303	15 / 0.794	5 / 0.271	5 / 0.275	0 / 0.000	5 / 0.275	5 / 0.281	5 / 0.286	- / -	- / -	0 / 0.000	159 / 5.210
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	124 / 3.303	15 / 0.794	5 / 0.271	5 / 0.275	0 / 0.000	5 / 0.275	5 / 0.281	5 / 0.286	- / -	- / -	0 / 0.000	159 / 5.210

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	124	4	4	4	3	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	159
Out	124	4	4	4	3	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	159

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 8: Type 2 Advanced Mission Computer (AMC) kits (ECP 6267R1)

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: Type 2 Advanced Mission Computer (AMC) kits (ECP 6

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	33 / 5.251	8 / 1.326	7 / 1.182	10 / 1.718	0 / 0.000	10 / 1.718	4 / 0.676	- / -	- / -	- / -	0 / 0.000	62 / 10.153
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	33 / 5.251	8 / 1.326	7 / 1.182	10 / 1.718	0 / 0.000	10 / 1.718	4 / 0.676	- / -	- / -	- / -	0 / 0.000	62 / 10.153

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	33	2	2	2	2	4	3	-	-	3	3	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
Out	33	2	2	2	2	4	3	-	-	3	3	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 8: F/A-18E ACS (ECP-6516) BLK III

Manufacturer Information

Manufacturer Name: Boeing - F/A-18E ACS | Manufacturer Location: St Louis

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024

Installation Information

Method of Implementation: Navy Drive In Modification:: Installation Name: F/A-18E ACS (ECP-6516) BLK III

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.086	0 / 0.000	1 / 0.086	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.086
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.087	- / -	- / -	- / -	0 / 0.000	1 / 0.087
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.062	- / -	- / -	0 / 0.000	23 / 2.062
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.104	- / -	0 / 0.000	23 / 2.104
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.146	0 / 0.000	23 / 2.146
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	181 / 18.415	181 / 18.415
Total	- / -	- / -	- / -	1 / 0.086	0 / 0.000	1 / 0.086	1 / 0.087	23 / 2.062	23 / 2.104	23 / 2.146	181 / 18.415	252 / 24.900

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	6	6	6	5	6	6	6	5	6	6	6	5	181	252
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	6	6	6	5	6	6	6	5	6	6	6	5	181	252

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 8: F/A-18F ACS (ECP-6516) BLK III

Manufacturer Information

Manufacturer Name: Boeing - F/A-18F and EA-18G ACS | Manufacturer Location: St Louis

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021		Dec 2022	Dec 2023	Dec 2024
Delivery Dates		Sep 2020	Sep 2021		Dec 2022	Dec 2023	Dec 2024

Installation Information

Method of Implementation: Contractor Field Mod:: Installation Name: F/A-18F ACS (ECP-6516) BLK III

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.102	0 / 0.000	1 / 0.102	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.102
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.104	- / -	- / -	- / -	0 / 0.000	1 / 0.104
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 1.804	- / -	- / -	0 / 0.000	17 / 1.804
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 1.840	- / -	0 / 0.000	17 / 1.840
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 1.877	0 / 0.000	17 / 1.877
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	136 / 16.262	136 / 16.262
Total	- / -	- / -	- / -	1 / 0.102	0 / 0.000	1 / 0.102	1 / 0.104	17 / 1.804	17 / 1.840	17 / 1.877	136 / 16.262	189 / 21.989

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	5	4	4	4	5	4	4	4	5	4	4	4	136	189
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	5	4	4	4	5	4	4	4	5	4	4	4	136	189

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 8: F/A-18 G ACS (ECP-6516)

Manufacturer Information

Manufacturer Name: Boeing - F/A-18F and EA-18G ACS | Manufacturer Location: St Louis

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021		Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Dec 2020	Dec 2021		Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: Navy Drive In Modification:: Installation Name: F/A-18 G ACS (ECP-6516)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.026	0 / 0.000	1 / 0.026	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.026
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.028	- / -	- / -	- / -	0 / 0.000	1 / 0.028
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.866	10 / 0.000	0 / 0.000	42 / 0.866
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.883	0 / 0.000	32 / 0.883
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.866	32 / 0.866
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	65 / 1.784	65 / 1.784
Total	- / -	- / -	- / -	1 / 0.026	0 / 0.000	1 / 0.026	1 / 0.028	- / -	32 / 0.866	42 / 0.883	97 / 2.650	173 / 4.453

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	2	10	10	10	12	10	10	10	97	173
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	2	10	10	10	12	10	10	10	97	173

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 8: Stores Management Upgrade (SMUG) (ECP 6042)

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 3 Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Drive-In Modification:: Installation Name: Stores Management Upgrade (SMUG) (ECP 6042)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	30 / 0.020	11 / 0.010	11 / 0.011	7 / 0.012	0 / 0.000	7 / 0.012	- / -	- / -	- / -	- / -	0 / 0.000	59 / 0.053
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	30 / 0.020	11 / 0.010	11 / 0.011	7 / 0.012	0 / 0.000	7 / 0.012	- / -	- / -	- / -	- / -	0 / 0.000	59 / 0.053

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	30	3	3	3	2	3	3	3	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
Out	30	3	3	3	2	3	3	3	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 8 of 8: Type 3 Mission Computer 4th Processor

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	

Installation Information

Method of Implementation: Contractor Field Team:: Installation Name: Type 3 Mission Computer 4th Processor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	342 / 0.353	0 / 0.000	342 / 0.353	- / -	- / -	- / -	- / -	0 / 0.000	342 / 0.353
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.105	- / -	- / -	- / -	0 / 0.000	100 / 0.105
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	343 / 0.369	- / -	- / -	0 / 0.000	343 / 0.369
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	261 / 0.286	- / -	0 / 0.000	261 / 0.286
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.007	0 / 0.000	6 / 0.007
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	342 / 0.353	0 / 0.000	342 / 0.353	100 / 0.105	343 / 0.369	261 / 0.286	6 / 0.007	0 / 0.000	1,052 / 1.120

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	86	86	85	85	25	25	25	25	86	86	86	85	66	65	65	65	6	-	-	-	-	1,052
Out	-	-	-	-	-	-	-	-	-	86	86	85	85	25	25	25	25	86	86	86	85	66	65	65	65	6	-	-	-	-	1,052

Footnotes:

(28) ECP-6212R1 installs were realigned to match concurrent install schedule with Type 2 AMC (ECP-6267R1). ECP-6212R1 (AFC-557) applies to E/F Lots 23-25, and is dependent upon Type II Mission Computer prerequisite install from ECP-6267R1 (AFC-507 Lot 25 and AFC-506 Lot 23-24). AFC-507 is complete for E/F. AFC-506 has experienced significant delays due to the complexity of the aircraft

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 10 / Core Avionics Improvements / Upgrades (OSIP 023-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

modification. AFC-557 val/ver activity closed in FY14 enabling issuance of the technical directive to begin installs in Lot 25E/F. AFC-506 was released in FY15 for Lot 23-24 E/F and installs have been scheduled to coincide with AFC-557.

(29) ECP-6212R1 installs were realigned to match concurrent install schedule with Type 2 AMC (ECP-6267R1). ECP-6212R1 (AFC-557) applies to E/F Lots 23-25, and is dependent upon Type II Mission Computer prerequisite install from ECP-6267R1 (AFC-507 Lot 25 and AFC-506 Lot 23-24). AFC-507 is complete for E/F. AFC-506 has experienced significant delays due to the complexity of the aircraft modification. AFC-557 val/ver activity closed in FY14 enabling issuance of the technical directive to begin installs in Lot 25E/F. AFC-506 was released in FY15 for Lot 23-24 E/F and installs have been scheduled to coincide with AFC-557.

(30) Type 2 AMC A-kits were procured under BLI 05770 and are being installed under BLI 05250. Type 2 AMC B-kits have been removed from aircraft and replaced with Type 3 AMC kits, so there is no cost for B-kits. The B-kits are O-level installs so there is no associated install cost or schedule for B-kits.

(31) Kits were procured as a Life of Type Buy in FY14.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 11 / Litening AT Targeting Pod (OSIP 024-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	164.422	1.094	1.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	166.520
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	164.422	1.094	1.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	166.520
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**164.422**	**1.094**	**1.004**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**166.520**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LITENING Advanced Targeting (AT) Pod (AN-AAQ-28) possesses qualities essential to the Marine Corps' F/A-18A+/C/D's in the execution of operations within the combat spectrum providing the Marine Air Ground Task Force with crucial capabilities in the expeditionary land based environment. LITENING AT Pod capabilities include: laser/Infrared (IR) marker functionality, image data link functionality, cooperative laser guided illumination, laser spot tracker, and limited weapons damage assessment capability. Northrop Grumman's LITENING pod has demonstrated improved reliability and maintainability during combat operation. This OSIP provides ongoing integration improvements to LITENING pod systems in support of evolving operational requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
LITENING is a commercial off the shelf non-developmental item. This Operational, Safety and Improvement Program (OSIP) funds hardware for modifications to include personal computer memory card international association cards, station four adapters, wiring kits, loaders, etc. as well as desired software enhancements to take advantage of new capabilities. LITENING kits for F/A-18D (lots 14 and up) were procured in prior years and have reconnaissance wiring. LITENING kits for F/A-18D (lots 12 and 13) are engineered for aircraft without reconnaissance wiring and were procured in FY13.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 11 / Litening AT Targeting Pod (OSIP 024-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A+/C/D	**Modification Type:** CAPABILITY IMPROVEMENTS	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) F/A-18C A-kits - NonOrganic *Installation 1 of 1*	127 / 2.912	60 / 0.536	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	187 / 3.448
1.1.2) A-kits Archive - Organic(*)	137 / 4.865	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	137 / 4.865
1.2.1) Installation Kits N/R - Organic(*)	- / 1.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.225
2.1.1) B-kits Archive - Organic(*)	64 / 120.716	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 120.716
2.2.1) Installation Equipment N/R - Organic(*)	- / 6.216	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.216
Subtotal: Procurement	*- / 135.934*	*- / 0.536*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 136.470*
Support												
3.1) Engineering Change Orders	- / 10.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.025
3.2) Data	- / 2.853	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.853
3.3) Training Equipment	- / 0.289	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.289
3.4) Support Equipment	- / 0.484	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.484
3.5) ILS	- / 2.448	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.448
3.6) Other Support	- / 11.727	- / 0.280	- / 0.350	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.357
Subtotal: Support	*- / 27.826*	*- / 0.280*	*- / 0.350*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 28.456*
Installation												
Installation 1 of 1: F/A-18C A-kits	- / 0.662	- / 0.278	- / 0.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.594
Subtotal: Installation	*- / 0.662*	*- / 0.278*	*- / 0.654*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.594*
Total												
Total Cost (Procurement + Support + Installation)	**164.422**	**1.094**	**1.004**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**166.520**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 11 / Litening AT Targeting Pod (OSIP 024-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: F/A-18C A-kits

Manufacturer Information

Manufacturer Name: Northrop Grumman - F/A-18C A-kits | Manufacturer Location: Shamburg, IL

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019						
Delivery Dates	Aug 2019						

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: F/A-18C A-kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	101 / 0.662	26 / 0.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	127 / 0.940
FY 2019	- / -	- / -	60 / 0.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 0.654
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	101 / 0.662	26 / 0.278	60 / 0.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	187 / 1.594

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	101	6	6	7	7	15	15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	187
Out	101	6	6	7	7	15	15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	187

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,224.080	128.140	87.786	48.851	0.000	48.851	45.137	71.495	101.453	121.784	389.243	2,217.969
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,224.080	128.140	87.786	48.851	0.000	48.851	45.137	71.495	101.453	121.784	389.243	2,217.969
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,224.080**	**128.140**	**87.786**	**48.851**	**0.000**	**48.851**	**45.137**	**71.495**	**101.453**	**121.784**	**389.243**	**2,217.969**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F/A-18E/F and EA-18G program has developed and integrated the APG-79 Active Electronically Scanned Array (AESA) radar system for installation in Lot 26 and subsequent Block II, Super Hornet and Growler aircraft. The integration of the APG-79 AESA radar system into the F/A-18E /F and EA-18G greatly improves the weapon system's threat detection range, high resolution synthetic aperture radar ground mapping and targeting capability, aircraft survivability and situational awareness. APG-79 AESA Radar Producibilty Enhancement (ECP 6279) is an umbrella ECP and is comprised of Electro Magnetic Interference Upgrades (ECP 6298), Waveform Generator Firmware Upgrade (ECP 6329), and Power Conditioning Unit Upgrade to -120 (ECP 6314). The Configuration D upgrade includes the following ECPs: General Purpose Processor (GPP)3 (ECP 6381); 5th and 6th Channel (ECP 6344); Waveform Generator (ECP 6346), Waveform Generator- R2 Firmware (ECP 6346R2), and General Purpose Processor (GPP)3 General Purpose Controller (GPC) (ECP 6381). Corrections, modifications, and upgrades to Radar software is supported in compliance with system configuration set (SCS) builds.

This Operational, Safety and Improvement Program (OSIP) also includes recurring and non-recurring efforts for reliability and operational safety improvements to, as well as obsolescence mitigation for, the APG-65 and APG-73 radars. These efforts include retrofit incorporation of APG-73 into F/A-18 A+C/D- AFC 585 Kits (ECP 620). Funding included for Sensor Hardware Encapsulation Layer Narrow Band Converter Module Firmware (SNBC FW).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** AVIONICS UPGRADE	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 620 Kits - NonOrganic *Installation 1 of 4*	30 / 0.734	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.734
1.1.2) A Kit Archive - NonOrganic *Installation 2 of 4*	131 / 37.494	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	131 / 37.494
1.2.1) Installation Kits N/R - Organic(*)	- / 6.203	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.203
2.1.1) Modules Kits (WRAs) (ECP-6279) - NonOrganic (32) *Installation 3 of 4*	167 / 69.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	167 / 69.660
2.1.2) GPP3 (ECP 6381) - Organic(*)	461 / 97.243	228 / 48.157	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	689 / 145.400
2.1.3) 5th and 6th Channel (ECP 6344) - NonOrganic *Installation 4 of 4*	386 / 71.050	12 / 1.325	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	398 / 72.375
2.1.4) Waveform Generator HW (ECP 6346) - Organic(*)	461 / 42.021	228 / 31.692	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	689 / 73.713
2.1.5) Waveform Generator FW (ECP 6346) - Organic(*)	95 / 1.140	50 / 0.610	45 / 0.540	15 / 0.180	- / -	15 / 0.180	- / -	- / -	- / -	- / -	- / -	205 / 2.470
2.1.6) APG-65/73 obsolescence - Organic(*) (33)	- / 2.461	- / 9.630	- / 25.785	- / 5.165	- / -	- / 5.165	- / 5.869	- / 18.560	- / 21.053	- / 21.684	- / -	- / 110.207
2.1.7) APG-79 obsolescence - Organic(*) (34)	- / 4.399	- / -	- / 13.442	- / 3.396	- / -	- / 3.396	- / 9.371	- / 18.663	- / 21.744	- / 22.396	- / -	- / 93.411
2.1.8) SNBC FW ECP 6517 - Organic(*)	- / -	- / -	- / -	- / 4.098	- / -	- / 4.098	- / -	- / -	- / -	- / -	- / -	- / 4.098
2.1.9) B-Kits Archive - Organic(*)	260 / 457.388	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 457.388
2.2.1) Installation Equipment N/R - Organic(*)	- / 238.760	- / 7.000	- / 8.323	- / 6.663	- / -	- / 6.663	- / 6.459	- / 10.054	- / 15.460	- / 22.898	- / 4.581	- / 320.198
2.2.2) Software - Legacy Radar Software Upgrades - Organic(*) (35)	- / 18.141	- / 12.386	- / 16.458	- / 5.979	- / -	- / 5.979	- / 6.035	- / 6.480	- / 14.689	- / 20.506	- / 189.930	- / 290.604
2.2.3) Software - AESA Short Range Improvement S/W Upgrade - Organic(*) (36)	- / 22.876	- / 3.201	- / 3.260	- / 3.271	- / -	- / 3.271	- / 3.330	- / 3.396	- / 8.891	- / 14.386	- / 114.483	- / 177.094
Subtotal: Procurement	*- / 1,069.570*	*- / 114.001*	*- / 67.808*	*- / 28.752*	*- / -*	*- / 28.752*	*- / 31.064*	*- / 57.153*	*- / 81.837*	*- / 101.870*	*- / 308.994*	*- / 1,861.049*
Support												
3.1) Engineering Change Orders	- / 34.268	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 34.268
3.2) Data	- / 1.534	- / 0.250	- / 0.251	- / 0.255	- / -	- / 0.255	- / 0.260	- / 0.265	- / 0.271	- / 0.276	- / -	- / 3.362
3.4) Support Equipment	- / 14.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.000	- / 5.006	- / -	- / 24.084
3.5) ILS	- / 7.830	- / 0.909	- / 0.255	- / 0.260	- / -	- / 0.260	- / 0.266	- / 0.271	- / 0.276	- / 0.282	- / 2.137	- / 12.486
3.6) Other Support	- / 82.851	- / 12.491	- / 13.041	- / 13.302	- / -	- / 13.302	- / 13.547	- / 13.806	- / 14.069	- / 14.350	- / 78.112	- / 255.569
Subtotal: Support	*- / 140.561*	*- / 13.650*	*- / 13.547*	*- / 13.817*	*- / -*	*- / 13.817*	*- / 14.073*	*- / 14.342*	*- / 19.616*	*- / 19.914*	*- / 80.249*	*- / 329.769*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** AVIONICS UPGRADE	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 4: ECP 620 Kits	- / 0.884	- / 0.139	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.023
Installation 2 of 4: A Kit Archive	- / 0.508	- / 0.126	- / 0.367	- / 0.393	- / 0.000	- / 0.393	- / -	- / -	- / -	- / -	- / 0.000	- / 1.394
Installation 3 of 4: Modules Kits (WRAs) (ECP-6279)	- / 8.717	- / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.827
Installation 4 of 4: 5th and 6th Channel (ECP 6344)	- / 3.840	- / 0.114	- / 6.064	- / 5.889	- / 0.000	- / 5.889	- / -	- / -	- / -	- / -	- / 0.000	- / 15.907
Subtotal: Installation	*- / 13.949*	*- / 0.489*	*- / 6.431*	*- / 6.282*	*- / -*	*- / 6.282*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 27.151*
Total												
Total Cost (Procurement + Support + Installation)	**1,224.080**	**128.140**	**87.786**	**48.851**	**0.000**	**48.851**	**45.137**	**71.495**	**101.453**	**121.784**	**389.243**	**2,217.969**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: ECP 620 Kits

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: ECP 620 Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	26 / 0.884	4 / 0.139	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	30 / 1.023
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	26 / 0.884	4 / 0.139	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	30 / 1.023

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	26	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
Out	26	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: A Kit Archive

Manufacturer Information

Manufacturer Name: Not Specified. (37) Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: A Kit Archive

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	79 / 0.508	6 / 0.126	20 / 0.367	26 / 0.393	0 / 0.000	26 / 0.393	- / -	- / -	- / -	- / -	0 / 0.000	131 / 1.394
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	79 / 0.508	6 / 0.126	20 / 0.367	26 / 0.393	0 / 0.000	26 / 0.393	- / -	- / -	- / -	- / -	0 / 0.000	131 / 1.394

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	79	1	-	-	5	-	10	-	10	6	6	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131
Out	79	1	-	-	5	-	10	-	10	6	6	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: Modules Kits (WRAs) (ECP-6279)

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: Modules Kits (WRAs) (ECP-6279)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	154 / 8.717	13 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	167 / 8.827
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	154 / 8.717	13 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	167 / 8.827

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	154	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167
Out	154	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: 5th and 6th Channel (ECP 6344)

Manufacturer Information

Manufacturer Name: Raytheon - ECP 6344 | Manufacturer Location: El Segundo, CA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Sep 2019						

Installation Information

Method of Implementation: FRC:: Installation Name: 5th and 6th Channel (ECP 6344)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	24 / 3.840	7 / 0.114	176 / 5.677	179 / 5.889	0 / 0.000	179 / 5.889	- / -	- / -	- / -	- / -	0 / 0.000	386 / 15.520
FY 2019	- / -	- / -	12 / 0.387	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.387
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	24 / 3.840	7 / 0.114	188 / 6.064	179 / 5.889	0 / 0.000	179 / 5.889	- / -	- / -	- / -	- / -	0 / 0.000	398 / 15.907

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	24	2	2	2	1	47	47	47	47	44	45	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	398
Out	24	2	2	2	1	47	47	47	47	44	45	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	398

Footnotes:

(32) ECP 6279 installs are dependent upon squadron availability.

(33) Costs for obsolescence kits vary because obsolescence issues are not an ongoing effort for a single item and are not subject to inflation driven increases. The requirement for obsolescence kits was determined by evaluating historic life of type buy costs for analogous systems. These costs were projected to support future obsolescence issues in the affected components.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 12 / AESA/AN-APG-65/AN-APG-73 (OSIP 002-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(34) Costs for obsolescence kits vary because obsolescence issues are not an ongoing effort for a single item and are not subject to inflation driven increases. The requirement for obsolescence kits was determined by evaluating historic life of type buy costs for analogous systems. These costs were projected to support future obsolescence issues in the affected components.

(35) There are no quantities associated with software modifications.

(36) There are no quantities associated with software modifications.

(37) ECP 6038

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	292.775	34.136	19.857	18.068	0.000	18.068	10.985	11.928	12.078	86.927	1,806.038	2,292.792
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	292.775	34.136	19.857	18.068	0.000	18.068	10.985	11.928	12.078	86.927	1,806.038	2,292.792
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**292.775**	**34.136**	**19.857**	**18.068**	**0.000**	**18.068**	**10.985**	**11.928**	**12.078**	**86.927**	**1,806.038**	**2,292.792**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Purchase additional ALR-67(V)3 Radar Warning Receiver (RWR) systems and ALQ-214(V)4/5 self-protection onboard jammer systems to be used to retrofit F/A-18C/D/E/F platforms. These systems will replace existing ALR-67(V)2 RWR and ALQ-126B or ALQ-165 jammer systems. This will significantly increase aircrew survivability in the legacy F/A-18. The repetitive obsolescence issues of the V(2), ALQ-165, and ALQ-126B systems is a consistent issue in the F/A-18 community. The RWR ALR-67(V)3 is the threat recognition providing situational awareness for the aircrew and is vital to their own safety as well as providing the opportunity to support the ground troops. The jammer ALQ-214 provides incremental, significant improvement in survivability against RF threats. These retrofits reduce the risk of lost aircraft and aircrew in a hostile environment, improves close air support, and reduces the risk of blue on blue fratricide. The Operational, Safety and Improvement Program (OSIP) also performs required safety of flight modifications, addresses obsolescence issues and incorporates system improvements for all electronic warfare unique requirements to include hardware and software modifications. Current ECPs include ECP 622 (ALR-67(V)3), ECP 6389 (ALQ-214(V)4/5) Software and IETMs updates are also required as a result of these modifications. ALR-67(V)3 and ALQ-214(V)4/5 kit procurements are required for aircraft installation.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: ALR-67V(3) development and integration efforts started in FY10 and delivery and installs of A-kits began in FY14 and will continue through FY20 on the ALR-67(V)3 and FY24 on the ALQ-214.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18C/D/E/F ALR-67(V)3 Retrofit	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ALR 67(V)3 (ECP 622) -- OCO - NonOrganic [38] *Installation 1 of 4*	159 / 5.442	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	159 / 5.442
1.1.2) ALR 67(V)3 (ECP 622) SCIF/CKA Brackets - Organic *Installation 2 of 4*	- / -	70 / 0.536	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	70 / 0.536
1.1.3) ECP 6389 (ALQ-214) - NonOrganic *Installation 3 of 4*	94 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.357	94 / 17.357
1.1.4) RWR Jammer Survivability Mod - NonOrganic *Installation 4 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 63.370	413 / 806.076	449 / 869.446
1.1.5) A-Kits Archive - Organic(*)	95 / 3.745	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	95 / 3.745
1.1.6) Fiber Optic Cables for ALR-67(V3/ALQ-214) ECP 639/6389/622 - Organic(*)	- / -	- / -	- / -	36 / 0.110	- / -	36 / 0.110	30 / 0.094	32 / 0.096	- / -	- / -	- / -	98 / 0.300
1.2.1) Installation Kits N/R - Organic(*)	- / 2.792	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.843	- / -	- / 11.635
2.1.1) B-Kits Archive - Organic(*)	521 / 127.294	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	521 / 127.294
2.1.2) ALQ-214 ECP6389 - Organic(*)	86 / 31.504	14 / 25.237	8 / 16.048	2 / 4.012	- / -	2 / 4.012	- / -	- / -	- / -	- / -	- / -	110 / 76.801
2.2.1) F/A-18C/D ALR-67(V)3 Systems - Organic(*)	34 / 16.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 16.000
2.2.2) Installation Equipment N/R - Organic(*)	- / 14.190	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.190
2.2.3) F/A-C/D ALQ-214 (V) 5 Systems - Organic(*)	- / 32.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 32.550
2.2.4) Software - ALR-67(V)3 system S/W upgrade - Organic(*)	- / 30.552	- / 1.981	- / 1.716	- / 2.783	- / -	- / 2.783	- / 1.594	- / 5.986	- / 6.457	- / -	- / -	- / 51.069
2.2.5) H18 ALE-47 Common Carriage - Organic(*)	- / -	- / 1.349	- / -	- / 0.982	- / -	- / 0.982	- / -	- / -	- / -	- / -	- / -	- / 2.331
2.2.6) H18 EW ALR-67(V)3 BIT Improvement - Organic(*)	- / -	- / -	- / -	- / 1.245	- / -	- / 1.245	- / -	- / -	- / -	- / -	- / -	- / 1.245
2.2.7) H18 EW Suite - Organic(*)	- / -	- / -	- / -	- / 2.982	- / -	- / 2.982	- / 2.713	- / -	- / -	- / -	- / -	- / 5.695
Subtotal: Procurement	*- / 264.069*	*- / 29.103*	*- / 17.764*	*- / 12.114*	*- / -*	*- / 12.114*	*- / 4.401*	*- / 6.082*	*- / 6.457*	*- / 72.213*	*- / 823.433*	*- / 1,235.636*
Support												
3.2) Data	- / 2.045	- / 1.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.328	- / -	- / 4.892
3.3) Training Equipment	- / 0.276	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.276
3.4) Support Equipment	- / 7.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.607	- / -	- / 12.928
3.5) ILS	- / 3.583	- / 1.292	- / 0.520	- / 0.760	- / -	- / 0.760	- / 0.791	- / 0.806	- / 0.823	- / 0.839	- / 1.942	- / 11.356
3.6) Other Support	- / 11.517	- / 1.272	- / 1.363	- / 4.556	- / -	- / 4.556	- / 4.613	- / 4.704	- / 4.798	- / 6.940	- / 37.158	- / 76.921
Subtotal: Support	*- / 24.742*	*- / 4.083*	*- / 1.883*	*- / 5.316*	*- / -*	*- / 5.316*	*- / 5.404*	*- / 5.510*	*- / 5.621*	*- / 14.714*	*- / 39.100*	*- / 106.373*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18C/D/E/F ALR-67(V)3 Retrofit	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 4: ALR 67(V)3 (ECP 622) -- OCO	- / 2.248	- / 0.465	- / 0.210	- / 0.430	- / 0.000	- / 0.430	- / 1.127	- / 0.336	- / -	- / -	- / 0.000	- / 4.816
Installation 2 of 4: ALR 67(V)3 (ECP 622) SCIF/CKA Brackets	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -
Installation 3 of 4: ECP 6389 (ALQ-214)	- / 1.716	- / 0.485	- / -	- / 0.208	- / 0.000	- / 0.208	- / 0.053	- / -	- / -	- / -	- / 0.000	- / 2.462
Installation 4 of 4: RWR Jammer Survivability Mod	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 943.505	- / 943.505
Subtotal: Installation	*- / 3.964*	*- / 0.950*	*- / 0.210*	*- / 0.638*	*- / -*	*- / 0.638*	*- / 1.180*	*- / 0.336*	*- / -*	*- / -*	*- / 943.505*	*- / 950.783*
Total												
Total Cost (Procurement + Support + Installation)	**292.775**	**34.136**	**19.857**	**18.068**	**0.000**	**18.068**	**10.985**	**11.928**	**12.078**	**86.927**	**1,806.038**	**2,292.792**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: ALR 67(V)3 (ECP 622) -- OCO

Manufacturer Information

Manufacturer Name: Not Specified.	Manufacturer Location: Not Specified..
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ALR 67(V)3 (ECP 622) -- OCO

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	82 / 2.248	18 / 0.465	9 / 0.210	16 / 0.430	0 / 0.000	16 / 0.430	22 / 1.127	12 / 0.336	- / -	- / -	0 / 0.000	159 / 4.816
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	82 / 2.248	18 / 0.465	9 / 0.210	16 / 0.430	0 / 0.000	16 / 0.430	22 / 1.127	12 / 0.336	- / -	- / -	0 / 0.000	159 / 4.816

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	82	5	5	4	4	3	2	2	2	4	4	4	4	6	6	5	5	3	3	3	3	-	-	-	-	-	-	-	-	-	159
Out	82	5	5	4	4	3	2	2	2	4	4	4	4	6	6	5	5	3	3	3	3	-	-	-	-	-	-	-	-	-	159

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: ALR 67(V)3 (ECP 622) SCIF/CKA Brackets

Manufacturer Information

Manufacturer Name: Not Specified. | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: ALR 67(V)3 (ECP 622) SCIF/CKA Brackets

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 4: ECP 6389 (ALQ-214)

Manufacturer Information

Manufacturer Name: Not Specified.	Manufacturer Location: Not Specified..
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: ECP 6389 (ALQ-214)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	66 / 1.716	18 / 0.485	- / -	8 / 0.208	0 / 0.000	8 / 0.208	2 / 0.053	- / -	- / -	- / -	0 / 0.000	94 / 2.462
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	66 / 1.716	18 / 0.485	- / -	8 / 0.208	0 / 0.000	8 / 0.208	2 / 0.053	- / -	- / -	- / -	0 / 0.000	94 / 2.462

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	66	5	5	4	4	-	-	-	-	2	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94
Out	66	5	5	4	4	-	-	-	-	2	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 13 / EW Unique (OSIP 021-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 4: RWR Jammer Survivability Mod

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							Dec 2024
Delivery Dates							Sep 2025

Installation Information

Method of Implementation: Contractor Field Team:: Installation Name: RWR Jammer Survivability Mod

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 64.637	36 / 64.637
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	413 / 878.868	413 / 878.868
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	449 / 943.505	449 / 943.505

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	449	449
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	449	449

Footnotes:

(38) ALR 67(V)3 (ECP 622) OCO Qty 100 being installed with Baseline funding.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	257.325	56.646	56.434	44.625	0.000	44.625	42.991	67.826	45.185	45.684	391.475	1,008.191
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	257.325	56.646	56.434	44.625	0.000	44.625	42.991	67.826	45.185	45.684	391.475	1,008.191
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**257.325**	**56.646**	**56.434**	**44.625**	**0.000**	**44.625**	**42.991**	**67.826**	**45.185**	**45.684**	**391.475**	**1,008.191**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Operational, Safety and Improvement Program (OSIP) 001-10 will implement a common configuration and capability across all F/A-18A-F and EA-18G aircraft. Improving platform performance in all mission areas including Surface Warfare (SuW), air-to-air, strike, Suppression of Enemy Air Defenses (SEAD)/Defensive Electronic Counter Measurements (DECD) and interoperability which will result in a reduction of a number of aircraft and weapons to execute SuW and strike missions in most stressing scenarios, decrease in time on target to execute SuW, SEAD/DECD missions in major combat operations scenarios and will improve survivability due to decreased time on target.

The F/A-18 program has developed and integrated multiple systems to be installed in Lot 26 and subsequent block 2 and block 3 aircraft. The integration of the systems: ECP 6253 - Distributed Targeting System (DTS), Distributed Targeting Processor - Network (DTP-N), ECP 6442 - Data Transfer Unit (DTU), ECP 6393 - Digital Memory Device (DMD), Advanced Navigation (ANAV), ECP 6318 - Upgraded Solid State Recorder (USSR), digital cueing systems and G4 processor, and interoperability modifications due to multifunctional information distribution system low volume terminal and digital communication system radio military-standard will greatly improve the weapon systems threat capability. This OSIP will implement the required architecture in support of Navigation Plan 2030. The ANAV retrofit implements an advanced inertial navigation system/global positioning system that increases platform navigation accuracy and smart weapon targeting solutions. Due to ANAV obsolescence and continued aircraft production, the ANAV retrofit for E/F Lots 26-29 (ECP 6340R1) (TD574) has been put into abeyance in order to supply retrofit ANAVs for production aircraft deliveries. The current plan is for the PMW170 ANAV-M program to replace the ANAV, which will allow the ANAV retrofit program to be completed.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
DMD, ANAV, and digital countermeasure receiver were fully developed in FY 2008. DTS achieved IOC in Oct 2013. DTP-N is scheduled to complete non-recurring engineering in 2019, with procurement scheduled for 2020 and fielding in 2021. DTU has completed development up to and including Physical Configuration Audit. USSR (ECP-6318) is fully developed and being installed (EA-18G is complete, F/A-18F ongoing). USSR RMM Upgrade has been cancelled. USSR has reached terminal end of production due to technology obsolescence and will be replaced by the HDVR (OSIP 23-04). Conversion of Lots 30-32.5 from 12 channel ANAVS to 24 channel ANAVs was complete in July 2017.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Avionics Upgrade	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) DTS A1 A-kit (LOTS 26-29) (ECP 6253) - NonOrganic *Installation 1 of 6*	169 / 6.165	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 6.165
1.1.2) DTP-N A-kits (A1) (ECP6509) - NonOrganic *Installation 2 of 6*	- / -	37 / 0.519	44 / 0.630	32 / 0.467	- / -	32 / 0.467	32 / 0.476	17 / 0.258	- / -	- / -	- / -	162 / 2.350
1.1.3) DTP-N A-kits (A2) (ECP6509) - Organic(*)	- / -	37 / 0.387	32 / 1.013	13 / 0.228	- / -	13 / 0.228	- / -	- / -	- / -	- / -	- / -	82 / 1.628
1.1.4) DTP-N A-kits (A1) (ECP 6509) E/F (SLM) - NonOrganic *Installation 3 of 6*	- / -	4 / 0.060	- / -	- / -	- / -	- / -	- / -	40 / 0.717	40 / 0.731	40 / 0.746	320 / 6.512	444 / 8.766
1.1.5) DTP-N A-kits (A2) (ECP 6509) E/F (SLM) - NonOrganic *Installation 3 of 6*	- / -	4 / 0.055	- / -	- / -	- / -	- / -	- / -	40 / 0.717	40 / 0.731	40 / 0.746	320 / 6.512	444 / 8.761
1.1.6) ANI Wiring A-kit (ECP 6522) E/F (SLM) - NonOrganic *Installation 4 of 6*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.600	40 / 1.632	40 / 1.665	320 / 14.535	440 / 19.432
1.1.7) DTU A-kit - Organic(*)	118 / 0.001	101 / 0.001	101 / 0.001	110 / 0.001	- / -	110 / 0.001	110 / 0.001	- / -	- / -	- / -	- / -	540 / 0.005
1.1.8) DTU AME Cables - Organic(*)	305 / 0.623	9 / 0.004	81 / 0.109	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	395 / 0.736
1.1.9) Archived A-Kits - Organic(*)	1,026 / 31.846	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,026 / 31.846
1.1.10) USSR A Kit - NonOrganic *Installation 5 of 6*	179 / 7.748	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	179 / 7.748
1.2.1) Prior Year N/R - Organic(*)	- / 14.522	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.522
2.1.1) DTP-N B-kits (DTP-N) (ECP6509) - Organic(*)	- / -	37 / 23.574	48 / 31.200	32 / 24.304	- / -	32 / 24.304	32 / 24.790	17 / 13.433	- / -	- / -	18 / 14.507	184 / 131.808
2.1.2) DTP-N K-kit (ECP 6509) E/F (SLM) - NonOrganic *Installation 6 of 6*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 31.174	40 / 31.798	40 / 32.433	320 / 283.198	440 / 378.603
2.1.3) DTP-N B-kit (MSU) (ECP 6253) - Organic(*)	- / -	49 / 3.655	20 / 1.534	32 / 2.503	- / -	32 / 2.503	57 / 4.549	67 / 5.453	- / -	- / -	- / -	225 / 17.694
2.1.4) DTP-N B-kits (BDCs) (ECP 6253) - Organic(*)	- / -	123 / 2.091	67 / 1.130	80 / 1.376	- / -	80 / 1.376	142 / 2.492	168 / 3.007	- / -	- / -	- / -	580 / 10.096
2.1.5) DTU B-kit - Organic(*)	274 / 18.000	112 / 7.823	101 / 6.192	68 / 5.189	- / -	68 / 5.189	20 / 1.557	- / -	- / -	- / -	- / -	575 / 38.761
2.1.6) DTU Ground Encryptor - Organic(*)	243 / 12.487	136 / 7.319	100 / 5.078	24 / 1.218	- / -	24 / 1.218	- / -	- / -	- / -	- / -	- / -	503 / 26.102
2.1.7) DTU Memory Modules - Organic(*)	1,767 / 3.324	813 / 1.615	530 / 1.044	26 / 0.052	- / -	26 / 0.052	- / -	- / -	- / -	- / -	- / -	3,136 / 6.035
2.1.8) Archive - B-kit - Organic(*)	1,157 / 124.964	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,157 / 124.964
2.2.1) Installation Equipment N/R - Organic(*)	- / -	4 / 2.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.880
2.2.2) Software - Organic(*)	- / -	- / 0.143	- / 0.346	- / 0.589	- / -	- / 0.589	- / 0.591	- / 0.613	- / 0.631	- / 0.638	- / -	- / 3.551
Subtotal: Procurement	*- / 219.680*	*- / 50.126*	*- / 48.277*	*- / 35.927*	*- / -*	*- / 35.927*	*- / 34.456*	*- / 56.972*	*- / 35.523*	*- / 36.228*	*- / 325.264*	*- / 842.453*
Support												
3.2) Data	- / 2.501	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.501

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Avionics Upgrade	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.3) Training Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.185	- / 0.189	- / -	- / -	- / 0.374
3.4) Support Equipment	- / 12.647	- / 0.384	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.031
3.5) ILS	- / 15.585	- / -	- / 0.427	- / 0.642	- / -	- / 0.642	- / 0.668	- / 0.776	- / 0.647	- / 0.660	- / 4.752	- / 24.157
3.6) Other Support	- / 4.465	- / 5.610	- / 5.722	- / 5.816	- / -	- / 5.816	- / 5.932	- / 6.051	- / 6.171	- / 6.295	- / 47.904	- / 93.966
Subtotal: Support	*- / 35.198*	*- / 5.994*	*- / 6.149*	*- / 6.458*	*- / -*	*- / 6.458*	*- / 6.600*	*- / 7.012*	*- / 7.007*	*- / 6.955*	*- / 52.656*	*- / 134.029*
Installation												
Installation 1 of 6: DTS A1 A-kit (LOTS 26-29) (ECP 6253)	- / 0.955	- / 0.350	- / 0.964	- / 0.983	- / 0.000	- / 0.983	- / 1.003	- / 1.402	- / 0.618	- / 0.946	- / 0.000	- / 7.221
Installation 2 of 6: DTP-N A-kits (A1) (ECP6509)	- / -	- / -	- / 1.036	- / 1.257	- / 0.000	- / 1.257	- / 0.932	- / 0.951	- / 0.515	- / -	- / 0.000	- / 4.691
Installation 3 of 6: GRP: DTP-N A-kit E/F (SLM)	- / -	- / 0.124	- / -	- / -	- / -	- / -	- / -	- / 1.446	- / 1.475	- / 1.505	- / 13.135	- / 17.685
Installation 4 of 6: ANI Wiring A-kit (ECP 6522) E/F (SLM)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.021	- / 0.022	- / 0.023	- / 0.210	- / 0.276
Installation 5 of 6: USSR A Kit	- / 1.492	- / 0.052	- / 0.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.552
Installation 6 of 6: DTP-N K-kit (ECP 6509) E/F (SLM)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.022	- / 0.025	- / 0.027	- / 0.210	- / 0.284
Subtotal: Installation	*- / 2.447*	*- / 0.526*	*- / 2.008*	*- / 2.240*	*- / -*	*- / 2.240*	*- / 1.935*	*- / 3.842*	*- / 2.655*	*- / 2.501*	*- / 13.555*	*- / 31.709*
Total												
Total Cost (Procurement + Support + Installation)	**257.325**	**56.646**	**56.434**	**44.625**	**0.000**	**44.625**	**42.991**	**67.826**	**45.185**	**45.684**	**391.475**	**1,008.191**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: DTS A1 A-kit (LOTS 26-29) (ECP 6253)

Manufacturer Information

Manufacturer Name: Not Specified.	Manufacturer Location: Not Specified..
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: DTS A1 A-kit (LOTS 26-29) (ECP 6253)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.955	10 / 0.350	27 / 0.964	27 / 0.983	0 / 0.000	27 / 0.983	27 / 1.003	37 / 1.402	16 / 0.618	24 / 0.946	0 / 0.000	169 / 7.221
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.955	10 / 0.350	27 / 0.964	27 / 0.983	0 / 0.000	27 / 0.983	27 / 1.003	37 / 1.402	16 / 0.618	24 / 0.946	0 / 0.000	169 / 7.221

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	1	2	2	3	3	6	7	7	7	6	7	7	7	6	7	7	7	9	9	9	10	4	4	4	4	6	6	6	6	-	169
Out	1	2	2	3	3	6	7	7	7	6	7	7	7	6	7	7	7	9	9	9	10	4	4	4	4	6	6	6	6	-	169

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 6: DTP-N A-kits (A1) (ECP6509)

Manufacturer Information

Manufacturer Name: BOEING - ECP 6500 HEATER LINE | Manufacturer Location: ST. LOUIS, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: DTP-N A-kits (A1) (ECP6509)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	37 / 1.036	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	37 / 1.036
FY 2020	- / -	- / -	- / -	44 / 1.257	0 / 0.000	44 / 1.257	- / -	- / -	- / -	- / -	0 / 0.000	44 / 1.257
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.932	- / -	- / -	- / -	0 / 0.000	32 / 0.932
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.951	- / -	- / -	0 / 0.000	32 / 0.951
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.515	- / -	0 / 0.000	17 / 0.515
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	37 / 1.036	44 / 1.257	0 / 0.000	44 / 1.257	32 / 0.932	32 / 0.951	17 / 0.515	- / -	0 / 0.000	162 / 4.691

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	9	9	9	10	11	11	11	11	8	8	8	8	8	8	8	8	5	4	4	4	-	-	-	-	-	162
Out	-	-	-	-	-	9	9	9	10	11	11	11	11	8	8	8	8	8	8	8	8	5	4	4	4	-	-	-	-	-	162

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 6: GRP: DTP-N A-kit E/F (SLM)

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019			Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Mar 2019	Mar 2020			Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: TBD:: Installation Name: DTP-N A-kit E/F (SLM)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	8 / 0.124	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.124
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 1.446	- / -	- / -	0 / 0.000	80 / 1.446
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 1.475	- / -	0 / 0.000	80 / 1.475
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 1.505	0 / 0.000	80 / 1.505
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	640 / 13.135	640 / 13.135
Total	- / -	8 / 0.124	- / -	- / -	- / -	- / -	- / -	80 / 1.446	80 / 1.475	80 / 1.505	640 / 13.135	888 / 17.685

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	40	-	-	40	40	-	-	40	40	640	888
Out	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	40	-	-	40	40	-	-	40	40	640	888

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 6: ANI Wiring A-kit (ECP 6522) E/F (SLM)

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2022	Dec 2023	Dec 2024
Delivery Dates					Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Contractor Team:: Installation Name: ANI Wiring A-kit (ECP 6522) E/F (SLM)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.021	- / -	- / -	0 / 0.000	40 / 0.021
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.022	- / -	0 / 0.000	40 / 0.022
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.023	0 / 0.000	40 / 0.023
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	320 / 0.210	320 / 0.210
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.021	40 / 0.022	40 / 0.023	320 / 0.210	440 / 0.276

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	-	-	20	20	-	-	20	20	320	440
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	-	-	20	20	-	-	20	20	320	440

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 6: USSR A Kit

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Mod Team:: Installation Name: USSR A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	169 / 1.492	7 / 0.052	3 / 0.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	179 / 1.552
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	169 / 1.492	7 / 0.052	3 / 0.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	179 / 1.552

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	169	2	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179
Out	169	2	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 14 / Network Centric Operations: (OSIP 001-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 6: DTP-N K-kit (ECP 6509) E/F (SLM)

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2022	Dec 2023	Dec 2024
Delivery Dates					Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Contractor Team:: Installation Name: DTP-N K-kit (ECP 6509) E/F (SLM)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.022	- / -	- / -	0 / 0.000	40 / 0.022
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.025	- / -	0 / 0.000	40 / 0.025
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.027	0 / 0.000	40 / 0.027
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	320 / 0.210	320 / 0.210
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.022	40 / 0.025	40 / 0.027	320 / 0.210	440 / 0.284

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	-	-	20	20	-	-	20	20	320	440
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	-	-	20	20	-	-	20	20	320	440

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	171.303	52.950	90.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	314.803
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	171.303	52.950	90.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	314.803
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**171.303**	**52.950**	**90.550**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**314.803**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

With EA-18G aircraft achieving initial operational capability in FY2009, an Operational, Safety and Improvement Program (OSIP) to perform required safety of flight modifications, address obsolescence issues, and incorporate system improvements was established. Funding supports the retrofit of the ALQ-99 tactical jamming system. ECP 6360, the Joint Tactical Terminal-Receiver (JTT-R) was developed to replace the Multi-Mission Advanced Tactical Terminal (MATT) to address MATT obsolescence and capability deficiencies. OSIP funding was used to retrofit the aircraft with JTT-R at the completion of the development program. Future SATCOM (i.e. JTT-R) modifications will exist on EA-18G and will require funding for software and hardware updates. OSIP funding will also support a common configuration and airborne electronic attack (AEA) I-level standup which includes the procurement and fielding of operational test program sets (OTPS) as support equipment for the I-level stand up. Funds are required to support Weapons Replaceable Assemblies (WRAs) and Shop Replaceable Assemblies (SRAs) to achieve depot standup SRA/WRA capability. EA-18G software modifications are budgeted to support and stay abreast with emerging electronic warfare threats and the software modifications required to react to those threats. OSIP funding will be used to retrofit ALQ-218(V)2 hardware and software on board the EA-18G for increased emitter detection (ECP 6482 Airborne Electronic Attack Systems Enhancements (ASE)). ECP 6312 (EA-18G AESA Blanking Wire Group and CCS Mid-board Group A) supports Counter Communications Set (CCS)/ AESA Blanking capabilities during future jamming operations for EA-18G. This ECP adds CCS provisional wiring as well as a blanking wire from the AESA/Electronic Interface Blanking Unit (EIBU) to the ALQ-218(V)2 onboard the EA-18G. ECP 6444 is part of the weight reduction initiative in order to support future EA-18G modifications and jamming capabilities. ECP 6479 is an EA-18G aircraft wiring modification supporting the software upgrade of Time Difference of Arrival (TDOA) one pulse per second signal. ECP 6464 addresses EIBU obsolescence and incorporates the Radio Frequency Blanking Unit (RFBU) as a form, fit, function replacement to the EIBU to support EA-18G operations.

Funds are provided for integrating Reactive Electronic Attack Measures (REAM) capability. This technology and hardware upgrade of the Electronic Attack Unit (EAU) will bring Cognitive Electronic Warfare capability to the platform and is the start to EA-18G BLK II modernization as well as development and integration of special mission pods in support of BLK II modernization.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
REAM development is funded out of RDT&E; procurement to follow.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:** 0604269N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A - NonOrganic *Installation 1 of 6*	4 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.400
1.1.2) ECP 6444 - EA-18G Weight Reduction Initiative - NonOrganic *Installation 2 of 6*	14 / 0.239	4 / 0.440	28 / 3.142	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 3.821
1.1.3) ECP 6479 - One Pulse Per Second (1PPS) - NonOrganic *Installation 3 of 6*	155 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	155 / 0.025
1.1.4) ECP 6482 - ASE (ALQ-218 Modifications) - NonOrganic *Installation 4 of 6*	- / -	4 / 0.064	28 / 0.229	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.293
1.1.5) A-kits Archive - Organic(*)	- / 6.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.620
1.2.1) Installation Kits N/R - Organic(*)	- / 25.473	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 25.773
2.1.1) ECP 6464 - RFBU - Organic(*)	69 / 4.291	100 / 3.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.181
2.1.2) ECP 6482 ASE - (ALQ-218 Modifications (WRAs)) - NonOrganic (39) *Installation 5 of 6*	- / -	4 / 4.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4.000
2.1.3) ECP 6482 ASE - (ALQ-218 Modifications (WRAs)) 0505 - Organic(*) (40)	- / -	- / -	28 / 27.994	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 27.994
2.1.4) ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP)) - NonOrganic *Installation 6 of 6*	5 / 5.000	3 / 1.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.032
2.1.5) ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP)) 0505 - Organic(*) (41)	- / -	- / -	24 / 3.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.002
2.1.6) B-Kits Archive - Organic(*)	283 / 77.522	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	283 / 77.522
2.2.1) Installation Equipment N/R - Organic(*) (42)	- / -	- / -	- / 3.249	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.249
2.2.2) EA-18G SCS- H14 - Organic(*)	- / -	- / 0.266	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.266
2.2.3) EA-18G SCS- H16 - Organic(*)	- / -	- / 2.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.032
2.2.4) H16 TDOA Block 2 - Organic(*)	- / 10.322	- / -	- / 1.083	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.405
2.2.5) EA-18G SCS- H18 - Organic(*) (43)	- / -	- / -	- / 6.172	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.172
2.2.6) Advanced Modes 1 and 2, REAM/Cognitive EW - Organic(*)	- / -	- / 6.830	- / 14.723	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.553
2.2.7) Software - Organic(*)	- / -	- / -	- / 3.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.989
Subtotal: Procurement	*- / 129.892*	*- / 18.854*	*- / 63.583*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 212.329*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-18G	**Modification Type:** SAFETY /RELIABILITY/ IMPROVEMENT	**Related RDT&E PEs:** 0604269N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Support												
3.1) Data	- / 2.879	- / 1.898	- / 1.936	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.713
3.2) Training Equipment	- / 0.172	- / -	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.772
3.3) Support Equipment	- / 16.081	- / 2.640	- / 2.406	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.127
3.4) ILS	- / 7.474	- / 2.145	- / 3.366	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.985
3.5) Other Support	- / 12.363	- / 27.240	- / 15.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 54.872
Subtotal: Support	*- / 38.969*	*- / 33.923*	*- / 23.577*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 96.469*
Installation												
Installation 1 of 6: ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A	- / 0.207	- / -	- / 0.422	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.629
Installation 2 of 6: ECP 6444 - EA-18G Weight Reduction Initiative	- / 2.200	- / -	- / 0.973	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.173
Installation 3 of 6: ECP 6479 - One Pulse Per Second (1PPS)	- / 0.035	- / 0.173	- / 0.176	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.384
Installation 4 of 6: ECP 6482 - ASE (ALQ-218 Modifications)	- / -	- / -	- / 0.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.368
Installation 5 of 6: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))	- / -	- / -	- / 0.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.811
Installation 6 of 6: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))	- / -	- / -	- / 0.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.640
Subtotal: Installation	*- / 2.442*	*- / 0.173*	*- / 3.390*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 6.005*
Total												
Total Cost (Procurement + Support + Installation)	**171.303**	**52.950**	**90.550**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**314.803**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: ECP 6312 - EA-18G AESA Blanking Wire Group A and CCS Mid-board Group A

Manufacturer Information

Manufacturer Name: Not Specified. | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Field Modification Team:: Installation Name: ECP 6312 - EA-18G AESA Blanking Wire Group A and C

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.207	- / -	2 / 0.422	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	4 / 0.629
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.207	- / -	2 / 0.422	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	4 / 0.629

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4
Out	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 6: ECP 6444 - EA-18G Weight Reduction Initiative

Manufacturer Information

Manufacturer Name: Boeing - ECP 6444	Manufacturer Location: St. Louis
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019	Feb 2020					
Delivery Dates	Aug 2020	Aug 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6444 - EA-18G Weight Reduction Initiative

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	10 / 2.200	- / -	4 / 0.320	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 2.520
FY 2019	- / -	- / -	4 / 0.320	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.320
FY 2020	- / -	- / -	4 / 0.333	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.000	28 / 0.333
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	10 / 2.200	- / -	12 / 0.973	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.000	46 / 3.173

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	10	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	46
Out	10	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	46

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 6: ECP 6479 - One Pulse Per Second (1PPS)

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP 6479 - One Pulse Per Second (1PPS)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	25 / 0.035	65 / 0.173	65 / 0.176	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	155 / 0.384
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	25 / 0.035	65 / 0.173	65 / 0.176	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	155 / 0.384

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	25	17	16	16	16	17	16	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155
Out	25	17	16	16	16	17	16	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 6: ECP 6482 - ASE (ALQ-218 Modifications)

Manufacturer Information

Manufacturer Name: Boeing - ECP 6482 - ASE (ALQ-218 Modifications)	Manufacturer Location: St. Louis, MO
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Sep 2019	Feb 2020					
Delivery Dates	Aug 2020	Aug 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 - ASE (ALQ-218 Modifications)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 0.184	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.184
FY 2020	- / -	- / -	4 / 0.184	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.000	28 / 0.184
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	8 / 0.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.000	32 / 0.368

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	32
Out	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	32

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 6: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))

Manufacturer Information

Manufacturer Name: Northrop Grumman - ECP 6482 WRAs (44) | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Sep 2019	Feb 2020					
Delivery Dates	Aug 2020	Aug 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 ASE - (ALQ-218 Modifications (WRAs))

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 0.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.811
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 0.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.811

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 6 of 6: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))

Manufacturer Information

Manufacturer Name: Northrop Grumman - ECP 6482 GBP	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Sep 2019	Feb 2020					
Delivery Dates	Aug 2020	Aug 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 6482 ASE - (ALQ-218 Modifications (AEA/GBP))

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	5 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.400
FY 2019	- / -	- / -	3 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.240
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	8 / 0.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.640

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Footnotes:

(39) Funding in FY20 - FY22 includes costs for the Low Band Dedicated Receiver (LBDR) Weapons Replaceable Assembly (WRA).

(40) Funding in FY20 - FY22 includes costs for the Low Band Dedicated Receiver (LBDR) Weapons Replaceable Assembly (WRA). Kits will be installed under BLI 0505 OSIP 11-10

(41) Kits will be installed under BLI 0505 OSIP 11-10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 15 / EA-18G Unique OSIP (011-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(42) Increases in FY21-FY22 are for non-recurring engineering associated with Growler Block 2 modification ECPs.

(43) Funding supports EA-18G H18 block upgrades as well as interoperability with Growler Block 2/Reactive Electronic Attack Measures (REAM).

(44) Kits will be installed under BLI 0505 OSIP 11-10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 16 / Power and Propulsion (11-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	551.692	58.747	58.566	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	669.005
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	551.692	58.747	58.566	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	669.005
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**551.692**	**58.747**	**58.566**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**669.005**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This OSIP incorporates safety and life-limiting propulsion and power corrective actions to resolve safety and readiness concerns. Corrections to design deficiencies found during post production test and evaluation and discovered during fleet operations that have resulted in safety and reliability degradation must be corrected. The requirement to upgrade or modify the engine, system secondary power system, electrical system, and fuel systems is critical in maintaining sustainable fleet reliability, safety, and performance and is necessary to meet mission requirements. Modifications include Generator Convertor Units (GCUs), GCU Peculiar Support Equipment (PSE), electrical power and secondary power systems for service life extension.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 16 / Power and Propulsion (11-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** Safety, Readiness, Reliability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.1) Archived ECPs - Organic(*)	1,628 / 1.888	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,628 / 1.888
2.1.2) GCU Reliability Upgrade midterm (ECP 6421) Pt 3 G3/G4 - Organic(*)	610 / 73.917	180 / 26.783	120 / 18.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	910 / 118.940
2.1.3) GCU Reliability Upgrade midterm Pt 3 (ECP 6421) G4 - Organic(*)	78 / 9.322	122 / 29.768	149 / 37.101	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	349 / 76.191
2.2.1) Installation Equipment N/R - Organic(*)	- / 0.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.278
Subtotal: Procurement	*- / 85.405*	*- / 56.551*	*- / 55.341*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 197.297*
Support												
3.1) Data	- / 0.002	- / -	- / 0.214	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.216
3.2) Training Equipment	- / 0.119	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.119
3.3) Support Equipment (45)	- / 462.792	- / 0.087	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 462.879
3.4) ILS	- / 0.080	- / -	- / 1.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.105
3.5) Other Support	- / 3.294	- / 2.109	- / 1.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.389
Subtotal: Support	*- / 466.287*	*- / 2.196*	*- / 3.225*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 471.708*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**551.692**	**58.747**	**58.566**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**669.005**

Footnotes:

(45) Support equipment increases in FY24 for depot stand up of OSIP 14-03 ECP 6480.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 17 / Infrared Search and Track (IRST) (04-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	291.499	60.195	46.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	398.656
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	291.499	60.195	46.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	398.656
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**291.499**	**60.195**	**46.962**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**398.656**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description:

The Infrared Search and Track (IRST) will provide the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment. IRST is an evolutionary program using a block approach. This Operational, Safety and Improvement Program (OSIP) is used to procure Block I IRST systems [Low Rate Initial Production (LRIP) lots 1 and 2], Infrared Optimized Configuration (IROC) and AV6+ modifications, Block II Engineering Change Proposal (ECP) modifications and incorporation including retrofit and forward fit [LRIP lots 3 through 6 and FRP] as well as all initial integrated logistics support activities to include special tooling, support equipment, production test equipment, I Level stand-up, reliability, maintainability, obsolescence and reliability growth activities in support of system Block II modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

IRST development began in FY2008. IRST Block I Milestone B occurred on 17 June 2011 and the Acquisition Decision Memorandum was signed 12 July 2011. Block I Milestone C occurred on 02 December 2014 and the Acquisition Decision Memorandum (ADM) was signed 24 March 2015. IRST was reclassified as an Acquisition Category IC Major Defense Acquisition Program (P510) on 5 November 2016. The ACAT IC APB was signed 13 February 2017. A successful MS-C review was conducted 4 December 2018. The Full Rate Production milestone decision review is scheduled for 3rd Quarter FY 2021 with Initial Operational Capability scheduled for 4th Quarter FY 2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 17 / Infrared Search and Track (IRST) (04-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F	**Modification Type:** CAPABILITY IMPROVEMENTS	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.1) IRST B-kits (Block I) - Organic(*) (46)	18 / 135.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 135.411
2.1.2) IRST Block 1 Upgrade - Organic(*)	16 / 131.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 131.600
2.1.3) IRST B-kits (Block II) - Organic(*)	- / -	6 / 55.002	4 / 30.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 85.905
2.1.4) IRST B Kits LRIP - Organic(*)	- / -	- / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450
2.1.5) IRST B Kit LRIP 1AV6+ Processor Cards - Organic(*)	8 / 0.531	24 / 1.568	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 2.099
2.2.1) Installation Equipment N/R - Organic(*)	- / 12.417	- / -	- / 3.199	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.616
Subtotal: Procurement	*- / 279.959*	*- / 57.020*	*- / 34.102*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 371.081*
Support												
3.1) Data	- / 0.008	- / 0.058	- / 0.073	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.139
3.2) Training Equipment	- / -	- / 0.056	- / 2.792	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.848
3.3) Support Equipment	- / 0.453	- / 0.094	- / 1.711	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.258
3.4) ILS	- / 3.359	- / 0.877	- / 1.746	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.982
3.5) Other Support	- / 7.720	- / 2.090	- / 6.538	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.348
Subtotal: Support	*- / 11.540*	*- / 3.175*	*- / 12.860*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 27.575*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**291.499**	**60.195**	**46.962**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**398.656**

Footnotes:

(46) IRST kits are O-level install items and have no related install cost/schedule.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	191.739	164.463	162.980	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	519.182
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	191.739	164.463	162.980	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	519.182
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**191.739**	**164.463**	**162.980**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**519.182**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Incorporation of structural and sub-systems enhancements and changes are required to extend the F/A-18E/F service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY2046. Enhancements and changes include resolution of discrepancies identified as a result of Service Life Assessment Program (SLAP) analysis and in-service experience. These enhancements and changes include modifications to the entire airframe and aircraft sub-systems to extend flight hours, as well as modifications to ensure landing gear, catapult and attachment components can extend total landings. These modifications include: Block 1 Forward Fuselage, Block 2 Forward Fuselage, Inner Wing Panel (Pre-CRI), Inner Wing Panel (CRI), Outer Wing Panel (Pre-CRI), Outer Wing Panel (CRI), Center Fuselage, Aft Fuselage, Vertical Tail, Hydraulic Systems, Landing Gear Systems, Fuel Delivery Systems, Environmental Control Systems, Mechanical Systems, and the low observable paint re-baseline. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft and to not correct the structural defects discovered on fatigue test articles. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. SLAP analyzes the critical structural and sub-system areas to determine crack initiation. Service Life Extension Program (SLEP) will transition into a full turn-key operation to install SLEP kits, safety of flight technical directives(TDs) and other relevant TDs, funded from other OSIPs to achieve the Service Life Modification (SLM). The aircraft will be inducted by the Original Equipment Manufacturer (OEM) and returned to the fleet as a fully modified aircraft with an extended service life to achieve fleet missions.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Currently all Lot 21 through 42 aircraft have service life limits established by the F/A-18 and EA-18G Service Life Bulletin not inclusive of service life management plan modifications to extend the service life. The OEMs are currently performing structures and sub-systems SLAP. As SLAP analysis is completed, "hot spots" are reviewed to determine the best approach for extending specific areas of concern. Until FY18, NRE for service life modifications were grouped into one of five series of Zonal ECPs (6465, 6466, 6467, 6468, and 6469) according to aircraft block and location. Zonal ECP NRE will continue through FY22, and subsystems ECPs beyond; but starting in FY18 will begin a transition to a holistic SLM effort based on the entire aircraft. In an effort to reduce exigent procurement lead times and resulting high out-of-reporting rates associated with traditional, disparate piece part kit procurements and installation, SLM relies on a turn-key approach utilizing the OEM to extend aircraft service life. SLM includes all material / kit and labor / installation costs to modify service life from 6,000 flight hours to 7,500 flight hours. NRE will continue until a SLEP full kit is developed and the aircraft service life will be extended to 10,000 flight hours.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18E/F and EA-18G	**Modification Type:** SAFETY / LIFE EXTENSION	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-6465 Block 1 Forward Fuselage - NonOrganic *Installation 1 of 1*	2 / 0.159	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.159
1.1.2) ECP-6469: Inner Wing Panel (Pre-CRI) - Organic(*) (47)	2 / 7.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.435
1.1.3) ECP-6469: Outer Wing Panel (Pre-CRI) - Organic(*) (48)	2 / 0.064	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.064
1.1.4) Service Life Extension (SLEP) kits - Organic(*) (49)	5 / 53.829	9 / 58.428	18 / 120.518	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 232.775
1.2.1) Installation Kit N/R - Organic(*) (50)	- / 100.030	- / 87.879	- / 22.721	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 210.630
Subtotal: Procurement	*- / 161.517*	*- / 146.307*	*- / 143.239*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 451.063*
Support												
3.2) Data	- / 5.808	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.808
3.4) Support Equipment	- / 0.429	- / 0.362	- / 0.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.159
3.6) ILS	- / 2.718	- / 4.210	- / 1.924	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.852
3.7) Other Support	- / 21.267	- / 13.429	- / 17.449	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 52.145
Subtotal: Support	*- / 30.222*	*- / 18.001*	*- / 19.741*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 67.964*
Installation												
Installation 1 of 1: ECP-6465 Block 1 Forward Fuselage	- / -	- / 0.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.155
Subtotal: Installation	*- / 0.000*	*- / 0.155*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.155*
Total												
Total Cost (Procurement + Support + Installation)	**191.739**	**164.463**	**162.980**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**519.182**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: ECP-6465 Block 1 Forward Fuselage

Manufacturer Information

Manufacturer Name: Boeing - ECP-6465 | Manufacturer Location: St Louis, MO

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Navy Drive-In Modification:: Installation Name: ECP-6465 Block 1 Forward Fuselage

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	2 / 0.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.155
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.155

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Footnotes:

(47) FY21 Install moved to BLI 0505

(48) FY21 Install moved to BLI 0505

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 18 / F/A-18E/F and EA-18G SLEP (OSIP 020-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(49) Unit cost varies based on the series (E/F/G) of aircraft planned for induction.

(50) NRE is required in future years due to development of multiple ECPs as locations of the aircraft are determined to need extension. Each structural zone ECP will require multiple revisions for multiple requirements. Each of these efforts will require NRE.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 19 / Priority Stores Integration (OSIP 10-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	36.600	12.689	9.456	11.063	0.000	11.063	11.496	12.427	12.556	12.921	57.880	177.088
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	36.600	12.689	9.456	11.063	0.000	11.063	11.496	12.427	12.556	12.921	57.880	177.088
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**36.600**	**12.689**	**9.456**	**11.063**	**0.000**	**11.063**	**11.496**	**12.427**	**12.556**	**12.921**	**57.880**	**177.088**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of this Operational Safety Improvement Program (OSIP) is to facilitate aircraft capability upgrades to carry priority stores for F/A-18A-F and EA-18G aircraft. Priority Stores Integration contains fleet required air to air and air to ground weapon configurations upgrades to support fleet requirements. This OSIP will provide for F/A-18A-F and EA-18G aircraft weapon systems software and aeromechanical hardware upgrades needed during fleet operations to ensure that mission readiness and safety of flight regimes are maintained. It will also allow for weapon capability expansion through engineering, logistics, obsolescence updates and verification and validation of incorporated engineering changes. Specifically, this will provide mission flexibility by updating System Configuration Set (SCS) software in response to weapon software upgrades and weapon carriage and release characteristics.

Hardware and software modifications may be incorporated for the following efforts: Universal Armament Interface (UAI), Air Intercept Missile (AIM)-7, AIM-120, AIM-9, Joint Standoff Weapon (JSOW), Joint Direct Attack Munition (JDAM), Laser JDAM (LJDAM), Guided Bomb Unit (GBU)-10/12/16/24 , Harpoon, Standoff Land Attack Missile Extended Range (SLAM-ER), underwater time bomb mines, aerial weapon fuzes, High Speed Anti-Radiation Missile (HARM), Advanced Anti-Radiation Guided Missile (AARGM), aircraft rocket systems, Advanced Guided Missile (AGM)-65 Maverick, M61 aerial rotary cannon, ALQ-99, ALQ-218, ALE-43, Cluster Bomb Units (CBUs), aerial countermeasure flares and smoke emitters, General Purpose (GP) bombs, Laser Guided Training Rounds (LGTRs), Small Diameter Bomb (SDB)-II, the Offensive Anti Surface Warfare (OASuW), Long Range Antiship Missile (LRASM), Miniature Air Launched Decoy (MALD), Next Generation Jammer (NGJ) pod, Bomb Releasable Unit (BRU)-32, BRU-55, Launcher Ariel Unit (LAU)-127, LAU-116, LAU-115, LAU-117, LAU-118,Adapter Unit (ADU)-773, SUU-62, SUU-63, SUU-78, SUU-79 and the SUU-80. This OSIP will provide aircraft platform growth flexibility with all upgrades to existing weapons, future weapons, and weapon subsystem upgrades to F/A-18A-F and EA-18G aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Weapons are procured with Weapons Procurement, Navy (WPN) funding. Hardware and software modifications to the aircraft in order to utilize the weapons are funded with APN-5.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 19 / Priority Stores Integration (OSIP 10-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18A-F and EA-18G	**Modification Type:** CAPABILITY IMPROVEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP 87S1 / ECP 437 - SUU-63 - Organic(*)	70 / 5.900	50 / 3.843	45 / 3.215	40 / 2.915	- / -	40 / 2.915	40 / 2.973	30 / 2.275	15 / 1.160	- / -	- / -	290 / 22.281
1.1.2) ECP - SUU-79 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.150	100 / 1.530	400 / 6.242	400 / 6.367	2,098 / 35.537	3,008 / 49.826
1.1.3) ECP - SUU-80 - Organic(*)	- / -	- / -	- / -	150 / 1.116	- / -	150 / 1.116	185 / 1.404	210 / 1.626	65 / 0.513	- / -	- / -	610 / 4.659
1.1.4) ECP - M61 Gun - Organic(*)	- / -	- / -	- / -	100 / 0.714	- / -	100 / 0.714	150 / 1.092	150 / 1.114	200 / 1.515	64 / 0.487	- / -	664 / 4.922
1.2.1) Installation Kits N/R - Organic(*)	- / -	- / -	- / 0.500	- / -	- / -	- / -	- / 0.750	- / -	- / -	- / -	- / -	- / 1.250
2.2.2) 31C (SCS) - Organic(*)	- / -	- / -	- / 0.891	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.891
2.2.3) H16 (SCS) - Organic(*)	- / 12.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.275
2.2.4) H18 (SCS) - Organic(*)	- / -	- / -	- / -	- / 1.419	- / -	- / 1.419	- / -	- / -	- / -	- / -	- / -	- / 1.419
2.2.5) H20 (SCS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.821	- / -	- / -	- / -	- / -	- / 1.821
2.2.6) H22 (SCS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.018	- / -	- / -	- / -	- / 3.018
2.2.7) Software - Organic(*)	- / 8.394	- / 7.690	- / 3.446	- / 3.465	- / -	- / 3.465	- / 1.845	- / 1.377	- / 1.611	- / 4.520	- / 12.936	- / 45.284
Subtotal: Procurement	*- / 26.569*	*- / 11.533*	*- / 8.052*	*- / 9.629*	*- / -*	*- / 9.629*	*- / 10.035*	*- / 10.940*	*- / 11.041*	*- / 11.374*	*- / 48.473*	*- / 147.646*
Support												
3.1) ILS	- / -	- / -	- / 0.225	- / 0.232	- / -	- / 0.232	- / 0.239	- / 0.242	- / 0.245	- / 0.252	- / 1.032	- / 2.467
3.2) Other Support	- / 10.031	- / 1.156	- / 1.179	- / 1.202	- / -	- / 1.202	- / 1.222	- / 1.245	- / 1.270	- / 1.295	- / 8.375	- / 26.975
Subtotal: Support	*- / 10.031*	*- / 1.156*	*- / 1.404*	*- / 1.434*	*- / -*	*- / 1.434*	*- / 1.461*	*- / 1.487*	*- / 1.515*	*- / 1.547*	*- / 9.407*	*- / 29.442*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**36.600**	**12.689**	**9.456**	**11.063**	**0.000**	**11.063**	**11.496**	**12.427**	**12.556**	**12.921**	**57.880**	**177.088**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	21.248	65.340	51.521	0.000	51.521	53.909	57.150	48.104	44.525	237.308	579.105
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	21.248	65.340	51.521	0.000	51.521	53.909	57.150	48.104	44.525	237.308	579.105
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**21.248**	**65.340**	**51.521**	**0.000**	**51.521**	**53.909**	**57.150**	**48.104**	**44.525**	**237.308**	**579.105**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) funds modifications to mitigate aircrew Physiological Episodes (PE) in F/A-18 A-F and E/A-18G by correcting aircraft deficiencies and addressing safety and reliability issues via Engineering Change Proposals (ECPs). All aircraft systems that contribute to aircrew life support can be causal factors in physiological events. This includes the Onboard Oxygen Generating System (OBOGS) and all associated piping, valves, and monitors, the Environmental Control System (ECS) and all associate ducting, valves, and sensors, hardware and software, and aircrew alerting systems to provide cautions and warning of failures or potential hazards. Modifications to the aircraft will focus on addressing the highest likelihood causal factors for PEs. This includes the ECS system and cockpit structural improvements to improve the stability and control of cabin pressurization. It also includes OBOGS hardware and software improvements, including all aircraft and aircrew gear used to deliver and monitor breathing gas to ensure aircrew are receiving the optimized levels of oxygen during all regimes of flight, to include the possibility of a new MILSTAN 3050 compliant oxygen concentrator.
This OSIP also addresses all aircrew flight gear that could affect aircrew performance and/or physiology prior to or during flight. Modifications will include Expanded Emergency Oxygen System and Automatic Backup Oxygen System (ABOS) to provide seamless delivery of oxygen to aircrew during emergency operations or systems failure; cabin altitude monitoring and alerting to warn aircrew to hazardous conditions or systems failures, including the Cabin Pressure and Monitoring Systems (CPOMS); and air quality monitoring and filtration systems to ensure adequacy and purity of aircrew breathing gas. Finally LSSI will allow an Enhanced Capability Concentrator (ECC) and Cabin Pressure and OBOGS Monitoring System (CPOMS) units to be integrated with the F/A-18A-F and EA-18G mission computer to provide appropriate cautions and warnings, maintenance information, and post flight data review capability.
Development Status/Major Milestones: Each change has been or will be tested prior to installation into the F-18 A-F and E/A-18G.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-18 A-F and E/A-18G	**Modification Type:** Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ECP-23650 ENHANCED EMERGENCY OXYGEN SYSTEM - Organic(*)	- / -	131 / 4.778	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	131 / 4.778
2.1.1) ECP 615 GGU-12/A Catalyst Sieve Bed Sets - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.083	14 / 0.083
2.1.2) ECP 1233 Cabin Exit Air Closer - NonOrganic *Installation 1 of 5*	- / -	- / -	- / -	78 / 0.069	- / -	78 / 0.069	90 / 0.082	90 / 0.083	- / -	- / -	- / -	258 / 0.234
2.1.3) ECP-6477 ECS Item 001 Primary Bleed Air Pressure Regulator & shutoff - Organic(*)	- / -	- / -	384 / 11.673	325 / 9.879	- / -	325 / 9.879	- / -	- / -	- / -	- / -	545 / 15.302	1,254 / 36.854
2.1.4) ECP-6478 ECS Items 51 & 26 Improvements - Organic(*)	- / -	- / -	360 / 2.182	360 / 2.182	- / -	360 / 2.182	190 / 1.152	- / -	- / -	- / -	281 / 1.703	1,191 / 7.219
2.1.5) ECP 6488 - Secondary Bleed air regualator & Shut Off Valve Improvement - Organic(*)	- / -	- / -	156 / 4.656	- / -	- / -	- / -	- / -	- / -	- / -	- / -	630 / 18.826	786 / 23.482
2.1.6) ECP-6500 HEATER LINE UPGRADE KIT PROCUEMENT BLK I - NonOrganic *Installation 2 of 5*	- / -	- / -	- / -	26 / 0.391	- / -	26 / 0.391	32 / 0.490	40 / 0.625	30 / 0.478	- / -	- / -	128 / 1.984
2.1.7) ECP-6500 HEATER LINE UPGRADE KIT PROCUEMENT Blk II - Organic(*)	- / -	- / -	- / -	35 / 0.526	- / -	35 / 0.526	41 / 0.628	86 / 1.345	120 / 1.914	150 / 2.440	171 / 2.837	603 / 9.690
2.1.8) ECP-6506 CPOMS Improvements - NonOrganic (51) *Installation 3 of 5*	112 / 0.000	- / -	288 / 10.869	277 / 10.663	- / -	277 / 10.663	265 / 10.405	130 / 5.206	- / -	- / -	- / -	1,072 / 37.143
2.1.9) ECP 6519 Life Support System Integration (LSSI)/GGU-XX Procurement - NonOrganic *Installation 4 of 5*	- / -	- / -	- / -	- / -	- / -	- / -	135 / 9.639	135 / 9.832	165 / 12.257	198 / 15.003	830 / 65.047	1,463 / 111.778
2.1.10) ECP 6529 SENSOR LINE UPGRADE - NON ORGANIC INSTALL - NonOrganic *Installation 5 of 5*	- / -	- / -	- / -	26 / 0.392	- / -	26 / 0.392	32 / 0.492	40 / 0.627	30 / 0.480	- / -	- / -	128 / 1.991
2.1.11) ECP-6529 SENSOR LINE ORGANIC INSTALL - Organic(*)	- / -	- / -	- / -	30 / 0.452	- / -	30 / 0.452	40 / 0.615	86 / 1.348	90 / 1.439	120 / 1.957	237 / 3.943	603 / 9.754
2.2.1) Installation Equipment N/R - Organic(*)	- / -	- / 5.839	- / 29.611	- / 3.764	- / -	- / 3.764	- / 3.927	- / -	- / -	- / -	- / -	- / 43.141
Subtotal: Procurement	*- / 0.000*	*- / 10.617*	*- / 58.991*	*- / 28.318*	*- / -*	*- / 28.318*	*- / 27.430*	*- / 19.066*	*- / 16.568*	*- / 19.400*	*- / 107.741*	*- / 288.131*
Support												
3.1) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.250	- / -	- / -	- / -	- / -	- / 0.250
3.2) ILS	- / -	- / 0.306	- / 0.307	- / 0.313	- / -	- / 0.313	- / 0.320	- / 0.326	- / 0.332	- / 0.339	- / 2.571	- / 4.814
3.3) Other Support	- / -	- / 4.165	- / 6.042	- / 6.474	- / -	- / 6.474	- / 6.516	- / 6.680	- / 6.710	- / 6.798	- / 33.511	- / 76.896
Subtotal: Support	*- / 0.000*	*- / 4.471*	*- / 6.349*	*- / 6.787*	*- / -*	*- / 6.787*	*- / 7.086*	*- / 7.006*	*- / 7.042*	*- / 7.137*	*- / 36.082*	*- / 81.960*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-18 A-F and E/A-18G	**Modification Type:** Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 5: ECP 1233 Cabin Exit Air Closer	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.288	- / 0.339	- / 0.346	- / -	- / 0.000	- / 0.973
Installation 2 of 5: ECP-6500 HEATER LINE UPGRADE KIT PROCUEMENT BLK I	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.515	- / 1.902	- / 2.425	- / 1.855	- / 0.000	- / 7.697
Installation 3 of 5: ECP-6506 CPOMS Improvements	- / -	- / 6.160	- / -	- / 16.416	- / 0.000	- / 16.416	- / 16.105	- / 15.715	- / 7.864	- / -	- / 0.000	- / 62.260
Installation 4 of 5: ECP 6519 Life Support System Integration (LSSI)/GGU-XX Procurement	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.257	- / 11.482	- / 14.314	- / 93.485	- / 130.538
Installation 5 of 5: ECP 6529 SENSOR LINE UPGRADE - NON ORGANIC INSTALL	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.485	- / 1.865	- / 2.377	- / 1.819	- / 0.000	- / 7.546
Subtotal: Installation	*- / 0.000*	*- / 6.160*	*- / -*	*- / 16.416*	*- / -*	*- / 16.416*	*- / 19.393*	*- / 31.078*	*- / 24.494*	*- / 17.988*	*- / 93.485*	*- / 209.014*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**21.248**	**65.340**	**51.521**	**0.000**	**51.521**	**53.909**	**57.150**	**48.104**	**44.525**	**237.308**	**579.105**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 5: ECP 1233 Cabin Exit Air Closer

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023		
Delivery Dates			Sep 2021	Sep 2022	Sep 2023		

Installation Information

Method of Implementation: TBD:: Installation Name: ECP 1233 Cabin Exit Air Closer

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	78 / 0.288	- / -	- / -	- / -	0 / 0.000	78 / 0.288
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 0.339	- / -	- / -	0 / 0.000	90 / 0.339
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 0.346	- / -	0 / 0.000	90 / 0.346
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	78 / 0.288	90 / 0.339	90 / 0.346	- / -	0 / 0.000	258 / 0.973

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	19	20	19	20	22	23	22	23	22	23	22	23	-	-	-	-	-	258
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	19	20	19	20	22	23	22	23	22	23	22	23	-	-	-	-	-	258

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 5: ECP-6500 HEATER LINE UPGRADE KIT PROCUEMENT BLK I

Manufacturer Information

Manufacturer Name: BOEING - ECP 6500 HEATER LINE | Manufacturer Location: ST. LOUIS, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates			Sep 2021	Sep 2022	Sep 2023	Sep 2024	

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: ECP-6500 HEATER LINE UPGRADE KIT PROCUEMENT BLK I

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.515	- / -	- / -	- / -	0 / 0.000	26 / 1.515
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.902	- / -	- / -	0 / 0.000	32 / 1.902
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.425	- / -	0 / 0.000	40 / 2.425
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.855	0 / 0.000	30 / 1.855
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.515	32 / 1.902	40 / 2.425	30 / 1.855	0 / 0.000	128 / 7.697

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7	6	7	8	8	8	8	10	10	10	10	8	8	8	6	-	128
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7	6	7	8	8	8	8	10	10	10	10	8	8	8	6	-	128

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 5: ECP-6506 CPOMS Improvements

Manufacturer Information

Manufacturer Name: Boeing - ECP 6506 CPOMS | Manufacturer Location: St. Louis

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022		
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023		

Installation Information

Method of Implementation: Contractor Field Teams:: Installation Name: ECP-6506 CPOMS Improvements

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	112 / 6.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	112 / 6.160
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	288 / 16.416	0 / 0.000	288 / 16.416	- / -	- / -	- / -	- / -	0 / 0.000	288 / 16.416
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	277 / 16.105	- / -	- / -	- / -	0 / 0.000	277 / 16.105
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	265 / 15.715	- / -	- / -	0 / 0.000	265 / 15.715
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	130 / 7.864	- / -	0 / 0.000	130 / 7.864
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	112 / 6.160	- / -	288 / 16.416	0 / 0.000	288 / 16.416	277 / 16.105	265 / 15.715	130 / 7.864	- / -	0 / 0.000	1,072 / 62.260

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	28	28	28	28	-	-	-	-	72	72	72	72	69	69	69	70	66	66	66	67	32	33	32	33	-	-	-	-	-	1,072
Out	-	28	28	28	28	-	-	-	-	72	72	72	72	-	-	69	69	69	70	66	66	66	67	32	33	32	33	-	-	-	1,072

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 5: ECP 6519 Life Support System Integration (LSSI)/GGU-XX Procurement

Manufacturer Information

Manufacturer Name: BOEING - LIFE SUPORT SYSTEM INTEGRATION (LSSI) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates				Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: ECP 6519 Life Support System Integration (LSSI)/GGU-XX Proc

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	135 / 11.257	- / -	- / -	0 / 0.000	135 / 11.257
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	135 / 11.482	- / -	0 / 0.000	135 / 11.482
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	165 / 14.314	0 / 0.000	165 / 14.314
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	198 / 17.520	198 / 17.520
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	830 / 75.965	830 / 75.965
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	135 / 11.257	135 / 11.482	165 / 14.314	1,028 / 93.485	1,463 / 130.538

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	34	34	34	34	34	34	33	41	41	41	42	1,028	1,463
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	34	34	34	34	34	34	33	41	41	41	1,070	1,463

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 20 / Physiological Episode (PE) Mitigation (OSIP 13-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 5: ECP 6529 SENSOR LINE UPGRADE - NON ORGANIC INSTALL

Manufacturer Information

Manufacturer Name: BOEING - ECP 6529 SENSOR LINE | Manufacturer Location: ST. LOUIS, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Sep 2021	Sep 2022	Sep 2023	Sep 2023	Sep 2025

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: ECP 6529 SENSOR LINE UPGRADE - NON ORGANIC INSTALL

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.485	- / -	- / -	- / -	0 / 0.000	26 / 1.485
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.865	- / -	- / -	0 / 0.000	32 / 1.865
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.377	- / -	0 / 0.000	40 / 2.377
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.819	0 / 0.000	30 / 1.819
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.485	32 / 1.865	40 / 2.377	30 / 1.819	0 / 0.000	128 / 7.546

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	7	7	8	8	8	8	10	10	10	10	8	8	7	7	-	128
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	7	7	8	8	8	8	10	10	10	10	8	8	7	7	-	128

Footnotes:

(51) Prior Year quantity purchased under OSIP 14-03.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	25.253	0.000	25.253	32.171	54.187	73.422	74.896	367.080	627.009
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	25.253	0.000	25.253	32.171	54.187	73.422	74.896	367.080	627.009
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**25.253**	**0.000**	**25.253**	**32.171**	**54.187**	**73.422**	**74.896**	**367.080**	**627.009**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Digital Communications System (DCS) consists of an upgraded AN/ARC-210 Receiver Transmitter (RT) (with embedded digital message transfer capability and embedded communications security) installed in the F/A-18 and integrated with the F/A-18 weapons system (mission computer, controls and displays, and communication subsystem). The DCS utilizes pre-formatted messages to communicate with standard United States Marine Corps, United States Navy, and United States Air Force digital communications devices to facilitate close air support, deep air strike, and tactical air control missions. Joint Staff has specified new requirements for close air support platforms to improve interoperability between air and ground units in Digitally-Aided Close Air Support (DACAS) missions. These requirements are being satisfied with the upgrade of the DCS radio to the ARC-210 RT-1990 radio. DCS reduces voice communications requirements which tend to be slow, inaccurate, and susceptible to Meaconing, Interference, Jamming, and Intrusion. DCS will enhance mission effectiveness by decreasing pilot workload which allows the pilot more time to counter increased threat capabilities (operational requirements document# 486-88-98). The RT-1990 radio also supports the North Atlantic Treaty Organization (NATO) standard anti-jam waveform, Second generation Anti-jam Tactical UHF radio for NATO (SATURN), and will greatly improve communication in a jamming environment as compared to current anti-jam waveforms. The next version of ARC-210, RT-1990A, and the next version of the Comm1 external encryptor, KY-58M, will support National Security Agency cryptographic modernization mandates and the instruction CJCSI 6510.02E Cryptographic Modernization Planning. This operational safety improvement program will also be used to address parts obsolescence issues and to perform non-recurring work associated with network centric operations and interoperability requirements. The RT-2036 is the next version of the ARC-210, and supports Mobile User Objective System (MUOS) SATCOM. The RT-1990A also supports SATCOM along with the installation of corresponding ancillary equipment, which is planned for retrofit in all Lot 26 and up Super Hornets and Growlers. The Audio Management System (AMS) is required for the integration of the RT-1990A in COMM1.

This Operational, Safety and Improvement Program (OSIP) also funds systems that provide secure digital data link communications and Tactical Air Navigation (TACAN) capabilities to aircraft. The Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) is an Engineering Change Proposal (ECP) upgrade to the MIDS-LVT (Low Volume Terminal) and offers the same functionality as MIDS-LVT (Link 16, tactical air navigation, and digital voice) in a software-controlled architecture, JTRS-compliant format, and provides the option of future expandability to host follow-on advanced tactical data links (i.e. Tactical Targeting Network Technology (TTNT). MIDS JTRS is approved for retrofit in Lots 26-31 F/A-18E/F and EA-18G aircraft and is funded for retrofit incorporation as MIDS JTRS 4-Net Concurrent Multi-Netting and Concurrent Contention Receive (CMN-4) in all MIDS-capable Navy F/A-18 and EA-18G aircraft. MIDS JTRS provides cryptographic modernization and frequency remapping capability. CMN-4 provides increased Link 16 capacity to support Navy Integrated Fire Control-Counter Air. With either MIDS-LVT or MIDS JTRS installed, F/A-18 is interoperable with all Link 16 equipped platforms in United States and Allied Nations. Retrofit incorporation of MIDS JTRS TTNT is planned for all EA-18G aircraft (Lot 30 and up) as part of Integrated Capability Package-3 (ICP-3) and for all Lot 26 and up F/A-18E/F aircraft. TTNT provides Internet Protocol (IP) and non-IP network connectivity at significantly increased throughput capacity compared to that of Link 16. This OSIP will also be used to perform efforts to address parts obsolescence and tactical modernization (MIDS Modernization Increments). Single MIDS Operational Requirements Document # 642-61-04 and MIDS JTRS Capability Production Document Change 1 Version 2.0 are germane. The Communication System Controller (CSC) controls many of the discrete signals that go to the MIDS terminal.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) SATCOM (ECP6486) E/F - NonOrganic *Installation 1 of 4*	- / -	- / -	- / -	20 / 3.017	- / -	20 / 3.017	20 / 3.078	50 / 7.848	50 / 8.005	50 / 8.165	250 / 43.571	440 / 73.684
1.1.2) SATCOM (ECP6486) G - NonOrganic *Installation 2 of 4*	- / -	- / -	- / -	8 / 0.741	- / -	8 / 0.741	8 / 0.756	32 / 3.083	32 / 3.144	32 / 3.207	48 / 5.051	160 / 15.982
1.1.3) COMM 1 Gen 5 (ECP6512) - NonOrganic *Installation 3 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.866	50 / 1.104	50 / 1.126	50 / 1.149	410 / 9.669	600 / 13.914
1.1.4) TTNT A-Kit (ECP6471) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.200	39 / 3.182	147 / 12.575	226 / 18.957
2.1.1) Amplifiers (HPA/LNA) (ECP6486) - Organic(*)	- / -	- / -	- / -	28 / 2.100	- / -	28 / 2.100	28 / 2.142	82 / 6.397	82 / 6.525	82 / 6.655	273 / 24.012	575 / 47.831
2.1.2) MUOS Antenna (ECP6486) - Organic(*)	- / -	- / -	- / -	28 / 1.713	- / -	28 / 1.713	28 / 1.747	82 / 5.219	82 / 5.324	82 / 5.430	275 / 19.619	577 / 39.052
2.1.3) RT-2036 Gen 6 Radio (ECP1214-18) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.439	50 / 4.385	50 / 4.472	50 / 4.562	418 / 40.178	608 / 57.036
2.1.4) AMS (ECP6507) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.515	50 / 1.932	50 / 1.971	50 / 2.010	410 / 17.335	600 / 24.763
2.1.5) E/F/G CMN-4 Upgrades to TTNT (ECP6471) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.250	40 / 13.260	40 / 13.525	80 / 28.008	170 / 58.043
2.1.6) ECP577R3 - NonOrganic (52) *Installation 4 of 4*	8 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.000
2.2.1) Install Equipment N/R - Organic(*)	- / -	- / -	- / -	- / 2.986	- / -	- / 2.986	- / -	- / -	- / -	- / -	- / -	- / 2.986
2.2.2) Software - Organic(*)	- / -	- / -	- / -	- / 3.153	- / -	- / 3.153	- / 3.403	- / 3.864	- / 1.583	- / 1.706	- / 9.323	- / 23.032
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 13.710*	*- / -*	*- / 13.710*	*- / 16.946*	*- / 37.082*	*- / 48.610*	*- / 49.591*	*- / 209.341*	*- / 375.280*
Support												
3.1) Data	- / -	- / -	- / -	- / 0.505	- / -	- / 0.505	- / 0.515	- / 0.525	- / 0.536	- / 0.546	- / 4.144	- / 6.771
3.2) ILS	- / -	- / -	- / -	- / 0.253	- / -	- / 0.253	- / 0.258	- / 0.263	- / 0.268	- / 0.273	- / 1.343	- / 2.658
3.3) Other Support	- / -	- / -	- / -	- / 10.771	- / -	- / 10.771	- / 10.972	- / 11.181	- / 11.406	- / 11.632	- / 88.411	- / 144.373
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 11.529*	*- / -*	*- / 11.529*	*- / 11.745*	*- / 11.969*	*- / 12.210*	*- / 12.451*	*- / 93.898*	*- / 153.802*
Installation												
Installation 1 of 4: SATCOM (ECP6486) E/F	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.476	- / 2.526	- / 6.440	- / 6.569	- / 32.745	- / 50.756
Installation 2 of 4: SATCOM (ECP6486) G	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.990	- / 1.010	- / 4.122	- / 4.204	- / 10.998	- / 21.324
Installation 3 of 4: COMM 1 Gen 5 (ECP6512)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.600	- / 2.040	- / 2.081	- / 20.098	- / 25.819
Installation 4 of 4: ECP577R3	- / -	- / -	- / -	- / 0.014	- / 0.000	- / 0.014	- / 0.014	- / -	- / -	- / -	- / 0.000	- / 0.028
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.014*	*- / -*	*- / 0.014*	*- / 3.480*	*- / 5.136*	*- / 12.602*	*- / 12.854*	*- / 63.841*	*- / 97.927*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18 E/F & EA-18G	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**25.253**	**0.000**	**25.253**	**32.171**	**54.187**	**73.422**	**74.896**	**367.080**	**627.009**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: SATCOM (ECP6486) E/F

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Jun 2022	Jun 2023	Jun 2024	Jun 2025	Jun 2026

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: SATCOM (ECP6486) E/F

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	20 / 2.476	- / -	- / -	- / -	0 / 0.000	20 / 2.476
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 2.526	- / -	- / -	0 / 0.000	20 / 2.526
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 6.440	- / -	0 / 0.000	50 / 6.440
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 6.569	0 / 0.000	50 / 6.569
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 5.361	50 / 5.361
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	250 / 27.384	250 / 27.384
Total	- / -	- / -	- / -	- / -	- / -	- / -	20 / 2.476	20 / 2.526	50 / 6.440	50 / 6.569	300 / 32.745	440 / 50.756

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	10	10	-	-	25	25	-	-	25	25	300	440
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	-	-	10	10	-	-	25	25	-	-	25	25	300	440

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: SATCOM (ECP6486) G

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: SATCOM (ECP6486) G

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.990	- / -	- / -	- / -	0 / 0.000	8 / 0.990
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.010	- / -	- / -	0 / 0.000	8 / 1.010
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 4.122	- / -	0 / 0.000	32 / 4.122
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 4.204	0 / 0.000	32 / 4.204
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 4.288	32 / 4.288
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 6.710	48 / 6.710
Total	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.990	8 / 1.010	32 / 4.122	32 / 4.204	80 / 10.998	160 / 21.324

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	8	8	8	8	8	8	8	8	80	160
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	8	8	8	8	8	8	8	8	80	160

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: COMM 1 Gen 5 (ECP6512)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates				Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: COMM 1 Gen 5 (ECP6512)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.600	- / -	- / -	0 / 0.000	40 / 1.600
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 2.040	- / -	0 / 0.000	50 / 2.040
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 2.081	0 / 0.000	50 / 2.081
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 2.120	50 / 2.120
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	410 / 17.978	410 / 17.978
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.600	50 / 2.040	50 / 2.081	460 / 20.098	600 / 25.819

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	12	13	12	13	12	13	12	13	460	600
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	12	13	12	13	12	13	12	13	460	600

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 21 / Communication Systems (OSIP 11-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: ECP577R3

Manufacturer Information

Manufacturer Name: Not Specified. Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 0 Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: NAVY FIELD MOD TEAM:: Installation Name: ECP577R3

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	4 / 0.014	0 / 0.000	4 / 0.014	4 / 0.014	- / -	- / -	- / -	0 / 0.000	8 / 0.028
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	4 / 0.014	0 / 0.000	4 / 0.014	4 / 0.014	- / -	- / -	- / -	0 / 0.000	8 / 0.028

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Footnotes:

(52) 72 kits were procured in OSIP 12-99. Installs through FY20 (64) are funded in OSIP 12-99 with the remainder (8) being funded in OSIP 11-21.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 22 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	409.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	409.370
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	409.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	409.370
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**409.370**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**409.370**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 22 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.2.1) Inactive OSIPs - Organic(*)	- / 409.370	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 409.370
Subtotal: Procurement	*- / 409.370*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 409.370*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**409.370**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**409.370**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 23 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	71.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	71.300
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	71.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	71.300
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**71.300**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**71.300**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2020 enacted includes congressional rescissions of $71.3 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 23 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: N/A												
Subtotal: N/A	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Support *(All Modification Items)*												
3.1) FY 2020 Enacted Rescissions	- / -	- / 71.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 71.300
Subtotal: Support	- / 0.000	- / 71.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 71.300
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**71.300**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**71.300**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0525 / F-18 Series	**Modification Number / Title:** 23 / FY 2020 Enacted Rescissions

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: N/A

Manufacturer Information

Manufacturer Name: N/A

Manufacturer Location: N/A

Administrative Leadtime *(in Months)*:

Production Leadtime *(in Months)*:

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Support Only Installation

Installation Quantity: 0

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0528 / H-53 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,642.191	66.070	68.385	74.771	0.000	74.771	175.757	230.737	193.492	197.284	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,642.191	66.070	68.385	74.771	0.000	74.771	175.757	230.737	193.492	197.284	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,642.191**	**66.070**	**68.385**	**74.771**	**0.000**	**74.771**	**175.757**	**230.737**	**193.492**	**197.284**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

H-53 Series line item funds modifications to the 142 CH-53E aircraft and to the 31 MH-53E aircraft. The aircraft inventories to be modified vary by Operational, Safety, and Improvement Program, dependent on kit modification production lead-time. The CH-53E is a seven blade main rotor and a four-blade canted tail rotor helicopter powered by three T64-GE-416/416A/419/419A turbo shaft engines. The CH-53E aircraft are capable of both land and ship based transport of heavy equipment, supplies, and personnel. The MH-53E is similar to the CH-53E with additional capabilities for Airborne Mine Countermeasures, Vertical On-Board Delivery, and Special Missions which require longer range and more precise navigation than that of the CH-53E. The overall goal of the modifications budgeted in FY20 is increased communication and navigation, integrated mechanical diagnostics and condition based maintenance, propulsion and power, degraded visual environment mitigation, survivability and sustainment initiatives, and fleet operation and safety performance in the H-53 community. This line item also funds the CH-53K "King Stallion" modifications. The CH-53K is designed to address CH-53E performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns and support Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment, and is the only heavy-lift platform that can lift the Marine Air-Ground Task Force ashore. The CH-53K provides significant improvements in range and payload, performance, cargo handling, turn-around times, reliability and maintainability, interoperability and survivability.

Notes:
1. Navy active and Navy reserve: CH-53E: 136 active and 6 reserve aircraft ; MH-53E: 25 active and 6 reserve aircraft comprise the H-53 fleet. Navy active and Navy reserve funds have been budgeted to provide capability to all 173 H-53 aircraft.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	65.345	67.866	73.768	-	73.768	174.395	229.717	192.452	196.223
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.725	0.519	1.003	-	1.003	1.362	1.020	1.040	1.061
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**66.070**	**68.385**	**74.771**	**-**	**74.771**	**175.757**	**230.737**	**193.492**	**197.284**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0528 / H-53 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*
P-3a	1 / INTEGRATED MECH DIAG (OSIP 007-98) (SAFETY, READINESS, AND MAINTAINABILITY)				- / 182.660	- / 6.222	- / 2.284	- / 9.962	- / 0.000	- / 9.962
P-3a	2 / NACELLES (OSIP 009-01) (MISSION/MISSION ENHANCEMENT)				- / 47.912	- / 6.693	- / 10.506	- / 0.776	- / 0.000	- / 0.776
P-3a	3 / H-53 ERIP (OSIP 010-05) (SAFETY, READINESS AND MAINTAINABILITY)				- / 190.882	- / 13.833	- / 12.932	- / 38.296	- / 0.000	- / 38.296
P-3a	4 / H-53 A/C SUSTAINMENT (OSIP 008-06) (MISSION/ PERFORMANCE SUSTAINMENT)				- / 291.446	- / 23.010	- / 9.027	- / 9.099	- / 0.000	- / 9.099
P-3a	5 / DIRCM (OSIP 010-08) (MISSION/PERFORMANCE SUSTAINMENT)				- / 210.187	- / 0.079	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / H-53 AVIONICS (OSIP 031-12) (MISSION/PERFORMANCE SUSTAINMENT)				- / 84.798	- / 7.741	- / 7.996	- / 10.612	- / 0.000	- / 10.612
P-3a	7 / Correction of Deficiencies (OSIP 007-19) (Safety, Reliability, Improved Mission Capability)			390	- / 0.000	- / 8.492	- / 17.703	- / 4.432	- / 0.000	- / 4.432
P-3a	8 / CH-53K Production Upgrades (OSIP 008-19) (Mission Capability, Reliability, Safety)				- / 0.000	- / 0.000	- / 7.937	- / 1.594	- / 0.000	- / 1.594
P-3a	9 / Archived OSIPS (Various)				- / 634.306	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,642.191**	**- / 66.070**	**- / 68.385**	**- / 74.771**	**- / 0.000**	**- / 74.771**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*	Quantity / Total Cost *(Each) / ($ M)*
P-3a	1 / INTEGRATED MECH DIAG (OSIP 007-98) (SAFETY, READINESS, AND MAINTAINABILITY)				- / 4.349	- / 3.180	- / 0.000	- / 0.000	- / 0.000	- / 208.657
P-3a	2 / NACELLES (OSIP 009-01) (MISSION/MISSION ENHANCEMENT)				- / 0.791	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 66.678
P-3a	3 / H-53 ERIP (OSIP 010-05) (SAFETY, READINESS AND MAINTAINABILITY)				- / 131.666	- / 175.218	- / 133.613	- / 137.810	Continuing	Continuing
P-3a	4 / H-53 A/C SUSTAINMENT (OSIP 008-06) (MISSION/ PERFORMANCE SUSTAINMENT)				- / 16.289	- / 19.685	- / 25.296	- / 10.105	Continuing	Continuing
P-3a	5 / DIRCM (OSIP 010-08) (MISSION/PERFORMANCE SUSTAINMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 210.266
P-3a	6 / H-53 AVIONICS (OSIP 031-12) (MISSION/PERFORMANCE SUSTAINMENT)				- / 11.622	- / 12.822	- / 10.057	- / 9.709	Continuing	Continuing
P-3a	7 / Correction of Deficiencies (OSIP 007-19) (Safety, Reliability, Improved Mission Capability)			390	- / 8.187	- / 15.022	- / 18.085	- / 38.597	Continuing	Continuing
P-3a	8 / CH-53K Production Upgrades (OSIP 008-19) (Mission Capability, Reliability, Safety)				- / 2.853	- / 4.810	- / 6.441	- / 1.063	Continuing	Continuing
P-3a	9 / Archived OSIPS (Various)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 634.306
P-40	**Total Gross/Weapon System Cost**				**- / 175.757**	**- / 230.737**	**- / 193.492**	**- / 197.284**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0528 / H-53 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.		

Justification:
The FY2021 funding request is for the CH/MH-53E and CH-53K platforms for critical safety, readiness, obsolescence, avionics, and mission system modifications. Funding supports modifications to upgrade top age related engine degraders, fatigue limiters, and performance degraders on the T-64 Engine; reliability and readiness efforts including new T64 core engines and fuel control retrofits.

The FY 2021 funding request was reduced by $20.946M to account for the availability of prior year execution balances.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 1 / INTEGRATED MECH DIAG (OSIP 007-98)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	182.660	6.222	2.284	9.962	0.000	9.962	4.349	3.180	0.000	0.000	0.000	208.657
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	182.660	6.222	2.284	9.962	0.000	9.962	4.349	3.180	0.000	0.000	0.000	208.657
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**182.660**	**6.222**	**2.284**	**9.962**	**0.000**	**9.962**	**4.349**	**3.180**	**0.000**	**0.000**	**0.000**	**208.657**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Integrated Mechanical Diagnostics (IMD) is a helicopter monitoring and diagnostics system that provides continuous on board monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, Rotor Track and Balance (RTB). Full incorporation of the IMD system capabilities will allow rapid transition from the current costly philosophies of the 70s to today's cost wise initiatives and concepts. Lessons learned from this effort were incorporated into the solicitation for the fleet wide IMD effort with CH/MH-53E aircraft designated as the lead platforms. IMD produces the aircraft interface required to implement Military Flight Operations Quality Assurance (MFOQA), a capability designed to provide hazard monitoring and mitigation. Additionally, IMDS includes support equipment for RTB, including Virtual Master Blade System (VMBS). Condition Based Maintenance (CBM) is hosted within the aircraft IMDS/Health and Usage Monitoring System (HUMS), intended to direct maintenance by predicting failures based on real-time assessment of equipment condition obtained from Integrated Mechanical Diagnostics System (IMDS) embedded sensors.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Advanced diagnostics enhancements and airframe structural life extension database interfaces are being incorporated to provide comprehensive platform operational and maintenance status awareness to the Squadron Commanders and key decision makers.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP increases $7.679M from FY2020 to FY2021 due to commencement of NRE and kit procurement for the Integrated Vehicle Health Monitoring Unit

Notes:
1. Cost Element 1.1.1 MH-53E Kits - Four additional kits are being procured in FY19 to support the four Reconstitutionalized MH-53E A/C.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 1 / INTEGRATED MECH DIAG (OSIP 007-98)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 1771 Total	**Modification Type:** SAFETY, READINESS, AND MAINTAINABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MH-53E Kits (A-kits) - NonOrganic [1] *Installation 1 of 2*	29 / 9.995	4 / 1.535	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 11.530
1.1.2) IMDS IVHMU A Kits - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	55 / 0.385	- / -	55 / 0.385	18 / 0.129	10 / 0.073	- / -	- / -	- / -	83 / 0.587
1.1.3) Archived A Kits OSIP 007-98 - Organic(*)	- / 64.768	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 64.768
1.2.1) IMDS - IVHMU NRE - Organic(*)	- / -	- / -	- / -	- / 1.715	- / -	- / 1.715	- / 0.318	- / -	- / -	- / -	- / -	- / 2.033
2.1.1) CBM Installation Equipment - Organic(*)	- / 13.529	- / 3.398	- / 1.051	- / 0.850	- / -	- / 0.850	- / 0.867	- / 0.884	- / -	- / -	- / -	- / 20.579
2.1.2) CBM Installation Equipment - Reserve - Organic(*)	- / 1.706	- / 0.146	- / 0.044	- / 0.034	- / -	- / 0.034	- / 0.035	- / 0.035	- / -	- / -	- / -	- / 2.000
2.1.3) IVHMU B Kits - Organic(*)	- / -	- / -	- / -	55 / 5.775	- / -	55 / 5.775	18 / 1.928	10 / 1.092	- / -	- / -	- / -	83 / 8.795
2.1.4) Archived B Kits - Organic(*)	31 / 2.448	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 2.448
Subtotal: Procurement	*- / 92.446*	*- / 5.079*	*- / 1.095*	*- / 8.759*	*- / -*	*- / 8.759*	*- / 3.277*	*- / 2.084*	*- / -*	*- / -*	*- / 0.000*	*- / 112.740*
Support												
3.1) Engineering Change Orders	- / 0.217	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.217
3.2) Data	- / 1.618	- / 0.021	- / 0.020	- / 0.290	- / -	- / 0.290	- / 0.204	- / 0.262	- / -	- / -	- / -	- / 2.415
3.3) Data - Reserve	- / 0.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.143
3.4) Software	- / 6.591	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.591
3.5) Training Equipment	2 / 0.750	- / 0.008	- / 0.020	- / 0.150	- / -	- / 0.150	- / 0.153	- / 0.156	- / -	- / -	- / -	2 / 1.237
3.6) Training Equipment - Reserve	- / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050
3.7) Support Equipment	- / 5.944	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.944
3.8) Condition Based Maint (CBM)	- / 2.922	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.922
3.9) ILS	- / 4.713	- / 0.123	- / 0.115	- / 0.100	- / -	- / 0.100	- / 0.102	- / 0.104	- / -	- / -	- / -	- / 5.257
3.10) ILS - Reserve	- / 0.369	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.005	- / 0.005	- / 0.005	- / -	- / -	- / -	- / 0.394
3.11) Other Support - Reserve	- / 2.299	- / 0.039	- / 0.028	- / 0.020	- / -	- / 0.020	- / 0.020	- / 0.021	- / -	- / -	- / -	- / 2.427
3.12) Other Support	- / 60.669	- / 0.947	- / 0.641	- / 0.399	- / -	- / 0.399	- / 0.459	- / 0.469	- / -	- / -	- / -	- / 63.584
Subtotal: Support	*- / 86.285*	*- / 1.143*	*- / 0.829*	*- / 0.964*	*- / -*	*- / 0.964*	*- / 0.943*	*- / 1.017*	*- / -*	*- / -*	*- / 0.000*	*- / 91.181*
Installation												
Installation 1 of 2: MH-53E Kits (A-kits)	- / 3.929	- / -	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.289
Installation 2 of 2: GRP: H-53 IVHMU	- / -	- / -	- / -	- / 0.239	- / 0.000	- / 0.239	- / 0.129	- / 0.079	- / -	- / -	- / 0.000	- / 0.447
Subtotal: Installation	*- / 3.929*	*- / -*	*- / 0.360*	*- / 0.239*	*- / -*	*- / 0.239*	*- / 0.129*	*- / 0.079*	*- / -*	*- / -*	*- / 0.000*	*- / 4.736*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 1 / INTEGRATED MECH DIAG (OSIP 007-98)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 1771 Total	**Modification Type:** SAFETY, READINESS, AND MAINTAINABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	**182.660**	**6.222**	**2.284**	**9.962**	**0.000**	**9.962**	**4.349**	**3.180**	**0.000**	**0.000**	**0.000**	**208.657**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 1 / INTEGRATED MECH DIAG (OSIP 007-98)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: MH-53E Kits (A-kits)

Manufacturer Information

Manufacturer Name: Goodrich-MH | Manufacturer Location: Vergennes, VT

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019						
Delivery Dates	Oct 2019						

Installation Information

Method of Implementation: [none specified]:: Installation Name: MH-53E Kits (A-kits)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	29 / 3.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	29 / 3.929
FY 2019	- / -	- / -	4 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.360
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	29 / 3.929	- / -	4 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	33 / 4.289

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	29	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Out	29	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 1 / INTEGRATED MECH DIAG (OSIP 007-98)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: GRP: H-53 IVHMU

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023		
Delivery Dates			Jun 2021	Jun 2022	Jun 2023		

Installation Information

Method of Implementation: CONTRACTOR INSTALLED-FIELD MOD TEAM:: Installation Name: H-53 IVHMU

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	55 / 0.239	0 / 0.000	55 / 0.239	- / -	- / -	- / -	- / -	0 / 0.000	55 / 0.239
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.129	- / -	- / -	- / -	0 / 0.000	18 / 0.129
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.079	- / -	- / -	0 / 0.000	10 / 0.079
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	55 / 0.239	0 / 0.000	55 / 0.239	18 / 0.129	10 / 0.079	- / -	- / -	0 / 0.000	83 / 0.447

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	28	27	-	-	9	9	-	-	5	5	-	-	-	-	-	-	-	-	-	83
Out	-	-	-	-	-	-	-	-	-	-	-	28	27	-	-	9	9	-	-	5	5	-	-	-	-	-	-	-	-	-	83

Footnotes:

(1) Cost Element 1.1.1 MH-53E Kits - of the 31 procured, 2 installed kits (OCO) have been archived, leaving 29 Kits - only 28 of the 29 are installing due to mishap. Included in the remaining 28 installs is 1 trainer kit (FY13).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 2 / NACELLES (OSIP 009-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	47.912	6.693	10.506	0.776	0.000	0.776	0.791	0.000	0.000	0.000	0.000	66.678
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	47.912	6.693	10.506	0.776	0.000	0.776	0.791	0.000	0.000	0.000	0.000	66.678
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**47.912**	**6.693**	**10.506**	**0.776**	**0.000**	**0.776**	**0.791**	**0.000**	**0.000**	**0.000**	**0.000**	**66.678**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The CH/MH-53E Number 1 & Number 3 engine Nacelles are a safety risk due to Things Falling Off Aircraft (TFOA). TFOA incidents risk damage to the aircraft, threaten aircrew safety, and could potentially impact personnel and/or property on the ground. To date, 84 TFOA events have occurred and of the 84, 10 have impacted the tail rotor. New CH/MH-53E Nacelles incorporates improved material properties, design and positive locking/latching mechanisms to prevent TFOA. The procurement improves fleet safety and readiness.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP decreases $9.730M from FY2020 to FY2021 due to completion of CH/MH-53E Nacelles kit procurements in FY2020.

Notes:
1. Due to increasing complexity of the Nacelles install, installs will be performed by contractor field mod team. Prior year installs were organic.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 2 / NACELLES (OSIP 009-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E(142), MH-53E(29), 171 TOTAL	**Modification Type:** MISSION/MISSION ENHANCEMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MH-53E Kit - NonOrganic *Installation 1 of 2*	24 / 5.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 5.790
1.1.2) MH-53E Kits - Reserve - NonOrganic *Installation 1 of 2*	2 / 0.497	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.497
1.1.3) CH-53E KITS (Nacelles) - NonOrganic *Installation 2 of 2*	70 / 16.488	26 / 5.650	44 / 9.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	140 / 31.881
1.1.4) CH-53E KITS - (Nacelles) Reserve - NonOrganic *Installation 2 of 2*	- / -	2 / 0.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.435
1.1.5) Archived A Kits OSIP 09-01 - Organic(*)	224 / 9.947	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	224 / 9.947
2.1.1) Non-Recurring - Organic(*)	- / 0.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.811
Subtotal: Procurement	*- / 33.533*	*- / 6.085*	*- / 9.743*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 49.361*
Support												
3.2) Data	- / 0.177	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.177
3.4) Support Equipment	- / 3.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.695
3.5) ILS	- / 0.539	- / 0.038	- / 0.038	- / 0.038	- / -	- / 0.038	- / 0.039	- / -	- / -	- / -	- / -	- / 0.692
3.6) ILS - Reserve	- / 0.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.096
3.7) Other Support	- / 9.703	- / 0.090	- / 0.090	- / 0.090	- / -	- / 0.090	- / 0.091	- / -	- / -	- / -	- / -	- / 10.064
3.8) Other Support - Reserve	- / 0.169	- / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.173
Subtotal: Support	*- / 14.379*	*- / 0.132*	*- / 0.128*	*- / 0.128*	*- / -*	*- / 0.128*	*- / 0.130*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.897*
Installation												
Installation 1 of 2: GRP: MH-53 Installs	- / -	- / 0.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.364
Installation 2 of 2: GRP: CH-53 Installs	- / -	- / 0.112	- / 0.635	- / 0.648	- / 0.000	- / 0.648	- / 0.661	- / -	- / -	- / -	- / 0.000	- / 2.056
Subtotal: Installation	*- / 0.000*	*- / 0.476*	*- / 0.635*	*- / 0.648*	*- / -*	*- / 0.648*	*- / 0.661*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.420*
Total												
Total Cost (Procurement + Support + Installation)	**47.912**	**6.693**	**10.506**	**0.776**	**0.000**	**0.776**	**0.791**	**0.000**	**0.000**	**0.000**	**0.000**	**66.678**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 2 / NACELLES (OSIP 009-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: GRP: MH-53 Installs

Manufacturer Information

Manufacturer Name: Sikorski Aircraft Corp	Manufacturer Location: Stratford, CT
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: MH-53 Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	26 / 0.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	26 / 0.364
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	26 / 0.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	26 / 0.364

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	7	7	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Out	-	7	7	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 2 / NACELLES (OSIP 009-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: GRP: CH-53 Installs

Manufacturer Information

Manufacturer Name: Sikorski Aircraft Corp	Manufacturer Location: Stratford, CT
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020					
Delivery Dates	Dec 2020	Dec 2021					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: CH-53 Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	8 / 0.112	44 / 0.635	16 / 0.236	0 / 0.000	16 / 0.236	- / -	- / -	- / -	- / -	0 / 0.000	68 / 0.983
FY 2019	- / -	- / -	- / -	28 / 0.412	0 / 0.000	28 / 0.412	- / -	- / -	- / -	- / -	0 / 0.000	28 / 0.412
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	44 / 0.661	- / -	- / -	- / -	0 / 0.000	44 / 0.661
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	8 / 0.112	44 / 0.635	44 / 0.648	0 / 0.000	44 / 0.648	44 / 0.661	- / -	- / -	- / -	0 / 0.000	140 / 2.056

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	8	-	16	14	14	1	15	14	14	11	11	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	140
Out	-	-	-	-	8	-	16	14	14	1	15	14	14	11	11	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	140

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 3 / H-53 ERIP (OSIP 010-05)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	190.882	13.833	12.932	38.296	0.000	38.296	131.666	175.218	133.613	137.810	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	190.882	13.833	12.932	38.296	0.000	38.296	131.666	175.218	133.613	137.810	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**190.882**	**13.833**	**12.932**	**38.296**	**0.000**	**38.296**	**131.666**	**175.218**	**133.613**	**137.810**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The T64 Engine Reliability Improvement Program (ERIP) upgrades top age related engine degraders, fatigue limiters, and performance degraders on the T64 engine. The objective is to increase engine reliability and performance by incorporating minor improvements, necessary parts changes and introducing new Core Engine Kits to the fleet. This will be accomplished by standing up both a core engine and fuel control production line. These production lines will produce Core Engine Kits along with ensuring a production line is available for parts procurement/upgrades throughout the remainder of the CH-53E service life.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP increases $25.364M from FY2020 to FY2021 to fund continuation of T64 engine core non-recurring engineering efforts to include creating ECP package and necessary support equipment upgrades.

Notes:
1. Cost Element 1.1.1 and 1.1.2 Kits will be completed via O-level installations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 3 / H-53 ERIP (OSIP 010-05)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: H-53 T64 Turbo-shaft engines	**Modification Type:** SAFETY, READINESS AND MAINTAINABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) T-64 Engine Core - Organic(*)	- / -	- / -	- / -	9 / 20.700	- / -	9 / 20.700	50 / 105.490	59 / 124.850	52 / 111.800	48 / 103.200	22 / 47.520	240 / 513.560
1.1.2) T-64 Engine Fuel Control - Organic(*)	- / -	- / -	- / -	13 / 3.330	- / -	13 / 3.330	86 / 22.360	172 / 45.630	64 / 16.980	91 / 29.680	- / -	426 / 117.980
1.1.3) T-64 High Flow Nozzles - Organic(*)	- / -	516 / 3.754	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	516 / 3.754
1.1.4) ARCHIVED B KITS - Organic(*)	4,221 / 158.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4,221 / 158.246
1.2.1) Non-Recurring Engineering - Organic(*)	- / 0.289	- / 9.929	- / 12.382	- / 10.866	- / -	- / 10.866	- / -	- / -	- / -	- / -	- / -	- / 33.466
Subtotal: Procurement	*- / 158.535*	*- / 13.683*	*- / 12.382*	*- / 34.896*	*- / -*	*- / 34.896*	*- / 127.850*	*- / 170.480*	*- / 128.780*	*- / 132.880*	*- / 47.520*	*- / 827.006*
Support												
2.2) Data	- / 1.005	- / -	- / 0.250	- / 1.272	- / -	- / 1.272	- / -	- / -	- / -	- / -	- / -	- / 2.527
2.3) Training Equipment	- / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.004
2.4) Training Equipment-OCO	- / 0.506	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.506
2.5) Support Equipment	- / 5.829	- / -	- / -	- / 0.098	- / -	- / 0.098	- / -	- / -	- / -	- / -	- / -	- / 5.927
2.6) ILS	- / 0.510	- / 0.050	- / 0.100	- / 0.500	- / -	- / 0.500	- / 1.272	- / 1.507	- / 1.537	- / 1.568	Continuing	Continuing
2.7) ILS - Reserve	- / 0.123	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.123
2.8) Other Support	- / 18.883	- / 0.100	- / 0.200	- / 1.530	- / -	- / 1.530	- / 2.544	- / 3.231	- / 3.296	- / 3.362	Continuing	Continuing
2.9) Other Support - Reserve	- / 0.087	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.087
2.10) Other Support-OCO	- / 5.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.400
Subtotal: Support	*- / 32.347*	*- / 0.150*	*- / 0.550*	*- / 3.400*	*- / -*	*- / 3.400*	*- / 3.816*	*- / 4.738*	*- / 4.833*	*- / 4.930*	*Continuing*	*Continuing*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**190.882**	**13.833**	**12.932**	**38.296**	**0.000**	**38.296**	**131.666**	**175.218**	**133.613**	**137.810**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	291.446	23.010	9.027	9.099	0.000	9.099	16.289	19.685	25.296	10.105	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	291.446	23.010	9.027	9.099	0.000	9.099	16.289	19.685	25.296	10.105	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**291.446**	**23.010**	**9.027**	**9.099**	**0.000**	**9.099**	**16.289**	**19.685**	**25.296**	**10.105**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The H-53 aircraft is planned to be in service through Calendar Year 2029. The H-53 Aircraft Sustainment Strategy targets initiatives to remedy the top maintenance degraders, fatigue life limiters, and safety issues that impede the aircraft's ability to operate into the future. This program implements mitigations to H-53 component obsolescence structural limitations; landing gear, dynamic components, missions systems, life support, wiring improvements to aircrew safety and all other components required to fly the H-53E Fleet sustainment support in an affordable manner will continue until the H-53K becomes available.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The H-53 Sustainment Program Acquisition Strategy was approved by Program Executive Office (Aircraft) in December 2013 to be executed as one Abbreviated Acquisition Program (AAP) for Automatic Flight Control System (AFCS) and multiple independent projects related to safety, obsolescence, readiness and fatigue of all aircraft systems (e.g., fuel, fuel delivery, rotor, drive, landing gear, electrical, hydraulic, lighting, tow, flight control, communication/navigation, pitot/static and cockpit instrumentation). Outside of the AFCS AAP, each year of the program involves non-recurring engineering (NRE) on some projects, leading to production and installation in out-years. Other projects require little or no NRE and can be acquired and installed quickly during routine maintenance.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP increases $.072M from FY2020 to FY2021. FY2021 funding is required for the #2 Engine Fire Prevention Kits and Safety Readiness Improvement Kits.

Future Modifications:
Forward Hydraulic Access Panel
Soundproofing Retention Kits

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 171 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) #2 Engine Fire Prevention Kits - NonOrganic *Installation 1 of 3*	- / -	18 / 0.990	30 / 1.874	36 / 2.340	- / -	36 / 2.340	36 / 2.387	43 / 2.851	- / -	- / -	- / -	163 / 10.442
1.1.2) #2 Engine Fire Prevention Kits - Reserve - NonOrganic *Installation 1 of 3*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.871	13 / 0.871
1.1.3) Kapton Wiring Kits (H-53) - NonOrganic *Installation 2 of 3*	170 / 20.740	4 / 1.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	174 / 21.777
1.1.4) Kapton Wiring Kits (H-53) - Reserve - NonOrganic *Installation 2 of 3*	1 / 0.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.143
1.1.5) #2 Engine Compartment Modernization - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 7.924	59 / 17.662	6 / 1.831	- / -	92 / 27.417
1.1.6) ARCHIVED A KITS - Organic(*)	2,495 / 86.268	- / 0.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,495 / 86.300
1.2.1) Installation Kits (including Automatic Flight Control System) - Organic(*) (2)	- / 43.440	- / 2.159	- / 0.240	- / 1.960	- / -	- / 1.960	- / 8.682	- / 1.870	- / 1.423	- / 1.552	- / 3.291	- / 64.617
1.2.2) Non-Recurring Engineering - Reserve (including AFCS) - Organic(*)	- / 0.744	- / 0.110	- / 0.110	- / 0.100	- / -	- / 0.100	- / 0.102	- / 0.104	- / 0.106	- / 0.108	- / -	- / 1.484
2.1.1) Safety/Readiness Improvement Kits - Organic(*)	248 / 2.504	24 / 4.555	1 / 0.189	24 / 0.885	- / -	24 / 0.885	24 / 3.072	24 / 4.456	24 / 4.664	24 / 5.045	134 / 25.586	527 / 50.956
2.1.2) Soundproofing Retention Kits - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	164 / 8.350	164 / 8.350
2.1.3) Soundproofing Retention Kits - Reserve - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.650	13 / 0.650
2.1.4) AMARG Modifications - NonOrganic *Installation 3 of 3*	2 / 0.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.086
2.1.5) IR Fire Detector - Organic(*)	1,056 / 3.445	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,056 / 3.445
2.1.6) Retrofit Kits for Common Navy Configuation - Organic(*)	- / -	- / 11.178	- / 2.515	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.693
2.1.7) Forward Hydraulic Access Panel - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 2.000
2.1.8) ARCHIVED B KITS - Organic(*)	4,175 / 22.369	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4,175 / 22.369
2.2.1) Installation Cost - Prior Year - Organic(*)	- / 6.468	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.468
2.2.2) Installation Equipment - Organic(*) (3)	- / 3.089	- / -	- / 0.150	- / 0.357	- / -	- / 0.357	- / 0.363	- / 0.370	- / 0.377	- / 0.485	- / -	- / 5.191
Subtotal: Procurement	*- / 189.296*	*- / 20.061*	*- / 5.078*	*- / 5.642*	*- / -*	*- / 5.642*	*- / 14.606*	*- / 17.575*	*- / 24.232*	*- / 9.021*	*- / 40.748*	*- / 326.259*
Support												
3.1) Engineering Change Orders	- / 0.322	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.322
3.2) Data - OCO	- / 0.732	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.732
3.3) Data	- / 1.358	- / 0.100	- / 0.237	- / 0.100	- / -	- / 0.100	- / 0.102	- / 0.102	- / 0.104	- / 0.106	- / 4.729	- / 6.938

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 171 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.4) Data - Reserve	- / 0.037	- / 0.100	- / 0.100	- / 0.020	- / -	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / -	- / 0.337
3.5) Training Equipment	6 / 0.030	- / 0.020	- / 0.020	- / 0.020	- / -	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / -	6 / 0.170
3.6) Support Equipment (4)	104 / 1.847	- / -	- / -	- / 1.810	- / -	- / 1.810	- / -	- / 0.250	- / -	- / -	- / 0.850	104 / 4.757
3.7) ILS	- / 7.286	- / 0.260	- / 0.360	- / 0.150	- / -	- / 0.150	- / 0.153	- / 0.153	- / 0.156	- / 0.159	Continuing	Continuing
3.8) ILS - Reserve	- / 1.213	- / 0.050	- / 0.100	- / 0.069	- / -	- / 0.069	- / 0.070	- / 0.070	- / 0.071	- / 0.072	Continuing	Continuing
3.9) Other Support	- / 55.833	- / 1.219	- / 1.271	- / 0.563	- / -	- / 0.563	- / 0.576	- / 0.576	- / 0.589	- / 0.601	Continuing	Continuing
3.10) Other Support - Reserve	- / 2.318	- / 0.150	- / 0.150	- / 0.100	- / -	- / 0.100	- / 0.102	- / 0.102	- / 0.104	- / 0.106	Continuing	Continuing
3.11) Other Support - OCO	- / 1.702	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.702
3.12) Interim Contractor support	- / 0.270	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.270
Subtotal: Support	*- / 72.948*	*- / 1.899*	*- / 2.238*	*- / 2.832*	*- / -*	*- / 2.832*	*- / 1.043*	*- / 1.293*	*- / 1.064*	*- / 1.084*	*- / 1.579*	*- / 11.228*
Installation												
Installation 1 of 3: GRP: H-53 A/C SUSTAINMENT (OSIP 08-06) Engine Fire Prevention Kits	- / -	- / 0.300	- / 0.511	- / 0.625	- / 0.000	- / 0.625	- / 0.640	- / 0.817	- / -	- / -	- / 0.230	- / 3.123
Installation 2 of 3: GRP: H-53 A/C SUSTAINMENT (OSIP 08-06) Kapton Wiring	- / 29.202	- / -	- / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.780	- / 31.182
Installation 3 of 3: AMARG Modifications	- / -	- / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.750
Subtotal: Installation	*- / 29.202*	*- / 1.050*	*- / 1.711*	*- / 0.625*	*- / -*	*- / 0.625*	*- / 0.640*	*- / 0.817*	*- / -*	*- / -*	*- / 1.010*	*- / 35.055*
Total												
Total Cost (Procurement + Support + Installation)	**291.446**	**23.010**	**9.027**	**9.099**	**0.000**	**9.099**	**16.289**	**19.685**	**25.296**	**10.105**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: GRP: H-53 A/C SUSTAINMENT (OSIP 08-06) Engine Fire Prevention Kits

Manufacturer Information

Manufacturer Name: Sikorski Aircraft Corp | Manufacturer Location: Stratford, CT

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023		
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023		

Installation Information

Method of Implementation: CONTRACTOR FIELD MOD TEAM:: Installation Name: H-53 A/C SUSTAINMENT (OSIP 08-06) Engine Fire Prevent

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	18 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 0.300
FY 2020	- / -	- / -	30 / 0.511	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	30 / 0.511
FY 2021	- / -	- / -	- / -	36 / 0.625	0 / 0.000	36 / 0.625	- / -	- / -	- / -	- / -	0 / 0.000	36 / 0.625
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.640	- / -	- / -	- / -	0 / 0.000	36 / 0.640
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.817	- / -	- / -	0 / 0.000	43 / 0.817
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.230	13 / 0.230
Total	- / -	18 / 0.300	30 / 0.511	36 / 0.625	0 / 0.000	36 / 0.625	36 / 0.640	43 / 0.817	- / -	- / -	13 / 0.230	176 / 3.123

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	9	9	-	-	15	15	-	-	18	18	-	-	18	18	-	-	21	22	-	-	-	-	-	-	-	-	13	176
Out	-	-	-	9	9	-	-	15	15	-	-	18	18	-	-	18	18	-	-	21	22	-	-	-	-	-	-	-	-	13	176

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: GRP: H-53 A/C SUSTAINMENT (OSIP 08-06) Kapton Wiring

Manufacturer Information

Manufacturer Name: SOFSA-Kapton (5) | Manufacturer Location: Lexington, KY

Administrative Leadtime *(in Months)*: 10 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019						
Delivery Dates	Jun 2020						

Installation Information

Method of Implementation: CONTRACTOR FIELD MOD TEAM:: Installation Name: H-53 A/C SUSTAINMENT (OSIP 08-06) Kapton Wiring

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	171 / 29.202	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.780	171 / 29.982
FY 2019	- / -	- / -	4 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.200
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	171 / 29.202	- / -	4 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.780	175 / 31.182

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	171	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175
Out	171	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: AMARG Modifications

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: CONTRACTOR FIELD MOD TEAM:: Installation Name: AMARG Modifications

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	2 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.750
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.750

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Footnotes:

(2) Cost Element 1.2.1 Installation Kits (including Automatic Flight Control System) increase in FY21 and FY22 due to required NRE for #2 Engine Compartment Modernization.

(3) Cost Element 2.2.2 Installation Equipment NRE required for upcoming safety/readiness improvements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 4 / H-53 A/C SUSTAINMENT (OSIP 008-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(4) Cost Element 3.6 Support Equipment increase in FY21 and FY23 is to support Main Rotor Static Balancing initiative.

(5) Cost Element 1.1.3 Four additional kits are being installed in FY20 to support the four reconstitutionalized aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 5 / DIRCM (OSIP 010-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	210.187	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	210.266
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	210.187	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	210.266
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**210.187**	**0.079**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**210.266**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Currently, the H-53 is only integrated with Infrared (IR) detection equipment and rudimentary countermeasure flares. This funding is for Engineering Change Proposal (ECP) development, A-kit procurement and installation of a Direct Infrared Counter Measure (DIRCM) system for H-53s. This system will help protect the H-53 which is highly susceptible to IR seeking Man-Portable Air Defense System (MANPADS), the weapon of choice in all current theaters. This system has been found effective against fourth generation IR MANPADS, and is extremely effective against earlier generation MANPADS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Non-Recurring Engineering (NRE) for the CH-53E began in May 07 and concluded with a completed and verified Technical Directive in early FY09. Test and Evaluation for the CH-53E began with risk-reduction testing in April 08 and concluded with Initial Operational Test and Evaluation (IOT&E) in late FY09. Critical to early fielding was the Quick reaction assessment, completed in August 08 which led to an Early Operational Capability (EOC) decision in November 08. Validation and verification were conducted for the CH-53E between May - September 08. Non-Recurring engineering for the CH-53D began in May 08 and concluded with a completed and verified TD in early FY10. The FY11 United States Marine Corps Aviation Plan was released in October 2010 and called for the early retirement of the CH-53D. Development and deployment of the DIRCM system on the CH-53D system was subsequently suspended and the remaining funding was realigned to other priorities consistent with Headquarters Marine Corps direction. DIRCM is being procured as a mission kit by PMA-272. CH-53Es must be modified with an A-kit to accept the mission kit.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: FY2019 completes installs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 5 / DIRCM (OSIP 010-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), 142 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DIRCM (OSIP 010-08)												
A Kits												
Recurring												
1.1.1) CH-53E Kits OCO - NonOrganic	54 / 5.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 5.483
1.1.2) CH-53E (Rev-A) A-kits OCO - NonOrganic	147 / 2.771	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	147 / 2.771
1.1.3) CH-53E (Rev-A) A Kits OCO - Reserve - NonOrganic	6 / 0.113	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.113
1.1.4) Archived A Kits OSIP 10-08 - Organic	- / 44.881	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 44.881
Subtotal: Recurring	*- / 53.248*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 53.248*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	3 / 5.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.775
Subtotal: Non-Recurring	*- / 5.775*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.775*
B Kits												
Recurring												
2.1.1) Archived B Kits - Organic	223 / 108.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	223 / 108.990
Subtotal: Recurring	*- / 108.990*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 108.990*
Subtotal: DIRCM (OSIP 010-08)	*433 / 168.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*433 / 168.013*
Subtotal: Procurement, All Modification Items	*- / 168.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 168.013*
Support *(All Modification Items)*												
3.2) Data	- / 1.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.225
3.3) Training Equipment	- / 0.335	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.335
3.4) Training Equipment-OCO	- / 0.999	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.999
3.6) ILS	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000
3.7) ILS-OCO	- / 0.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.234
3.8) Other Support	- / 14.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.112
3.9) Other Support-OCO	- / 9.541	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.541
3.10) Interim Contractor Support	- / 6.041	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.041
Subtotal: Support	*- / 34.487*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 34.487*
Installation												
Modification Item 1 of 1: DIRCM (OSIP 010-08)	- / 7.687	- / 0.079	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.766

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 5 / DIRCM (OSIP 010-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), 142 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Installation	- / 7.687	- / 0.079	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.766
Total												
Total Cost (Procurement + Support + Installation)	**210.187**	**0.079**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**210.266**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 5 / DIRCM (OSIP 010-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DIRCM (OSIP 010-08)

Manufacturer Information

Manufacturer Name: Northrop Grumman-DIRCM	Manufacturer Location: Rolling Meadows, IL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: CONTRACTOR FIELD MOD TEAM:: Installation Name: DIRCM (OSIP 010-08)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	205 / 7.687	2 / 0.079	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	207 / 7.766
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	205 / 7.687	2 / 0.079	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	207 / 7.766

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	205	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	207
Out	205	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	207

Method of Implementation (Organic): Installation Kits N/R - Not Installed	**Installation Quantity:** 3
Method of Implementation (Organic): Archived B Kits - Not Installed	**Installation Quantity:** 223

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	84.798	7.741	7.996	10.612	0.000	10.612	11.622	12.822	10.057	9.709	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	84.798	7.741	7.996	10.612	0.000	10.612	11.622	12.822	10.057	9.709	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**84.798**	**7.741**	**7.996**	**10.612**	**0.000**	**10.612**	**11.622**	**12.822**	**10.057**	**9.709**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) will fund avionics systems for the H-53 helicopter. The H-53 strategy is to address safety, survivability, system obsolescence, and avionics deficiencies that require correction to maintain platform relevance on an increasingly networked battlefield. Specifically, this OSIP addresses Smart Multifunctional Color Display (SMFCD), APR-39D(V)2 and a mitigating solution for Controlled Flight Into Terrain risk when operating in Degraded Visual Environment (DVE)/Low Speed Precision Controls (LSPC) for the CH-53E. This OSIP also provides funding to upgrade the MH-53E antiquated cockpit with critical safety and avionics upgrades, including (Embedded Global Positioning System/Inertial Navigation System)(EGI).

This funding provides for the integration of cockpit avionics with Aircraft Survival Equipment (ASE) to provide time critical data to other battlefield users in order to more rapidly prosecute threats. This funding effort seeks to meet requirements, and eliminate avionics and ASE related system level deficiencies and safety hazards with the above described improvements, as well as ensuring that all H-53 aircraft are equipped with a full complement of ASE required to operate on the modern networked battlefield.

This OSIP also includes NRE funding for future targeted improvements that may be needed to provide for the safety and survivability of the fleet user.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Full EGI integration commenced in FY19 .

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: FY2021 increase of $2.617M funds the procurement of DVE/LSPC kits and the NRE for APR-39D(V)2.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 171 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) SMFCD - NonOrganic (6) *Installation 1 of 4*	150 / 2.626	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 2.626
1.1.2) SMFCD - Reserve - NonOrganic *Installation 1 of 4*	6 / 0.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.156
1.1.3) SATCOM - NonOrganic (7) *Installation 1 of 4*	152 / 0.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	152 / 0.278
1.1.4) MH EGI A Kits - NonOrganic (8) *Installation 2 of 4*	27 / 3.186	4 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 3.486
1.1.5) CH-53E APR-39D(V)2 - NonOrganic *Installation 3 of 4*	- / -	- / -	- / -	1 / 0.070	- / -	1 / 0.070	1 / 0.071	36 / 2.621	36 / 2.671	36 / 2.722	32 / 2.464	142 / 10.619
1.1.6) CH-53E DVE/LSPC A kits - NonOrganic *Installation 4 of 4*	- / -	- / -	11 / 0.275	23 / 0.587	- / -	23 / 0.587	23 / 0.598	23 / 0.610	5 / 0.135	10 / 0.275	52 / 1.625	147 / 4.105
1.1.7) Archived A Kits - Organic(*)	445 / 43.233	- / 0.016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	445 / 43.249
1.2.1) Installation Kit NRE - Organic(*) (9)	- / 5.369	- / 2.594	- / 0.462	- / 1.087	- / -	- / 1.087	- / 1.646	- / -	- / -	- / -	- / -	- / 11.158
2.1.1) CH-53 ARC-210 SATCOM Kit-OCO - Organic(*)	40 / 1.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.600
2.1.2) CH-53E DVE/LSPC B kit - Organic(*)	- / -	- / -	11 / 2.475	23 / 5.302	- / -	23 / 5.302	23 / 5.408	23 / 5.514	5 / 1.222	5 / 1.245	57 / 14.689	147 / 35.855
2.1.3) Avionics B Kits - Organic(*)	45 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 0.225
2.1.4) Avioncs B Kit NRE - Organic(*)	- / 0.149	- / 0.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.421
Subtotal: Procurement	*- / 56.822*	*- / 3.182*	*- / 3.212*	*- / 7.046*	*- / -*	*- / 7.046*	*- / 7.723*	*- / 8.745*	*- / 4.028*	*- / 4.242*	*- / 18.778*	*- / 113.778*
Support												
3.2) Data	- / 1.506	- / 0.011	- / 0.250	- / 0.100	- / -	- / 0.100	- / 0.102	- / 0.104	- / 0.106	- / 0.108	- / 0.060	- / 2.347
3.3) Software	- / 3.992	- / 0.513	- / 0.090	- / 0.058	- / -	- / 0.058	- / 0.021	- / 0.153	- / 0.156	- / 0.159	- / 0.562	- / 5.704
3.4) Training Equipment	- / -	- / 0.103	- / 0.822	- / 0.465	- / -	- / 0.465	- / 0.474	- / 0.483	- / 0.383	- / 0.390	- / 0.100	- / 3.220
3.5) Support Equipment	- / 0.450	- / -	- / 0.020	- / 0.020	- / -	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / 0.020	- / 0.015	- / 0.585
3.6) ILS	- / 3.097	- / 0.458	- / 0.520	- / 0.497	- / -	- / 0.497	- / 0.507	- / 0.517	- / 0.527	- / 0.538	Continuing	Continuing
3.7) ILS - Reserve	- / 0.069	- / 0.018	- / 0.015	- / 0.015	- / -	- / 0.015	- / 0.015	- / 0.015	- / 0.015	- / 0.015	Continuing	Continuing
3.8) Other Support	- / 12.913	- / 1.424	- / 1.739	- / 1.696	- / -	- / 1.696	- / 1.732	- / 1.769	- / 1.805	- / 1.841	Continuing	Continuing
3.9) Other Support - Reserve	- / 0.287	- / 0.061	- / 0.060	- / 0.060	- / -	- / 0.060	- / 0.061	- / 0.062	- / 0.063	- / 0.064	Continuing	Continuing
3.10) Aircraft 539 Reconfigure Other Support - OCO	- / 0.609	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.609
Subtotal: Support	*- / 22.923*	*- / 2.588*	*- / 3.516*	*- / 2.911*	*- / -*	*- / 2.911*	*- / 2.932*	*- / 3.123*	*- / 3.075*	*- / 3.135*	*Continuing*	*Continuing*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E (142), MH-53E (29), 171 Total	**Modification Type:** MISSION/PERFORMANCE SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 4: GRP: H-53 AVIONICS (OSIP 031-12) - SMFCD	- / 4.951	- / 1.565	- / 1.220	- / 0.270	- / 0.000	- / 0.270	- / -	- / -	- / -	- / -	- / 0.000	- / 8.006
Installation 2 of 4: MH EGI A Kits	- / 0.102	- / 0.406	- / 0.048	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.556
Installation 3 of 4: CH-53E APR-39D(V)2	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.146	- / 0.117	- / 2.101	- / 2.143	- / 4.165	- / 8.672
Installation 4 of 4: CH-53E DVE/LSPC A kits	- / -	- / -	- / -	- / 0.385	- / 0.000	- / 0.385	- / 0.821	- / 0.837	- / 0.853	- / 0.189	- / 2.655	- / 5.740
Subtotal: Installation	*- / 5.053*	*- / 1.971*	*- / 1.268*	*- / 0.655*	*- / -*	*- / 0.655*	*- / 0.967*	*- / 0.954*	*- / 2.954*	*- / 2.332*	*- / 6.820*	*- / 22.974*
Total												
Total Cost (Procurement + Support + Installation)	**84.798**	**7.741**	**7.996**	**10.612**	**0.000**	**10.612**	**11.622**	**12.822**	**10.057**	**9.709**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: GRP: H-53 AVIONICS (OSIP 031-12) - SMFCD

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Indianapolis, IN
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: CONTRACTOR FIELD MOD TEAM:: Installation Name: H-53 AVIONICS (OSIP 031-12) - SMFCD

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	211 / 4.951	51 / 1.565	37 / 1.220	9 / 0.270	0 / 0.000	9 / 0.270	- / -	- / -	- / -	- / -	0 / 0.000	308 / 8.006
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	211 / 4.951	51 / 1.565	37 / 1.220	9 / 0.270	0 / 0.000	9 / 0.270	- / -	- / -	- / -	- / -	0 / 0.000	308 / 8.006

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	211	13	13	13	12	10	9	9	9	2	2	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	308
Out	211	13	13	13	12	10	9	9	9	2	2	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	308

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 4: MH EGI A Kits

Manufacturer Information

Manufacturer Name: MH EGI - Honeywell	Manufacturer Location: Clearwater, FL
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	Jan 2020						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: MH EGI A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	14 / 0.102	13 / 0.406	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	27 / 0.508
FY 2019	- / -	- / -	4 / 0.048	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.048
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	14 / 0.102	13 / 0.406	4 / 0.048	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	31 / 0.556

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	14	-	5	5	3	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Out	14	-	5	5	3	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 4: CH-53E APR-39D(V)2

Manufacturer Information

Manufacturer Name: TBD - APR-39D	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023		
Delivery Dates			Jan 2022	Jan 2023	Jan 2024		

Installation Information

Method of Implementation: [none specified]:: Installation Name: CH-53E APR-39D(V)2

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.146	- / -	- / -	- / -	0 / 0.000	1 / 0.146
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.117	- / -	- / -	0 / 0.000	1 / 0.117
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 2.101	- / -	0 / 0.000	36 / 2.101
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 2.143	0 / 0.000	36 / 2.143
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 2.185	36 / 2.185
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.980	32 / 1.980
Total	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.146	1 / 0.117	36 / 2.101	36 / 2.143	68 / 4.165	142 / 8.672

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	13	13	10	-	13	13	10	68	142
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	13	13	10	-	13	13	10	68	142

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 4: CH-53E DVE/LSPC A kits

Manufacturer Information

Manufacturer Name: TBD - DVE	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023		
Delivery Dates		Jan 2021	Jan 2022	Jan 2023	Jan 2024		

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: CH-53E DVE/LSPC A kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	11 / 0.385	0 / 0.000	11 / 0.385	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.385
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.821	- / -	- / -	- / -	0 / 0.000	23 / 0.821
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.837	- / -	- / -	0 / 0.000	23 / 0.837
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.853	- / -	0 / 0.000	23 / 0.853
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.189	0 / 0.000	5 / 0.189
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.385	10 / 0.385
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 2.270	57 / 2.270
Total	- / -	- / -	- / -	11 / 0.385	0 / 0.000	11 / 0.385	23 / 0.821	23 / 0.837	23 / 0.853	5 / 0.189	67 / 2.655	152 / 5.740

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	4	4	3	-	8	8	7	-	8	8	7	-	8	8	7	-	2	3	-	67	152
Out	-	-	-	-	-	-	-	-	-	-	4	4	3	-	8	8	7	-	8	8	7	-	8	8	7	-	2	3	-	67	152

Footnotes:

(6) Cost Element 1.1.1 Prior Year Kits procured under OSIP 15-05, 10 Trainer kits installed at the "O" Level.

(7) Cost Element 1.1.3 SATCOM Kits procured under OSIP 20-07. Install is performed via Contractor Field Mod Team which can very the costs depending on the location of the installation.

(8) Cost Element 1.1.4 MH EGI A Kits Install is performed via Contractor Field Mod Team which can vary the costs depending on the location of the installation.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 6 / H-53 AVIONICS (OSIP 031-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(9) Cost Element 1.2.1 Installation Kit NRE - Increase in FY21 is to support non-recurring engineering required for APR-39D(V)2.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 390	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	8.492	17.703	4.432	0.000	4.432	8.187	15.022	18.085	38.597	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	8.492	17.703	4.432	0.000	4.432	8.187	15.022	18.085	38.597	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**8.492**	**17.703**	**4.432**	**0.000**	**4.432**	**8.187**	**15.022**	**18.085**	**38.597**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational and Safety Improvement Program incorporates Corrections of Deficiencies on CH-53K aircraft related to safety, survivability, maintainability, reliability, interoperability and obsolescence of aircraft systems. These modifications and selected component changes will be accomplished by field retrofit performed by FRC, organic contractor artisans and contractor field mod teams. In order to resolve emerging deficiencies in a timeline that supports fleet requirements, the airframe, avionics, and propulsion and power systems which must be modified and installed as critical corrections/changes are identified. Funds will be used to manage, prepare, process, develop for retrofit, validate/verify, and incorporate Engineering Change Proposals (ECP) and implement those corrections to improve and sustain the CH-53K operations.

Corrections/modifications will be integrated for Reliability improvements. Avionics systems corrections include aircrew avionics, data, displays, controls, Operational Flight Program (OFP) aircraft software, Navigation and Safety systems, Air Data Pitot Static System, Communications / Identification / Intercommunication and Interoperability systems for CNS/ATM, Data Link, Counter Measures, Degraded Visual Environment (DVE), System Integration Laboratory, and Mission Planning. Airframe corrections include all structural components, mounts, cowlings, landing gear, fuselage and various dynamic components and internal/external cargo load, Propulsion and Power upgrades include main/tail rotors, engines, fuel system, hydraulic power system, auxiliary power, ECS/Icing, rotors assembly, transmission, drive train, Integrated Mobile Aircrew Restraint System (IMARS), windscreens and mission system equipment. Propulsion and Power corrections are planned for chip detectors, main rotor blades (MRB), wheels and brakes and fire suppression system.

Corrections and modifications include retrofit activities for SDTA aircraft to maintain production configuration. Corrections and modifications include aircraft and mission software, communication systems, air data systems, fire suppression, airframe and engine structural components, windshield components, restraint devices, and the engine and fuel system components.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: CH-53K ADM signed for MS-C on 4 April 2017.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP decreases $13.271M from FY2020 to FY2021 to account for the availability of prior year execution balances.

NOTE: Specific ECPs performed each year will vary based on identified deficiencies.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 390	
Models of Systems Affected: CH-53K	**Modification Type:** Safety, Reliability, Improved Mission Capability	**Related RDT&E PEs:** 0605212M

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Avionics - NonOrganic (10) *Installation 1 of 3*	- / -	6 / 1.440	6 / 2.050	4 / 0.376	- / -	4 / 0.376	- / -	2 / 0.900	2 / 3.500	12 / 16.068	- / -	32 / 24.334
1.1.2) Airframe - NonOrganic (11) *Installation 2 of 3*	- / -	6 / 2.825	6 / 7.600	4 / 1.695	- / -	4 / 1.695	2 / 5.168	2 / 8.700	2 / 7.500	12 / 16.068	- / -	34 / 49.556
1.1.3) Propusion and Power - NonOrganic (12) *Installation 3 of 3*	- / -	6 / 1.025	6 / 0.805	4 / 0.092	- / -	4 / 0.092	2 / 0.548	2 / 1.460	2 / 1.451	- / -	- / -	22 / 5.381
1.1.4) Reliability Improvements - Organic(*)	- / -	- / -	8 / 2.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 2.150
1.1.5) MRB Tip Core Deficiency - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.900	2 / 0.900	- / -	- / -	4 / 1.800
1.1.6) Wheel & Brakes Deficiency - Organic(*)	- / -	- / -	6 / 0.305	- / -	- / -	- / -	- / -	2 / 0.900	2 / 0.900	- / -	- / -	10 / 2.105
1.2.1) A kit Non-recurring - Organic(*)	- / -	- / 3.202	- / 1.463	- / 1.243	- / -	- / 1.243	- / 1.402	- / 0.659	- / -	- / -	- / -	- / 7.969
Subtotal: Procurement	*- / 0.000*	*- / 8.492*	*- / 14.373*	*- / 3.406*	*- / -*	*- / 3.406*	*- / 7.118*	*- / 13.519*	*- / 14.251*	*- / 32.136*	*- / 0.000*	*- / 93.295*
Support												
3.1) Data	- / -	- / -	- / 0.205	- / 0.084	- / -	- / 0.084	- / 0.118	- / 0.120	- / 0.122	- / 0.124	- / -	- / 0.773
3.2) ILS	- / -	- / -	- / 0.105	- / 0.075	- / -	- / 0.075	- / 0.088	- / 0.090	- / 0.092	- / 0.094	Continuing	Continuing
3.3) Other Support	- / -	- / -	- / 0.455	- / 0.417	- / -	- / 0.417	- / 0.488	- / 0.498	- / 0.508	- / 0.518	Continuing	Continuing
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.765*	*- / 0.576*	*- / -*	*- / 0.576*	*- / 0.694*	*- / 0.708*	*- / 0.722*	*- / 0.736*	*Continuing*	*Continuing*
Installation												
Installation 1 of 3: Avionics	- / -	- / -	- / 0.925	- / 0.150	- / 0.000	- / 0.150	- / 0.095	- / -	- / 0.375	- / 1.400	- / 2.250	- / 5.195
Installation 2 of 3: Airframe	- / -	- / -	- / 1.355	- / 0.150	- / 0.000	- / 0.150	- / 0.205	- / 0.475	- / 1.862	- / 3.550	- / 3.500	- / 11.097
Installation 3 of 3: Propusion and Power	- / -	- / -	- / 0.285	- / 0.150	- / 0.000	- / 0.150	- / 0.075	- / 0.320	- / 0.875	- / 0.775	- / 0.000	- / 2.480
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 2.565*	*- / 0.450*	*- / -*	*- / 0.450*	*- / 0.375*	*- / 0.795*	*- / 3.112*	*- / 5.725*	*- / 5.750*	*- / 18.772*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**8.492**	**17.703**	**4.432**	**0.000**	**4.432**	**8.187**	**15.022**	**18.085**	**38.597**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 390

Installation 1 of 3: Avionics

Manufacturer Information

Manufacturer Name: TBD (13) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019	Jan 2020	Dec 2020	Dec 2021	Dec 2022		
Delivery Dates	Aug 2020	Jan 2021	Dec 2021	Dec 2022	Dec 2023		

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Avionics

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	6 / 0.925	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.925
FY 2020	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.095	- / -	- / -	- / -	0 / 0.000	4 / 0.095
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.375	- / -	0 / 0.000	2 / 0.375
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.400	0 / 0.000	2 / 1.400
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.250	12 / 2.250
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 0.925	6 / 0.150	0 / 0.000	6 / 0.150	4 / 0.095	- / -	2 / 0.375	2 / 1.400	12 / 2.250	32 / 5.195

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	-	-	-	-	1	1	-	-	1	1	-	12	32
Out	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	-	-	-	-	1	1	-	-	1	1	-	12	32

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 390

Installation 2 of 3: Airframe

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019	Jan 2020	Dec 2020	Dec 2021	Dec 2022		
Delivery Dates	Aug 2020	Jan 2021	Dec 2021	Dec 2022	Dec 2023		

Installation Information

Method of Implementation: Contractor Mod Team:: Installation Name: Airframe

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	6 / 1.355	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.355
FY 2020	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.205	- / -	- / -	- / -	0 / 0.000	4 / 0.205
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.475	- / -	- / -	0 / 0.000	2 / 0.475
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.862	- / -	0 / 0.000	2 / 1.862
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.550	0 / 0.000	2 / 3.550
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.500	12 / 3.500
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 1.355	6 / 0.150	0 / 0.000	6 / 0.150	4 / 0.205	2 / 0.475	2 / 1.862	2 / 3.550	12 / 3.500	34 / 11.097

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	1	1	-	-	1	1	-	-	1	1	-	12	34
Out	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	1	1	-	-	1	1	-	-	1	1	-	12	34

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 390

Installation 3 of 3: Propusion and Power

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019	Jan 2020	Dec 2020	Dec 2021	Dec 2022		
Delivery Dates	Aug 2020	Jan 2021	Dec 2021	Dec 2022	Dec 2023		

Installation Information

Method of Implementation: Contractor Mod Team:: Installation Name: Propusion and Power

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	6 / 0.285	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.285
FY 2020	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.075	- / -	- / -	- / -	0 / 0.000	4 / 0.075
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.320	- / -	- / -	0 / 0.000	2 / 0.320
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.875	- / -	0 / 0.000	2 / 0.875
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.775	0 / 0.000	2 / 0.775
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 0.285	6 / 0.150	0 / 0.000	6 / 0.150	4 / 0.075	2 / 0.320	2 / 0.875	2 / 0.775	0 / 0.000	22 / 2.480

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	1	1	-	-	1	1	-	-	1	1	-	-	22
Out	-	-	-	-	-	-	-	-	6	-	2	2	2	1	1	1	1	-	1	1	-	-	1	1	-	-	1	1	-	-	22

Footnotes:

(10) Cost Element 1.1.1 Avionics Specific ECPs performed each year will vary based on identified deficiencies.

(11) Cost Element 1.1.2 Airframe Specific ECPs performed each year will vary based on identified deficiencies.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 7 / Correction of Deficiencies (OSIP 007-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 390	

(12) Cost Element 1.1.3 Propulsion and Power Specific ECPs performed each year will vary based on identified deficiencies.

(13) Specific ECPs performed each year will vary based on identified deficiencies.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 8 / CH-53K Production Upgrades (OSIP 008-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	7.937	1.594	0.000	1.594	2.853	4.810	6.441	1.063	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	7.937	1.594	0.000	1.594	2.853	4.810	6.441	1.063	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**7.937**	**1.594**	**0.000**	**1.594**	**2.853**	**4.810**	**6.441**	**1.063**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) incorporates a number of retrofits into CH-53K Aircraft to common fleet configuration to address obsolescence issues and improve mission performance, reliability, maintainability and supportability. This OSIP incorporates cost effective changes to CH-53K systems to improve ready-based aircraft and ready-for-tasking rates. Improvements to maintenance and readiness degrader items will yield a more capable and survivable CH-53K to sustain warfighter capability in support of worldwide operations.
Systems modified and improved on CH-53K aircraft will leverage common architectures and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the improved systems.

Retrofit will be integrated for Reliability improvements. Avionics systems corrections include aircrew avionics, data, displays, controls, Operational Flight Program (OFP) aircraft software, Navigation and Safety systems, Air Data Pitot Static System, Communications / Identification / Intercommunication and Interoperability systems for CNS/ATM, Data Link, Counter Measures, Degraded Visual Environment (DVE), System Integration Laboratory, and Mission Planning. Airframe corrections include all structural components, mounts, cowlings, landing gear, fuselage and various dynamic components and internal/external cargo load, Propulsion and Power upgrades include main/tail rotors, engines, fuel system, hydraulic power system, auxiliary power, ECS/Icing, rotors assembly, transmission, drive train, Integrated Mobile Aircrew Restraint System (IMARS), windscreens and mission system equipment. Propulsion and Power corrections are planned for chip detectors, main rotor blades (MRB), wheels and brakes and fire suppression system.

Retrofit and modifications include activities for aircraft to be maintained in production configuration. Retrofit and modification activities include Heads-Up Display (HUD) to improve safety and mission effectiveness, ARC-210 Airborne Radio for hardware obsolescence and to meet crypto modernization requirements, Digital Interoperability (DI) capabilities, Health Monitoring Systems, GAU-21system components, and Flight Control Computer (FCC) and aircraft systems obsolescence, and fire protection system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: ADM signed for MS-C on 4 April 2017.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: This OSIP decreases $6.344M from FY2020 to FY2021 to account for the availability of prior year execution balances.

NOTE: Specific ECPs performed each year will vary based on identified deficiencies.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 8 / CH-53K Production Upgrades (OSIP 008-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53K	**Modification Type:** Mission Capability, Reliability, Safety	**Related RDT&E PEs:** 0605212M

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Heads Up Display (HUD) - NonOrganic (14) *Installation 1 of 2*	- / -	- / -	6 / 0.153	- / -	- / -	- / -	2 / 0.250	2 / 0.270	2 / 0.280	- / -	- / -	12 / 0.953
1.1.2) ARC-210 Airborne Radio - NonOrganic (15) *Installation 2 of 2*	- / -	- / -	6 / 0.666	- / -	- / -	- / -	2 / 0.350	2 / 0.370	2 / 0.380	- / -	- / -	12 / 1.766
1.1.3) GAU-21 - Organic(*)	- / -	- / -	6 / 0.060	- / -	- / -	- / -	2 / 0.216	6 / 0.690	10 / 1.200	- / -	- / -	24 / 2.166
1.1.4) Flight Control Computer - Organic(*)	- / -	- / -	6 / 0.385	- / -	- / -	- / -	2 / 0.274	6 / 0.870	10 / 1.500	- / -	- / -	24 / 3.029
1.1.5) Fuel Shut-Off Valve - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.056	6 / 0.171	10 / 0.290	6 / 0.174	- / -	24 / 0.691
1.2.1) A KIT NRE - Organic(*)	- / -	- / -	- / 3.360	- / 0.882	- / -	- / 0.882	- / 1.144	- / 1.524	- / 1.849	- / -	- / -	- / 8.759
2.1.1) Heads Up Display (HUD) - Organic(*)	- / -	- / -	6 / 0.561	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.561
2.1.2) ARC-210 Airborne Radio - Organic(*)	- / -	- / -	6 / 2.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.220
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 7.405*	*- / 0.882*	*- / -*	*- / 0.882*	*- / 2.290*	*- / 3.895*	*- / 5.499*	*- / 0.174*	*- / 0.000*	*- / 20.145*
Support												
3.2) Data	- / -	- / -	- / 0.150	- / 0.130	- / -	- / 0.130	- / 0.125	- / 0.128	- / 0.131	- / 0.134	- / 0.122	- / 0.920
3.3) ILS	- / -	- / -	- / 0.142	- / 0.115	- / -	- / 0.115	- / 0.150	- / 0.153	- / 0.156	- / 0.159	Continuing	Continuing
3.4) Other Support	- / -	- / -	- / 0.240	- / 0.167	- / -	- / 0.167	- / 0.288	- / 0.294	- / 0.300	- / 0.306	Continuing	Continuing
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.532*	*- / 0.412*	*- / -*	*- / 0.412*	*- / 0.563*	*- / 0.575*	*- / 0.587*	*- / 0.599*	*Continuing*	*Continuing*
Installation												
Installation 1 of 2: Heads Up Display (HUD)	- / -	- / -	- / -	- / 0.150	- / 0.000	- / 0.150	- / -	- / 0.210	- / 0.220	- / 0.222	- / 0.000	- / 0.802
Installation 2 of 2: ARC-210 Airborne Radio	- / -	- / -	- / -	- / 0.150	- / 0.000	- / 0.150	- / -	- / 0.130	- / 0.135	- / 0.068	- / 0.000	- / 0.483
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.300*	*- / -*	*- / 0.300*	*- / -*	*- / 0.340*	*- / 0.355*	*- / 0.290*	*- / 0.000*	*- / 1.285*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**7.937**	**1.594**	**0.000**	**1.594**	**2.853**	**4.810**	**6.441**	**1.063**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 8 / CH-53K Production Upgrades (OSIP 008-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: Heads Up Display (HUD)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021				
Delivery Dates		Jan 2021	Jan 2022				

Installation Information

Method of Implementation: Contractor Mod Team:: Installation Name: Heads Up Display (HUD)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.210	- / -	- / -	0 / 0.000	2 / 0.210
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.220	- / -	0 / 0.000	2 / 0.220
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.222	0 / 0.000	2 / 0.222
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	2 / 0.210	2 / 0.220	2 / 0.222	0 / 0.000	12 / 0.802

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	12
Out	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	12

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 8 / CH-53K Production Upgrades (OSIP 008-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: ARC-210 Airborne Radio

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021				
Delivery Dates		Jan 2021	Jan 2022				

Installation Information

Method of Implementation: Contracator Mod Team:: Installation Name: ARC-210 Airborne Radio

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.130	- / -	- / -	0 / 0.000	2 / 0.130
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.135	- / -	0 / 0.000	2 / 0.135
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.068	0 / 0.000	2 / 0.068
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	2 / 0.130	2 / 0.135	2 / 0.068	0 / 0.000	12 / 0.483

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	12
Out	-	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	12

Footnotes:

(14) Specific ECPs performed each year will vary based on identified production upgrades.

(15) Specific ECPs performed each year will vary based on identified production upgrades.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 9 / Archived OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	634.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	634.306
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	634.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	634.306
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**634.306**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**634.306**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0528 / H-53 Series	**Modification Number / Title:** 9 / Archived OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: H-53 Series	**Modification Type:** Various	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPS - Organic(*)	- / 634.306	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 634.306
Subtotal: Procurement	*- / 634.306*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 634.306*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**634.306**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**634.306**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0530 / MH-60 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,329.911	128.523	141.612	131.584	0.000	131.584	108.011	129.536	122.330	133.441	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,329.911	128.523	141.612	131.584	0.000	131.584	108.011	129.536	122.330	133.441	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,329.911**	**128.523**	**141.612**	**131.584**	**0.000**	**131.584**	**108.011**	**129.536**	**122.330**	**133.441**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to MH-60 Series aircraft. The MH-60 Series FY 2020 Inventory is comprised of: 259 MH-60S and 269 MH-60R. Primary missions of the MH-60S include Surface Warfare (SUW), SOF Support, Personnel Recovery, and Airborne Mine Countermeasures (AMCM). Additional missions include Combat Logistics, Vertical Replenishment, Search and Rescue, Humanitarian Assistance/Disaster Response, and Airhead Operations. The MH-60R primary missions include SUW, Anti-Submarine Warfare (ASW), Electronic Warfare (EW), Command and Control (CC), and Non-Combat Operations (NCO). Secondary missions include: Amphibious Warfare (AMW), Air Warfare (AW), Health Services (HS), Fleet Support - Operations (FS-O), Intelligence Operations (INT), Logistics (LOG), and Naval Special Warfare (NSW). The overall goal of the modifications budget is for Safety Related Systems Upgrades, AMCM/Armed Helo (Correction of Deficiencies) for the MH-60S, Warfighter upgrades for the MH-60R, Warfighter upgrades for the MH-60S, MH-60 Aircraft obsolescence and MH60S Service Life Extension Program (SLEP).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0530 / MH-60 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / 009-03 SAFETY RELATED SYSTEM UPGRADE (SAFETY)				- / 88.858	- / 9.153	- / 2.835	- / 3.284	- / 0.000	- / 3.284
P-3a	2 / 016-04 ARMED HELO/AMCM (OPERATIONAL ENHANCEMENT)				- / 49.604	- / 0.176	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / 001-06 MH-60R WARFIGHTER (OPERATIONAL ENHANCEMENT, RELIABILITY)				- / 412.226	- / 26.347	- / 43.020	- / 37.632	- / 0.000	- / 37.632
P-3a	4 / 009-07 MH-60S WARFIGHTER (OPERATIONAL ENHANCEMENT)				- / 298.720	- / 57.975	- / 40.772	- / 37.196	- / 0.000	- / 37.196
P-3a	5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT (SUSTAINMENT)				- / 116.474	- / 34.872	- / 54.985	- / 53.472	- / 0.000	- / 53.472
P-3a	6 / 001-23 MH60S SLEP (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	7 / Inactive OSIPs (TBD)				- / 364.029	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,329.911**	**- / 128.523**	**- / 141.612**	**- / 131.584**	**- / 0.000**	**- / 131.584**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / 009-03 SAFETY RELATED SYSTEM UPGRADE (SAFETY)				- / 3.344	- / 3.464	- / 3.527	- / 3.597	Continuing	Continuing
P-3a	2 / 016-04 ARMED HELO/AMCM (OPERATIONAL ENHANCEMENT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 49.780
P-3a	3 / 001-06 MH-60R WARFIGHTER (OPERATIONAL ENHANCEMENT, RELIABILITY)				- / 24.652	- / 23.522	- / 22.173	- / 19.135	Continuing	Continuing
P-3a	4 / 009-07 MH-60S WARFIGHTER (OPERATIONAL ENHANCEMENT)				- / 36.322	- / 33.055	- / 30.724	- / 23.611	Continuing	Continuing
P-3a	5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT (SUSTAINMENT)				- / 43.693	- / 54.195	- / 46.006	- / 50.398	Continuing	Continuing
P-3a	6 / 001-23 MH60S SLEP (TBD)				- / 0.000	- / 15.300	- / 19.900	- / 36.700	- / 1,221.833	- / 1,293.733
P-3a	7 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 364.029
P-40	**Total Gross/Weapon System Cost**				**- / 108.011**	**- / 129.536**	**- / 122.330**	**- / 133.441**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2021 funding request is for critical safety, obsolescence, avionics, weapons and mission system modifications. The decrease from FY 2020 to FY 2021 is based on obsolescence and sustainment requirements, Installation schedules and phasing of training requirements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 1 / 009-03 SAFETY RELATED SYSTEM UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	88.858	9.153	2.835	3.284	0.000	3.284	3.344	3.464	3.527	3.597	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	88.858	9.153	2.835	3.284	0.000	3.284	3.344	3.464	3.527	3.597	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**88.858**	**9.153**	**2.835**	**3.284**	**0.000**	**3.284**	**3.344**	**3.464**	**3.527**	**3.597**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Safety Related Systems Upgrade funds modifications to improve the safety of operating MH-60 Series aircraft in all operations. In addition to those modifications specifically cited below, this Operational Safety Improvement Program provides the vehicle to expeditiously fund and correct MH-60 Series engine, airframe and avionics safety-related deficiencies (Hazard Risk Index 1-20). Future modifications will include modification of rotor damper bearings with elastomeric bearings leading to increased component life, replacing the current non-locking rescue hook with a locking rescue hook to improve safety, mandated controlled-flight-into-terrain (CFIT) avoidance systems, mandated mid-air-collision avoidance capabilities (MCAC), mandated crash data recording capabilities, improved tail gear box bevel gear mesh patterns to reduce catastrophic damage under increased load conditions, and MH-60S gunner seats.
Areas of potential OSIP modifications being investigated for future improvements include: 1) Power & Propulsion systems/Engines (gearboxes, Auxiliary Power Unit (APU), T700, rotors, fuel systems, and dampers), 2) Aircrew Survivability (integration for seating, harness, hearing), and Safety issues (integration for landing gear, instrument/navigation, fuel, electrical/wiring, guns, weapons, dynamic flight control components, mission computers, Advanced Flight Control Computer (AFCS), Radar Altimeter (RADALT), crash worthy seating, emergency lighting, and hydraulic systems) and 3) Airframe/Avionics (soundproofing, landing gear, and rescue hoist, cockpit lighting/searchlights, and Airborne Low Frequency Sonar (ALFS)).
Additionally, the safety modifications include aircraft avionics and mission systems that enable overland operations in degraded visual flight environments (DVE) that are associated with unimproved terrain, both day and night, and in all weather conditions. This includes terrain avoidance warning systems, precision overland navigation awareness displays, enhanced radar laser detection systems for obstacle and power line avoidance, and additional developmental items that pertain to operations in degraded visual environments.
DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60 series currently has 35 active Safety Action Records being monitored across all MH-60 series aircraft. As solutions become available the aircraft modifications will be implemented.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: OSIP 009-03 baseline funding increases by $0.4M from FY 2020 to FY 2021 due to fleet requirement of safety kits.

Current Active Modifications:
1. T700 Engine; 2. Aircrew Survivability Kits; 3. Airframe Safety Kits

[OTHER SUPPORT] Cost element 3.5 (Other Support) funding is required for acquisition, configuration/documentation management, scheduling of aircraft and installation activities, engineering, and test support required to incorporate safety modifications on the MH-60R/S aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 1 / 009-03 SAFETY RELATED SYSTEM UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60R, MH-60S	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 009-03 SAFETY RELATED SYSTEM UPGRADE												
A Kits												
Recurring												
1.1.1) SH-60 Series Archived ECPs - Organic	- / 43.818	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 43.818
1.1.2) T700 Engine - Organic	83 / 0.411	12 / 0.271	50 / 1.149	50 / 1.170	- / -	50 / 1.170	50 / 1.191	50 / 1.212	50 / 1.234	50 / 1.259	675 / 20.182	1,070 / 28.079
1.1.3) Aircrew Survivability Kits - Organic	- / 0.061	2 / 0.341	2 / 0.347	4 / 0.709	- / -	4 / 0.709	4 / 0.723	4 / 0.798	4 / 0.814	4 / 0.830	432 / 90.411	456 / 95.034
1.1.4) Airframe Safety Kits - Organic	- / -	2 / 0.226	4 / 0.460	8 / 0.936	- / -	8 / 0.936	8 / 0.952	8 / 0.968	8 / 0.984	8 / 1.004	406 / 87.330	452 / 92.860
1.1.5) Tail Gearbox Sight Gauges - Organic	183 / 0.329	162 / 0.364	183 / 0.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	528 / 1.112
1.1.6) MH-60S Gunner Seats - Organic	200 / 15.759	65 / 7.498	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	265 / 23.257
Subtotal: Recurring	*- / 60.378*	*- / 8.700*	*- / 2.375*	*- / 2.815*	*- / -*	*- / 2.815*	*- / 2.866*	*- / 2.978*	*- / 3.032*	*- / 3.093*	*- / 197.923*	*- / 284.160*
Non-Recurring												
1.2.1) INSTALLATION KITS N/R - Organic	- / 9.588	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.588
Subtotal: Non-Recurring	*- / 9.588*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.588*
Subtotal: 009-03 SAFETY RELATED SYSTEM UPGRADE	*466 / 69.966*	*243 / 8.700*	*239 / 2.375*	*62 / 2.815*	*- / -*	*62 / 2.815*	*62 / 2.866*	*62 / 2.978*	*62 / 3.032*	*62 / 3.093*	*1,513 / 197.923*	*2,771 / 293.748*
Subtotal: Procurement, All Modification Items	*- / 69.966*	*- / 8.700*	*- / 2.375*	*- / 2.815*	*- / -*	*- / 2.815*	*- / 2.866*	*- / 2.978*	*- / 3.032*	*- / 3.093*	*- / 197.923*	*- / 293.748*
Support *(All Modification Items)*												
3.1) SAFTEY RELATED ECO	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.030
3.2) DATA	- / 1.670	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.670
3.3) TRAINING EQUIPMENT	- / 0.429	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.429
3.4) ILS	- / 0.981	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.981
3.5) OTHER SUPPORT	- / 15.782	- / 0.453	- / 0.460	- / 0.469	- / -	- / 0.469	- / 0.478	- / 0.486	- / 0.495	- / 0.504	Continuing	Continuing
Subtotal: Support	*- / 18.892*	*- / 0.453*	*- / 0.460*	*- / 0.469*	*- / -*	*- / 0.469*	*- / 0.478*	*- / 0.486*	*- / 0.495*	*- / 0.504*	*Continuing*	*Continuing*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**88.858**	**9.153**	**2.835**	**3.284**	**0.000**	**3.284**	**3.344**	**3.464**	**3.527**	**3.597**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 1 / 009-03 SAFETY RELATED SYSTEM UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: 009-03 SAFETY RELATED SYSTEM UPGRADE		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 2 / 016-04 ARMED HELO/AMCM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	49.604	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	49.780
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	49.604	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	49.780
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**49.604**	**0.176**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**49.780**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Based on Developmental and Operational Testing, Fleet aircraft require modifications to correct identified deficiencies incorporated in production aircraft. These modifications include corrections to Night Vision Device Exterior Lighting and Airborne Mine Countermeasures (AMCM) Mission Equipment. Night Vision Device Capable Aircraft Lighting are complete on 134 Aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60S aircraft completed Operational Evaluation in March 2002; Milestone III was completed 12 August 2002.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: COMPLETE

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 2 / 016-04 ARMED HELO/AMCM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60S	**Modification Type:** OPERATIONAL ENHANCEMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 016-04 ARMED HELO/ AMCM												
A Kits												
Recurring												
1.1.1) Archived ECPs - Organic	- / 33.512	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 33.512
1.1.2) Night Vision Device (NVD) Kits - NonOrganic	134 / 5.548	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	134 / 5.548
Subtotal: Recurring	*- / 39.060*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 39.060*
Non-Recurring												
1.2.1) Installations Kits N/R - Organic	- / 4.205	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.205
Subtotal: Non-Recurring	*- / 4.205*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.205*
Subtotal: 016-04 ARMED HELO/AMCM	*134 / 43.265*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*134 / 43.265*
Subtotal: Procurement, All Modification Items	*- / 43.265*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 43.265*
Support *(All Modification Items)*												
3.1) Engineering Change Orders	- / 0.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.099
3.2) Data	- / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.488
3.3) Training Equipment	- / 0.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.099
3.5) ILS	- / 0.053	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.053
3.6) Other Support	- / 2.290	- / 0.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.389
Subtotal: Support	*- / 3.029*	*- / 0.099*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.128*
Installation												
Modification Item 1 of 1: 016-04 ARMED HELO/AMCM	- / 3.310	- / 0.077	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.387
Subtotal: Installation	*- / 3.310*	*- / 0.077*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.387*
Total												
Total Cost (Procurement + Support + Installation)	**49.604**	**0.176**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**49.780**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 2 / 016-04 ARMED HELO/AMCM

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: 016-04 ARMED HELO/AMCM

Manufacturer Information

Manufacturer Name: NVD Lighting--Contractor Field Mod Team | Manufacturer Location: New MFG-Loc

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Night Vision Device (NVD) Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	130 / 3.310	4 / 0.077	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	134 / 3.387
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	130 / 3.310	4 / 0.077	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	134 / 3.387

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	130	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	134
Out	130	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	134

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 3 / 001-06 MH-60R WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	412.226	26.347	43.020	37.632	0.000	37.632	24.652	23.522	22.173	19.135	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	412.226	26.347	43.020	37.632	0.000	37.632	24.652	23.522	22.173	19.135	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**412.226**	**26.347**	**43.020**	**37.632**	**0.000**	**37.632**	**24.652**	**23.522**	**22.173**	**19.135**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The MH-60R provides warfighting effectiveness in the primary mission areas of Anti-Submarine Warfare (ASW), Electronic Warfare, and Surface Warfare, including fast attack craft/fast in-shore attack craft (FAC/FIAC) threat response. Secondary MH-60R mission areas include search and rescue, vertical replenishment, naval surface fire support, logistics support, naval special warfare, strike warfare, personnel transport, and medical evacuation.

This OSIP funds modifications to the MH-60R Series aircraft to include airframe structures, avionics, weapons and mission systems.

The land based Precision Approach Radar (PAR) is the only precision approach available to the MH-60R and is slated to be replaced by Joint Precision Approach Landing System (JPALS) at Naval Air Stations. The Very high frequency Omnidirectional Radio range (VOR) navigation capability included with the Instrument Landing System (ILS) system provides instrument navigation after disestablishment of Tactical Air Command and Navigation system in the Continental United States. ILS provides precision approach capability ashore and to supplement currently available military PAR controlled approaches.

Automatic Radar Periscope Detection and Discriminator (ARPDD) provides the MH-60R the capability to detect very small, low visibility targets, such as periscopes and small vessels, and alert the aircrew to their presence from long distances, reducing aircrew workload and increasing battle group survivability. The AN/APS-153 MMR consists of the Signal Data Processor/ARPDD Enhanced Processor, Receiver Transmitter (R/T), Antenna Pedestal, Antenna Array, and IFF R/T retrofits. Retrofits to the IFF R/T will provide Mode 5 interrogation capability.

Advanced Data Transfer System (ADTS) provides high-capacity storage and transfer of data with multi-level security enabling moving map integration (MMI)and replacing obsolete components.

The Acoustic Subsystem is a key component to meeting MH-60R ASW mission requirements. The Acoustic Subsystem consists of Acoustic Processor, Airborne Low Frequency Sonar (ALFS) Transmitter/ Receiver, Reeling Machines, Reeling Machine Interface Unit, Reeling Machine Control Unit, Transducer Assembly, and reel & cable. Night Vision Device improvements will incorporate enhancements to the Thunderstorm Light, ALFS Light, Recovery, Assist, Securing, and Traversing Panel, and Search Light. The MH-60R/ALFS is the primary ASW sensor in the Carrier Strike Group. ALFS component failure rates have depleted the spares inventory, impacting deployed and non-deployed readiness, including the ability to support concurrent MH-60R deployments. ALFS reliability improvement efforts include but are not limited to the following: (1) Reeling machine sonar cable monitoring system to allow for immediate clearing of cable miss-wraps prior to cable damage, (2) Sonar Transmitter Receiver upgrade to provide cable uplink dynamic equalizer to increase overall usable life of the sonar cable, (3) Transducer Assembly reliability improvement: Hydraulic Motor and stave retention, and (4) Reeling Machine locking device limit switches and aux electric motor power relay.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILSTONES: ADTS MMI kit installations began in FY 2018 and VOR ILS kit installations began in FY 2019.

METHOD OF IMPLEMENTATION: ADTS MMI and VOR ILS kits are installed via Contractor Field Mod Team.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 3 / 001-06 MH-60R WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: OSIP 001-06 baseline funding decreases $5.4M from FY 2020 to FY 2021 due to phasing of training equipment requirements for ADTS/MMI and System Configuration 18 and installs.

[VOR INSTRUMENT LANDING SYSTEM (ILS)] Cost Element 1.1.2 Requirement increases from FY 2020 to FY 2021 to meet fleet demand for VOR/ILS capability.

[ADTS/MMI RME Kit] Cost Element 2.1.3 Unit cost is more expensive on the MH-60R than the MH-60S due to the requirement for an additional digital transfer unit in each kit.

[TRAINING EQUIPMENT] Cost element 3.3 Decreases from FY 2020 to FY 2021 due to phasing of training device modifications for System Configuration 18 and ADTS/MMI.

[OTHER SUPPORT] Cost element 3.6 Funding is required for acquisition, configuration/documentation management, scheduling of aircraft and installation activities, engineering, and test support required to incorporate the modifications on the MH-60R aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 3 / 001-06 MH-60R WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60R	**Modification Type:** OPERATIONAL ENHANCEMENT, RELIABILITY	**Related RDT&E PEs:** 0604216N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ARCHIVED ECPs - Organic(*)	- / 115.709	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 115.709
1.1.2) VOR INSTRUMENT LANDING SYSTEM (ILS) - NonOrganic *Installation 1 of 2*	80 / 6.652	- / -	20 / 1.930	40 / 3.875	- / -	40 / 3.875	40 / 3.953	40 / 4.032	30 / 3.084	19 / 1.992	- / -	269 / 25.518
1.1.3) ADTS/MMI Kit - NonOrganic *Installation 2 of 2*	45 / 5.532	40 / 2.600	50 / 3.315	50 / 3.381	- / -	50 / 3.381	20 / 1.380	14 / 0.985	14 / 1.004	9 / 0.659	- / -	242 / 18.856
2.1.1) APRDD KIT - Organic(*)	130 / 190.837	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	130 / 190.837
2.1.2) ALFS Reliability Improvements - Organic(*)	382 / 6.170	60 / 0.494	40 / 0.336	40 / 0.343	- / -	40 / 0.343	- / -	- / -	- / -	- / -	- / -	522 / 7.343
2.1.3) ADTS/MMI RME Kit - Organic(*)	45 / 7.840	40 / 9.390	50 / 12.074	50 / 12.316	- / -	50 / 12.316	20 / 5.025	14 / 3.588	14 / 3.659	9 / 2.399	- / -	242 / 56.291
2.2.1) ARPDD O&A - Organic(*)	- / 13.113	- / 0.961	- / 0.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.931
2.2.2) ALFS Reliability NRE - Organic(*)	- / 2.022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.022
Subtotal: Procurement	*- / 347.875*	*- / 13.445*	*- / 18.512*	*- / 19.915*	*- / -*	*- / 19.915*	*- / 10.358*	*- / 8.605*	*- / 7.747*	*- / 5.050*	*- / 0.000*	*- / 431.507*
Support												
3.1) ENGINEERING CHANGE ORDERS	- / 2.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.849
3.2) DATA	- / 0.712	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.712
3.3) TRAINING EQUIPMENT	- / 1.000	- / 0.601	- / 7.432	- / 4.327	- / -	- / 4.327	- / 0.414	- / 0.421	- / 0.429	- / 0.436	Continuing	Continuing
3.4) SUPPORT EQUIPMENT	- / 1.375	- / 0.624	- / 0.636	- / 0.649	- / -	- / 0.649	- / 0.661	- / 0.673	- / 0.685	- / 0.697	Continuing	Continuing
3.5) ILS	- / 9.859	- / 2.720	- / 2.700	- / 2.538	- / -	- / 2.538	- / 2.732	- / 2.834	- / 3.257	- / 3.289	Continuing	Continuing
3.6) OTHER SUPPORT	- / 45.784	- / 6.842	- / 6.975	- / 7.061	- / -	- / 7.061	- / 6.807	- / 6.943	- / 6.000	- / 6.060	Continuing	Continuing
3.7) INTERIM CONTRACTOR SUPPORT	- / 2.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.575
Subtotal: Support	*- / 64.154*	*- / 10.787*	*- / 17.743*	*- / 14.575*	*- / -*	*- / 14.575*	*- / 10.614*	*- / 10.871*	*- / 10.371*	*- / 10.482*	*Continuing*	*Continuing*
Installation												
Installation 1 of 2: VOR INSTRUMENT LANDING SYSTEM (ILS)	- / -	- / 0.752	- / 5.828	- / 2.162	- / 0.000	- / 2.162	- / 2.538	- / 3.760	- / 3.760	- / 3.412	- / 3.196	- / 25.408
Installation 2 of 2: ADTS/MMI Kit	- / 0.197	- / 1.363	- / 0.937	- / 0.980	- / 0.000	- / 0.980	- / 1.142	- / 0.286	- / 0.295	- / 0.191	- / 0.000	- / 5.391
Subtotal: Installation	*- / 0.197*	*- / 2.115*	*- / 6.765*	*- / 3.142*	*- / -*	*- / 3.142*	*- / 3.680*	*- / 4.046*	*- / 4.055*	*- / 3.603*	*- / 3.196*	*- / 30.799*
Total												
Total Cost (Procurement + Support + Installation)	**412.226**	**26.347**	**43.020**	**37.632**	**0.000**	**37.632**	**24.652**	**23.522**	**22.173**	**19.135**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 3 / 001-06 MH-60R WARFIGHTER

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: VOR INSTRUMENT LANDING SYSTEM (ILS)

Manufacturer Information

Manufacturer Name: VOR/ILS--Lockheed Martin | Manufacturer Location: Owego, NY

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates		May 2021	May 2022	May 2023	May 2024	May 2025	May 2026

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VOR INSTRUMENT LANDING SYSTEM (ILS)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	8 / 0.752	62 / 5.828	10 / 0.940	0 / 0.000	10 / 0.940	- / -	- / -	- / -	- / -	0 / 0.000	80 / 7.520
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	13 / 1.222	0 / 0.000	13 / 1.222	7 / 0.658	- / -	- / -	- / -	0 / 0.000	20 / 1.880
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.880	20 / 1.880	- / -	- / -	0 / 0.000	40 / 3.760
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.880	20 / 1.880	- / -	0 / 0.000	40 / 3.760
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.880	20 / 1.880	0 / 0.000	40 / 3.760
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.532	15 / 1.410	30 / 2.942
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 1.786	19 / 1.786
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	8 / 0.752	62 / 5.828	23 / 2.162	0 / 0.000	23 / 2.162	27 / 2.538	40 / 3.760	40 / 3.760	35 / 3.412	34 / 3.196	269 / 25.408

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	8	12	20	20	10	10	-	4	9	7	-	10	10	10	10	10	10	10	10	10	10	10	10	10	5	34	269
Out	-	-	-	-	8	12	20	20	10	10	-	4	9	7	-	10	10	10	10	10	10	10	10	10	10	10	10	10	5	34	269

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 3 / 001-06 MH-60R WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: ADTS/MMI Kit

Manufacturer Information

Manufacturer Name: ADTS/MMI--GDIT	Manufacturer Location: New Bern, NC
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	May 2019	May 2020	May 2021	May 2022	May 2023	May 2024	May 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ADTS/MMI Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 0.197	41 / 1.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	45 / 1.360
FY 2019	- / -	10 / 0.200	30 / 0.612	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 0.812
FY 2020	- / -	- / -	16 / 0.325	34 / 0.694	0 / 0.000	34 / 0.694	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.019
FY 2021	- / -	- / -	- / -	14 / 0.286	0 / 0.000	14 / 0.286	36 / 0.734	- / -	- / -	- / -	0 / 0.000	50 / 1.020
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.408	- / -	- / -	- / -	0 / 0.000	20 / 0.408
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.286	- / -	- / -	0 / 0.000	14 / 0.286
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.295	- / -	0 / 0.000	14 / 0.295
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.191	0 / 0.000	9 / 0.191
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.197	51 / 1.363	46 / 0.937	48 / 0.980	0 / 0.000	48 / 0.980	56 / 1.142	14 / 0.286	14 / 0.295	9 / 0.191	0 / 0.000	242 / 5.391

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	4	13	17	11	10	15	15	8	8	17	17	7	7	18	18	10	10	-	-	7	7	-	-	7	7	-	-	9	-	-	242
Out	4	13	17	11	10	15	15	8	8	17	17	7	7	18	18	10	10	-	-	7	7	-	-	7	7	-	-	9	-	-	242

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	298.720	57.975	40.772	37.196	0.000	37.196	36.322	33.055	30.724	23.611	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	298.720	57.975	40.772	37.196	0.000	37.196	36.322	33.055	30.724	23.611	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**298.720**	**57.975**	**40.772**	**37.196**	**0.000**	**37.196**	**36.322**	**33.055**	**30.724**	**23.611**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The basic MH-60S conducts search and rescue, vertical replenishment, Humanitarian Assistance/Disaster Response, and airhead operations. Armed Helicopter and Airborne Mine Countermeasures (AMCM) have been added as primary mission areas for the MH-60S as block upgrades to the platform. Armed Helicopter upgrades include weapons and survivability systems with capabilities to conduct Surface Warfare (SUW) missions involving engagement of Fast Attack Craft / Fast In-shore Attack Craft (FAC/FIAC) threats, provide Naval Special Warfare (NSW) support, and execute maritime and overland Combat Search and Rescue missions in a medium threat environment. AMCM upgrades enable employment of airborne mine detection and neutralization systems, operated as part of the Littoral Combat Ship Mine Countermeasures Mission Package.

This Operational Safety Improvement Program (OSIP) funds modifications to the MH-60S series airframe structures, avionics and mission systems, and provides for the retrofit of aircraft, training devices, and support equipment. Armed Helo Block 3A includes airframe provisions, removable mission kits, and trainer updates into Block 3A aircraft, and includes the following systems: Fixed Forward Firing Weapons (FFFW) guns and rockets, Helmet Display Tracking System (HDTS), Full Motion Video Data Link and External Gun Mount. External Gun Mount will expand employment envelopes and improve operational flexibility and weapon capability.

ECP H-60-111 incorporated Downed Aviator Locator System (DALS) in all Block 3 aircraft.

Advanced Data Transfer System (ADTS) provides high-capacity storage and transfer of data with multi-level security enabling moving map integration and replacing obsolete components.

Modifications to MH-60S aircraft that operate in CENTCOM area of responsibility incorporate a Distributed Aperture Infrared Countermeasure (DAIRCM) capability. This system fulfills a CENTCOM JUONS for improved Missile Warning (MW) and Aircraft Survivability Equipment (ASE), with an inexhaustible countermeasure capability to pace the threat from the latest Surface to Air Weapons.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60S Aircraft completed Milestone III in August 2002. Armed Helo achieved Initial Operational Capability (IOC) in June 2007. AMCM: Initial Operational Test & Evaluation (IOT&E) extended to complete by FY 2021 for Littoral Combat Ship.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: OSIP 009-07 baseline funding decreases $3.6M from FY 2020 to FY 2021 due to reduction in ADTS/MMI kit procurements.

[HDTS A Kit] Cost Element 1.1.4 Changes to HDTS A Kit quantities reflect an increase to meet operational requirements.

[DAIRCM] Cost Element 1.1.6 OCO funded kits are installed with prior year funding.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

[HDTS RME] Cost Element 2.1.2 Changes to HDTS RME quantities reflect an increase to meet operational requirements.

[External Gun Mount RME] Cost Element 2.1.5 Will expand employment envelopes and improve operational flexibility and weapon capability.

[Training Equipment] Cost element 3.3 FY 2021 funding is required for System Configuration 18 and ADTS/MMI trainer modifications.

[Other Support] Cost element 3.6 funding is required for acquisition, configuration/documentation management, scheduling of aircraft and installation activities, engineering, and test support required to incorporate the modifications on the MH-60S aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60S	**Modification Type:** OPERATIONAL ENHANCEMENT	**Related RDT&E PEs:** 0604216N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ARCHIVED ECPs - Organic(*)	- / 159.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 159.213
1.1.2) ECP 4039 - NonOrganic *Installation 1 of 6*	90 / 10.314	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 10.314
1.1.3) Data Link/FMV A Kit - NonOrganic *Installation 2 of 6*	- / 0.383	20 / 2.421	20 / 2.415	20 / 2.417	- / -	20 / 2.417	20 / 2.418	20 / 2.418	20 / 2.418	20 / 2.418	74 / 9.037	214 / 26.345
1.1.4) HDTS A Kit - NonOrganic *Installation 3 of 6*	78 / 6.250	26 / 1.701	18 / 1.202	24 / 1.634	- / -	24 / 1.634	24 / 1.667	24 / 1.700	13 / 0.939	- / -	- / -	207 / 15.093
1.1.5) ADTS/MMI Kits - NonOrganic *Installation 4 of 6*	19 / 1.546	50 / 3.400	50 / 3.468	25 / 1.769	- / -	25 / 1.769	25 / 1.804	25 / 1.840	20 / 1.502	- / -	- / -	214 / 15.329
1.1.6) DAIRCM - NonOrganic *Installation 5 of 6*	20 / 5.758	6 / 2.958	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 8.716
1.1.7) ECP H60-111 DALS - NonOrganic *Installation 6 of 6*	56 / 1.328	20 / 0.374	5 / 0.093	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	81 / 1.795
2.1.1) Data Link/FMV RME - Organic(*)	- / -	20 / 3.888	20 / 3.888	20 / 3.905	- / -	20 / 3.905	20 / 3.923	20 / 3.923	20 / 3.923	20 / 3.923	74 / 14.806	214 / 42.179
2.1.2) HDTS RME - Organic(*)	78 / 22.053	26 / 6.942	12 / 3.268	24 / 6.667	- / -	24 / 6.667	24 / 6.800	11 / 3.179	6 / 1.746	- / -	- / -	181 / 50.655
2.1.3) HDTS Helmet Tracker (HTK) - Organic(*)	439 / 13.635	100 / 3.051	60 / 1.867	60 / 1.905	- / -	60 / 1.905	60 / 1.943	60 / 1.982	89 / 2.998	- / -	- / -	868 / 27.381
2.1.4) ADTS/MMI RME Kit - Organic(*)	19 / 2.556	50 / 6.861	50 / 6.893	25 / 3.569	- / -	25 / 3.569	25 / 3.640	25 / 3.713	20 / 3.030	- / -	- / -	214 / 30.262
2.1.5) External Gun Mount RME - Organic(*)	- / -	- / -	- / -	5 / 1.750	- / -	5 / 1.750	10 / 3.500	10 / 3.500	10 / 3.500	20 / 7.000	65 / 22.750	120 / 42.000
2.2.1) Installation Equipment N/R - Organic(*)	- / 0.603	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.603
2.2.2) Data Link/FMV NRE - Organic(*)	- / -	- / 7.583	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.583
Subtotal: Procurement	*- / 223.639*	*- / 39.179*	*- / 23.094*	*- / 23.616*	*- / -*	*- / 23.616*	*- / 25.695*	*- / 22.255*	*- / 20.056*	*- / 13.341*	*- / 46.593*	*- / 437.468*
Support												
3.1) Engineering Change Orders	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567
3.2) Data	- / 0.317	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.317
3.3) Training Equipment	- / 4.747	- / 3.360	- / 6.541	- / 3.522	- / -	- / 3.522	- / 0.605	- / 0.618	- / 0.357	- / 0.357	Continuing	Continuing
3.4) Support Equipment	- / 5.835	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
3.5) ILS	- / 9.045	- / 1.862	- / 1.645	- / 1.672	- / -	- / 1.672	- / 1.709	- / 1.743	- / 1.887	- / 1.924	Continuing	Continuing
3.6) Other Support	- / 28.673	- / 7.866	- / 6.685	- / 6.785	- / -	- / 6.785	- / 6.728	- / 6.829	- / 6.891	- / 6.994	Continuing	Continuing
Subtotal: Support	*- / 49.184*	*- / 13.088*	*- / 14.871*	*- / 11.979*	*- / -*	*- / 11.979*	*- / 9.042*	*- / 9.190*	*- / 9.135*	*- / 9.275*	*Continuing*	*Continuing*
Installation												
Installation 1 of 6: ECP 4039	- / 21.228	- / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 22.002
Installation 2 of 6: Data Link/FMV A Kit	- / -	- / -	- / 0.119	- / 0.472	- / 0.000	- / 0.472	- / 0.295	- / 0.307	- / 0.307	- / 0.336	- / 1.443	- / 3.279

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60S	**Modification Type:** OPERATIONAL ENHANCEMENT	**Related RDT&E PEs:** 0604216N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 3 of 6: HDTS A Kit	- / 1.100	- / 0.749	- / 0.762	- / 0.537	- / 0.000	- / 0.537	- / 0.720	- / 0.733	- / 0.746	- / 0.659	- / 0.000	- / 6.006
Installation 4 of 6: ADTS/MMI Kits	- / 0.379	- / 0.714	- / 1.122	- / 0.592	- / 0.000	- / 0.592	- / 0.570	- / 0.570	- / 0.480	- / -	- / 0.000	- / 4.427
Installation 5 of 6: DAIRCM	- / 1.150	- / 1.900	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	- / 3.050
Installation 6 of 6: ECP H60-111 DALS	- / 2.040	- / 1.571	- / 0.804	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.415
Subtotal: Installation	*- / 25.897*	*- / 5.708*	*- / 2.807*	*- / 1.601*	*- / -*	*- / 1.601*	*- / 1.585*	*- / 1.610*	*- / 1.533*	*- / 0.995*	*- / 1.443*	*- / 43.179*
Total												
Total Cost (Procurement + Support + Installation)	**298.720**	**57.975**	**40.772**	**37.196**	**0.000**	**37.196**	**36.322**	**33.055**	**30.724**	**23.611**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: ECP 4039

Manufacturer Information

Manufacturer Name: ECP 4039 Sikorsky Aircraft Corporation | Manufacturer Location: Stratford, CT

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ECP 4039

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	86 / 21.228	4 / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	90 / 22.002
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	86 / 21.228	4 / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	90 / 22.002

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	86	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
Out	86	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 6: Data Link/FMV A Kit

Manufacturer Information

Manufacturer Name: Data Link/FMV- Cubic Defense Applications, Inc.	Manufacturer Location: San Diego, CA
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Apr 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates	Feb 2020	Jan 2021	Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Depot Field Mod Team:: Installation Name: Data Link/FMV A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	8 / 0.119	12 / 0.177	0 / 0.000	12 / 0.177	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.296
FY 2020	- / -	- / -	- / -	20 / 0.295	0 / 0.000	20 / 0.295	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.295
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.295	- / -	- / -	- / -	0 / 0.000	20 / 0.295
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.307	- / -	- / -	0 / 0.000	20 / 0.307
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.307	- / -	0 / 0.000	20 / 0.307
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.336	0 / 0.000	20 / 0.336
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.307	20 / 0.307
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	74 / 1.136	74 / 1.136
Total	- / -	- / -	8 / 0.119	32 / 0.472	0 / 0.000	32 / 0.472	20 / 0.295	20 / 0.307	20 / 0.307	20 / 0.336	94 / 1.443	214 / 3.279

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	2	3	3	12	9	6	5	2	7	8	3	2	7	8	3	2	7	8	3	2	7	8	3	94	214
Out	-	-	-	-	-	-	2	3	3	12	9	6	5	2	7	8	3	2	7	8	3	2	7	8	3	2	7	8	3	94	214

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 6: HDTS A Kit

Manufacturer Information

Manufacturer Name: HDTS Akit--Elbit Systems of America	Manufacturer Location: Fort Worth, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: HDTS A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	52 / 1.100	26 / 0.749	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	78 / 1.849
FY 2019	- / -	- / -	26 / 0.762	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	26 / 0.762
FY 2020	- / -	- / -	- / -	18 / 0.537	0 / 0.000	18 / 0.537	- / -	- / -	- / -	- / -	0 / 0.000	18 / 0.537
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.720	- / -	- / -	- / -	0 / 0.000	24 / 0.720
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.733	- / -	- / -	0 / 0.000	24 / 0.733
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.746	- / -	0 / 0.000	24 / 0.746
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.659	0 / 0.000	13 / 0.659
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	52 / 1.100	26 / 0.749	26 / 0.762	18 / 0.537	0 / 0.000	18 / 0.537	24 / 0.720	24 / 0.733	24 / 0.746	13 / 0.659	0 / 0.000	207 / 6.006

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	52	6	6	7	7	9	9	8	-	6	6	6	-	8	8	8	-	8	8	8	-	8	8	8	-	7	6	-	-	-	207
Out	52	6	6	7	7	9	9	8	-	6	6	6	-	8	8	8	-	8	8	8	-	8	8	8	-	7	6	-	-	-	207

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 6: ADTS/MMI Kits

Manufacturer Information

Manufacturer Name: ADTS/MMI--GDIT | Manufacturer Location: New Bern, NC

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	
Delivery Dates	May 2019	May 2020	May 2021	May 2022	May 2023	May 2024	

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ADTS/MMI Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	19 / 0.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 0.379
FY 2019	- / -	35 / 0.714	15 / 0.306	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.020
FY 2020	- / -	- / -	40 / 0.816	10 / 0.204	0 / 0.000	10 / 0.204	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.020
FY 2021	- / -	- / -	- / -	19 / 0.388	0 / 0.000	19 / 0.388	6 / 0.122	- / -	- / -	- / -	0 / 0.000	25 / 0.510
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.448	3 / 0.060	- / -	- / -	0 / 0.000	25 / 0.508
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 0.510	- / -	- / -	0 / 0.000	25 / 0.510
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.480	- / -	0 / 0.000	20 / 0.480
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	19 / 0.379	35 / 0.714	55 / 1.122	29 / 0.592	0 / 0.000	29 / 0.592	28 / 0.570	28 / 0.570	20 / 0.480	- / -	0 / 0.000	214 / 4.427

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	19	-	-	18	17	15	-	20	20	10	-	10	9	6	-	11	11	3	-	13	12	-	-	10	10	-	-	-	-	-	214
Out	19	-	-	18	17	15	-	20	20	10	-	10	9	6	-	11	11	3	-	13	12	-	-	10	10	-	-	-	-	-	214

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 6: DAIRCM

Manufacturer Information

Manufacturer Name: DAIRCM--CECOM	Manufacturer Location: Cherry Point, NC
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019						
Delivery Dates	Jun 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: DAIRCM

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 1.150	0 / 1.520	20 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 2.670
FY 2019	- / -	0 / 0.380	- / -	6 / 0.000	0 / 0.000	6 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.380
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 1.150	0 / 1.900	20 / 0.000	6 / 0.000	0 / 0.000	6 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	26 / 3.050

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	6	6	8	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Out	-	-	-	-	-	-	6	6	8	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 4 / 009-07 MH-60S WARFIGHTER

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 6: ECP H60-111 DALS

Manufacturer Information

Manufacturer Name: ECP H60-111 DALS--FRCMA/FRCSW

Manufacturer Location: Norfolk, VA/San Diego, CA

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019					
Delivery Dates	Jun 2019	Jun 2020					

Installation Information

Method of Implementation: Field Team:: Installation Name: ECP H60-111 DALS

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	51 / 2.040	5 / 0.393	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	56 / 2.433
FY 2019	- / -	15 / 1.178	5 / 0.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 1.582
FY 2020	- / -	- / -	5 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.400
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	51 / 2.040	20 / 1.571	10 / 0.804	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	81 / 4.415

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	51	5	-	8	7	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	81
Out	51	5	-	8	7	5	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	81

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	116.474	34.872	54.985	53.472	0.000	53.472	43.693	54.195	46.006	50.398	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	116.474	34.872	54.985	53.472	0.000	53.472	43.693	54.195	46.006	50.398	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**116.474**	**34.872**	**54.985**	**53.472**	**0.000**	**53.472**	**43.693**	**54.195**	**46.006**	**50.398**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The MH-60 Aircraft are included in the Department of the Navy Aviation Plan through calendar year 2045. The MH-60 aircraft sustainment strategy targets initiatives to remedy the top age-related maintenance degraders fatigue life limiters, obsolescence and safety issues that impede the aircraft's ability to operate into the future. This effort will sustain the MH-60 in an affordable manner until the follow-on aircraft becomes available. This program implements a concentrated effort to utilize improvements to the MH-60 component obsolescence (e.g. mission computers), structural limitations (e.g. tail pylon, canted bulkhead, station 308 structural improvement), aircrew safety systems, and aircraft wiring analysis health.

In order to mitigate the risk of Diminishing Manufacturing Sources and Material Shortages (DMSMS) the MH-60 program has a proactive plan to manage the risk associated with obsolescence issues. DMSMS includes material obsolescence which may occur at the part, module, component, equipment, or other system indenture level. These situations may cause material shortages that endanger MH-60 capabilities, readiness, and life cycle support. Preliminary efforts include the incorporation of system bill of materials (BOM) for active monitoring into predictive tools to prioritize and determine risk associated with possible DMSMS occurrences. When issues arise, the solution involves procurement from alternate sources, substitution of components, life of type buys, emulation of components, or ultimately system redesign requiring the modification of MH-60 systems. Obsolescence kit procurements will be focused in the areas of air vehicle, mission systems, avionics and weapons.

Aircraft modification/replacement of the Single Board Computers (SBCs) in the Gen III and Gen V Mission Computers/Flight Mission Computers in the MH-60R/S will allow for future software builds. The current computers have obsolescence issues and do not have the memory or processing speed for new software builds.

MH-60R/S is the lead platform for Multifunctional Information Distribution System (MIDS) Block Upgrade 2 (BU2), in support of Battle Group Tactical Data Link Network Centric Warfare. MH-60R/S will procure MIDS BU2 upgrades to support Federal Aviation Administration (FAA) Frequency Remapping (FR) and National Security Administration (NSA) Crypto Modernization (CM) mandates.

JUSTIFICATION FOR REQUIREMENTS AND CHANGES: OSIP 018-12 baseline funding decreases by $1.5M from FY 2020 to FY 2021 due reduction of obsolescence NRE requirements.

[Avionics B Kits] Cost element 2.1.1 Efforts contain different quantities and scope each year resulting in overall cost variability. Funding in FY 2021 thru FY 2025 for obsolescence efforts regarding Digital Mapping Junction Unit Version 2 (DMJUv2), Advanced Flight Control Computer, Stabilator amplifier, Active Vibration Control Computer, and high definition displays.

[Air Vehicle B Kits] Cost element 2.1.2 Efforts contain different quantities and scope each year resulting in overall cost variability. Funding in FY 2023 and FY 2024 is for obsolescence component kits for the Hydraulic Control Module, Fire Extinguisher Logic Module, and Distributor Box, Main Rotor Blade Fold.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

[Mission System B Kits] Cost element 2.1.3 Funding in FY 2024 and FY 2025 is for obsolescence component kits for the Recovery Assistance, Securing and Traversing Systems (RAST) control panel.

[Weapons B Kits] Cost element 2.1.4 Funding in FY 2024 and FY 2025 is for obsolescence component kits for the Armament Control Indicator.

[MIDS BU2 B Kits] Cost element 2.1.5 Effort contains more than one prime vendor resulting in overall cost variability.

[MC/FMC B Kits] Cost element 2.1.6 Unit cost varies due to Qty variation.

[MH-60R/S Obsolescence NRE] Cost Element 2.2.1 Funding in FY 2021 is for non recurring engineering to address end-of-life obsolescence issues with the MH-60 Advanced Flight Control Computer and stabilator amplifier and Multi-Spectral Targeting System/Forward-Looking Infrared and high definition displays. FY 2022 to FY 2025 funding supports end-of-life obsolescence issues with Airborne Low Frequency Sonar, Electronic Support Measures, the Armament Control Indicator, Control Monitor Panel, Hydraulic Control Module, Fire Extinguisher Logic Module Assembly, Active Vibration Control Computer , Distributor Box Main Rotor Blade Fold, De-Ice Controller/System, Technical Insert Acoustic Processor and Recovery Assist Secure and Traverse Control Panel.

[Training Equipment] Cost element 3.1 FY 2021 funding is required to update the Trainers Airborne Operational Program (AOP) and Courseware in both the MH-60R and MH-60S trainers in support of the Mission Computer/Flight Management Computer (MC/FMC) upgrade.

[Support Equipment] Cost Element 3.2 FY 2021 decrease due to the completion of Operational Test Program Set (OTPS) for mission computer.

[Other Support] Cost element 3.4 Funding is required for acquisition, configuration/documentation management, engineering, and test support required to incorporate obsolescence modifications on the MH-60R/S aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60S, MH-60R	**Modification Type:** SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT												
A Kits												
Recurring												
1.1.1) Archived ECPs - Organic	- / 10.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.857
Subtotal: Recurring	*- / 10.857*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.857*
Non-Recurring												
1.2.1) Obsolescence Components Kits - Organic	- / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.005
Subtotal: Non-Recurring	*- / 0.005*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.005*
B Kits												
Recurring												
2.1.1) Avionics B Kits - Organic	216 / 20.125	50 / 1.648	- / -	25 / 0.850	- / -	25 / 0.850	45 / 1.561	45 / 1.591	45 / 1.624	50 / 5.550	799 / 461.276	1,275 / 494.225
2.1.2) Air Vehicle B Kits - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.475	13 / 4.475	- / -	Continuing	Continuing
2.1.3) Mission System B Kits - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.868	35 / 3.038	45 / 3.906	100 / 17.853	190 / 25.665
2.1.4) Weapons B Kits - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 2.603	50 / 3.719	60 / 8.639	145 / 14.961
2.1.5) MIDS BU2 B Kits - Organic	142 / 10.415	154 / 9.765	86 / 6.437	86 / 6.437	- / -	86 / 6.437	48 / 3.593	- / -	- / -	- / -	- / -	516 / 36.647
2.1.6) MC/FMC B Kits - Organic	9 / 7.413	146 / 19.688	148 / 19.993	164 / 22.598	- / -	164 / 22.598	30 / 4.258	28 / 4.093	9 / 1.346	- / -	- / -	534 / 79.389
Subtotal: Recurring	*- / 37.953*	*- / 31.101*	*- / 26.430*	*- / 29.885*	*- / -*	*- / 29.885*	*- / 9.412*	*- / 11.027*	*- / 13.086*	*- / 13.175*	*Continuing*	*Continuing*
Non-Recurring												
2.2.1) MH-60R/S Obsolescence NRE - Organic	- / 32.073	- / -	- / 17.882	- / 13.016	- / -	- / 13.016	- / 29.661	- / 39.178	- / 30.355	- / 34.634	Continuing	Continuing
2.2.2) MC/FMC NRE - Organic	- / 10.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.250
Subtotal: Non-Recurring	*- / 42.323*	*- / -*	*- / 17.882*	*- / 13.016*	*- / -*	*- / 13.016*	*- / 29.661*	*- / 39.178*	*- / 30.355*	*- / 34.634*	*Continuing*	*Continuing*
Subtotal: 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT	*367 / 91.138*	*350 / 31.101*	*234 / 44.312*	*275 / 42.901*	*- / -*	*275 / 42.901*	*123 / 39.073*	*96 / 50.205*	*137 / 43.441*	*145 / 47.809*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 91.138*	*- / 31.101*	*- / 44.312*	*- / 42.901*	*- / -*	*- / 42.901*	*- / 39.073*	*- / 50.205*	*- / 43.441*	*- / 47.809*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
3.1) Training Equipment	- / -	- / 0.037	- / 0.440	- / 6.703	- / -	- / 6.703	- / 0.696	- / -	- / -	- / -	- / -	- / 7.876
3.2) Support Equipment	- / 6.079	- / -	- / 6.374	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.453
3.3) ILS	- / 5.971	- / 0.269	- / 0.275	- / 0.280	- / -	- / 0.280	- / 0.286	- / 0.292	- / 0.274	- / 0.252	Continuing	Continuing
3.4) Other Support	- / 13.286	- / 3.465	- / 3.584	- / 3.588	- / -	- / 3.588	- / 3.638	- / 3.698	- / 2.291	- / 2.337	Continuing	Continuing

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-60S, MH-60R	**Modification Type:** SUSTAINMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Support	- / 25.336	- / 3.771	- / 10.673	- / 10.571	- / -	- / 10.571	- / 4.620	- / 3.990	- / 2.565	- / 2.589	*Continuing*	*Continuing*
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**116.474**	**34.872**	**54.985**	**53.472**	**0.000**	**53.472**	**43.693**	**54.195**	**46.006**	**50.398**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 5 / 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: 018-12 H-60 OBSOLESCENCE AND SUSTAINMENT		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 6 / 001-23 MH60S SLEP
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.300	19.900	36.700	1,221.833	1,293.733
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.300	19.900	36.700	1,221.833	1,293.733
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**15.300**	**19.900**	**36.700**	**1,221.833**	**1,293.733**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MH-60 Service Life Assessment Program (SLAP) is assessing the MH-60S fleet airframe's ability to meet its designed service life of 10,000 hours. The highest flight time MH-60S helicopter are expected to exceed the design life limit in FY2024, at which time as many as 30 aircraft per year could be removed from flight status without a SLAP and a follow-on Service Life Extension Program (SLEP). MH-60 SLAP is comprised of two distinct assessments: Fatigue Life Assessment (FLA), which will establish the fatigue life of the aircraft and air vehicle systems and Subsystems Life Assessment (SLA), which will examine subsystems that are critical to safe operations and identify risk mitigation strategies for critical components. The MH-60 design/development engineering efforts for SLEP solutions will begin in FY2021. The procurement and installs of SLEP modification kits will begin in FY2023. These modifications will incorporate change to improve primary aircraft structure and subsystem to increase aircraft service life and flight hours. This Fatigue Life is expected to meet Chief of Naval Operations (CNO) operational inventory requirements through FY2035. These Modifications will be implemented at a Depot level in conjunction with the current planned maintenance interval schedule.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 6 / 001-23 MH60S SLEP
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH60S	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 001-23 MH60S SLEP												
A Kits												
Recurring												
1.1.1) SLEP Mod Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 15.024	3 / 12.588	8 / 30.417	243 / 888.634	259 / 946.663
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 15.024*	*- / 12.588*	*- / 30.417*	*- / 888.634*	*- / 946.663*
Subtotal: 001-23 MH60S SLEP	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*5 / 15.024*	*3 / 12.588*	*8 / 30.417*	*243 / 888.634*	*259 / 946.663*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 15.024*	*- / 12.588*	*- / 30.417*	*- / 888.634*	*- / 946.663*
Support *(All Modification Items)*												
2.2) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.030	- / 0.020	- / -	- / -	- / 0.050
2.3) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.246	- / 0.392	- / 0.450	- / -	- / 1.088
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.276*	*- / 0.412*	*- / 0.450*	*- / 0.000*	*- / 1.138*
Installation												
Modification Item 1 of 1: 001-23 MH60S SLEP	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.900	- / 5.833	- / 333.199	- / 345.932
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.900*	*- / 5.833*	*- / 333.199*	*- / 345.932*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**15.300**	**19.900**	**36.700**	**1,221.833**	**1,293.733**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 6 / 001-23 MH60S SLEP

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: 001-23 MH60S SLEP

Manufacturer Information

Manufacturer Name: SLEP Mod Kit - Lockheed Martin | Manufacturer Location: Owego, NY

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					May 2023	Jan 2024	Jan 2025
Delivery Dates					May 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: Depot Field Mod Team:: Installation Name: SLEP Mod Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 6.900	- / -	0 / 0.000	5 / 6.900
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.833	0 / 0.000	3 / 5.833
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 12.099	8 / 12.099
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	243 / 321.100	243 / 321.100
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 6.900	3 / 5.833	251 / 333.199	259 / 345.932

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	1	1	1	251	259
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	1	1	1	251	259

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 7 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	364.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	364.029
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	364.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	364.029
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**364.029**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**364.029**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0530 / MH-60 Series	**Modification Number / Title:** 7 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 364.029	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 364.029
Subtotal: Procurement	*- / 364.029*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 364.029*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**364.029**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**364.029**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0532 / H-1 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604245N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	609.426	86.995	114.059	185.140	0.000	185.140	183.194	214.774	219.266	223.592	920.693	2,757.139
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	609.426	86.995	114.059	185.140	0.000	185.140	183.194	214.774	219.266	223.592	920.693	2,757.139
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**609.426**	**86.995**	**114.059**	**185.140**	**0.000**	**185.140**	**183.194**	**214.774**	**219.266**	**223.592**	**920.693**	**2,757.139**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the UH-1Y and AH-1Z aircraft and related systems. The overall goals associated with these modifications are to reduce the total cost of ownership while improving ready-based aircraft and ready-for-tasking rates, eliminate safety hazards, improve survivability, fulfill operational requirements, remedy obsolescence, and sustain/improve mission capability in support of the Marine Air Ground Task Force and joint operations worldwide.

The H-1 Series modifications within this line item are grouped into three focus areas: H-1 Avionics Improvements (OSIP 015-12), H-1 Sensors and Weapons Improvements (OSIP 016-12), and H-1 Air Vehicle Improvements (OSIP 013-14).

The mission of the UH-1Y utility helicopter is to provide command and control and combat assault support under day/night and adverse weather conditions and special operations support: supporting arms coordination and aeromedical evacuation. The H-1 aircraft provide local civilian and military search and rescue support, as well as augmenting Department of Homeland Security resources. The AH-1Z are tandem-seat, two-place attack helicopters. The mission of the AH-1Z attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance, anti-helicopter and point air defense and fire support coordination during day/night conditions. The current armament of the AH-1Z includes the Sidewinder and Hellfire missile systems, Joint Air to Ground Missile (JAGM), a chin-mounted 20mm turret gun, and a wide variety of forward-firing and gravity-released external stores. Improvements also include software updates and integration test assets to support engineering modifications and changes.

The aircraft inventory objective for the UH-1Y for FY 2021 is projected to be 145 aircraft.
The aircraft inventory objective for the AH-1Z for FY 2021 is projected to be 161 aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0532 / H-1 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604245N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12) (Operational Improvement)				- / 119.748	- / 35.961	- / 54.537	- / 76.809	- / 0.000	- / 76.809
P-3a	2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12) (Operational Improvement)				- / 81.006	- / 14.403	- / 21.791	- / 44.814	- / 0.000	- / 44.814
P-3a	3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14) (Safety/ Reliability Improvements)				- / 123.643	- / 27.381	- / 37.731	- / 63.517	- / 0.000	- / 63.517
P-3a	4 / INACTIVE OSIPS (TBD)				- / 285.029	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 9.250	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 609.426**	**- / 86.995**	**- / 114.059**	**- / 185.140**	**- / 0.000**	**- / 185.140**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12) (Operational Improvement)				- / 70.794	- / 68.677	- / 78.105	- / 72.358	- / 204.365	- / 781.354
P-3a	2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12) (Operational Improvement)				- / 48.768	- / 63.011	- / 64.061	- / 45.573	- / 214.746	- / 598.173
P-3a	3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14) (Safety/ Reliability Improvements)				- / 63.632	- / 83.086	- / 77.100	- / 105.661	- / 501.582	- / 1,083.333
P-3a	4 / INACTIVE OSIPS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 285.029
P-3a	5 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 9.250
P-40	**Total Gross/Weapon System Cost**				**- / 183.194**	**- / 214.774**	**- / 219.266**	**- / 223.592**	**- / 920.693**	**- / 2,757.139**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2020 enacted includes congressional rescissions of $9.25 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

FY 2021 budget request modifies the UH-1Y and AH-1Z aircraft and related Avionics, Sensors and Weapons, and Air Vehicle systems to address critical capability gaps.

Funding increase from FY 2020 to FY 2021 supports: Avionics efforts-DI-Full Motion Video Phase 2.0, Wireless Internal Communication System, Ethernet Backbone, ARC-210 Gen 6 RT-2036 Mobile User Objective System, Mission Computer Retrofit, Crash Survivable Recorder; Sensor and Weapons efforts-APR-39D(V)2 and Target Sight System Block Upgrade; Air Vehicle efforts-Tail Rotor Drive Shaft, Swashplate Improvements, Environmental Control System, Floorboards Upgrade Kits, Drive Plate Improvements, Rotor Brake System, Main Rotor Gear Box Tiltball, Inverters, and DC Generator.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	119.748	35.961	54.537	76.809	0.000	76.809	70.794	68.677	78.105	72.358	204.365	781.354
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	119.748	35.961	54.537	76.809	0.000	76.809	70.794	68.677	78.105	72.358	204.365	781.354
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**119.748**	**35.961**	**54.537**	**76.809**	**0.000**	**76.809**	**70.794**	**68.677**	**78.105**	**72.358**	**204.365**	**781.354**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) incorporates changes to H-1 avionics systems, specifically attacking the highest readiness degraders to reduce the total cost of ownership while improving ready based aircraft and ready- for-tasking rates. Improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), and readiness degrader items will yield a more interoperable and survivable H-1 force to sustain warfighter capability in support of worldwide operations. Systems modified and improved on H-1 aircraft will leverage common architectures and utilize existing technology to the maximum extent practicable to minimize development and procurement costs and to reduce the time to field the modifications.

Specific systems associated with this OSIP are: Mission Computer, Mission Computer Harness for improved video, Digital Map, Flight Control Computer, Wiring Integration Remote Terminals, flight data recorders, maintenance data recorders, video recorders, Digital Video Recorders (DVR), data loaders, air data systems, Multi-Function Displays (MFD), Dual Function Displays (DFD), interoperable video and digital data links (Tactical Video Data Links and Full Motion Video (FMV), Variable Message Format (VMF), Ethernet Backbone capability includes: Router, a Guard, associated cabling, Advanced Data Transfer System (ADTS), and A-kit. Communication systems, Mobile User Objective System (MUOS), Wireless Inter-Communications Systems (WICS), Identification Friend or Foe system Aircraft Dependent Surveillance Broadcast (ADS-B), Selective Availability Anti-Spoofing Module (SAASM), Enhanced Navigation includes: Enhanced Global Positioning System Inertial (EGI) modernization to include an enhanced GPS system, anti-jam antenna and radar altimeter, and Joint Battlefield Command - Platform (JBC-P).

Safety system modifications are required for collision avoidance systems, Degraded Visual Environment, Ground Proximity Warning System, Terrain Awareness Warning System, Crash Survivable Flight Incident Recorder, Improved Vehicle Health and Monitoring System (IMD HUMS) along with Military Flight Operations Quality Assurance.

System Configuration Set (SCS) updates are required for avionics component upgrades and interface modifications to ensure integration of platform weapons and sensors. Other focus areas will include Weapon Repairable Assembly modifications to improve avionics and weapons system reliability, maintainability, accuracy and interoperability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	P-1 Line Item Number / Title: 0532 / H-1 Series	Modification Number / Title: 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
Models of Systems Affected: UH-1Y, AH-1Z	Modification Type: Operational Improvement	Related RDT&E PEs:

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) DI-Full Motion Video (FMV) Phase 1.0 (UH-1Y/AH-1Z) - NonOrganic (1) *Installation 1 of 4*	47 / 2.108	24 / 0.712	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 2.820
1.1.2) DI-Full Motion Video (FMV) Phase 2.0 (UH-1Y/AH-1Z) - NonOrganic (2) *Installation 2 of 4*	- / -	- / -	24 / 3.600	24 / 3.720	- / -	24 / 3.720	- / -	- / -	- / -	- / -	- / -	48 / 7.320
1.1.3) Wireless Internal Communication System (WICS) (UH-1Y) - Organic(*)	- / -	- / -	4 / 0.104	8 / 0.224	- / -	8 / 0.224	20 / 0.600	8 / 0.256	8 / 0.272	8 / 0.288	89 / 3.382	145 / 5.126
1.1.4) Ethernet Backbone (UH-1Y/AH-1Z) - NonOrganic *Installation 3 of 4*	- / -	- / -	- / -	24 / 3.600	- / -	24 / 3.600	24 / 3.720	24 / 3.840	24 / 3.960	24 / 4.080	186 / 32.550	306 / 51.750
1.1.5) Digital Video Recorder (DVR) (UH-1Y/AH-1Z) - Organic(*)	101 / 0.404	27 / 0.095	27 / 0.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	155 / 0.595
1.1.6) Mission Computer (MC) Harness (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	60 / 2.400	60 / 2.400	- / -	60 / 2.400	50 / 2.000	50 / 2.000	86 / 3.440	- / -	- / -	306 / 12.240
1.1.7) Enhanced Navigation (UH-1Y/AH-1Z) - NonOrganic *Installation 4 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.699	32 / 1.731	32 / 1.763	32 / 1.795	178 / 9.986	306 / 16.974
1.1.8) ARC-210 Gen 6 RT-2036 Mobile User Objective System (MUOUS) (UH-1Y) - Organic(*)	- / -	- / -	- / -	8 / 0.832	- / -	8 / 0.832	17 / 1.802	47 / 5.076	48 / 5.280	52 / 5.824	13 / 1.482	185 / 20.296
1.1.9) Archived Mods - Organic(*)	8 / 3.235	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.235
1.2.1) Installation Kits N/R - Organic(*) (3)	- / 18.816	- / 4.261	- / 14.522	- / 7.621	- / -	- / 7.621	- / 7.710	- / 7.820	- / 7.524	- / 9.622	- / 8.919	- / 86.815
2.1.1) DI-Full Motion Video (FMV) Phase 1.0 (UH-1Y/AH-1Z) - Organic(*)	47 / 12.026	24 / 3.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 15.434
2.1.2) DI-Full Motion Video (FMV) Phase 2.0 (UH-1Y/AH-1Z) - Organic(*) (4)	- / -	- / -	- / -	24 / 9.000	- / -	24 / 9.000	24 / 9.120	- / -	- / -	- / -	- / -	48 / 18.120
2.1.3) Wireless Internal Communication System (WICS) (UH-1Y) - Organic(*)	- / -	- / -	4 / 0.140	8 / 0.288	- / -	8 / 0.288	20 / 0.740	8 / 0.304	8 / 0.312	8 / 0.320	89 / 3.649	145 / 5.753
2.1.4) Ethernet Backbone (UH-1Y/AH-1Z) - Organic(*) (5)	- / -	- / -	- / -	24 / 4.200	- / -	24 / 4.200	24 / 4.320	24 / 4.440	24 / 4.560	24 / 4.680	186 / 37.200	306 / 59.400
2.1.5) Digital Video Recorder (DVR) (UH-1Y/AH-1Z) - Organic(*)	101 / 3.388	27 / 1.243	27 / 1.280	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	155 / 5.911
2.1.6) Mission Computer (MC) Retrofit (UH-1Y/AH-1Z) - Organic(*) (6)	40 / 8.120	28 / 4.739	26 / 5.330	26 / 5.356	- / -	26 / 5.356	26 / 5.382	26 / 5.408	61 / 12.749	26 / 5.460	47 / 9.917	306 / 62.461
2.1.7) ARC-210 Gen 6 RT-2036 Mobile User Objective System (MUOUS) (UH-1Y) - Organic(*)	- / -	- / -	- / -	8 / 0.752	- / -	8 / 0.752	17 / 1.632	47 / 4.606	48 / 4.800	52 / 5.304	13 / 1.326	185 / 18.420
2.1.8) Enhanced Navigation (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	32 / 4.192	32 / 4.256	32 / 4.320	32 / 4.384	178 / 24.742	306 / 41.894
2.1.9) Multi-Function Display (MFD) (UH-1Y/AH-1Z) - Organic(*)	928 / 17.918	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	928 / 17.918

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1Z	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.1.10) Crash Survivable Recorder (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	8 / 0.128	8 / 0.136	- / -	8 / 0.136	8 / 0.144	8 / 0.152	8 / 0.160	8 / 0.168	258 / 5.676	306 / 6.564
2.1.11) Archived Mods - Organic(*)	156 / 12.415	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 12.415
2.2.1) Installation Equipment N/R - Organic(*) (7)	- / 27.371	- / 13.968	- / 13.215	- / 17.858	- / -	- / 17.858	- / 9.065	- / 9.360	- / 9.515	- / 10.947	- / 10.190	- / 121.489
Subtotal: Procurement	*- / 105.801*	*- / 28.426*	*- / 40.815*	*- / 55.987*	*- / -*	*- / 55.987*	*- / 52.126*	*- / 49.249*	*- / 58.655*	*- / 52.872*	*- / 149.019*	*- / 592.950*
Support												
3.1) Engineering Change Orders	- / 0.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.001
3.2) Data (8)	- / 3.223	- / -	- / 0.405	- / 2.198	- / -	- / 2.198	- / 0.198	- / 0.198	- / 0.150	- / -	- / -	- / 6.372
3.3) Training Equipment	- / 0.251	- / -	- / 0.092	- / 0.080	- / -	- / 0.080	- / 0.075	- / 0.050	- / 0.050	- / -	- / 1.951	- / 2.549
3.4) Support Equipment	- / 1.230	- / -	- / 0.188	- / 0.185	- / -	- / 0.185	- / 0.095	- / 0.050	- / -	- / -	- / -	- / 1.748
3.5) ILS (9)	- / 1.091	- / 0.200	- / 4.457	- / 4.619	- / -	- / 4.619	- / 4.550	- / 4.563	- / 4.591	- / 4.613	- / 4.582	- / 33.266
3.6) Other Support (10)	- / 4.720	- / 5.979	- / 8.580	- / 8.940	- / -	- / 8.940	- / 8.950	- / 8.967	- / 9.059	- / 9.273	- / 9.213	- / 73.681
Subtotal: Support	*- / 10.516*	*- / 6.179*	*- / 13.722*	*- / 16.022*	*- / -*	*- / 16.022*	*- / 13.868*	*- / 13.828*	*- / 13.850*	*- / 13.886*	*- / 15.746*	*- / 117.617*
Installation												
Installation 1 of 4: DI-Full Motion Video (FMV) Phase 1.0 (UH-1Y/AH-1Z)	- / 3.431	- / 1.356	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.787
Installation 2 of 4: DI-Full Motion Video (FMV) Phase 2.0 (UH-1Y/AH-1Z)	- / -	- / -	- / -	- / 2.400	- / 0.000	- / 2.400	- / 2.400	- / -	- / -	- / -	- / 0.000	- / 4.800
Installation 3 of 4: Ethernet Backbone (UH-1Y/AH-1Z)	- / -	- / -	- / -	- / 2.400	- / 0.000	- / 2.400	- / 2.400	- / 2.400	- / 2.400	- / 2.400	- / 18.600	- / 30.600
Installation 4 of 4: Enhanced Navigation (UH-1Y/AH-1Z)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.200	- / 3.200	- / 3.200	- / 21.000	- / 30.600
Subtotal: Installation	*- / 3.431*	*- / 1.356*	*- / -*	*- / 4.800*	*- / -*	*- / 4.800*	*- / 4.800*	*- / 5.600*	*- / 5.600*	*- / 5.600*	*- / 39.600*	*- / 70.787*
Total												
Total Cost (Procurement + Support + Installation)	**119.748**	**35.961**	**54.537**	**76.809**	**0.000**	**76.809**	**70.794**	**68.677**	**78.105**	**72.358**	**204.365**	**781.354**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: DI-Full Motion Video (FMV) Phase 1.0 (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: J.F.Taylor Full Motion Video (FMV) Phase 1.0 (11)

Manufacturer Location: Camp Pendleton, California

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018						
Delivery Dates	Mar 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: DI-Full Motion Video (FMV) Phase 1.0 (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	47 / 3.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	47 / 3.431
FY 2019	- / -	24 / 1.356	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 1.356
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	47 / 3.431	24 / 1.356	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	71 / 4.787

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	47	-	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71
Out	41	6	-	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: DI-Full Motion Video (FMV) Phase 2.0 (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: TBD - DI Full Motion Video (FMV) Phase 2.0 (12)

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021			
Delivery Dates			Mar 2021	Mar 2022			

Installation Information

Method of Implementation: Contractor Field Mod Team (CFMT):: Installation Name: DI-Full Motion Video (FMV) Phase 2.0 (UH-1Y/AH

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	24 / 2.400	0 / 0.000	24 / 2.400	- / -	- / -	- / -	- / -	0 / 0.000	24 / 2.400
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.400	- / -	- / -	- / -	0 / 0.000	24 / 2.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	24 / 2.400	0 / 0.000	24 / 2.400	24 / 2.400	- / -	- / -	- / -	0 / 0.000	48 / 4.800

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	48
Out	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	48

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: Ethernet Backbone (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Ethernet Backbone | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Ethernet Backbone (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	24 / 2.400	0 / 0.000	24 / 2.400	- / -	- / -	- / -	- / -	0 / 0.000	24 / 2.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.400	- / -	- / -	- / -	0 / 0.000	24 / 2.400
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.400	- / -	- / -	0 / 0.000	24 / 2.400
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.400	- / -	0 / 0.000	24 / 2.400
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.400	0 / 0.000	24 / 2.400
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	186 / 18.600	186 / 18.600
Total	- / -	- / -	- / -	24 / 2.400	0 / 0.000	24 / 2.400	24 / 2.400	24 / 2.400	24 / 2.400	24 / 2.400	186 / 18.600	306 / 30.600

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	8	8	8	-	8	8	8	-	8	8	8	186	306
Out	-	-	-	-	-	-	-	-	-	-	8	8	8	-	8	8	8	-	8	8	8	-	8	8	8	-	8	8	8	186	306

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: Enhanced Navigation (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Enhanced Navigation (UH-1Y/AH-1Z) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Oct 2022	Oct 2023	Oct 2024	Oct 2025
Delivery Dates				Jun 2023	Jun 2024	Jun 2025	Jun 2026

Installation Information

Method of Implementation: Contractor Field Mod Team (CFMT):: Installation Name: Enhanced Navigation (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.200	- / -	- / -	0 / 0.000	32 / 3.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.200	- / -	0 / 0.000	32 / 3.200
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.200	0 / 0.000	32 / 3.200
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.200	32 / 3.200
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	178 / 17.800	178 / 17.800
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.200	32 / 3.200	32 / 3.200	210 / 21.000	306 / 30.600

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	26	-	-	6	26	-	-	6	26	210	306
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	26	-	-	6	26	-	-	6	236	306

Footnotes:

(1) 1.1.1) DI-Full Motion Video (FMV) Phase 1.0-DI Full Motion Video (FMV) supports Urgent Universal Needs Statement (UUNS) CDTS# 11061UA. The separation of DI-FMV was made to reflect a phase 1 which includes a 2 tail-mounted antennas and a carry-on ANW2 waveform capability, which provides an interim capability to meet the UUNS.

(2) 1.1.2) DI-Full Motion Video (FMV) Phase 2.0-Increase in FY 2021 is due to reprioritization of Phase 1.0 efforts to support initial fielding of Phase 2.0 along with escalation cost.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 1 / H-1 AVIONICS IMPROVEMENTS (OSIP 015-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) 1.2.1) Installation Kits N/R-FY 2021 Installation Kits N/R is due to modifications for Ethernet Backbone, DI-FMV Phase 2.0 and Mission Computer engineering.

(4) 2.1.2) DI-Full Motion Video (FMV) Phase 2.0-Increase in FY 2021 is due to the cancelation of Phase 1.0 and initial fielding of Phase 2.0 along with escalation cost.

(5) 2.1.4) Ethernet Backbone-Cost element added to address Ethernet Backbone which absorbed Aircraft Network Switch (ANS) and Advanced Data Transfer System (ADTS) represented on previous budget submittals. Ethernet Backbone also includes a Router, a Guard, associated cabling, and A-kit. FY 2021 increase is due to expanded capability requirements. Ethernet Backbone enables the integration of capabilities that have dependencies on increased bandwidth and throughput for high volume data technologies. The backbone will support Multi-level security for the segregation of operational data vs maintenance and support data. The system will support a comprehensive solution for data aggregation and distribution via a solution that is similar to a client server style subscription of data for usage.

(6) 2.1.6) Mission Computer (MC) Retrofit-The Army procured 56 Mission Computers (MC) in FY 2019 which afforded us the opportunity to take economic ordering quantity. At this time we are not aware of the Army's need to procure more and thus remaining at the projected cost with inflation throughout the FYDP.

(7) 2.2.1) Installation Equipment N/R-Increase in FY 2021 Installation Equipment N/R is due to modifications for Ethernet Backbone Phase, Mission Computer, ARC-210 Gen 6, Crash Survivable Recorder, Wireless Internal Communication System as well as DI-FMV Phase 2.0.

(8) 3.2) Data-Increase in FY 2021 is due to procurement of digital map licensing for Ethernet Backbone.

(9) 3.5) ILS-Increase in FY 2021 provides logistic efforts supporting production activities migrating over to fleet modifications and depot level installs for DI-FMV Phase 2.0, Wireless Inter-Communication System (WICS), Ethernet Backbone, Mission Computers (MC), Enhanced Navigation, and ARC-210.

(10) 3.6) Other Support-Increase in FY 2021 provides programmatic, engineering, and technical support for production activities migrating over to fleet modifications and depot level installs for DI-FMV Phase 2.0, Wireless Inter-Communication (WICS), Ethernet Backbone, Mission Computer (MC), Enhanced Navigation, and ARC-210.

(11) Installation 1 of 4: DI-Full Motion Video (FMV) Phase 1.0--The quantiy being installed doesn't align with the current A-II due to the intermediate capability Urgent Needs Statement (UNS) originally being funded for 110 H-1 Aircraft. In the initial deployment technical issues better solved in Phase 2.0 drove a reprioritization to put emphasis on DI-Full Motion video Phase 2.0, reducing the UNS requirement from 110 to 71.

(12) Installation 2 of 4: DI-Full Motion Video (FMV) Phase 2.0--The quantiy being installed doesn't align with the current A-II due to Phase 2.0 was only funded for first 2 years of installations because it was initially planned to happen in FY23 and FY 24, a reprioritization has reallocated this effort to FY21 and FY22. A follow-on Program Objective Memorandum (POM) issue sheet will cover requirement for remaining fleet aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	81.006	14.403	21.791	44.814	0.000	44.814	48.768	63.011	64.061	45.573	214.746	598.173
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	81.006	14.403	21.791	44.814	0.000	44.814	48.768	63.011	64.061	45.573	214.746	598.173
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**81.006**	**14.403**	**21.791**	**44.814**	**0.000**	**44.814**	**48.768**	**63.011**	**64.061**	**45.573**	**214.746**	**598.173**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) incorporates changes to H-1 mission systems sensors, Helmet Mounted Sight Displays (HMSD), Aircraft Survivability Equipment (ASE), and weapon systems, specifically attacking the highest readiness degraders to reduce the total cost of ownership while improving ready-based aircraft and ready-for-tasking rates. Improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), aircrew situational awareness and readiness degrader items will yield a more interoperable and survivable H-1 force to sustain warfighter capability in support of worldwide operations. Systems modified and improved on H-1 aircraft will leverage common avionics architectures to the extent possible to mitigate development, procurement costs and fielding timelines. The modifications will specifically address enhancing capabilities, readiness and sensor fusion with the entire ASE, HMSD, and weapons suite to improve both battlefield and situational awareness.

This OSIP addresses the U.S. Marine Corps' operational requirement to detect, identify, and destroy target sets with the precision guided munitions during day, night, and adverse weather conditions. Sensor systems include the Target Sight System (TSS), which currently provides a night/adverse weather Forward-Looking Infrared and laser designation for the H-1 series helicopter. Improvements to H-1 series helicopters' weapons systems include both air to ground and air to air missiles, rocket systems, 20mm turreted gun system reliability/obsolescence and weapons accuracy improvement efforts. These weapon systems include all Precision Guided Munitions, (Advanced Precision Kill Weapon System (APKWS), the Hellfire family of missiles, inclusive of the M299 Hellfire launcher and the Joint Air To Ground (JAGM), AIM-9X integration, associated Aviation Armament Equipment (AAE), and the Digital Rocket Launcher (DRL) and associated Airborne Weapon Support Equipment (AWSE). Helmet Mounted Sight and Display (HMSD) system, improvements to the Optimized Top Owl (OTO), include Night and Day Module Optic Reliability Improvements, helmet to aircraft integration improvements as well as helmet mapping improvements. HMSD safety initiatives addressed by this OSIP include, but not limited to, spatial disorientation issues caused by Degraded Visual Environments (DVE), human factor improvements to helmet design, integration and optics improvements. For Sensor Improvements, this OSIP will address TSS Block Upgrades/Modifications to add a Laser Spot Tracker (LST) capability to detect, acquire and track laser designator signatures; Infra-Red (IR) laser pointing devices; add a high definition camera/telescope to increase detection, recognition, and identification ranges. This improvement will upgrade existing gimbal processors, optimize program security initiatives, address AC network and data link capabilities as well as improve upon overall HMSD, weapon and sensor fusion to improve weapons accuracy.
The H-1 Upgrades Aircraft Survivability Equipment (ASE) suite currently consists of the AN/APR-39B(V)2 RWR, AAR-47E (V)2 Missile Warning Systems (MWS) and the AN/ALE-47 Countermeasures Dispensing System (CMDS). The AN/APR-39B(V)2 currently installed in the AH-1Z and UH-1Y is obsolete and must be replaced by the AN/APR-39D(V)2. In addition to the radar detection upgrades of the APR-39D(V)2, IR detection and countermeasures upgrades will be implemented with the integration of the Distributed Aperture Infrared Countermeasures (DAIRCM) system, and processor upgrades in the ALE-47 countermeasures dispensing set. ASE Suite upgrades are inherent to successful Digital Interoperability and Electronic Warfare (EW) initiatives, such as the integration of the Intrepid Tiger (IT II), that will ensure the H-1 platform can effectively meet network ready requirements. The interoperability with other battle management systems, provides aircrew with improved situational awareness, battlefield awareness and incorporates an EW capability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY 2019-20 began JUONS DAIRCM system installation and Developmental and Operational Test (DT/OT) for 2 x H-1 test aircraft. FY 2021 begins initial procurement of the for Target Sight System Block Upgrade systems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1W/Z	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) APR-39D(V)2 (UH-1Y/AH-1Z) - NonOrganic (13) *Installation 1 of 1*	- / -	5 / 0.700	17 / 2.380	48 / 6.720	- / -	48 / 6.720	34 / 4.760	36 / 5.040	36 / 5.040	36 / 5.040	94 / 13.160	306 / 42.840
1.2.2) Archived Mods - Organic(*)	200 / 15.451	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	200 / 15.451
2.1.1) Target Sight System (TSS) Block Upgrade (AH-1Z) - Organic(*) (14)	- / -	- / -	- / -	30 / 16.935	- / -	30 / 16.935	33 / 18.628	36 / 20.322	44 / 24.838	11 / 6.209	7 / 3.951	161 / 90.883
2.1.2) APR-39D(V)2 (UH-1Y/AH-1Z) - Organic(*) (15)	- / -	5 / 3.535	10 / 7.070	9 / 6.363	- / -	9 / 6.363	4 / 2.828	27 / 19.089	21 / 14.847	21 / 14.847	209 / 147.763	306 / 216.342
2.1.3) Archived Mods - Organic(*)	249 / 44.866	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	249 / 44.866
2.2.1) Installation Equipment N/R - Organic(*)	- / 6.249	- / 6.827	- / 6.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.345
Subtotal: Procurement	*- / 66.566*	*- / 11.062*	*- / 15.719*	*- / 30.018*	*- / -*	*- / 30.018*	*- / 26.216*	*- / 44.451*	*- / 44.725*	*- / 26.096*	*- / 164.874*	*- / 429.727*
Support												
3.1) Engineering Change Orders	- / 1.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.352
3.2) Data	- / 2.242	- / -	- / 0.437	- / 0.205	- / -	- / 0.205	- / 0.378	- / 0.531	- / 0.657	- / 0.775	- / 0.825	- / 6.050
3.5) ILS (16)	- / 5.007	- / 0.445	- / 1.042	- / 1.080	- / -	- / 1.080	- / 1.078	- / 1.092	- / 1.104	- / 1.112	- / 1.115	- / 13.075
3.6) Other Support (17)	- / 5.839	- / 2.896	- / 3.093	- / 8.411	- / -	- / 8.411	- / 6.696	- / 6.737	- / 6.775	- / 6.790	- / 6.779	- / 54.016
Subtotal: Support	*- / 14.440*	*- / 3.341*	*- / 4.572*	*- / 9.696*	*- / -*	*- / 9.696*	*- / 8.152*	*- / 8.360*	*- / 8.536*	*- / 8.677*	*- / 8.719*	*- / 74.493*
Installation												
Installation 1 of 1: APR-39D(V)2 (UH-1Y/AH-1Z)	- / -	- / -	- / 1.500	- / 5.100	- / 0.000	- / 5.100	- / 14.400	- / 10.200	- / 10.800	- / 10.800	- / 41.153	- / 93.953
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 1.500*	*- / 5.100*	*- / -*	*- / 5.100*	*- / 14.400*	*- / 10.200*	*- / 10.800*	*- / 10.800*	*- / 41.153*	*- / 93.953*
Total												
Total Cost (Procurement + Support + Installation)	**81.006**	**14.403**	**21.791**	**44.814**	**0.000**	**44.814**	**48.768**	**63.011**	**64.061**	**45.573**	**214.746**	**598.173**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: APR-39D(V)2 (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: APR-39D(V)2 (UH-1Y/AH-1Z) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025
Delivery Dates	May 2020	May 2021	May 2022	May 2023	May 2024	May 2025	May 2026

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: APR-39D(V)2 (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	5 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.500
FY 2020	- / -	- / -	- / -	17 / 5.100	0 / 0.000	17 / 5.100	- / -	- / -	- / -	- / -	0 / 0.000	17 / 5.100
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	48 / 14.400	- / -	- / -	- / -	0 / 0.000	48 / 14.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 10.200	- / -	- / -	0 / 0.000	34 / 10.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 10.800	- / -	0 / 0.000	36 / 10.800
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 10.800	0 / 0.000	36 / 10.800
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 10.800	36 / 10.800
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	94 / 30.353	94 / 30.353
Total	- / -	- / -	5 / 1.500	17 / 5.100	0 / 0.000	17 / 5.100	48 / 14.400	34 / 10.200	36 / 10.800	36 / 10.800	130 / 41.153	306 / 93.953

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	2	3	-	-	8	9	-	-	24	24	-	-	17	17	-	-	18	18	-	-	18	18	130	306
Out	-	-	-	-	-	-	-	-	2	3	-	-	8	9	-	-	24	24	-	-	17	17	-	-	18	18	-	-	18	148	306

Footnotes:

(13) 1.1.1) APR-39D(V)2-Quantities updated to include both T/M/S (UH-1Y and AH-1Z). A-Kit quantities increased to match B-Kit procurements for both platforms. The UH-1Y/AH-1Z is currently equipped with the legacy APR-39 system. Adjustment allows the UH-1Y/AH-1Z flexibility to deploy aircraft with a common digital processor type that will enhance situational awareness, enhance effectiveness and suitability in complex, hostile environments in support of Marine Expeditionary Operations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 2 / H-1 SENSORS AND WEAPONS IMPROVEMENTS (OSIP 016-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(14) 2.1.1) Target Sight System (TSS) Block Upgrade-The USMC H-1 Operating Forces Capabilities Planning Document identifies the need for an electro-optical system capable of automatically detecting laser designator energy for purposes of target handoff operations. The Target Sight System (TSS) Block Upgrade includes the TSS Laser Spot Tracker, Turret Electronic Unit, and High Definition upgrade to enable the AH-1Z to detect, acquire, and track laser designator energy for more expeditious target handoff and engagement. Procurement of equipment begins in FY 2021. Quantity and price has been refined based on updated cost information.

(15) 2.1.2) APR-39D(V)2-The UH-1Y/AH-1Z is currently equipped with the legacy APR-39B(V)2 system. Increase in FY 2021 with the modification of (9) UH-1Y's will allow the Marine Corps the flexibility to deploy aircraft with a common digital processor type that will enhance situational awareness, effectiveness and suitability in complex, hostile environments in support of Marine Expeditionary Operations. Quantity and price has been refined based on updated cost information. Quantity differs from A-Kit due to equipment procurement being provided by commodity owner.

(16) 3.5) ILS-Increase in FY 2021 provides logistic efforts supporting production activities migrating over to fleet modifications and depot level installs for APR-39D(V)2 and Target Sight System (TSS) Block Upgrade.

(17) 3.6) Other Support-Increase in FY 2021 provides programmatic, engineering, and technical support for production activities migrating over to fleet modifications and depot level installs for APR-39(D)V-2 and Target Sight System (TSS) Block Upgrade.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	123.643	27.381	37.731	63.517	0.000	63.517	63.632	83.086	77.100	105.661	501.582	1,083.333
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	123.643	27.381	37.731	63.517	0.000	63.517	63.632	83.086	77.100	105.661	501.582	1,083.333
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**123.643**	**27.381**	**37.731**	**63.517**	**0.000**	**63.517**	**63.632**	**83.086**	**77.100**	**105.661**	**501.582**	**1,083.333**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) incorporates a number of modifications to H-1 Air Vehicle systems, specifically attacking the highest readiness degraders to reduce the total cost of ownership while improving ready-based aircraft and ready-for-tasking rates. Improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), and readiness degrader items will yield a more interoperable and survivable H-1 force to sustain warfighter capability in support of worldwide operations.

Planned modifications cover airframes (structural and air vehicle systems), propulsion, survivability, reliability and maintainability, fuel systems, electrical power, drives, engines, rotors, flying qualities, flight controls, human factors, systems thermodynamics, and weight and balance. Particular focus is on continuously reducing total ownership costs by increasing component time on the aircraft. During full scale development testing of the H-1 Upgrades aircraft, data evaluation showed that incorporation of redesigned components applicable to the critical load paths will significantly increase the service life of the aircraft and components to meet the life limit of 10,000 flight hours.

Safety programs include mission grip mounts. Reliability and maintainability modification items include the aircraft electrical system, power distribution system, fuel cells interface improvements, canopy frame, bushings, blade fold rack, gearboxes, standpipes, fuselage/cabin/seats, engine mount and tail boom bearings, main and tail rotor components, aircraft battery, hydraulic distribution, weight reduction initiatives, swashplate, integrated mechanical diagnostic system, clearances, drive system, systems heating/cooling, corrosion/water intrusion control, rotor blade and gun turret covers, engine cowlings, and airframe structural robustness including access panels, and Throttle improvements. Dynamic Component Reliability includes improvements/upgrades to the rotor brake system, Main Rotor Gear Box (MRGB), Driveplate, and MRGB tiltball. Survivability modifications include, Improved Defensive Armament System (IDAS) for carrying stores (UH-1Y machine guns, rocket pods, fuel tanks, etc.), and armored flooring. Electrical power modifications include generators and inverters.

Other structural modifications include: swash plate assembly, clamp ring assembly, tail boom assembly, main rotor blades, and canopies. Human factor improvements include Aircrew Restraint System (ARS). Propulsion improvements to tail boom wiring and drives. Thermal cooling improvements include Environmental Control System (ECS).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1W/Z	**Modification Type:** Safety/Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Tail Boom Clamp and Retainer Mod (UH-1Y/AH-1Z) - NonOrganic *Installation 1 of 6*	61 / 0.760	2 / 0.031	16 / 0.254	15 / 0.245	- / -	15 / 0.245	- / -	- / -	- / -	- / -	- / -	94 / 1.290
1.1.2) Main Rotor Gear Box (MRGB) Pylon Strap Rivets (UH-1Y) - NonOrganic *Installation 2 of 6*	52 / 0.008	5 / 0.006	4 / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	61 / 0.019
1.1.3) Tail Rotor Drive Shaft (TRDS) Clearance Improvements (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	80 / 0.760	105 / 0.998	- / -	105 / 0.998	74 / 0.703	47 / 0.447	- / -	- / -	- / -	306 / 2.908
1.1.4) Swashplate Improvements (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	25 / 0.636	52 / 1.363	- / -	52 / 1.363	52 / 1.404	52 / 1.446	52 / 1.489	52 / 1.560	21 / 1.821	306 / 9.719
1.1.5) Environmental Control System (ECS) Thermal (UH-1Y/ AH-1Z) - NonOrganic *Installation 3 of 6*	- / -	20 / 2.480	20 / 2.520	50 / 6.400	- / -	50 / 6.400	40 / 5.200	39 / 5.148	40 / 5.360	50 / 6.800	47 / 6.486	306 / 40.394
1.1.6) Structural Improvements and Electrical Power Upgrades (UH-1Y/AH-1Z) - NonOrganic (18) *Installation 4 of 6*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 21.000	20 / 14.000	30 / 21.000	226 / 158.200	306 / 214.200
1.1.7) Floorboards Upgrade Kits (UH-1Y) - NonOrganic (19) *Installation 5 of 6*	- / -	- / -	- / -	30 / 0.401	- / -	30 / 0.401	30 / 0.409	30 / 0.417	30 / 0.426	25 / 0.362	- / -	145 / 2.015
1.1.8) Drive Plate Improvements (UH-1Y/AH-1Z) - NonOrganic (20) *Installation 6 of 6*	- / -	- / -	55 / 0.165	75 / 0.232	- / -	75 / 0.232	75 / 0.239	75 / 0.245	26 / 0.088	- / -	- / -	306 / 0.969
1.2.1) Installation Kits N/R - Organic(*)	- / 16.807	- / 1.157	- / 0.741	- / 0.704	- / -	- / 0.704	- / 0.668	- / -	- / -	- / -	- / 3.776	- / 23.853
1.2.2) Archived Mods - Organic(*)	799 / 11.019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	799 / 11.019
2.1.1) Mission Grip Mount (AH-1Z) - Organic(*)	118 / 0.379	22 / 0.092	21 / 0.088	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	161 / 0.559
2.1.2) Structural Improvements and Electrical Power Upgrades (UH-1Y/AH-1Z) - Organic(*) (21)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 17.000	20 / 20.000	30 / 30.000	239 / 239.000	306 / 306.000
2.1.3) Rotor Brake System (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	10 / 2.500	32 / 8.000	- / -	32 / 8.000	58 / 14.500	16 / 4.000	22 / 5.500	70 / 17.500	98 / 24.500	306 / 76.500
2.1.4) Main Rotor Gear Box (MRGB) Tiltball (UH-1Y/AH-1Z) - Organic(*) (22)	- / -	- / -	- / -	60 / 0.600	- / -	60 / 0.600	77 / 0.770	95 / 0.950	74 / 0.740	- / -	- / -	306 / 3.060
2.1.5) Inverters (UH-1Y) - Organic(*) (23)	- / -	- / -	- / -	75 / 1.224	- / -	75 / 1.224	215 / 3.511	- / -	- / -	- / -	- / -	290 / 4.735
2.1.6) Engine Throttle Stiffness (UH-1Y) - Organic(*) (24)	- / -	- / -	80 / 0.560	65 / 0.455	- / -	65 / 0.455	- / -	- / -	- / -	- / -	- / -	145 / 1.015
2.1.7) Fuel Cell Interface (UH-1Y.AH-1Z)) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.240	65 / 1.072	130 / 2.209	96 / 2.077	306 / 5.598
2.1.8) C-box Chafing Mitigation (UH-1Y/AH-1Z) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.372	86 / 0.372	86 / 0.372	48 / 0.207	- / -	306 / 1.323
2.1.9) DC Generator (UH-1Y/AH-1Z) - Organic(*) (25)	- / -	- / -	- / -	70 / 1.470	- / -	70 / 1.470	168 / 3.528	168 / 3.528	168 / 3.528	112 / 2.352	- / -	686 / 14.406

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1W/Z	**Modification Type:** Safety/Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.2.1) Installation Equipment N/R - Organic(*) (26)	- / 16.978	- / 9.180	- / 12.502	- / 20.141	- / -	- / 20.141	- / 15.309	- / 12.354	- / 2.518	- / 3.976	- / -	- / 92.958
2.2.2) Archived Mods - Organic(*)	575 / 71.966	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	575 / 71.966
Subtotal: Procurement	*- / 117.917*	*- / 12.946*	*- / 20.731*	*- / 42.233*	*- / -*	*- / 42.233*	*- / 46.613*	*- / 67.147*	*- / 55.093*	*- / 85.966*	*- / 435.860*	*- / 884.506*
Support												
3.2) Data (27)	- / 0.723	- / -	- / -	- / 1.972	- / -	- / 1.972	- / 1.767	- / 0.520	- / 0.497	- / -	- / -	- / 5.479
3.4) Support Equipment (28)	- / -	- / -	- / -	- / 0.200	- / -	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / 0.200
3.5) ILS (29)	- / 1.287	- / 1.480	- / 2.464	- / 2.584	- / -	- / 2.584	- / 2.564	- / 2.597	- / 2.623	- / 2.666	- / 2.639	- / 20.904
3.6) Other Support (30)	- / 2.931	- / 11.918	- / 9.994	- / 10.330	- / -	- / 10.330	- / 10.293	- / 10.412	- / 10.530	- / 10.667	- / 10.708	- / 87.783
Subtotal: Support	*- / 4.941*	*- / 13.398*	*- / 12.458*	*- / 15.086*	*- / -*	*- / 15.086*	*- / 14.624*	*- / 13.529*	*- / 13.650*	*- / 13.333*	*- / 13.347*	*- / 114.366*
Installation												
Installation 1 of 6: Tail Boom Clamp and Retainer Mod (UH-1Y/AH-1Z)	- / 0.398	- / 0.447	- / 3.576	- / 3.353	- / 0.000	- / 3.353	- / -	- / -	- / -	- / -	- / 0.000	- / 7.774
Installation 2 of 6: Main Rotor Gear Box (MRGB) Pylon Strap Rivets (UH-1Y)	- / 0.387	- / 0.090	- / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.549
Installation 3 of 6: Environmental Control System (ECS) Thermal (UH-1Y/AH-1Z)	- / -	- / 0.500	- / 0.750	- / 1.500	- / 0.000	- / 1.500	- / 1.000	- / 0.975	- / 1.000	- / 1.250	- / 1.175	- / 8.150
Installation 4 of 6: Structural Improvements and Electrical Power Upgrades (UH-1Y/AH-1Z)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.000	- / 4.000	- / 51.200	- / 61.200
Installation 5 of 6: Floorboards Upgrade Kits (UH-1Y)	- / -	- / -	- / -	- / 1.149	- / 0.000	- / 1.149	- / 1.199	- / 1.239	- / 1.289	- / 1.112	- / 0.000	- / 5.988
Installation 6 of 6: Drive Plate Improvements (UH-1Y/AH-1Z)	- / -	- / -	- / 0.144	- / 0.196	- / 0.000	- / 0.196	- / 0.196	- / 0.196	- / 0.068	- / -	- / 0.000	- / 0.800
Subtotal: Installation	*- / 0.785*	*- / 1.037*	*- / 4.542*	*- / 6.198*	*- / -*	*- / 6.198*	*- / 2.395*	*- / 2.410*	*- / 8.357*	*- / 6.362*	*- / 52.375*	*- / 84.461*
Total												
Total Cost (Procurement + Support + Installation)	**123.643**	**27.381**	**37.731**	**63.517**	**0.000**	**63.517**	**63.632**	**83.086**	**77.100**	**105.661**	**501.582**	**1,083.333**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: Tail Boom Clamp and Retainer Mod (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Tail Boom Clamp and Retainer Mod (31) | Manufacturer Location: North Carolina

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018	Oct 2019	Oct 2020				
Delivery Dates	Jan 2019	Jan 2020	Jan 2021				

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Tail Boom Clamp and Retainer Mod (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	61 / 0.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	61 / 0.398
FY 2019	- / -	2 / 0.447	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.447
FY 2020	- / -	- / -	16 / 3.576	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 3.576
FY 2021	- / -	- / -	- / -	15 / 3.353	0 / 0.000	15 / 3.353	- / -	- / -	- / -	- / -	0 / 0.000	15 / 3.353
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	61 / 0.398	2 / 0.447	16 / 3.576	15 / 3.353	0 / 0.000	15 / 3.353	- / -	- / -	- / -	- / -	0 / 0.000	94 / 7.774

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	61	-	1	1	-	-	5	5	6	-	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94
Out	61	-	1	1	-	-	5	5	6	-	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 6: Main Rotor Gear Box (MRGB) Pylon Strap Rivets (UH-1Y)

Manufacturer Information

Manufacturer Name: Depot - Main Rotor Gear Box (MRGB) Plyon Strap Rivets (32)

Manufacturer Location: North Carolina

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018	Oct 2019					
Delivery Dates	Apr 2019	Apr 2020					

Installation Information

Method of Implementation: Depot Field Modification Team:: Installation Name: Main Rotor Gear Box (MRGB) Pylon Strap Rivets (UH

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	52 / 0.387	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	52 / 0.387
FY 2019	- / -	5 / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.090
FY 2020	- / -	- / -	4 / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.072
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	52 / 0.387	5 / 0.090	4 / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	61 / 0.549

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	52	-	-	2	3	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
Out	47	5	-	-	2	3	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 6: Environmental Control System (ECS) Thermal (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Environmental Control System (ECS) Thermal | Manufacturer Location: North Carolina

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024
Delivery Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Depot Field Modification Team:: Installation Name: Environmental Control System (ECS) Thermal (UH-1Y

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	20 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.500
FY 2020	- / -	- / -	20 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.750
FY 2021	- / -	- / -	- / -	50 / 1.500	0 / 0.000	50 / 1.500	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.500
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.000	- / -	- / -	- / -	0 / 0.000	40 / 1.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.975	- / -	- / -	0 / 0.000	39 / 0.975
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.000	- / -	0 / 0.000	40 / 1.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 1.250	0 / 0.000	50 / 1.250
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 1.175	47 / 1.175
Total	- / -	20 / 0.500	20 / 0.750	50 / 1.500	0 / 0.000	50 / 1.500	40 / 1.000	39 / 0.975	40 / 1.000	50 / 1.250	47 / 1.175	306 / 8.150

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	6	7	7	-	6	7	7	-	16	17	17	-	13	13	14	-	13	13	13	-	12	14	14	-	16	17	17	47	306
Out	-	-	-	6	7	7	-	6	7	7	-	16	17	17	-	13	13	14	-	13	13	13	-	12	14	-	-	16	17	78	306

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 6: Structural Improvements and Electrical Power Upgrades (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Structural IImprovements and Electrical Power Upgrade (UH-1Y/AH-1Z) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Oct 2023	Oct 2024	Oct 2025
Delivery Dates					Feb 2024	Feb 2025	Feb 2026

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Structural Improvements and Electrical Power Upgrades

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 6.000	- / -	0 / 0.000	30 / 6.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 4.000	0 / 0.000	20 / 4.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 6.000	30 / 6.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	226 / 45.200	226 / 45.200
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 6.000	20 / 4.000	256 / 51.200	306 / 61.200

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	-	6	7	7	256	306
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	-	6	7	7	256	306

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 6: Floorboards Upgrade Kits (UH-1Y)

Manufacturer Information

Manufacturer Name: Floorboards Upgrades (UH-1Y) | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			May 2021	May 2022	May 2023	May 2024	May 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Floorboards Upgrade Kits (UH-1Y)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	30 / 1.149	0 / 0.000	30 / 1.149	- / -	- / -	- / -	- / -	0 / 0.000	30 / 1.149
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.199	- / -	- / -	- / -	0 / 0.000	30 / 1.199
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.239	- / -	- / -	0 / 0.000	30 / 1.239
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.289	- / -	0 / 0.000	30 / 1.289
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.112	0 / 0.000	25 / 1.112
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	30 / 1.149	0 / 0.000	30 / 1.149	30 / 1.199	30 / 1.239	30 / 1.289	25 / 1.112	0 / 0.000	145 / 5.988

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	15	15	-	-	15	15	-	-	15	15	-	-	15	15	-	-	17	8	-	145
Out	-	-	-	-	-	-	-	-	-	-	-	-	15	15	-	-	15	15	-	-	15	15	-	-	15	15	-	-	17	8	145

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 6: Drive Plate Improvements (UH-1Y/AH-1Z)

Manufacturer Information

Manufacturer Name: Drive Plate Improvements | Manufacturer Location: North Carolina

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	

Installation Information

Method of Implementation: Depot Field Mod Team:: Installation Name: Drive Plate Improvements (UH-1Y/AH-1Z)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	55 / 0.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	55 / 0.144
FY 2021	- / -	- / -	- / -	75 / 0.196	0 / 0.000	75 / 0.196	- / -	- / -	- / -	- / -	0 / 0.000	75 / 0.196
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	75 / 0.196	- / -	- / -	- / -	0 / 0.000	75 / 0.196
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 0.196	- / -	- / -	0 / 0.000	75 / 0.196
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.068	- / -	0 / 0.000	26 / 0.068
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	55 / 0.144	75 / 0.196	0 / 0.000	75 / 0.196	75 / 0.196	75 / 0.196	26 / 0.068	- / -	0 / 0.000	306 / 0.800

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	18	18	19	-	25	25	25	-	25	25	25	-	25	25	25	-	21	5	-	-	-	-	-	-	306
Out	-	-	-	-	-	-	-	18	18	19	-	25	25	25	-	25	25	25	-	25	25	25	-	21	5	-	-	-	-	-	306

Footnotes:

(18) 1.1.6) Structural Improvements and Electrical Power Upgrades-This cost element combined Structural and Electrical Improvements and Electrical Power Upgrade from previous budget submittals to a consolidated title. Structural Improvements incorporates structural provisions for the increased external load weight carrying capability and extend combat radius. The Structural Improvement includes cabin

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 3 / H-1 AIR VEHICLE IMPROVEMENTS (OSIP 013-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

improvement items, two station defense armament system, and fuel cell qualification. Electrical System Improvement increases the current capability of the H-1 electrical system to meet current and future power demands of the aircraft, to include accessory quill qualification, AC generator qualification, electrical wiring re-run, and new Universal Stores Control Units (USCU).

(19) 1.1.7) Floorboards Upgrade Kits-Cost element added to address floorboard readiness degrader. Structural removable floorboard modification allows easy access to underfloor for inspection, maintenance, and corrosion control.

(20) 1.1.8) Drive Plate Improvements-Cost element added to address drive plate readiness degrader. This effort will add bushings to the yoke interface to allow for removal and replacement of bearings damaged from fretting/galling/corrosion in lieu of replacing the entire drive plate.

(21) 2.1.2) Structural Improvements and Electrical Power Upgrades-This cost element combined Structural and Electrical Improvements and Electrical Power Upgrade from previous budget submittals to a consolidated title. Structural Improvements incorporates structural provisions for the increased external load weight carrying capability and extend combat radius. The Structural Improvement includes cabin improvement items, two station defense armament system, and fuel cell qualification. Electrical System Improvement increases the current capability of the H-1 electrical system to meet current and future power demands of the aircraft, to include accessory quill qualification, AC generator qualification, electrical wiring re-run, and new Universal Stores Control Units (USCU).

(22) 2.1.4) Main Rotor Gear Box (MRGB) Tiltball-Increase in FY 2021 Main Rotor Gear Box (MRGB) Tiltball is due to a delay in the FY 2020 procurement cycle.

(23) 2.1.5) Inverters-Increase in FY 2021 for (75) Inverters will have a positive impact on readiness of the UH-1Y Fleet. Existing UH-1Y inverters are currently experiencing high rates of failure (low reliability) which is having a negative effect on the readiness of the UH-1Y Fleet. Reports show these inverters have a Mean Time Between Failure (MTBF) average of 263 hrs. The new Digital Signal Processor (DSP) type inverter calculated MTBF is 3,468 hrs. Replacing current inverters with new DSP-type inverters increases time between replacement by ~3,205 hours per unit.

(24) 2.1.6) Engine Throttle Stiffness-Cost element added to address engine throttle stiffness. The current bushing in the collective support assembly is a safety hazard by restricting the movement of the worm gear in the outside ranges of collective motion. This is a modification to upgrade the current bushing support assembly as part of the flight control system.

(25) 2.1.9) DC Generator-Cost element added to address the DC generator readiness degrader. The upgraded generator will provide an increase in Mean Time Before Failure (MTBF) and also provides an increase in DC power available.

(26) 2.2.1) Installation Equipment N/R-Increase in FY 2021 is due to modifications for Inverters, DC Generator, and Structural Improvements and Electrical Power Upgrades.

(27) 3.2) Data-Increase in FY 2021 provides publications for Tail Rotor Drive Shaft and Floorboard upgrades.

(28) 3.4) Support Equipment-Increase in FY 2021 is for Main Rotor Yoke Tooling support equipment to address readiness.

(29) 3.5) ILS-Increase in FY 2021 provides logistic efforts supporting production activities migrating over to fleet modifications and depot level installs for Tailboom Clamp and Retainer, Tail Rotor Drive Shaft, Swashplate Improvements, ECS Thermal, Floorboard Upgrades, Drive Plate Improvements, Rotor Brake System, Main Rotor Gearbox Tiltball, Inverters, Engine Throttle, and DC Generator.

(30) 3.6) Other Support-Increase in FY 2021 provides programmatic, engineering, and technical support for production activities migrating over to fleet modifications and depot level installs for Tailboom Clamp and Retainer, Tail Rotor Drive Shaft, Swashplate Improvements, ECS Thermal, Floorboard Upgrades, Drive Plate Improvements, Rotor Brake System, Main Rotor Gearbox Tiltball, Inverters, Engine Throttle, and DC Generator.

(31) Installation 1 of 6: Tail Boom Clamp and Retainer Mod-The quantiy being installed doesn't align with the current A-II due to Technical Directive (TD) H-1 Accessory Change Number 1607 authorizing the retrofit installation of the Tail Boom Clamp and Retainer into 29 AH-1Z and 65 UH-1Y fielded tailbooms. This change was incorporated into the AH-1Z and UH-1Y production line aircraft, therefore, retrofit of additional fielded AH-1Z and UH-1Y tailbooms is not required.

(32) Installation 2 of 6: Main Rotor Gear Box (MRGB) Plyon Strap Rivets-The quantiy being installed doesn't align with the current A-II due to Technical Directive (TD) H-1 Airframe Change Number 445 authorizing the retrofit installation of the Main Rotor Gear Box Pylon Strap Rivets into 61 UH-1Y fielded aircraft. This change was incorporated into the UH-1Y production line aircraft, therefore, retrofit of additional fielded UH-1Y aircraft is not required.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 4 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	285.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	285.029
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	285.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	285.029
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**285.029**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**285.029**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 4 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 285.029	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 285.029
Subtotal: Procurement	*- / 285.029*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 285.029*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**285.029**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**285.029**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 5 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	9.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.250
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	9.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.250
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**9.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.250**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
The FY 2020 enacted includes congressional rescissions of $9.25 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 5 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: N/A												
Subtotal: N/A	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Support *(All Modification Items)*												
3.1) FY 2020 Enacted Rescissions	- / -	- / 9.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.250
Subtotal: Support	- / 0.000	- / 9.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.250
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**9.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.250**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0532 / H-1 Series	**Modification Number / Title:** 5 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: N/A

Manufacturer Information

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime *(in Months)*:	Production Leadtime *(in Months)*:

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Support Only Installation	**Installation Quantity:** 0

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0537 / EP-3 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,349.561	9.013	14.143	26.602	0.000	26.602	23.296	8.296	3.996	0.000	-	1,434.907
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,349.561	9.013	14.143	26.602	0.000	26.602	23.296	8.296	3.996	0.000	-	1,434.907
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,349.561**	**9.013**	**14.143**	**26.602**	**0.000**	**26.602**	**23.296**	**8.296**	**3.996**	**0.000**	**-**	**1,434.907**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the EP-3E aircraft. The EP-3E is a land based, long range aircraft with electronic intercept devices for detection and tracking of enemy Radio Detection and Ranging and communications.

In Operational, Safety and Improvement Program (OSIP) 11-01, the Joint Airborne Signal Intelligence Architecture Modification Common Configuration (JCC) obsolescence Engineering Change Orders (ECO) improves operational capability and aircrew productivity by updating the Electronic Support Measures systems, applying state-of-the-art signal exploitation/processing/display techniques, off-board classified communication, and expanding special signal processing capability while meeting cybersecurity, crypto, and emerging requirement upgrades. OSIP 14-05 responds to the current, immediate demand for information operations capabilities on the EP-3E in Overseas Contingency Operations (OCO).

Active Primary Aircraft Authorization inventory is 11. Funds budgeted in FY2020-FY2024 are to continue EP-3E mission viability, address mission systems obsolescence issues and cybersecurity posture, and pace the threat to remain compliant with FY11 National Defense Authorization Act (NDAA) guidance. The EP-3E has an average age of 46 years.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0537 / EP-3 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / JSAF Modification (JMOD) - OSIP 11-01 (Operational Improvement / Modernization)				- / 755.450	- / 3.633	- / 8.655	- / 26.602	- / 0.000	- / 26.602
P-3a	2 / EP-3E Info Operations - OSIP 14-05 (Operational Improvement / Modernization)				- / 214.200	- / 5.380	- / 5.488	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / Inactive OSIPS (Operational Improvement / Modernization)				- / 379.911	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,349.561**	**- / 9.013**	**- / 14.143**	**- / 26.602**	**- / 0.000**	**- / 26.602**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / JSAF Modification (JMOD) - OSIP 11-01 (Operational Improvement / Modernization)				- / 23.296	- / 8.296	- / 3.996	- / 0.000	- / 0.000	- / 829.928
P-3a	2 / EP-3E Info Operations - OSIP 14-05 (Operational Improvement / Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 225.068
P-3a	3 / Inactive OSIPS (Operational Improvement / Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 379.911
P-40	**Total Gross/Weapon System Cost**				**- / 23.296**	**- / 8.296**	**- / 3.996**	**- / 0.000**	**- / -**	**- / 1,434.907**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY2021 funding incorporates modifications that address obsolescence issues, improves cyber protection posture, and maintains compliance with National Security Agency (NSA) mandates.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	755.450	3.633	8.655	26.602	0.000	26.602	23.296	8.296	3.996	0.000	0.000	829.928
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	755.450	3.633	8.655	26.602	0.000	26.602	23.296	8.296	3.996	0.000	0.000	829.928
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**755.450**	**3.633**	**8.655**	**26.602**	**0.000**	**26.602**	**23.296**	**8.296**	**3.996**	**0.000**	**0.000**	**829.928**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) responds to Operational Requirements Document (ORD) #571-78-01 and the CAPSTONE ORD #CAF-002-88. JCC was designed as an evolutionary acquisition program consisting of spiral upgrades. Current JCC baseline requires incorporation of Engineering Change Proposals (ECPs) to procure Quick Reaction Capability mission systems, allowing the EP-3E the flexibility to react in real-time against current and new emerging threats with the most sophisticated equipment available. This flexibility allows upgrades to current aircraft and training systems, support equipment, data and logistics support, aircraft testing, and modernization of computer/software-based applications and crypto systems to support critical missions deemed vital to our national security.

QRC funds address mission avionics system obsolescence and emerging requirements. This OSIP includes JCC Obsolescence funding to replace subsystem obsolescence, maintain compliance with cyber and crypto system mandates, and emerging requirement upgrades to ensure EP-3E viability until aircraft recapitalization.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
JCC Spiral 3 LRIP decision was approved on 25 February 2011

NOTES:
1) Other Support includes Navy Test
2) Install Schedule based on Projected Aircraft Availability
3) Obsolescence quantities include various mission equipment quantities. Quantities cannot be defined due to unknown obsolescence issues.
4) FY20-FY24 NRE, ECO, Data, Training Equipment and Support Equipment supports EP-3E Obsolescence issues and emerging requirement upgrades.
5) The Aircraft Program Data File (APDF) was updated in December 2019 and the A-II will be updated to show the EP-3E extension through FY2024.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EP-3E	**Modification Type:** Operational Improvement / Modernization	**Related RDT&E PEs:** 0305206N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 2: Kits												
A Kits												
Recurring												
1.1.1) Prior Year Archive - Organic	12 / 47.751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 47.751
Subtotal: Recurring	*- / 47.751*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 47.751*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 24.465	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 24.465
Subtotal: Non-Recurring	*- / 24.465*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 24.465*
B Kits												
Recurring												
2.1.1) Prior Year Archive - Organic	9 / 178.808	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 178.808
Subtotal: Recurring	*- / 178.808*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 178.808*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 45.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 45.191
Subtotal: Non-Recurring	*- / 45.191*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 45.191*
Subtotal: Kits	*21 / 296.215*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*21 / 296.215*
Modification Item 2 of 2: Support												
A Kits												
Recurring												
3.1.1) JCC Obsolescence - NonOrganic (1)	- / 201.413	- / 0.405	- / 2.540	- / 18.959	- / -	- / 18.959	- / 15.700	- / 4.338	- / 2.073	- / -	- / -	- / 245.428
Subtotal: Recurring	*- / 201.413*	*- / 0.405*	*- / 2.540*	*- / 18.959*	*- / -*	*- / 18.959*	*- / 15.700*	*- / 4.338*	*- / 2.073*	*- / -*	*- / 0.000*	*- / 245.428*
Subtotal: Support	*- / 201.413*	*- / 0.405*	*- / 2.540*	*- / 18.959*	*- / -*	*- / 18.959*	*- / 15.700*	*- / 4.338*	*- / 2.073*	*- / -*	*- / -*	*- / 245.428*
Subtotal: Procurement, All Modification Items	*- / 497.628*	*- / 0.405*	*- / 2.540*	*- / 18.959*	*- / -*	*- / 18.959*	*- / 15.700*	*- / 4.338*	*- / 2.073*	*- / -*	*- / 0.000*	*- / 541.643*
Support *(All Modification Items)*												
4.2) QRC	- / 4.473	- / 0.880	- / 0.880	- / 0.891	- / -	- / 0.891	- / 0.901	- / 0.312	- / 0.156	- / -	- / -	- / 8.493
4.3) Data	- / 15.649	- / 0.100	- / 0.350	- / 0.354	- / -	- / 0.354	- / 0.358	- / 0.101	- / 0.051	- / -	- / -	- / 16.963
4.4) Training Equipment	- / 17.976	- / 0.381	- / 0.581	- / 0.588	- / -	- / 0.588	- / 0.595	- / 0.386	- / 0.195	- / -	- / -	- / 20.702
4.5) Support Equipment	- / 18.420	- / 0.100	- / 0.200	- / 0.870	- / -	- / 0.870	- / 0.880	- / 0.701	- / 0.351	- / -	- / -	- / 21.522

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EP-3E	**Modification Type:** Operational Improvement / Modernization	**Related RDT&E PEs:** 0305206N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
4.6) ILS	- / 32.434	- / 0.406	- / 1.180	- / 1.310	- / -	- / 1.310	- / 1.326	- / 0.412	- / 0.208	- / -	- / -	- / 37.276
4.7) Other Support	- / 111.571	- / 0.512	- / 1.375	- / 1.830	- / -	- / 1.830	- / 1.852	- / 0.719	- / 0.360	- / -	- / -	- / 118.219
Subtotal: Support	*- / 200.523*	*- / 2.379*	*- / 4.566*	*- / 5.843*	*- / -*	*- / 5.843*	*- / 5.912*	*- / 2.631*	*- / 1.321*	*- / -*	*- / 0.000*	*- / 223.175*
Installation												
Modification Item 2 of 2: Support	- / 57.299	- / 0.849	- / 1.549	- / 1.800	- / 0.000	- / 1.800	- / 1.684	- / 1.327	- / 0.602	- / 0.000	- / 0.000	- / 65.110
Subtotal: Installation	*- / 57.299*	*- / 0.849*	*- / 1.549*	*- / 1.800*	*- / -*	*- / 1.800*	*- / 1.684*	*- / 1.327*	*- / 0.602*	*- / -*	*- / 0.000*	*- / 65.110*
Total												
Total Cost (Procurement + Support + Installation)	**755.450**	**3.633**	**8.655**	**26.602**	**0.000**	**26.602**	**23.296**	**8.296**	**3.996**	**0.000**	**0.000**	**829.928**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 2: Kits		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 2 of 2: Support

Manufacturer Information

Manufacturer Name: TBD - Obsolescence ECP's [2] | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates	Feb 2019	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	

Installation Information

Method of Implementation: Navy Field Mod Team:: Installation Name: JCC Obsolescence

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 57.299	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 57.299
FY 2019	- / -	0 / 0.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 0.849
FY 2020	- / -	- / -	0 / 1.549	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 1.549
FY 2021	- / -	- / -	- / -	0 / 1.800	0 / 0.000	0 / 1.800	- / -	- / -	- / -	- / -	0 / 0.000	- / 1.800
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.684	- / -	- / -	- / -	0 / 0.000	- / 1.684
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.327	- / -	- / -	0 / 0.000	- / 1.327
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.602	- / -	0 / 0.000	- / 0.602
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 57.299	0 / 0.849	0 / 1.549	0 / 1.800	0 / 0.000	0 / 1.800	0 / 1.684	0 / 1.327	0 / 0.602	- / -	0 / 0.000	- / 65.110

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Footnotes:

[1] Technical and Schedule pressure on development, production and IOC for MQ-4C Triton IFC-4 has required extension of operational service for EP-3E. Extension planned for an additional 3 years (through FY24) to ensure compliance with FY11 NDAA. FY21 JCC Obsolescence funds address EP-3E mission viability, mission systems obsolescence, improves cybersecurity posture, National Security Agency (NSA) mandates, and pacing the threat.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 1 / JSAF Modification (JMOD) - OSIP 11-01
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) OBS quantities include various mission equipment quantities.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 2 / EP-3E Info Operations - OSIP 14-05
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	214.200	5.380	5.488	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	225.068
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	214.200	5.380	5.488	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	225.068
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**214.200**	**5.380**	**5.488**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**225.068**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This OSIP responds to the current, immediate demand for information operations capabilities on the EP-3E in the Overseas Contingency Operations (OCO).

This EP-3E Information Operations OSIP will procure the necessary modifications for EP-3E aircraft to selectively conduct offensive intelligence operations. This requirement was originally identified by Commander U.S. Fifth Fleet (US Navy) N3//11715332OCT02)for Operation Enduring Freedom. The requirement was again identified by Commander Naval Forces - Iraq (021101ZNOV04) and endorsed by United States Central Command (CCJ3-P//091619ZNOV4), United States Naval Forces, Central Command(CENTCOM)(111332ZNOV04) and Commander, U.S. Fleet Forces Command(122012ZNOV04).

FY2021 OCO request will enable EP-3E to rapidly integrate new Special Collection and Recording System (SCARS) capabilities to conduct COCOM directed theater-specific missions in support of OCO. Includes rapid technology integration of software and hardware, lab integration, aircraft integration, cybersecurity, collected data dissemination, test, and logistics support, to include training and publication updates.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 2 / EP-3E Info Operations - OSIP 14-05
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EP-3E	**Modification Type:** Operational Improvement / Modernization	**Related RDT&E PEs:** 0305206N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Increased Capability Special Collection Equipment (ICSCE) - NonOrganic *Installation 1 of 2*	- / -	12 / 0.840	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840
1.1.2) Collection Recording and Distribution (CRAD) - NonOrganic *Installation 2 of 2*	- / -	- / -	10 / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.450
1.1.3) ARCHIVED ECPs - Organic(*)	70 / 121.224	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	70 / 121.224
1.2.1) Installation Kits N/R - Organic(*)	- / 11.893	- / 1.025	- / 1.702	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.620
2.1.1) Increased Capability Special Collection Equipment (ICSCE) - Organic(*)	- / -	14 / 1.470	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.470
2.1.2) Collecting Recording and Distribution (CRAD) - Organic(*)	- / -	- / -	10 / 1.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.260
2.1.3) Archive B-Kits Recurring - Organic(*)	42 / 52.827	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 52.827
2.2.1) Install Equipment N/R - Organic(*)	- / 3.050	- / 0.565	- / 0.851	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.466
Subtotal: Procurement	*- / 188.994*	*- / 3.900*	*- / 4.263*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 197.157*
Support												
3.2) Surge ECO	- / 6.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.000
3.3) Data	- / 0.081	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.081
3.4) Training Equipment	- / 1.886	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.886
3.5) Support Equipment	- / 1.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.100
3.6) ILS	- / 1.917	- / 0.175	- / 0.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.217
3.7) Other Support	- / 14.222	- / 0.645	- / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.317
Subtotal: Support	*- / 25.206*	*- / 0.820*	*- / 0.575*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 26.601*
Installation												
Installation 1 of 2: Increased Capability Special Collection Equipment (ICSCE)	- / -	- / 0.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.660
Installation 2 of 2: Collection Recording and Distribution (CRAD)	- / -	- / -	- / 0.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.650
Subtotal: Installation	*- / 0.000*	*- / 0.660*	*- / 0.650*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.310*
Total												
Total Cost (Procurement + Support + Installation)	**214.200**	**5.380**	**5.488**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**225.068**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 2 / EP-3E Info Operations - OSIP 14-05
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: Increased Capability Special Collection Equipment (ICSCE)

Manufacturer Information

Manufacturer Name: TBD - ICSCE	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	Mar 2019						

Installation Information

Method of Implementation: [none specified]:: Installation Name: Increased Capability Special Collection Equipment (ICSCE)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	12 / 0.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.660
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	12 / 0.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.660

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	-	-	-	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 2 / EP-3E Info Operations - OSIP 14-05
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: Collection Recording and Distribution (CRAD)

Manufacturer Information

Manufacturer Name: TBD - CRAD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020					
Delivery Dates		Mar 2020					

Installation Information

Method of Implementation: [none specified]:: Installation Name: Collection Recording and Distribution (CRAD)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	10 / 0.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.650
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	10 / 0.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.650

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	3	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	-	-	-	-	-	-	-	3	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 3 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	379.911	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	379.911
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	379.911	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	379.911
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**379.911**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**379.911**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0537 / EP-3 Series	**Modification Number / Title:** 3 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EP-3E	**Modification Type:** Operational Improvement / Modernization	**Related RDT&E PEs:** 0305206N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.2.1) Inactive OSIPS - Organic(*)	- / 379.911	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 379.911
Subtotal: Procurement	*- / 379.911*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 379.911*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**379.911**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**379.911**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0538 / P-3 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4,910.160	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	4,910.963
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4,910.160	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	4,910.963
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4,910.160**	**0.803**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**4,910.963**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to P-3 aircraft. The P-3 Orion is a four turbo-prop engine, long-range maritime surveillance aircraft which performs Under Sea Warfare, Surface Warfare and Intelligence, Surveillance and Reconnaissance in support of battle group and littoral operations in direct support of Sea Shield and Forcenet pillars of Seapower 21.

A key investment area is P-3 Mod Programs. Funding for these programs support a multitude of obsolescence, structural, sustainment, training/logistics and warfighting capability upgrades that are key in keeping the P-3 platform relevant through Multi-mission Maritime Aircraft (MMA) Initial Operational Capability. P-3 aircraft mods funded under the Aircraft Procurement, Navy line have heavily supported recent and current Operation Enduring Freedom, Operation Iraqi Freedom and Overseas Contingency Operations (OCO). Without key technology upgrades and aggressive obsolescence management, P-3 aircraft will be unable to meet Fleet Response Plan requirements, leaving key Seapower 21 capabilities in support of the Combatant Commanders at risk. This P-3 Sustainment Bridge provides a roadmap ensuring sufficient P-3 assets for Fleet and Combatant Commanders to fulfill operational and training/readiness requirements.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0538 / P-3 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / P-3 MISSION SYSTEMS(OSIP 006-08) (Operational Improvement)				- / 51.891	- / 0.803	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / Inactive OSIPs (TBD)				- / 4,858.269	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 4,910.160**	**- / 0.803**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 0.000**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / P-3 MISSION SYSTEMS(OSIP 006-08) (Operational Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 52.694
P-3a	2 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4,858.269
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 4,910.963**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The budget supports the remaining P-3 variants through FY2019 in order to complete the P-8 transition, and has been optimized for 55 AIP+, 12 EP-3, and 18 Block Modification Upgrade Program (BMUP) configured aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0538 / P-3 Series	**Modification Number / Title:** 1 / P-3 MISSION SYSTEMS(OSIP 006-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	51.891	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	52.694
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	51.891	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	52.694
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**51.891**	**0.803**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**52.694**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and Joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The P-3C Mission Systems Sustainment program will ensure that the P-3C aircraft continues to meet the Navy's requirement to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I) until Full Operational Capability (FOC) of Multi-Mission Maritime Aircraft (MMA) is achieved. Funding supports a multitude of obsolescence sustainment, training/logistics and war fighting capability upgrades that are key in keeping the P-3 platform relevant until the projected P-8A FOC. Sustaining the sensor capabilities provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared(EO/IR) system, ALR 95 Electronic Support Measures(ESM), Tactical Common Data Link (TCDL), small circular area of probability weapon system (Maverick, Standoff Land Attack Missile (SLAM), SLAM-Extended Range, provisions to carry and launch all Mil Std 1760 Digital weapons with Digital Stores Management System (DSMS), Block Modification Upgrade Program(BMUP) Sustainment, Fleet Response, P-3 Obsolescence Upgrades, ALE-47/AAR-47 missile warning countermeasures due to obsolescence is essential in order to maintain these vital capabilities. Additional systems and capabilities may be required in order to remain effective in the Sea Power 21 Construct. These systems include: MATT, APS-137 radar; Acoustic systems, AIMS EO/IR; Multi-Mission Advanced Tactical Terminal; Link 16; Global Communication & Control System - Maritime (GCCS-M); Integrated Tactical Picture (ITP); International Marine/Maritime Satellite; Precision Targeting Workstation (PTW); Over-the-Horizon Airborne Sensor Information System; Video Distribution Controller (VDC); Tactical Mission Computer(TMC); ALR-95 ESM; Demand Assigned Multiple Access (DAMA) Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS), Advanced Data Storage System (ADSS); Cockpit Proximity Video System (CPVS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system upgrades.
These improvements are a vital element of the P-3 sustainment bridge for mission aircraft, including Anti-surface Warfare Improvement Program (AIP) and BMUP, significantly enhancing the strategy of a smaller, more ready, more capable P-3 force during the bridge to MMA. P-3 C Mission Systems Sustainment is a branch of the ASW Maritime Improvement program (AMIP) to provide for obsolescence, technology refresh and technology insertion to P-3C mission systems.

FY17-FY18 P-3 obsolescence upgrades includes the upgrade of Cockpit Proximity Video System (CPVS) procured under critical systems OISP 53-85 as a Pacific Fleet Urgent Operational Need (UON).

FY18-FY19 P-3 obsolescence upgrades addresses obsolescence issues on 18 BMUP aircraft. BMUP aircraft are supporting the Littoral Surveillance Radar System (LSRS) mission through 2023.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
This modification makes maximum use of previously developed subsystems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0538 / P-3 Series	**Modification Number / Title:** 1 / P-3 MISSION SYSTEMS(OSIP 006-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-3C	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: P-3 MISSION SYSTEMS(OSIP 006-08)												
B Kits												
Recurring												
2.1.1) P-3 Obsolescence Upgrades - Organic	140 / 8.814	- / 0.761	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	140 / 9.575
2.1.3) Archived Mods - Organic	43 / 7.816	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 7.816
Subtotal: Recurring	*- / 16.630*	*- / 0.761*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 17.391*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 7.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.204
Subtotal: Non-Recurring	*- / 7.204*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 7.204*
Subtotal: P-3 MISSION SYSTEMS(OSIP 006-08)	*183 / 23.834*	*- / 0.761*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*183 / 24.595*
Subtotal: Procurement, All Modification Items	*- / 23.834*	*- / 0.761*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 24.595*
Support *(All Modification Items)*												
3.1) ECO	- / 6.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.145
3.2) Data	- / 0.622	- / 0.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.632
3.3) Training Equipment	- / 1.366	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.366
3.4) Support Equipment	- / 0.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.357
3.5) ILS	- / 0.630	- / 0.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.640
3.6) Other Support	- / 18.937	- / 0.022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.959
Subtotal: Support	*- / 28.057*	*- / 0.042*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 28.099*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**51.891**	**0.803**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**52.694**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0538 / P-3 Series	**Modification Number / Title:** 1 / P-3 MISSION SYSTEMS(OSIP 006-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: P-3 MISSION SYSTEMS(OSIP 006-08)		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0538 / P-3 Series	**Modification Number / Title:** 2 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4,858.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4,858.269
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4,858.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4,858.269
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4,858.269**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4,858.269**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0538 / P-3 Series	**Modification Number / Title:** 2 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.2.1) Inactive OSIPS - Organic(*)	- / 4,858.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4,858.269
Subtotal: Procurement	*- / 4,858.269*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4,858.269*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**4,858.269**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4,858.269**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0544 / E-2 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,548.509	82.902	117.059	175.540	0.000	175.540	220.700	200.804	260.320	269.373	821.901	3,697.108
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,548.509	82.902	117.059	175.540	0.000	175.540	220.700	200.804	260.320	269.373	821.901	3,697.108
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,548.509**	**82.902**	**117.059**	**175.540**	**0.000**	**175.540**	**220.700**	**200.804**	**260.320**	**269.373**	**821.901**	**3,697.108**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the E-2 aircraft. The E-2 is an all-weather, carrier based, airborne early warning, command and control aircraft that extends task force defense perimeters by providing early warning of approaching enemy units and by vectoring interceptors into attack position. Additionally, the HAWKEYE provides strike control, radar surveillance, search and rescue assistance, communications relay and automatic tactical data exchange. As the result of technological advancements, the Commercial-Off-The-Shelf (COTS) hardware/software of the Mission Computer (MCU) will change or become obsolete in the very near future.

-Technology Insertion Operational Safety and Improvement Program (OSIP) (05-01): Supports assembly, validation and configuration management of COTS hardware and software of the MCU.

-Dual Transmit Satellite Communications OSIP (08-14): Provides the E-2 with an additional Satellite Communications satisfying a capability gap that was identified during Operation Enduring Freedom.

-E-2 Airframe Change Directives (ACDs) OSIP (05-15): Retrofit ACDs and Engineering Change Proposals (ECPs) necessary to sustain and improve the E-2 system operations.

-E-2D Automatic Identification System (AIS) OSIP (09-16): Provides enhanced maritime target Combat Identification (CID) capability in support of Battlefield Management, Command and Control and Surface Warfare mission.

-E-2 Embedded National Tactical Receiver (ENTR) OSIP (08-17): Provides the E-2 with the capability to receive intelligence data from national assets for real-time, emergent threat or CID data, compressing tactical engagement timeline for Naval Integrated Fire Control (NIFC) kill chains.

-Structural Enhancements OSIP (12-17): Enables the aircrafts full service life and removes vehicle performance envelope restrictions. This will mitigate the potential for aircraft grounding.

-E-2D Aerial Refueling (AR) OSIP (02-18): Allows the E-2 to receive fuel from various organic and non-organic tanker aircraft. It will provide Expanded Battle Space Surveillance and Targeting through significantly enhanced persistence and increased flexibility (range & endurance).

-E-2 Secret Internet Protocol Router Chat (SIPR CHAT) OSIP (03-18): Supports the integration of current collaboration tools including tactical "chat" (text) communications, real-time tasking, and Air Tasking Order distribution. Recent real world operations have demonstrated a migration of Command and Control communications from voice to Internet protocol based networks.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0544 / E-2 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

-Crypto Modernization / Frequency Remapping OSIP (07-18): Addresses MIDS JTRS/LINK 16 crypto modernization and frequency remapping to maintain E-2D LINK 16 interoperability including Concurrent Multi-Netting 4 (CMN-4).

-Navigational Warfare (NAVWAR) OSIP (11-19): Allows the E-2D Advanced Hawkeye (AHE) to operate in areas where signal disruption would prohibit unprotected GPS reception. The E-2D AHE will be able to provide continuous operations in a degraded GPS environment for mission areas that depend on GPS for precise position, navigation, and timing. Also, provides Naval platforms improved access to GPS signals in challenged and jamming environments. Modernizes GPS receivers to utilize the new M-Code GPS Signal in Space, incorporate enhanced cryptology, deliver greater position and time accuracy, provide improved protection against signal spoofing as compared to legacy Selective Anti-Jam Anti-Spoof Module (SAASM) receivers and replace an obsolescence issue. Additionally, GPS Modernization delivers increased GPS anti-jam protection and enables blue force GPS electronic attack. Enables compliance with Public Law 111-383 and Office of the Secretary of Defense Oversight Council guidance.

-Advanced Radar Processor (ARP) OSIP (03-20): Essential upgrade to the E-2D APY-9 Radar system that improves the radar processing capability six fold, reduces production costs, addresses obsolescence, reduces future support costs and enables future growth by reducing the number of Subsystem Replaceable Assemblys in the processors. ARP is required to support the transition of current Science & Technology investments in NIFC Increment 3, Counter Electronic Attack and Sensor Netting.

-E-2 Technology Upgrades (16-20): Ensures fleet configuration management and addresses deficiencies and obsolescence of Mission Systems hardware, software and firmware components. This OSIP will execute a strategic, comprehensive plan to mitigate component level end of production and end of support due to deficiencies and obsolescence on all E-2 aircraft and trainers.

-Datalinks (18-20): Addresses Crypto Modernization (CM) upgrades and Frequency Remapping (FR) capabilities. This OSIP will field the LINK 16 CM/FM capability into the E-2 Series aircraft. Funding will also be used to integrate and field Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) Tactical Targeting Network Technology (TTNT) wave form.

-Electronic Support Measures OSIP (07-21): Digital upgrade greatly enhances CID, battle space awareness, and effectiveness of blue forces. Combat Identification (#3) requirements and Electronic Protection (#4) are specifically called out on COMACCLOGWING's FY19 E-2D Naval Aviation Requirements Group (NARG) Message and Electronic Warfare is directly identified in US Fleet Forces POM-21 Integrated Priority List submission.

-Counter Electronic Attack (CEA) (01-24): Improves the ability of the E-2D platform to detect and track targets in a dense Electronic Attack (EA) environment. Modifications to the radar processing architecture and software improvements will allow the radar to detect and track targets.

There are currently 37 E-2Cs in the Fleet inventory and 75 E-2Ds (delivered or on contract) for a total of 112 E-2 aircraft. The E-2 has a service life of 10,000 flight hours.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy | **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity:
1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft

P-1 Line Item Number / Title:
0544 / E-2 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / 005-01 Technology Insertion (Mission Performance Enhancement)				- / 137.590	- / 14.031	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / 008-14 Dual Transmit SATCOM (Mission Performance Enhancements)				- / 18.788	- / 0.655	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / 005-15 E-2 Airframe Change Directives (Mission Performance Enhancements)				- / 10.977	- / 2.157	- / 4.383	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / 009-16 E-2D AIS (Mission Performance Enhancements)				- / 8.539	- / 1.266	- / 0.640	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / 008-17 E-2 ENTR (Missions Performance Enhancements)				- / 3.662	- / 0.509	- / 5.045	- / 5.383	- / 0.000	- / 5.383
P-3a	6 / 012-17 Structural Enhancements (Safety/Reliability Improvement)				- / 10.145	- / 9.253	- / 9.991	- / 17.005	- / 0.000	- / 17.005
P-3a	7 / 002-18 E-2D Aerial Refueling (Mission Performance Enhancements)				- / 24.207	- / 37.280	- / 42.054	- / 38.308	- / 0.000	- / 38.308
P-3a	8 / 003-18 E-2 SIPR CHAT (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 7.443	- / 22.806	- / 0.000	- / 22.806
P-3a	9 / 007-18 Crypto Modernization (Mission Performance Enhancement)				- / 2.000	- / 5.466	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	10 / 011-19 Navigational Warfare (NAVWAR) (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 4.960	- / 6.867	- / 0.000	- / 6.867
P-3a	11 / 003-20 Advanced Radar Processor (Mission Performance Enhancement)				- / 0.000	- / 12.285	- / 16.250	- / 40.007	- / 0.000	- / 40.007
P-3a	12 / 016-20 Technology Upgrades (Mission Performance Enhancement)				- / 0.000	- / 0.000	- / 4.260	- / 6.260	- / 0.000	- / 6.260
P-3a	13 / 018-20 Datalinks (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 22.033	- / 31.196	- / 0.000	- / 31.196
P-3a	14 / 007-21 Electronic Support Measures (Mission Performance Enhancement)				- / 0.000	- / 0.000	- / 0.000	- / 7.708	- / 0.000	- / 7.708
P-3a	15 / 001-24 Counter Electronic Attack (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	16 / Inactive OSIPs (TBD)				- / 1,332.601	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,548.509**	**- / 82.902**	**- / 117.059**	**- / 175.540**	**- / 0.000**	**- / 175.540**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / 005-01 Technology Insertion (Mission Performance Enhancement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 151.621
P-3a	2 / 008-14 Dual Transmit SATCOM (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 19.443
P-3a	3 / 005-15 E-2 Airframe Change Directives (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 17.517
P-3a	4 / 009-16 E-2D AIS (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.445
P-3a	5 / 008-17 E-2 ENTR (Missions Performance Enhancements)				- / 5.486	- / 5.080	- / 3.049	- / 0.314	- / 0.000	- / 28.528
P-3a	6 / 012-17 Structural Enhancements (Safety/Reliability Improvement)				- / 12.474	- / 19.287	- / 18.543	- / 19.820	- / 112.171	- / 228.689

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0544 / E-2 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	7 / 002-18 E-2D Aerial Refueling (Mission Performance Enhancements)				- / 37.531	- / 38.315	- / 38.478	- / 39.220	- / 28.089	- / 323.482
P-3a	8 / 003-18 E-2 SIPR CHAT (Mission Performance Enhancements)				- / 16.310	- / 14.047	- / 8.564	- / 1.988	- / 0.000	- / 71.158
P-3a	9 / 007-18 Crypto Modernization (Mission Performance Enhancement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.466
P-3a	10 / 011-19 Navigational Warfare (NAVWAR) (Mission Performance Enhancements)				- / 8.231	- / 4.750	- / 7.109	- / 12.448	- / 44.804	- / 89.169
P-3a	11 / 003-20 Advanced Radar Processor (Mission Performance Enhancement)				- / 53.907	- / 6.559	- / 0.000	- / 0.000	- / 0.000	- / 129.008
P-3a	12 / 016-20 Technology Upgrades (Mission Performance Enhancement)				- / 9.979	- / 27.709	- / 53.559	- / 51.818	- / 303.688	- / 457.273
P-3a	13 / 018-20 Datalinks (Mission Performance Enhancements)				- / 22.944	- / 17.964	- / 11.552	- / 0.973	- / 0.000	- / 106.662
P-3a	14 / 007-21 Electronic Support Measures (Mission Performance Enhancement)				- / 53.838	- / 67.093	- / 70.311	- / 76.314	- / 75.025	- / 350.289
P-3a	15 / 001-24 Counter Electronic Attack (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 49.155	- / 66.478	- / 258.124	- / 373.757
P-3a	16 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,332.601
P-40	**Total Gross/Weapon System Cost**				**- / 220.700**	**- / 200.804**	**- / 260.320**	**- / 269.373**	**- / 821.901**	**- / 3,697.108**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Retrofit efforts and associated Support Costs in OSIP 05-15 Airframe Change Directives (ACDs) were realigned to OSIP 012-17 Structural Enhancements in FY 2021 and out.

OSIP 008-21 Test Asset Viability requirement and associated funding realigned to Advanced Hawkeye Research, Development, Test & Evaluation PE 0604234N PU 3051.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 1 / 005-01 Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	137.590	14.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	151.621
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	137.590	14.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	151.621
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**137.590**	**14.031**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**151.621**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Addresses obsolescence and deficiencies of Commercial-Off-The-Shelf (COTS) software and hardware of E-2 computing resources. Commercial technology obsolescence and deficiencies drive hardware and software changes in computing resources for the E-2 Aircraft. Funding is required to support capability for assembly, validation, and configuration management of COTS hardware/software provided to fleet squadrons and updated on a 4-year technology cycle. Specific examples include video boards, memory boards, Computer Processing Units cards, compilers, middleware, backplanes, and operating systems that will change or become obsolete.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The E-2 Program Support Activity will ensure software is upgraded, revised, and integrated so that it functions with the versions of the COTS hardware and software delivered. The integration effort must start no less than one year prior to delivery.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 1 / 005-01 Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancement	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 005-01 Technology Insertion												
B Kits												
Recurring												
1.1.1) E-2C COM-Express Mod Replacement B-Kit - Organic	145 / 1.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	145 / 1.801
Subtotal: Recurring	*- / 1.801*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.801*
Non-Recurring												
1.2.1) Installation Equip N/R - Organic (1)	- / -	- / 12.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.112
Subtotal: Non-Recurring	*- / 0.000*	*- / 12.112*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 12.112*
Subtotal: 005-01 Technology Insertion	*145 / 1.801*	*- / 12.112*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*145 / 13.913*
Subtotal: Procurement, All Modification Items	*- / 1.801*	*- / 12.112*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 13.913*
Support *(All Modification Items)*												
2.1) Data	- / 0.927	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.952
2.2) ILS	- / 9.773	- / 0.118	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.891
2.3) Software Upgrades	- / 13.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.234
2.4) Training Equipment	- / 6.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.000
2.5) Other Support	- / 105.855	- / 1.776	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 107.631
Subtotal: Support	*- / 135.789*	*- / 1.919*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 137.708*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**137.590**	**14.031**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**151.621**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 1 / 005-01 Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: 005-01 Technology Insertion		

Footnotes:

(1) FY 2019 Installation Equip N/R updated to reflect actual execution for cockpit tech refresh modification non-recurring engineering efforts. Procurement of kits will be executed in OSIP 016-20 Technology Upgrades.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 2 / 008-14 Dual Transmit SATCOM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	18.788	0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.443
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	18.788	0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.443
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**18.788**	**0.655**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.443**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Dual Transmit Satellite Communication (SATCOM) OSIP will integrate and field the capability into the E-2 by modifying aircraft cabling/components and the antenna. This integration will allow the aircrew to simultaneously receive/transmit on two SATCOM channels, allowing use of two discrete command nets for voice and data. This capability is critical to prevent severe communication gaps with the carrier strike group during missions in theatre.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 2 / 008-14 Dual Transmit SATCOM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D Dual Transmit SATCOM B-Kit - NonOrganic *Installation 1 of 1*	16 / 14.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 14.262
Subtotal: Procurement	*- / 14.262*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.262*
Support												
2.1) Data	- / 0.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.352
2.2) ILS	- / 0.524	- / 0.082	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.606
2.3) Training Equipment	- / 0.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.155
2.4) Support Equipment	- / 0.545	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.545
2.5) Other Support	- / 1.877	- / 0.334	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.211
Subtotal: Support	*- / 3.453*	*- / 0.416*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.869*
Installation												
Installation 1 of 1: E-2D Dual Transmit SATCOM B-Kit	- / 1.073	- / 0.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.312
Subtotal: Installation	*- / 1.073*	*- / 0.239*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.312*
Total												
Total Cost (Procurement + Support + Installation)	**18.788**	**0.655**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.443**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 2 / 008-14 Dual Transmit SATCOM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: E-2D Dual Transmit SATCOM B-Kit

Manufacturer Information

Manufacturer Name: Dual Transmit SATCOM	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Dual Transmit SATCOM B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	13 / 1.073	3 / 0.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 1.312
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 1.073	3 / 0.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 1.312

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Out	13	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 3 / 005-15 E-2 Airframe Change Directives
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.977	2.157	4.383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.517
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.977	2.157	4.383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.517
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.977**	**2.157**	**4.383**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**17.517**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Retrofit Airframe Change Directives (ACDs), also known as Technical Directives (TDs), are required for the E-2 aircraft to support the incorporation of established capability, reliability, maintainability, obsolescence, safety and supportability improvements. Funds will be used to incorporate Engineering Change Proposals (ECP) and implement those changes to sustain and improve E-2 system operations. Planned kit procurements are made up of multiple ACD/TDs needed for the Fleet in each fiscal year.

FY 2021 and out requirements and associated funding have been realigned under OSIP 012-17 Structural Enhancements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 3 / 005-15 E-2 Airframe Change Directives
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Archived Cost Elements - NonOrganic(*)	100 / 5.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 5.191
1.1.2) E-2D Engine Conversion Modification A-Kit - Organic(*)	- / -	2 / 0.900	2 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.800
1.1.3) E-2D DSSC-3 Modification A-Kit - NonOrganic (2) *Installation 1 of 2*	- / -	- / -	10 / 0.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.149
1.1.4) E-2D 2B ACD A-Kit - NonOrganic *Installation 2 of 2*	23 / 3.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 3.450
1.1.5) E-2D 4A ACD A-Kit - Organic(*) (3)	- / -	- / -	41 / 1.607	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 1.607
1.2.1) Installation Kits N/R - Organic(*) (4)	- / 0.333	- / 0.121	- / 0.320	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.774
Subtotal: Procurement	*- / 8.974*	*- / 1.021*	*- / 2.976*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 12.971*
Support												
2.1) Data	- / 0.282	- / 0.036	- / 0.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.355
2.2) ILS (5)	- / 0.209	- / 0.070	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.639
2.3) Support Equipment	- / -	- / -	- / 0.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.021
2.4) Other Support	- / 0.459	- / 0.156	- / 0.294	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.909
Subtotal: Support	*- / 0.950*	*- / 0.262*	*- / 0.712*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.924*
Installation												
Installation 1 of 2: E-2D DSSC-3 Modification A-Kit	- / -	- / -	- / 0.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.695
Installation 2 of 2: E-2D 2B ACD A-Kit	- / -	- / 0.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.874
Subtotal: Installation	*- / 1.053*	*- / 0.874*	*- / 0.695*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.622*
Total												
Total Cost (Procurement + Support + Installation)	**10.977**	**2.157**	**4.383**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**17.517**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 3 / 005-15 E-2 Airframe Change Directives

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: E-2D DSSC-3 Modification A-Kit

Manufacturer Information

Manufacturer Name: E-2 DSSC-3 Modification Kit | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019					
Delivery Dates		May 2020					

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D DSSC-3 Modification A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	10 / 0.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.695
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	10 / 0.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.695

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	-	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 3 / 005-15 E-2 Airframe Change Directives

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: E-2D 2B ACD A-Kit

Manufacturer Information

Manufacturer Name: E-2 2B ACD Kit | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D 2B ACD A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	23 / 0.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	23 / 0.874
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	23 / 0.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	23 / 0.874

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	10	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Out	-	-	10	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23

Footnotes:

(2) FY 2021 and out requirements and associated funding have been realigned under OSIP 012-17 Structural Enhancements.

(3) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year. Kits procured in FY 2020 will be installed under OSIP 012-17 Structural Enhancements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 3 / 005-15 E-2 Airframe Change Directives
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(4) Installation Kits N/R: Engineering Change Proposal Development for multiple kits in each fiscal year.

(5) ILS fluctuates depending on the amount of support needed by the Fleet in each fiscal year.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 4 / 009-16 E-2D AIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	8.539	1.266	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.445
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	8.539	1.266	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.445
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**8.539**	**1.266**	**0.640**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**10.445**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Automatic Identification System (AIS) is a tracking system which provides identification, course and speed of maritime surface vessels. E-2D AIS is a critical component in developing and maintaining the common tactical picture for naval and joint forces. AIS will provide enhanced maritime target Combat ID capability in support of Battlefield Management, Command and Control (BMC2) and Surface Warfare (SUW) mission capability. E-2D AIS supports Combat Identification (CID) gap identified at Fleet Forces Command (FFC) war gaming workshop and is an E-2D Capability Development Document (CDD) requirement (JROC approved March 3, 2009). AIS is already incorporated in the E-2C.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 4 / 009-16 E-2D AIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2D	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D AIS A-Kit - NonOrganic *Installation 1 of 1*	30 / 2.143	4 / 0.298	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 2.441
2.1.1) E-2D AIS B-Kit - Organic(*) (6)	- / 0.464	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.464
Subtotal: Procurement	*- / 2.607*	*- / 0.298*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.905*
Support												
3.1) Data	- / 0.022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.022
3.2) ILS	- / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.090
3.3) Training Equipment	- / 2.629	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.629
3.4) Support Equipment	- / 0.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.396
3.5) Other Support	- / 1.091	- / 0.400	- / 0.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.899
Subtotal: Support	*- / 4.228*	*- / 0.400*	*- / 0.408*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.036*
Installation												
Installation 1 of 1: E-2D AIS A-Kit	- / 1.704	- / 0.568	- / 0.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.504
Subtotal: Installation	*- / 1.704*	*- / 0.568*	*- / 0.232*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.504*
Total												
Total Cost (Procurement + Support + Installation)	**8.539**	**1.266**	**0.640**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**10.445**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 4 / 009-16 E-2D AIS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: E-2D AIS A-Kit

Manufacturer Information

Manufacturer Name: AIS	Manufacturer Location: FIELD MOD TEAM
Administrative Leadtime *(in Months)*: 11	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019						
Delivery Dates	Feb 2020						

Installation Information

Method of Implementation: FIELD MOD TEAM:: Installation Name: E-2D AIS A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	20 / 1.704	10 / 0.568	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	30 / 2.272
FY 2019	- / -	- / -	4 / 0.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.232
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 1.704	10 / 0.568	4 / 0.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	34 / 2.504

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	20	-	4	4	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
Out	20	-	4	4	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34

Footnotes:

(6) 34 AIS kits were procured prior to Production "cut-in" with AC number 35.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 5 / 008-17 E-2 ENTR
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.662	0.509	5.045	5.383	0.000	5.383	5.486	5.080	3.049	0.314	0.000	28.528
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.662	0.509	5.045	5.383	0.000	5.383	5.486	5.080	3.049	0.314	0.000	28.528
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.662**	**0.509**	**5.045**	**5.383**	**0.000**	**5.383**	**5.486**	**5.080**	**3.049**	**0.314**	**0.000**	**28.528**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Integrating the Embedded National Tactical Receiver (ENTR) provides the E-2D capability to receive Integrated Broadcast Service intelligence data from national assets for real-time, emergent threat or Combat ID data, compressing tactical engagement timeline for both Naval Integrated Fire Control kill chains. Due to obsolescence of legacy MATT receiver, it was not included in the E-2D baseline configuration. This capability is an E-2 baseline Capability Design Document threshold requirement and supports gap identified at Fleet Forces Command wargaming workshop.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 5 / 008-17 E-2 ENTR
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Missions Performance Enhancements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D ENTR A-Kit - NonOrganic (7) *Installation 1 of 1*	- / -	- / -	10 / 4.450	10 / 4.535	- / -	10 / 4.535	10 / 4.621	9 / 4.238	5 / 2.399	- / -	- / -	44 / 20.243
2.1.1) E-2D ENTR B-Kit - Organic(*)	- / -	- / -	10 / 0.350	10 / 0.357	- / -	10 / 0.357	10 / 0.363	9 / 0.333	5 / 0.189	- / -	- / -	44 / 1.592
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 4.800*	*- / 4.892*	*- / -*	*- / 4.892*	*- / 4.984*	*- / 4.571*	*- / 2.588*	*- / -*	*- / 0.000*	*- / 21.835*
Support												
3.1) Data	- / 0.043	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.043
3.2) ILS	- / 0.206	- / 0.101	- / 0.031	- / 0.030	- / -	- / 0.030	- / 0.031	- / 0.029	- / -	- / -	- / -	- / 0.428
3.3) Training Equipment	- / 3.148	- / 0.198	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.346
3.4) Support Equipment	- / 0.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.059
3.5) Other Support	- / 0.206	- / 0.210	- / 0.214	- / 0.217	- / -	- / 0.217	- / 0.223	- / 0.227	- / 0.229	- / 0.183	- / -	- / 1.709
Subtotal: Support	*- / 3.662*	*- / 0.509*	*- / 0.245*	*- / 0.247*	*- / -*	*- / 0.247*	*- / 0.254*	*- / 0.256*	*- / 0.229*	*- / 0.183*	*- / 0.000*	*- / 5.585*
Installation												
Installation 1 of 1: E-2D ENTR A-Kit	- / -	- / -	- / -	- / 0.244	- / 0.000	- / 0.244	- / 0.248	- / 0.253	- / 0.232	- / 0.131	- / 0.000	- / 1.108
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.244*	*- / -*	*- / 0.244*	*- / 0.248*	*- / 0.253*	*- / 0.232*	*- / 0.131*	*- / 0.000*	*- / 1.108*
Total												
Total Cost (Procurement + Support + Installation)	**3.662**	**0.509**	**5.045**	**5.383**	**0.000**	**5.383**	**5.486**	**5.080**	**3.049**	**0.314**	**0.000**	**28.528**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 5 / 008-17 E-2 ENTR
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: E-2D ENTR A-Kit

Manufacturer Information

Manufacturer Name: E-2 ENTR	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D ENTR A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	10 / 0.244	0 / 0.000	10 / 0.244	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.244
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.248	- / -	- / -	- / -	0 / 0.000	10 / 0.248
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.253	- / -	- / -	0 / 0.000	10 / 0.253
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.232	- / -	0 / 0.000	9 / 0.232
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.131	0 / 0.000	5 / 0.131
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	10 / 0.244	0 / 0.000	10 / 0.244	10 / 0.248	10 / 0.253	9 / 0.232	5 / 0.131	0 / 0.000	44 / 1.108

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	3	3	2	2	3	3	2	2	3	3	2	2	2	3	2	2	2	1	-	44
Out	-	-	-	-	-	-	-	-	-	-	2	3	3	2	2	3	3	2	2	3	3	2	2	2	3	2	2	2	1	-	44

Footnotes:

(7) ENTR A-Kit unit cost updated to reflect unit cost as per approved Engineering Change Proposal (ECP NGC-E2-0647).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.145	9.253	9.991	17.005	0.000	17.005	12.474	19.287	18.543	19.820	112.171	228.689
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.145	9.253	9.991	17.005	0.000	17.005	12.474	19.287	18.543	19.820	112.171	228.689
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.145**	**9.253**	**9.991**	**17.005**	**0.000**	**17.005**	**12.474**	**19.287**	**18.543**	**19.820**	**112.171**	**228.689**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The structural modifications to the E-2 series aircraft specifically target improvements to structural integrity in order to improve aircrew safety, modernize the airframe and engine, and incorporate structural enhancements to resolve readiness, obsolescence, and safety issues required for the airframe to reach its designed service life. Retrofit Airframe Change Directives (ACD), Technical Directives (TD), and engineering change proposals are required for the E-2 aircraft to support the incorporation of these established capability, reliability, maintainability, obsolescence, safety and supportability improvements. These improvements are a vital requirement for E-2 to maintain the aircraft in the Fleet until the planned sundown. Funds will be used to implement those changes to sustain and improve the E-2 systems operations and all associated support costs. Aircraft systems upgrades will also be incorporated into existing training devices.

Non-Recurring Engineering (NRE) funding levels will fluctuate due to mix and complexity of aircraft system ECPs being written and verified in each year. All ECPs do not require the same level of NRE. Publications and Integrated Logistics Support also vary from year to year based on complexity of logistics elements and number of publications required to be updated for each individual ECP.

Structural changes to the wing center section will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. This effort
will sustain the E-2 Fleet in an affordable manner until the follow-on aircraft are fully fielded.

ACD kit procurements are made up of multiple ACD/TDs needed for the Fleet in each year.

FY 2021 funding required to procure and install kits for DSSC-3 Modification, Rotodome Borescope Access, Crash Survivable Flight Incident Recorder, E-2D Wing Center Section and various ACDs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Safety/Reliability Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D DSSC-3 Modification A-Kit - NonOrganic *Installation 1 of 7*	- / -	- / -	- / -	29 / 0.440	- / -	29 / 0.440	- / -	- / -	- / -	- / -	- / -	29 / 0.440
1.1.2) E-2D Rotodome Bore Scope Access A-Kit - NonOrganic *Installation 2 of 7*	- / -	- / -	- / -	17 / 0.026	- / -	17 / 0.026	17 / 0.026	16 / 0.025	- / -	- / -	- / -	50 / 0.077
1.1.3) E-2D Crash Survivable Flight Incident Recorder A-Kit - NonOrganic *Installation 3 of 7*	- / -	- / -	- / -	5 / 0.008	- / -	5 / 0.008	5 / 0.008	5 / 0.008	5 / 0.008	5 / 0.009	5 / 0.009	30 / 0.050
1.1.4) E-2D Anti-Skid Braking System A-Kit - NonOrganic *Installation 4 of 7*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.534	10 / 0.544	10 / 0.555	31 / 1.788	61 / 3.421
1.1.5) E-2D 4A ACD A-Kit - NonOrganic (8) *Installation 5 of 7*	- / -	- / -	41 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 0.000
1.1.6) E-2D 4B ACD A-Kit - NonOrganic (9) *Installation 5 of 7*	- / -	- / -	- / -	53 / 2.120	- / -	53 / 2.120	- / -	- / -	- / -	- / -	- / -	53 / 2.120
1.1.7) E-2D 5A ACD A-Kit - NonOrganic (10) *Installation 5 of 7*	- / -	- / -	- / -	- / -	- / -	- / -	57 / 2.630	- / -	- / -	- / -	- / -	57 / 2.630
1.1.8) E-2D 5B ACD A-Kit - NonOrganic (11) *Installation 5 of 7*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 3.192	- / -	- / -	- / -	57 / 3.192
1.1.9) E-2D 6A ACD A-Kit - NonOrganic (12) *Installation 5 of 7*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 3.251	- / -	- / -	57 / 3.251
1.1.10) E-2D 7A ACD A-Kit - NonOrganic (13) *Installation 5 of 7*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	65 / 3.780	650 / 41.980	715 / 45.760
1.2.1) Installation Kits N/R - Organic(*) (14)	- / -	- / -	- / -	- / 0.430	- / -	- / 0.430	- / 0.350	- / 0.357	- / 0.364	- / 0.371	- / 4.125	- / 5.997
2.1.1) E-2C Wing Center Section Modification B-Kit - NonOrganic (15) *Installation 6 of 7*	12 / 5.146	5 / 2.139	5 / 2.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 9.465
2.1.2) E-2D Wing Center Section Modification B-Kit - NonOrganic (16) *Installation 7 of 7*	- / -	5 / 1.864	5 / 1.931	5 / 1.974	- / -	5 / 1.974	5 / 2.037	5 / 2.091	12 / 5.113	7 / 3.042	- / -	44 / 18.052
2.1.3) E-2D Anti-Skid Braking System B-Kit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.514	10 / 0.523	10 / 0.534	31 / 1.720	61 / 3.291
2.2.1) Installation Equip N/R - Organic(*) (17)	- / -	- / 0.873	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / -	- / -	- / -	- / 1.373
Subtotal: Procurement	*- / 5.146*	*- / 4.876*	*- / 4.111*	*- / 4.998*	*- / -*	*- / 4.998*	*- / 5.051*	*- / 7.221*	*- / 9.803*	*- / 8.291*	*- / 49.622*	*- / 99.119*
Support												
3.1) Data (18)	- / 0.075	- / -	- / -	- / 0.038	- / -	- / 0.038	- / 0.039	- / 0.540	- / 0.041	- / 0.041	- / 0.460	- / 1.234
3.2) ILS (19)	- / 0.473	- / 0.396	- / 0.352	- / 0.965	- / -	- / 0.965	- / 0.614	- / 0.626	- / 0.639	- / 0.651	- / 7.789	- / 12.505
3.3) Support Equipment (20)	- / -	- / -	- / -	- / 0.030	- / -	- / 0.030	- / -	- / 0.160	- / 0.163	- / -	- / -	- / 0.353

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Safety/Reliability Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.4) Training Equipment [21]	- / -	- / -	- / -	- / 1.000	- / -	- / 1.000	- / 1.020	- / 4.039	- / 1.059	- / 1.080	- / 11.999	- / 20.197
3.5) Other Support [22]	- / 2.168	- / 0.393	- / 0.527	- / 0.841	- / -	- / 0.841	- / 0.788	- / 1.284	- / 1.307	- / 1.332	- / 15.746	- / 24.386
Subtotal: Support	*- / 2.716*	*- / 0.789*	*- / 0.879*	*- / 2.874*	*- / -*	*- / 2.874*	*- / 2.461*	*- / 6.649*	*- / 3.209*	*- / 3.104*	*- / 35.994*	*- / 58.675*
Installation												
Installation 1 of 7: E-2D DSSC-3 Modification A-Kit	- / -	- / -	- / -	- / 2.053	- / 0.000	- / 2.053	- / -	- / -	- / -	- / -	- / 0.000	- / 2.053
Installation 2 of 7: E-2D Rotodome Bore Scope Access A-Kit	- / -	- / -	- / -	- / 1.153	- / 0.000	- / 1.153	- / 1.175	- / 1.127	- / -	- / -	- / 0.000	- / 3.455
Installation 3 of 7: E-2D Crash Survivable Flight Incident Recorder A-Kit	- / -	- / -	- / -	- / 0.038	- / 0.000	- / 0.038	- / 0.039	- / 0.040	- / 0.040	- / 0.041	- / 0.042	- / 0.240
Installation 4 of 7: E-2D Anti-Skid Braking System A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.936	- / 0.954	- / 3.836	- / 5.726
Installation 5 of 7: GRP: ACD Kit Installation	- / -	- / -	- / -	- / 1.200	- / 0.000	- / 1.200	- / 1.438	- / 1.968	- / 2.229	- / 1.737	- / 19.290	- / 27.862
Installation 6 of 7: E-2C Wing Center Section Modification B-Kit	- / 2.283	- / 3.588	- / 2.285	- / 2.328	- / 0.000	- / 2.328	- / -	- / -	- / -	- / -	- / 0.000	- / 10.484
Installation 7 of 7: E-2D Wing Center Section Modification B-Kit	- / -	- / -	- / 2.716	- / 2.361	- / 0.000	- / 2.361	- / 2.310	- / 2.282	- / 2.326	- / 5.693	- / 3.387	- / 21.075
Subtotal: Installation	*- / 2.283*	*- / 3.588*	*- / 5.001*	*- / 9.133*	*- / -*	*- / 9.133*	*- / 4.962*	*- / 5.417*	*- / 5.531*	*- / 8.425*	*- / 26.555*	*- / 70.895*
Total												
Total Cost (Procurement + Support + Installation)	**10.145**	**9.253**	**9.991**	**17.005**	**0.000**	**17.005**	**12.474**	**19.287**	**18.543**	**19.820**	**112.171**	**228.689**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 7: E-2D DSSC-3 Modification A-Kit

Manufacturer Information

Manufacturer Name: E-2 DSSC-3 Modification Kit	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020				
Delivery Dates			May 2021				

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D DSSC-3 Modification A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	29 / 2.053	0 / 0.000	29 / 2.053	- / -	- / -	- / -	- / -	0 / 0.000	29 / 2.053
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	29 / 2.053	0 / 0.000	29 / 2.053	- / -	- / -	- / -	- / -	0 / 0.000	29 / 2.053

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	6	7	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
Out	-	-	-	-	-	-	-	-	-	-	-	6	7	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 7: E-2D Rotodome Bore Scope Access A-Kit

Manufacturer Information

Manufacturer Name: E-2D Rotodome Bore Scope Access | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022		
Delivery Dates			May 2021	May 2022	May 2023		

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Rotodome Bore Scope Access A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	17 / 1.153	0 / 0.000	17 / 1.153	- / -	- / -	- / -	- / -	0 / 0.000	17 / 1.153
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	17 / 1.175	- / -	- / -	- / -	0 / 0.000	17 / 1.175
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.127	- / -	- / -	0 / 0.000	16 / 1.127
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	17 / 1.153	0 / 0.000	17 / 1.153	17 / 1.175	16 / 1.127	- / -	- / -	0 / 0.000	50 / 3.455

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	3	4	5	5	3	4	5	5	3	4	5	4	-	-	-	-	-	-	-	50
Out	-	-	-	-	-	-	-	-	-	-	-	3	4	5	5	3	4	5	5	3	4	5	4	-	-	-	-	-	-	-	50

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 7: E-2D Crash Survivable Flight Incident Recorder A-Kit

Manufacturer Information

Manufacturer Name: E-2D Crash Survivable Flight Incident Recorder

Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Crash Survivable Flight Incident Recorder A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	5 / 0.038	0 / 0.000	5 / 0.038	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.038
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.039	- / -	- / -	- / -	0 / 0.000	5 / 0.039
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.040	- / -	- / -	0 / 0.000	5 / 0.040
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.040	- / -	0 / 0.000	5 / 0.040
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.041	0 / 0.000	5 / 0.041
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.042	5 / 0.042
Total	- / -	- / -	- / -	5 / 0.038	0 / 0.000	5 / 0.038	5 / 0.039	5 / 0.040	5 / 0.040	5 / 0.041	5 / 0.042	30 / 0.240

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	6	30
Out	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	6	30

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 7: E-2D Anti-Skid Braking System A-Kit

Manufacturer Information

Manufacturer Name: E-2D Anti-Skid Braking System | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Mar 2023	Mar 2024	Mar 2025
Delivery Dates					Mar 2024	Mar 2025	Mar 2026

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Anti-Skid Braking System A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.936	- / -	0 / 0.000	10 / 0.936
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.954	0 / 0.000	10 / 0.954
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.936	10 / 0.936
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 2.900	31 / 2.900
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.936	10 / 0.954	41 / 3.836	61 / 5.726

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	3	3	1	3	3	44	61
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	3	3	1	3	3	44	61

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 7: GRP: ACD Kit Installation

Manufacturer Information

Manufacturer Name: ACD Kit Installation	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates		Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: ACD Kit Installation

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	41 / 1.200	0 / 0.000	41 / 1.200	- / -	- / -	- / -	- / -	0 / 0.000	41 / 1.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	53 / 1.438	- / -	- / -	- / -	0 / 0.000	53 / 1.438
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 0.501	- / -	- / -	0 / 0.000	57 / 0.501
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 1.467	19 / 0.735	- / -	0 / 0.000	57 / 2.202
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 1.494	- / -	0 / 0.000	57 / 1.494
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 1.737	17 / 0.000	65 / 1.737
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	650 / 19.290	650 / 19.290
Total	- / -	- / -	- / -	41 / 1.200	0 / 0.000	41 / 1.200	53 / 1.438	95 / 1.968	76 / 2.229	48 / 1.737	667 / 19.290	980 / 27.862

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	10	10	10	11	10	14	14	15	15	15	34	31	19	19	19	19	-	16	16	16	667	980
Out	-	-	-	-	-	-	-	-	-	10	10	10	11	10	14	14	15	15	15	34	31	19	19	19	19	-	16	16	16	667	980

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 7: E-2C Wing Center Section Modification B-Kit

Manufacturer Information

Manufacturer Name: E-2C Wing Center Section Modification

Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020					
Delivery Dates	Jan 2020	Jan 2021					

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2C Wing Center Section Modification B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 2.283	8 / 3.588	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 5.871
FY 2019	- / -	- / -	5 / 2.285	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.285
FY 2020	- / -	- / -	- / -	5 / 2.328	0 / 0.000	5 / 2.328	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.328
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 2.283	8 / 3.588	5 / 2.285	5 / 2.328	0 / 0.000	5 / 2.328	- / -	- / -	- / -	- / -	0 / 0.000	22 / 10.484

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	2	3	3	-	2	2	1	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Out	4	-	2	3	3	-	2	2	1	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 7: E-2D Wing Center Section Modification B-Kit

Manufacturer Information

Manufacturer Name: E-2D Wing Center Section Modification

Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2024
Delivery Dates	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Wing Center Section Modification B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	5 / 2.716	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.716
FY 2020	- / -	- / -	- / -	5 / 2.361	0 / 0.000	5 / 2.361	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.361
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.310	- / -	- / -	- / -	0 / 0.000	5 / 2.310
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.282	- / -	- / -	0 / 0.000	5 / 2.282
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.326	- / -	0 / 0.000	5 / 2.326
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 5.693	0 / 0.000	12 / 5.693
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 3.387	7 / 3.387
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 2.716	5 / 2.361	0 / 0.000	5 / 2.361	5 / 2.310	5 / 2.282	5 / 2.326	12 / 5.693	7 / 3.387	44 / 21.075

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	3	3	3	10	44
Out	-	-	-	-	-	-	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	3	3	3	10	44

Footnotes:

(8) E-2 4A ACD A-Kits procured in FY 2020 were procured and funded under OSIP 05-15 Airframe Change Directives.

(9) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year.

(10) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 6 / 012-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(11) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year.
(12) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year.
(13) Kits are made up of multiple ACDs needed for the Fleet in each fiscal year.
(14) Installation Kits N/R required for Engineering Change Proposal development efforts for multiple kits in each fiscal year.
(15) Unit costs updated per negotiated contract costs.
(16) Unit costs for FY 2019 through FY 2023 updated per negotiated contract costs.
(17) FY 2023 Installation Equipment N/R required for Anti-Skid Braking System modification.
(18) FY 2023 increase in Data required for Ant-Skid Braking System efforts.
(19) FY 2021 and out increase in ILS due to inclusion of efforts previously funded under OSIP 05-15 Airframe Change Directives. ILS fluctuates depending on the amount of support needed by the Fleet in each fiscal year.
(20) FY 2023 and FY 2024 Support Equipment required for Anti-Skid Braking System effort.
(21) FY 2021 and out Training Equipment required to modify E-2 aircrew and maintenance training devices due to incorporation of E-2 ECPs within a fiscal year.
(22) Other Support: FY 2021 increase due to inclusion of efforts previously funded under OSIP 015-15 Airframe Change Directives. FY 2023 increase due to start of Anti-Skid Braking System efforts.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 7 / 002-18 E-2D Aerial Refueling
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	24.207	37.280	42.054	38.308	0.000	38.308	37.531	38.315	38.478	39.220	28.089	323.482
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	24.207	37.280	42.054	38.308	0.000	38.308	37.531	38.315	38.478	39.220	28.089	323.482
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**24.207**	**37.280**	**42.054**	**38.308**	**0.000**	**38.308**	**37.531**	**38.315**	**38.478**	**39.220**	**28.089**	**323.482**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The E-2D Aerial Refueling (AR) OSIP (002-18) will allow the E-2D to receive fuel from various organic and non-organic tanker aircraft. It will provide Expanded Battle Space Surveillance and Targeting through significantly enhanced persistance and increased flexibility (range & endurance).

Aerial Refueling modification will cut into the production line on aircraft 46.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 7 / 002-18 E-2D Aerial Refueling
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2D	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:** 0604234N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D Aerial Refueling B-Kit - NonOrganic *Installation 1 of 1*	4 / 9.522	5 / 9.653	5 / 9.923	5 / 10.121	- / -	5 / 10.121	5 / 10.324	5 / 10.530	5 / 10.730	5 / 10.945	- / -	39 / 81.748
Subtotal: Procurement	*- / 9.522*	*- / 9.653*	*- / 9.923*	*- / 10.121*	*- / -*	*- / 10.121*	*- / 10.324*	*- / 10.530*	*- / 10.730*	*- / 10.945*	*- / 0.000*	*- / 81.748*
Support												
2.1) Data	- / -	- / -	- / 0.543	- / 0.554	- / -	- / 0.554	- / 0.546	- / 0.557	- / -	- / -	- / -	- / 2.200
2.2) ILS	- / 1.316	- / 0.427	- / 0.453	- / 0.468	- / -	- / 0.468	- / 0.477	- / 0.487	- / 0.496	- / 0.475	- / 0.410	- / 5.009
2.3) Training Equipment	- / 8.832	- / 3.613	- / 5.963	- / 1.494	- / -	- / 1.494	- / -	- / -	- / -	- / -	- / -	- / 19.902
2.4) Support Equipment	- / 1.855	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.855
2.5) Other Support	- / 2.682	- / 2.600	- / 2.642	- / 2.691	- / -	- / 2.691	- / 2.744	- / 2.832	- / 2.889	- / 2.950	- / 2.331	- / 24.361
Subtotal: Support	*- / 14.685*	*- / 6.640*	*- / 9.601*	*- / 5.207*	*- / -*	*- / 5.207*	*- / 3.767*	*- / 3.876*	*- / 3.385*	*- / 3.425*	*- / 2.741*	*- / 53.327*
Installation												
Installation 1 of 1: E-2D Aerial Refueling B-Kit	- / -	- / 20.987	- / 22.530	- / 22.980	- / 0.000	- / 22.980	- / 23.440	- / 23.909	- / 24.363	- / 24.850	- / 25.348	- / 188.407
Subtotal: Installation	*- / 0.000*	*- / 20.987*	*- / 22.530*	*- / 22.980*	*- / -*	*- / 22.980*	*- / 23.440*	*- / 23.909*	*- / 24.363*	*- / 24.850*	*- / 25.348*	*- / 188.407*
Total												
Total Cost (Procurement + Support + Installation)	**24.207**	**37.280**	**42.054**	**38.308**	**0.000**	**38.308**	**37.531**	**38.315**	**38.478**	**39.220**	**28.089**	**323.482**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 7 / 002-18 E-2D Aerial Refueling
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: E-2D Aerial Refueling B-Kit

Manufacturer Information

Manufacturer Name: E-2D Aerial Refueling	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019	May 2020	May 2021	May 2022	May 2023	May 2024	
Delivery Dates	Apr 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024	Apr 2025	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Aerial Refueling B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	4 / 20.987	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 20.987
FY 2019	- / -	- / -	5 / 22.530	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 22.530
FY 2020	- / -	- / -	- / -	5 / 22.980	0 / 0.000	5 / 22.980	- / -	- / -	- / -	- / -	0 / 0.000	5 / 22.980
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 23.440	- / -	- / -	- / -	0 / 0.000	5 / 23.440
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 23.909	- / -	- / -	0 / 0.000	5 / 23.909
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 24.363	- / -	0 / 0.000	5 / 24.363
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 24.850	0 / 0.000	5 / 24.850
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 25.348	5 / 25.348
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	4 / 20.987	5 / 22.530	5 / 22.980	0 / 0.000	5 / 22.980	5 / 23.440	5 / 23.909	5 / 24.363	5 / 24.850	5 / 25.348	39 / 188.407

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	1	1	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	7	39
Out	-	-	-	1	1	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	1	1	1	2	7	39

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 8 / 003-18 E-2 SIPR CHAT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	7.443	22.806	0.000	22.806	16.310	14.047	8.564	1.988	0.000	71.158
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	7.443	22.806	0.000	22.806	16.310	14.047	8.564	1.988	0.000	71.158
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**7.443**	**22.806**	**0.000**	**22.806**	**16.310**	**14.047**	**8.564**	**1.988**	**0.000**	**71.158**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The E-2 Secret Internet Protocol Router Chat (SIPR) OSIP (03-18), will support the integration of current collaboration tools including tactical "chat" (text) communications, real-time tasking, and Air Tasking Order distribution. Recent real world operations have demonstrated a migration of Command and Control communications from voice to Internet protocol based networks.

OSIP 003-18 will retrofit 51 total E-2 aircraft with SIPR Chat capability. Hybrid Beyond Line of Sight (H-BLOS) capability provides interim solution to 34 E-2 platform until FY 2021 at which point the E-2 aircraft will be modified with the complete Beyond Line of Sight (BLOS) solution.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 8 / 003-18 E-2 SIPR CHAT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:** 0604234N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 003-18 E-2 SIPR CHAT												
A Kits												
Recurring												
1.1.1) E-2D H-BLOS SIPR Chat A-Kit - NonOrganic [23]	- / -	- / -	17 / 1.777	17 / 1.810	- / -	17 / 1.810	- / -	- / -	- / -	- / -	- / -	34 / 3.587
1.1.2) E-2D Beyond Line of Sight SIPR Chat A-Kit - NonOrganic	- / -	- / -	- / -	7 / 0.760	- / -	7 / 0.760	5 / 0.553	3 / 0.338	2 / 0.230	- / -	- / -	17 / 1.881
1.1.3) E-2D H-BLOS to BLOS SIPR Chat Conversion A-Kit - NonOrganic [24]	- / -	- / -	- / -	7 / 1.575	- / -	7 / 1.575	11 / 2.522	11 / 2.570	5 / 1.190	- / -	- / -	34 / 7.857
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 1.777*	*- / 4.145*	*- / -*	*- / 4.145*	*- / 3.075*	*- / 2.908*	*- / 1.420*	*- / -*	*- / 0.000*	*- / 13.325*
B Kits												
Recurring												
2.1.1) E-2D H-BLOS SIPR Chat B-Kit - Organic	- / -	- / -	17 / 1.391	17 / 1.418	- / -	17 / 1.418	- / -	- / -	- / -	- / -	- / -	34 / 2.809
2.1.2) E-2D Beyond Line of Sight SIPR Chat B-Kit - Organic	- / -	- / -	- / -	7 / 4.250	- / -	7 / 4.250	5 / 3.094	3 / 1.891	2 / 1.285	- / -	- / -	17 / 10.520
2.1.3) E-2D H-BLOS to BLOS SIPR Chat Conversion B-Kit - Organic	- / -	- / -	- / -	7 / 3.675	- / -	7 / 3.675	11 / 5.885	11 / 5.997	5 / 2.777	- / -	- / -	34 / 18.334
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 1.391*	*- / 9.343*	*- / -*	*- / 9.343*	*- / 8.979*	*- / 7.888*	*- / 4.062*	*- / -*	*- / 0.000*	*- / 31.663*
Subtotal: 003-18 E-2 SIPR CHAT	*- / -*	*- / -*	*34 / 3.168*	*62 / 13.488*	*- / -*	*62 / 13.488*	*32 / 12.054*	*28 / 10.796*	*14 / 5.482*	*- / -*	*- / -*	*170 / 44.988*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 3.168*	*- / 13.488*	*- / -*	*- / 13.488*	*- / 12.054*	*- / 10.796*	*- / 5.482*	*- / -*	*- / 0.000*	*- / 44.988*
Support *(All Modification Items)*												
3.1) ILS	- / -	- / -	- / 0.307	- / 0.312	- / -	- / 0.312	- / 0.318	- / 0.325	- / 0.331	- / -	- / -	- / 1.593
3.2) Training Equipment [25]	- / -	- / -	- / 3.147	- / 6.660	- / -	- / 6.660	- / -	- / -	- / -	- / -	- / -	- / 9.807
3.3) Support Equipment [26]	- / -	- / -	- / 0.081	- / 0.326	- / -	- / 0.326	- / 0.333	- / 0.339	- / 0.345	- / 0.352	- / -	- / 1.776
3.4) Other Support	- / -	- / -	- / 0.740	- / 0.755	- / -	- / 0.755	- / 0.768	- / 0.785	- / 0.800	- / 0.817	- / -	- / 4.665
Subtotal: Support	*- / 0.000*	*- / -*	*- / 4.275*	*- / 8.053*	*- / -*	*- / 8.053*	*- / 1.419*	*- / 1.449*	*- / 1.476*	*- / 1.169*	*- / 0.000*	*- / 17.841*
Installation												
Modification Item 1 of 1: 003-18 E-2 SIPR CHAT	- / 0.000	- / 0.000	- / 0.000	- / 1.265	- / 0.000	- / 1.265	- / 2.837	- / 1.802	- / 1.606	- / 0.819	- / 0.000	- / 8.329
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 1.265*	*- / -*	*- / 1.265*	*- / 2.837*	*- / 1.802*	*- / 1.606*	*- / 0.819*	*- / 0.000*	*- / 8.329*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 8 / 003-18 E-2 SIPR CHAT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:** 0604234N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**7.443**	**22.806**	**0.000**	**22.806**	**16.310**	**14.047**	**8.564**	**1.988**	**0.000**	**71.158**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 8 / 003-18 E-2 SIPR CHAT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 003-18 E-2 SIPR CHAT

Manufacturer Information

Manufacturer Name: E-2D SIPR Chat Kit Install

Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D SIPR Chat Kit Install

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	17 / 1.265	0 / 0.000	17 / 1.265	- / -	- / -	- / -	- / -	0 / 0.000	17 / 1.265
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	31 / 2.837	- / -	- / -	- / -	0 / 0.000	31 / 2.837
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.802	- / -	- / -	0 / 0.000	16 / 1.802
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.606	- / -	0 / 0.000	14 / 1.606
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.819	0 / 0.000	7 / 0.819
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	17 / 1.265	0 / 0.000	17 / 1.265	31 / 2.837	16 / 1.802	14 / 1.606	7 / 0.819	0 / 0.000	85 / 8.329

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	3	4	5	5	3	3	9	9	5	6	4	5	3	3	4	4	4	3	2	1	-	85
Out	-	-	-	-	-	-	-	-	-	3	4	5	5	3	3	9	9	5	6	4	5	3	3	4	4	4	3	2	1	-	85

Method of Implementation (Organic): E-2D H-BLOS SIPR Chat B-Kit

Installation Quantity: 34

Method of Implementation (Organic): E-2D Beyond Line of Sight SIPR Chat B-Kit

Installation Quantity: 17

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 8 / 003-18 E-2 SIPR CHAT
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: 003-18 E-2 SIPR CHAT		
Installation Information		
Method of Implementation (Organic): E-2D H-BLOS to BLOS SIPR Chat Conversion B-Kit	**Installation Quantity:** 34	

Footnotes:

(23) Hybrid Beyond Line of Sight (H-BLOS) provides interim solution to the E-2D platform until FY 2021 at which point the E-2D aircraft will be modified with the complete Beyond Line of Sight (BLOS) solution. FY 2019 SIPR Chat kit procurements delayed due to requirement to integrate Hybrid Beyond Line of Sight (H-BLOS) interim capability solution. FY 2019 funds reallocated to OSIP 007-18 Crypto Modernization.

(24) Hybrid Beyond Line of Sight (H-BLOS) to Beyond Line of Sight (BLOS) SIPR Chat conversion kits required to modify (34) E-2D aircraft that received the interim H-BLOS solution to the full BLOS capability.

(25) FY 2020 through FY 2021 Training requirements: Integration and verification of SIPR CHAT capability into aircrew and maintenance training devices and updates to applicable software. SIPR CHAT capability integration requires aircrew and maintenance training devices to be connected to SIPR NET resulting in increased cyber compliance. SIPR CHAT will also require additional testing to ensure interoperability and RMF compliance.

(26) Support Equipment (SE) requirements: Unexpected obsolescence in critical Peculiar SE resulting in new Peculiar SE being required to support SIPR CHAT kit procurements and installations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 9 / 007-18 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.000	5.466	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.466
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.000	5.466	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.466
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.000**	**5.466**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**7.466**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding will be used to integrate and field the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) with Concurrent Multi-Netting 4. This capability will integrate the current E-2D Link -16 data link architecture with Crypto Modernization and Frequency Remapping with Concurrent Contention Receive and Concurrent Multi-Netting.

FY 2020 and out requirements and associated funding have been realigned under OSIP 018-20 Datalinks.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 9 / 007-18 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2D	**Modification Type:** Mission Performance Enhancement	**Related RDT&E PEs:** 0604234N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Crypto Mod CMN-4 Terminal - Organic(*) (27)	8 / 2.000	15 / 3.821	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 5.821
1.1.2) Crypto Mod High Powered Amplifier - Organic(*) (28)	- / -	6 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.500
Subtotal: Procurement	*- / 2.000*	*- / 5.321*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 7.321*
Support												
2.1) Other Support	- / -	- / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.145
Subtotal: Support	*- / 0.000*	*- / 0.145*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.145*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**2.000**	**5.466**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**7.466**

Footnotes:

(27) Concurrent Multi-Netting 4 (CMN-4) Terminals have a long lead procurement time of 18 months. Terminals procured in FY 2018 will be installed in FY 2021 under OSIP 018-20 Datalinks.

(28) High Powered Amplifiers (HPAs) have a procurement time of 18 months. HPAs procured in FY 2019 will be installed in FY 2021 under OSIP 018-20 Datalinks.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 10 / 011-19 Navigational Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	4.960	6.867	0.000	6.867	8.231	4.750	7.109	12.448	44.804	89.169
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	4.960	6.867	0.000	6.867	8.231	4.750	7.109	12.448	44.804	89.169
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**4.960**	**6.867**	**0.000**	**6.867**	**8.231**	**4.750**	**7.109**	**12.448**	**44.804**	**89.169**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procurement of kits and installs to provide a Navigation Warfare (NAVWAR) capability including the integration of the Advanced Digital Antenna Production (ADAP) Controlled Reception Pattern Antenna (CRPA) and Antenna Electronics. NAVWAR capability allows the E-2D AHE to operate in areas where signal disruption would prohibit unprotected Global Positioning System (GPS) reception. The aircraft will be able to provide continuous operations in a degraded GPS environment for mission areas that depend on GPS for precise position, navigation, and timing.

OSIP also provides Naval platforms improved access to Global Positioning System signals in challenged and jamming environments. Modernized GPS receivers to utilize the new M-Code GPS Signal in Space, incorporate enhanced cryptology, deliver greater position and time accuracy, provide improved protection against signal spoofing as compared to legacy Selective Anti-Jam Anti-Spoof Module (SAASM) receivers and to replace an obsolescence issue. Additionally, GPS Modernization delivers increased GPS anti-jam protection and enables blue force GPS electronic attack. Plays a pivotal role in Anti-Access Area Denial (A2AD) fight. Integrates hardware currently under development by the Air Force and integrates it into Naval ships, submarines, aircraft, weapons systems, and GPS enabled systems imbedded on those platforms. Enables compliance with Public Law 111-383 and Office of the Secretary of Defense Oversight Council guidance.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 10 / 011-19 Navigational Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:** 0604777N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) NAVWAR A-Kit - NonOrganic [29] *Installation 1 of 2*	- / -	- / -	5 / 1.760	5 / 1.795	- / -	5 / 1.795	5 / 1.831	5 / 1.866	5 / 1.901	5 / 1.939	23 / 9.438	53 / 20.530
2.1.1) NAVWAR B-Kit - Organic[*]	- / -	- / -	5 / 0.655	5 / 0.668	- / -	5 / 0.668	5 / 0.681	5 / 0.694	5 / 0.708	5 / 0.722	23 / 3.512	53 / 7.640
2.1.2) GPS Modernization B-Kit - NonOrganic [30] *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.636	20 / 6.673	36 / 12.361	61 / 20.670
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 2.415*	*- / 2.463*	*- / -*	*- / 2.463*	*- / 2.512*	*- / 2.560*	*- / 4.245*	*- / 9.334*	*- / 25.311*	*- / 48.840*
Support												
3.1) ILS [31]	- / -	- / -	- / 0.090	- / 0.092	- / -	- / 0.092	- / 0.094	- / 0.095	- / 0.728	- / 0.742	- / 4.074	- / 5.915
3.2) Training Equipment [32]	- / -	- / -	- / 1.292	- / 2.297	- / -	- / 2.297	- / 3.569	- / -	- / -	- / -	- / -	- / 7.158
3.3) Support Equipment	- / -	- / -	- / 0.412	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.412
3.4) Other Support	- / -	- / -	- / 0.751	- / 0.765	- / -	- / 0.765	- / 0.781	- / 0.796	- / 0.812	- / 0.830	- / 5.101	- / 9.836
Subtotal: Support	*- / 0.000*	*- / -*	*- / 2.545*	*- / 3.154*	*- / -*	*- / 3.154*	*- / 4.444*	*- / 0.891*	*- / 1.540*	*- / 1.572*	*- / 9.175*	*- / 23.321*
Installation												
Installation 1 of 2: NAVWAR A-Kit	- / -	- / -	- / -	- / 1.250	- / 0.000	- / 1.250	- / 1.275	- / 1.299	- / 1.324	- / 1.350	- / 8.080	- / 14.578
Installation 2 of 2: GPS Modernization B-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.192	- / 2.238	- / 2.430
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 1.250*	*- / -*	*- / 1.250*	*- / 1.275*	*- / 1.299*	*- / 1.324*	*- / 1.542*	*- / 10.318*	*- / 17.008*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**4.960**	**6.867**	**0.000**	**6.867**	**8.231**	**4.750**	**7.109**	**12.448**	**44.804**	**89.169**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 10 / 011-19 Navigational Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: NAVWAR A-Kit

Manufacturer Information

Manufacturer Name: NAVWAR	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2024
Delivery Dates		Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: NAVWAR A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	5 / 1.250	0 / 0.000	5 / 1.250	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.250
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.275	- / -	- / -	- / -	0 / 0.000	5 / 1.275
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.299	- / -	- / -	0 / 0.000	5 / 1.299
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.324	- / -	0 / 0.000	5 / 1.324
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.350	0 / 0.000	5 / 1.350
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.377	5 / 1.377
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 6.703	23 / 6.703
Total	- / -	- / -	- / -	5 / 1.250	0 / 0.000	5 / 1.250	5 / 1.275	5 / 1.299	5 / 1.324	5 / 1.350	28 / 8.080	53 / 14.578

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	2	2	-	1	2	2	-	1	2	2	-	1	2	2	-	1	2	2	28	53
Out	-	-	-	-	-	-	-	-	-	-	1	2	2	-	1	2	2	-	1	2	2	-	1	2	2	-	1	2	2	28	53

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 10 / 011-19 Navigational Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: GPS Modernization B-Kit

Manufacturer Information

Manufacturer Name: GPS Modernization	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Mar 2024	Mar 2025
Delivery Dates						Dec 2024	Dec 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: GPS Modernization B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.192	0 / 0.000	5 / 0.192
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.785	20 / 0.785
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.453	36 / 1.453
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.192	56 / 2.238	61 / 2.430

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	56	61
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	56	61

Footnotes:

(29) NAVWAR A-Kit and B-Kit procurement adjusted to reflect anticipated aircraft availability for installation.

(30) GPS Modernization kit procurement will begin in FY 2024 to accommodate ongoing development of the E-2D GPS capability solution.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 10 / 011-19 Navigational Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(31) FY 2024 increase in ILS due to GPS Modernization efforts.

(32) FY 2021 increase to Training Equipment due to integration and verification of NAVWAR and GPS Modernization capabilities into aircrew and maintenance training devices. An increase in the amount of fielded trainers drives additional retrofit costs to integrate and verify these training capabilities.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 11 / 003-20 Advanced Radar Processor
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	12.285	16.250	40.007	0.000	40.007	53.907	6.559	0.000	0.000	0.000	129.008
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	12.285	16.250	40.007	0.000	40.007	53.907	6.559	0.000	0.000	0.000	129.008
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**12.285**	**16.250**	**40.007**	**0.000**	**40.007**	**53.907**	**6.559**	**0.000**	**0.000**	**0.000**	**129.008**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

E-2D Advanced Radar Processor (ARP) is an essential upgrade to the E-2D APY-9 Radar system that improves the radar processing capability six fold, reduces production costs, addresses obsolescence, reduces future support costs and enables future growth by reducing the number of Subsystem Replaceable Assembly's in the processors. ARP is required to support the transition of current Science & Technology investments in Naval Integrated Fire Control (NIFC) (Increment 3), Counter Electronic Attack and Sensor Netting.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 11 / 003-20 Advanced Radar Processor
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2	**Modification Type:** Mission Performance Enhancement	**Related RDT&E PEs:** 0604234N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 003-20 Advanced Radar Processor												
B Kits												
Recurring												
1.1.1) ARP B-Kit - NonOrganic (33)	- / -	3 / 8.400	4 / 11.413	12 / 34.889	- / -	12 / 34.889	16 / 47.402	- / -	- / -	- / -	- / -	35 / 102.104
Subtotal: Recurring	*- / 0.000*	*- / 8.400*	*- / 11.413*	*- / 34.889*	*- / -*	*- / 34.889*	*- / 47.402*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 102.104*
Subtotal: 003-20 Advanced Radar Processor	*- / -*	*3 / 8.400*	*4 / 11.413*	*12 / 34.889*	*- / -*	*12 / 34.889*	*16 / 47.402*	*- / -*	*- / -*	*- / -*	*- / -*	*35 / 102.104*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 8.400*	*- / 11.413*	*- / 34.889*	*- / -*	*- / 34.889*	*- / 47.402*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 102.104*
Support *(All Modification Items)*												
2.1) Data	- / -	- / 0.275	- / 0.280	- / 0.286	- / -	- / 0.286	- / 2.152	- / 2.295	- / -	- / -	- / -	- / 5.288
2.2) ILS	- / -	- / 1.500	- / 1.530	- / 1.560	- / -	- / 1.560	- / 1.591	- / 1.623	- / -	- / -	- / -	- / 7.804
2.3) Training Equipment	- / -	- / -	- / 1.135	- / 0.247	- / -	- / 0.247	- / -	- / -	- / -	- / -	- / -	- / 1.382
2.4) Support Equipment	- / -	- / 0.237	- / -	- / 0.633	- / -	- / 0.633	- / -	- / -	- / -	- / -	- / -	- / 0.870
2.5) Other Support	- / -	- / 1.873	- / 1.892	- / 1.950	- / -	- / 1.950	- / 1.989	- / 1.591	- / -	- / -	- / -	- / 9.295
Subtotal: Support	*- / 0.000*	*- / 3.885*	*- / 4.837*	*- / 4.676*	*- / -*	*- / 4.676*	*- / 5.732*	*- / 5.509*	*- / -*	*- / -*	*- / 0.000*	*- / 24.639*
Installation												
Modification Item 1 of 1: 003-20 Advanced Radar Processor	- / 0.000	- / 0.000	- / 0.000	- / 0.442	- / 0.000	- / 0.442	- / 0.773	- / 1.050	- / 0.000	- / 0.000	- / 0.000	- / 2.265
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.442*	*- / -*	*- / 0.442*	*- / 0.773*	*- / 1.050*	*- / -*	*- / -*	*- / 0.000*	*- / 2.265*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**12.285**	**16.250**	**40.007**	**0.000**	**40.007**	**53.907**	**6.559**	**0.000**	**0.000**	**0.000**	**129.008**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 11 / 003-20 Advanced Radar Processor
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 003-20 Advanced Radar Processor

Manufacturer Information

Manufacturer Name: ARP B-Kit [34]	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 21

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Jul 2020	Jul 2021	Jul 2022			
Delivery Dates	Apr 2021	Jul 2021	Jul 2022	Jul 2023			

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: ARP B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	3 / 0.190	0 / 0.000	3 / 0.190	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.190
FY 2020	- / -	- / -	- / -	4 / 0.252	0 / 0.000	4 / 0.252	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.252
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.773	- / -	- / -	- / -	0 / 0.000	12 / 0.773
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.050	- / -	- / -	0 / 0.000	16 / 1.050
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	7 / 0.442	0 / 0.000	7 / 0.442	12 / 0.773	16 / 1.050	- / -	- / -	0 / 0.000	35 / 2.265

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	2	5	-	-	-	5	5	2	-	6	5	5	-	-	-	-	-	-	-	35
Out	-	-	-	-	-	-	-	-	-	-	-	2	5	-	-	-	5	5	2	-	6	5	5	-	-	-	-	-	-	-	35

Footnotes:

[33] Advanced Radar Processor capability into the E-2D aircraft has been accelerated to meet Fleet requirements and realize cost savings. Total program of record quantity has been updated to 35 total aircraft to align with planned ECP production cut-in.

[34] 21 month Production Leadtime on first lot of ARP kits; 12 month Production Leadtime on all subsequent lots

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 12 / 016-20 Technology Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	4.260	6.260	0.000	6.260	9.979	27.709	53.559	51.818	303.688	457.273
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	4.260	6.260	0.000	6.260	9.979	27.709	53.559	51.818	303.688	457.273
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**4.260**	**6.260**	**0.000**	**6.260**	**9.979**	**27.709**	**53.559**	**51.818**	**303.688**	**457.273**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

E-2 Technology Upgrades OSIP was established to ensure fleet configuration management and address deficiencies and obsolescence of Mission Systems hardware, software and firmware components. The E-2 platform is technology dependent and Commercial-Off-The-Shelf (COTS) intensive, leaving it vulnerable to industry component lifecycle trends which are typically 3-5 years. This OSIP funds Mission Systems improvements of, but not limited to, aircraft avionics, displays, navigation, communication, electronic sensors, and datalinks identified as fleet prioritized requirements to address reliability improvements, obsolescence, urgent operational needs, and flight safety issues. Funds will be utilized to manage, process, and incorporate Mission Systems ECP upgrades and implement changes to sustain and improve mission system readiness. The Technology Upgrades OSIP will execute a strategic, comprehensive plan to mitigate component level end of production and end of support due to deficiencies and obsolescence on all E-2 aircraft and trainers.

This OSIP includes efforts started under OSIP 005-01 Technology Insertion.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 12 / 016-20 Technology Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2 Series	**Modification Type:** Mission Performance Enhancement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2D Hawkeye Cockpit Tech Refresh (HECTR) A-Kit - NonOrganic *Installation 1 of 1*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.950	7 / 1.987	7 / 2.027	47 / 14.259	68 / 20.223
2.1.1) E-2C Tactical 4th Operator Mod Kits B-Kit - Organic(*) (35)	- / -	- / -	15 / 0.750	15 / 0.764	- / -	15 / 0.764	- / -	- / -	- / -	- / -	- / -	30 / 1.514
2.1.2) E-2D Hawkeye Cockpit Tech Refresh (HECTR) B-Kit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 8.120	7 / 8.274	7 / 8.440	47 / 59.374	68 / 84.208
2.1.3) E-2C B-Kits 1 - Organic(*)	- / -	- / -	25 / 0.976	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 0.976
2.1.4) E-2D B-Kits 1 - Organic(*)	- / -	- / -	- / -	45 / 1.789	- / -	45 / 1.789	- / -	- / -	- / -	- / -	- / -	45 / 1.789
2.1.5) E-2D B-Kits 2 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.823	- / -	- / -	- / -	- / -	45 / 1.823
2.1.6) E-2C B-Kits 3 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.858	- / -	- / -	- / -	45 / 1.858
2.1.7) E-2D B-Kits 4 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 2.106	- / -	- / -	50 / 2.106
2.1.8) E-2D B-Kits 5 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 2.148	- / -	50 / 2.148
2.2.1) Installation Equip N/R - Organic(*) (36)	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.476	- / 10.136	- / 25.776	- / 27.472	- / 121.500	- / 187.360
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 1.726*	*- / 2.553*	*- / -*	*- / 2.553*	*- / 4.299*	*- / 22.064*	*- / 38.143*	*- / 40.087*	*- / 195.133*	*- / 304.005*
Support												
3.1) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.600	- / 5.400	- / 6.000
3.2) ILS	- / -	- / -	- / 0.640	- / 0.654	- / -	- / 0.654	- / 0.667	- / 0.599	- / 0.569	- / 0.300	- / 2.700	- / 6.129
3.3) Software Upgrades	- / -	- / -	- / 0.210	- / 0.235	- / -	- / 0.235	- / 0.240	- / 0.181	- / 0.172	- / 1.500	- / 13.500	- / 16.038
3.4) Training Equipment (37)	- / -	- / -	- / -	- / 1.100	- / -	- / 1.100	- / 3.121	- / 3.180	- / 8.225	- / 3.289	- / 36.532	- / 55.447
3.5) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / 4.500	- / 5.000
3.6) Other Support	- / -	- / -	- / 1.684	- / 1.718	- / -	- / 1.718	- / 1.652	- / 1.685	- / 1.490	- / 0.483	- / 4.500	- / 13.212
Subtotal: Support	*- / 0.000*	*- / -*	*- / 2.534*	*- / 3.707*	*- / -*	*- / 3.707*	*- / 5.680*	*- / 5.645*	*- / 10.456*	*- / 6.672*	*- / 67.132*	*- / 101.826*
Installation												
Installation 1 of 1: E-2D Hawkeye Cockpit Tech Refresh (HECTR) A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.960	- / 5.059	- / 41.423	- / 51.442
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.960*	*- / 5.059*	*- / 41.423*	*- / 51.442*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**4.260**	**6.260**	**0.000**	**6.260**	**9.979**	**27.709**	**53.559**	**51.818**	**303.688**	**457.273**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 12 / 016-20 Technology Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: E-2D Hawkeye Cockpit Tech Refresh (HECTR) A-Kit

Manufacturer Information

Manufacturer Name: Hawkeye Cockpit Tech Refresh (HECTR)	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Mar 2023	Mar 2024	Mar 2025
Delivery Dates					Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Hawkeye Cockpit Tech Refresh (HECTR) A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 4.960	- / -	0 / 0.000	7 / 4.960
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 5.059	0 / 0.000	7 / 5.059
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 5.155	7 / 5.155
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 36.268	47 / 36.268
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 4.960	7 / 5.059	54 / 41.423	68 / 51.442

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	-	2	2	3	54	68
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	-	2	2	3	54	68

Footnotes:

(35) Efforts and funding in FY 2020 and out were originally identified in OSIP 005-01 Technology Insertion.

(36) FY 2022 Installation Equip N/R required for Hawkeye Cockpit Tech Refresh (HECTR) effort.

(37) FY 2024 increase in Training Equipment due to integration of Hawkeye Cockpit Tech Refresh capability into aircrew and maintenance trainers.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	22.033	31.196	0.000	31.196	22.944	17.964	11.552	0.973	0.000	106.662
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	22.033	31.196	0.000	31.196	22.944	17.964	11.552	0.973	0.000	106.662
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**22.033**	**31.196**	**0.000**	**31.196**	**22.944**	**17.964**	**11.552**	**0.973**	**0.000**	**106.662**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Addresses Crypto Modernization (CM) upgrades and Frequency Remapping (FR) capabilities as mandated by the National Security Agency (NSA), the Department of Transportation (DoT) and the Department of Defense (DoD). This OSIP will field the LINK 16 CM/FR capability with the integration of the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) with Concurrent Multi-Netting 4 (CMN-4) into the E-2 and supports the software effort to integrate application standards into the mission computer and displays. The CMN-4 capability integrates the current E-2 LINK 16 data link architecture with CM and FR with Concurrent Contention Receive and Concurrent Multi-Netting to comply with CM mandate.

Funding will also be used to integrate and field the MIDS JTRS Tactical Targeting Network Technology (TTNT) wave form. The TTNT capability integrates the current E-2 LINK 16 data link architecture with a time sensitive targeting technology in support of the Naval Integrated Fire Control concept for fleet air and missile defense. Overall TTNT kit and install quantities funded under this OSIP have been reduced from 52 to 26 to account for supplemental Spectrum Relocation Fund (SRF) funding. SRF funding will cover kits, installs and associated support costs for the remaining 26 TTNT retrofits.

This OSIP combines previous OSIPs 001-17 LINK 16, 001-18 E-2 MIDS/JTRS TTNT, and current OSIP 007-18 Crypto Modernization in FY 2020 and out.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2 Series	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) E-2C Crypto Mod A-Kit - Organic(*) (38)	- / -	- / -	11 / 0.618	9 / 0.515	- / -	9 / 0.515	- / -	- / -	- / -	- / -	- / -	20 / 1.133
1.1.2) E-2D Crypto Mod A-Kit - NonOrganic (39) *Installation 1 of 3*	- / -	- / -	17 / 9.316	17 / 9.493	- / -	17 / 9.493	- / -	- / -	- / -	- / -	- / -	34 / 18.809
1.1.3) E-2 MIDS/JTRS Crypto Mod to TTNT Conversion A-Kit - NonOrganic *Installation 2 of 3*	- / -	- / -	- / -	4 / 0.183	- / -	4 / 0.183	5 / 0.233	5 / 0.237	3 / 0.145	- / -	- / -	17 / 0.798
1.1.4) E-2 MIDS/JTRS TTNT A-Kit - NonOrganic *Installation 3 of 3*	- / -	- / -	- / -	4 / 3.817	- / -	4 / 3.817	2 / 1.945	2 / 1.982	1 / 1.010	- / -	- / -	9 / 8.754
2.1.1) E-2C Crypto Mod B-Kit - Organic(*)	- / -	- / -	11 / 1.750	9 / 1.459	- / -	9 / 1.459	- / -	- / -	- / -	- / -	- / -	20 / 3.209
2.1.2) E-2D Crypto Mod CMN-4 Terminal - Organic(*) (40)	- / -	- / -	11 / 2.855	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.855
2.1.3) E-2D Crypto Mod High Powered Amplifier (HPA) - Organic(*)	- / -	- / -	20 / 5.095	8 / 2.077	- / -	8 / 2.077	- / -	- / -	- / -	- / -	- / -	28 / 7.172
2.1.4) E-2 MIDS/JTRS Crypto Mod to TTNT Conversion B-Kit - Organic(*)	- / -	- / -	- / -	4 / 0.509	- / -	4 / 0.509	5 / 0.648	5 / 0.661	3 / 0.404	- / -	- / -	17 / 2.222
2.1.5) E-2 MIDS/JTRS TTNT B-Kit - Organic(*)	- / -	- / -	- / -	7 / 1.248	- / -	7 / 1.248	8 / 1.454	7 / 1.296	4 / 0.755	- / -	- / -	26 / 4.753
2.1.6) E-2 MIDS/JTRS TTNT CMN-4 Terminal - Organic(*)	- / -	- / -	- / -	7 / 2.625	- / -	7 / 2.625	2 / 0.764	- / -	- / -	- / -	- / -	9 / 3.389
2.1.7) E-2 MIDS/JTRS TTNT L16 HPA - Organic(*)	- / -	- / -	- / -	4 / 1.019	- / -	4 / 1.019	2 / 0.519	3 / 0.794	- / -	- / -	- / -	9 / 2.332
2.1.8) E-2 MIDS/JTRS TTNT THPA - Organic(*)	- / -	- / -	- / -	7 / 3.675	- / -	7 / 3.675	8 / 4.280	7 / 3.816	4 / 2.222	- / -	- / -	26 / 13.993
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 19.634*	*- / 26.620*	*- / -*	*- / 26.620*	*- / 9.843*	*- / 8.786*	*- / 4.536*	*- / -*	*- / 0.000*	*- / 69.419*
Support												
3.1) ILS	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450	- / 0.459	- / -	- / -	- / -	- / 0.909
3.2) Training Equipment	- / -	- / -	- / 2.067	- / 1.770	- / -	- / 1.770	- / 5.113	- / 4.700	- / 4.500	- / -	- / -	- / 18.150
3.3) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.420	- / 2.634	- / 1.100	- / -	- / -	- / 7.154
3.4) Other Support	- / -	- / -	- / 0.332	- / 0.338	- / -	- / 0.338	- / 0.345	- / 0.351	- / 0.358	- / 0.365	- / -	- / 2.089
Subtotal: Support	*- / 0.000*	*- / -*	*- / 2.399*	*- / 2.108*	*- / -*	*- / 2.108*	*- / 9.328*	*- / 8.144*	*- / 5.958*	*- / 0.365*	*- / 0.000*	*- / 28.302*
Installation												
Installation 1 of 3: E-2D Crypto Mod A-Kit	- / -	- / -	- / -	- / 2.468	- / 0.000	- / 2.468	- / 2.515	- / -	- / -	- / -	- / 0.000	- / 4.983
Installation 2 of 3: E-2 MIDS/JTRS Crypto Mod to TTNT Conversion A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.519	- / 0.661	- / 0.674	- / 0.412	- / 0.000	- / 2.266
Installation 3 of 3: E-2 MIDS/JTRS TTNT A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.739	- / 0.373	- / 0.384	- / 0.196	- / 0.000	- / 1.692
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 2.468*	*- / -*	*- / 2.468*	*- / 3.773*	*- / 1.034*	*- / 1.058*	*- / 0.608*	*- / 0.000*	*- / 8.941*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2 Series	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	22.033	31.196	0.000	31.196	22.944	17.964	11.552	0.973	0.000	106.662

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: E-2D Crypto Mod A-Kit

Manufacturer Information

Manufacturer Name: E-2D Crypto Mod | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021				
Delivery Dates		Mar 2021	Mar 2022				

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2D Crypto Mod A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	17 / 2.468	0 / 0.000	17 / 2.468	- / -	- / -	- / -	- / -	0 / 0.000	17 / 2.468
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	17 / 2.515	- / -	- / -	- / -	0 / 0.000	17 / 2.515
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	17 / 2.468	0 / 0.000	17 / 2.468	17 / 2.515	- / -	- / -	- / -	0 / 0.000	34 / 4.983

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	3	4	5	5	3	4	5	5	-	-	-	-	-	-	-	-	-	-	-	34
Out	-	-	-	-	-	-	-	-	-	-	-	3	4	5	5	3	4	5	5	-	-	-	-	-	-	-	-	-	-	-	34

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 3: E-2 MIDS/JTRS Crypto Mod to TTNT Conversion A-Kit

Manufacturer Information

Manufacturer Name: E-2 MIDS/JTRS Crypto Mod to TTNT Conversion	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2 MIDS/JTRS Crypto Mod to TTNT Conversion A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.519	- / -	- / -	- / -	0 / 0.000	4 / 0.519
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.661	- / -	- / -	0 / 0.000	5 / 0.661
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.674	- / -	0 / 0.000	5 / 0.674
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.412	0 / 0.000	3 / 0.412
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.519	5 / 0.661	5 / 0.674	3 / 0.412	0 / 0.000	17 / 2.266

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	1	2	2	-	1	2	2	-	1	1	1	-	17
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	1	2	2	-	1	2	2	-	1	1	1	-	17

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 13 / 018-20 Datalinks
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 3: E-2 MIDS/JTRS TTNT A-Kit

Manufacturer Information

Manufacturer Name: E-2 MIDS/JTRS TTNT A-Kit	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: E-2 MIDS/JTRS TTNT A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.739	- / -	- / -	- / -	0 / 0.000	4 / 0.739
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.373	- / -	- / -	0 / 0.000	2 / 0.373
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.384	- / -	0 / 0.000	2 / 0.384
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.196	0 / 0.000	1 / 0.196
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.739	2 / 0.373	2 / 0.384	1 / 0.196	0 / 0.000	9 / 1.692

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	1	1	-	-	1	1	-	-	1	-	-	9
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	1	1	-	-	1	1	-	-	1	-	-	9

Footnotes:

(38) E-2C Crypto Mod kits will be installed at the Operational Level

(39) E-2D Crypto Modernization A-Kit unit cost updated to reflect unit cost as per approved Engineering Change Proposal (ECP NGC-E2-0651).

(40) E-2D Crypto Mod B-Kits procured in FY 2019 were procured and funded under OSIP 07-18 Crypto Modernization.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 14 / 007-21 Electronic Support Measures
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	7.708	0.000	7.708	53.838	67.093	70.311	76.314	75.025	350.289
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	7.708	0.000	7.708	53.838	67.093	70.311	76.314	75.025	350.289
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**7.708**	**0.000**	**7.708**	**53.838**	**67.093**	**70.311**	**76.314**	**75.025**	**350.289**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

E-2D Electronic Support Measures (ESM) Combat Identification (CID) upgrade integrates digital receiver and processing technology, enables E-2 multi-ship geo-location and Time Difference of Arrival (TDOA) with other sensors across Link-16 and Tactical Targeting Network Technology (TTNT), and provides a precision internal clock source to enable netted detection of advanced threat radar systems. Connectivity to Electronic Warfare (EW) netted sensors will provide multiple node, real-time, enhanced CID capabilities. The digital upgrade greatly enhances CID and battlespace awareness, and improve effectiveness of blue forces. Survivability capability is required to ensure the E-2D can perform its intended mission at locations required to support Naval and Joint Force Operations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 14 / 007-21 Electronic Support Measures
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2D	**Modification Type:** Mission Performance Enhancement	**Related RDT&E PEs:** 0604234N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Electronic Support Measures A-Kit - NonOrganic (41) *Installation 1 of 2*	- / -	- / -	- / -	12 / 6.000	- / -	12 / 6.000	12 / 6.114	12 / 6.230	12 / 6.349	- / -	- / -	48 / 24.693
1.1.2) Survivability A-Kit - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.000	10 / 2.038	15 / 3.118	38 / 8.134	73 / 15.290
2.1.1) Electronic Support Measures B-Kit - Organic(*) (42)	- / -	- / -	- / -	- / -	- / -	- / -	15 / 37.500	15 / 38.213	15 / 38.939	15 / 39.717	- / -	60 / 154.369
2.1.2) Survivability B-Kit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 10.000	10 / 10.190	15 / 15.591	38 / 40.668	73 / 76.449
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 6.000*	*- / -*	*- / 6.000*	*- / 43.614*	*- / 56.443*	*- / 57.516*	*- / 58.426*	*- / 48.802*	*- / 270.801*
Support												
3.1) Data	- / -	- / -	- / -	- / 0.250	- / -	- / 0.250	- / 0.255	- / 0.260	- / 0.265	- / 0.180	- / -	- / 1.210
3.2) ILS	- / -	- / -	- / -	- / 0.550	- / -	- / 0.550	- / 0.561	- / 0.572	- / 0.583	- / 0.292	- / 0.373	- / 2.931
3.3) Training Equipment	- / -	- / -	- / -	- / 0.508	- / -	- / 0.508	- / 4.000	- / 4.305	- / 2.038	- / 7.308	- / -	- / 18.159
3.4) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 2.040	- / 1.871	- / 1.909	- / -	- / 7.820
3.5) Other Support	- / -	- / -	- / -	- / 0.400	- / -	- / 0.400	- / 0.408	- / 0.416	- / 0.423	- / 0.432	- / 0.508	- / 2.587
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 1.708*	*- / -*	*- / 1.708*	*- / 7.224*	*- / 7.593*	*- / 5.180*	*- / 10.121*	*- / 0.881*	*- / 32.707*
Installation												
Installation 1 of 2: Electronic Support Measures A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.000	- / 3.057	- / 3.115	- / 3.177	- / 0.000	- / 12.349
Installation 2 of 2: Survivability A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.500	- / 4.590	- / 25.342	- / 34.432
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.000*	*- / 3.057*	*- / 7.615*	*- / 7.767*	*- / 25.342*	*- / 46.781*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**7.708**	**0.000**	**7.708**	**53.838**	**67.093**	**70.311**	**76.314**	**75.025**	**350.289**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 14 / 007-21 Electronic Support Measures
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: Electronic Support Measures A-Kit

Manufacturer Information

Manufacturer Name: Electronic Support Measures	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates			Jan 2022	Jan 2023	Jan 2024	Jan 2025	

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: Electronic Support Measures A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.000	- / -	- / -	- / -	0 / 0.000	12 / 3.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.057	- / -	- / -	0 / 0.000	12 / 3.057
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.115	- / -	0 / 0.000	12 / 3.115
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.177	0 / 0.000	12 / 3.177
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.000	12 / 3.057	12 / 3.115	12 / 3.177	0 / 0.000	48 / 12.349

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	-	48
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	-	48

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 14 / 007-21 Electronic Support Measures
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: Survivability A-Kit

Manufacturer Information

Manufacturer Name: Survivability A-Kit	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Mar 2023	Mar 2024	Mar 2025
Delivery Dates					Jan 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: Survivability A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 4.500	- / -	0 / 0.000	10 / 4.500
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 4.590	0 / 0.000	10 / 4.590
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 7.023	15 / 7.023
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 18.319	38 / 18.319
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 4.500	10 / 4.590	53 / 25.342	73 / 34.432

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	4	-	2	4	4	53	73
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	4	-	2	4	4	53	73

Footnotes:

(41) Production cut-in for Electronic Support Measures (ESM) A-Kits is aircraft 53. The installation of A-Kits, which are comprised of cables, will occur during the DSSC-3.1 timeframe in order to minimize downtime for aircraft. Total quantity of 48 E-2D aircraft will require a retrofit consisting of the ESM A-Kit components.

(42) Production cut-in for Electronic Support Measures (ESM) B-Kits is aircraft 65. Total quantity of 60 E-2D aircraft will require a retrofit consisting of the ESM B-Kit components.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 15 / 001-24 Counter Electronic Attack
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	49.155	66.478	258.124	373.757
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	49.155	66.478	258.124	373.757
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**49.155**	**66.478**	**258.124**	**373.757**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

E-2D Counter Electronic Attack (CEA) OSIP was established to improve the ability of the E-2D platform to detect and track targets in a dense Electronic Attack (EA) environment. Modifications to the radar processing architecture and software improvements will allow the radar to detect and track targets.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
Preliminary Design Review will be completed 1st Qtr of FY 2021. Critical Design Review will be completed 4th Qtr FY 2021. Developmental Test and Evaluation will complete 4th Qtr FY 2023. Procurement of kits will begin in FY 2024.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 15 / 001-24 Counter Electronic Attack
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-2D	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:** 0604234N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 001-24 Counter Electronic Attack												
B Kits												
Recurring												
1.1.1) CEA B-Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 21.198	10 / 36.037	58 / 223.757	74 / 280.992
Subtotal: Recurring	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.198	- / 36.037	- / 223.757	- / 280.992
Subtotal: 001-24 Counter Electronic Attack	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 21.198	10 / 36.037	58 / 223.757	74 / 280.992
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 21.198	- / 36.037	- / 223.757	- / 280.992
Support *(All Modification Items)*												
2.1) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.971	- / 4.050	- / -	- / 8.021
2.2) ILS	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.975	- / 1.583	- / 9.264	- / 11.822
2.3) Training Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.048	- / 16.352	- / 3.000	- / 35.400
2.4) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.536	- / 6.667	- / -	- / 13.203
2.5) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.427	- / 1.309	- / 16.211	- / 17.947
Subtotal: Support	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 27.957	- / 29.961	- / 28.475	- / 86.393
Installation												
Modification Item 1 of 1: 001-24 Counter Electronic Attack	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.480	- / 5.892	- / 6.372
Subtotal: Installation	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.480	- / 5.892	- / 6.372
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**49.155**	**66.478**	**258.124**	**373.757**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 15 / 001-24 Counter Electronic Attack

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: 001-24 Counter Electronic Attack

Manufacturer Information

Manufacturer Name: CEA B-Kits | Manufacturer Location: Field Mod Team

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Mar 2024	Mar 2025
Delivery Dates						Nov 2024	Nov 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: CEA B-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.480	0 / 0.000	6 / 0.480
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.817	10 / 0.817
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 5.075	58 / 5.075
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.480	68 / 5.892	74 / 6.372

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	68	74
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	68	74

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 16 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,332.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,332.601
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,332.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,332.601
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,332.601**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,332.601**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0544 / E-2 Series	**Modification Number / Title:** 16 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 1,332.601	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1,332.601
Subtotal: Procurement	*- / 1,332.601*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1,332.601*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**1,332.601**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,332.601**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	244.216	11.597	5.616	7.085	0.000	7.085	9.228	9.627	9.383	7.972	24.384	329.108
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	244.216	11.597	5.616	7.085	0.000	7.085	9.228	9.627	9.383	7.972	24.384	329.108
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**244.216**	**11.597**	**5.616**	**7.085**	**0.000**	**7.085**	**9.228**	**9.627**	**9.383**	**7.972**	**24.384**	**329.108**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to a group of trainer aircraft systems which includes the T-44 and TH-57, and US Navy Test Pilot School (USNTPS) aircraft.

The T-44 is a twin-engine, multi-seat turboprop aircraft produced by Hawker Beech Aircraft and is utilized to provide training for simulated operation of multi-engine training. Specifically, this aircraft provides pipeline training for the P-3, P-8, EP-3, KC-130, E-6, E-2, C-2, and MV-22. Current Navy inventory is 54 aircraft with service life thru 2025 with possible multiyear extensions.

The overall goal of modifications for T-44 is to modify and/or upgrade aircraft avionics and associated sub-systems to include upgrades to avionic systems for Federal Aviation Administration (FAA) compliance. Efforts also include, Avionics modifications to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to avionic systems, may also be driven by new Cyber Security requirements.

The TH-57 is a single engine, multi-seat rotary wing aircraft utilized to provide rotary wing training. Current Navy TH-57 inventory is 115 aircraft with no documented service life remaining. The airframe and dynamic components can be sustained indefinitely (although at higher costs as time goes on).

The overall goal of modifications for TH-57 is implement safety updates as well as required upgrades to avionic systems for FAA compliance. Efforts also include, modifications to airframe, avionics, and sub-systems, necessary to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to avionic systems, may also be driven by new Cyber Security requirements.

Test Pilot School aircraft support training of test pilots, Naval Flight Officers (NFOs), and Test Engineers. TPS aircraft include ten T-38, five UH-72, five OH-58, two U-6, one U-1, two X-26 and one C-26. Efforts include modifications to airframe, avionics, and sub-systems, necessary to address safety, reliability, maintainability, obsolescence, capability, and Diminishing Manufacturing Source (DMSMS) requirements.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE (Safety)				- / 126.252	- / 2.558	- / 0.000	- / 1.546	- / 0.000	- / 1.546
P-3a	2 / OSIP 006-07 TH-57 SAFETY UPGRADE (Conversion/Safety)				- / 62.625	- / 8.934	- / 5.616	- / 4.739	- / 0.000	- / 4.739
P-3a	3 / OSIP 015-16 TPS Aircraft (Safety)				- / 2.295	- / 0.105	- / 0.000	- / 0.800	- / 0.000	- / 0.800
P-3a	4 / Inactive OSIPs (TBD)				- / 53.044	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 244.216**	**- / 11.597**	**- / 5.616**	**- / 7.085**	**- / 0.000**	**- / 7.085**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE (Safety)				- / 1.533	- / 1.576	- / 1.616	- / 0.000	- / 0.000	- / 135.081
P-3a	2 / OSIP 006-07 TH-57 SAFETY UPGRADE (Conversion/Safety)				- / 6.795	- / 5.251	- / 3.567	- / 5.372	- / 0.000	- / 102.899
P-3a	3 / OSIP 015-16 TPS Aircraft (Safety)				- / 0.900	- / 2.800	- / 4.200	- / 2.600	- / 24.384	- / 38.084
P-3a	4 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 53.044
P-40	**Total Gross/Weapon System Cost**				**- / 9.228**	**- / 9.627**	**- / 9.383**	**- / 7.972**	**- / 24.384**	**- / 329.108**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
OSIP 005-04 incorporates corresponding schedule updates and modification efforts focused on T-44 avionics obsolescence.

OSIP 006-07 provides for TH-57 ADS-B(Out) procurement and installation schedules. This submission also incorporates TH-57 Safety Upgrades, to include: Night Vision Device Compatibility kits on 15 TH-57Cs to respond to CNATRA training requirements, implements a TH-57 Kapton Wiring modification to respond to an electrical wiring hazard, and addresses an obsolescence issue with the KMA-24 Audio Panel and Isolation AMP.

The FY 2021 funding request was reduced by $400,000 to account for the availability of prior year execution balances.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	126.252	2.558	0.000	1.546	0.000	1.546	1.533	1.576	1.616	0.000	0.000	135.081
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	126.252	2.558	0.000	1.546	0.000	1.546	1.533	1.576	1.616	0.000	0.000	135.081
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**126.252**	**2.558**	**0.000**	**1.546**	**0.000**	**1.546**	**1.533**	**1.576**	**1.616**	**0.000**	**0.000**	**135.081**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds modifications to T-44 aircraft to provide required Avionics upgrades and address Avionics obsolescence.

This OSIP includes efforts that address, avionics and supporting sub-system modifications and/or upgrades to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications may also be driven by new cyber security requirements.

This OSIP also funds upgrades to avionic systems necessary for compliance with Federal Aviation Administration (FAA) 28 May 2010 release DoT/FAA, 14 CFR Part 91: Automated Dependent Surveillance Broadcast (ADS-B) Out performance requirements to support Air Traffic Control (ATC) service final rule. This mandate stipulates that all aircraft required to have unrestricted access to operate in Classes A, B and C airspace; certain Class E airspace, and other specified airspace requiring ADS-B Out, must be in compliance with this regulation by January 1, 2020.

Current Engineering Change Proposals (ECPs) include: ADS-B Out; Avionics Cooling; and Avionics Obsolescence/DMSMS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Continue incorporation of engineering change proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-44 T-44	**Modification Type:** Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ADS-B Out - NonOrganic *Installation 1 of 2*	38 / 0.114	13 / 0.044	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.158
1.1.2) Archived A-Kit ECPs - Organic(*)	54 / 33.367	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 33.367
1.2.1) Installation Kits Non-recurring - Organic(*)	3 / 5.855	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.855
2.1.1) ADS-B OUT - Organic(*)	38 / 2.340	13 / 0.969	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 3.309
2.1.2) Avionics Cooling Non-Organic - NonOrganic (1) *Installation 2 of 2*	11 / 0.118	40 / 0.197	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.315
2.1.3) Avionics Cooling Organic - Organic(*)	14 / 0.124	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.124
2.1.4) Avionics Obsolescence/DMSMS ECPs - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	54 / 0.763	- / -	54 / 0.900	- / -	- / -	108 / 1.663
2.1.5) Archived B-Kit ECPs - Organic(*)	- / 53.839	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.839
2.2.1) Avionics Obsolescence/DMSMS ECPs NRE - Organic(*) (2)	- / 0.833	- / -	- / -	- / 1.443	- / -	- / 1.443	- / 0.666	- / 1.330	- / 0.506	- / -	- / -	- / 4.778
Subtotal: Procurement	*- / 96.590*	*- / 1.210*	*- / -*	*- / 1.443*	*- / -*	*- / 1.443*	*- / 1.429*	*- / 1.330*	*- / 1.406*	*- / -*	*- / 0.000*	*- / 103.408*
Support												
3.2) DATA - Publications	- / 0.392	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.040	- / -	- / -	- / -	- / 0.432
3.3) Training Equipment	14 / 22.707	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 22.707
3.5) Other Support	- / 6.146	- / 0.906	- / -	- / 0.103	- / -	- / 0.103	- / 0.104	- / 0.206	- / 0.210	- / -	- / -	- / 7.675
Subtotal: Support	*- / 29.245*	*- / 0.906*	*- / -*	*- / 0.103*	*- / -*	*- / 0.103*	*- / 0.104*	*- / 0.246*	*- / 0.210*	*- / -*	*- / 0.000*	*- / 30.814*
Installation												
Installation 1 of 2: ADS-B Out	- / 0.399	- / 0.292	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.691
Installation 2 of 2: Avionics Cooling Non-Organic	- / 0.018	- / 0.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.168
Subtotal: Installation	*- / 0.417*	*- / 0.442*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.859*
Total												
Total Cost (Procurement + Support + Installation)	**126.252**	**2.558**	**0.000**	**1.546**	**0.000**	**1.546**	**1.533**	**1.576**	**1.616**	**0.000**	**0.000**	**135.081**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: ADS-B Out

Manufacturer Information

Manufacturer Name: Dyncorp International ADS-B Out | Manufacturer Location: Corpus Christi, TX - ADS-B Out

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	Apr 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: ADS-B Out

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	28 / 0.399	10 / 0.127	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	38 / 0.526
FY 2019	- / -	13 / 0.165	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 0.165
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 0.399	23 / 0.292	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	51 / 0.691

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	28	5	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51
Out	28	5	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 1 / OSIP 005-04 - T44 AVIONICS OBSOLESCENCE

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: Avionics Cooling Non-Organic

Manufacturer Information

Manufacturer Name: Dyncorp International - Avionics Cooling | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018						
Delivery Dates	Nov 2018						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Avionics Cooling Non-Organic

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	11 / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.018
FY 2019	- / -	40 / 0.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 0.150
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 0.018	40 / 0.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	51 / 0.168

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	11	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51
Out	11	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51

Footnotes:

(1) 2.1.2) Avionics Cooling Non-Organic: Price increase due to having two different Avionics cooling configurations, one stall is nearly twice the cost for install due to additional hours needed to uninstall an entire unit, vice partial uninstall.

(2) 2.2.1) Avionics Obsolescence/DMSMS ECPs NRE: This cost element supports the NRE for FY21-24, funding various avionics ECPs and obsolescence issues resulting from an aging aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 2 / OSIP 006-07 TH-57 SAFETY UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	62.625	8.934	5.616	4.739	0.000	4.739	6.795	5.251	3.567	5.372	0.000	102.899
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	62.625	8.934	5.616	4.739	0.000	4.739	6.795	5.251	3.567	5.372	0.000	102.899
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**62.625**	**8.934**	**5.616**	**4.739**	**0.000**	**4.739**	**6.795**	**5.251**	**3.567**	**5.372**	**0.000**	**102.899**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds modifications to TH-57 aircraft to implement safety updates as well as required upgrades to avionic systems for Federal Aviation Administration (FAA) compliance.

This OSIP includes efforts that address modifications to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications include Airframe, sub-systems, and avionics systems. Modifications, particularly to avionic systems, may also be driven by new cyber security requirements.

Current Engineering Change Proposals (ECPs) include: Kapton Wiring Replacement, Night Vision Device Compatibility kits, Audio Control Panel Replacement, and Avionics Obsolescence. Due to the planned divestiture of the TH-57 by 2025, the previously planned Tactical Air Navigation (TACAN) system replacement has been removed.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Continue incorporation of engineering change proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 2 / OSIP 006-07 TH-57 SAFETY UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: TH-57B/C	**Modification Type:** Conversion/Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ADS-B Out/VHF-Radio - NonOrganic (3) *Installation 1 of 1*	109 / 2.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	109 / 2.348
1.1.2) NVG Cockpit - NonOrganic *Installation 1 of 1*	- / -	15 / 0.462	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.462
1.1.3) Kapton Wiring Replacement - NonOrganic (4) *Installation 1 of 1*	- / -	16 / 0.010	48 / 0.029	47 / 0.028	- / -	47 / 0.028	- / -	- / -	- / -	- / -	- / -	111 / 0.067
1.1.4) Audio Control Panel Replacement - NonOrganic (5) *Installation 1 of 1*	- / -	- / -	41 / 0.250	45 / 0.275	- / -	45 / 0.275	29 / 0.177	- / -	- / -	- / -	- / -	115 / 0.702
1.2.1) Installation Kits Non-recurring - Organic(*)	8 / 3.556	- / 0.133	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.689
2.1.1) ADS-B Out/VHF Radio - Organic(*)	109 / 3.565	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	109 / 3.565
2.1.2) NVG Cockpit - Organic(*)	- / -	15 / 0.565	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.565
2.1.3) Avionics Obsolescence (B kits) - Organic(*) (6)	- / 0.020	- / -	- / -	4 / 0.200	- / -	4 / 0.200	20 / 1.020	20 / 1.040	19 / 1.008	20 / 1.082	- / -	83 / 4.370
2.1.4) Archived ECP B-kits - Organic(*)	- / 2.682	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.682
2.2.1) Avionics Obsolescence NRE - Organic(*) (7)	- / -	- / 3.969	- / 2.019	- / 1.561	- / -	- / 1.561	- / 2.975	- / 1.696	- / -	- / 1.674	- / -	- / 13.894
Subtotal: Procurement	*- / 12.171*	*- / 5.139*	*- / 2.298*	*- / 2.064*	*- / -*	*- / 2.064*	*- / 4.172*	*- / 2.736*	*- / 1.008*	*- / 2.756*	*- / 0.000*	*- / 32.344*
Support												
3.1) DATA - Publications	- / 0.031	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.031
3.2) Training Equipment - Trainer OFT	- / 15.745	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.745
3.4) Other Support	- / 31.742	- / 2.325	- / 2.371	- / 2.419	- / -	- / 2.419	- / 2.465	- / 2.515	- / 2.559	- / 2.616	- / -	- / 49.012
Subtotal: Support	*- / 47.518*	*- / 2.325*	*- / 2.371*	*- / 2.419*	*- / -*	*- / 2.419*	*- / 2.465*	*- / 2.515*	*- / 2.559*	*- / 2.616*	*- / 0.000*	*- / 64.788*
Installation												
Installation 1 of 1: GRP: OSIP 006-07 TH-57 SAFETY UPGRADE	- / 2.936	- / 1.470	- / 0.947	- / 0.256	- / 0.000	- / 0.256	- / 0.158	- / -	- / -	- / -	- / 0.000	- / 5.767
Subtotal: Installation	*- / 2.936*	*- / 1.470*	*- / 0.947*	*- / 0.256*	*- / -*	*- / 0.256*	*- / 0.158*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.767*
Total												
Total Cost (Procurement + Support + Installation)	**62.625**	**8.934**	**5.616**	**4.739**	**0.000**	**4.739**	**6.795**	**5.251**	**3.567**	**5.372**	**0.000**	**102.899**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 2 / OSIP 006-07 TH-57 SAFETY UPGRADE

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: OSIP 006-07 TH-57 SAFETY UPGRADE

Manufacturer Information

Manufacturer Name: Various [8] | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Logistics Support Provider:: Installation Name: OSIP 006-07 TH-57 SAFETY UPGRADE

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	51 / 2.936	34 / 1.470	24 / 0.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	109 / 4.953
FY 2019	- / -	- / -	31 / 0.181	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	31 / 0.181
FY 2020	- / -	- / -	73 / 0.219	16 / 0.011	0 / 0.000	16 / 0.011	- / -	- / -	- / -	- / -	0 / 0.000	89 / 0.230
FY 2021	- / -	- / -	- / -	77 / 0.245	0 / 0.000	77 / 0.245	15 / 0.010	- / -	- / -	- / -	0 / 0.000	92 / 0.255
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	29 / 0.148	- / -	- / -	- / -	0 / 0.000	29 / 0.148
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	51 / 2.936	34 / 1.470	128 / 0.947	93 / 0.256	0 / 0.000	93 / 0.256	44 / 0.158	- / -	- / -	- / -	0 / 0.000	350 / 5.767

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	51	10	9	7	8	24	24	44	36	23	23	24	23	22	13	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350
Out	51	10	9	7	8	24	24	44	36	23	23	24	23	22	13	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350

Footnotes:

(3) 1.1.1) Prior Year quantity updated to reflect correct number of kits procured.

(4) 1.1.3) Kapton Wiring Replacement kit quantities and dollar amounts updated to reflect accelerated modification.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 2 / OSIP 006-07 TH-57 SAFETY UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(5) 1.1.4) New pending ECP to address obsolescence issue with the KMA-24 Audio Panel and Isolation AMP.

(6) 2.1.3) Avionics Obsolescence Kits and the associated Non-Recurring Engineering for the development of the kits is required for sustainment of the inventory the aging aircraft until planned retirement in FY 2025.

(7) 2.2.1) Avionics Obsolescence NRE: The FY 2021 funding request was reduced by $209,000 to account for the availability of prior year execution balances.

(8) Installation Modification Item 1 of 1: Items that make up this installation group have various manufacturer as well as various Administrative Leadtime and Production Leadtime. All installations are made by the TH-57 Contractor Logistics Support Provider.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 3 / OSIP 015-16 TPS Aircraft
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.295	0.105	0.000	0.800	0.000	0.800	0.900	2.800	4.200	2.600	24.384	38.084
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.295	0.105	0.000	0.800	0.000	0.800	0.900	2.800	4.200	2.600	24.384	38.084
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.295**	**0.105**	**0.000**	**0.800**	**0.000**	**0.800**	**0.900**	**2.800**	**4.200**	**2.600**	**24.384**	**38.084**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Test Pilot School (TPS) aircraft support training of test pilots, Naval Flight Officers (NFOs), and Test Engineers. TPS aircraft include T-38, UH-72, OH-58, U-6, U-1, X-26, and C-26. Efforts include modifications to airframe, avionics, and sub-systems, necessary to address safety, reliability, maintainability, obsolescence, capability, and Diminishing Manufacturing Source (DMSMS) requirements.

Funds will be utilized to manage, process, and incorporate Engineering Change Proposals (ECPs) and implement changes to sustain and improve TPS aircraft readiness including safety, mission availability, structural integrity, capability, and component (avionics/systems) reliability, maintainability, and obsolescence conditions.

Current initiatives include Talon Repair, Improvement, and Modification Program (TRIM), and the T-38 Wing Upgrade Program.
The T-38 Wing Upgrade program will result in the T-38C -29 wings being upgraded to the new configuration -33 wing. This modification will maintain concurrency with the USAF configuration, significantly reducing support costs, and enable the aircraft to safely operate until their planned FY35 divestiture.
The TRIM Program will incorporate a USAF SLEP solution that will address sustainment and obsolescence issues on the T-38. The resulting modifications are required to maintain concurrency with the USAF configuration, significantly reducing support costs, and enable the aircraft to safely operate until their planned FY35 divestiture.

DEVELOPMENTAL STATUS/MAJOR DEVELOPMENT MILESTONES:
Avionics Component Improvement (AvCI) Program successfully completed in FY2019. The T-38 Wing Upgrade Program is scheduled to begin in FY21. The TRIM program is scheduled to begin in FY23.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 3 / OSIP 015-16 TPS Aircraft
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** Safety	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: OSIP 015-16 TPS Aircraft												
A Kits												
Recurring												
1.1.1) VHF A-Kits - NonOrganic	10 / 0.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.002
1.1.2) Trim A Kits - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.225	2 / 0.463	1 / 0.239	6 / 10.002	10 / 10.929
1.1.3) Wings A Kit - Organic (9)	- / -	- / -	- / -	1 / 0.778	- / -	1 / 0.778	1 / 0.801	1 / 0.825	1 / 0.850	1 / 0.876	5 / 4.380	10 / 8.510
Subtotal: Recurring	*- / 0.002*	*- / -*	*- / -*	*- / 0.778*	*- / -*	*- / 0.778*	*- / 0.801*	*- / 1.050*	*- / 1.313*	*- / 1.115*	*- / 14.382*	*- / 19.441*
B Kits												
Recurring												
2.1.1) Archive B-Kits - Organic	- / 2.293	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.293
Subtotal: Recurring	*- / 2.293*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.293*
Non-Recurring												
2.2.1) Trim NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050	- / -	- / -	- / -	- / -	- / 0.050
2.2.2) Wing NRE - Organic	- / -	- / -	- / -	- / 0.022	- / -	- / 0.022	- / -	- / -	- / -	- / -	- / -	- / 0.022
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 0.022*	*- / -*	*- / 0.022*	*- / 0.050*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.072*
Subtotal: OSIP 015-16 TPS Aircraft	*10 / 2.295*	*- / -*	*- / -*	*1 / 0.800*	*- / -*	*1 / 0.800*	*1 / 0.851*	*2 / 1.050*	*3 / 1.313*	*2 / 1.115*	*11 / 14.382*	*30 / 21.806*
Subtotal: Procurement, All Modification Items	*- / 2.295*	*- / -*	*- / -*	*- / 0.800*	*- / -*	*- / 0.800*	*- / 0.851*	*- / 1.050*	*- / 1.313*	*- / 1.115*	*- / 14.382*	*- / 21.806*
Support *(All Modification Items)*												
3.1) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.049	- / 0.037	- / 0.010	- / -	- / -	- / 0.096
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.049*	*- / 0.037*	*- / 0.010*	*- / -*	*- / 0.000*	*- / 0.096*
Installation												
Modification Item 1 of 1: OSIP 015-16 TPS Aircraft	- / 0.000	- / 0.105	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.713	- / 2.877	- / 1.485	- / 10.002	- / 16.182
Subtotal: Installation	*- / 0.000*	*- / 0.105*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.713*	*- / 2.877*	*- / 1.485*	*- / 10.002*	*- / 16.182*
Total												
Total Cost (Procurement + Support + Installation)	**2.295**	**0.105**	**0.000**	**0.800**	**0.000**	**0.800**	**0.900**	**2.800**	**4.200**	**2.600**	**24.384**	**38.084**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 3 / OSIP 015-16 TPS Aircraft
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: OSIP 015-16 TPS Aircraft

Manufacturer Information

Manufacturer Name: TBD - Trim A Kits	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2022	Oct 2023	Dec 2024
Delivery Dates					Jan 2023	Nov 2023	Jan 2025

Manufacturer Name: VHF A-Kits	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: VHF A-Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	10 / 0.105	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.105
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	10 / 0.105	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.105

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 3 / OSIP 015-16 TPS Aircraft

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: OSIP 015-16 TPS Aircraft

Installation Information

Method of Implementation: [none specified]:: Installation Name: Trim A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.713	- / -	- / -	0 / 0.000	1 / 1.713
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.877	- / -	0 / 0.000	2 / 2.877
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.485	0 / 0.000	1 / 1.485
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 10.002	6 / 10.002
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.713	2 / 2.877	1 / 1.485	6 / 10.002	10 / 16.077

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	1	-	6	10
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	7	10

Method of Implementation (Organic): Wings A Kit **Installation Quantity:** 10

Footnotes:

(9) Wing Installation to be performed at the O-Level

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	53.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	53.044
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	53.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	53.044
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**53.044**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**53.044**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

[Inactive OSIPs] Includes TH-57 Cockpit Camera Mounts, ADS-B Val/Ver, and Kapton Wiring NRE

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0549 / Trainer Acft Series	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 53.044	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.044
Subtotal: Procurement	*- / 53.044*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 53.044*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**53.044**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**53.044**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0556 / C-2A

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	501.328	8.261	13.747	9.525	0.000	9.525	4.627	0.000	0.000	0.000	-	537.488
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	501.328	8.261	13.747	9.525	0.000	9.525	4.627	0.000	0.000	0.000	-	537.488
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**501.328**	**8.261**	**13.747**	**9.525**	**0.000**	**9.525**	**4.627**	**0.000**	**0.000**	**0.000**	**-**	**537.488**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-2A(R) Greyhound is a high wing monoplane, twin engine turbo-prop aircraft capable of operating from both a shore base and all operational United States Navy aircraft carrier classes. The mission of the C-2A(R) is to provide rapid response Carrier Onboard Delivery of fleet essential supplies, repair parts, and personnel to sustain at sea operations of deployed battle groups. In addition, the C-2A(R) provides airdrop delivery and mobilization support for special operations forces from land bases and carriers.

The goal of the Critical Components Operational Safety Improvement Program (OSIP) (11-07) is to continue procurement efforts for multiple modifications. Critical Components are composed of Communication Avionics and Radio Upgrades, Engine Power & Propulsion, Ejector Valve, Hydraulics, and Transducer Engineering Change Proposals. The C-2 Critical Brake Upgrade OSIP (04-16) provides funding for air vehicle modifications to improve operational ground controllability of C-2A aircraft. The Structural Enhancements OSIP (14-17) targets improvements to structural integrity. These improvements are a vital requirement for C-2A(R) to maintain the aircraft in the Fleet. The modification to the wing center section is to prevent structural cracks due to fatigue.

The original design service life of the C-2A(R) was 10,000 flight hours with 15,000 landings. The C-2A(R) Service Life Extension Program (SLEP) extended the service life to 15,000 flight hours with 36,000 landings. Average service life remaining on the C-2A(R) is 4,400 hours. There is a total number of 34 C-2A aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0556 / C-2A

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / 011-07 Critical Components (Mission Performance Enhancements)				- / 24.897	- / 1.116	- / 1.471	- / 1.072	- / 0.000	- / 1.072
P-3a	2 / 004-16 C-2 Critical Brake Upgrade (Mission Performance Enhancements)				- / 13.263	- / 3.099	- / 5.248	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / 014-17 Structural Enhancements (Mission Performance Enhancements)				- / 19.232	- / 4.046	- / 7.028	- / 8.453	- / 0.000	- / 8.453
P-3a	4 / Inactive OSIPs (TBD)				- / 443.936	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 501.328**	**- / 8.261**	**- / 13.747**	**- / 9.525**	**- / 0.000**	**- / 9.525**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / 011-07 Critical Components (Mission Performance Enhancements)				- / 1.052	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 29.608
P-3a	2 / 004-16 C-2 Critical Brake Upgrade (Mission Performance Enhancements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 21.610
P-3a	3 / 014-17 Structural Enhancements (Mission Performance Enhancements)				- / 3.575	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 42.334
P-3a	4 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 443.936
P-40	**Total Gross/Weapon System Cost**				**- / 4.627**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 537.488**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Basis for FY 2021 request is to procure Wing Center Section and SIPR Chat kits, perform Wing Center Section installs, and fund program costs associated with those efforts.

Anti-Skid Brake System (ABS) modification has been accelerated due to reduction in production lead time.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 1 / 011-07 Critical Components
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	24.897	1.116	1.471	1.072	0.000	1.072	1.052	0.000	0.000	0.000	0.000	29.608
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	24.897	1.116	1.471	1.072	0.000	1.072	1.052	0.000	0.000	0.000	0.000	29.608
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**24.897**	**1.116**	**1.471**	**1.072**	**0.000**	**1.072**	**1.052**	**0.000**	**0.000**	**0.000**	**0.000**	**29.608**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-2A(R) Service Life Extension Program (SLEP) extended the Navy's Carrier Onboard Delivery capability beyond the original projected service life. With a longer air vehicle life, problems with other non-SLEP systems require upgrade/modifications. OSIP 11-07 procures a portion of the Critical Components communication avionics, radios, transducers, ejector valves, hydraulics, power and propulsion subsystems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 1 / 011-07 Critical Components
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C-2A(R) Aircraft	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 011-07 Critical Components												
A Kits												
Recurring												
1.1.1) Ejector Valve - Organic	52 / 3.536	13 / 1.017	15 / 1.173	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 5.726
1.1.2) SIPR Chat - NonOrganic	- / -	- / -	- / -	14 / 0.939	- / -	14 / 0.939	- / -	- / -	- / -	- / -	- / -	14 / 0.939
1.1.3) ARCHIVE Modification - Organic	- / 9.317	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.317
Subtotal: Recurring	*- / 12.853*	*- / 1.017*	*- / 1.173*	*- / 0.939*	*- / -*	*- / 0.939*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 15.982*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic (1)	- / 2.234	- / -	- / 0.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.473
Subtotal: Non-Recurring	*- / 2.234*	*- / -*	*- / 0.239*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.473*
B Kits												
Recurring												
2.1.1) Installation Equipment - Organic	- / 0.470	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.470
Subtotal: Recurring	*- / 0.470*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.470*
Subtotal: 011-07 Critical Components	*52 / 15.557*	*13 / 1.017*	*15 / 1.412*	*14 / 0.939*	*- / -*	*14 / 0.939*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*94 / 18.925*
Subtotal: Procurement, All Modification Items	*- / 15.557*	*- / 1.017*	*- / 1.412*	*- / 0.939*	*- / -*	*- / 0.939*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 18.925*
Support *(All Modification Items)*												
3.1) Data (2)	- / 0.746	- / -	- / -	- / 0.031	- / -	- / 0.031	- / 0.031	- / -	- / -	- / -	- / -	- / 0.808
3.2) ILS (3)	- / 1.036	- / 0.079	- / 0.055	- / 0.025	- / -	- / 0.025	- / 0.026	- / -	- / -	- / -	- / -	- / 1.221
3.3) Training Equipment	- / 0.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.505
3.4) Support Equipment	- / 0.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.007
3.5) Other Support (4)	- / 7.046	- / 0.020	- / 0.004	- / 0.077	- / -	- / 0.077	- / 0.078	- / -	- / -	- / -	- / -	- / 7.225
Subtotal: Support	*- / 9.340*	*- / 0.099*	*- / 0.059*	*- / 0.133*	*- / -*	*- / 0.133*	*- / 0.135*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.766*
Installation												
Modification Item 1 of 1: 011-07 Critical Components	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.917	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.917
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.917*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.917*
Total												
Total Cost (Procurement + Support + Installation)	**24.897**	**1.116**	**1.471**	**1.072**	**0.000**	**1.072**	**1.052**	**0.000**	**0.000**	**0.000**	**0.000**	**29.608**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 1 / 011-07 Critical Components
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 011-07 Critical Components

Manufacturer Information

Manufacturer Name: SIPR Chat Installs	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020				
Delivery Dates			Dec 2021				

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: SIPR Chat

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.917	- / -	- / -	- / -	0 / 0.000	14 / 0.917
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.917	- / -	- / -	- / -	0 / 0.000	14 / 0.917

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	14

Method of Implementation (Organic): Ejector Valve	**Installation Quantity:** 80

Footnotes:

(1) FY 2020 increase in A-Kit N/R due to SIPR Chat ECP requirements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 1 / 011-07 Critical Components
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) FY 2021 increase in Data required for SIPR Chat ECP requirements.

(3) FY 2022 funding for Data, ILS, and Other Support costs support installation of SIPR Chat kits procured in FY 2021.

(4) FY 2021 increase in Other Support due to SIPR Chat ECP requirements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 2 / 004-16 C-2 Critical Brake Upgrade
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.263	3.099	5.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.610
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.263	3.099	5.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21.610
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.263**	**3.099**	**5.248**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**21.610**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
The C-2A(R) Greyhound Critical Brake Upgrade adds an Anti-Skid Brake System (ABS) to the aircraft which helps mitigate directional stability safety issues by enhancing ground controllability for land based runway conditions.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 2 / 004-16 C-2 Critical Brake Upgrade
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C-2A(R) Aircraft	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 004-16 C-2 Critical Brake Upgrade												
A Kits												
Recurring												
1.1.1) Critical Brakes - NonOrganic	19 / 2.898	- / -	14 / 2.016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 4.914
Subtotal: Recurring	*- / 2.898*	*- / -*	*- / 2.016*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.914*
Non-Recurring												
1.2.1) A-Kits N/R - Organic	- / 1.038	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.038
Subtotal: Non-Recurring	*- / 1.038*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.038*
B Kits												
Recurring												
2.1.1) Critical Brakes B-kit - Organic	19 / 1.706	- / -	14 / 0.983	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 2.689
Subtotal: Recurring	*- / 1.706*	*- / -*	*- / 0.983*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.689*
Subtotal: 004-16 C-2 Critical Brake Upgrade	*38 / 5.642*	*- / -*	*28 / 2.999*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*66 / 8.641*
Subtotal: Procurement, All Modification Items	*- / 5.642*	*- / -*	*- / 2.999*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.641*
Support *(All Modification Items)*												
3.1) Data	- / 0.642	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.642
3.2) ILS	- / 1.690	- / 0.443	- / 0.222	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.355
3.3) Training Equipment	- / -	- / 0.276	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.276
3.4) Support Equipment	- / 0.458	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.458
3.5) Other Support	- / 3.731	- / 1.566	- / 0.783	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.080
Subtotal: Support	*- / 6.521*	*- / 2.285*	*- / 1.005*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.811*
Installation												
Modification Item 1 of 1: 004-16 C-2 Critical Brake Upgrade	- / 1.100	- / 0.814	- / 1.244	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.158
Subtotal: Installation	*- / 1.100*	*- / 0.814*	*- / 1.244*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.158*
Total												
Total Cost (Procurement + Support + Installation)	**13.263**	**3.099**	**5.248**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**21.610**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 2 / 004-16 C-2 Critical Brake Upgrade
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 004-16 C-2 Critical Brake Upgrade

Manufacturer Information

Manufacturer Name: Critical Brake Upgrade	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019					
Delivery Dates		May 2020					

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: Critical Brake Upgrade

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	11 / 1.100	8 / 0.814	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 1.914
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	14 / 1.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.244
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 1.100	8 / 0.814	14 / 1.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	33 / 3.158

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	11	-	-	8	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
Out	2	-	9	-	-	-	8	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33

Method of Implementation (Organic): Critical Brakes B-kit	**Installation Quantity:** 33

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 3 / 014-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	19.232	4.046	7.028	8.453	0.000	8.453	3.575	0.000	0.000	0.000	0.000	42.334
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	19.232	4.046	7.028	8.453	0.000	8.453	3.575	0.000	0.000	0.000	0.000	42.334
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**19.232**	**4.046**	**7.028**	**8.453**	**0.000**	**8.453**	**3.575**	**0.000**	**0.000**	**0.000**	**0.000**	**42.334**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The structural enhancements to the C-2 series aircraft target improvements to structural integrity and support costs. These improvements are a vital requirement for C-2 to maintain the aircraft in the Fleet until the planned sundown. Structural changes to the wing center section will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. This effort will take the C-2 Fleet to full service life.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 3 / 014-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C-2A(R) Aircraft	**Modification Type:** Mission Performance Enhancements	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 014-17 Structural Enhancements												
B Kits												
Recurring												
1.1.1) Wing Center Section - NonOrganic	19 / 11.205	- / -	6 / 3.716	5 / 3.158	- / -	5 / 3.158	- / -	- / -	- / -	- / -	- / -	30 / 18.079
Subtotal: Recurring	*- / 11.205*	*- / -*	*- / 3.716*	*- / 3.158*	*- / -*	*- / 3.158*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 18.079*
Non-Recurring												
1.2.1) B Kits N/R - Organic	- / 0.901	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.901
Subtotal: Non-Recurring	*- / 0.901*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.901*
Subtotal: 014-17 Structural Enhancements	*19 / 12.106*	*- / -*	*6 / 3.716*	*5 / 3.158*	*- / -*	*5 / 3.158*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*30 / 18.980*
Subtotal: Procurement, All Modification Items	*- / 12.106*	*- / -*	*- / 3.716*	*- / 3.158*	*- / -*	*- / 3.158*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 18.980*
Support *(All Modification Items)*												
2.1) Data	- / 0.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.409
2.2) ILS (5)	- / 0.978	- / 0.625	- / 0.666	- / 0.944	- / -	- / 0.944	- / 0.335	- / -	- / -	- / -	- / -	- / 3.548
2.3) Support Equipment	- / 0.497	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.497
2.4) Other Support	- / 1.467	- / 0.854	- / 0.871	- / 1.263	- / -	- / 1.263	- / 0.615	- / -	- / -	- / -	- / -	- / 5.070
Subtotal: Support	*- / 3.351*	*- / 1.479*	*- / 1.537*	*- / 2.207*	*- / -*	*- / 2.207*	*- / 0.950*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.524*
Installation												
Modification Item 1 of 1: 014-17 Structural Enhancements	- / 3.775	- / 2.567	- / 1.775	- / 3.088	- / 0.000	- / 3.088	- / 2.625	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 13.830
Subtotal: Installation	*- / 3.775*	*- / 2.567*	*- / 1.775*	*- / 3.088*	*- / -*	*- / 3.088*	*- / 2.625*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 13.830*
Total												
Total Cost (Procurement + Support + Installation)	**19.232**	**4.046**	**7.028**	**8.453**	**0.000**	**8.453**	**3.575**	**0.000**	**0.000**	**0.000**	**0.000**	**42.334**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 3 / 014-17 Structural Enhancements
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 014-17 Structural Enhancements

Manufacturer Information

Manufacturer Name: Wing Center Section	Manufacturer Location: Field Mod Team
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2019	Nov 2020	Nov 2021				
Delivery Dates	Jul 2020	Jul 2021	Jul 2022				

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: Wing Center Section

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 3.775	6 / 2.567	4 / 1.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 8.117
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	6 / 3.088	0 / 0.000	6 / 3.088	- / -	- / -	- / -	- / -	0 / 0.000	6 / 3.088
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.625	- / -	- / -	- / -	0 / 0.000	5 / 2.625
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 3.775	6 / 2.567	4 / 1.775	6 / 3.088	0 / 0.000	6 / 3.088	5 / 2.625	- / -	- / -	- / -	0 / 0.000	30 / 13.830

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	2	2	2	1	2	2	1	1	1	1	1	2	2	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	30
Out	3	2	2	2	1	2	2	1	1	1	1	1	2	2	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	30

Footnotes:

(5) FY 2022 funding for ILS and Other Support costs support installation of kits procured in FY 2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	443.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	443.936
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	443.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	443.936
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**443.936**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**443.936**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0556 / C-2A	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 443.936	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 443.936
Subtotal: Procurement	*- / 443.936*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 443.936*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**443.936**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**443.936**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0560 / C-130 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 433

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	864.686	70.463	91.093	141.705	0.000	141.705	196.302	200.603	218.259	224.228	221.723	2,229.062
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	864.686	70.463	91.093	141.705	0.000	141.705	196.302	200.603	218.259	224.228	221.723	2,229.062
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**864.686**	**70.463**	**91.093**	**141.705**	**0.000**	**141.705**	**196.302**	**200.603**	**218.259**	**224.228**	**221.723**	**2,229.062**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION: This item funds modifications to C/KC-130 aircraft. The Lockheed C/KC-130 aircraft is a four engine, high-wing, all metal, long range, land based monoplane capable of all-weather transport of cargo or personnel and in-flight refueling. There are currently 98 aircraft in the Navy and Marine Corps inventory (55 active and 43 reserve). The expected Service Life is as follows:

T/M/S Service Date Service Life Expected Life
C-130T 10/91 - 11/95 450 mos. 2028-2032
KC-130T 04/84 - 02/96 450 mos. 2021-2033
KC-130J 09/00 - 10/26 450 mos. 2037-2063

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Navy	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	56.025	68.407	120.228	-	120.228	110.072	112.639	111.863	113.830
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	14.438	22.686	21.477	-	21.477	86.230	87.964	106.396	110.398
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**70.463**	**91.093**	**141.705**	**-**	**141.705**	**196.302**	**200.603**	**218.259**	**224.228**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0560 / C-130 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 433

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07) (Performance Enhancement)				- / 215.653	- / 13.361	- / 23.556	- / 45.992	- / 0.000	- / 45.992
P-3a	2 / Avionics /Obsolescence Upgrades (OSIP 008-12) (Safety / Readiness)				- / 125.888	- / 13.694	- / 22.686	- / 21.477	- / 0.000	- / 21.477
P-3a	3 / Electronic Counter Measures (OSIP 020-12) (Safety)				- / 92.128	- / 6.151	- / 5.293	- / 7.878	- / 0.000	- / 7.878
P-3a	4 / Technical Insertion (OSIP 019-14) (Safety / Reliability / Obsolescence)				- / 57.723	- / 37.170	- / 36.873	- / 64.222	- / 0.000	- / 64.222
P-3a	5 / Safety/Obsolescence Upgrades (OSIP 015-17) (Safety / Reliability / Obsolescence)				- / 1.911	- / 0.087	- / 2.685	- / 2.136	- / 0.000	- / 2.136
P-3a	6 / Inactive OSIPs (TBD)				- / 371.383	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 864.686**	**- / 70.463**	**- / 91.093**	**- / 141.705**	**- / 0.000**	**- / 141.705**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07) (Performance Enhancement)				- / 30.112	- / 30.475	- / 31.451	- / 33.410	- / 42.955	- / 466.965
P-3a	2 / Avionics /Obsolescence Upgrades (OSIP 008-12) (Safety / Readiness)				- / 46.731	- / 57.364	- / 56.897	- / 48.036	- / 42.362	- / 435.135
P-3a	3 / Electronic Counter Measures (OSIP 020-12) (Safety)				- / 8.312	- / 8.637	- / 8.914	- / 21.902	- / 39.950	- / 199.165
P-3a	4 / Technical Insertion (OSIP 019-14) (Safety / Reliability / Obsolescence)				- / 69.894	- / 71.745	- / 69.560	- / 52.057	- / 32.369	- / 491.613
P-3a	5 / Safety/Obsolescence Upgrades (OSIP 015-17) (Safety / Reliability / Obsolescence)				- / 41.253	- / 32.382	- / 51.437	- / 68.823	- / 64.087	- / 264.801
P-3a	6 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 371.383
P-40	**Total Gross/Weapon System Cost**				**- / 196.302**	**- / 200.603**	**- / 218.259**	**- / 224.228**	**- / 221.723**	**- / 2,229.062**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Basis for FY2021 Budget request: Provides funding to procure aircraft modifications to include Weapons Mission Kits, Electronic Countermeasures, Safety, Reliability, Readiness and Obsolescence Issues and Communication Navigation Surveillance System (CNS) Air Traffic Management (ATM) requirements such as Block Upgrade 8.1, and Avionics Obsolescence Upgrade (AOU) for the C/KC-130 program.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	215.653	13.361	23.556	45.992	0.000	45.992	30.112	30.475	31.451	33.410	42.955	466.965
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	215.653	13.361	23.556	45.992	0.000	45.992	30.112	30.475	31.451	33.410	42.955	466.965
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**215.653**	**13.361**	**23.556**	**45.992**	**0.000**	**45.992**	**30.112**	**30.475**	**31.451**	**33.410**	**42.955**	**466.965**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The KC-130 provides air-to-air refueling (AAR), aviation delivered ground refueling, tactical troop transport, aerial delivery of personnel and cargo, airborne radio relay, Digital Interoperability (DI), tactical aero-medical evacuation, Multi-Sensor Imagery and Reconnaissance (MIR), and Close Air Support (CAS). The objective of this effort is to integrate an MIR and air-to-ground weapons systems kit into the KC-130J aircraft to provide the Marine Air-Ground Task Force (MAGTF) with an intra-theater CAS and MIR capability for real time intelligence gathering and target detection, identification, and tracking in support of weapons delivery and maintain the refueling capability and capacity of the KC-130J. The MIR/Weapon System Kit will consist of a MIR pod, and wing mounted air-to-ground missiles and precision guided munitions. The system will be configured as a Roll-On/Roll-Off capability for rapid deployment. Future capabilities will support DI and include video and datalink connectivity, Beyond Line of Sight (BLOS) communications, Hellfire P4/N4 compatibility, recovery of external fuel stores, and dual AAR systems, improved human factors, Joint Air to Ground Munitions (JAGM), small diameter bombs, and address obsolescence, test platform, and capability gaps.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The KC-130J MIR/Weapons Mission Kit configuration provides MIR Weapon System Capability and CAS capability through both wing mounted munitions and Derringer Door mounted Standoff Precision Guided Munitions. The 6 baseline MIR/Weapons Mission Kits and 10 baseline aircraft modifications completed production in FY14. This Operational, Safety, and Improvement Program (OSIP) provides funding for HH+ to address obsolescence issues [update Battle Management System (BMS) for Hellfire P4/N4 variant missiles] and JAGM, human factors issues, and recover external fuel stores, and for OWS-430 to recover the dual AAR systems This OSIP also provides funding to address additional known fleet capability gaps such as tactical datalink, and communications.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C/KC-130T/J	**Modification Type:** Performance Enhancement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Harvest Hawk Plus A Kit - NonOrganic *Installation 1 of 4*	10 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.000
1.1.2) HH+ Radome A Kit - Organic(*) (1)	6 / 0.284	- / -	3 / 0.099	1 / 0.034	- / -	1 / 0.034	- / -	- / -	- / -	- / -	- / -	10 / 0.417
1.1.3) Weapon @ OWS430 A KIT - NonOrganic (2) *Installation 2 of 4*	1 / 3.014	1 / 2.080	1 / 1.802	3 / 5.630	- / -	3 / 5.630	3 / 5.850	1 / 2.028	- / -	- / -	- / -	10 / 20.404
1.1.4) JAGM A Kit - NonOrganic (3) *Installation 3 of 4*	- / -	- / -	- / -	1 / 0.079	- / -	1 / 0.079	- / -	4 / 0.321	1 / 0.082	- / -	- / -	6 / 0.482
1.1.5) 30MM Gun A - KIT - NonOrganic *Installation 4 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.325	- / -	3 / 0.897	2 / 0.622	6 / 1.844
1.1.6) Archive - Organic(*)	- / 34.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 34.239
1.2.1) Installation Kits N/R - Organic(*)	- / 7.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400	- / -	- / -	- / 7.850
2.1.2) 30MM Gun B Kit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.913	- / -	2 / 14.409	3 / 22.036	6 / 42.358
2.1.3) Weapons @ OWS430 B-Kit - Organic(*) (4)	1 / 0.546	1 / 0.568	1 / 0.323	3 / 1.218	- / -	3 / 1.218	3 / 0.969	1 / 0.646	- / -	- / -	- / -	10 / 4.270
2.1.5) Archive - Organic(*)	- / 92.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 92.262
2.2.1) Installation Equipment N/R - Organic(*) (5)	- / 21.288	- / -	- / 1.868	- / 2.365	- / -	- / 2.365	- / 1.000	- / -	- / 0.958	- / -	- / -	- / 27.479
2.2.2) JAGM NRE - Organic(*) (6)	- / -	- / -	- / -	- / 6.483	- / -	- / 6.483	- / -	- / -	- / -	- / -	- / -	- / 6.483
2.2.3) JAGM Testing - Organic(*) (7)	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.489	- / -	- / -	- / -	- / -	- / 4.489
2.2.4) JAGM Instrumentation - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.100	- / -	- / -	- / -	- / -	- / 1.100
2.2.5) HH+ Testing - Organic(*)	- / 3.498	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.498
2.2.6) 30MM Gun NRE - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.718	- / -	- / -	- / 9.718
2.2.7) 30MM Gun Testing - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.300	- / -	- / 8.300
2.2.8) Weapons @ OWS430 NRE - Organic(*) (8)	- / 9.219	- / -	- / 3.564	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.783
2.2.10) OWS430 Testing - Organic(*) (9)	- / -	- / 4.252	- / 3.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.802
Subtotal: Procurement	*- / 174.800*	*- / 6.900*	*- / 11.206*	*- / 15.809*	*- / -*	*- / 15.809*	*- / 13.408*	*- / 9.233*	*- / 11.158*	*- / 23.606*	*- / 22.658*	*- / 288.778*
Support												
3.2) Data	- / 0.708	- / 0.050	- / 0.050	- / 0.050	- / -	- / 0.050	- / 0.150	- / -	- / 0.125	- / 0.125	- / -	- / 1.258
3.3) Training Equipment (10)	- / 4.989	- / 0.118	- / 0.200	- / 9.865	- / -	- / 9.865	- / 0.058	- / -	- / 0.805	- / 0.225	- / -	- / 16.260
3.4) Support Equipment	- / 2.322	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / -	- / -	- / -	- / 2.822
3.5) ILS	- / 5.207	- / 0.431	- / 0.505	- / 0.507	- / -	- / 0.507	- / 0.549	- / 0.753	- / 0.709	- / 0.724	- / 0.683	- / 10.068

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C/KC-130T/J	**Modification Type:** Performance Enhancement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.6) Other Support (11)	- / 14.674	- / 2.979	- / 3.535	- / 6.502	- / -	- / 6.502	- / 4.589	- / 6.146	- / 10.610	- / 3.498	- / 4.457	- / 56.990
3.7) Interim Contractor Support (12)	- / 8.388	- / 2.883	- / 4.810	- / 4.860	- / -	- / 4.860	- / 5.081	- / 5.081	- / 5.058	- / 5.232	- / 6.302	- / 47.695
Subtotal: Support	*- / 36.288*	*- / 6.461*	*- / 9.100*	*- / 21.784*	*- / -*	*- / 21.784*	*- / 10.427*	*- / 12.480*	*- / 17.307*	*- / 9.804*	*- / 11.442*	*- / 135.093*
Installation												
Installation 1 of 4: Harvest Hawk Plus A Kit	- / 2.101	- / -	- / 3.250	- / 1.752	- / 0.000	- / 1.752	- / -	- / -	- / -	- / -	- / 0.000	- / 7.103
Installation 2 of 4: Weapon @ OWS430 A KIT	- / 2.464	- / -	- / -	- / 6.468	- / 0.000	- / 6.468	- / 6.277	- / 6.996	- / -	- / -	- / 0.000	- / 22.205
Installation 3 of 4: JAGM A Kit	- / -	- / -	- / -	- / 0.179	- / 0.000	- / 0.179	- / -	- / 1.766	- / 0.190	- / -	- / 0.000	- / 2.135
Installation 4 of 4: 30MM Gun A - KIT	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.796	- / -	- / 8.855	- / 11.651
Subtotal: Installation	*- / 4.565*	*- / -*	*- / 3.250*	*- / 8.399*	*- / -*	*- / 8.399*	*- / 6.277*	*- / 8.762*	*- / 2.986*	*- / -*	*- / 8.855*	*- / 43.094*
Total												
Total Cost (Procurement + Support + Installation)	**215.653**	**13.361**	**23.556**	**45.992**	**0.000**	**45.992**	**30.112**	**30.475**	**31.451**	**33.410**	**42.955**	**466.965**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 4: Harvest Hawk Plus A Kit

Manufacturer Information

Manufacturer Name: APSD | Manufacturer Location: Pax River, MD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: Harvest Hawk Plus A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 2.101	- / -	3 / 3.250	1 / 1.752	0 / 0.000	1 / 1.752	- / -	- / -	- / -	- / -	0 / 0.000	10 / 7.103
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 2.101	- / -	3 / 3.250	1 / 1.752	0 / 0.000	1 / 1.752	- / -	- / -	- / -	- / -	0 / 0.000	10 / 7.103

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	6	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 4: Weapon @ OWS430 A KIT

Manufacturer Information

Manufacturer Name: Sierra Nevada Corporation | Manufacturer Location: Centennial, CO

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023		
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023		

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: Weapon @ OWS430 A KIT

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 2.464	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.464
FY 2019	- / -	- / -	- / -	1 / 2.156	0 / 0.000	1 / 2.156	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.156
FY 2020	- / -	- / -	- / -	1 / 2.156	0 / 0.000	1 / 2.156	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.156
FY 2021	- / -	- / -	- / -	1 / 2.156	0 / 0.000	1 / 2.156	2 / 4.185	- / -	- / -	- / -	0 / 0.000	3 / 6.341
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.092	2 / 4.664	- / -	- / -	0 / 0.000	3 / 6.756
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.332	- / -	- / -	0 / 0.000	1 / 2.332
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 2.464	- / -	- / -	3 / 6.468	0 / 0.000	3 / 6.468	3 / 6.277	3 / 6.996	- / -	- / -	0 / 0.000	10 / 22.205

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	10
Out	1	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 4: JAGM A Kit

Manufacturer Information

Manufacturer Name: TBD JAGM | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2021		Dec 2022	Dec 2023	
Delivery Dates			Mar 2021		Mar 2023	Mar 2024	

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: JAGM A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.179	0 / 0.000	1 / 0.179	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.179
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.766	- / -	- / -	0 / 0.000	4 / 1.766
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.190	- / -	0 / 0.000	1 / 0.190
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.179	0 / 0.000	1 / 0.179	- / -	4 / 1.766	1 / 0.190	- / -	0 / 0.000	6 / 2.135

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	3	-	-	1	-	-	-	-	-	-	-	6
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	3	-	-	1	-	-	-	-	-	-	6

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: 30MM Gun A - KIT

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Dec 2022		Dec 2024
Delivery Dates					Dec 2023		Dec 2025

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: 30MM Gun A - KIT

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.796	- / -	0 / 0.000	1 / 2.796
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.053	3 / 3.053
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.802	2 / 5.802
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.796	- / -	5 / 8.855	6 / 11.651

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	5	6
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	5	6

Footnotes:

(1) The completion of the ten A-Kit modifications from "Legacy" to "Plus" were planned for FY17 and 18. HQMC did not want to sundown the Legacy Harvest HAWK capability until both VMGR-252 and 352 were fully functional with HH+. HQMC directed that the final four (4) HH+ mods be completed in FY20 (Qty 3) and FY21 (Qty 1). The budget exhibits were corrected to reflect this activity.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 1 / C/KC-130 ISR / WEAPONS MISSION KIT (022-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) The OWS-430 NRE effort and test program has slipped by one (1) fiscal year (FY19 to FY20). The original program plan was to procure three (3) A-Kits in FY20 which has been reduced to one (1) in FY20. The single A-Kit procurement will address long lead for the first of three (3) installs in FY21. These costs were applied to NRE and Test efforts in FY20.

(3) The OWS-430 program execution has slid one (1) FY and has moved planned ECP activity to the right one (1) FY. This impacted JAGM kit procurements, and moved one kit from FY20 to FY21.

(4) The OWS-430 NRE and test program has slipped one (1) fiscal (FY19 to FY20). The original program plan was to procure three (3) B-Kits in FY20 which has been reduced to one (1) in FY20. The single B-Kit procurement will address long lead for the first of three (3) installs in FY21. These costs were applied to NRE and Test efforts in FY20.

(5) FY21 increase due to more extensive than planned aircraft instrumentation required to measure strain, flutter, and dynamics.

(6) FY21 JAGM NRE of $6.483M required to integrate the new JAGM missile on the Harvest HAWK Plus (HH+) Aircraft configuration following OWS-430 modifications. The OWS-430 modification allows captive carry and launch of this weapon and is a pre-requisite to integration, and requires the HH+ Mission Operator Pallet (MOP) software to be upgraded along with the Battle Management System (BMS) software. This effort includes extensive code testing, lab integration and software builds prior to entry into government acceptance testing.

(7) OWS-430 program execution delays have forced planned ECP activity to the right, moving planned JAGM testing activities from FY20 to FY22.

(8) The OWS-430 modification program has slid to the right one (1) fiscal year and additional NRE is required to address the challenges associated with undefined NAVAIR Technical Area Expert (TAE) requirements, adding additional NRE requirements to FY20.

(9) The OWS-430 modification program has slid to the right one (1) fiscal year. As such, additional testing is required in FY20 to address the challenges associated with significantly increased test requirements with respect to wing loading, flutter, and flight dynamics.

(10) Increase in FY21 to support changes to KC-130J training devices as a result of Harvest Hawk Plus Integrated Mission Training Suite updates/requirements.

(11) FY21 increase due to significant increase in NAVAIR Technical Area Expert (TAE) required assistance, increased VX-20 engineering support requirements, and additional VX-1 assessments to satisfy the increased OWS-430 validation/verification requirements. Specifically, these efforts require JAGM program assessment efforts; preparation/review of technical documentation, and review of applicable engineering change proposals (ECP) and technical directives (TDs).

(12) Interim Contractor Support (ICS) covers the Original Equipment Manufacturer(OEM) HH+ support for completion of test. FY21 ICS covers the HH+ & OEM JAGM support. FY22 ICS covers the HH+ & OEM JAGM Test Support. FY23 ICS covers the HH+ & OEM OWS-430 & JAGM production completion;30 MM Gun. FY24 ICS covers support for OEM 30 MM (Gun) NRE & test support planning. FY25 ICS covers 30 MM Cannon (Gun) Test execution.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 2 / Avionics /Obsolescence Upgrades (OSIP 008-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	125.888	13.694	22.686	21.477	0.000	21.477	46.731	57.364	56.897	48.036	42.362	435.135
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	125.888	13.694	22.686	21.477	0.000	21.477	46.731	57.364	56.897	48.036	42.362	435.135
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**125.888**	**13.694**	**22.686**	**21.477**	**0.000**	**21.477**	**46.731**	**57.364**	**56.897**	**48.036**	**42.362**	**435.135**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Objective of the Avionics/Obsolescence Upgrades (AOU) Operational, Safety, and Improvement Program (OSIP) is to preserve the world-wide capabilities of the C/KC-130 aircraft by providing required capability enhancements and addressing obsolescence. The legacy C/KC-130T model aircraft have been in service for 28 years and still retain many of their original systems. AOU incorporates updated technologies to support safety, reliability, supportability, obsolescence, deficiency correction, mandated modifications, commonality, interoperability, and affordability of the C/KC-130T platform. AOU updates apply to aircraft avionics, navigation, communications, transponders, sensors, transmitters, antennae, radars, and other electronic aircraft systems to meet global Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements and provides necessary safety equipment for aircraft carrying troops. AOU modifications will also be incorporated into existing training devices.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: AOU program is post Milestone-C, Low Rate Initial Production 2 approved. Government is Lead Systems Integrator, performing the majority of the NRE and installation of the validation and verification aircraft kits. Contract awarded for software integration non-recurring engineering and non-developmental systems in September 2012. Government ground testing on validation aircraft began 2017. Development Flight Test began February 2019 following a 19 month delay due to the K/C-130T Red Stripe that grounded most of the C/KC-130T fleet in September 2017. Validation aircraft will complete testing in FY21. Verification aircraft will undergo installation through 2020, followed by production installs beginning in 2022. Updated APB was signed by the MDA in Dec 2019.

In July 2017, the United States Navy, Naval Reserve, and Marine Corps Reserve C/KC-130T aircraft were grounded as a result of a 54H60-111 propeller "Red Stripe". The Red Stripe delayed the start of flight test for the Avionics Obsolescence Upgrade (AOU) program by 19 months, from Jul 2017 until Feb 2019, ultimately delaying Initial Operational Capability (IOC) by over two years. To address schedule impacts in the year of execution and mitigate further delays in Developmental Test & Evaluation (DT) the FY 19-21 Full-Rate Production (FRP) kit quantities and installations were realigned. The FY20 Congressional Mark of $3.085M limits the ability to correct deficiencies found in validation and extends efforts into 2021. As a result, procurement QTY adjusted to reflect this impact.

Program of Record increase from OPNAV N98 from 20 to 25 aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 2 / Avionics /Obsolescence Upgrades (OSIP 008-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C/KC-130T/J	**Modification Type:** Safety / Readiness	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) A Kits - NonOrganic (13) *Installation 1 of 2*	3 / 4.259	- / -	- / -	- / -	- / -	- / -	3 / 5.520	6 / 11.262	6 / 11.487	4 / 7.811	2 / 3.984	24 / 44.323
1.2.1) Installation Kits N/R - NonOrganic (14) *Installation 2 of 2*	1 / 24.528	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 24.528
2.1.1) B Kits - Organic(*)	3 / 8.294	- / -	- / -	- / -	- / -	- / -	3 / 10.880	6 / 21.535	6 / 22.381	4 / 15.667	2 / 8.225	24 / 86.982
2.2.1) NRE/TEST - Government - Organic(*) (15)	- / 14.943	- / 6.738	- / 7.702	- / 7.625	- / -	- / 7.625	- / 15.235	- / -	- / -	- / -	- / -	- / 52.243
2.2.2) NRE - Contractor - Organic(*) (16)	1 / 36.246	- / -	- / 6.097	- / 4.155	- / -	- / 4.155	- / 1.800	- / -	- / -	- / -	- / -	1 / 48.298
Subtotal: Procurement	*- / 88.270*	*- / 6.738*	*- / 13.799*	*- / 11.780*	*- / -*	*- / 11.780*	*- / 33.435*	*- / 32.797*	*- / 33.868*	*- / 23.478*	*- / 12.209*	*- / 256.374*
Support												
3.1) Data	- / 0.799	- / -	- / 0.854	- / 0.725	- / -	- / 0.725	- / 0.557	- / -	- / -	- / -	- / -	- / 2.935
3.2) Training Equipment (17)	- / 1.081	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.678	- / -	- / -	- / -	- / 10.759
3.3) Support Equipment	- / 2.474	- / -	- / -	- / -	- / -	- / -	- / 0.315	- / 0.167	- / 0.170	- / 0.172	- / 0.301	- / 3.599
3.4) ILS	- / 8.597	- / 1.963	- / 1.702	- / 1.739	- / -	- / 1.739	- / 1.829	- / 0.438	- / 0.447	- / 0.456	- / 0.940	- / 18.111
3.5) Other Support (18)	- / 18.685	- / 4.993	- / 6.331	- / 7.233	- / -	- / 7.233	- / 7.722	- / 5.494	- / 4.480	- / 5.640	- / 10.132	- / 70.710
Subtotal: Support	*- / 31.636*	*- / 6.956*	*- / 8.887*	*- / 9.697*	*- / -*	*- / 9.697*	*- / 10.423*	*- / 15.777*	*- / 5.097*	*- / 6.268*	*- / 11.373*	*- / 106.114*
Installation												
Installation 1 of 2: A Kits	- / 4.114	- / -	- / -	- / -	- / -	- / -	- / 2.873	- / 8.790	- / 17.932	- / 18.290	- / 18.780	- / 70.779
Installation 2 of 2: Installation Kits N/R	- / 1.868	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.868
Subtotal: Installation	*- / 5.982*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.873*	*- / 8.790*	*- / 17.932*	*- / 18.290*	*- / 18.780*	*- / 72.647*
Total												
Total Cost (Procurement + Support + Installation)	**125.888**	**13.694**	**22.686**	**21.477**	**0.000**	**21.477**	**46.731**	**57.364**	**56.897**	**48.036**	**42.362**	**435.135**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 2 / Avionics /Obsolescence Upgrades (OSIP 008-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: A Kits

Manufacturer Information

Manufacturer Name: AOU A Kits | Manufacturer Location: Multiple

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Dec 2022	Dec 2023	Dec 2024
Delivery Dates				Jan 2023	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 4.114	- / -	- / -	- / -	- / -	- / -	1 / 2.873	- / -	- / -	- / -	0 / 0.000	3 / 6.987
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 8.790	- / -	- / -	0 / 0.000	3 / 8.790
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 17.932	- / -	0 / 0.000	6 / 17.932
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 18.290	0 / 0.000	6 / 18.290
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 12.437	4 / 12.437
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.343	2 / 6.343
Total	2 / 4.114	- / -	- / -	- / -	- / -	- / -	1 / 2.873	3 / 8.790	6 / 17.932	6 / 18.290	6 / 18.780	24 / 70.779

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	-	-	-	6	-	-	-	6	-	-	-	6	24
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	6	-	-	-	6	6	24

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 2 / Avionics /Obsolescence Upgrades (OSIP 008-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: Installation Kits N/R

Manufacturer Information

Manufacturer Name: AOU A KITS | Manufacturer Location: MULTIPLE

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Installation Kits N/R

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.868	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.868
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 1.868	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.868

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Footnotes:

(13) In July 2017, the United States Navy, Naval Reserve, and Marine Corps Reserve C/KC-130T aircraft were grounded as a result of a 54H60-111 propeller "Red Stripe". The Red Stripe delayed the start of flight test for the Avionics Obsolescence Upgrade (AOU) program by 19 months, from Jul 2017 until Feb 2019, ultimately delaying Initial Operational Capability (IOC) by over two years. To address schedule impacts in the year of execution and mitigate further delays in Developmental Test & Evaluation (DT) the FY 19-21 Full-Rate Production (FRP) kit quantities and installations were realigned. There were 4 kits

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 2 / Avionics /Obsolescence Upgrades (OSIP 008-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

previously purchased prior to REDSTRIPE. Due to the REDSTRIPE, only 3 of the kits were installed due to fleet aircraft availability. The C-130T AOU team is ready to install the 4 kit which was procured prior to the REDSTRIPE immediately upon IOC.

(14) 1.2.1: The NRE KIT for Prototype/Validation A/C QTY in previous budget request was erroneously omitted with dollar value accounted for.

(15) 2.2.1: NRE required thru FY21 for ground and flight assessment activities to support incorporation of the AOU modification on the KC-130T airframe. NRE in FY22 is separate and distinct in which it funds integrations of C-130T AOU ECP on KC-130T Tanker A/C.

(16) 2.2.2: The FY20 mark reduced CTR efforts to correct identified issues during system checkout and validation, and also reduced the amount of testing planned. Funding in FY21 required for ground and flight operational assessment and validation/verification events that occur through 3QFY21 to support a 1QFY22 IOC.

(17) 3.2: FY23 Training System funding supports implementing the AOU ECP to the 2F107 Operational Flight Trainer.

(18) 3.5: Other support includes lead systems integrator cost to assess and deliver AOU modification kits. FY21 increase includes Lead Systems Integration support for IOC and FRP activities; engineering effort to support integration and validation activities; airworthiness certification, and assessment results in support of CNS/ATM certification of critical operational issues affecting IOC.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 3 / Electronic Counter Measures (OSIP 020-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	92.128	6.151	5.293	7.878	0.000	7.878	8.312	8.637	8.914	21.902	39.950	199.165
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	92.128	6.151	5.293	7.878	0.000	7.878	8.312	8.637	8.914	21.902	39.950	199.165
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**92.128**	**6.151**	**5.293**	**7.878**	**0.000**	**7.878**	**8.312**	**8.637**	**8.914**	**21.902**	**39.950**	**199.165**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The KC-130 provides air-to-air refueling, rapid ground refueling, tactical troop transport, aerial delivery of personnel and cargo, airborne radio relay, Digital Interoperability (DI), tactical aero-medical evacuation, Multi-Sensor Imagery and Reconnaissance (MIR), and Close Air Support (CAS). This OSIP provides funding for the addition of new Aircraft Survivability Equipment (ASE), including Department of the Navy (DoN) Large Aircraft Infrared Counter Measures (LAIRCM) with Advanced Threat Warning (ATW) and the KC-130J Adjustable Ballast System (JABS) to the KC-130J Aircraft which will increase survivability and allow the aircraft to operate under expanded threat environments, thereby increasing combat effectiveness. The addition of DoN LAIRCM with the ATW sensor expands the aircraft's capability to perform its core Mission Essential Tasking in any infrared threat environment. This OSIP also provides funding to ensure the most effective threat adaptive, reprogrammable, computer controlled threat defeating capabilities for the Defensive Electronic Counter Measures (DECM) portion of the ASE to increase combat effectiveness as well as future upgrades to the radar warning receiver (RWR) counter measure system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The USMC is leveraging other DoN LAIRCM platforms to provide a common solution among naval platforms and to reduce Operations and Support (O&S) costs. Modification of aircraft will be performed as a Drive-In Modification.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 3 / Electronic Counter Measures (OSIP 020-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C/KC-130T/J	**Modification Type:** Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) LAIRCM A Kit - NonOrganic (19) *Installation 1 of 2*	19 / 5.355	3 / 2.035	3 / 2.150	3 / 2.222	- / -	3 / 2.222	3 / 2.297	3 / 2.375	3 / 1.537	22 / 9.568	- / -	59 / 27.539
1.1.2) LAIRCM JABS - NonOrganic (20) *Installation 2 of 2*	20 / 0.899	9 / 0.462	9 / 0.480	6 / 0.333	- / -	6 / 0.333	6 / 0.404	7 / 0.420	15 / 1.092	14 / 1.061	- / -	86 / 5.151
1.2.1) Archive - Organic(*)	- / 22.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.078
2.1.1) Archive - Organic(*)	- / 17.634	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.634
2.1.3) Meons - Organic(*)	7 / 0.612	- / -	- / -	- / -	- / -	- / -	- / 0.113	- / 0.115	- / -	- / -	- / -	7 / 0.840
2.1.4) PCMCIA Cards - Organic(*)	- / 0.038	- / -	- / 0.007	- / 0.005	- / -	- / 0.005	- / 0.049	- / 0.050	- / 0.110	- / -	- / -	- / 0.259
2.1.5) GFE - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.471	- / -	- / 0.471
2.2.1) NRE/Test - Government - Organic(*)	- / 11.689	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.689
Subtotal: Procurement	*- / 58.305*	*- / 2.497*	*- / 2.637*	*- / 2.560*	*- / -*	*- / 2.560*	*- / 2.863*	*- / 2.960*	*- / 2.739*	*- / 11.100*	*- / 0.000*	*- / 85.661*
Support												
3.1) Data	- / 0.113	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.113
3.2) Training Equipment	- / 0.386	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.386
3.3) Support Equipment	- / 1.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.073	- / -	- / -	- / 1.277
3.4) ILS	- / 4.283	- / 0.605	- / 0.597	- / 0.608	- / -	- / 0.608	- / 0.597	- / 0.621	- / 0.653	- / 1.786	- / -	- / 9.750
3.5) Other Support	- / 10.994	- / 0.671	- / 0.486	- / 0.569	- / -	- / 0.569	- / 0.691	- / 0.678	- / 0.896	- / 3.763	- / -	- / 18.748
Subtotal: Support	*- / 16.980*	*- / 1.276*	*- / 1.083*	*- / 1.177*	*- / -*	*- / 1.177*	*- / 1.288*	*- / 1.299*	*- / 1.622*	*- / 5.549*	*- / 0.000*	*- / 30.274*
Installation												
Installation 1 of 2: LAIRCM A Kit	- / 16.069	- / 2.292	- / 1.169	- / 3.720	- / 0.000	- / 3.720	- / 3.869	- / 4.024	- / 4.185	- / 4.353	- / 39.049	- / 78.730
Installation 2 of 2: LAIRCM JABS	- / 0.774	- / 0.086	- / 0.404	- / 0.421	- / 0.000	- / 0.421	- / 0.292	- / 0.354	- / 0.368	- / 0.900	- / 0.901	- / 4.500
Subtotal: Installation	*- / 16.843*	*- / 2.378*	*- / 1.573*	*- / 4.141*	*- / -*	*- / 4.141*	*- / 4.161*	*- / 4.378*	*- / 4.553*	*- / 5.253*	*- / 39.950*	*- / 83.230*
Total												
Total Cost (Procurement + Support + Installation)	**92.128**	**6.151**	**5.293**	**7.878**	**0.000**	**7.878**	**8.312**	**8.637**	**8.914**	**21.902**	**39.950**	**199.165**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 3 / Electronic Counter Measures (OSIP 020-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: LAIRCM A Kit

Manufacturer Information

Manufacturer Name: Lockheed Martin - LAIRCM | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 21

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025	Oct 2026

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: LAIRCM A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	16 / 16.069	2 / 2.292	1 / 1.169	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 19.530
FY 2019	- / -	- / -	- / -	3 / 3.720	0 / 0.000	3 / 3.720	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.720
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.869	- / -	- / -	- / -	0 / 0.000	3 / 3.869
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.024	- / -	- / -	0 / 0.000	3 / 4.024
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.185	- / -	0 / 0.000	3 / 4.185
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.353	0 / 0.000	3 / 4.353
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.527	3 / 4.527
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 34.522	22 / 34.522
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 16.069	2 / 2.292	1 / 1.169	3 / 3.720	0 / 0.000	3 / 3.720	3 / 3.869	3 / 4.024	3 / 4.185	3 / 4.353	25 / 39.049	59 / 78.730

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	1	-	-	-	1	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	25	59
Out	16	-	1	1	-	-	-	1	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	3	-	-	-	-	3	25	59

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 3 / Electronic Counter Measures (OSIP 020-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: LAIRCM JABS

Manufacturer Information

Manufacturer Name: J.F Taylor -JABS | Manufacturer Location: Lexington Park, MD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: LAIRCM JABS

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	18 / 0.774	2 / 0.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 0.860
FY 2019	- / -	- / -	9 / 0.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 0.404
FY 2020	- / -	- / -	- / -	9 / 0.421	0 / 0.000	9 / 0.421	- / -	- / -	- / -	- / -	0 / 0.000	9 / 0.421
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.292	- / -	- / -	- / -	0 / 0.000	6 / 0.292
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.354	- / -	- / -	0 / 0.000	6 / 0.354
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.368	- / -	0 / 0.000	7 / 0.368
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.900	0 / 0.000	15 / 0.900
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.901	14 / 0.901
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	18 / 0.774	2 / 0.086	9 / 0.404	9 / 0.421	0 / 0.000	9 / 0.421	6 / 0.292	6 / 0.354	7 / 0.368	15 / 0.900	14 / 0.901	86 / 4.500

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	18	2	-	-	-	3	3	3	-	3	3	3	-	2	2	2	-	2	2	2	-	3	3	1	-	4	4	4	3	14	86
Out	18	-	2	-	-	-	3	3	3	-	3	3	3	-	2	2	2	-	2	2	2	-	3	3	1	4	4	4	3	14	86

Footnotes:

(19) Aircraft equipped with A Kits can operate with or without B Kits. Install cost increase is due to insufficient organic capacity requiring commercial production.

(20) DoN LAIRCM modified aircraft require a JABS kit installed prior to flight. Qty objective of 86 JABS kits is due to providing JABS kits to all KC-130J aircraft. DoN LAIRCM will be cut into the production line at aircraft 60, but JABS will not be cut into the production line.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 4 / Technical Insertion (OSIP 019-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	57.723	37.170	36.873	64.222	0.000	64.222	69.894	71.745	69.560	52.057	32.369	491.613
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	57.723	37.170	36.873	64.222	0.000	64.222	69.894	71.745	69.560	52.057	32.369	491.613
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**57.723**	**37.170**	**36.873**	**64.222**	**0.000**	**64.222**	**69.894**	**71.745**	**69.560**	**52.057**	**32.369**	**491.613**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Technical Insertion provides for the incorporation and/or Tactical Demonstration (TACDEMO) of new or updated technologies to support safety, reliability, supportability, obsolescence, deficiency correction, mandated modifications, commonality, Digital Interoperability (DI), Electronic Warfare (EW), interoperability, C/KC-130 unique mission planning requirements, or affordability of the C/KC-130 platform as well as the necessary Reliability Centered Maintenance (RCM) baselining required for these efforts. Technical Insertion includes initial fielding of interactive Electronic Technical Manual (IETM) and Automated Logistic Environment (ALE) for production aircraft. Technical Insertion updates support those technology initiatives that apply to aircraft avionics, navigation, communications,transponders, sensors, transmitters, antennae, mission computers and associated systems, electronic mission systems, C/KC-130 unique mission planning requirements or other electronic aircraft systems.

Current modifications include: KC-130J Block Upgrade 8.1, which includes Communication Navigation Surveillance System (CNS) Air Traffic Management (ATM) mandates, new Flight Management System (FMS), transponder and Mission Computer updates for Required Navigation Performance (RNP) and Area Navigation (RNAV) and Automatic Dependent Surveillance - Broadcast (ADS-B) Out, safety improvements Improved Intercom System (ICS) Portable Audio (PA) System and enhanced covert lighting, deficiency correction Telecommunications Electronics Material Protected from Emanating Spurious Transmissions (TEMPEST) compliance, and DI updates (Mode 5 Identification Friend and Foe (IFF) and Link 16). Unique C/KC-130 mission planning requirement CAT 5.0 and Flight Performance Model (FPM) Take-off and Landing Data (TOLD) certification.

Planned future modifications: Capability Management Upgrade (CMU) with Flight Management System (FMS) performance enhancements to ensure future mission readiness of the KC-130J fleet, Software Reprogrammable Payload (SRP), the Blue Force Tracker (BFT), Blue Force Situational Awareness (BFSA) initiative, and Ku Band Satellite System (Kuss) Beyond Line of Sight (BLOS) to support DI within the Marine Air Ground Task Force (MAGTF) and across the services. Unique C/KC-130 mission planning requirements including map and communication tools. Development of tablet enabled applications such as Electronic Take-off and Landing Data (ETOLD), Weight and Balance (W&B), and FPM planning.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Block 8.1 upgrade consists of 57 kits and installs starting in FY18 and completing beyond the FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 4 / Technical Insertion (OSIP 019-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-130T/J	**Modification Type:** Safety / Reliability / Obsolescence	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) A Kit 7.0/8.1 Block Upgrade - NonOrganic (21) *Installation 1 of 2*	5 / 7.545	9 / 13.989	7 / 9.153	9 / 12.000	- / -	9 / 12.000	9 / 12.230	9 / 12.461	9 / 12.692	- / -	- / -	57 / 80.070
1.1.2) A Kit ADS-B Out - NonOrganic *Installation 2 of 2*	53 / 0.134	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 0.134
1.2.1) Installation Kit N/R Block Upgrade - Organic(*)	- / 2.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.163
2.1.1) Block 7.08/8.1 GFE - Organic(*) (22)	- / -	- / 2.633	- / 4.453	- / 16.967	- / -	- / 16.967	- / 12.443	- / 9.049	- / 5.655	- / -	- / -	- / 51.200
2.1.2) B Kit 7.0/8.1 Block Upgrade - Organic(*) (23)	5 / 11.734	9 / 18.327	7 / 9.153	9 / 12.000	- / -	9 / 12.000	9 / 12.230	9 / 12.461	9 / 12.692	- / -	- / -	57 / 88.597
2.2.1) ADS-B Out NRE - Organic(*)	- / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.005
2.2.2) Installation Kit N/R Block Upgrade - Organic(*)	- / 12.238	- / 0.127	- / 0.365	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.730
Subtotal: Procurement	*- / 33.819*	*- / 35.076*	*- / 23.124*	*- / 40.967*	*- / -*	*- / 40.967*	*- / 36.903*	*- / 33.971*	*- / 31.039*	*- / -*	*- / 0.000*	*- / 234.899*
Support												
3.2) Data Block Upgrade	- / 1.620	- / -	- / 0.241	- / 0.225	- / -	- / 0.225	- / 0.224	- / 0.215	- / 0.205	- / 0.200	- / 0.200	- / 3.130
3.3) Training Equipment Block Upgrade	- / 14.615	- / -	- / 3.976	- / 10.475	- / -	- / 10.475	- / 4.553	- / 6.534	- / 4.830	- / 22.842	- / -	- / 67.825
3.4) Support Equipment Block Upgrade	- / 0.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.125
3.5) ILS Block Upgrade	- / 1.957	- / 0.915	- / 1.326	- / 1.000	- / -	- / 1.000	- / 1.032	- / 1.010	- / 0.989	- / 0.971	- / 0.979	- / 10.179
3.6) ILS ADS-B Out	- / 0.543	- / 0.165	- / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.758
3.7) Other Support Block Upgrade	- / 2.269	- / 0.759	- / 4.154	- / 0.753	- / -	- / 0.753	- / 0.848	- / 0.865	- / 0.882	- / 0.848	- / 0.848	- / 12.226
3.8) Other Support ADS-B Out	- / 1.185	- / 0.255	- / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.520
3.9) Interim Contractor Support Block Upgrade	- / -	- / -	- / 0.182	- / 1.370	- / -	- / 1.370	- / 1.378	- / 0.735	- / 0.271	- / 0.255	- / 0.255	- / 4.446
Subtotal: Support	*- / 22.314*	*- / 2.094*	*- / 10.009*	*- / 13.823*	*- / -*	*- / 13.823*	*- / 8.035*	*- / 9.359*	*- / 7.177*	*- / 25.116*	*- / 2.282*	*- / 100.209*
Installation												
Installation 1 of 2: A Kit 7.0/8.1 Block Upgrade	- / -	- / -	- / 3.740	- / 9.432	- / 0.000	- / 9.432	- / 24.956	- / 28.415	- / 31.344	- / 26.941	- / 30.087	- / 154.915
Installation 2 of 2: A Kit ADS-B Out	- / 1.590	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.590
Subtotal: Installation	*- / 1.590*	*- / -*	*- / 3.740*	*- / 9.432*	*- / -*	*- / 9.432*	*- / 24.956*	*- / 28.415*	*- / 31.344*	*- / 26.941*	*- / 30.087*	*- / 156.505*
Total												
Total Cost (Procurement + Support + Installation)	**57.723**	**37.170**	**36.873**	**64.222**	**0.000**	**64.222**	**69.894**	**71.745**	**69.560**	**52.057**	**32.369**	**491.613**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 4 / Technical Insertion (OSIP 019-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 2: A Kit 7.0/8.1 Block Upgrade

Manufacturer Information

Manufacturer Name: Lockheed Martin - Block Upgrade	Manufacturer Location: Greenville, SC
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	
Delivery Dates	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026	

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: A Kit 7.0/8.1 Block Upgrade

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	2 / 3.740	3 / 7.074	0 / 0.000	3 / 7.074	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.814
FY 2019	- / -	- / -	- / -	1 / 2.358	0 / 0.000	1 / 2.358	8 / 18.150	- / -	- / -	- / -	0 / 0.000	9 / 20.508
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.806	4 / 10.333	- / -	- / -	0 / 0.000	7 / 17.139
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 18.082	2 / 5.800	- / -	0 / 0.000	9 / 23.882
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 25.544	- / -	0 / 0.000	9 / 25.544
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 26.941	0 / 0.000	9 / 26.941
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 30.087	9 / 30.087
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 3.740	4 / 9.432	0 / 0.000	4 / 9.432	11 / 24.956	11 / 28.415	11 / 31.344	9 / 26.941	9 / 30.087	57 / 154.915

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	1	1	1	2	-	1	4	2	3	2	3	2	3	3	2	3	3	3	-	3	3	3	9	57
Out	-	-	-	-	-	-	-	-	-	1	1	1	2	1	4	1	4	1	4	1	4	2	3	-	3	3	3	-	3	15	57

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 4 / Technical Insertion (OSIP 019-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: A Kit ADS-B Out

Manufacturer Information

Manufacturer Name: D.T. Brown Inc	Manufacturer Location: Bohemia, NY
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: A Kit ADS-B Out

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	53 / 1.590	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	53 / 1.590
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	53 / 1.590	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	53 / 1.590

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
Out	41	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53

Footnotes:

(21) Block upgrade kit costs were revised based on anticipated Lot 3-5 Block 7.0/8.1 kits in negotiation by the USAF.

(22) Block 7.0/8.1 GFE costs revised to align the shipset quantities with the kit procurements and revised installation schedule. GFE components have a 2-year lead-time.

(23) Block upgrade kit costs were revised based on anticipated Lot 3-5 Block 7.0/8.1 kits in negotiation by the USAF.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 5 / Safety/Obsolescence Upgrades (OSIP 015-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.911	0.087	2.685	2.136	0.000	2.136	41.253	32.382	51.437	68.823	64.087	264.801
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.911	0.087	2.685	2.136	0.000	2.136	41.253	32.382	51.437	68.823	64.087	264.801
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.911**	**0.087**	**2.685**	**2.136**	**0.000**	**2.136**	**41.253**	**32.382**	**51.437**	**68.823**	**64.087**	**264.801**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: This line item funds modifications to Navy C/KC-130 aircraft. To ensure preservation of Marine Air Ground Task Force (MAGTF) Assault Support and Navy-Unique Fleet Essential Aircraft capabilities world-wide, this Safety, Reliability, Readiness and Obsolescence Improvement OSIP provides funding for issues that adversely affect aircraft safety, reliability and/or availability. Applicable areas include Power and Propulsion, Airframes and Structures, Safety and Life Support, Electrical Power, Readiness Initiatives and Survivability. This OSIP provides resources to correct such issues via Engineering Change Proposal (ECP) and other applicable efforts by modifying, improving, and upgrading aircraft structural safety and reliability. Modifications include: Airframe Structural Upgrades such as Flight Controls Surfaces, Forward Fuselage, Aft Fuselage, Inner/Outer Wing, Critical Structures; and Aircraft Subsystem Upgrades, such as Electrical, Hydraulic, Environmental Control Systems (ECS), Fuel, Launch and Recovery, Critical Structures, Mechanical, Secondary Power, and Fire Suppression Systems.

The T56 Series 3.5 Engine Upgrade Program provides improvement in performance with design enhancements including with new compressor wheels and compressor and turbine blades and vanes. Performance benefits include: Improved fuel efficiency, increased reliability, increased take-off thrust, increased climb rate,decreased take-off field length, increased payload carriage, and increased range.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The current KC-130 aircraft do not have crashworthy observer seats in the cargo compartment required for safe operations in the tactical environment. The observer seats will provide increased crash attenuation, mission endurance, and restraint systems. The observer seats are Commercial Off The Shelf (COTS) items and are currently being installed in USAF C-130 Aircraft. Planned material solution is being updated to better meet USMC requirements. Current Inter-Communication System (ICS) system is a hardwire solution that impedes the aircrews' ability to carry out critical mission sets. A wireless ICS system will provide safer, unrestricted mobility for crew members to perform critical missions such as Aerial Cargo Delivery, ground and in-flight refueling. In addition, a wireless ICS facilitates crew members egress in the event of an emergency. The legacy 3,600 gallon fuel tanks in the cargo compartment need to be modified to fit the KC-130J due to obsolete components that are not compatible with the new KC-130J. Planned Engineering Change Proposals (ECP) for reliability are carbon brakes, corrosion control, and engine upgrades. Additionally, night vision goggles are being upgraded to white phosphorous as a safety improvement to the degraded visual environment.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 5 / Safety/Obsolescence Upgrades (OSIP 015-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-130J/T	**Modification Type:** Safety / Reliability / Obsolescence	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Safety/Obsolescence Upgrades (OSIP 015-17)												
A Kits												
Recurring												
1.1.1) Performance Enhancement - Organic [24]	- / -	- / -	- / -	- / -	- / -	- / -	28 / 39.500	28 / 30.600	28 / 49.600	28 / 51.100	28 / 52.600	140 / 223.400
1.1.2) Center Wing Box - Organic [25]	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.262	- / 11.487	- / 22.749
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 39.500*	*- / 30.600*	*- / 49.600*	*- / 62.362*	*- / 64.087*	*- / 246.149*
B Kits												
Recurring												
2.1.1) Archive - Organic	- / 1.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.654
2.1.2) KC-130J Observer Seat B Kit - Organic	- / -	- / -	24 / 2.183	18 / 1.712	- / -	18 / 1.712	15 / 1.372	15 / 1.414	16 / 1.508	56 / 5.645	- / -	144 / 13.834
Subtotal: Recurring	*- / 1.654*	*- / -*	*- / 2.183*	*- / 1.712*	*- / -*	*- / 1.712*	*- / 1.372*	*- / 1.414*	*- / 1.508*	*- / 5.645*	*- / 0.000*	*- / 15.488*
Subtotal: Safety/Obsolescence Upgrades (OSIP 015-17)	*- / 1.654*	*- / -*	*24 / 2.183*	*18 / 1.712*	*- / -*	*18 / 1.712*	*43 / 40.872*	*43 / 32.014*	*44 / 51.108*	*84 / 68.007*	*28 / 64.087*	*284 / 261.637*
Subtotal: Procurement, All Modification Items	*- / 1.654*	*- / -*	*- / 2.183*	*- / 1.712*	*- / -*	*- / 1.712*	*- / 40.872*	*- / 32.014*	*- / 51.108*	*- / 68.007*	*- / 64.087*	*- / 261.637*
Support *(All Modification Items)*												
3.2) KC-130J Observer Seat Support Equipment	- / -	- / 0.087	- / 0.053	- / 0.024	- / -	- / 0.024	- / -	- / -	- / -	- / -	- / -	- / 0.164
3.4) KC-130J Observer Seat ILS	- / 0.107	- / -	- / 0.233	- / 0.200	- / -	- / 0.200	- / 0.196	- / 0.195	- / 0.181	- / 0.429	- / -	- / 1.541
3.5) KC-130J Observer Seat Other Support	- / 0.150	- / -	- / 0.216	- / 0.200	- / -	- / 0.200	- / 0.185	- / 0.173	- / 0.148	- / 0.387	- / -	- / 1.459
Subtotal: Support	*- / 0.257*	*- / 0.087*	*- / 0.502*	*- / 0.424*	*- / -*	*- / 0.424*	*- / 0.381*	*- / 0.368*	*- / 0.329*	*- / 0.816*	*- / 0.000*	*- / 3.164*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**1.911**	**0.087**	**2.685**	**2.136**	**0.000**	**2.136**	**41.253**	**32.382**	**51.437**	**68.823**	**64.087**	**264.801**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 5 / Safety/Obsolescence Upgrades (OSIP 015-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Safety/Obsolescence Upgrades (OSIP 015-17)		

Footnotes:

(24) The T56 Series 3.5 Engine Upgrade Program provides improvement in performance with design enhancements including with new compressor wheels and compressor and turbine blades and vanes. Performance benefits include: Improved fuel efficiency, increased reliability, increased take-off thrust, increased climb rate, decreased take-off field length, increased payload carriage, and increased range. The program modifies 140 T56 Series 3 engines in the USNR fleet to the Series 3.5 configuration within 5 years to maximize the return of investment for the Navy. There will be a 24 month lead time in Kit procurement with procurements beginning in FY 22 and depot installations beginning in FY24.

(25) Center Wing Box should be funded with 1A5A. A line was put in the exhibit in order to balance to control; issue sheet will be submitted with budget.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 6 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	371.383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	371.383
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	371.383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	371.383
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**371.383**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**371.383**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0560 / C-130 Series	**Modification Number / Title:** 6 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 371.383	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 371.383
Subtotal: Procurement	*- / 371.383*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 371.383*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**371.383**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**371.383**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0561 / Flt Elect Wrfr Supt Grp (FEWSG)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	100.685	0.597	0.509	0.684	0.000	0.684	0.734	0.701	0.715	0.732	3.005	108.362
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	100.685	0.597	0.509	0.684	0.000	0.684	0.734	0.701	0.715	0.732	3.005	108.362
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**100.685**	**0.597**	**0.509**	**0.684**	**0.000**	**0.684**	**0.734**	**0.701**	**0.715**	**0.732**	**3.005**	**108.362**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Installations are modifications to fleet systems based on the Adversary Electronic Attack Digital Radio Frequency Memory (DRFM) Roadmap for Filthy Badger classified program requirements. The program focuses on the Filthy Badger modification schedule and support of the required engineering and logistics to accomplish these upgrades.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0561 / Flt Elect Wrfr Supt Grp (FEWSG)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83) (RELIABILITY, MAINTAINABILITY, CAPABILITY)				- / 100.685	- / 0.597	- / 0.509	- / 0.684	- / 0.000	- / 0.684
P-40	**Total Gross/Weapon System Cost**				**- / 100.685**	**- / 0.597**	**- / 0.509**	**- / 0.684**	**- / 0.000**	**- / 0.684**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83) (RELIABILITY, MAINTAINABILITY, CAPABILITY)				- / 0.734	- / 0.701	- / 0.715	- / 0.732	- / 3.005	- / 108.362
P-40	**Total Gross/Weapon System Cost**				**- / 0.734**	**- / 0.701**	**- / 0.715**	**- / 0.732**	**- / 3.005**	**- / 108.362**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2021 funding requested to support the FEWSG modification schedule and the required engineering and logistics to accomplish these upgrades.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0561 / Flt Elect Wrfr Supt Grp (FEWSG)	**Modification Number / Title:** 1 / AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	100.685	0.597	0.509	0.684	0.000	0.684	0.734	0.701	0.715	0.732	3.005	108.362
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	100.685	0.597	0.509	0.684	0.000	0.684	0.734	0.701	0.715	0.732	3.005	108.362
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**100.685**	**0.597**	**0.509**	**0.684**	**0.000**	**0.684**	**0.734**	**0.701**	**0.715**	**0.732**	**3.005**	**108.362**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Installations are modifications to fleet systems based on the FEWSG program requirements. The program focuses on the FEWSG modification schedule and support of the required engineering and logistics to accomplish the upgrades.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0561 / Flt Elect Wrfr Supt Grp (FEWSG)	**Modification Number / Title:** 1 / AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: NOT APPLICABLE	**Modification Type:** RELIABILITY, MAINTAINABILITY, CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)												
B Kits												
Recurring												
1.1.1) Install Equipment (B Kits) - Organic [1]	1,051 / 76.502	1 / 0.209	1 / 0.056	4 / 0.342	- / -	4 / 0.342	4 / 0.367	4 / 0.351	4 / 0.357	4 / 0.366	8 / 1.535	1,081 / 80.085
Subtotal: Recurring	*- / 76.502*	*- / 0.209*	*- / 0.056*	*- / 0.342*	*- / -*	*- / 0.342*	*- / 0.367*	*- / 0.351*	*- / 0.357*	*- / 0.366*	*- / 1.535*	*- / 80.085*
Non-Recurring												
1.2.1) Install Equipment N/R - Organic	- / 2.391	- / 0.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.447
Subtotal: Non-Recurring	*- / 2.391*	*- / 0.056*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.447*
Subtotal: AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)	*1,051 / 78.893*	*1 / 0.265*	*1 / 0.056*	*4 / 0.342*	*- / -*	*4 / 0.342*	*4 / 0.367*	*4 / 0.351*	*4 / 0.357*	*4 / 0.366*	*8 / 1.535*	*1,081 / 82.532*
Subtotal: Procurement, All Modification Items	*- / 78.893*	*- / 0.265*	*- / 0.056*	*- / 0.342*	*- / -*	*- / 0.342*	*- / 0.367*	*- / 0.351*	*- / 0.357*	*- / 0.366*	*- / 1.535*	*- / 82.532*
Support *(All Modification Items)*												
2.1) Engineering Change Orders	- / 2.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.928
2.2) Data	- / 0.406	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.406
2.3) Training Equipment	3 / 4.815	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.815
2.4) Support Equipment	- / 5.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.510
2.5) ILS	- / 2.903	- / 0.137	- / 0.248	- / 0.104	- / -	- / 0.104	- / 0.111	- / 0.105	- / 0.107	- / 0.109	- / 0.440	- / 4.264
2.6) Other Support	- / 5.230	- / 0.195	- / 0.205	- / 0.238	- / -	- / 0.238	- / 0.256	- / 0.245	- / 0.251	- / 0.257	- / 1.030	- / 7.907
Subtotal: Support	*- / 21.792*	*- / 0.332*	*- / 0.453*	*- / 0.342*	*- / -*	*- / 0.342*	*- / 0.367*	*- / 0.350*	*- / 0.358*	*- / 0.366*	*- / 1.470*	*- / 25.830*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**100.685**	**0.597**	**0.509**	**0.684**	**0.000**	**0.684**	**0.734**	**0.701**	**0.715**	**0.732**	**3.005**	**108.362**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0561 / Flt Elect Wrfr Supt Grp (FEWSG)	**Modification Number / Title:** 1 / AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: AN/AST-6/9(V), AN/ULQ-21/24, AN/ALQ-237, AN/ALQ-167 (OSIP 119-83)		

Footnotes:

(1) FY 2021 and beyond increase in required funding for Install Equipment (B Kits) is due to supportability and obsolescence issues. An increase in hardware that requires replacement is greater than previously planned for AST-9 and ALQ-167.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	305.929	8.932	8.767	8.911	0.000	8.911	10.833	10.685	10.672	11.011	49.065	424.805
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	305.929	8.932	8.767	8.911	0.000	8.911	10.833	10.685	10.672	11.011	49.065	424.805
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**305.929**	**8.932**	**8.767**	**8.911**	**0.000**	**8.911**	**10.833**	**10.685**	**10.672**	**11.011**	**49.065**	**424.805**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the following cargo and transport aircraft: C-40A (QTY 15), C-20G (QTY 4), C-37A (QTY 1), C-37B (QTY 3), C-26D (QTY 7), UC-35C (QTY 2), UC-35D (QTY 10), UC-12F (QTY 10), UC-12M (QTY 9), UC-12W (QTY 7), and RC-12M (QTY 1).

The C-40A Clipper, C-20G Gulfstream IV, C-37A Gulfstream V, C-37 B Gulfstream 550, UC-35C Cessna Ultra, UC-35D Cessna Encore are commercial twin jet transport aircraft that provide time-critical medium lift logistic support for the fleet combatant commanders. The C-40A can accommodate 121 passengers, or 8 pallets of cargo, or a combination configuration of 3 pallets and 70 passengers with a range of 3,400 nautical miles. The C-20G can accommodate 26 passengers or all pallets of cargo, or a combination of pallets and passengers with a range of 5,130 nautical miles. The C-37 provides worldwide executive transport to Secretary of the Navy, Chief of Naval Operations, Commandant of the Marine Corps, and Fleet Commanders. The UC-35 provides transport for high priority passenger/cargo missions with time, place or mission sensitive requirements. The UC-35 can accommodate 6 passengers or 1,200 pounds of cargo with a range of 1,300 nautical miles. The C-12 King Air and C-26 Metroliner variants are commercial twin turbo-prop aircraft that provide shorter-range light lift passenger/cargo transport and range control missions. The C-12 is capable of carrying 6 passengers or maximum cargo capacity of 2,850 pounds, with a range of 1,075 nautical miles. The C-26 is capable of carrying 19 passengers 1,300 nautical miles.

In FY15 - FY21 Block 3 aircraft modifications include Automatic Dependent Surveillance to DO260B (ADS-B) standards, Data Link recording capability that is tied to the Cockpit Voice Recorder, Expansion of data link systems/services based on global operational data-link mandates, integration of AN/APX-119 IFF Mode 5 with new digital control panel, Performance based navigation (RNAV/RNP), weather radar integration, L5 GLS capabilities, SATCOM upgrades required to meet new Iridium or International Maritime Satellite (INMARSAT) requirements. To combat jamming of commercial navigation systems incorporate anti jamming GPS antenna systems with M-code. FY21 begins prototype for Block 4 aircraft modifications through FY25 that include Flight Management System upgrades to meet FAA advanced RNP minimum performance standards, Continue with incorporation of anti jam and anti spoofing M-Code GPS to ensure secure transmission of accurate military signals, New Navigation GPS receivers to meet ARINC 743B standards, and New High Definition Displays that meet electronic terrain and obstacle data requirements and next generation flight deck upgrades including Pro Line Fusion.

Cost to Complete should be $49.065 and Total Cost should be $427.574

[P3A - 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)]: Note: Installation Kits N/R - Organic increase from FY2020 to FY2021 due to increased cost and complexity associated with initial Block 4 Modifications for C-40A, UC-35, and C-12.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
NR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.932	8.767	8.911	-	8.911	10.833	10.685	10.672	11.011
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**8.932**	**8.767**	**8.911**	**-**	**8.911**	**10.833**	**10.685**	**10.672**	**11.011**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86) (SAFETY/ RELIABILITY)				- / 22.533	- / 0.025	- / 0.025	- / 0.025	- / 0.000	- / 0.025
P-3a	2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04) (SAFETY/RELIABILITY)				- / 206.118	- / 8.482	- / 8.717	- / 8.861	- / 0.000	- / 8.861
P-3a	3 / Safety/Obsolescence Upgrades (013-16) (SAFETY/RELIABILITY)				- / 1.460	- / 0.425	- / 0.025	- / 0.025	- / 0.000	- / 0.025
P-3a	4 / RESERVE FORCES Inactive OSIPs (TBD)				- / 75.818	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 305.929**	**- / 8.932**	**- / 8.767**	**- / 8.911**	**- / 0.000**	**- / 8.911**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86) (SAFETY/ RELIABILITY)				- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.100	- / 22.808
P-3a	2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04) (SAFETY/RELIABILITY)				- / 10.783	- / 10.635	- / 10.622	- / 10.961	- / 48.865	- / 324.044
P-3a	3 / Safety/Obsolescence Upgrades (013-16) (SAFETY/RELIABILITY)				- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.100	- / 2.135
P-3a	4 / RESERVE FORCES Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 75.818
P-40	**Total Gross/Weapon System Cost**				**- / 10.833**	**- / 10.685**	**- / 10.672**	**- / 11.011**	**- / 49.065**	**- / 424.805**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Basis for FY21 budget request: provides funding to procure aircraft modifications for Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) and Safety requirements for Cargo Transport Aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.533	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.025	0.025	0.100	22.808
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.533	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.025	0.025	0.100	22.808
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.533**	**0.025**	**0.025**	**0.025**	**0.000**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.100**	**22.808**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Federal Aviation Regulations require manufacturers of commercial aircraft and associated systems/subsystems to investigate discrepant conditions, failures, and potential safety problems reported by all operators. The results of these investigations with recommended corrective action are reviewed/authorized by Federal Aviation Administration (FAA) designated representatives and provided to all operators as service bulletins. Each service bulletin is a complete technical directive that provides corrective change information or detailed modification instructions. To ensure safe, reliable, FAA/Navy certified aircraft and to provide a program that will assure continued life extension at minimum cost, the Navy must maintain configuration and integrity compatible with FAA certified commercial models by incorporation of applicable service bulletins. The incorporation of certain service bulletins also serves to preclude extensive repairs/repetitive inspections. Crew equipment requirements in accordance with FAA directives and/or Navy requirements will be incorporated to ensure maximum safety in case of emergency. Specific examples of systems that will require modification to conform to FAA Service Bulletins and Directives include Brakes, Landing Gear Systems, Flight Controls, Engine Modifications, Propeller Modifications, Airframe Modifications, Hydraulics, Electrical/Mechanical Systems & Components, Fuel Systems, Software Modifications/Upgrades, Fire Detection Systems, Interior Environmental Systems, Pressurization Systems, Oxygen Systems, Pilot-Static Systems and Smoke/Fire Detection Systems. Modifications budgeted in this Operational Safety and Improvement Program include the incorporation of Service Bulletins/Directives requirements into the C-40A, C-20G, C-37A, C-37B, C-26D, UC-35C, UC-35D, UC-12F, UC-12M, UC-12W and RC-12M aircraft.

Development Status/Major Development Milestones: Service Bulletins are reviewed for possible incorporation on an as required basis. Prototype verification has been previously accomplished and approved by the FAA.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CARGO TRANSPORT AC SERIES	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)												
A Kits												
Recurring												
1.1.1) Tech Directive Implementation - Organic	- / 0.325	- / 0.025	- / 0.025	- / 0.025	- / -	- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.100	- / 0.600
1.1.2) Archived Cost Elements - Organic	- / 17.478	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.478
Subtotal: Recurring	*- / 17.803*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.100*	*- / 18.078*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 2.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.832
Subtotal: Non-Recurring	*- / 2.832*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.832*
Subtotal: FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)	*- / 20.635*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.100*	*- / 20.910*
Subtotal: Procurement, All Modification Items	*- / 20.635*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.100*	*- / 20.910*
Support *(All Modification Items)*												
3.1) Engineering Change Orders	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.360
3.2) Data	- / 0.293	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.293
3.3) Training Equipment	- / 0.206	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.206
3.5) ILS	- / 0.016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.016
3.6) Other Support	- / 0.816	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.816
3.7) Interim Contractor Support	- / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.207
Subtotal: Support	*- / 1.898*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.898*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CARGO TRANSPORT AC SERIES	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	22.533	0.025	0.025	0.025	0.000	0.025	0.025	0.025	0.025	0.025	0.100	22.808

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 1 / FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: FEDERAL AVIATION ADMINISTRATION (FAA) CONFIGURATION UPDATES RESERVE FORCES(OSIP 071-86)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	206.118	8.482	8.717	8.861	0.000	8.861	10.783	10.635	10.622	10.961	48.865	324.044
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	206.118	8.482	8.717	8.861	0.000	8.861	10.783	10.635	10.622	10.961	48.865	324.044
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**206.118**	**8.482**	**8.717**	**8.861**	**0.000**	**8.861**	**10.783**	**10.635**	**10.622**	**10.961**	**48.865**	**324.044**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

World-wide airspace congestion and communication bandwidth saturation has led the International Civil Aviation Organization to restructure the world-wide airspace structure to improve safety through a series of equipment and performance mandates implemented by regional authorities. The Type/Models/Series cited below will be required to comply with Communication, Navigation and Surveillance - Air Traffic Management (CNS-ATM) mandates to retain the Navy's capability to operate these aircraft worldwide. Failure to comply with these time-phased mandates will result in being denied access to high-volume airspace (routing and altitudes) and airfields, and result in circuitous routing and sub optimal altitudes. Required modifications to meet these CNS-ATM mandates are being implemented on post production aircraft as capabilities listed in the third paragraph.

To minimize the impact of successive modifications and maximize aircraft availability, a block upgrade approach has been taken during this budget submit. Block upgrades have been prioritized and phased to meet regional mandates just in time to ensure that commercial CNS-ATM solutions are available off the shelf to minimize non-reoccurring engineering associated with Federal Aviation Administration supplemental type certification. In order to incorporate CNS-ATM mandates several older aircraft (C-35C, all C-26 and C-12) required the installation of a digital flight management and communication system.

CNS-ATM capabilities associated with each Block Upgrade are listed below:

C-26D: Block 3 - CPDLC and ADS-C datalink, CMU, add VDL-2 and SATCOM capability (Iridium or INMARSAT) and services, Automatic Dependent Surveillance to DO260B (ADS-B) standards, AN/APX-119 IFF Mode 5 with new digital control panel, RNAV/RNP, and L5 GLS Installs. Block 4 - Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standards, New Navigation GPS receivers to meet ARINC 743B standards and New High Definition Displays that meet electronic terrain and obstacle data requirements, Next generation Flight deck upgrades, to include Pro Line Fusion. C-26D Block 4 not currently funded.

C-40A: Block 3 - Upgrade SATCOM capability (Iridium or INMARSAT) and services to meet new I4 requirements; Automatic Dependent Surveillance to DO260B standards, Data Link recording enhancements, AN/APX-119 IFF Mode 5 with new digital control panel, Performance based navigation (RNAV/RNP), weather radar enhancement and L5 GLS Installs. Protected Mode and Baseline Controller Pilot Data Link Communication (PM-CPDLC) and Automatic Dependent Surveillance-Contract (ADS-C) datalink, and VHF Data Link Mode 2. Block 4 - Updated Display Electronic Unit to raise to current standard, Flight Management System upgrades to meet FAA advanced RNP minimum performance standards, incorporation of anti jam and anti spoofing M-Code GPS to ensure secure transmission of accurate military signals, New Navigation GPS receivers to meet ARINC 743B standards, and New High Definition Displays that meet electronic terrain and obstacle data requirements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

C-37A/B: Block 3 - PM-CPDLC, ADS-C datalink, VHF Data Link Mode 2, SATCOM capability (Iridium or INMARSAT) and services, Automatic Dependent Surveillance to DO260B (ADS-B) standards, Data Link recording enhancements, and RNAV/RNP. Block 4 - Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standards, L5 GLS Installs, AN/APX-119 IFF Mode 5 with new digital control panel, incorporation of anti jam and anti spoofing M-Code GPS to ensure secure transmission of accurate military signals, New Navigation GPS receivers to meet ARINC 743B standards, and New High Definition Displays that meet electronic terrain and obstacle data requirements.

UC-35D: Block 3 - Upgrade UNS-1Espw for CPDLC and ADS-C datalink and Dependent Surveillance to DO260B standards, Data Link recording enhancements, Aircraft Survivability Equipment Gen3, SATCOM capability (Iridium or INMARSAT) and services, AN/APX-119 IFF Mode 5 with new digital control panel, RNAV/RNP, weather integration and Anti-jamming GPS antenna and M code. Block 4 - L5 GLS Installs and Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standards, New Navigation GPS receivers to meet ARINC 743B standards and New High Definition Displays that meet electronic terrain and obstacle data requirements.

C-20G: Block 3 - SATCOM capability (Iridium or INMARSAT) and services, Automatic Dependent Surveillance to DO260B standards, Data Link recording enhancements, AN/APX-119 IFF Mode 5 with new digital control panel, and RNAV/RNP. Block 4 - Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standards and L5 GLS Installs, New Navigation GPS receivers to meet ARINC 743B standards and New High Definition Displays that meet electronic terrain and obstacle data requirements.

C-12F/M: Block 3 - SATCOM capability (Iridium or INMARSAT) and services, Automatic Dependent Surveillance to DO260B standards, Data Link recording enhancements, AN/APX-119 IFF Mode 5 with new digital control panel, and RNAV/RNP. Block 4 - Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standards and L5 GLS Installs, New Navigation GPS receivers to meet ARINC 743B standards and New High Definition Displays that meet electronic terrain and obstacle data requirements.

UC-12W: Block 3 - WAAS, SATCOM capability (Iridium or INMARSAT) and services, Automatic Dependent Surveillance to DO260B standards, Data Link recording enhancements, AN/APX-119 IFF Mode 5 with new digital control panel, CPDLC and ADS-C Data Link, CMU, add VDL-2 , RNAV/RNP, L5 GLS Installs and Anti-jamming GPS antenna and M code. Block 4 - Aircraft Flight Management System upgrades to meet FAA advanced RNP minimum performance standard, New Navigation GPS receivers to meet ARINC 743B standards and New High Definition Displays that meet electronic terrain and obstacle data requirements. Next generation Flight deck upgrades, to include Pro Line Fusion.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CARGO TRANSPORT AC SERIES	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Block 4 (C-12) - Organic - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.262	4 / 1.048	- / -	5 / 1.310
1.1.2) Block 4 (C-40) - Organic - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.916	1 / 0.200	- / -	13 / 3.116
1.1.3) Block 3 (C-37) - Organic - Organic(*)	1 / 0.113	4 / 0.859	4 / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 1.052
1.1.4) Block 3 (C-26) - NonOrganic *Installation 1 of 6*	6 / 1.263	- / -	- / -	1 / 0.650	- / -	1 / 0.650	- / -	- / -	- / -	- / -	- / -	7 / 1.913
1.1.5) Block 3 (C-20) - Organic - Organic(*)	- / -	3 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.300
1.1.6) Block 3 (C-12) - NonOrganic *Installation 2 of 6*	36 / 1.466	- / -	7 / 0.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 1.536
1.1.11) Block 4 (C-12) - NonOrganic *Installation 2 of 6*	- / -	- / -	- / -	2 / 1.204	- / -	2 / 1.204	- / -	- / -	1 / 0.300	- / -	6 / 1.800	9 / 3.304
1.1.7) Block 4 (C-40) - NonOrganic *Installation 3 of 6*	- / -	- / -	- / -	2 / 0.300	- / -	2 / 0.300	5 / 2.880	4 / 1.280	- / -	- / -	14 / 2.425	25 / 6.885
2.1.3) Block 3 C-40 - NonOrganic *Installation 3 of 6*	4 / 2.051	17 / 2.687	7 / 1.624	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 6.362
1.1.8) Block 4 (C-37) - NonOrganic *Installation 4 of 6*	- / -	- / -	- / -	1 / 0.300	- / -	1 / 0.300	1 / 0.450	- / -	- / -	- / -	9 / 1.980	11 / 2.730
1.1.9) Block 4 (UC-35) - NonOrganic *Installation 5 of 6*	- / -	- / -	- / -	1 / 0.300	- / -	1 / 0.300	2 / 0.740	5 / 1.050	- / -	- / -	6 / 2.461	14 / 4.551
1.1.10) Block 4 (C-20) - NonOrganic *Installation 6 of 6*	- / -	- / -	- / -	1 / 0.300	- / -	1 / 0.300	- / -	- / -	- / -	- / -	3 / 1.000	4 / 1.300
1.1.12) Archive Mods - Organic(*) (1)	- / 81.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 81.499
1.2.1) Installation Kits N/R - Organic(*) (2)	- / 34.124	- / 0.351	- / 0.145	- / 2.301	- / -	- / 2.301	- / 2.170	- / -	- / -	- / -	- / 6.275	- / 45.366
2.1.1) Archived Mods - Organic(*)	- / 44.754	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 44.754
2.1.2) Block 3 - Organic(*) (3)	25 / 5.027	5 / 0.800	6 / 0.291	7 / 1.169	- / -	7 / 1.169	- / -	- / -	- / -	- / -	6 / 1.167	49 / 8.454
2.1.4) Block 4 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.963	9 / 5.076	16 / 4.443	13 / 7.463	3 / 5.769	51 / 23.714
2.2.1) Installation Equipment N/R - Organic(*)	- / 3.994	- / 0.300	- / -	- / -	- / -	- / -	- / 1.100	- / 0.500	- / 1.420	- / 1.450	- / 0.655	- / 9.419
Subtotal: Procurement	*- / 174.291*	*- / 5.297*	*- / 2.210*	*- / 6.524*	*- / -*	*- / 6.524*	*- / 8.303*	*- / 7.906*	*- / 9.341*	*- / 10.161*	*- / 23.532*	*- / 247.565*
Support												
3.1) Engineering Change Orders	- / 0.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.160

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CARGO TRANSPORT AC SERIES	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.2) Data	- / 6.177	- / 0.300	- / 0.138	- / 0.126	- / -	- / 0.126	- / 0.210	- / 0.205	- / 0.160	- / -	- / 2.473	- / 9.789
3.3) Training Equipment (4)	- / 1.778	- / -	- / -	- / -	- / -	- / -	- / 0.293	- / 0.185	- / 0.100	- / -	- / 1.821	- / 4.177
3.4) Support Equipment	- / 0.626	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.061	- / 1.687
3.5) ILS (5)	- / 4.715	- / 0.135	- / 0.126	- / 0.105	- / -	- / 0.105	- / 0.330	- / 0.344	- / 0.325	- / 0.352	- / 1.893	- / 8.325
3.6) Other Support (6)	- / 13.882	- / 1.280	- / 0.980	- / 0.556	- / -	- / 0.556	- / 0.647	- / 0.655	- / 0.546	- / 0.448	- / 4.090	- / 23.084
Subtotal: Support	*- / 27.338*	*- / 1.715*	*- / 1.244*	*- / 0.787*	*- / -*	*- / 0.787*	*- / 1.480*	*- / 1.389*	*- / 1.131*	*- / 0.800*	*- / 11.338*	*- / 47.222*
Installation												
Installation 1 of 6: GRP: CNS/ATM C-26	- / -	- / 0.656	- / 0.656	- / 0.325	- / 0.000	- / 0.325	- / -	- / -	- / -	- / -	- / 0.000	- / 1.637
Installation 2 of 6: GRP: CNS/ATM C-12	- / 1.506	- / 0.814	- / 0.607	- / 0.450	- / 0.000	- / 0.450	- / -	- / -	- / 0.150	- / -	- / 0.900	- / 4.427
Installation 3 of 6: GRP: CNS/ATM C-40A/C-9	- / 2.983	- / -	- / 4.000	- / 0.400	- / 0.000	- / 0.400	- / 0.625	- / 0.890	- / -	- / -	- / 2.425	- / 11.323
Installation 4 of 6: GRP: CNS/ATM C-37	- / -	- / -	- / -	- / 0.125	- / 0.000	- / 0.125	- / 0.125	- / -	- / -	- / -	- / 2.180	- / 2.430
Installation 5 of 6: GRP: CNS/ATM UC-35	- / -	- / -	- / -	- / 0.125	- / 0.000	- / 0.125	- / 0.250	- / 0.450	- / -	- / -	- / 8.040	- / 8.865
Installation 6 of 6: GRP: CNS/ATM C-20	- / -	- / -	- / -	- / 0.125	- / 0.000	- / 0.125	- / -	- / -	- / -	- / -	- / 0.450	- / 0.575
Subtotal: Installation	*- / 4.489*	*- / 1.470*	*- / 5.263*	*- / 1.550*	*- / -*	*- / 1.550*	*- / 1.000*	*- / 1.340*	*- / 0.150*	*- / -*	*- / 13.995*	*- / 29.257*
Total												
Total Cost (Procurement + Support + Installation)	**206.118**	**8.482**	**8.717**	**8.861**	**0.000**	**8.861**	**10.783**	**10.635**	**10.622**	**10.961**	**48.865**	**324.044**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 6: GRP: CNS/ATM C-26

Manufacturer Information

Manufacturer Name: Rockwell Collins | Manufacturer Location: Cedar Rapids, IA

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020				
Delivery Dates			Jul 2021				

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM C-26

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	3 / 0.656	3 / 0.656	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.312
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.325	0 / 0.000	1 / 0.325	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.325
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	3 / 0.656	3 / 0.656	1 / 0.325	0 / 0.000	1 / 0.325	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.637

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	3	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Out	-	-	-	-	3	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 6: GRP: CNS/ATM C-12

Manufacturer Information

Manufacturer Name: L-3 Vertex - C-12 | Manufacturer Location: Madison, Mississippi

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019	Nov 2020			Nov 2023	
Delivery Dates		Feb 2020	Feb 2021			Feb 2024	

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM C-12

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	12 / 1.506	16 / 0.814	8 / 0.407	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	36 / 2.727
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	7 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.200
FY 2021	- / -	- / -	- / -	2 / 0.450	0 / 0.000	2 / 0.450	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.450
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.150	- / -	0 / 0.000	1 / 0.150
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.900	6 / 0.900
Total	12 / 1.506	16 / 0.814	15 / 0.607	2 / 0.450	0 / 0.000	2 / 0.450	- / -	- / -	1 / 0.150	- / -	6 / 0.900	52 / 4.427

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	12	-	-	8	8	8	2	2	3	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	6	52
Out	12	-	-	8	8	8	2	2	3	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	6	52

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 6: GRP: CNS/ATM C-40A/C-9

Manufacturer Information

Manufacturer Name: Various - C-40/C-9 | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023		
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023		

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM C-40A/C-9

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 2.983	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.983
FY 2019	- / -	- / -	17 / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 2.000
FY 2020	- / -	- / -	7 / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 2.000
FY 2021	- / -	- / -	- / -	2 / 0.400	0 / 0.000	2 / 0.400	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.625	- / -	- / -	- / -	0 / 0.000	5 / 0.625
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.890	- / -	- / -	0 / 0.000	4 / 0.890
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.425	14 / 2.425
Total	4 / 2.983	- / -	24 / 4.000	2 / 0.400	0 / 0.000	2 / 0.400	5 / 0.625	4 / 0.890	- / -	- / -	14 / 2.425	53 / 11.323

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	6	6	5	7	-	-	-	2	-	-	-	5	-	-	-	4	-	-	-	-	-	-	-	-	14	53
Out	4	-	-	-	-	6	6	5	7	-	-	-	2	-	-	-	5	-	-	-	4	-	-	-	-	-	-	-	-	14	53

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 6: GRP: CNS/ATM C-37

Manufacturer Information

Manufacturer Name: Gulfstream-C-37 | Manufacturer Location: Savannah, GA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021			
Delivery Dates			Mar 2021	Mar 2022			

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM C-37

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.125
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.125	- / -	- / -	- / -	0 / 0.000	1 / 0.125
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 2.180	9 / 2.180
Total	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	1 / 0.125	- / -	- / -	- / -	9 / 2.180	11 / 2.430

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	11
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	11

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 6: GRP: CNS/ATM UC-35

Manufacturer Information

Manufacturer Name: M7 Aerospace UC-35 | Manufacturer Location: San Antonio, TX

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022		
Delivery Dates			Jan 2021	Jan 2022	Jan 2023		

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM UC-35

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.125
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.250	- / -	- / -	- / -	0 / 0.000	2 / 0.250
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.450	- / -	- / -	0 / 0.000	5 / 0.450
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 8.040	6 / 8.040
Total	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	2 / 0.250	5 / 0.450	- / -	- / -	6 / 8.040	14 / 8.865

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	2	2	1	-	-	-	-	-	-	-	-	6	14
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	2	2	1	-	-	-	-	-	-	-	-	6	14

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 6: GRP: CNS/ATM C-20

Manufacturer Information

Manufacturer Name: Gulfstream-C-20 | Manufacturer Location: Savannah, GA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020				
Delivery Dates			Feb 2021				

Installation Information

Method of Implementation: Depot Contractor:: Installation Name: CNS/ATM C-20

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.125
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.450	3 / 0.450
Total	- / -	- / -	- / -	1 / 0.125	0 / 0.000	1 / 0.125	- / -	- / -	- / -	- / -	3 / 0.450	4 / 0.575

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4
Out	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4

Footnotes:

(1) Archived Block 3 (UC-35) Non Organic (CE 1.1.4)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 2 / COMMUNICATION, NAVIGATION AND SURVEILLANCE - AIR TRAFFIC MANAGEMENT RESERVE FORCES (OSIP 012-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) Installation Kits N/R - Organic increase from FY2020 to FY2021 due to increased cost and complexity associated with initial Block 4 Modifications for C-40A, UC-35, and C-12.

(3) Block 3 - Organic increase in FY21 due to projected T/M/S B-kit requirements and associated OEM kit costs.

(4) Increase in FY2022 to support update to training devices as a result of Block 4 updates/requirements.

(5) Increase from FY21 to FY22 to support ramp up of Block 4 upgrade activities.

(6) Increase from FY21 to FY22 to support ramp up of Block 4 upgrade activities.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 3 / Safety/Obsolescence Upgrades (013-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.460	0.425	0.025	0.025	0.000	0.025	0.025	0.025	0.025	0.025	0.100	2.135
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.460	0.425	0.025	0.025	0.000	0.025	0.025	0.025	0.025	0.025	0.100	2.135
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.460**	**0.425**	**0.025**	**0.025**	**0.000**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.100**	**2.135**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the following cargo and transport airlift aircraft: C-40A, C-20G, C-37A/B, UC-35C/D, C-26D, UC-12B/F/M/W,RC-12M.
To ensure preservation of the airlift capabilities world-wide, this Safety, Reliability and Obsolescence Improvement OSIP provides funding to correct deficiencies that adversely affect aircraft safety, reliability and/or availability; specifically deficiencies that are not corrected through the existing FAA commercial service bulletin process because they are peculiar systems/equipment to the Navy. Navy peculiar aircraft systems include but are not limited to navigation systems, communication, survivability equipment, and cargo/passenger loading and carriage systems.

Modifications will support all readiness, obsolescent, and safety of flight improvements to existing Navy perculiar aircraft systems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 3 / Safety/Obsolescence Upgrades (013-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CARGO TRANSPORT AC SERIES	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Safety/Obsolescence Upgrades (013-16)												
A Kits												
Recurring												
1.1.1) AirStair - Organic	15 / 0.349	1 / 0.025	1 / 0.025	- / 0.025	- / -	- / 0.025	- / 0.025	- / 0.025	- / 0.025	1 / 0.025	- / 0.100	18 / 0.624
Subtotal: Recurring	*- / 0.349*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.100*	*- / 0.624*
Non-Recurring												
1.2.1) A Kit Non-Recurring - Organic	3 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.900
Subtotal: Non-Recurring	*- / 0.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.900*
B Kits												
Recurring												
2.1.1) B Kit Non-Recurring - Organic (7)	- / -	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400
Subtotal: Recurring	*- / 0.000*	*- / 0.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.400*
Subtotal: Safety/Obsolescence Upgrades (013-16)	*18 / 1.249*	*1 / 0.425*	*1 / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*1 / 0.025*	*- / 0.100*	*21 / 1.924*
Subtotal: Procurement, All Modification Items	*- / 1.249*	*- / 0.425*	*- / 0.025*	*- / 0.025*	*- / -*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.025*	*- / 0.100*	*- / 1.924*
Support *(All Modification Items)*												
3.6) Other Support	- / 0.211	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.211
Subtotal: Support	*- / 0.211*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.211*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**1.460**	**0.425**	**0.025**	**0.025**	**0.000**	**0.025**	**0.025**	**0.025**	**0.025**	**0.025**	**0.100**	**2.135**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 3 / Safety/Obsolescence Upgrades (013-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Safety/Obsolescence Upgrades (013-16)		

Footnotes:

(7) FY19 Non-Recurring Engineering (NRE) funding for High Frequency (HF) Radio communication system.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 4 / RESERVE FORCES Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	75.818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	75.818
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	75.818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	75.818
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**75.818**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**75.818**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0562 / Cargo/Transport Acft Series	**Modification Number / Title:** 4 / RESERVE FORCES Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 75.818	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 75.818
Subtotal: Procurement	*- / 75.818*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 75.818*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**75.818**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**75.818**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0564 / E-6 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0101402N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,669.521	164.511	153.573	197.206	0.000	197.206	167.046	138.212	129.864	132.281	81.910	2,834.124
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,669.521	164.511	153.573	197.206	0.000	197.206	167.046	138.212	129.864	132.281	81.910	2,834.124
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,669.521**	**164.511**	**153.573**	**197.206**	**0.000**	**197.206**	**167.046**	**138.212**	**129.864**	**132.281**	**81.910**	**2,834.124**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the E-6 Mercury aircraft to improve mission capability and readiness. All sixteen (16) aircraft, unless otherwise noted, in the E-6 fleet will receive each modification. The E-6 is a manned airborne communications platform designed to provide a survivable, endurable, and reliable airborne Command and Control Communications capability in support of the President, Secretary of Defense, and United States strategic and non-strategic forces.

-Safety Deficiencies (OSIP 008-02) corrects high risk aircraft safety hazards to protect personnel and equipment enabling mission readiness.

-Tech Insertion (OSIP 003-04) corrects aircraft obsolescence, supportability, weight management and interoperability deficiencies through new technology insertion enabling mission readiness and mandate compliance.

-Service Life Extension Program (OSIP 003-07) extends the service life of the aircraft to 2038+ through airframe strengthening and structural data recording and analysis.

-Communications Upgrade (OSIP 012-07) installs expanded aircraft digital communication paths and processing to improve airborne command post operations and modernizes direct over-the-horizon communications links to deployed strategic forces.

-Block I (OSIP 008-10) corrects Airborne Command Post (ABNCP) operational test deficiencies to improve mission capability, readiness and legacy system obsolescence.

-Multi-Role Tactical Common Data Link (OSIP 013-10) installs expanded aircraft communication bandwidth capability required to interoperate with United States Strategic Command's National Command and Control Architecture.

-Auxiliary Power Unit (APU) (OSIP 002-12) corrects airborne command post operational test deficiencies by installing an improved APU to meet increased aircraft power requirements.

-Family of Advanced Beyond-Line-of-Sight Terminals/Presidential and National Voice Conferencing (FAB-T/PNVC) (OSIP 014-14) replaces obsolete Military Strategic Tactical Relay terminals with improved FAB-T and replaces Secure Emergency Conferencing Network with PNVC.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0564 / E-6 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0101402N
Line Item MDAP/MAIS Code: N/A		

-Mission Systems (OSIP 014-21) addresses obsolescence and supportability upgrades through technology insertion of commercial and government off the shelf (COTs/GOTs) systems.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0564 / E-6 Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** 0101402N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Safety Deficiencies (OSIP 008-02) (Safety/Reliability/ Improvements)				- / 88.771	- / 6.322	- / 10.201	- / 10.934	- / 0.000	- / 10.934
P-3a	2 / Tech Insertion (OSIP 003-04) (Capability and Reliability Improvements)				- / 121.402	- / 8.866	- / 21.108	- / 19.143	- / 0.000	- / 19.143
P-3a	3 / Service Life Extension Program (SLEP) (OSIP 003-07) (Life Extension)				- / 129.220	- / 8.298	- / 9.009	- / 7.916	- / 0.000	- / 7.916
P-3a	4 / Communications Upgrade (OSIP 012-07) (Capability Improvements)				- / 293.939	- / 54.487	- / 40.368	- / 33.334	- / 0.000	- / 33.334
P-3a	5 / Block I (OSIP 008-10) (Capability Improvements)				- / 547.876	- / 23.871	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10) (Capability Improvements)				- / 261.474	- / 13.910	- / 22.521	- / 56.193	- / 0.000	- / 56.193
P-3a	7 / Auxiliary Power Unit (APU) (OSIP 002-12) (Capability Improvements)				- / 58.859	- / 12.751	- / 4.778	- / 14.553	- / 0.000	- / 14.553
P-3a	8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/PNVC)(OSIP 014-14) (Capability and Reliability Improvements)				- / 136.964	- / 36.006	- / 45.588	- / 47.634	- / 0.000	- / 47.634
P-3a	9 / Mission Systems (OSIP 014-21) (Capability Improvements)				- / 0.000	- / 0.000	- / 0.000	- / 7.499	- / 0.000	- / 7.499
P-3a	10 / Inactive OSIPS (Inactive)				- / 31.016	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,669.521**	**- / 164.511**	**- / 153.573**	**- / 197.206**	**- / 0.000**	**- / 197.206**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Safety Deficiencies (OSIP 008-02) (Safety/Reliability/ Improvements)				- / 11.403	- / 9.362	- / 6.584	- / 5.326	- / 9.349	- / 158.252
P-3a	2 / Tech Insertion (OSIP 003-04) (Capability and Reliability Improvements)				- / 20.703	- / 26.191	- / 60.645	- / 66.474	- / 38.247	- / 382.779
P-3a	3 / Service Life Extension Program (SLEP) (OSIP 003-07) (Life Extension)				- / 6.450	- / 6.578	- / 5.405	- / 3.132	- / 6.089	- / 182.097
P-3a	4 / Communications Upgrade (OSIP 012-07) (Capability Improvements)				- / 19.074	- / 21.863	- / 20.480	- / 16.930	- / 4.656	- / 505.131
P-3a	5 / Block I (OSIP 008-10) (Capability Improvements)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 571.747
P-3a	6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10) (Capability Improvements)				- / 43.732	- / 26.983	- / 0.000	- / 0.000	- / 8.428	- / 433.241
P-3a	7 / Auxiliary Power Unit (APU) (OSIP 002-12) (Capability Improvements)				- / 14.428	- / 9.453	- / 0.000	- / 0.000	- / 3.069	- / 117.891
P-3a	8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/PNVC)(OSIP 014-14) (Capability and Reliability Improvements)				- / 35.016	- / 21.297	- / 0.000	- / 0.000	- / 2.716	- / 325.221

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0564 / E-6 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0101402N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	9 / Mission Systems (OSIP 014-21) (Capability Improvements)				- / 16.240	- / 16.485	- / 36.750	- / 40.419	- / 9.356	- / 126.749
P-3a	10 / Inactive OSIPS (Inactive)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 31.016
P-40	**Total Gross/Weapon System Cost**				**- / 167.046**	**- / 138.212**	**- / 129.864**	**- / 132.281**	**- / 81.910**	**- / 2,834.124**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2021 funding request was increased by $43.633 million due to:

Increase in number of scheduled installations for Safety Deficiencies (OSIP 008-02) for Kapton Lower Lobe, Tech Insertion (OSIP 003-04) for Fuel Tank Sealant Upgrade (FTSU), Service Life Extension Program (SLEP) (OSIP 003-07) for SLEP Phase 1B, Communications Upgrade (OSIP 012-07) for Key Generator Receiver (KGR-72) , Multi-Role Tactical Common Data Link (OSIP 013-10) MR-TCDL system, Auxiliary Power Unit (OSIP 002-12) APU system, Family of Advanced Beyond-Line-of-Sight Terminals/Presidential National Voice Conferencing and Digital Red Switch System (FAB-T/PNVC/DRSS) (OSIP 014-14) for FAB-T, PNVC and DRSS systems.

Increase in procurements of kits for the following: FTSU, Global Positioning System M Code Advanced Digital Antenna Production, MR-TCDL, FAB-T and PNVC.

Increase in Non-Recurring Engineering (NRE) for Mission Computer Modernization (MCM) and Secondary Launch Platform Airborne (SLP-A).

Note: Correct Cost To Complete is $81.910 million.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	88.771	6.322	10.201	10.934	0.000	10.934	11.403	9.362	6.584	5.326	9.349	158.252
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	88.771	6.322	10.201	10.934	0.000	10.934	11.403	9.362	6.584	5.326	9.349	158.252
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**88.771**	**6.322**	**10.201**	**10.934**	**0.000**	**10.934**	**11.403**	**9.362**	**6.584**	**5.326**	**9.349**	**158.252**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The Operational Safety Improvement Program corrects safety hazards to protect personnel and equipment enabling mission readiness. The OSIP also addresses Federal agency directives, aging aircraft material condition, and emergent safety hazards generated by the operational environment. Modifications include, but not limited to: Fuel Quantity Indicator System (FQIS) modification, Kapton wiring replacement and other safety deficiencies that require correction.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FQIS kit buys PY-FY21; installations in PY-FY22. Aircraft Kapton NRE PY to beyond FYDP, buys kits and installs in PY to beyond FYDP. Kapton Lower Lobe, Wings, Engine Struts, and Tail are included in Kapton replacement efforts.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Safety/Reliability/Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Kapton Wings A Kits - NonOrganic *Installation 1 of 5*	4 / 0.759	2 / 0.560	2 / 0.298	2 / 0.305	- / -	2 / 0.305	2 / 0.311	2 / 0.318	2 / 0.324	- / -	- / -	16 / 2.875
1.1.2) Kapton Engine Struts A Kits - NonOrganic *Installation 2 of 5*	5 / 1.480	1 / 0.494	2 / 0.637	2 / 0.654	- / -	2 / 0.654	2 / 0.667	2 / 0.680	2 / 0.694	- / -	- / -	16 / 5.306
1.1.3) Kapton Lower Lobe A Kits - NonOrganic (1) *Installation 3 of 5*	2 / 0.339	3 / 1.001	4 / 1.455	4 / 1.493	- / -	4 / 1.493	3 / 1.142	- / -	- / -	- / -	- / -	16 / 5.430
1.1.4) Kapton Tail A Kits - NonOrganic *Installation 4 of 5*	- / -	- / -	- / -	2 / 0.651	- / -	2 / 0.651	2 / 0.663	2 / 0.675	2 / 0.687	2 / 0.699	6 / 2.135	16 / 5.510
1.1.5) FQIS A Kits - NonOrganic *Installation 5 of 5*	9 / 0.528	2 / 0.090	2 / 0.058	3 / 0.084	- / -	3 / 0.084	- / -	- / -	- / -	- / -	- / -	16 / 0.760
1.1.6) Archived ECPs - Organic(*)	112 / 17.803	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	112 / 17.803
1.2.1) Installation Kits N/R - Organic(*) (2)	- / 23.534	- / 0.685	- / 2.932	- / 1.995	- / -	- / 1.995	- / 1.900	- / 1.912	- / 1.950	- / 1.989	- / 2.029	- / 38.926
2.1.1) FQIS B Kits - Organic(*)	9 / 0.018	2 / 0.043	3 / 0.066	2 / 0.045	- / -	2 / 0.045	- / -	- / -	- / -	- / -	- / -	16 / 0.172
2.1.2) Archived ECPs - Organic(*)	188 / 6.271	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	188 / 6.271
2.2.1) Installation Equipment N/R - NonOrganic(*)	- / 3.122	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.122
Subtotal: Procurement	*- / 53.854*	*- / 2.873*	*- / 5.446*	*- / 5.227*	*- / -*	*- / 5.227*	*- / 4.683*	*- / 3.585*	*- / 3.655*	*- / 2.688*	*- / 4.164*	*- / 86.175*
Support												
3.2) Data	- / 0.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.986
3.3) Training	- / 5.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.832
3.4) Support Equipment	- / 0.045	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.045
3.5) ILS	- / 0.466	- / -	- / -	- / 0.235	- / -	- / 0.235	- / 0.239	- / 0.243	- / 0.240	- / 0.244	- / 0.249	- / 1.916
3.6) Engineering	- / -	- / -	- / -	- / 0.496	- / -	- / 0.496	- / 0.506	- / 0.514	- / 0.507	- / 0.517	- / 0.527	- / 3.067
3.7) Other Support (3)	- / 24.180	- / 1.669	- / 1.556	- / 0.855	- / -	- / 0.855	- / 0.873	- / 0.885	- / 0.873	- / 0.891	- / 0.909	- / 32.691
Subtotal: Support	*- / 31.509*	*- / 1.669*	*- / 1.556*	*- / 1.586*	*- / -*	*- / 1.586*	*- / 1.618*	*- / 1.642*	*- / 1.620*	*- / 1.652*	*- / 1.685*	*- / 44.537*
Installation												
Installation 1 of 5: Kapton Wings A Kits	- / 0.420	- / 0.240	- / 0.254	- / 0.260	- / 0.000	- / 0.260	- / 0.265	- / 0.270	- / 0.276	- / -	- / 0.000	- / 1.985
Installation 2 of 5: Kapton Engine Struts A Kits	- / 1.243	- / 0.136	- / 0.138	- / 0.141	- / 0.000	- / 0.141	- / 0.144	- / 0.147	- / 0.150	- / 0.153	- / 0.000	- / 2.252
Installation 3 of 5: Kapton Lower Lobe A Kits	- / 0.060	- / 0.876	- / 2.680	- / 3.655	- / 0.000	- / 3.655	- / 3.728	- / 2.852	- / -	- / -	- / 0.000	- / 13.851
Installation 4 of 5: Kapton Tail A Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.832	- / 0.866	- / 0.883	- / 0.833	- / 3.500	- / 6.914
Installation 5 of 5: FQIS A Kits	- / 1.685	- / 0.528	- / 0.127	- / 0.065	- / 0.000	- / 0.065	- / 0.133	- / -	- / -	- / -	- / 0.000	- / 2.538
Subtotal: Installation	*- / 3.408*	*- / 1.780*	*- / 3.199*	*- / 4.121*	*- / -*	*- / 4.121*	*- / 5.102*	*- / 4.135*	*- / 1.309*	*- / 0.986*	*- / 3.500*	*- / 27.540*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Safety/Reliability/Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**88.771**	**6.322**	**10.201**	**10.934**	**0.000**	**10.934**	**11.403**	**9.362**	**6.584**	**5.326**	**9.349**	**158.252**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 5: Kapton Wings A Kits

Manufacturer Information

Manufacturer Name: Kapton Wings/Grace Aerospace	Manufacturer Location: Long Island, NY
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	

Installation Information

Method of Implementation: Drive In:: Installation Name: Kapton Wings A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.420
FY 2019	- / -	2 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.240
FY 2020	- / -	- / -	2 / 0.254	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.254
FY 2021	- / -	- / -	- / -	2 / 0.260	0 / 0.000	2 / 0.260	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.260
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.265	- / -	- / -	- / -	0 / 0.000	2 / 0.265
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.270	- / -	- / -	0 / 0.000	2 / 0.270
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.276	- / -	0 / 0.000	2 / 0.276
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.420	2 / 0.240	2 / 0.254	2 / 0.260	0 / 0.000	2 / 0.260	2 / 0.265	2 / 0.270	2 / 0.276	- / -	0 / 0.000	16 / 1.985

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	-	-	-	16
Out	2	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 5: Kapton Engine Struts A Kits

Manufacturer Information

Manufacturer Name: Kapton Struts/Grace Aerospace	Manufacturer Location: Long Island, NY
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

Installation Information

Method of Implementation: Drive In:: Installation Name: Kapton Engine Struts A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 1.243	2 / 0.136	1 / 0.069	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.448
FY 2019	- / -	- / -	1 / 0.069	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.069
FY 2020	- / -	- / -	- / -	2 / 0.141	0 / 0.000	2 / 0.141	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.141
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.144	- / -	- / -	- / -	0 / 0.000	2 / 0.144
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.147	- / -	- / -	0 / 0.000	2 / 0.147
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.150	- / -	0 / 0.000	2 / 0.150
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.153	0 / 0.000	2 / 0.153
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 1.243	2 / 0.136	2 / 0.138	2 / 0.141	0 / 0.000	2 / 0.141	2 / 0.144	2 / 0.147	2 / 0.150	2 / 0.153	0 / 0.000	16 / 2.252

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	16
Out	2	-	-	-	-	-	1	-	1	-	1	1	-	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	2	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 5: Kapton Lower Lobe A Kits

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021			
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022			

Installation Information

Method of Implementation: [none specified]:: Installation Name: Kapton Lower Lobe A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.060	1 / 0.876	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.936
FY 2019	- / -	- / -	3 / 2.680	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.680
FY 2020	- / -	- / -	- / -	4 / 3.655	0 / 0.000	4 / 3.655	- / -	- / -	- / -	- / -	0 / 0.000	4 / 3.655
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 3.728	- / -	- / -	- / -	0 / 0.000	4 / 3.728
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.852	- / -	- / -	0 / 0.000	3 / 2.852
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.060	1 / 0.876	3 / 2.680	4 / 3.655	0 / 0.000	4 / 3.655	4 / 3.728	3 / 2.852	- / -	- / -	0 / 0.000	16 / 13.851

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	1	-	-	-	1	2	-	-	2	2	-	-	2	2	-	-	2	1	-	-	-	-	-	-	-	-	-	16
Out	1	-	-	-	-	1	-	-	-	-	1	-	2	-	2	-	2	-	2	-	2	-	2	-	1	-	-	-	-	-	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 5: Kapton Tail A Kits

Manufacturer Information

Manufacturer Name: Kapton Tail/TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 13

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates			Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026

Installation Information

Method of Implementation: Drive In:: Installation Name: Kapton Tail A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.832	- / -	- / -	- / -	0 / 0.000	2 / 0.832
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.866	- / -	- / -	0 / 0.000	2 / 0.866
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.883	- / -	0 / 0.000	2 / 0.883
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.833	0 / 0.000	2 / 0.833
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.875	2 / 0.875
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.625	6 / 2.625
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.832	2 / 0.866	2 / 0.883	2 / 0.833	8 / 3.500	16 / 6.914

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	8	16
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1	10	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 1 / Safety Deficiencies (OSIP 008-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 5: FQIS A Kits

Manufacturer Information

Manufacturer Name: FQIS/EDN Aviation	Manufacturer Location: Van Nuys, CA
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020				
Delivery Dates	Jun 2019	Jun 2020	Jun 2021				

Installation Information

Method of Implementation: Drive In:: Installation Name: FQIS A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	9 / 1.685	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 1.685
FY 2019	- / -	2 / 0.528	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.528
FY 2020	- / -	- / -	2 / 0.127	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.127
FY 2021	- / -	- / -	- / -	1 / 0.065	0 / 0.000	1 / 0.065	2 / 0.133	- / -	- / -	- / -	0 / 0.000	3 / 0.198
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 1.685	2 / 0.528	2 / 0.127	1 / 0.065	0 / 0.000	1 / 0.065	2 / 0.133	- / -	- / -	- / -	0 / 0.000	16 / 2.538

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	9	-	-	1	1	-	-	1	1	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Out	9	-	-	-	-	-	1	-	1	-	1	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	16

Footnotes:

(1) The A kits for Kapton Lower Lobe costs increased due to an updated Rough Order of Magnitude (ROM) from the contractor.

(2) Installation Kit NRE in PY-FY25 is for replacement of Kapton wiring and other emergent safety modifications.

(3) Other Support cost in FY19-FY25 is for continued support of emergent aircraft safety hazards and Kapton wiring replacement to enable mission readiness.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	121.402	8.866	21.108	19.143	0.000	19.143	20.703	26.191	60.645	66.474	38.247	382.779
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	121.402	8.866	21.108	19.143	0.000	19.143	20.703	26.191	60.645	66.474	38.247	382.779
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**121.402**	**8.866**	**21.108**	**19.143**	**0.000**	**19.143**	**20.703**	**26.191**	**60.645**	**66.474**	**38.247**	**382.779**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Technology Insertion corrects aircraft systems obsolescence, supportability, and interoperability deficiencies as well as providing weight savings initiatives through technology insertion of commercial and government off the shelf (COTs/GOTs) system integration onto the E-6B. Integration of already qualified airborne systems will be primary solution sets, but if required the ruggedization of the COTs/GOTs from land or water fielded systems may be pursued. Carbon Brakes integrates prior DoD-135/707 type brakes to the E-6B. Seats integrates DoD approved mission seats to meet E-6B crash load requirements. ADS-B Out integrates production COTs/GOTs to address Federal Aviation Administration (FAA) civil navigation requirements by calendar year 2020. Global Positioning System (GPS) M Code/Advanced Digital Antenna Production (ADAP) integrates production GOTs systems to correct aircraft GPS deficiencies and improve readiness. Fuel Tank Sealant Upgrade (FTSU) utilizes new commercially proven processes and materials to correct fuel system leaks caused by age and operational hours. AC Electrical Phase 1 will integrate production COTs/GOTs equipment to correct power generation deficiencies and increase readiness; Phase 2 will integrate COTs/GOTs equipment to correct electrical distribution, quality, and cooling deficiencies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Carbon Brake installs in PY-FY23 based on fleet aircraft availability. Seats and ADS-B Out installs in PY-FY20 based on fleet aircraft availability. FTSU A-kit buys and installs in FY19-FY23. GPS ADAP A-kit and B-kit buys in FY20-FY24 with installs in FY21-FY25. Aircraft Electrical Phase 1 NRE and 16 kit buys in FY20 with organic installs; Phase 2 NRE FY22-FY24, A-kit and B-kit buys in FY24 to beyond FYDP, and installs in FY25 to beyond FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Carbon Brakes A Kits - NonOrganic *Installation 1 of 4*	16 / 6.463	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 6.463
1.1.2) Seats A Kits - NonOrganic *Installation 1 of 4*	16 / 8.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 8.640
1.1.3) ADS-B OUT A Kit - NonOrganic *Installation 1 of 4*	16 / 0.015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.015
1.1.4) Fuel Tank Sealant Upgrade A Kits - NonOrganic *Installation 2 of 4*	- / -	1 / 0.286	3 / 0.857	5 / 1.457	- / -	5 / 1.457	4 / 1.189	3 / 0.909	- / -	- / -	- / -	16 / 4.698
1.1.5) GPS ADAP A kit - NonOrganic *Installation 3 of 4*	- / -	- / -	2 / 0.100	4 / 0.204	- / -	4 / 0.204	4 / 0.208	4 / 0.212	2 / 0.108	- / -	- / -	16 / 0.832
1.1.6) Phase 2 AC Electrical A Kit - NonOrganic *Installation 4 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.161	4 / 0.329	10 / 0.852	16 / 1.342
1.1.7) Archived ECPs - Organic(*)	95 / 2.984	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	95 / 2.984
1.1.8) PY Installs - Organic(*)	94 / 3.614	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	94 / 3.614
1.2.1) Installation Kits N/R - Organic(*) (4)	- / 24.172	- / 0.325	- / 5.486	- / 0.341	- / -	- / 0.341	- / 3.052	- / 11.751	- / 41.360	- / 40.670	- / -	- / 127.157
2.1.1) ADS-B Out B Kits - Organic(*)	16 / 0.353	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.353
2.1.2) Engine Covers - Organic(*)	- / -	- / -	8 / 0.120	8 / 0.122	- / -	8 / 0.122	- / -	- / -	- / -	- / -	- / -	16 / 0.242
2.1.3) GPS ADAP B Kit - Organic(*)	- / -	- / -	2 / 0.341	4 / 0.695	- / -	4 / 0.695	4 / 0.709	4 / 0.724	2 / 0.369	- / -	- / -	16 / 2.838
2.1.4) Phase 1 AC Electrical B Kit - Organic(*)	- / -	- / -	16 / 1.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.600
2.1.5) Phase 2 AC Electrical B Kit - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.612	4 / 3.289	10 / 8.520	16 / 13.421
2.1.6) Archived ECPs - Organic(*)	176 / 14.646	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	176 / 14.646
2.2.1) Installation Equipment N/R - Organic(*)	- / 3.468	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.468
Subtotal: Procurement	*- / 64.355*	*- / 0.611*	*- / 8.504*	*- / 2.819*	*- / -*	*- / 2.819*	*- / 5.158*	*- / 13.596*	*- / 43.610*	*- / 44.288*	*- / 9.372*	*- / 192.313*
Support												
3.1) Engineering Change Orders	- / 0.462	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.462
3.2) Data (5)	- / 0.611	- / -	- / 0.719	- / 0.093	- / -	- / 0.093	- / 0.082	- / 0.083	- / 2.294	- / 3.378	- / -	- / 7.260
3.3) Training (6)	- / 6.608	- / 0.026	- / 1.015	- / 0.672	- / -	- / 0.672	- / 0.873	- / -	- / 1.080	- / -	- / -	- / 10.274
3.4) Support Equipment (7)	- / 0.458	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / 2.208	- / 3.378	- / -	- / 6.344
3.5) ILS	- / 2.470	- / 1.500	- / 0.653	- / 0.653	- / -	- / 0.653	- / 0.041	- / -	- / 1.104	- / 2.252	- / -	- / 8.673
3.6) Engineering	- / -	- / -	- / 0.980	- / 0.980	- / -	- / 0.980	- / 0.061	- / 0.062	- / 2.527	- / 3.638	- / -	- / 8.248

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.7) Other Support [8]	- / 44.722	- / 2.372	- / 1.171	- / 2.531	- / -	- / 2.531	- / 5.071	- / 5.089	- / 7.398	- / 5.382	- / -	- / 73.736
Subtotal: Support	*- / 55.331*	*- / 3.898*	*- / 4.838*	*- / 4.929*	*- / -*	*- / 4.929*	*- / 6.128*	*- / 5.234*	*- / 16.611*	*- / 18.028*	*- / 0.000*	*- / 114.997*
Installation												
Installation 1 of 4: GRP: Prior Year Installs	- / 1.716	- / 1.769	- / 1.423	- / 0.411	- / 0.000	- / 0.411	- / 0.209	- / 0.213	- / -	- / -	- / 0.000	- / 5.741
Installation 2 of 4: Fuel Tank Sealant Upgrade A Kits	- / -	- / 2.588	- / 6.343	- / 10.784	- / 0.000	- / 10.784	- / 8.800	- / 6.732	- / -	- / -	- / 0.000	- / 35.247
Installation 3 of 4: GPS ADAP A kit	- / -	- / -	- / -	- / 0.200	- / 0.000	- / 0.200	- / 0.408	- / 0.416	- / 0.424	- / 0.216	- / 0.000	- / 1.664
Installation 4 of 4: Phase 2 AC Electrical A Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.942	- / 28.875	- / 32.817
Subtotal: Installation	*- / 1.716*	*- / 4.357*	*- / 7.766*	*- / 11.395*	*- / -*	*- / 11.395*	*- / 9.417*	*- / 7.361*	*- / 0.424*	*- / 4.158*	*- / 28.875*	*- / 75.469*
Total												
Total Cost (Procurement + Support + Installation)	**121.402**	**8.866**	**21.108**	**19.143**	**0.000**	**19.143**	**20.703**	**26.191**	**60.645**	**66.474**	**38.247**	**382.779**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: GRP: Prior Year Installs

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Drive In:: Installation Name: Prior Year Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	20 / 1.716	12 / 1.769	12 / 1.423	2 / 0.411	0 / 0.000	2 / 0.411	1 / 0.209	1 / 0.213	- / -	- / -	0 / 0.000	48 / 5.741
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 1.716	12 / 1.769	12 / 1.423	2 / 0.411	0 / 0.000	2 / 0.411	1 / 0.209	1 / 0.213	- / -	- / -	0 / 0.000	48 / 5.741

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	20	1	-	5	6	10	1	-	1	-	1	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	48
Out	20	-	1	-	6	8	2	4	2	1	-	1	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	48

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 4: Fuel Tank Sealant Upgrade A Kits

Manufacturer Information

Manufacturer Name: Fuel Tank Sealant Upgrade/PASI	Manufacturer Location: Dallas, TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018	Oct 2019	Oct 2020	Oct 2021	Oct 2022		
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022		

Installation Information

Method of Implementation: Drive In:: Installation Name: Fuel Tank Sealant Upgrade A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	1 / 2.588	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.588
FY 2020	- / -	- / -	3 / 6.343	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 6.343
FY 2021	- / -	- / -	- / -	5 / 10.784	0 / 0.000	5 / 10.784	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.784
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.800	- / -	- / -	- / -	0 / 0.000	4 / 8.800
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.732	- / -	- / -	0 / 0.000	3 / 6.732
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 2.588	3 / 6.343	5 / 10.784	0 / 0.000	5 / 10.784	4 / 8.800	3 / 6.732	- / -	- / -	0 / 0.000	16 / 35.247

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	1	-	-	-	1	1	1	-	1	1	3	-	1	1	2	-	1	2	-	-	-	-	-	-	-	-	-	-	-	16
Out	-	-	-	1	-	-	1	1	1	1	-	1	3	-	1	1	2	-	1	2	-	-	-	-	-	-	-	-	-	-	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 4: GPS ADAP A kit

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	

Installation Information

Method of Implementation: [none specified]:: Installation Name: GPS ADAP A kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	2 / 0.200	0 / 0.000	2 / 0.200	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.408	- / -	- / -	- / -	0 / 0.000	4 / 0.408
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.416	- / -	- / -	0 / 0.000	4 / 0.416
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.424	- / -	0 / 0.000	4 / 0.424
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.216	0 / 0.000	2 / 0.216
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 0.200	0 / 0.000	2 / 0.200	4 / 0.408	4 / 0.416	4 / 0.424	2 / 0.216	0 / 0.000	16 / 1.664

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	2	-	1	1	2	-	1	1	2	-	1	1	-	-	-	16
Out	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	2	-	1	1	2	-	1	1	2	-	1	1	-	-	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 4: Phase 2 AC Electrical A Kit

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Dec 2023	Dec 2024
Delivery Dates						Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: Phase 2 AC Electrical A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.942	0 / 0.000	2 / 3.942
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.041	4 / 8.041
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 20.834	10 / 20.834
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.942	14 / 28.875	16 / 32.817

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	14	16
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	14	16

Footnotes:

(4) FY20 Non-Recurring Engineering (NRE) includes capabilities analyses for Aircraft Electrical Phase 1 and GPS Modernization capability into the E-6.

(5) FY20-FY21 Data funding is in support of the drafting of technical directives for GPS modernization during validation and verification installations. FY24-FY25 Data funding in support of technical directives for Phase 2 AC Electrical.

(6) FY20-FY21 Training funding is for the development and material for Operational Flight Training.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 2 / Tech Insertion (OSIP 003-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(7) FY20 Support Equipment funding is for procurement of GPS ADAP Test Bench and Control Display Navigation Unit items. FY24-FY25 Support Equipment funding is for Phase 2 AC Electrical items.

(8) FY21 Other Support increase in funding is required for project management and acquisition support of initial installation ramp-up of Global Positioning System/Advanced Digital Antenna Production (GPS/ADAP) and Fuel Tank Sealant Upgrade (FTSU) programs. FY22 Other Support increase project management and acquisition support in support of AC Electrical Phase 2.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 3 / Service Life Extension Program (SLEP) (OSIP 003-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	129.220	8.298	9.009	7.916	0.000	7.916	6.450	6.578	5.405	3.132	6.089	182.097
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	129.220	8.298	9.009	7.916	0.000	7.916	6.450	6.578	5.405	3.132	6.089	182.097
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**129.220**	**8.298**	**9.009**	**7.916**	**0.000**	**7.916**	**6.450**	**6.578**	**5.405**	**3.132**	**6.089**	**182.097**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Service Life Extension Program (SLEP) extends the service life of the aircraft to 2038+ through airframe strengthening, structural data recording and analysis, and just in time modifications to prevent aircraft grounding due to fatigue. Modifications include, but not limited to: SLEP Phase 1; Individual Aircraft Tracking System (IATS); Runway Survey Analysis; and SLEP Phase 1B. IATS will integrate the data collected from already installed Digital Flight Data Acquisition Unit (DFDAU) to support the Aircraft Structural Integrity Program along with data collected from a representative sample of E-6Bs (2 aircraft) during a limited period of time.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY19-FY21 NRE is for SLEP Phase 1B. SLEP Phase 1B kit buys PY to beyond FYDP and installs FY19 to beyond FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 3 / Service Life Extension Program (SLEP) (OSIP 003-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Life Extension	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) SLEP Phase 1B A Kits - NonOrganic *Installation 1 of 1*	2 / 0.773	- / -	2 / 0.162	2 / 0.166	- / -	2 / 0.166	2 / 0.169	2 / 0.172	2 / 0.176	2 / 0.179	2 / 0.183	16 / 1.980
1.1.2) IATS A Kits - NonOrganic *Installation 1 of 1*	2 / 1.560	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.560
1.1.3) Archived ECPs - Organic(*)	16 / 85.375	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 85.375
1.2.1) Installation Kits N/R - Organic(*) (9)	- / 17.821	- / 3.011	- / 2.751	- / 1.087	- / -	- / 1.087	- / -	- / -	- / -	- / -	- / -	- / 24.670
Subtotal: Procurement	*- / 105.529*	*- / 3.011*	*- / 2.913*	*- / 1.253*	*- / -*	*- / 1.253*	*- / 0.169*	*- / 0.172*	*- / 0.176*	*- / 0.179*	*- / 0.183*	*- / 113.585*
Support												
2.2) Data (10)	- / 0.063	- / 0.200	- / 0.510	- / 0.521	- / -	- / 0.521	- / -	- / -	- / -	- / -	- / -	- / 1.294
2.3) Training	- / -	- / -	- / 1.586	- / 0.731	- / -	- / 0.731	- / -	- / -	- / -	- / -	- / -	- / 2.317
2.4) Support Equipment	- / 6.614	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.614
2.5) ILS	- / -	- / 0.317	- / 0.264	- / 0.213	- / -	- / 0.213	- / 0.217	- / 0.222	- / 0.226	- / -	- / -	- / 1.459
2.6) Engineering	- / -	- / 0.281	- / 0.356	- / 0.362	- / -	- / 0.362	- / 0.297	- / 0.302	- / 0.308	- / -	- / -	- / 1.906
2.7) Other Support (11)	- / 15.780	- / 2.103	- / 2.016	- / 2.054	- / -	- / 2.054	- / 2.929	- / 2.987	- / 1.742	- / -	- / -	- / 29.611
Subtotal: Support	*- / 22.457*	*- / 2.901*	*- / 4.732*	*- / 3.881*	*- / -*	*- / 3.881*	*- / 3.443*	*- / 3.511*	*- / 2.276*	*- / -*	*- / 0.000*	*- / 43.201*
Installation												
Installation 1 of 1: GRP: SLEP Phase 1B A Kits/IATS A Kits	- / 1.234	- / 2.386	- / 1.364	- / 2.782	- / 0.000	- / 2.782	- / 2.838	- / 2.895	- / 2.953	- / 2.953	- / 5.906	- / 25.311
Subtotal: Installation	*- / 1.234*	*- / 2.386*	*- / 1.364*	*- / 2.782*	*- / -*	*- / 2.782*	*- / 2.838*	*- / 2.895*	*- / 2.953*	*- / 2.953*	*- / 5.906*	*- / 25.311*
Total												
Total Cost (Procurement + Support + Installation)	**129.220**	**8.298**	**9.009**	**7.916**	**0.000**	**7.916**	**6.450**	**6.578**	**5.405**	**3.132**	**6.089**	**182.097**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 3 / Service Life Extension Program (SLEP) (OSIP 003-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: SLEP Phase 1B A Kits/IATS A Kits

Manufacturer Information

Manufacturer Name: ALC Tinker | Manufacturer Location: Tinker Air Force Base, OK

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Apr 2021	Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026

Installation Information

Method of Implementation: Drive In:: Installation Name: SLEP Phase 1B A Kits/IATS A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.234	2 / 2.386	1 / 1.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 4.984
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	2 / 2.782	0 / 0.000	2 / 2.782	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.782
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.838	- / -	- / -	- / -	0 / 0.000	2 / 2.838
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.895	- / -	- / -	0 / 0.000	2 / 2.895
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.953	- / -	0 / 0.000	2 / 2.953
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.953	0 / 0.000	2 / 2.953
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.953	2 / 2.953
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.953	2 / 2.953
Total	1 / 1.234	2 / 2.386	1 / 1.364	2 / 2.782	0 / 0.000	2 / 2.782	2 / 2.838	2 / 2.895	2 / 2.953	2 / 2.953	4 / 5.906	18 / 25.311

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	1	-	1	-	1	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	4	18
Out	1	-	1	-	-	1	1	-	-	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	5	18

Footnotes:

(9) FY19-FY21 Non-Recurring Engineering funding for SLEP Phase 1B.

(10) FY21 Technical Data for SLEP Phase 1B.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 3 / Service Life Extension Program (SLEP) (OSIP 003-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(11) Other support includes project management and acquisition support for SLEP Phase 1B installs and IATS de-instrumentation FY22-FY23.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	293.939	54.487	40.368	33.334	0.000	33.334	19.074	21.863	20.480	16.930	4.656	505.131
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	293.939	54.487	40.368	33.334	0.000	33.334	19.074	21.863	20.480	16.930	4.656	505.131
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**293.939**	**54.487**	**40.368**	**33.334**	**0.000**	**33.334**	**19.074**	**21.863**	**20.480**	**16.930**	**4.656**	**505.131**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Installs expanded aircraft digital communication paths and processing to improve airborne command post operations and modernizes direct over-the-horizon communications links to deployed strategic forces. Internet Protocol (IP) connectivity and wideband communication capability to enable voice, video and data services is mission critical to command and control operations. Modifications include: IP Phase 1, International Marine/Maritime Satellite (INMARSAT); IP Phase 3, removal of Utility Trailing Wire Antenna (UTWA); Key Generator Receiver (KGR)-72; and High Power Transmit Set (HPTS) Modernization Program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: KGR-72 NRE in FY17-FY19. KGR-72 production B kit Life of Type Buy in FY19, A kit buy in FY19 and production installs in FY20-FY21. HPTS Modernization NRE begins in FY19-FY22 with procurement of kits FY22-FY25 and production installs in FY23-FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Phase 1 A Kit - NonOrganic (12) *Installation 1 of 3*	16 / 7.042	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 7.042
1.1.2) Phase 3 A Kit - NonOrganic (13) *Installation 1 of 3*	16 / 7.518	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 7.518
1.1.3) KGR-72 A Kit - NonOrganic (14) *Installation 2 of 3*	- / -	14 / 4.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 4.060
1.1.4) HPTS A Kit - NonOrganic (15) *Installation 3 of 3*	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.534	4 / 2.087	4 / 2.128	3 / 1.628	- / -	14 / 7.377
1.1.6) Archived ECPs - Organic(*)	51 / 27.017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 27.017
1.2.1) Installation Kit N/R - Organic(*) (16)	- / 92.882	- / 33.680	- / 28.721	- / 19.218	- / -	- / 19.218	- / 2.261	- / 1.123	- / -	- / -	- / -	- / 177.885
2.1.1) KGR-72 B Kits - Organic(*) (17)	- / -	14 / 2.932	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.932
2.1.2) HPTS B Kit - Organic(*) (18)	- / -	- / -	- / -	- / -	- / -	- / -	3 / 8.687	4 / 11.814	4 / 12.051	3 / 9.219	- / -	14 / 41.771
2.1.4) Archived ECPs - Organic(*)	19 / 3.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.519
Subtotal: Procurement	*- / 137.978*	*- / 40.672*	*- / 28.721*	*- / 19.218*	*- / -*	*- / 19.218*	*- / 12.482*	*- / 15.024*	*- / 14.179*	*- / 10.847*	*- / 0.000*	*- / 279.121*
Support												
3.2) Data (19)	- / 2.987	- / -	- / 0.930	- / 1.502	- / -	- / 1.502	- / -	- / -	- / -	- / -	- / -	- / 5.419
3.3) Training (20)	- / 15.033	- / 0.183	- / 3.654	- / 4.687	- / -	- / 4.687	- / -	- / -	- / -	- / -	- / -	- / 23.557
3.4) Support Equipment	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.025
3.5) ILS	- / 5.829	- / 2.691	- / 0.300	- / 0.306	- / -	- / 0.306	- / 0.312	- / -	- / -	- / -	- / -	- / 9.438
3.6) Other Support (21)	- / 54.866	- / 6.839	- / 6.433	- / 6.778	- / -	- / 6.778	- / 6.280	- / 5.514	- / 4.499	- / 4.245	- / 3.250	- / 98.704
Subtotal: Support	*- / 78.740*	*- / 9.713*	*- / 11.317*	*- / 13.273*	*- / -*	*- / 13.273*	*- / 6.592*	*- / 5.514*	*- / 4.499*	*- / 4.245*	*- / 3.250*	*- / 137.143*
Installation												
Installation 1 of 3: GRP: Phase	- / 77.221	- / 4.102	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 81.323
Installation 2 of 3: KGR-72 A Kit	- / -	- / -	- / 0.330	- / 0.843	- / 0.000	- / 0.843	- / -	- / -	- / -	- / -	- / 0.000	- / 1.173
Installation 3 of 3: HPTS A Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.325	- / 1.802	- / 1.838	- / 1.406	- / 6.371
Subtotal: Installation	*- / 77.221*	*- / 4.102*	*- / 0.330*	*- / 0.843*	*- / -*	*- / 0.843*	*- / -*	*- / 1.325*	*- / 1.802*	*- / 1.838*	*- / 1.406*	*- / 88.867*
Total												
Total Cost (Procurement + Support + Installation)	**293.939**	**54.487**	**40.368**	**33.334**	**0.000**	**33.334**	**19.074**	**21.863**	**20.480**	**16.930**	**4.656**	**505.131**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: GRP: Phase

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: Seattle, Wa

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Drive In:: Installation Name: Phase

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	28 / 77.221	2 / 4.102	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	32 / 81.323
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 77.221	2 / 4.102	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	32 / 81.323

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	28	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
Out	26	-	-	2	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: KGR-72 A Kit

Manufacturer Information

Manufacturer Name: KGR-72 / Collins Aerospace — Manufacturer Location: Cedar Rapids, IA

Administrative Leadtime *(in Months)*: 10 — Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019						
Delivery Dates	Jan 2020						

Installation Information

Method of Implementation: [none specified]:: Installation Name: KGR-72 A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 0.330	10 / 0.843	0 / 0.000	10 / 0.843	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.173
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 0.330	10 / 0.843	0 / 0.000	10 / 0.843	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.173

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	2	2	-	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
Out	-	-	-	-	-	-	-	2	2	-	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: HPTS A Kit

Manufacturer Information

Manufacturer Name: HPTS / Collins Aerospace [22] Manufacturer Location: Cedar Rapids, IA

Administrative Leadtime *(in Months)*: 2 Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Nov 2021	Nov 2022	Nov 2023	
Delivery Dates				Nov 2022	Nov 2023	Nov 2024	

Installation Information

Method of Implementation: [none specified]:: Installation Name: HPTS A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.325	- / -	- / -	0 / 0.000	3 / 1.325
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.802	- / -	0 / 0.000	4 / 1.802
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.838	0 / 0.000	4 / 1.838
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.406	3 / 1.406
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.325	4 / 1.802	4 / 1.838	3 / 1.406	14 / 6.371

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	1	1	1	1	1	3	14
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	1	1	1	1	4	14

Footnotes:

[12] IP Phase 1 installations are performed concurrently with Block I. Due to discovery of significant aircraft discrepancies, increased maintenance workload during Block I installations, the final Phase 1 install has moved from FY19 to FY20.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 4 / Communications Upgrade (OSIP 012-07)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(13) IP Phase 3 installations are performed concurrently with Block I. Due to discovery of significant aircraft discrepancies, increased maintenance workload during Block I installations, the final Phase 3 install has moved from FY19 to FY20.

(14) The total quantity of KGR-72 A consist of fourteen (14) KGR-72 and two (2) validation and verification kits procured during Non-Recurring Engineering (NRE) for a total quantity of 16.

(15) The total quantity of HPTS A kits consist of two (2) validation and verification kits procured during Non-Recurring Engineering (NRE) and fourteen (14) during production for a total quantity of 16.

(16) FY21 HPTS Modernization will address current and near obsolescence to ensure functionality through the expected aircraft service life. This will include the Dual Trailing Wire Antenna, Solid State Power Amplifier / Coupler, and Control and Monitor subsystems.

(17) The total quantity of KGR-72 B kits consist of fourteen (14) KGR-72 and two (2) validation and verification kits procured during Non-Recurring Engineering (NRE) for a total quantity of 16.

(18) The total quantity of HPTS B kits consist of two (2) validation and verification kits procured during Non-Recurring Engineering (NRE) and fourteen (14) during production for a total quantity of 16.

(19) FY21 Data is the final evaluated data, ensuring delivered data meets Government requirements and approved corrections made to delivered data and incorporation into Electronic Technical Manuals (ETMs) and NATOPS (aircrew).

(20) FY21 Training includes funding Weapon System Trainer (WST) training device modifications and installations in support of KGR-72.

(21) FY21 Other support costs includes project management, acquisition and engineering support to execute the contract for the High Power Transmit Set (HPTS) and Key Generator Receiver (KGR-72) programs.

(22) The total quantity of HPTS A and B kits consist of 14 HPTS and two (2) validation and verification kits being procured under Non-Recurring Engineering (NRE) for a total quantity of 16.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 5 / Block I (OSIP 008-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	547.876	23.871	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	571.747
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	547.876	23.871	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	571.747
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**547.876**	**23.871**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**571.747**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Block I corrects Airborne Command Post (ABNCP) operational test deficiencies to improve mission capability, readiness and legacy system obsolescence. Modifications include, but not limited to: Block I; Very Low Frequency (VLF) Transmit Terminal (VTT); and Technology Upgrade including Block I, and Workstations.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Block I Systems Integration Lab (SIL) & aircraft (A/C) development kit installed in SIL FY06 and in A/C FY08; Milestone-C 3Q FY10; Low-Rate Initial Production (LRIP) contract award 3Q FY10; LRIP 1 kit buy in FY10 and 3 kit buys in FY11 with installs in FY11 and FY12 (4 A/C); Full-Rate Production (FRP) Decision Review achieved 2Q FY12. FRP kit buys PY-FY17 (11 A/C) with installs in PY-FY20. VTT Prototype SIL and A/C development kit delivery in FY11 with installation in FY12. SIL and A/C testing 2Q FY12 to 1Q FY13. VTT Production kit buys in PY-FY17 with installs in PY-FY20 (15 A/C).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 5 / Block I (OSIP 008-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability Improvements	**Related RDT&E PEs:** 0101402N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Block 1 A Kit - NonOrganic (23) *Installation 1 of 1*	15 / 64.852	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 64.852
1.1.2) Tech Upgrade Block A Kits - NonOrganic (24) *Installation 1 of 1*	16 / 0.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.272
1.1.3) Tech Upgrade Workstations A Kits - NonOrganic (25) *Installation 1 of 1*	16 / 3.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 3.278
2.1.3) VTT B Kits - NonOrganic *Installation 1 of 1*	15 / 4.807	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 4.807
1.2.1) Installation Kits N/R - Organic(*)	- / 61.306	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 61.306
2.1.1) Block 1 B Kit - Organic(*)	15 / 106.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 106.482
2.1.2) Tech Upgrade Workstations B Kits - Organic(*)	16 / 7.456	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 7.456
Subtotal: Procurement	*- / 248.453*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 248.453*
Support												
3.1) Engineering Change Orders	- / 2.258	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.258
3.2) Data	- / 14.903	- / 0.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.178
3.3) Training	- / 56.336	- / 0.196	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 56.532
3.4) Support Equipment	- / 37.062	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 37.062
3.5) ILS	- / 4.474	- / 0.473	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.947
3.6) Other Support	- / 77.611	- / 11.328	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 88.939
Subtotal: Support	*- / 192.644*	*- / 12.272*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 204.916*
Installation												
Installation 1 of 1: GRP: Block/Tech/VTT Installs	- / 106.779	- / 11.599	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 118.378
Subtotal: Installation	*- / 106.779*	*- / 11.599*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 118.378*
Total												
Total Cost (Procurement + Support + Installation)	**547.876**	**23.871**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**571.747**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 5 / Block I (OSIP 008-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: GRP: Block/Tech/VTT Installs

Manufacturer Information

Manufacturer Name: Collins Aerospace	Manufacturer Location: Cedar Rapids, IA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Drive In:: Installation Name: Block/Tech/VTT Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	54 / 106.779	4 / 11.599	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	62 / 118.378
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	54 / 106.779	4 / 11.599	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	62 / 118.378

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	54	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
Out	50	-	-	4	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62

Footnotes:

(23) The quantity of 15 Block 1 A kit buys were procured with APN funding and 1 was procured and installed with RDT&E funding as the prototype for a total quantity of 16. Due to discovery of significant aircraft discrepancies, increased maintenance workload during Block I installations, the completion of Block I installs have moved from FY19 to FY 20. FY19 is the final year of Block I funding. Remaining Block I efforts necessary to complete production installation thru FY20 will be funded with FY19 funding.

(24) Technology Upgrade Block I A kits quantity of 16 consists of 2 Prior year validation/verification kits, 10 retrofits and 4 forward fits. Technology Upgrade Block I B kits were procured by the U.S. Air Force.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 5 / Block I (OSIP 008-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(25) Technology Upgrade Workstation A kits quantity of 16 consists of 2 Prior year validation/verification kits, 10 retrofits and 4 forward fits.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	261.474	13.910	22.521	56.193	0.000	56.193	43.732	26.983	0.000	0.000	8.428	433.241
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	261.474	13.910	22.521	56.193	0.000	56.193	43.732	26.983	0.000	0.000	8.428	433.241
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**261.474**	**13.910**	**22.521**	**56.193**	**0.000**	**56.193**	**43.732**	**26.983**	**0.000**	**0.000**	**8.428**	**433.241**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Multi-Role Tactical Common Data Link (MR-TCDL) is an Army program which developed production hardware that is being integrated into the E-6B aircraft. The E-6B MR-TCDL program supports expanded aircraft communication bandwidth capability required to interoperate with United States Strategic Command's National Command and Control Architecture.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: E-6B MR-TCDL integration NRE PY-FY20. PY NRE includes one A & B kit and one install. MR-TCDL Production A kit buys in PY-FY22 and B Kit buys in PY-FY21, with installs PY-FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MR-TCDL A Kit - Organic(*)	8 / 17.340	- / -	1 / 2.433	3 / 7.445	- / -	3 / 7.445	3 / 7.594	- / -	- / -	- / -	- / -	15 / 34.812
1.2.1) Installation Kit N/R - Organic(*) (26)	- / 91.855	- / 0.127	- / 0.862	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 92.844
2.1.1) MR-TCDL Equipment B Kits - NonOrganic (27) *Installation 1 of 1*	13 / 60.405	1 / 4.203	- / -	1 / 4.373	- / -	1 / 4.373	- / -	- / -	- / -	- / -	- / -	15 / 68.981
Subtotal: Procurement	*- / 169.600*	*- / 4.330*	*- / 3.295*	*- / 11.818*	*- / -*	*- / 11.818*	*- / 7.594*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 196.637*
Support												
3.1) Engineering Change Orders	- / 8.668	- / 0.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.881
3.2) Data	- / 8.425	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.425
3.3) Training	- / 15.865	- / 0.190	- / 4.433	- / 0.493	- / -	- / 0.493	- / -	- / -	- / -	- / -	- / -	- / 20.981
3.4) Support Equipment (28)	- / -	- / -	- / -	- / 6.000	- / -	- / 6.000	- / -	- / -	- / -	- / -	- / -	- / 6.000
3.5) ILS	- / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.005
3.6) Engineering (29)	- / -	- / 0.541	- / 0.817	- / 0.817	- / -	- / 0.817	- / 0.777	- / 0.610	- / -	- / -	- / -	- / 3.562
3.7) Other Support (30)	- / 50.663	- / 0.900	- / 6.492	- / 6.532	- / -	- / 6.532	- / 4.218	- / 2.547	- / -	- / -	- / -	- / 71.352
Subtotal: Support	*- / 83.626*	*- / 1.844*	*- / 11.742*	*- / 13.842*	*- / -*	*- / 13.842*	*- / 4.995*	*- / 3.157*	*- / -*	*- / -*	*- / 0.000*	*- / 119.206*
Installation												
Installation 1 of 1: MR-TCDL Equipment B Kits	- / 8.248	- / 7.736	- / 7.484	- / 30.533	- / 0.000	- / 30.533	- / 31.143	- / 23.826	- / -	- / -	- / 8.428	- / 117.398
Subtotal: Installation	*- / 8.248*	*- / 7.736*	*- / 7.484*	*- / 30.533*	*- / -*	*- / 30.533*	*- / 31.143*	*- / 23.826*	*- / -*	*- / -*	*- / 8.428*	*- / 117.398*
Total												
Total Cost (Procurement + Support + Installation)	**261.474**	**13.910**	**22.521**	**56.193**	**0.000**	**56.193**	**43.732**	**26.983**	**0.000**	**0.000**	**8.428**	**433.241**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: MR-TCDL Equipment B Kits

Manufacturer Information

Manufacturer Name: MR-TCDL B Kits Northrup Grumman Systems Corp | Manufacturer Location: San Diego, Ca

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 21

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019		Nov 2020				
Delivery Dates	Dec 2020		Aug 2022				

Installation Information

Method of Implementation: Drive In:: Installation Name: MR-TCDL Equipment B Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 8.248	1 / 7.736	1 / 7.484	4 / 30.533	0 / 0.000	4 / 30.533	4 / 31.143	2 / 15.884	- / -	- / -	0 / 0.000	13 / 101.028
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.942	- / -	- / -	0 / 0.000	1 / 7.942
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.428	1 / 8.428
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 8.248	1 / 7.736	1 / 7.484	4 / 30.533	0 / 0.000	4 / 30.533	4 / 31.143	3 / 23.826	- / -	- / -	1 / 8.428	15 / 117.398

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	15
Out	-	-	-	-	-	-	-	2	-	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	15

Footnotes:

(26) Prior year NRE includes one A & B kit and one install.

(27) MR-TCDL installation schedule delays due to test aircraft maintenance readiness issues unrelated to the modifications. FY21 MR-TCDL installation cost based on actual costs and kit changes resulting from validation installation. MR-TCDL is installed concurrently with other aircraft modification and maintenance efforts to minimize out-of-reporting time and maximize aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 6 / Multi-Role Tactical Common Data Link (MR-TCDL) (OSIP 013-10)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(28) FY21 Support Equipment is to procure Portable Ground Entry Point Support (PGEP) system to support aircraft MR-TCDL system status updates, ground operations, NC3 network support and other associated peculiar ground support equipment.

(29) FY19-FY23 engineering support for software engineering upgrades, implementation and increases in cyber requirements.

(30) FY20 - FY23 Other Support includes project management support and acquisition support integral to the execution of the MR-TCDL modifications.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 7 / Auxiliary Power Unit (APU) (OSIP 002-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	58.859	12.751	4.778	14.553	0.000	14.553	14.428	9.453	0.000	0.000	3.069	117.891
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	58.859	12.751	4.778	14.553	0.000	14.553	14.428	9.453	0.000	0.000	3.069	117.891
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**58.859**	**12.751**	**4.778**	**14.553**	**0.000**	**14.553**	**14.428**	**9.453**	**0.000**	**0.000**	**3.069**	**117.891**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The Auxiliary Power Unit (APU) incorporates safety, capacity and life-limiting propulsion and power corrective actions to resolve safety and readiness concerns. Corrections to design deficiencies found during post production test and evaluation and discovered during fleet operations have resulted in safety and reliability degradations that must be corrected. The requirement to upgrade or modify the APU is critical in maintaining sustainable fleet reliability, safety, and performance and is necessary to meet established mission requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: APU Kit buys PY-FY19; installations PY-FYDP based on fleet aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 7 / Auxiliary Power Unit (APU) (OSIP 002-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) APU A Kit - NonOrganic (31) *Installation 1 of 1*	13 / 20.205	2 / 3.573	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 23.778
1.2.1) Installation Kits N/R - Organic(*) (32)	- / 5.509	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.509
2.1.1) APU Equipment B Kit - Organic(*)	13 / 9.492	2 / 1.515	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 11.007
2.1.2) APU Generator B kit - Organic(*)	13 / 0.736	2 / 0.124	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.860
Subtotal: Procurement	*- / 35.942*	*- / 5.212*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 41.154*
Support												
3.1) Engineering Change Orders	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.200
3.2) Data	- / 1.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.800
3.3) Training	- / 1.810	- / 0.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.315
3.4) Support Equipment	- / 1.125	- / 0.451	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.576
3.5) ILS	- / 0.944	- / 0.982	- / 0.400	- / 0.392	- / -	- / 0.392	- / -	- / -	- / -	- / -	- / -	- / 2.718
3.6) Engineering	- / 0.219	- / 0.135	- / 0.132	- / 0.135	- / -	- / 0.135	- / 0.138	- / -	- / -	- / -	- / -	- / 0.759
3.7) Other Support (33)	- / 12.555	- / 2.794	- / 1.521	- / 2.906	- / -	- / 2.906	- / 2.948	- / 0.776	- / -	- / -	- / -	- / 23.500
Subtotal: Support	*- / 18.653*	*- / 4.867*	*- / 2.053*	*- / 3.433*	*- / -*	*- / 3.433*	*- / 3.086*	*- / 0.776*	*- / -*	*- / -*	*- / 0.000*	*- / 32.868*
Installation												
Installation 1 of 1: APU A Kit	- / 4.264	- / 2.672	- / 2.725	- / 11.120	- / 0.000	- / 11.120	- / 11.342	- / 8.677	- / -	- / -	- / 3.069	- / 43.869
Subtotal: Installation	*- / 4.264*	*- / 2.672*	*- / 2.725*	*- / 11.120*	*- / -*	*- / 11.120*	*- / 11.342*	*- / 8.677*	*- / -*	*- / -*	*- / 3.069*	*- / 43.869*
Total												
Total Cost (Procurement + Support + Installation)	**58.859**	**12.751**	**4.778**	**14.553**	**0.000**	**14.553**	**14.428**	**9.453**	**0.000**	**0.000**	**3.069**	**117.891**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 7 / Auxiliary Power Unit (APU) (OSIP 002-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: APU A Kit

Manufacturer Information

Manufacturer Name: APU A Kit/L-3 (34) | Manufacturer Location: Waco, TX

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 48

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019						
Delivery Dates	Jul 2023						

Installation Information

Method of Implementation: Drive In:: Installation Name: APU A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 4.264	1 / 2.672	1 / 2.725	4 / 11.120	0 / 0.000	4 / 11.120	4 / 11.342	2 / 5.785	- / -	- / -	0 / 0.000	13 / 37.908
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.892	- / -	- / -	1 / 3.069	2 / 5.961
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 4.264	1 / 2.672	1 / 2.725	4 / 11.120	0 / 0.000	4 / 11.120	4 / 11.342	3 / 8.677	- / -	- / -	1 / 3.069	15 / 43.869

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	15
Out	-	-	-	-	-	-	-	2	-	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	15

Footnotes:

(31) APU PY-FYDP installation schedule delays due to test aircraft and maintenance readiness issues unrelated to APU modifications. APU is installed concurrently with other aircraft modification and maintenance efforts to minimize out-of-reporting time and maximize aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 7 / Auxiliary Power Unit (APU) (OSIP 002-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(32) PY NRE includes one A & B kit and one install.

(33) FY21-FY22 Other Support funding increase driven by installation schedule requiring increased need for contractor program management oversight of concurrent APU aircraft modification installation with MR-TCDL and FAB-T/PNVC/DRSS to minimize aircraft out of reporting time. APU kits undergo a re-preservation process at CONUS depots and Original Equipment Manufacturer (OEM) depot-level maintenance facility in Rzezow, Poland prior to installation that require contractor program management oversight.

(34) FY21 APU installation cost growth based on actual costs from validation installation.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	136.964	36.006	45.588	47.634	0.000	47.634	35.016	21.297	0.000	0.000	2.716	325.221
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	136.964	36.006	45.588	47.634	0.000	47.634	35.016	21.297	0.000	0.000	2.716	325.221
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**136.964**	**36.006**	**45.588**	**47.634**	**0.000**	**47.634**	**35.016**	**21.297**	**0.000**	**0.000**	**2.716**	**325.221**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T) and Presidential and National Voice Conferencing (PNVC) are U.S. Air Force (USAF) programs of record. USAF will be providing production hardware to the E-6B for integration into the aircraft. These systems are an obsolescence replacement for the currently installed Military Strategic Tactical Relay terminals (MILSTAR). E-6B integration NRE for FAB-T
and PNVC includes Red Switch (RS) integration, which is required for PNVC capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FAB-T/PNVC/RS NRE in PY-FY19 and FY21- FY23. FAB-T A kit buys in PY-FY22; with installs in PY-FYDP. PNVC A kit buys in PY-FY22; B kit buys in FY18-FY19; with installs in PY-FYDP. RS A kit buys in PY-FY22; B kit buys in PY-FY22; with installs in PY-FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability and Reliability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) FAB-T A Kit - NonOrganic (35) *Installation 1 of 3*	8 / 3.978	2 / 0.714	- / -	3 / 1.327	- / -	3 / 1.327	3 / 1.353	- / -	- / -	- / -	- / -	16 / 7.372
1.1.2) PNVC A Kit - Organic(*)	8 / 0.741	2 / 0.136	- / -	3 / 0.212	- / -	3 / 0.212	3 / 0.216	- / -	- / -	- / -	- / -	16 / 1.305
1.1.3) RS A KIT - Organic(*) (36)	4 / 10.281	2 / 6.934	4 / 11.972	4 / 12.236	- / -	4 / 12.236	2 / 6.240	- / -	- / -	- / -	- / -	16 / 47.663
1.2.1) Install Kits N/R - Organic(*) (37)	- / 40.739	- / 5.834	- / -	- / 4.000	- / -	- / 4.000	- / 4.080	- / 4.160	- / -	- / -	- / -	- / 58.813
2.1.1) PNVC B Kit - NonOrganic (38) *Installation 2 of 3*	12 / 2.229	4 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 2.589
2.1.2) RS B KIT - NonOrganic (39) *Installation 3 of 3*	5 / 3.564	1 / 1.317	4 / 5.367	4 / 5.481	- / -	4 / 5.481	2 / 2.795	- / -	- / -	- / -	- / -	16 / 18.524
Subtotal: Procurement	*- / 61.532*	*- / 15.295*	*- / 17.339*	*- / 23.256*	*- / -*	*- / 23.256*	*- / 14.684*	*- / 4.160*	*- / -*	*- / -*	*- / 0.000*	*- / 136.266*
Support												
3.1) Engineering Change Order	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400
3.2) Data (40)	- / 2.111	- / 0.531	- / 0.698	- / 2.068	- / -	- / 2.068	- / 0.886	- / 0.926	- / -	- / -	- / -	- / 7.220
3.3) Training (41)	- / 16.093	- / 0.227	- / 8.600	- / 1.110	- / -	- / 1.110	- / -	- / -	- / -	- / -	- / -	- / 26.030
3.4) Support Equipment (42)	- / 14.964	- / -	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.964
3.5) ILS	- / 0.330	- / 0.158	- / 0.150	- / 0.154	- / -	- / 0.154	- / 0.174	- / 0.200	- / -	- / -	- / -	- / 1.166
3.6) Engineering	- / 7.364	- / 5.924	- / 5.296	- / 5.400	- / -	- / 5.400	- / 4.000	- / 4.000	- / -	- / -	- / -	- / 31.984
3.7) Other Support (43)	- / 32.022	- / 11.284	- / 5.695	- / 5.810	- / -	- / 5.810	- / 5.233	- / 4.333	- / -	- / -	- / -	- / 64.377
Subtotal: Support	*- / 73.284*	*- / 18.124*	*- / 23.439*	*- / 14.542*	*- / -*	*- / 14.542*	*- / 10.293*	*- / 9.459*	*- / -*	*- / -*	*- / 0.000*	*- / 149.141*
Installation												
Installation 1 of 3: FAB-T A Kit	- / 1.053	- / 1.268	- / 2.357	- / 4.819	- / 0.000	- / 4.819	- / 4.920	- / 3.762	- / -	- / -	- / 1.331	- / 19.510
Installation 2 of 3: PNVC B Kit	- / 0.451	- / 0.543	- / 1.010	- / 2.065	- / 0.000	- / 2.065	- / 2.108	- / 1.612	- / -	- / -	- / 0.570	- / 8.359
Installation 3 of 3: RS B KIT	- / 0.644	- / 0.776	- / 1.443	- / 2.952	- / 0.000	- / 2.952	- / 3.011	- / 2.304	- / -	- / -	- / 0.815	- / 11.945
Subtotal: Installation	*- / 2.148*	*- / 2.587*	*- / 4.810*	*- / 9.836*	*- / -*	*- / 9.836*	*- / 10.039*	*- / 7.678*	*- / -*	*- / -*	*- / 2.716*	*- / 39.814*
Total												
Total Cost (Procurement + Support + Installation)	**136.964**	**36.006**	**45.588**	**47.634**	**0.000**	**47.634**	**35.016**	**21.297**	**0.000**	**0.000**	**2.716**	**325.221**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: FAB-T A Kit

Manufacturer Information

Manufacturer Name: Various (44) | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018		Nov 2020	Nov 2021			
Delivery Dates	Jul 2021		Jan 2022	Nov 2022			

Installation Information

Method of Implementation: [none specified]:: Installation Name: FAB-T A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 1.053	1 / 1.268	2 / 2.357	4 / 4.819	0 / 0.000	4 / 4.819	- / -	- / -	- / -	- / -	0 / 0.000	8 / 9.497
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.460	- / -	- / -	- / -	0 / 0.000	2 / 2.460
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.460	1 / 1.254	- / -	- / -	0 / 0.000	3 / 3.714
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.508	- / -	- / -	1 / 1.331	3 / 3.839
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 1.053	1 / 1.268	2 / 2.357	4 / 4.819	0 / 0.000	4 / 4.819	4 / 4.920	3 / 3.762	- / -	- / -	1 / 1.331	16 / 19.510

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	2	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	16
Out	-	-	-	-	-	-	-	2	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: PNVC B Kit

Manufacturer Information

Manufacturer Name: Various (45) | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018						
Delivery Dates	Sep 2019						

Installation Information

Method of Implementation: Drive-In Modification:: Installation Name: PNVC B Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.451	1 / 0.543	2 / 1.010	4 / 2.065	0 / 0.000	4 / 2.065	4 / 2.108	- / -	- / -	- / -	0 / 0.000	12 / 6.177
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.612	- / -	- / -	1 / 0.570	4 / 2.182
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.451	1 / 0.543	2 / 1.010	4 / 2.065	0 / 0.000	4 / 2.065	4 / 2.108	3 / 1.612	- / -	- / -	1 / 0.570	16 / 8.359

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	2	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	16
Out	-	-	-	-	-	-	-	2	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: RS B KIT

Manufacturer Information

Manufacturer Name: Raytheon [46] | Manufacturer Location: Largo, FL

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021			
Delivery Dates	May 2020	May 2021	May 2022	May 2023			

Installation Information

Method of Implementation: [none specified]:: Installation Name: RS B KIT

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.644	1 / 0.776	2 / 1.443	1 / 0.738	0 / 0.000	1 / 0.738	- / -	- / -	- / -	- / -	0 / 0.000	5 / 3.601
FY 2019	- / -	- / -	- / -	1 / 0.738	0 / 0.000	1 / 0.738	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.738
FY 2020	- / -	- / -	- / -	2 / 1.476	0 / 0.000	2 / 1.476	2 / 1.505	- / -	- / -	- / -	0 / 0.000	4 / 2.981
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.506	2 / 1.536	- / -	- / -	0 / 0.000	4 / 3.042
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.768	- / -	- / -	1 / 0.815	2 / 1.583
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.644	1 / 0.776	2 / 1.443	4 / 2.952	0 / 0.000	4 / 2.952	4 / 3.011	3 / 2.304	- / -	- / -	1 / 0.815	16 / 11.945

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	-	2	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	16
Out	-	-	-	-	-	-	-	2	-	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	16

Footnotes:

[35] FY21 FAB-T/PNVC/DRSS installation cost growth based on actual costs and kit changes resulting from validation installation. FAB-T FAB-T/PNVC/DRSS is installed concurrently with other aircraft modification and maintenance efforts to minimize out-of-reporting time and maximize aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 8 / Family of Adv Beyond-LI-of-Sight Term/Pres&Nat'l Voice Conf (FAB-T/ PNVC)(OSIP 014-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(36) FY21 RS installation cost growth based on actual costs and kit changes resulting from validation installation.

(37) FY21-FY23 Non Recurring Engineering (NRE)to support Nuclear Command, Control and Communications (NC3) and Control Display Unit (CDU) software configuration by the Original Equipment Manufacturer (OEM) as a result of the Digital Red Switch Modification install schedule.

(38) FY21 FAB-T/PNVC/DRSS installation cost growth based on actual costs and kit changes resulting from validation installation. FAB-T FAB-T/PNVC/DRSS is installed concurrently with other aircraft modification and maintenance efforts to minimize out-of-reporting time and maximize aircraft availability.

(39) FY21 FAB-T/PNVC/DRSS installation cost growth based on actual costs and kit changes resulting from validation installation. FAB-T/PNVC/DRSS is installed concurrently with other aircraft modification and maintenance efforts to minimize out-of-reporting time and maximize aircraft availability.

(40) FY21 Data for FAB-T/PNVC/DRSS S1000D E-6B Digital Publication Upgrade.

(41) FY20-FY21 Training is for Mission Avionics Systems Trainer kits and installs. FY20 includes training courseware.

(42) FY20 Support Equipment costs for Sustainment and Support System (SASS) functional upgrade to incorporate into the Red Switch modification required to configure aircraft mission systems, load data and support operations.

(43) Other Support costs includes project management support and acquisition support integral to the execution of the FAB-T/PNVC/RS installations.

(44) FAB-T installation schedule delays due to aircraft availability. FY21 FAB-T/PNVC/DRSS installation cost growth based on actual costs and kit changes resulting from validation installation.

(45) PNVC installation schedule delays due to aircraft availability.

(46) RS installation schedule delays due to aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 9 / Mission Systems (OSIP 014-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	7.499	0.000	7.499	16.240	16.485	36.750	40.419	9.356	126.749
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	7.499	0.000	7.499	16.240	16.485	36.750	40.419	9.356	126.749
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**7.499**	**0.000**	**7.499**	**16.240**	**16.485**	**36.750**	**40.419**	**9.356**	**126.749**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: Mission Systems addresses obsolescence and supportability upgrades through technology insertion of commercial and government off the shelf (COTs/GOTs) system integration onto the E-6B. Integration of already qualified airborne systems will be primary solution sets, but if required the ruggedization of the COTs/GOTs from land or water fielded systems will be pursued. Secondary Launch Platform - Airborne (SLP-A) will integrate an Air Force procured system onto the E-6B to replace the current ALCS which is going obsolete. Mission Computer Modernization (MCM) (previously known as 64 Bit) will address mission systems obsolescence and associated cyber vulnerabilities by re-hosting latest version of software on 64 Bit compliant hardware architecture. Mission Operations Monitor (MOM) will update already installed E-6B systems with the ability to monitor and record critical mission parameters to ensure mission accomplishment and provide for accurate and timely post mission evaluations.

This OSIP is a new start in FY21.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: SLP-A NRE FY21-FY23, A kit buys FY22-FYDP, B kit buys FY22-FYDP, with installs in FY23-FYDP. MCM NRE FY21-FY23, A kit buys in FY22-FY24, B kit buys FY22-FY24 with installs FY23-FY25. MOM NRE FY24-FY25, MOM A & B Kits and installs beyond FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 9 / Mission Systems (OSIP 014-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: E-6 Series	**Modification Type:** Capability Improvements	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) SLP-A Kit - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.133	1 / 0.135	5 / 0.690	5 / 0.704	4 / 0.574	16 / 2.236
1.1.2) MCM A Kit - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.153	10 / 0.780	4 / 0.318	- / -	- / -	16 / 1.251
1.2.1) Installation Kits N/R - Organic(*) (47)	- / -	- / -	- / -	- / 5.837	- / -	- / 5.837	- / 11.111	- / 2.018	- / 15.411	- / 33.476	- / -	- / 67.853
2.1.1) SLP-A B Kits - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.322	1 / 0.329	5 / 1.677	5 / 1.710	4 / 1.396	16 / 5.434
2.1.2) MCM Upgrade B Kits - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.530	10 / 7.803	4 / 3.184	- / -	- / -	16 / 12.517
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 5.837*	*- / -*	*- / 5.837*	*- / 13.249*	*- / 11.065*	*- / 21.280*	*- / 35.890*	*- / 1.970*	*- / 89.291*
Support												
3.1) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.209	- / 0.228	- / -	- / 1.437
3.2) Training (48)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.296	- / 2.575	- / 7.764	- / 0.505	- / 3.762	- / 15.902
3.5) Other Support (49)	- / -	- / -	- / -	- / 1.662	- / -	- / 1.662	- / 1.695	- / 2.307	- / 4.250	- / 2.295	- / 2.341	- / 14.550
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 1.662*	*- / -*	*- / 1.662*	*- / 2.991*	*- / 4.882*	*- / 13.223*	*- / 3.028*	*- / 6.103*	*- / 31.889*
Installation												
Installation 1 of 2: SLP-A Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.122	- / 0.125	- / 0.635	- / 1.283	- / 2.165
Installation 2 of 2: MCM A Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.416	- / 2.122	- / 0.866	- / 0.000	- / 3.404
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.538*	*- / 2.247*	*- / 1.501*	*- / 1.283*	*- / 5.569*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**7.499**	**0.000**	**7.499**	**16.240**	**16.485**	**36.750**	**40.419**	**9.356**	**126.749**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 9 / Mission Systems (OSIP 014-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: SLP-A Kit

Manufacturer Information

Manufacturer Name: SLP-A | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates				Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Drive In:: Installation Name: SLP-A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.122	- / -	- / -	0 / 0.000	1 / 0.122
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.125	- / -	0 / 0.000	1 / 0.125
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.635	0 / 0.000	5 / 0.635
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.648	5 / 0.648
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.635	4 / 0.635
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.122	1 / 0.125	5 / 0.635	9 / 1.283	16 / 2.165

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	2	1	1	9	16
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	1	2	1	1	9	16

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 9 / Mission Systems (OSIP 014-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 2: MCM A Kit

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Dec 2021	Dec 2022	Dec 2023	
Delivery Dates				Apr 2023	Apr 2024	Apr 2025	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MCM A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.416	- / -	- / -	0 / 0.000	2 / 0.416
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.122	- / -	0 / 0.000	10 / 2.122
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.866	0 / 0.000	4 / 0.866
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.416	10 / 2.122	4 / 0.866	0 / 0.000	16 / 3.404

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	3	4	-	-	-	-	16
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	3	4	-	-	-	-	16

Footnotes:

(47) FY21 and FY22 NRE to support Mission Computer Modernization (MCM) and SLP-A for integration into E-6B Systems Integration Lab (SIL) and validation aircraft. FY24-FY25 NRE to support Mission Operations Monitor (MOM).

(48) FY22-FY24 Training funding is for Mission Avionics Systems Trainer (MAST) courseware development and material for MCM Operational Flight Training.

(49) Other support costs include project management and acquisition support integral to MCM and SLP-A execution.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 10 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	31.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.016
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	31.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.016
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**31.016**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**31.016**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 10 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** Inactive	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: N/A												
Subtotal: N/A	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Support *(All Modification Items)*												
2.2) Data	- / 0.003	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.003
2.4) Support Equipment	27 / 11.943	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 11.943
2.7) Other Support	- / 19.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.070
Subtotal: Support	- / 31.016	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 31.016
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**31.016**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**31.016**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0564 / E-6 Series	**Modification Number / Title:** 10 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: N/A

Manufacturer Information

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime *(in Months)*:	Production Leadtime *(in Months)*:

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Support Only Installation	**Installation Quantity:** 0

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	850.469	19.566	8.933	29.086	0.000	29.086	61.152	77.405	79.001	80.572	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	850.469	19.566	8.933	29.086	0.000	29.086	61.152	77.405	79.001	80.572	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**850.469**	**19.566**	**8.933**	**29.086**	**0.000**	**29.086**	**61.152**	**77.405**	**79.001**	**80.572**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the (11) VH-3D, (8) VH-60N, (1) UH-3D, and (1) UH-60N, currently in service. Initial Sundown efforts for these aircraft are to begin the first quarter of FY 2021. VH-92A Total Aircraft Inventory projected to be 23 by FY 2025 consisting of two Engineering Development Models and four System Demonstration Test Articles purchased with RDT&E funding PE 0604273M and 17 with APN-4 BLI 0455 procured. The overall goal of the budget in FY 2021 is to continue efforts in accordance with the modification strategy to maintain the VH-3D, VH-60N, and commence modification efforts for the VH-92A.

OSIP 014-02: Communication Suite Upgrade, completes the incorporation of the Wide Band Line of Sight capability by finishing the Phase IV communication network upgrades and Global Positioning System enhancements.

OSIP 016-08: Structural Enhancement Program, conducts VH Service Life Extension Program installations on the VH-3D and VH-60N.

OSIP 006-21: VH-92A Improvement Program, provides for the preparation and incorporation of Engineering Change Proposals (ECP) that are based on added capability and correction of deficiencies, and the implementation of those changes to sustain and improve VH-92A operations. A variety of factors will be addressed including communication, navigation, weight, and safety to remain mission relevant. These modifications will also improve readiness, increase aircraft availability, and decrease operating costs.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / VH COMM UPGRADE (OSIP 014-02) (SAFETY)				- / 152.592	- / 8.160	- / 2.200	- / 3.150	- / 0.000	- / 3.150
P-3a	2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08) (SAFETY)				- / 28.709	- / 3.471	- / 2.499	- / 5.098	- / 0.000	- / 5.098
P-3a	3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09) (SAFETY)				- / 179.237	- / 7.379	- / 4.234	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / VH-3D COCKPIT UPGRADE (OSIP 010-12) (SAFETY)				- / 57.084	- / 0.556	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21) (SAFETY)				- / 0.000	- / 0.000	- / 0.000	- / 20.838	- / 0.000	- / 20.838
P-3a	6 / Inactive OSIPs (SAFETY)				- / 432.847	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 850.469**	**- / 19.566**	**- / 8.933**	**- / 29.086**	**- / 0.000**	**- / 29.086**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / VH COMM UPGRADE (OSIP 014-02) (SAFETY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 166.102
P-3a	2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08) (SAFETY)				- / 5.070	- / 2.906	- / 0.000	- / 0.000	- / 0.000	- / 47.753
P-3a	3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09) (SAFETY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 190.850
P-3a	4 / VH-3D COCKPIT UPGRADE (OSIP 010-12) (SAFETY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 57.640
P-3a	5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21) (SAFETY)				- / 56.082	- / 74.499	- / 79.001	- / 80.572	Continuing	Continuing
P-3a	6 / Inactive OSIPs (SAFETY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 432.847
P-40	**Total Gross/Weapon System Cost**				**- / 61.152**	**- / 77.405**	**- / 79.001**	**- / 80.572**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
In FY 2021, the Wide Band Line of Sight (WBLoS) will be continuing Phase IV of the effort for seamless transitions between Ground Entry Points, and implements enhanced tracking Through the Rotors capability in order to provide greater access to the NC2/3 networks and provide a robust Fault Isolation/Fault Detection system to the user. The Service Life Extension Program (SLEP) procurement and installations started in FY17 and will run through FY 2023. The SLEP effort is being installed in parallel with the Special Progressive Aircraft Rework (SPAR) effort, and must follow the SPAR schedule. The VH-3D Cabin Interior modification will complete installation efforts in FY 2020. The VH-92A Improvement Program will begin improvements and modifications to the SDTA aircraft and subsequent aircraft after they are delivered.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	152.592	8.160	2.200	3.150	0.000	3.150	0.000	0.000	0.000	0.000	0.000	166.102
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	152.592	8.160	2.200	3.150	0.000	3.150	0.000	0.000	0.000	0.000	0.000	166.102
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**152.592**	**8.160**	**2.200**	**3.150**	**0.000**	**3.150**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**166.102**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: In support of the Senior Leaders Communications, a Wideband Line of Sight (WBLoS) system is required. Prior year efforts include the FM (YZ) radio replacements on the VH-3D and VH-60N aircraft to maintain crypto security requirements, as well as all related software/firmware modifications. In FY 2016 procurements commenced for a new radio, antenna, associated accessories, aircraft Operational Flight Programs (OFP) and aircraft integration.

WBLoS consists of two systems: Hydra Light and Crisis Management. The Hydra Light system consists of a radio, antenna, and amplifier (RFE) that provide the means for a Voice over IP (VoIP) call to be made using the Phoenix Air-to-Ground Communications Network (PAGCN) structure. The Crisis Management system is the router, call manager, and High Assurance Internet Protocol Encryptor (HAIPE) required to connect into the TS/SCI network controlled by DISA. Due to the unique challenges of the aircraft platform (limited space, weight, power, cooling, etc), the WBLoS effort was set up in phases to allow for the hardware development and maturation of technology, which is then employed through phases via software modifications to the radio and/or ground equipment after initial installations. Phase III of the four phase WBLoS effort began in FY 2017 and included the Non Recurring Engineering (NRE) for an upgraded software OFP that will provide the capability for a single WBLoS Terminal to communicate with more than one Ground Entry Point (GEP) at a time in order to minimize transition time between GEPs. It also included the testing and verification of that software. Phase IV, began in FY 2019 and continues through FY 2021. Phase IV includes a network upgrade to reduce anticipated packet routing delays due to limitations of Open Shortest Path First (OSPF) protocol when transitioning from GEP to GEP. Global Positioning System (GPS) enhancements support the VH requirement of seamless transitions between GEPs. Development and deployment of enhanced capabilities through phases (via software and modifications to the radio and/ or ground equipment) continue after initial installations. As of 22 April 2016, the VH-3D and VH-60N WBLoS communication capability efforts received a Deputy Assistant Secretary of the Navy signed exception to the prohibitions of 10 USC 2244a relating to the modification of aircraft within five years of retirement and disposal.

The increase in FY 2021 from FY 2020 is required to complete the final integration of the WBLOS system software upgrades into aircraft OFPs, perform system integration, ground and flight testing of both the VH-3D and VH-60N Phase IV software. The FY 2021 effort also includes the incorporation of all previous defects from FY 2020 testing, a Formal Qualification Test (FQT), and a Fleet releasable software which includes communication network upgrades and GPS enhancements. Upon completion of the software, final data will be delivered and incorporated into publications for the operators and maintainers.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: In FY 2013, the Deputy Secretary of Defense (DEPSECDEF) initiated the requirement for the WBLoS capability. Research and development efforts began in FY 2014 for this effort; the procurement efforts began in FY 2016. Non recurring engineering efforts for Phase III began in FY 2017. Phase IV software upgrades began in FY 2019.

Notes:
1. The Communication Upgrade (WBLoS) A-kits are being installed via a contractor field modification team.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-60N/VH-3D	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) VH-60 Comm Upgrade (WBLoS) Crisis Management System - NonOrganic *Installation 1 of 4*	- / -	8 / 0.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.421
1.1.2) VH-3D Comm Upgrade (WBLoS) Crisis Management System - NonOrganic (1) *Installation 2 of 4*	- / -	11 / 0.579	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.579
1.1.3) Archived A Kits - Organic(*)	107 / 4.699	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	107 / 4.699
1.1.4) Archived Prior Year Installations - Organic(*)	- / 1.253	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.253
1.1.5) VH-3D Comm Upgrade (WBLoS) Hydra Light Systems - NonOrganic *Installation 3 of 4*	11 / 0.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.180
1.1.6) VH-60 Comm Upgrade (WBLoS) Hydra Light Systems - NonOrganic *Installation 4 of 4*	8 / 0.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.149
1.2.1) Installation Kits N/R - Organic(*)	- / 12.516	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.516
2.1.1) Archived B Kit - Organic(*)	127 / 15.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	127 / 15.065
2.1.2) Archived Prior Year Installations - Organic(*)	- / 4.950	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.950
2.1.3) VH-3D Communications Equipment Upgrade (WBLoS) - Organic(*)	11 / 8.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 8.592
2.1.4) VH-60N Communications Equipment Upgrade (WBLoS) - Organic(*)	8 / 6.216	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.216
2.2.1) Installation Equipment N/R - Organic(*)	- / 15.587	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.587
Subtotal: Procurement	*- / 69.207*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 70.207*
Support												
3.2) Archived Engineering Change Orders	- / 2.576	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.576
3.3) Data	- / 9.961	- / 0.125	- / 0.210	- / 0.245	- / -	- / 0.245	- / -	- / -	- / -	- / -	- / -	- / 10.541
3.4) Software (2)	- / 8.346	- / 2.816	- / 1.161	- / 2.160	- / -	- / 2.160	- / -	- / -	- / -	- / -	- / -	- / 14.483
3.5) Training Equipment	- / 4.844	- / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.894
3.6) Support Equipment	- / 9.867	- / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.127
3.8) Other Support (3)	- / 45.624	- / 2.889	- / 0.804	- / 0.745	- / -	- / 0.745	- / -	- / -	- / -	- / -	- / -	- / 50.062
Subtotal: Support	*- / 81.218*	*- / 6.140*	*- / 2.175*	*- / 3.150*	*- / -*	*- / 3.150*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 92.683*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-60N/VH-3D	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 4: VH-60 Comm Upgrade (WBLoS) Crisis Management System	- / -	- / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.090
Installation 2 of 4: VH-3D Comm Upgrade (WBLoS) Crisis Management System	- / -	- / 0.258	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.283
Installation 3 of 4: VH-3D Comm Upgrade (WBLoS) Hydra Light Systems	- / 0.903	- / 0.572	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.475
Installation 4 of 4: VH-60 Comm Upgrade (WBLoS) Hydra Light Systems	- / 1.264	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.364
Subtotal: Installation	*- / 2.167*	*- / 1.020*	*- / 0.025*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.212*
Total												
Total Cost (Procurement + Support + Installation)	**152.592**	**8.160**	**2.200**	**3.150**	**0.000**	**3.150**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**166.102**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: VH-60 Comm Upgrade (WBLoS) Crisis Management System

Manufacturer Information

Manufacturer Name: Lockheed Martin - VH-60 Comm Upgrade CMS	Manufacturer Location: Patuxent River, MD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	May 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-60 Comm Upgrade (WBLoS) Crisis Management System

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	8 / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.090
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	8 / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.090

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	-	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 4: VH-3D Comm Upgrade (WBLoS) Crisis Management System

Manufacturer Information

Manufacturer Name: Lockheed Martin - VH-3D Comm Upgrade CMS	Manufacturer Location: Patuxent River, MD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	May 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-3D Comm Upgrade (WBLoS) Crisis Management System

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	10 / 0.258	1 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.283
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	10 / 0.258	1 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.283

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	5	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Out	-	-	-	5	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 4: VH-3D Comm Upgrade (WBLoS) Hydra Light Systems

Manufacturer Information

Manufacturer Name: Lockheed Martin - VH-3D Comm Upgrade Hydra Light Sys	Manufacturer Location: Patuxent River, MD
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-3D Comm Upgrade (WBLoS) Hydra Light Systems

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	5 / 0.903	6 / 0.572	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.475
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 0.903	6 / 0.572	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.475

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Out	4	1	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 1 / VH COMM UPGRADE (OSIP 014-02)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 4: VH-60 Comm Upgrade (WBLoS) Hydra Light Systems

Manufacturer Information

Manufacturer Name: Lockheed Martin - VH-60 Comm Upgrade Hydra Light Sys	Manufacturer Location: Patuxent River, MD
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-60 Comm Upgrade (WBLoS) Hydra Light Systems

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 1.264	1 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 1.364
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 1.264	1 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 1.364

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Out	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Footnotes:

(1) Installs of cost element 1.1.2: One VH-3D Comm Upgrade (WBLoS) Crisis Management System installation shifted from Q4 FY19 to Q1 FY 2020 due to aircraft installations taking longer than anticipated.

(2) The increase in FY 2021 from FY 2020 is required to complete the final integration of the WBLOS system software upgrades into aircraft OFPs, perform system integration, ground and flight testing of both the VH-3D and VH-60N Phase IV software.

(3) Cost element 3.9: FY 2021 Other support funding is required to update publications for pilot use to reflect Phase IV software updates.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	28.709	3.471	2.499	5.098	0.000	5.098	5.070	2.906	0.000	0.000	0.000	47.753
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	28.709	3.471	2.499	5.098	0.000	5.098	5.070	2.906	0.000	0.000	0.000	47.753
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**28.709**	**3.471**	**2.499**	**5.098**	**0.000**	**5.098**	**5.070**	**2.906**	**0.000**	**0.000**	**0.000**	**47.753**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The VH Structural Enhancement Program consists of the efforts to implement aircraft safety of flight structural modifications to extend the service lives of the VH-3D and VH-60N airframes. The VH-3D and VH-60N must stay in service to support mission needs until the completion of the fielding of the VH-92A aircraft. In order to meet the usage requirements, a Service Life Extension Program (SLEP) was established to implement the safety of flight upgrades identified in the Service Life Assessment Program (SLAP). The SLEP extends the service life of the VH-60N and VH-3D by 4,000 hours.

FY 2021 increase from FY 2020 is required to complete additional VH-3D and VH-60N SLEP installations.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Non-Recurring Engineering for the VH-3D and VH-60N Service Life Extensions began in FY 2012. The VH-3D SLEP kits were procured in FY 2013 via a Life of Type procurement due to lack of component part availability. The VH-60N SLEP Kit procurement began in FY 2015. Validation and Verification efforts occurred in FY 2017. Installs are to follow the Special Progressive Aircraft Rework (SPAR) schedule which began in FY 2018.

Notes:
1. VH-60N Kits have a 11 month production lead time. Kits must be available prior to the aircraft being inducted into SPAR.
2. The Other Support across the FYDP includes labor for the installation of the SLEP kits during SPAR.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-3D/VH-60N	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)												
A Kits												
Recurring												
1.1.1) VH-60N SLEP Kits - NonOrganic (4)	4 / 0.151	2 / 0.022	2 / 0.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.227
1.1.2) VH-3D SLEP Kits - NonOrganic (5)	11 / 0.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.896
Subtotal: Recurring	*- / 1.047*	*- / 0.022*	*- / 0.054*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.123*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 8.229	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.229
Subtotal: Non-Recurring	*- / 8.229*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.229*
B Kits												
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 0.918	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.918
Subtotal: Non-Recurring	*- / 0.918*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.918*
Subtotal: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)	*15 / 10.194*	*2 / 0.022*	*2 / 0.054*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*19 / 10.270*
Subtotal: Procurement, All Modification Items	*- / 10.194*	*- / 0.022*	*- / 0.054*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 10.270*
Support *(All Modification Items)*												
3.4) Support Equipment	- / 5.743	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.743
3.5) ILS	- / 0.110	- / 0.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.120
3.7) Other Support (6)	- / 12.163	- / 0.819	- / 0.846	- / 0.800	- / -	- / 0.800	- / 0.772	- / 0.706	- / -	- / -	- / -	- / 16.106
Subtotal: Support	*- / 18.016*	*- / 0.829*	*- / 0.846*	*- / 0.800*	*- / -*	*- / 0.800*	*- / 0.772*	*- / 0.706*	*- / -*	*- / -*	*- / 0.000*	*- / 21.969*
Installation												
Modification Item 1 of 1: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)	- / 0.499	- / 2.620	- / 1.599	- / 4.298	- / 0.000	- / 4.298	- / 4.298	- / 2.200	- / 0.000	- / 0.000	- / 0.000	- / 15.514
Subtotal: Installation	*- / 0.499*	*- / 2.620*	*- / 1.599*	*- / 4.298*	*- / -*	*- / 4.298*	*- / 4.298*	*- / 2.200*	*- / -*	*- / -*	*- / 0.000*	*- / 15.514*
Total												
Total Cost (Procurement + Support + Installation)	**28.709**	**3.471**	**2.499**	**5.098**	**0.000**	**5.098**	**5.070**	**2.906**	**0.000**	**0.000**	**0.000**	**47.753**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

Manufacturer Information

Manufacturer Name: Sikorsky Aircraft Corporation - VH Service Life Extension Program VH-3D | Manufacturer Location: Stratford, CT

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Manufacturer Name: Sikorsky Aircraft Corporation - VH Service Life Extension Program VH-60N (7) | Manufacturer Location: Stratford, CT

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Nov 2019					
Delivery Dates	Nov 2019	Oct 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-60N SLEP Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 0.499	1 / 0.462	1 / 0.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.460
FY 2019	- / -	- / -	- / -	1 / 0.499	0 / 0.000	1 / 0.499	1 / 0.499	- / -	- / -	- / -	0 / 0.000	2 / 0.998
FY 2020	- / -	- / -	- / -	1 / 0.499	0 / 0.000	1 / 0.499	1 / 0.499	- / -	- / -	- / -	0 / 0.000	2 / 0.998
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.499	1 / 0.462	1 / 0.499	2 / 0.998	0 / 0.000	2 / 0.998	2 / 0.998	- / -	- / -	- / -	0 / 0.000	7 / 3.456

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-60N SLEP Kits

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	1	-	-	1	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Out	-	-	-	-	1	-	-	1	-	-	1	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	7

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-3D SLEP Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	2 / 2.158	1 / 1.100	3 / 3.300	0 / 0.000	3 / 3.300	3 / 3.300	2 / 2.200	- / -	- / -	0 / 0.000	11 / 12.058
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 2.158	1 / 1.100	3 / 3.300	0 / 0.000	3 / 3.300	3 / 3.300	2 / 2.200	- / -	- / -	0 / 0.000	11 / 12.058

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	1	-	1	-	-	1	-	-	1	1	1	-	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	11
Out	-	-	-	1	-	1	-	-	1	-	-	1	1	1	-	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	11

Footnotes:

(4) Cost Element 1.1.1: One VH-60N SLEP Kit procured in FY 2015 was previously installed as the validation kit in FY 2017.

(5) Cost Element 1.1.2: One VH-3D SLEP Kit installation shifted into FY 2020 due to aircraft availability and installations being quicker than anticipated.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 2 / VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(6) Cost Element 3.7: The Other Support across the FYDP is required for labor for the installation of the SLEP kits during SPAR.

(7) VH-60N SLEP Installs: Installations were delayed due to the relocation of the aircraft rework facility and the availability of aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	179.237	7.379	4.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	190.850
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	179.237	7.379	4.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	190.850
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**179.237**	**7.379**	**4.234**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**190.850**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION:
This Operational, Safety, and Improvement Program provides for the readiness of the VH-3D and VH-60N Presidential Helicopters. Funds will be utilized to manage and prepare, process, and incorporate Engineering Change Proposals (ECP) and implement changes to sustain and improve all Executive Helicopter Series system readiness including safety, mission availability, structural integrity, component (avionics/systems) reliability, maintainability, operational weight, performance, and obsolescence conditions as they arise. This program contains the upgrade of Air Vehicle Support Equipment and technical data to support VH unique Air Vehicle requirements. This upgrade effort will install new operating systems, replace obsolete components and core computers, test equipment and basic test program hardware. The Cabin Interior upgrade program for the VH-3D reduces aircraft operational weight, replaces obsolete electrical components, upgrades the fuel system and improves maintainability. Cabin Interior installation efforts include the depopulation of the aircraft and removal of current aircraft interior to ready the aircraft for the installation of the new interior kit, as well as the installation of the new interior kit. As of 18 February 2016, the VH-3D Cabin Interior Modification effort received a Deputy Assistant Secretary of the Navy signed exception to the prohibitions of 10 USC 2244a relating to the modification of aircraft within five years of retirement or disposal.

FY 2020 completes this OSIP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: VH-3D Cabin Interior Upgrade Non-Recurring Engineering efforts began in FY 2014. The validation kit procurement was contracted in FY 2014 and was delivered in FY 2016. The validation installation was completed in FY 2017. Cabin Interior kits will be installed via a contractor field modification team and on-site support at the Presidential Helicopter Support Facility in Patuxent River, MD.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-3D/VH-60N	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)												
A Kits												
Recurring												
1.1.1) VH-3D Cabin Interior Redesign Kit - NonOrganic	11 / 32.792	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 32.792
1.1.2) Archived Kits - Organic	43 / 11.221	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 11.221
Subtotal: Recurring	*- / 44.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 44.013*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 18.956	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.956
Subtotal: Non-Recurring	*- / 18.956*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 18.956*
B Kits												
Recurring												
2.1.1) VH-3D Cabin Interior Redesign Equipment - Organic	11 / 5.345	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 5.345
Subtotal: Recurring	*- / 5.345*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.345*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 26.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.263
Subtotal: Non-Recurring	*- / 26.263*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 26.263*
Subtotal: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)	*65 / 94.577*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*65 / 94.577*
Subtotal: Procurement, All Modification Items	*- / 94.577*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 94.577*
Support *(All Modification Items)*												
3.2) Data	- / 3.833	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.833
3.3) Training Equipment	- / 7.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.086
3.4) Support Equipment	- / 4.751	- / 0.439	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.190
3.5) ILS	- / 1.548	- / 0.150	- / 0.164	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.862
3.6) Other Support	- / 61.815	- / 3.369	- / 1.786	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.970
Subtotal: Support	*- / 79.033*	*- / 3.958*	*- / 1.950*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 84.941*
Installation												
Modification Item 1 of 1: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)	- / 5.627	- / 3.421	- / 2.284	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 11.332

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-3D/VH-60N	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Installation	- / 5.627	- / 3.421	- / 2.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 11.332
Total												
Total Cost (Procurement + Support + Installation)	**179.237**	**7.379**	**4.234**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**190.850**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 3 / OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)

Manufacturer Information

Manufacturer Name: Sikorsky Aircraft Corp - Cabin Interior Redesign

Manufacturer Location: Stratford, CT - VH-3D Cabin Interior

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 26

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: VH-3D Cabin Interior Redesign Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	5 / 5.627	4 / 3.421	2 / 2.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 11.332
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 5.627	4 / 3.421	2 / 2.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 11.332

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Out	3	2	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11

Method of Implementation (Organic): Archived Kits

Installation Quantity: 43

Method of Implementation (Organic): VH-3D Cabin Interior Redesign Equipment

Installation Quantity: 11

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 4 / VH-3D COCKPIT UPGRADE (OSIP 010-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	57.084	0.556	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.640
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	57.084	0.556	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.640
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**57.084**	**0.556**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.640**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, a VH-3D Cockpit Upgrade program has been established to extend the VH-3D service life requirements. The VH-3D Cockpit Upgrade eliminates pending obsolescence and supportability issues with key avionics components and brings the VH-3D in compliance with mandated avionics capabilities (Communication Navigation Surveillance/Air Traffic Management, Terrain Awareness Warning System/Ground Proximity Warning System). In addition, an upgraded cockpit improves system safety, reduces pilot workload and training requirements. The baseline upgrade includes night vision compatibility and related cockpit lighting, GPS moving map functionality, and satellite weather feed, bringing the VH-3D in line with VH-60N capabilities. Modern, common avionics equipment will reduce logistics cost and increase reliability.

FY 2019 completes this OSIP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Procurement efforts for the VH-3D Cockpit Upgrade began in FY 2012. Procurement for the Cockpit Upgrade Lighting kits began in FY 2016. The GPS update began in FY 2018. Operational Flight Program Software (OFP) upgrades for the Cockpit Upgrade program are ongoing to support the upgraded hardware systems.

Notes:
1. The Cockpit Lighting Upgrade kits will be installed at O-level by the squadron at HMX-1 as aircraft are available.
2. The DTU-7000 effort within the FY18 VH-3D Cockpit Upgrade (OSIP 10-12) software line has been cancelled.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 4 / VH-3D COCKPIT UPGRADE (OSIP 010-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-3D	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: VH-3D COCKPIT UPGRADE (OSIP 010-12)												
A Kits												
Non-Recurring												
1.2.1) Installation Kits N/R - Organic	- / 8.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.505
Subtotal: Non-Recurring	*- / 8.505*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.505*
B Kits												
Recurring												
2.1.1) VH-3D Cockpit Upgrade Kit - Organic	14 / 0.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.409
Subtotal: Recurring	*- / 0.409*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.409*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 8.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.239
Subtotal: Non-Recurring	*- / 8.239*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.239*
Subtotal: VH-3D COCKPIT UPGRADE (OSIP 010-12)	*14 / 17.153*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*14 / 17.153*
Subtotal: Procurement, All Modification Items	*- / 17.153*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 17.153*
Support *(All Modification Items)*												
3.2) Data	- / 1.628	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.628
3.3) Software	- / 8.017	- / 0.036	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.053
3.4) Training Equipment	- / 0.553	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.553
3.5) Support Equipment	- / 3.308	- / 0.088	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.396
3.6) ILS	- / -	- / 0.024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.024
3.7) Other Support	- / 26.425	- / 0.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.833
Subtotal: Support	*- / 39.931*	*- / 0.556*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 40.487*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**57.084**	**0.556**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.640**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 4 / VH-3D COCKPIT UPGRADE (OSIP 010-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: VH-3D COCKPIT UPGRADE (OSIP 010-12)		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	20.838	0.000	20.838	56.082	74.499	79.001	80.572	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	20.838	0.000	20.838	56.082	74.499	79.001	80.572	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**20.838**	**0.000**	**20.838**	**56.082**	**74.499**	**79.001**	**80.572**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The VH-92A provides safe, reliable, and timely transportation for the President, Vice President, Foreign Heads of State (HoS), and other official parties as directed by the Director of the White House Military Office (WHMO). VH-92A Improvement Program provides near and long-term improvements to the fleet, focusing on documented deficiencies related to mission systems, maintainability, and incorporates pre-planned product improvements defined in the VH-92A Capabilities Development Document update in lieu of a Capability Production Document. These modifications and selected component changes are being accomplished by depot level maintenance or field retrofit. Funds will be used to manage, prepare, process and incorporate airframe and avionics Engineering Change Proposals (ECP) based on added capability and corrections of deficiencies, and implement those changes to sustain and improve VH-92A operations and will be identified in the P3A as they are approved. ECPs will be implemented to coincide with resources and aircraft availability.

AIRFRAME ECPs: Airframe corrections include all structural components, mounts, cowlings, landing gear, fuselage and various dynamic components. Planned effort includes Shipboard Interoperability, which allows for mandated shipboard operations.

AVIONICS ECPs: Modifications, other than structural deficiencies, are required to ensure safety of flight, aero-performance and maintainability. Avionics systems corrections include aircrew avionics, data, displays, controls, flight management systems, avionics management systems, navigation and safety systems, and communication systems. Planned efforts include upgrade of mission communication system server hardware (2 boxes per aircraft), Mission Communications System (MCS), Enhanced Visual System (EVS), and Automatic Dependent Surveillance Broadcast (ADSB) Out. ADSB Out efforts are to comply with Federal Aviation Administration (FAA) mandates to improve aircraft navigation in national airspace. EVS are improvements required to increase situational awareness outside of the aircraft during flight operations. MCS consists of all narrowband and wideband radios, intercoms, user interfaces, and control systems necessary to support command and mission communications requirements.

FY 2021 efforts include upgrades for Mission Communication System Servers, Shipboard Interoperability, and ADSB Out. The support costs are required for technical oversight, associated data updates, field activity and logistics support of the modification kit procurements, software activities, and Training Equipment efforts.

Aircraft modifications increase to match Total Aircraft Inventory each year.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The Milestone B Acquisition Decision Memorandum was signed 17 April 2014 and the VH-92A contract for the Engineering and Manufacturing Development (EMD) phase and priced options for production was awarded on 7 May 2014. The VH-92A program conducted a Milestone C review on 30 May 2019. The Acquisition Decision Memorandum was signed on 7 June 2019. Three of four System Demonstration Test Articles (SDTA) aircraft have delivered during EMD, with the last delivering May 2020, and will be used for Initial Operational

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Test and Evaluation (IOT&E). The SDTA aircraft will be transitioned to operational use after completion of IOT&E in FY 2021. This OSIP is a new start in FY 2021 to begin improvements and modifications to the SDTA aircraft and subsequent VH-92A aircraft after they are delivered. The VH-92A program will have a total of 21 operational aircraft by FY 2023.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-92A	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)												
A Kits												
Recurring												
1.1.1) Mission Communication System Server Hardware - Organic [8]	- / -	- / -	- / -	26 / 2.210	- / -	26 / 2.210	16 / 1.360	- / -	- / -	- / -	- / -	42 / 3.570
1.1.2) Shipboard Interoperability - NonOrganic	- / -	- / -	- / -	4 / 5.168	- / -	4 / 5.168	14 / 18.088	3 / 3.876	- / -	- / -	- / -	21 / 27.132
1.1.3) ADSB Out - NonOrganic	- / -	- / -	- / -	4 / 2.740	- / -	4 / 2.740	6 / 4.110	- / -	- / -	- / -	- / -	10 / 6.850
1.1.4) Airframe Modification - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 2.396	21 / 2.958	21 / 4.957	- / -	63 / 10.311
1.1.5) Avionics Modification - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 5.425	21 / 5.534	- / -	42 / 10.959
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 10.118*	*- / -*	*- / 10.118*	*- / 23.558*	*- / 6.272*	*- / 8.383*	*- / 10.491*	*- / 0.000*	*- / 58.822*
Non-Recurring												
1.2.1) Installation Kits N/R - Organic [9]	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.566	- / 16.835	- / 16.741	- / 17.108	Continuing	Continuing
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.566*	*- / 16.835*	*- / 16.741*	*- / 17.108*	*Continuing*	*Continuing*
B Kits												
Recurring												
2.1.1) Airframe Modification - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.614	21 / 3.686	- / -	42 / 7.300
2.1.2) Avionics Modification - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 5.994	21 / 6.114	- / -	42 / 12.108
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.608*	*- / 9.800*	*- / 0.000*	*- / 19.408*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic [10]	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.775	- / 8.825	- / 9.095	Continuing	Continuing
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.775*	*- / 8.825*	*- / 9.095*	*Continuing*	*Continuing*
Subtotal: VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)	*- / -*	*- / -*	*- / -*	*34 / 10.118*	*- / -*	*34 / 10.118*	*36 / 26.124*	*24 / 30.882*	*84 / 43.557*	*84 / 46.494*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / 10.118*	*- / -*	*- / 10.118*	*- / 26.124*	*- / 30.882*	*- / 43.557*	*- / 46.494*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
3.1) Data [11]	- / -	- / -	- / -	- / 0.107	- / -	- / 0.107	- / 0.402	- / 2.073	- / 3.973	- / 4.052	Continuing	Continuing
3.2) Software [12]	- / -	- / -	- / -	- / 3.116	- / -	- / 3.116	- / 3.212	- / 4.386	- / 4.748	- / 4.845	Continuing	Continuing
3.3) Training Equipment [13]	- / -	- / -	- / -	- / 2.037	- / -	- / 2.037	- / 5.635	- / 5.635	- / 5.635	- / 5.635	Continuing	Continuing
3.4) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.445	- / 0.461	- / 0.484	- / 0.495	- / -	- / 1.885

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-92A	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.5) ILS	- / -	- / -	- / -	- / 0.321	- / -	- / 0.321	- / 1.596	- / 2.278	- / 2.324	- / 2.370	Continuing	Continuing
3.6) Other Support (14)	- / -	- / -	- / -	- / 5.139	- / -	- / 5.139	- / 13.580	- / 16.064	- / 16.372	- / 16.681	Continuing	Continuing
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 10.720*	*- / -*	*- / 10.720*	*- / 24.870*	*- / 30.897*	*- / 33.536*	*- / 34.078*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.088	- / 12.720	- / 1.908	- / 0.000	- / 0.000	- / 19.716
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.088*	*- / 12.720*	*- / 1.908*	*- / -*	*- / 0.000*	*- / 19.716*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**20.838**	**0.000**	**20.838**	**56.082**	**74.499**	**79.001**	**80.572**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)

Manufacturer Information

Manufacturer Name: Sikorsky Installs | Manufacturer Location: Stratford, CT

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021				
Delivery Dates			Jan 2022				

Installation Information

Method of Implementation: Method:: Installation Name: Sikorsky Installs for Shipboard Interoperability and ADSB Out efforts

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	8 / 5.088	- / -	- / -	- / -	0 / 0.000	8 / 5.088
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 12.720	- / -	- / -	0 / 0.000	20 / 12.720
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.908	- / -	0 / 0.000	3 / 1.908
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	8 / 5.088	20 / 12.720	3 / 1.908	- / -	0 / 0.000	31 / 19.716

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	6	6	5	-	1	1	1	-	-	-	-	-	31
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	3	6	6	5	-	1	1	1	-	-	-	-	31

Method of Implementation (Organic): Mission Communication System Server Hardware | **Installation Quantity:** 42

Method of Implementation (Organic): Airframe Modification | **Installation Quantity:** 63

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 5 / VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: VH-92A IMPROVEMENT PROGRAM (OSIP 006-21)

Installation Information	
Method of Implementation (Organic): Avionics Modification	**Installation Quantity:** 42
Method of Implementation (Organic): Airframe Modification	**Installation Quantity:** 42
Method of Implementation (Organic): Avionics Modification	**Installation Quantity:** 42

Footnotes:

(8) Cost Element 1.1.1: There are two Mission Communication System Server Hardware kits per aircraft.

(9) Cost Element 1.2.1: Installation Kits N/R costs are required for the Airframe and Avionics ECP preparation, tooling, and Val/Ver for correction of deficiencies. Costs are increasing due to the varying number of expected NRE efforts and the quantity of A/C requiring correction of deficiency retrofits.

(10) Cost Element 2.2.1: Installation Equipment N/R costs are required for Airframe and Avionics installation equipment for correction of deficiencies. Costs are increasing due to the varying number of expected NRE efforts and the quantity of A/C requiring correction of deficiency retrofits.

(11) Cost Element 3.1: Data Costs are required to update Interactive Electronic Technical Manuals (IETMs) and publications to reflect forced retrofit changes.

(12) Cost Element 3.2: Software costs are required for upgrades/modifications to the Mission Communications System (MCS) software that includes the DEPSECDEF mandated requirement for Wide Band Line of Sight (WBLoS) capability for all strategic communications platforms. FY 2021 Software costs represent follow-on, upgrade/modification effort for future communications capabilities currently being developed.

(13) Cost Element 3.3: Training Equipment costs are required to ensure training devices delivered to the fleet (flight trainer, maintenance trainer, system emulation maintenance trainer, and courseware) are concurrent with aircraft configuration.

(14) Cost Element 3.6: Other Support costs are required for technical oversight, associated data updates, field activity, organic depot, and software support. Increase to this cost element throughout the FYDP is required to adequately provide the support to modification efforts which increases as the Aircraft inventory increases with the Production aircraft being delivered.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 6 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	432.847	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	432.847
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	432.847	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	432.847
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**432.847**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**432.847**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

VH-3D Lift Improvement Program (LIP) OSIP 011-06 completed in FY 2012 and has been moved to In-Active OSIPs.
VH-60N Cockpit Upgrade OSIP 009-02 completed in FY 2016 and has been moved to In-Active OSIPs.
VH-3D/VH-60N Trainer Conversion OSIP 009-11 completed in FY 2016 and has been moved to In-Active OSIPs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0566 / Executive Helicopters Series	**Modification Number / Title:** 6 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: VH-3D / VH-60N	**Modification Type:** SAFETY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.2.1) Inactive OSIPs - Organic(*)	- / 432.847	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 432.847
Subtotal: Procurement	*- / 432.847*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 432.847*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**432.847**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**432.847**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0567 / Special Project Acft

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	522.866	9.785	3.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	536.149
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	522.866	9.785	3.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	536.149
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**522.866**	**9.785**	**3.498**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**536.149**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Special Projects program modified and/or replaced obsolete special mission equipment and integrates Quick Reaction Capability (QRC) on P-3 and P-8 aircraft. Procurements vary in each fiscal year and include common Navy systems for increased capability, reduced operator workload and common logistics, procurement of special mission equipment as directed by the Chief of Naval Operations and other emerging requirements. Active Primary Aircraft Authorized inventory is 0 aircraft.

The government is the Lead System Integrator for Hardware and Software upgrades on the aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0567 / Special Project Acft

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Intelligence Sensors (OSIP 019-97) (Operational Improvement)				- / 443.457	- / 9.785	- / 3.498	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / Inactive OSIPS (Operational Improvement)				- / 79.409	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 522.866**	**- / 9.785**	**- / 3.498**	**- / 0.000**	**- / 0.000**	**- / 0.000**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Intelligence Sensors (OSIP 019-97) (Operational Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 456.740
P-3a	2 / Inactive OSIPS (Operational Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 79.409
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 536.149**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
For FY21 these modification efforts conclude as the P-3 Special Projects aircraft transition out of service.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0567 / Special Project Acft	**Modification Number / Title:** 1 / Intelligence Sensors (OSIP 019-97)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	443.457	9.785	3.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	456.740
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	443.457	9.785	3.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	456.740
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**443.457**	**9.785**	**3.498**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**456.740**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION:

The government is the Lead Systems Integrator for Hardware and Software upgrades on the aircraft.

DEVELOPMENT STATUS/MAJOR MILESTONES: Not Applicable

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0567 / Special Project Acft	**Modification Number / Title:** 1 / Intelligence Sensors (OSIP 019-97)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-3B/C	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Intelligence Sensors (OSIP 019-97)												
B Kits												
Recurring												
1.1.1) Archived - Organic	- / 86.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 86.920
1.1.2) Mission Unique Equipment - NonOrganic [1]	- / 174.368	- / 4.329	- / 1.271	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 179.968
Subtotal: Recurring	*- / 261.288*	*- / 4.329*	*- / 1.271*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 266.888*
Non-Recurring												
1.2.1) Install Equipment N/R - Organic	- / 80.382	- / 1.655	- / 1.452	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 83.489
1.2.2) BFT/Collection Equipment (Install Equip N/R) - Organic	- / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.120
Subtotal: Non-Recurring	*- / 80.502*	*- / 1.655*	*- / 1.452*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 83.609*
Subtotal: Intelligence Sensors (OSIP 019-97)	*- / 341.790*	*- / 5.984*	*- / 2.723*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 350.497*
Subtotal: Procurement, All Modification Items	*- / 341.790*	*- / 5.984*	*- / 2.723*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 350.497*
Support *(All Modification Items)*												
2.2) Data	- / 7.622	- / 0.140	- / 0.140	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.902
2.3) Training Equipment	- / 11.524	- / 0.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.614
2.4) BFT/Collection Equipment (Training Equip)	- / 0.181	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.181
2.5) Support Equipment	- / 0.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.430
2.6) ILS	- / 6.449	- / 0.550	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.199
2.7) Other Support	- / 57.406	- / 2.187	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 59.893
Subtotal: Support	*- / 83.612*	*- / 2.967*	*- / 0.640*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 87.219*
Installation												
Modification Item 1 of 1: Intelligence Sensors (OSIP 019-97)	- / 18.055	- / 0.834	- / 0.135	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 19.024
Subtotal: Installation	*- / 18.055*	*- / 0.834*	*- / 0.135*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 19.024*
Total												
Total Cost (Procurement + Support + Installation)	**443.457**	**9.785**	**3.498**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**456.740**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0567 / Special Project Acft	**Modification Number / Title:** 1 / Intelligence Sensors (OSIP 019-97)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Intelligence Sensors (OSIP 019-97)

Manufacturer Information

Manufacturer Name: TBD - Operational Improvement	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020					
Delivery Dates	Sep 2019	Sep 2020					

Installation Information

Method of Implementation: [none specified]:: Installation Name: Mission Unique Equipment

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	1 / 18.055	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 18.055
FY 2019	- / -	0 / 0.834	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 0.834
FY 2020	- / -	- / -	0 / 0.135	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 0.135
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 18.055	0 / 0.834	0 / 0.135	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 19.024

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Footnotes:

(1) P-3A In/Out for Total Prior Years should be blank, set to 1 as a workaround.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0567 / Special Project Acft	**Modification Number / Title:** 2 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	79.409	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	79.409
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	79.409	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	79.409
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**79.409**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**79.409**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0567 / Special Project Acft	**Modification Number / Title:** 2 / Inactive OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-3B/C	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPS - Organic(*)	- / 79.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 79.409
Subtotal: Procurement	*- / 79.409*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 79.409*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**79.409**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**79.409**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0569 / T-45 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,051.512	193.334	174.526	155.745	0.000	155.745	204.014	217.374	190.450	195.273	365.115	2,747.343
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,051.512	193.334	174.526	155.745	0.000	155.745	204.014	217.374	190.450	195.273	365.115	2,747.343
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,051.512**	**193.334**	**174.526**	**155.745**	**0.000**	**155.745**	**204.014**	**217.374**	**190.450**	**195.273**	**365.115**	**2,747.343**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to T-45 Training System (T45TS) which encompasses both aircraft and Ground-Based Training Systems (GBTS). Current inventory is 193 Aircraft. The T-45 Goshawk is a tandem-seat, carrier capable derivative of the existing British Aerospace Hawk aircraft powered by a single Rolls Royce Adour engine. It serves as the aircraft component of the T45TS integrated jet pilot training system. The overall goal of the modifications budgeted is to correct discrepancies and deficiencies discovered after delivery of the aircraft and to commence upgrades to the aircraft cockpit and navigation systems. T-45 aircraft and simulators are facing critical avionics obsolescence and Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Operational Safety and Improvement Program (OSIP) 008-95 - Corrections of Deficiencies was established to resolve safety and reliability issues, improve required mission capabilities and correct in-service deficiencies to aircraft components.

OSIP 003-03 - Engine Surge was established to resolve engine surge critical safety issues.

OSIP 017-04 - Avionics Obsolescence funds continuing avionics obsolescence and DMSMS issues and implements safety related avionics upgrades.

OSIP 022-14 - Service Life Extension Program (SLEP) funds correction of deficiencies discovered in the Service Life Assessment Program (SLAP), which identified risk areas that must be addressed in order to extend the aircraft service life.

OSIP 006-16 - Required Avionics Sustainment Program (RASP) will modify the T45TS with the Automatic Dependent Surveillance-Broadcast Out (ADS-B Out) Capability to comply with the January 1, 2020 Federal Aviation Administration (FAA) National Airspace Systems Mandate as well as other FAA and Navigation mandates. Additionally, the T-45 Navigation source (Global Positioning System ((GPS))) will be updated to address obsolescence.

OSIP 012-19 - Physiological Episode Mitigation funds modifications to the T-45 training system to address aircrew physiological episodes (PE).

The designed service life of the aircraft was 14,400 hours and reduced as a result of Service Life Assessment Program (SLAP) analysis to 13,000 hours.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0569 / T-45 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / T-45TS Corrections of Deficiencies (OSIP 008-95) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 358.265	- / 19.466	- / 22.255	- / 20.128	- / 0.000	- / 20.128
P-3a	2 / Engine Surge (OSIP 003-03) (PS Safety)				- / 96.618	- / 38.601	- / 46.754	- / 32.910	- / 0.000	- / 32.910
P-3a	3 / Avionics Obsolescence (OSIP 017-04) (PS Safety)				- / 295.049	- / 29.376	- / 12.728	- / 35.232	- / 0.000	- / 35.232
P-3a	4 / Service Life Extension Program (SLEP) (022-14) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 165.354	- / 34.571	- / 39.628	- / 37.697	- / 0.000	- / 37.697
P-3a	5 / Required Avionics Sustainment Program (RASP) (006-16) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 42.352	- / 30.086	- / 13.098	- / 17.122	- / 0.000	- / 17.122
P-3a	6 / Physiological Episode Mitigation (OSIP 012-19) (PS Safety)				- / 0.000	- / 30.714	- / 40.063	- / 12.656	- / 0.000	- / 12.656
P-3a	7 / Inactive OSIPs (TBD)				- / 93.874	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 10.520	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,051.512**	**- / 193.334**	**- / 174.526**	**- / 155.745**	**- / 0.000**	**- / 155.745**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / T-45TS Corrections of Deficiencies (OSIP 008-95) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 25.485	- / 22.857	- / 19.988	- / 22.973	- / 129.208	- / 640.625
P-3a	2 / Engine Surge (OSIP 003-03) (PS Safety)				- / 47.152	- / 39.083	- / 26.700	- / 54.121	- / 103.378	- / 485.317
P-3a	3 / Avionics Obsolescence (OSIP 017-04) (PS Safety)				- / 70.261	- / 84.706	- / 87.211	- / 47.553	- / 26.006	- / 688.122
P-3a	4 / Service Life Extension Program (SLEP) (022-14) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 40.161	- / 50.551	- / 44.324	- / 52.696	- / 99.048	- / 564.030
P-3a	5 / Required Avionics Sustainment Program (RASP) (006-16) (Safety, Reliability, Increased Service Life, Improved Mission Capabilities)				- / 13.394	- / 13.946	- / 7.550	- / 13.158	- / 7.475	- / 158.181
P-3a	6 / Physiological Episode Mitigation (OSIP 012-19) (PS Safety)				- / 7.561	- / 6.231	- / 4.677	- / 4.772	- / 0.000	- / 106.674
P-3a	7 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 93.874
P-3a	8 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.520
P-40	**Total Gross/Weapon System Cost**				**- / 204.014**	**- / 217.374**	**- / 190.450**	**- / 195.273**	**- / 365.115**	**- / 2,747.343**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The FY 2020 enacted includes congressional rescissions of $10.52 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

The FY 2021 Funding Request was reduced by $11.203M as compared to FY20 request due to removal of Bleed Air Shut Off Valve requirement, APN-5 Realignment, other miscellaneous changes.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0569 / T-45 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Funding in FY21 is required for correction of deficiencies to resolve safety and reliability issues; resolve engine surge critical safety issues; avionics obsolescence, Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues and safety related avionics upgrades; correction of deficiencies discovered in the SLAP; Required Avionics Sustainment Program (RASP)- Phase One (Automatic Dependent Surveillance - Broadcast (ADS-B) Out) and Phase Two (Multi-Function Color Displays (MFCD's) and Midair Collision Avoidance Capability (MCAC)/ADS-B In); and Physiological Episode (PE) mitigation modifications to address aircrew PEs.

The FY 2021 funding request was reduced by $8.606M to account for the availability of prior year execution balances.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	358.265	19.466	22.255	20.128	0.000	20.128	25.485	22.857	19.988	22.973	129.208	640.625
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	358.265	19.466	22.255	20.128	0.000	20.128	25.485	22.857	19.988	22.973	129.208	640.625
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**358.265**	**19.466**	**22.255**	**20.128**	**0.000**	**20.128**	**25.485**	**22.857**	**19.988**	**22.973**	**129.208**	**640.625**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational, Safety and Improvement Program (OSIP) funds modifications to the T-45 training system to address correction of deficiencies discovered during test and evaluation or operational use to the entire airframe; its components and sub-assemblies, including related Peculiar Support Equipment (SE), all of which vary in complexity and cost of Non-Recurring Engineering, procurement and installation. The correction of deficiencies Engineering Change Proposals (ECPs) include AIRFRAME ECPs (Both STRUCTURAL and SYSTEMS) and ENGINE/POWER AND PROPULSION ECPs.

STRUCTURAL ECPs: The structural portion of this OSIP provides for several structural ECPs to correct safety of flight related issues and deficiencies in meeting airframe original design life of 14,400 Flight Hours. ECPs for Wing
Leading Edge Panels, Wing Centerline Joint, Flap Center Hinge Arm, Canopy Frame, Canopy Frame Longeron, Wing Tip, Gas Turbine Starter Bracket, Horizontal Stabilators/Tailplane, Frame 24 Crossbeam Lugs and Side Skin, Frame 7 Upper Cross Tie, Wing Leading Edge, Frame 29 Lower Flange, Uplock Beam Forward Attach, Slat Track Rib 5 Downstop Bolt, Rib 2 T-Clip, Frame 28/32 Boundary/Vertical Fin, Frame 33 Structure, Inlet Close-Out Fuel and Tank Ceiling Stiffener, Airframe Engine Mount, Frame 21 Structure, Main Landing Gear (MLG) Bay Tilted & Fasteners, MLG Side Stay Support, Longitudinal Systems Viscous, Frame 20 Lower Longeron/Sidebrace, Frame 12 Vertical Splice, Frame 1 Structures and Ballast provisions, Nose Landing Gear Trunnion Beam, Slat Actuator Fitting Angle, Structure Life Improvement, Speed Brake and Backup Structure, Engine Mount Link Option, Stabilizer Back-Up Structures, Fuselage/Frame 10 Door, and Fin Bracket Lever Box Assembly, Over Center Locking Mechanism, Arrestor Beam Back-up Structure, Wing Lower Aux Spar Doubler, Frame 16 Lateral Link, Frame 17/18 structures and Fuselage Sideskin Fasteners.

SYSTEMS ECPs: Modifications to the airframe, other than structural deficiencies, are also required to ensure safety of flight, aero-performance and maintainability to enable satisfactory Pilot Training Requirements levels. This Airframe OSIP affects several airframe components and their sub-assemblies including: forward, center and aft fuselage components, flight controls, landing gear, Nose Wheel Steering, arresting hook, pivot, tail cone, wing, horizontal and vertical control surfaces (Aileron Rudder), flaps, canopy/windscreen, Aircrew Systems, Ejection system, including lanyard retention collar, ejection control handle, sequencer, barostatic release unit, seat pan, head box and associated components, hydraulic system, and hyd system quick disconnects, oxygen system; to include oxygen monitor, oxygen concentrator and ancillary components (bleed air shutoff valve, heat exchanger, temperature switch, water separator, bleed air piping, plenum and associated indicator systems/annunciators), electrical system, fuel system, throttle, instrumentation systems, environmental control system, communications, navigation, emergency systems, and associated Peculiar Support Equipment (PSE), nosewheel steering test set, hydraulic test stand, cabin pressure test set, Easily Manipulated Mechanical Arm, frame 33 tail plane fitting tool, and landing gear (dummy gear).

ENGINE/POWER AND PROPULSION ECPs: Modifications under this category include modifications to the Engine, Gas Turbine Starter, and Electrical System which will increase the reliability, maintainability and safety of these systems. Engine modifications include Engine Mounts, Fuel Pumps, Combustion Chamber, Compressors, Nozzle Guide Vanes, Drive Systems, Oil System, Air Systems, Turbines, Fuel

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Distribution and Control and modifications to address engine surge/compressor stall. Gas Turbine Starter modifications include starting system, air turbine starter, and air producer. Electrical modifications include generator/distribution/wiring modifications.

Other Support and Non-Recurring Engineering costs fund Government labor to perform engineering, test, logistics and financial management tasks in order to execute modifications associated with this OSIP. This additional support will be performed in accordance with the Financial Management Regulation and Naval Air Systems Command Policy.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY 2021 and out provides funds for STRUCTURAL ECPs, SYSTEMS ECPs and ENGINE/PROPULSION & POWER ECPs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capabilities	**Related RDT&E PEs:** 0702207N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Airframe Structural - NonOrganic *Installation 1 of 2*	823 / 16.113	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	823 / 16.113
1.1.6) Canopy Latch - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	8 / 0.304	- / -	8 / 0.304	12 / 0.293	12 / 0.264	24 / 0.504	37 / 0.791	100 / 2.138	193 / 4.294
1.1.7) Tailplane Indicator - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.192	48 / 0.288	48 / 0.293	73 / 0.451	- / -	193 / 1.224
1.1.8) Canopy Longeron - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	17 / 0.476	- / -	17 / 0.476	24 / 0.528	24 / 0.480	32 / 0.651	65 / 1.229	31 / 0.586	193 / 3.950
1.1.9) Anti-Collision Light - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	48 / 0.489	- / -	48 / 0.489	48 / 0.384	48 / 0.288	49 / 0.294	- / -	- / -	193 / 1.455
1.1.10) M54 Pivot - NonOrganic *Installation 1 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.288	73 / 0.590	84 / 0.689	193 / 1.567
1.1.11) Aileron - NonOrganic (1) *Installation 1 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.300	- / -	- / -	- / -	20 / 0.300
1.1.2) Sub 14.4K FLE Deficiencies - NonOrganic (2) *Installation 2 of 2*	17 / 0.973	24 / 2.900	24 / 2.952	24 / 1.303	- / -	24 / 1.303	24 / 1.326	24 / 1.350	24 / 1.374	24 / 1.399	8 / 0.373	193 / 13.950
1.1.4) Nose Wheel Steering System - NonOrganic *Installation 2 of 2*	- / -	- / -	66 / 0.706	66 / 0.725	- / -	66 / 0.725	61 / 0.682	- / -	- / -	- / -	- / -	193 / 2.113
1.1.3) Hookshank LSP - Organic(*)	84 / 0.178	24 / 0.029	24 / 0.053	24 / 0.054	- / -	24 / 0.054	24 / 0.055	13 / 0.030	- / -	- / -	- / -	193 / 0.399
1.1.5) Automatic Backup Oxygen System - Organic(*) (3)	9 / 2.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 2.098
1.1.12) Archived ECPs - Organic(*)	2,044 / 125.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,044 / 125.608
1.2.1) NON-RECURRING COSTS - Organic(*) (4)	- / 31.758	- / 7.945	- / 7.578	- / 4.396	- / -	- / 4.396	- / 6.643	- / 4.656	- / 3.295	- / 3.337	- / -	- / 69.608
2.1.1) Archived B Kits - Organic(*)	722 / 12.445	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	722 / 12.445
2.2.1) INSTALL EQUIPMENT N/R - Organic(*)	- / 49.489	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 49.489
Subtotal: Procurement	*- / 238.662*	*- / 10.874*	*- / 11.289*	*- / 7.747*	*- / -*	*- / 7.747*	*- / 10.103*	*- / 7.656*	*- / 6.699*	*- / 7.797*	*- / 3.786*	*- / 304.613*
Support												
3.2) Data	- / 0.809	- / -	- / 0.038	- / 0.039	- / -	- / 0.039	- / 0.037	- / 0.041	- / 0.039	- / 0.040	- / 0.197	- / 1.240
3.3) Training Equipment	- / 7.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.054
3.4) Support Equipment	- / 6.804	- / -	- / 0.055	- / 0.056	- / -	- / 0.056	- / 0.054	- / 0.058	- / 0.056	- / 0.056	- / 0.281	- / 7.420
3.5) ILS	- / 3.422	- / 1.228	- / 0.981	- / 0.999	- / -	- / 0.999	- / 1.011	- / 1.035	- / 1.053	- / 1.073	- / 10.730	- / 21.532
3.6) Other Support	- / 93.950	- / 7.364	- / 6.993	- / 7.969	- / -	- / 7.969	- / 8.033	- / 8.178	- / 8.433	- / 8.594	- / 99.929	- / 249.443

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capabilities	**Related RDT&E PEs:** 0702207N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Support	- / 112.039	- / 8.592	- / 8.067	- / 9.063	- / -	- / 9.063	- / 9.135	- / 9.312	- / 9.581	- / 9.763	- / 111.137	- / 286.689
Installation												
Installation 1 of 2: GRP: AIRFRAME STRUCTURAL	- / 6.220	- / -	- / 0.595	- / -	- / -	- / -	- / 3.242	- / 3.222	- / 2.703	- / 4.458	- / 11.988	- / 32.428
Installation 2 of 2: GRP: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)	- / 1.344	- / -	- / 2.304	- / 3.318	- / 0.000	- / 3.318	- / 3.005	- / 2.667	- / 1.005	- / 0.955	- / 2.297	- / 16.895
Subtotal: Installation	- / 7.564	- / -	- / 2.899	- / 3.318	- / -	- / 3.318	- / 6.247	- / 5.889	- / 3.708	- / 5.413	- / 14.285	- / 49.323
Total												
Total Cost (Procurement + Support + Installation)	**358.265**	**19.466**	**22.255**	**20.128**	**0.000**	**20.128**	**25.485**	**22.857**	**19.988**	**22.973**	**129.208**	**640.625**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: GRP: AIRFRAME STRUCTURAL

Manufacturer Information

Manufacturer Name: Various - Airframe Structural | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: CONTRACT FIELD MODIFICATION TEAM:: Installation Name: AIRFRAME STRUCTURAL

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	802 / 6.220	- / -	21 / 0.595	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	823 / 6.815
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	73 / 3.242	- / -	- / -	- / -	0 / 0.000	73 / 3.242
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	108 / 3.222	- / -	- / -	0 / 0.000	108 / 3.222
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	152 / 2.703	- / -	0 / 0.000	152 / 2.703
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	189 / 4.458	0 / 0.000	189 / 4.458
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	248 / 6.052	248 / 6.052
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	215 / 5.936	215 / 5.936
Total	802 / 6.220	- / -	21 / 0.595	- / -	- / -	- / -	73 / 3.242	108 / 3.222	152 / 2.703	189 / 4.458	463 / 11.988	1,808 / 32.428

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	802	-	-	-	-	6	5	5	5	-	-	-	-	18	18	19	18	27	27	27	27	38	38	38	38	47	47	48	47	463	1,808
Out	802	-	-	-	-	6	5	5	5	-	-	-	-	-	18	18	19	18	27	27	27	27	38	38	38	38	47	47	48	510	1,808

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: GRP: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

Manufacturer Information

Manufacturer Name: Boeing | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: CONTRACT FIELD MODIFICATION TEAM:: Installation Name: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 1.344	- / -	15 / 2.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 3.648
FY 2019	- / -	- / -	- / -	24 / 1.173	0 / 0.000	24 / 1.173	- / -	- / -	- / -	- / -	0 / 0.000	24 / 1.173
FY 2020	- / -	- / -	- / -	66 / 2.145	0 / 0.000	66 / 2.145	24 / 1.114	- / -	- / -	- / -	0 / 0.000	90 / 3.259
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	66 / 1.891	24 / 1.058	- / -	- / -	0 / 0.000	90 / 2.949
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	61 / 1.609	24 / 1.005	- / -	0 / 0.000	85 / 2.614
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.955	0 / 0.000	24 / 0.955
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.972	24 / 0.972
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.989	24 / 0.989
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.336	8 / 0.336
Total	2 / 1.344	- / -	15 / 2.304	90 / 3.318	0 / 0.000	90 / 3.318	90 / 3.005	85 / 2.667	24 / 1.005	24 / 0.955	56 / 2.297	386 / 16.895

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	-	-	-	-	4	4	3	4	22	23	22	23	22	23	22	23	22	21	21	21	6	6	6	6	6	6	6	6	56	386
Out	2	-	-	-	-	-	4	4	3	26	23	22	23	16	23	22	17	22	21	21	21	6	6	6	6	6	6	6	6	68	386

Footnotes:

(1) 1.1.11) Aileron: Kit procurement to establish new source of supply due to obsolescence. Projected quantity to reach aircraft end of life is 20 kits.

(2) 1.1.2) Sub 14.4K FLE Deficiencies (Non-Organic): Unit cost decrease FY2021 - FY2025 based on: Reduced variability in aircraft incoming condition, and stable kit parts.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 1 / T-45TS Corrections of Deficiencies (OSIP 008-95)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) 1.1.5) Automatic Backup Oxygen System: Required for the mitigation of T-45 physiological episodes. Quantity reduced from 40 to align with planned contract dates. Effort migrates to OSIP 012-19 in FY19. Installs will be funded under OSIP 012-19.

(4) 1.2.1 Non-Recurring Costs: For safety, obsolescence and reliability identified Engineering Change Proposals. FY21 decrease due to the nonrecurring engineering (NRE) expecting to entail less effort than previously estimated.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	96.618	38.601	46.754	32.910	0.000	32.910	47.152	39.083	26.700	54.121	103.378	485.317
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	96.618	38.601	46.754	32.910	0.000	32.910	47.152	39.083	26.700	54.121	103.378	485.317
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**96.618**	**38.601**	**46.754**	**32.910**	**0.000**	**32.910**	**47.152**	**39.083**	**26.700**	**54.121**	**103.378**	**485.317**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) funds modifications to the T-45 training system to address the safety-of-flight risk known as surge stall. T-45 engine surge is a critical safety concern for a single engine training aircraft with over 900 surge events documented, including over 70 surges requiring engine shutdown and restart emergency action. All elements of the T-45 training system (wings, fuselage, engine, etc.) contribute to the incidences of surge stall. The F405 engine continues to experience surge stall events and the funding is for the recurring and non-recurring activities set forth in this OSIP that are on-going through the Future Years Defense Program (FYDP) and the out-years. Kits include modifications to air vehicle, engine and fuel control system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Installation continues in FY 2021 for Inlet modification retrofit kits. Non-Recurring Engineering efforts to modify the F405-RR-401 engine and fuel system continue in FY 2021 with kit procurement to start in FY 2023. Retrofit kit procurements for engine compressor stator vane modifications began in FY 2018 with installations occurring at O&I Level.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** PS Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Static Inverter Mod - NonOrganic *Installation 1 of 3*	200 / 1.633	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	200 / 1.633
1.1.2) AF Inlet Mod Kits - NonOrganic *Installation 2 of 3*	19 / 12.576	24 / 13.381	36 / 20.472	36 / 19.882	- / -	36 / 19.882	36 / 20.279	36 / 20.685	6 / 3.516	- / -	- / -	193 / 110.791
1.1.3) Engine Kits O & I Level - Organic(*)	123 / 0.471	56 / 0.283	54 / 0.379	20 / 0.228	- / -	20 / 0.228	20 / 0.232	20 / 0.236	20 / 0.240	20 / 0.245	53 / 0.649	386 / 2.963
1.1.4) Fuel System Kits O&I - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.000	16 / 8.000	60 / 30.540	115 / 59.589	193 / 99.129
1.1.5) Airframe Fuel System Kits - NonOrganic *Installation 3 of 3*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.250	16 / 2.000	60 / 7.635	115 / 14.897	193 / 24.782
1.1.6) Engine Stator Vane Modification Kits - Organic(*) (5)	25 / 13.012	25 / 11.713	25 / 11.924	- / -	- / -	- / -	25 / 12.357	- / -	- / -	- / -	- / -	100 / 49.006
1.1.7) Archived ECPs - Organic(*)	118 / 2.283	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	118 / 2.283
1.2.1) Non-Recurring Engineering - Organic(*) (6)	- / 30.165	- / -	- / 0.625	- / 0.842	- / -	- / 0.842	- / 4.526	- / 3.794	- / 3.735	- / 3.831	- / 0.720	- / 48.238
2.1.1) Install Equipment - Organic(*)	- / -	- / 0.202	- / 0.202	- / 0.202	- / -	- / 0.202	- / 0.202	- / 0.204	- / 0.207	- / 0.211	- / 0.212	- / 1.642
2.1.2) Archived ECPs - Organic(*)	199 / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	199 / 0.260
2.2.1) INSTALL EQUIPMENT N/R - Organic(*)	- / -	- / 1.233	- / 1.014	- / 1.030	- / -	- / 1.030	- / 1.042	- / 1.061	- / 1.080	- / 1.099	- / 4.787	- / 12.346
Subtotal: Procurement	*- / 60.400*	*- / 26.812*	*- / 34.616*	*- / 22.184*	*- / -*	*- / 22.184*	*- / 38.638*	*- / 27.230*	*- / 18.778*	*- / 43.561*	*- / 80.854*	*- / 353.073*
Support												
3.2) Data	- / 0.701	- / 0.150	- / 0.052	- / 0.053	- / -	- / 0.053	- / 0.054	- / 0.055	- / 0.056	- / 0.057	- / 7.054	- / 8.232
3.3) Training Equipment	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.025
3.4) Support Equipment (7)	- / 8.309	- / 1.567	- / 0.784	- / 0.798	- / -	- / 0.798	- / 0.812	- / 4.019	- / 2.133	- / 3.133	- / -	- / 21.555
3.5) ILS (8)	- / 5.553	- / 7.061	- / 7.919	- / 5.958	- / -	- / 5.958	- / 3.685	- / 3.745	- / 1.587	- / 3.116	- / -	- / 38.624
3.6) Other Support	- / 20.544	- / 1.955	- / 2.551	- / 2.646	- / -	- / 2.646	- / 2.669	- / 2.717	- / 2.801	- / 2.854	- / 14.358	- / 53.095
3.7) Interim Contractor Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / 0.500
Subtotal: Support	*- / 35.132*	*- / 10.733*	*- / 11.306*	*- / 9.455*	*- / -*	*- / 9.455*	*- / 7.220*	*- / 10.536*	*- / 6.577*	*- / 9.160*	*- / 21.912*	*- / 122.031*
Installation												
Installation 1 of 3: Static Inverter Mod	- / 0.594	- / 1.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.650
Installation 2 of 3: AF Inlet Mod Kits	- / 0.492	- / -	- / 0.832	- / 1.271	- / 0.000	- / 1.271	- / 1.294	- / 1.317	- / 1.341	- / 1.365	- / 0.227	- / 8.139
Installation 3 of 3: Airframe Fuel System Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.004	- / 0.035	- / 0.385	- / 0.424
Subtotal: Installation	*- / 1.086*	*- / 1.056*	*- / 0.832*	*- / 1.271*	*- / -*	*- / 1.271*	*- / 1.294*	*- / 1.317*	*- / 1.345*	*- / 1.400*	*- / 0.612*	*- / 10.213*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** PS Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**96.618**	**38.601**	**46.754**	**32.910**	**0.000**	**32.910**	**47.152**	**39.083**	**26.700**	**54.121**	**103.378**	**485.317**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 3: Static Inverter Mod

Manufacturer Information

Manufacturer Name: L-3 Static Inverter Mod	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Static Inverter Mod

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	72 / 0.594	128 / 1.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	200 / 1.650
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	72 / 0.594	128 / 1.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	200 / 1.650

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	72	64	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200
Out	72	64	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 3: AF Inlet Mod Kits

Manufacturer Information

Manufacturer Name: Boeing - AF Inlet Mod Kits	Manufacturer Location: St. Louis, MO
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: AF Inlet Mod Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 0.492	- / -	15 / 0.832	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 1.324
FY 2019	- / -	- / -	- / -	24 / 1.271	0 / 0.000	24 / 1.271	- / -	- / -	- / -	- / -	0 / 0.000	24 / 1.271
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.294	- / -	- / -	- / -	0 / 0.000	36 / 1.294
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.317	- / -	- / -	0 / 0.000	36 / 1.317
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.341	- / -	0 / 0.000	36 / 1.341
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.365	0 / 0.000	36 / 1.365
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.227	6 / 0.227
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 0.492	- / -	15 / 0.832	24 / 1.271	0 / 0.000	24 / 1.271	36 / 1.294	36 / 1.317	36 / 1.341	36 / 1.365	6 / 0.227	193 / 8.139

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	4	-	-	-	-	7	8	-	-	6	6	6	6	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	193
Out	4	-	-	-	-	7	8	-	-	6	6	6	6	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 3: Airframe Fuel System Kits

Manufacturer Information

Manufacturer Name: TBD - Airframe Fuel System Kits	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Jan 2023	Jan 2024	Jan 2025
Delivery Dates					Oct 2024	Oct 2025	Oct 2026

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Airframe Fuel System Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.004	- / -	0 / 0.000	2 / 0.004
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.035	0 / 0.000	16 / 0.035
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.132	60 / 0.132
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	115 / 0.253	115 / 0.253
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.004	16 / 0.035	175 / 0.385	193 / 0.424

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	4	4	4	4	175	193
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	4	4	4	4	175	193

Footnotes:

(5) 1.1.6) Kit procurement continues in FY21 due to delays in prior year contract award. Installs will be at O&I Level.

(6) 1.2.1) Non-Recurring Engineering: FY2020 - FY2025 non-recurring engineering funding to address Engine Module (Modules 5-9) obsolescence. The FY 2021 funding request was reduced by $1.708M to account for the availability of prior year execution balances.

(7) 3.4) Support Equipment: Increase in FY 2023 because inlet modification will necessitate a configuration change on Support Equipment to continue to support the retrofit line through the life of the installations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 2 / Engine Surge (OSIP 003-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(8) 3.5) ILS: FY 2019 and out supports Inlet Mod full rate retrofit. Associated growth is based on install schedule and is necessary to prevent work stoppages and delay to the mod line.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	295.049	29.376	12.728	35.232	0.000	35.232	70.261	84.706	87.211	47.553	26.006	688.122
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	295.049	29.376	12.728	35.232	0.000	35.232	70.261	84.706	87.211	47.553	26.006	688.122
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**295.049**	**29.376**	**12.728**	**35.232**	**0.000**	**35.232**	**70.261**	**84.706**	**87.211**	**47.553**	**26.006**	**688.122**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds modifications to the T-45 training system to address Avionics obsolescence, performance, and Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

This OSIP includes efforts that address avionics (and associated software), and supporting sub-system modifications and/or upgrades to address safety, reliability, maintainability, obsolescence and Diminishing Manufacturing Source (DMSMS) requirements. Modifications may also be driven by new cyber security requirements. Efforts also fund changes to training and support equipment to maintain aircraft concurrency and supportability. As well as continuing avionics obsolescence and DMSMS issues and implements safety related avionics upgrades to include s hardware obsolescence on multiple Circuit Card Assemblies (CCA) within the Digital Data Set (DDS) to continue fleet operations through 2035. The DDS provides the Controlled Flight into Terrain/Terrain Awareness Warning System and Crash Survivable Recorder capabilities.

Current Engineering Change Proposals (ECPs) include: Mission Data Processer (MDP), Pilot Display Unit (PDU)/Heads-Up Display (HUD) and the HUD camera, Tactical Air Navigation (TACAN), the ARC-182 radio, Avionics Corrections of Deficiencies, Almanac Loading System, communication systems, navigation systems and the subsystem which includes Virtual Mission Training System (VMTS).

AVIONICS/GROUND BASED TRAINING SYSTEMS: Modifications to the Avionics will be required to update the MDP, PDU/Heads-Up Display (HUD) and the HUD camera, Tactical Air Navigation (TACAN), the ARC-182 radio and those avionic components associated with the affected aircraft systems.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Continue incorporation of Engineering Change Proposals in FY 2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** PS Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) DDS (CSMU/CP/DAU) - NonOrganic *Installation 1 of 6*	201 / 1.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	201 / 1.621
1.1.2) HUD Cameras - NonOrganic (9) *Installation 2 of 6*	- / -	67 / 0.067	67 / 0.068	59 / 0.061	- / -	59 / 0.061	- / -	- / -	- / -	- / -	- / -	193 / 0.196
1.1.3) ARC - 182 Radio Obsolescence - NonOrganic (10) *Installation 3 of 6*	- / -	- / -	3 / 0.028	33 / 0.311	- / -	33 / 0.311	50 / 0.479	60 / 0.586	47 / 0.467	- / -	- / -	193 / 1.871
1.1.4) TACAN Obsolescence - NonOrganic (11) *Installation 4 of 6*	- / -	- / -	3 / 0.059	33 / 0.666	- / -	33 / 0.666	50 / 1.027	60 / 1.254	47 / 1.000	- / -	- / -	193 / 4.006
1.1.5) HUD/PDU Obsolescence - NonOrganic (12) *Installation 5 of 6*	- / -	- / -	- / -	3 / 0.031	- / -	3 / 0.031	48 / 0.501	60 / 0.626	60 / 0.637	40 / 0.433	- / -	211 / 2.228
1.1.6) Archive - Organic(*)	- / 73.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 73.472
1.2.1) NR Engineering - Organic(*)	- / 16.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.636
2.1.1) HUD Cameras - Organic(*) (13)	- / -	67 / 0.677	67 / 0.689	59 / 0.618	- / -	59 / 0.618	- / -	- / -	- / -	- / -	- / -	193 / 1.984
2.1.2) Subsystems ECPs - Organic(*) (14)	100 / 1.260	- / -	28 / 1.729	28 / 1.760	- / -	28 / 1.760	37 / 2.368	37 / 2.410	37 / 2.454	37 / 2.498	- / -	304 / 14.479
2.1.3) DMSMS ECPs - Organic(*) (15)	- / -	- / -	75 / 1.008	68 / 0.932	- / -	68 / 0.932	68 / 0.949	68 / 0.970	50 / 0.726	50 / 0.739	- / -	379 / 5.324
2.1.4) ARC-182 Radio Obsolescence - Organic(*) (16)	- / -	- / -	3 / 1.171	33 / 13.108	- / -	33 / 13.108	50 / 20.218	60 / 24.698	47 / 19.695	- / -	- / -	193 / 78.890
2.1.5) TACAN Obsolescence - Organic(*) (17)	4 / 0.442	- / -	- / -	33 / 5.856	- / -	33 / 5.856	50 / 9.032	60 / 11.034	46 / 8.612	- / -	- / -	193 / 34.976
2.1.6) HUD PDU - Organic(*) (18)	- / -	- / -	- / -	3 / 1.500	- / -	3 / 1.500	48 / 24.432	60 / 30.540	60 / 31.090	40 / 21.100	- / -	211 / 108.662
2.1.7) Next Gen Multi Function Test Set - Organic(*) (19)	24 / 0.243	90 / 1.151	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	114 / 1.394
2.1.8) Mission Display Processor - NonOrganic (20) *Installation 6 of 6*	- / -	- / -	5 / 0.000	64 / 0.000	- / -	64 / 0.000	64 / 0.000	60 / 0.000	- / -	- / -	- / -	193 / 0.000
2.1.9) DDS (DAU) Obsolescence - Organic(*) (21)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.300	50 / 5.090	65 / 6.736	90 / 9.495	208 / 21.621
2.1.10) Archived B Kits - Organic(*)	1,246 / 93.341	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,246 / 93.341
2.2.1) Subsystem ECPs - Organic(*) (22)	- / -	- / -	- / 0.500	- / 1.130	- / -	- / 1.130	- / 0.750	- / 0.594	- / 4.973	- / 5.580	- / -	- / 13.527
2.2.2) DMSMS ECPs - Organic(*) (23)	- / 4.273	- / -	- / 0.840	- / 0.500	- / -	- / 0.500	- / 0.500	- / 0.509	- / 0.522	- / 0.531	- / 6.346	- / 14.021
2.2.3) DDS (DAU) - Organic(*)	- / 3.317	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.317
2.2.4) ARC-182 Radio Obsolescence - Organic(*) (24)	- / 8.902	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.902
2.2.5) TACAN Obsolescence - Organic(*) (25)	- / 1.713	- / 2.843	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.556
2.2.6) HUD PDU Obsolescence - Organic(*)	- / -	- / 10.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.250
2.2.7) DDS (DAU) Obsolescence - Organic(*) (26)	- / -	- / -	- / -	- / 1.655	- / -	- / 1.655	- / -	- / -	- / -	- / -	- / -	- / 1.655

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** PS Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Procurement	- / 205.220	- / 14.988	- / 6.092	- / 28.128	- / -	- / 28.128	- / 60.256	- / 73.521	- / 75.266	- / 37.617	- / 15.841	- / 516.929
Support												
3.3) Training Equipment	6 / 30.355	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 30.355
3.4) Support Equipment N/R	- / 0.916	- / 4.800	- / 0.060	- / 0.064	- / -	- / 0.064	- / 0.069	- / 0.074	- / 0.074	- / 0.074	- / 0.176	- / 6.307
3.5) ILS	- / 20.230	- / 3.274	- / 2.010	- / 1.853	- / -	- / 1.853	- / 1.886	- / 1.920	- / 1.926	- / 1.954	- / 3.541	- / 38.594
3.6) Other Support	- / 36.701	- / 5.989	- / 4.188	- / 4.676	- / -	- / 4.676	- / 4.717	- / 4.787	- / 4.932	- / 5.021	- / 6.078	- / 77.089
Subtotal: Support	- / 88.202	- / 14.063	- / 6.258	- / 6.593	- / -	- / 6.593	- / 6.672	- / 6.781	- / 6.932	- / 7.049	- / 9.795	- / 152.345
Installation												
Installation 1 of 6: DDS (CSMU/CP/DAU)	- / 1.627	- / 0.325	- / 0.173	- / 0.044	- / 0.000	- / 0.044	- / -	- / -	- / -	- / -	- / 0.000	- / 2.169
Installation 2 of 6: HUD Cameras	- / -	- / -	- / 0.205	- / 0.205	- / 0.000	- / 0.205	- / 0.183	- / -	- / -	- / -	- / 0.000	- / 0.593
Installation 3 of 6: ARC - 182 Radio Obsolescence	- / -	- / -	- / -	- / 0.052	- / 0.000	- / 0.052	- / 0.571	- / 0.881	- / 1.076	- / 0.843	- / 0.000	- / 3.423
Installation 4 of 6: TACAN Obsolescence	- / -	- / -	- / -	- / 0.090	- / 0.000	- / 0.090	- / 1.008	- / 1.554	- / 1.899	- / 1.488	- / 0.000	- / 6.039
Installation 5 of 6: HUD/PDU Obsolescence	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.035	- / 0.405	- / 0.546	- / 0.556	- / 0.370	- / 1.912
Installation 6 of 6: Mission Display Processor	- / -	- / -	- / -	- / 0.120	- / 0.000	- / 0.120	- / 1.536	- / 1.564	- / 1.492	- / -	- / 0.000	- / 4.712
Subtotal: Installation	- / 1.627	- / 0.325	- / 0.378	- / 0.511	- / -	- / 0.511	- / 3.333	- / 4.404	- / 5.013	- / 2.887	- / 0.370	- / 18.848
Total												
Total Cost (Procurement + Support + Installation)	**295.049**	**29.376**	**12.728**	**35.232**	**0.000**	**35.232**	**70.261**	**84.706**	**87.211**	**47.553**	**26.006**	**688.122**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 6: DDS (CSMU/CP/DAU)

Manufacturer Information

Manufacturer Name: Physical Optics CORP - DDS (CSMU/CP/DAU)	Manufacturer Location: Torrance, CA
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: DDS (CSMU/CP/DAU)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	186 / 1.627	3 / 0.325	8 / 0.173	2 / 0.044	0 / 0.000	2 / 0.044	- / -	- / -	- / -	- / -	0 / 0.000	199 / 2.169
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	186 / 1.627	3 / 0.325	8 / 0.173	2 / 0.044	0 / 0.000	2 / 0.044	- / -	- / -	- / -	- / -	0 / 0.000	199 / 2.169

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	186	-	-	-	3	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199
Out	186	-	-	-	3	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 6: HUD Cameras

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Jul 2020	Jul 2021				
Delivery Dates	Mar 2020	Mar 2021	Mar 2022				

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: HUD Cameras

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	67 / 0.205	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	67 / 0.205
FY 2020	- / -	- / -	- / -	67 / 0.205	0 / 0.000	67 / 0.205	- / -	- / -	- / -	- / -	0 / 0.000	67 / 0.205
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	59 / 0.183	- / -	- / -	- / -	0 / 0.000	59 / 0.183
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	67 / 0.205	67 / 0.205	0 / 0.000	67 / 0.205	59 / 0.183	- / -	- / -	- / -	0 / 0.000	193 / 0.593

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	33	34	-	-	33	34	-	-	29	30	-	-	-	-	-	-	-	-	-	-	-	-	-	193
Out	-	-	-	-	-	-	-	33	34	-	-	33	34	-	-	29	30	-	-	-	-	-	-	-	-	-	-	-	-	-	193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 6: ARC - 182 Radio Obsolescence

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	

Installation Information

Method of Implementation: Drive-In:: Installation Name: ARC - 182 Radio Obsolescence

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	3 / 0.052	0 / 0.000	3 / 0.052	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.052
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	33 / 0.571	- / -	- / -	- / -	0 / 0.000	33 / 0.571
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.881	- / -	- / -	0 / 0.000	50 / 0.881
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.076	- / -	0 / 0.000	60 / 1.076
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 0.843	0 / 0.000	47 / 0.843
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	3 / 0.052	0 / 0.000	3 / 0.052	33 / 0.571	50 / 0.881	60 / 1.076	47 / 0.843	0 / 0.000	193 / 3.423

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	2	-	-	8	8	9	8	12	13	13	12	15	15	15	15	12	11	12	12	-	193
Out	-	-	-	-	-	-	-	-	-	1	2	-	-	8	8	9	8	12	13	13	12	15	15	15	15	12	11	12	12	-	193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 6: TACAN Obsolescence

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	

Installation Information

Method of Implementation: Drive-In:: Installation Name: TACAN Obsolescence

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	3 / 0.090	0 / 0.000	3 / 0.090	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.090
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	33 / 1.008	- / -	- / -	- / -	0 / 0.000	33 / 1.008
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 1.554	- / -	- / -	0 / 0.000	50 / 1.554
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.899	- / -	0 / 0.000	60 / 1.899
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 1.488	0 / 0.000	47 / 1.488
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	3 / 0.090	0 / 0.000	3 / 0.090	33 / 1.008	50 / 1.554	60 / 1.899	47 / 1.488	0 / 0.000	193 / 6.039

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	1	2	-	-	8	8	9	8	12	13	13	12	15	15	15	15	12	11	12	12	-	193
Out	-	-	-	-	-	-	-	-	-	1	2	-	-	8	8	9	8	12	13	13	12	15	15	15	15	12	11	12	12	-	193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 6: HUD/PDU Obsolescence

Manufacturer Information

Manufacturer Name: TBD [27]	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Drive in:: Installation Name: HUD/PDU Obsolescence

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.035	- / -	- / -	- / -	0 / 0.000	3 / 0.035
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.405	- / -	- / -	0 / 0.000	48 / 0.405
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.546	- / -	0 / 0.000	60 / 0.546
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.556	0 / 0.000	60 / 0.556
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.370	40 / 0.370
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.035	48 / 0.405	60 / 0.546	60 / 0.556	40 / 0.370	211 / 1.912

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	16	16	16	-	20	20	20	-	20	20	20	-	40	211
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	16	16	16	-	20	20	20	-	20	20	20	-	40	211

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 6 of 6: Mission Display Processor

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019	Nov 2020	Nov 2021	Nov 2022		
Delivery Dates		Oct 2020	Oct 2021	Oct 2022	Oct 2023		

Installation Information

Method of Implementation: Contractor Depot Field Team:: Installation Name: Mission Display Processor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	5 / 0.120	0 / 0.000	5 / 0.120	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.120
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	64 / 1.536	- / -	- / -	- / -	0 / 0.000	64 / 1.536
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 1.564	- / -	- / -	0 / 0.000	64 / 1.564
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.492	- / -	0 / 0.000	60 / 1.492
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	5 / 0.120	0 / 0.000	5 / 0.120	64 / 1.536	64 / 1.564	60 / 1.492	- / -	0 / 0.000	193 / 4.712

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	2	3	-	-	16	16	16	16	16	16	16	16	15	15	15	15	-	-	-	-	-	193
Out	-	-	-	-	-	-	-	-	-	2	3	-	-	16	16	16	16	16	16	16	16	15	15	15	15	-	-	-	-	-	193

Footnotes:

(9) 1.1.2) HUD Cameras: Kit procurement shifted right one year due to change in acquisition strategy, which caused delays in determining a technically acceptable solution. Kit procurement starts in FY19.

(10) 1.1.3) ARC - 182 Radio Obsolescence: Aligned with TACAN obsolescence to gain NRE and install efficiencies. Quantity growth due to accelerated kit buy to deliver capability to the fleet to address increasing ARC-182 Radio Obsolescence.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 3 / Avionics Obsolescence (OSIP 017-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(11) 1.1.4)TACAN Obsolescence: Procurement funding broken out from Subsystems ECP as it was identified as top degrader. Aligned with ARC-182 obsolescence to gain NRE and install efficiencies. Accelerated kit buy to deliver capability to the fleet to address increasing TACAN Obsolescence.

(12) 1.1.5) HUD/PDU Obsolescence: Procurement is to address several obsolescence issues impacting fleet readiness. Procurement quantity includes 193 aircraft units and 18 Ground Based Training System (GBTS) units.

(13) 2.1.1) HUD Cameras: Kit procurement shifted right one year due to change in acquisition strategy, which caused delays in determining a technically acceptable solution. Kit procurement starts in FY 2019.

(14) 2.1.2) Subsystem ECPs cost element encompasses multiple ECPs.

(15) 2.1.3) DMSMS ECPs cost element encompasses multiple ECPs.

(16) 2.1.4) ARC - 182 Radio Obsolescence: Accelerated kit buy to deliver capability to the fleet to address increasing ARC-182 Radio Obsolescence. Aligned with TACAN obsolescence to gain NRE and install efficiencies.

(17) 2.1.5 TACAN Obsolescence: Accelerated kit buy to deliver capability to the fleet to address increasing TACAN Obsolescence. Procurement funding broken out from Subsystems ECP as it was identified as top degrader. Aligned with ARC-182 obsolescence to gain NRE and install efficiencies.

(18) 2.1.6) HUD PDU: Procurement is to address several obsolescence issues impacting fleet readiness. Procurement quantity includes 193 aircraft units and 18 Ground Based Training System (GBTS) units.

(19) 2.1.7) Next Gen Multi Function Test Set: Delay in Contract award slid 90 Kits to FY2019.

(20) 2.1.8) Mission Display Processor: Kits will be procured by PMA-209. PMA-273 will pay for installations.

(21) 2.1.9) DDS (DAU) Obsolescence: Funding FY2023 - FY2025 kit procurement to address hardware obsolescence on multiple Circuit Card Assemblies (CCA) within the Digital Data Set (DDS).

(22) 2.2.1) Subsystem ECPs non-recurring cost element encompasses multiple ECPs. Funding in FY 2021 - 2022 provided for VMTS Software Modification. Increase in FY 2024 - FY2025 supports non-recurring engineering for VMTS Obsolescence, YDC Obsolescence, and RADALT Obsolescence modifications.

(23) 2.2.2) DMSMS ECPs non-recurring cost element encompasses multiple ECPs.

(24) 2.2.4) ARC-182 Radio Obsolescence: non-recurring cost element is a combined accelerated effort with TACAN obsolescence.

(25) 2.2.5) TACAN Obsolescence: Non-recurring cost element is a combined accelerated effort with ARC-182 obsolescence.

(26) 2.2.7) DDS (DAU) Obsolescence: Funding in FY2021 to support non-recurring engineering to address hardware obsolescence that has been identified on multiple Circuit Card Assemblies (CCA) within the Digital Data Set (DDS).

(27) 1.1.5) HUD/PDU Obsolescence: Install schedule includes 193 aircraft units and 18 Ground Based Training System (GBTS) units.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 4 / Service Life Extension Program (SLEP) (022-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	165.354	34.571	39.628	37.697	0.000	37.697	40.161	50.551	44.324	52.696	99.048	564.030
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	165.354	34.571	39.628	37.697	0.000	37.697	40.161	50.551	44.324	52.696	99.048	564.030
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**165.354**	**34.571**	**39.628**	**37.697**	**0.000**	**37.697**	**40.161**	**50.551**	**44.324**	**52.696**	**99.048**	**564.030**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) funds modifications to the T-45 training system to address correction of deficiencies discovered in Service Life Assessment Program (SLAP), which identified risk areas that must be addressed in order to extend aircraft service life. Structural SLAP was completed during 1ST quarter 2012. Service Life Extension Program (SLEP): During Full Scale Development testing of the T45 aircraft it was determined that incorporation of redesigned components applicable to the critical load paths will significantly increase the service life of the aircraft. Correcting these areas is required to achieve the safe design life associated with the program of record. Non-Recurring Engineering for SLEP modifications determined changes required to improve structural details to increase aircraft service life to 21,600 flight hours at 150% Fatigue Life Expended (FLE). These SLEP modifications will enable Chief of Naval Air Training (CNATRA) pilot training requirements to be safely met until 2035. The other support in FY 2018 and beyond is to fund Government labor to perform engineering, test, logistics and financial management tasks, and to execute SLEP modifications associated with this OSIP. This support will be executed in accordance with the Financial Management Regulation and Naval Air Systems Command Policy.

Development Status/Major Milestones: Retrofit kit procurements and installations for SLEP modifications continue in FY 2021. The ILS in FY 2018 and beyond is to fund the Original Equipment Manufacturer technical support of SLEP installations and onsite engineering support to adjudicate any anomalies found during SLEP retrofit in order to prevent incorporation stoppages on aircraft undergoing SLEP modifications. Subsystems SLEP NRE is funded to begin in FY21 with kit procurements starting in FY23.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 4 / Service Life Extension Program (SLEP) (022-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capabilities	**Related RDT&E PEs:** 0702207N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Structural SLEP - NonOrganic [28] *Installation 1 of 1*	17 / 12.673	24 / 9.401	24 / 6.936	24 / 5.295	- / -	24 / 5.295	24 / 5.391	24 / 5.488	24 / 5.587	32 / 7.583	- / -	193 / 58.354
1.1.2) SLEP Wings - NonOrganic *Installation 1 of 1*	9 / 70.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 70.156
1.1.3) Subsytem SLEP - NonOrganic *Installation 1 of 1*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.920	24 / 5.009	48 / 7.648	97 / 11.800	193 / 29.377
1.1.4) Archived ECPs - Organic(*)	12 / 6.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.300
1.2.1) Structural SLEP NRE - Organic(*)	- / 28.353	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.353
1.2.2) SLEP Wings NRE - Organic(*)	- / 14.242	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.242
1.2.3) Subsystem SLEP NRE - Organic(*)	- / -	- / -	- / -	- / 1.100	- / -	- / 1.100	- / 2.700	- / 3.100	- / -	- / -	- / -	- / 6.900
Subtotal: Procurement	*- / 131.724*	*- / 9.401*	*- / 6.936*	*- / 6.395*	*- / -*	*- / 6.395*	*- / 8.091*	*- / 13.508*	*- / 10.596*	*- / 15.231*	*- / 11.800*	*- / 213.682*
Support												
2.2) Data	- / -	- / -	- / 0.300	- / 0.324	- / -	- / 0.324	- / 0.349	- / 0.376	- / 0.383	- / 0.390	- / 0.506	- / 2.628
2.4) Support Equipment [29]	- / 12.114	- / 2.070	- / 2.145	- / 2.184	- / -	- / 2.184	- / 2.223	- / 5.263	- / 1.743	- / 1.774	- / 1.774	- / 31.290
2.5) ILS [30]	- / 10.319	- / 12.397	- / 12.378	- / 9.855	- / -	- / 9.855	- / 10.033	- / 10.213	- / 10.397	- / 14.098	- / 31.752	- / 121.442
2.6) Other Support	- / 9.586	- / 5.290	- / 4.281	- / 4.345	- / -	- / 4.345	- / 4.609	- / 4.433	- / 4.571	- / 4.626	- / 13.653	- / 55.394
Subtotal: Support	*- / 32.019*	*- / 19.757*	*- / 19.104*	*- / 16.708*	*- / -*	*- / 16.708*	*- / 17.214*	*- / 20.285*	*- / 17.094*	*- / 20.888*	*- / 47.685*	*- / 210.754*
Installation												
Installation 1 of 1: GRP: SLEP Installs	- / 1.611	- / 5.413	- / 13.588	- / 14.594	- / 0.000	- / 14.594	- / 14.856	- / 16.758	- / 16.634	- / 16.577	- / 39.563	- / 139.594
Subtotal: Installation	*- / 1.611*	*- / 5.413*	*- / 13.588*	*- / 14.594*	*- / -*	*- / 14.594*	*- / 14.856*	*- / 16.758*	*- / 16.634*	*- / 16.577*	*- / 39.563*	*- / 139.594*
Total												
Total Cost (Procurement + Support + Installation)	**165.354**	**34.571**	**39.628**	**37.697**	**0.000**	**37.697**	**40.161**	**50.551**	**44.324**	**52.696**	**99.048**	**564.030**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 4 / Service Life Extension Program (SLEP) (022-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: SLEP Installs

Manufacturer Information

Manufacturer Name: Boeing - Structural SLEP, SLEP Wing and Subsystem SLEP [31]

Manufacturer Location: St. Louis

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: SLEP Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 1.611	6 / 5.413	13 / 8.538	1 / 0.334	0 / 0.000	1 / 0.334	1 / 0.340	2 / 0.600	1 / 0.300	- / -	0 / 0.000	26 / 17.136
FY 2019	- / -	- / -	4 / 5.050	20 / 11.883	0 / 0.000	20 / 11.883	- / -	- / -	- / -	- / -	0 / 0.000	24 / 16.933
FY 2020	- / -	- / -	- / -	4 / 2.377	0 / 0.000	4 / 2.377	20 / 12.097	- / -	- / -	- / -	0 / 0.000	24 / 14.474
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.419	20 / 12.314	- / -	- / -	0 / 0.000	24 / 14.733
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.464	20 / 12.536	- / -	0 / 0.000	24 / 15.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.380	24 / 3.798	20 / 12.763	0 / 0.000	48 / 17.941
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 3.814	20 / 12.762	48 / 16.576
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 22.532	80 / 22.532
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	97 / 4.269	97 / 4.269
Total	2 / 1.611	6 / 5.413	17 / 13.588	25 / 14.594	0 / 0.000	25 / 14.594	25 / 14.856	30 / 16.758	45 / 16.634	48 / 16.577	197 / 39.563	395 / 139.594

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	1	1	-	4	4	4	4	5	7	6	6	6	6	6	6	7	6	6	7	11	11	11	11	12	12	12	12	12	197	395
Out	2	1	1	-	-	4	4	5	4	5	6	6	6	6	6	6	7	6	6	7	7	10	11	11	12	11	12	12	12	209	395

Footnotes:

(28) 1.1.1) Structural SLEP: Decrease in unit cost starting in FY21 driven by reduced variability in aircraft incoming condition, stability of kits and minimum order quantity items already procured.

(29) 2.4) Support Equipment: Increase in FY23 is due to accompanying special tooling needed to complete the installations throughout the remainder of the SLEP installs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 4 / Service Life Extension Program (SLEP) (022-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(30) 2.5) ILS: Supports SLEP full rate retrofit and estimated number of engineering variations that will require OEM reachback and onsite engineering support. Associated growth is based on install schedule and is necessary to prevent work stoppages and delay to the mod line. FY2021 decrease is due to reduced variability in aircraft incoming condition, stability of kit parts, and anticipated reduction in the amount of OEM reachback required.

(31) Reflects 17 prior year procurment installations for Structural SLEP and 9 prior year procurement installations for SLEP Wings.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 5 / Required Avionics Sustainment Program (RASP) (006-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	42.352	30.086	13.098	17.122	0.000	17.122	13.394	13.946	7.550	13.158	7.475	158.181
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	42.352	30.086	13.098	17.122	0.000	17.122	13.394	13.946	7.550	13.158	7.475	158.181
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**42.352**	**30.086**	**13.098**	**17.122**	**0.000**	**17.122**	**13.394**	**13.946**	**7.550**	**13.158**	**7.475**	**158.181**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) funds modifications to the T-45 training system (T-45TS) in support of the Required Avionics Sustainment Program (RASP), which includes Automatic Dependent Surveillance-Broadcast (ADS-B Out) as Phase I of this effort.

The Federal Aviation Administration (FAA) has developed a plan to modernize the National Airspace System (NAS) in order to address the impact of air traffic growth in the United States. The FAA has mandated compliance with this plan by January 1, 2020. This plan, part of the FAA's Next Generation Air Transportation System (NextGen) Airspace, is intended to increase the air traffic capacity while at the same time improving safety and efficiency. In part, NextGen implements a process called Performance Based Navigation (PBN). In accordance with the concepts of PBN, an aircraft's navigation performance capability will be a determining factor as to whether or not it can fly within specific airspace, certain air traffic routes or instrument procedures. Also, NextGen transforms the NAS from a radar based system, with aircraft interrogation, to a satellite based system utilizing Automatic Dependent Surveillance-Broadcast (ADS-B) communication in order to transmit the aircraft's own position. In order for the T-45 to continue to have unrestricted access to the NAS through the year 2035, the T-45TS must be modified to avoid impacts to Chief of Naval Air Training (CNATRA) Strike Pilot and Naval Flight Officer (NFO) training.

Required Avionics Sustainment Program (RASP) Phase I ADS-B Out: The first Phase of RASP will modify the T-45 with ADS-B Out capability, in compliance with FAA NAS mandate stipulated in DoT/FAA, 14 CFR Part 91: ADS-B Out Performance Requirements to Support Air Traffic Control (ATC) Service Final Rule, May 28, 2010. This modification consists of the minimum required capability increase necessary to enable ADS-B Out, equipping 193 T-45 aircraft and 18 simulators to meet FAA NAS mandates. The ADS-B Out capability requires the modification of the existing antennas and the Mission Display Processor (MDP) Operational Flight Program (OFP) software as well as changes to the simulator and any associated support equipment. It also requires integration with the replacement to the Transponder (with associated data bus connectivity and control), changes to the pilot interface and the replacement Air Data Computer.

Phase II of the Required Avionics Sustainment Program (RASP) includes addressing obsolescence in the Multi-Function Color Displays (MFCD's) and incorporating Midair Collision Avoidance Capability (MCAC), which increases air traffic situational awareness, thereby reducing the potential for midair collisions. Automatic Dependent Surveillance Broadcast-In (ADS-B (In)) capability is an assumed enabler for MCAC.

Additionally, the T-45 Navigation source (Global Positioning System (GPS)) will be updated to address obsolescence. Replacement is necessary to ensure compliance with FAA NextGen requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY 2021 continues aircraft modification on the T-45TS for ADS-B Out and NextGen compliance and provides funding for integration and systems engineering in support of FAA certification.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 5 / Required Avionics Sustainment Program (RASP) (006-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T45TS	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capabilities	**Related RDT&E PEs:** 0603208N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) ADS-B Mod Kits - NonOrganic (32) *Installation 1 of 1*	87 / 1.262	84 / 1.260	- / -	22 / 0.336	- / -	22 / 0.336	- / -	- / -	- / -	- / -	- / -	193 / 2.858
1.1.2) GBTS - Organic(*)	12 / 0.271	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.271
1.2.1) A kit N/R - Organic(*)	- / 1.165	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.165
1.2.2) GBTS A Kit N/R - Organic(*)	- / 4.423	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.423
2.1.1) Transponder - Organic(*) (33)	84 / 11.334	84 / 12.915	- / -	9 / 2.723	- / -	9 / 2.723	- / -	- / -	- / -	- / -	- / -	177 / 26.972
2.1.2) GPS - Organic(*) (34)	- / -	35 / 4.875	35 / 4.963	35 / 5.052	- / -	35 / 5.052	35 / 5.143	35 / 5.984	18 / 2.741	- / -	- / -	193 / 28.758
2.1.3) Air Data Computer - Organic(*) (35)	84 / 8.479	84 / 7.305	- / -	25 / 2.662	- / -	25 / 2.662	- / -	- / -	- / -	- / -	- / -	193 / 18.446
2.2.1) B Kit N/R - Organic(*) (36)	- / 9.548	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.722	- / 10.715	- / -	- / 21.985
Subtotal: Procurement	*- / 36.482*	*- / 26.355*	*- / 4.963*	*- / 10.773*	*- / -*	*- / 10.773*	*- / 5.143*	*- / 5.984*	*- / 4.463*	*- / 10.715*	*- / 0.000*	*- / 104.878*
Support												
3.4) Support Equipment N/R	- / 0.355	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.355
3.5) Software	- / 0.363	- / 0.064	- / 2.479	- / 1.741	- / -	- / 1.741	- / 1.444	- / 1.470	- / -	- / -	- / -	- / 7.561
3.6) ILS	- / 3.185	- / 0.010	- / 1.080	- / 1.099	- / -	- / 1.099	- / 1.119	- / 1.139	- / 1.139	- / 0.854	- / 5.666	- / 15.291
3.7) Other Support	- / 1.967	- / 3.657	- / 4.313	- / 2.402	- / -	- / 2.402	- / 2.424	- / 2.465	- / 1.948	- / 1.589	- / 1.809	- / 22.574
Subtotal: Support	*- / 5.870*	*- / 3.731*	*- / 7.872*	*- / 5.242*	*- / -*	*- / 5.242*	*- / 4.987*	*- / 5.074*	*- / 3.087*	*- / 2.443*	*- / 7.475*	*- / 45.781*
Installation												
Installation 1 of 1: ADS-B Mod Kits	- / -	- / -	- / 0.263	- / 1.107	- / 0.000	- / 1.107	- / 3.264	- / 2.888	- / -	- / -	- / 0.000	- / 7.522
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.263*	*- / 1.107*	*- / -*	*- / 1.107*	*- / 3.264*	*- / 2.888*	*- / -*	*- / -*	*- / 0.000*	*- / 7.522*
Total												
Total Cost (Procurement + Support + Installation)	**42.352**	**30.086**	**13.098**	**17.122**	**0.000**	**17.122**	**13.394**	**13.946**	**7.550**	**13.158**	**7.475**	**158.181**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 5 / Required Avionics Sustainment Program (RASP) (006-16)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: ADS-B Mod Kits

Manufacturer Information

Manufacturer Name: Various - ADS-B [37]

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018		Oct 2020	Oct 2021			
Delivery Dates	Oct 2019		Oct 2021	Oct 2022			

Installation Information

Method of Implementation: [none specified]:: Installation Name: ADS-B Mod Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	7 / 0.263	29 / 1.107	0 / 0.000	29 / 1.107	51 / 1.982	- / -	- / -	- / -	0 / 0.000	87 / 3.352
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	33 / 1.282	51 / 2.018	- / -	- / -	0 / 0.000	84 / 3.300
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.870	- / -	- / -	0 / 0.000	22 / 0.870
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	7 / 0.263	29 / 1.107	0 / 0.000	29 / 1.107	84 / 3.264	73 / 2.888	- / -	- / -	0 / 0.000	193 / 7.522

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	2	1	2	7	7	7	8	21	21	21	21	25	26	11	11	-	-	-	-	-	-	-	-	-	193
Out	-	-	-	-	-	2	2	1	2	7	7	7	8	21	21	21	21	25	26	11	11	-	-	-	-	-	-	-	-	-	193

Footnotes:

[32] 1.1.1) ADS-B Mod Kits: The ADS-B Modification A Kit includes Transponder, Antenna, and Air Data Computer. FY 2020 kit buy shifted to FY 2021 to align with planned contract dates.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 5 / Required Avionics Sustainment Program (RASP) (006-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(33) 2.1.1) Transponder: Accelerated procurement to meet the ADS-B (Out) 01 Jan 2020 FAA mandate. FY 2020 kit buy shifted to FY 2021 to align with planned contract dates. In FY 2021 the quantity procured was reduced by 16 kits. 16 kits were previously procured by PMA209 and will be provided to PMA273. Installation will be funded by PMA273.

(34) 2.1.2) GPS: Procurement schedule updated to reflect Non Recurring Engineering delays

(35) 2.1.3) Air Data Computer: Accelerated procurement to meet the ADS-B (Out) 01 Jan 2020 FAA mandate. FY 2020 kit buy shifted to FY 2021 to align with planned contract dates.

(36) 2.2.1 B Kit N/R: Funding increased in FY 2024 and FY 2025 for Midair Collision Avoidance Capability (MCAC)/ADS-B In and Smart Display modification non-recurring engineering.

(37) FY2020 Kit buy shifted to FY2021 to align with planned contract dates

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	30.714	40.063	12.656	0.000	12.656	7.561	6.231	4.677	4.772	0.000	106.674
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	30.714	40.063	12.656	0.000	12.656	7.561	6.231	4.677	4.772	0.000	106.674
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**30.714**	**40.063**	**12.656**	**0.000**	**12.656**	**7.561**	**6.231**	**4.677**	**4.772**	**0.000**	**106.674**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) funds modifications to the T-45 training system to address aircrew physiological episodes (PE). PEs were increasing in number since formal reporting commenced in 2012, reaching a high of 10 events reported in a 30 day period in March 2017. PEs are currently trending down based on mitigation efforts to date. All aircraft systems that contribute to aircrew life support can be causal factors in physiological events. This includes the Onboard Oxygen Generating System (OBOGS) and all associated piping, valves, and monitors, the Environmental Control System (ECS), engine bleed air delivered to the OBOGS and ECS piping, and aircrew alerting systems to warn of failures. Modifications to the aircraft will focus on addressing the highest likelihood causal factors for PEs. These include, but are not limited to, an Automatic Backup Oxygen System (ABOS), new oxygen concentrator (GGU-25), new discrete pressure alerting, OBOGS component improvements to reduce pressure loss, ECS improvements to prevent rapid cockpit decompression, cabin altitude monitoring and alerting, and air quality monitoring and filtration. PE Mitigation efforts prior to FY 2019 were funded out of OSIP 008-95 Corrections of Deficiencies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY 2021 and out funds provide for non-recurring engineering, kit procurement, and installation in support of T-45 physiological episode mitigation. FY2021 request includes funding for Enhanced Emergency Oxygen System (EEOS) and the removal of the Advanced Bleed Air Shutoff Valve (BASOV).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45TS	**Modification Type:** PS Safety	**Related RDT&E PEs:** 0603208N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Automatic Backup Oxygen System - NonOrganic (38) *Installation 1 of 3*	- / -	84 / 19.054	84 / 22.045	16 / 2.661	- / -	16 / 2.661	- / -	- / -	- / -	- / -	- / -	184 / 43.760
1.1.2) Discrete Pressure Caution - NonOrganic (39) *Installation 2 of 3*	- / -	- / -	50 / 0.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.890
1.1.3) GGU-25 - Organic(*) (40)	- / -	96 / 1.000	97 / 1.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	193 / 2.018
1.2.1) Install Kits NR - Organic(*)	- / -	- / 0.763	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.763
2.1.1) Oxygen Concentrator- GGU-25 (Hypoxia Prevention) - NonOrganic (41) *Installation 3 of 3*	- / -	96 / 4.032	97 / 4.147	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	193 / 8.179
2.1.2) EEOS - Organic(*) (42)	- / -	- / -	193 / 0.940	193 / 0.957	- / -	193 / 0.957	- / -	- / -	- / -	- / -	- / -	386 / 1.897
2.2.1) Install Equipment N/R - Organic(*) (43)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000	- / 3.000	- / 3.000	- / 3.063	- / -	- / 10.063
Subtotal: Procurement	*- / 0.000*	*- / 24.849*	*- / 29.040*	*- / 3.618*	*- / -*	*- / 3.618*	*- / 1.000*	*- / 3.000*	*- / 3.000*	*- / 3.063*	*- / 0.000*	*- / 67.570*
Support												
3.3) Support Equipment N/R (44)	- / -	- / -	- / 0.439	- / 0.118	- / -	- / 0.118	- / -	- / -	- / -	- / -	- / -	- / 0.557
3.4) ILS (45)	- / -	- / -	- / 3.998	- / 2.478	- / -	- / 2.478	- / -	- / -	- / -	- / -	- / -	- / 6.476
3.5) Other Support	- / -	- / 5.865	- / 5.666	- / 1.574	- / -	- / 1.574	- / 1.598	- / 1.623	- / 1.677	- / 1.709	- / -	- / 19.712
Subtotal: Support	*- / 0.000*	*- / 5.865*	*- / 10.103*	*- / 4.170*	*- / -*	*- / 4.170*	*- / 1.598*	*- / 1.623*	*- / 1.677*	*- / 1.709*	*- / 0.000*	*- / 26.745*
Installation												
Installation 1 of 3: Automatic Backup Oxygen System	- / -	- / -	- / 0.920	- / 3.420	- / 0.000	- / 3.420	- / 3.482	- / 0.084	- / -	- / -	- / 0.000	- / 7.906
Installation 2 of 3: Discrete Pressure Caution	- / -	- / -	- / -	- / 1.448	- / 0.000	- / 1.448	- / -	- / -	- / -	- / -	- / 0.000	- / 1.448
Installation 3 of 3: Oxygen Concentrator- GGU-25 (Hypoxia Prevention)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.481	- / 1.524	- / -	- / -	- / 0.000	- / 3.005
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.920*	*- / 4.868*	*- / -*	*- / 4.868*	*- / 4.963*	*- / 1.608*	*- / -*	*- / -*	*- / 0.000*	*- / 12.359*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**30.714**	**40.063**	**12.656**	**0.000**	**12.656**	**7.561**	**6.231**	**4.677**	**4.772**	**0.000**	**106.674**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: Automatic Backup Oxygen System

Manufacturer Information

Manufacturer Name: Boeing - Automatic Backup Oxygen System (46) | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2019	Nov 2020	Nov 2021				
Delivery Dates	Aug 2020	Aug 2021	Aug 2022				

Installation Information

Method of Implementation: CONTRACT FIELD MODIFICATION TEAM:: Installation Name: Automatic Backup Oxygen System

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	23 / 0.920	70 / 2.850	0 / 0.000	70 / 2.850	- / -	- / -	- / -	- / -	0 / 0.000	93 / 3.770
FY 2020	- / -	- / -	- / -	14 / 0.570	0 / 0.000	14 / 0.570	70 / 2.902	- / -	- / -	- / -	0 / 0.000	84 / 3.472
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.580	2 / 0.084	- / -	- / -	0 / 0.000	16 / 0.664
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	23 / 0.920	84 / 3.420	0 / 0.000	84 / 3.420	84 / 3.482	2 / 0.084	- / -	- / -	0 / 0.000	193 / 7.906

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	2	7	14	21	21	21	21	21	21	21	21	2	-	-	-	-	-	-	-	-	-	-	-	-	193
Out	-	-	-	-	-	-	-	2	7	14	21	21	21	21	21	21	21	21	2	-	-	-	-	-	-	-	-	-	-	-	193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: Discrete Pressure Caution

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: ST. LOUIS, MO

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2020					
Delivery Dates		Aug 2021					

Installation Information

Method of Implementation: CONTRACT FIELD MODIFICATION TEAM:: Installation Name: Discrete Pressure Caution

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	50 / 1.448	0 / 0.000	50 / 1.448	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.448
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	50 / 1.448	0 / 0.000	50 / 1.448	- / -	- / -	- / -	- / -	0 / 0.000	50 / 1.448

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	13	13	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
Out	-	-	-	-	-	-	-	-	-	13	13	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: Oxygen Concentrator- GGU-25 (Hypoxia Prevention)

Manufacturer Information

Manufacturer Name: Cobham Group | Manufacturer Location: Davenport, IA

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2020	Nov 2021					
Delivery Dates	Oct 2021	Oct 2022					

Installation Information

Method of Implementation: CONTRACT FIELD MODIFICATION TEAM:: Installation Name: Oxygen Concentrator- GGU-25 (Hypoxia Preventio

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	96 / 1.481	- / -	- / -	- / -	0 / 0.000	96 / 1.481
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	97 / 1.524	- / -	- / -	0 / 0.000	97 / 1.524
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	96 / 1.481	97 / 1.524	- / -	- / -	0 / 0.000	193 / 3.005

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	24	24	24	24	25	24	-	-	-	-	-	-	-	-	-	193
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	24	24	24	24	25	24	-	-	-	-	-	-	-	-	193

Footnotes:

(38) 1.1.1) Automatic Backup Oxygen System: 9 of the 40 kits previously planned to be procured in OSIP 008-95 were procured in FY18, all remaining kits will be procured in OSIP 012-19. All 193 kits will be installed in OSIP 012-19 starting in FY2020. FY2019 and 2021 unit cost reduction is due to updated Independent Government Cost Estimate.

(39) 1.1.2) Discrete Pressure Caution: Required for the mitigation of T-45 physiological episodes. Only 50 kits required in FY20 due to ABOS including function of Discrete Pressure Caution.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 6 / Physiological Episode Mitigation (OSIP 012-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(40) 1.1.3) GGU-25: Kits added in FY2019 - FY2020 due to Commercial off the Shelf obsolescence issues which drove a change to acquisition strategy and dictated the A Kit requirement.

(41) 2.1.1) Oxygen Concentrator - GGU-25: FY2019 - FY2020 accelerated kit buy to deliver new concentrator to fleet.

(42) 2.1.2) EEOS: Funding in FY20 - FY21 supports procurement of Enhanced Emergency Oxygen Supply (EEOS) kits required for mitigation of T-45 physiological episodes. Two kits per aircraft are required.

(43) 2.2.1) Install Equipment N/R: Funding in FY 2022 - 2025 for non-recurring engineering in support of ECPs resulting from Physiological Mitigation (PE) root cause corrective actions.

(44) 3.3) Support Equipment N/R: Funding FY2020 - FY2021 for Automatic Backup Oxygen System (ABOS) Production Kits.

(45) 3.4) ILS: Funding in FY20-FY21 supports ABOS and estimated number of engineering variations that will require OEM reachback

(46) 9 ABOS Kits procured under OSIP 008-95 in FY 2018 will be installed in FY 2020 under OSIP 012-19.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 7 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	93.874	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	93.874
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	93.874	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	93.874
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**93.874**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**93.874**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 7 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 93.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 93.874
Subtotal: Procurement	*- / 93.874*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 93.874*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**93.874**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**93.874**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 8 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	10.520	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.520
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	10.520	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.520
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**10.520**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**10.520**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2020 enacted includes congressional rescissions of $10.52 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 8 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: N/A												
Subtotal: N/A	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Support *(All Modification Items)*												
3.1) FY 2020 Enacted Rescissions	- / -	- / 10.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.520
Subtotal: Support	- / 0.000	- / 10.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 10.520
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**10.520**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**10.520**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0569 / T-45 Series	**Modification Number / Title:** 8 / FY 2020 Enacted Rescissions

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: N/A

Manufacturer Information

Manufacturer Name: N/A | Manufacturer Location: N/A

Administrative Leadtime *(in Months)*: | Production Leadtime *(in Months)*:

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Support Only Installation | **Installation Quantity:** 0

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	654.693	25.043	16.136	24.633	0.000	24.633	26.046	23.911	24.013	24.652	17.225	836.352
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	654.693	25.043	16.136	24.633	0.000	24.633	26.046	23.911	24.013	24.652	17.225	836.352
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**654.693**	**25.043**	**16.136**	**24.633**	**0.000**	**24.633**	**26.046**	**23.911**	**24.013**	**24.652**	**17.225**	**836.352**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to all in-service aircraft engines. Power Plant Changes (PPC) are required throughout the service life of each aircraft to correct flight deficiencies and improve operational readiness while reducing engine operating costs. This program finances the procurement and installation of retrofit kits for all Navy and Marine Corp aircraft engines and related propulsion hardware such as propellers, starters and transmissions. The overall goal of the modifications budgeted is to continue modification efforts previously initiated on the engines for the AV-8B, F/A-18C/D & E/F, EA-18G, F-16, F-5, H-60, H-53, EA-6B, T-38, T-45, P-3, P-8A, E-2C, E-2D, C-2A, C-130, UH-1Y, AH-1Z, JSF, H-53 and AE1107C (V-22).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Power Plant Changes (Approx. 80% Safety, 20% Reliability)				- / 654.693	- / 25.043	- / 16.136	- / 24.633	- / 0.000	- / 24.633
P-40	**Total Gross/Weapon System Cost**				**- / 654.693**	**- / 25.043**	**- / 16.136**	**- / 24.633**	**- / 0.000**	**- / 24.633**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Power Plant Changes (Approx. 80% Safety, 20% Reliability)				- / 26.046	- / 23.911	- / 24.013	- / 24.652	- / 17.225	- / 836.352
P-40	**Total Gross/Weapon System Cost**				**- / 26.046**	**- / 23.911**	**- / 24.013**	**- / 24.652**	**- / 17.225**	**- / 836.352**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2021 funding for procurement and installation of retrofit kits for all Navy and Marine Corp aircraft engines and related propulsion hardware.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes	**Modification Number / Title:** 1 / Power Plant Changes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	654.693	25.043	16.136	24.633	0.000	24.633	26.046	23.911	24.013	24.652	17.225	836.352
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	654.693	25.043	16.136	24.633	0.000	24.633	26.046	23.911	24.013	24.652	17.225	836.352
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**654.693**	**25.043**	**16.136**	**24.633**	**0.000**	**24.633**	**26.046**	**23.911**	**24.013**	**24.652**	**17.225**	**836.352**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program corrects aircraft flight safety deficiencies, improves operational fleet readiness, and reduces engine total cost of ownership by incorporating approved power plant changes. Power plant changes are required throughout the aircraft service life as the engine ages and operationally revealed deficiencies are discovered, researched, and solutions engineered. Propulsion and Power (P&P) Component Improvement Program (CIP), which is funded in Research Development Test & Evaluation, Navy develops and demonstrates engineering solutions to these deficiencies and through the Engineering Change Proposal (ECP) process, initiates Power Plant Change. The Power Plant Change program procures the necessary retrofit kits, support equipment, kit installation and technical data. This program provides retrofit kits for all Navy and Marine Corp aircraft engines and propulsion related hardware such as propellers, starters, generators and transmissions. Reliability Improvements are designed to increase Mean Time Between Failure and Mean Time Between Engine Removal by 30% on average and are expected to generate savings /costs avoidance in excess of $50M annually. Aircraft engines included in Power Plant Change include: F402 Engine AV/8B, F404 Engine F/A18, F414 Engine F/A 18 E/F and EA-18G, AE1107 Engine V-22, T56 Engine P-3, C-2, E-2C/D and C130, T-64 Engine H-53, T700 Engine H-60, UH-1, CFM56-7B Engine P-8A, T408 Engine H-53K.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes	**Modification Number / Title:** 1 / Power Plant Changes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Power Plant Changes	**Modification Type:** Approx. 80% Safety, 20% Reliability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Power Plant Changes												
B Kits												
Recurring												
1.1.1) CFM 56-7B - NonOrganic	- / 3.051	- / 1.050	- / 0.549	- / 0.549	- / -	- / 0.549	- / 0.560	- / 0.571	- / 0.581	- / 0.593	- / 0.600	- / 8.104
1.1.2) F402 AV8B - NonOrganic (1)	- / 32.908	- / 1.731	- / 1.049	- / 1.833	- / -	- / 1.833	- / 1.849	- / 1.885	- / 1.923	- / 1.961	- / 2.000	- / 47.139
1.1.3) F404 F/A 18 - NonOrganic (2)	- / 34.615	- / 2.900	- / 1.606	- / 1.994	- / -	- / 1.994	- / 2.010	- / 2.050	- / 2.092	- / 2.132	- / 2.000	- / 51.399
1.1.4) F414 F/A 18 E/F - NonOrganic (3)	- / 28.546	- / 6.330	- / 2.244	- / 7.581	- / -	- / 7.581	- / 7.500	- / 5.001	- / 4.836	- / 5.205	- / 3.300	- / 70.543
1.1.5) T56 P3, C2, E2, C130 - NonOrganic	- / 65.863	- / 2.362	- / 1.660	- / 1.689	- / -	- / 1.689	- / 1.336	- / 1.362	- / 1.388	- / 1.415	- / 1.825	- / 78.900
1.1.6) T64 H53 - NonOrganic (4)	- / 48.095	- / 1.059	- / 0.419	- / 1.075	- / -	- / 1.075	- / 1.096	- / 1.118	- / 1.139	- / 1.161	- / 1.500	- / 56.662
1.1.7) T700 H60, AH-1 - NonOrganic (5)	- / 51.796	- / 1.554	- / 0.918	- / 1.575	- / -	- / 1.575	- / 1.606	- / 1.637	- / 1.669	- / 1.701	- / 1.750	- / 64.206
1.1.8) AE1107C (V-22) - NonOrganic (6)	- / 2.061	- / 1.754	- / 1.306	- / 1.952	- / -	- / 1.952	- / 1.969	- / 2.008	- / 2.047	- / 2.087	- / 2.500	- / 17.684
1.1.9) T408 (CH-53K) - NonOrganic (7)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.610	- / 1.641	- / 1.673	- / 1.705	- / 1.750	- / 8.379
1.1.10) Completed ECPs from prior years - NonOrganic	- / 245.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 245.065
Subtotal: Recurring	*- / 512.000*	*- / 18.740*	*- / 9.751*	*- / 18.248*	*- / -*	*- / 18.248*	*- / 19.536*	*- / 17.273*	*- / 17.348*	*- / 17.960*	*- / 17.225*	*- / 648.081*
Subtotal: Power Plant Changes	*- / 512.000*	*- / 18.740*	*- / 9.751*	*- / 18.248*	*- / -*	*- / 18.248*	*- / 19.536*	*- / 17.273*	*- / 17.348*	*- / 17.960*	*- / 17.225*	*- / 648.081*
Subtotal: Procurement, All Modification Items	*- / 512.000*	*- / 18.740*	*- / 9.751*	*- / 18.248*	*- / -*	*- / 18.248*	*- / 19.536*	*- / 17.273*	*- / 17.348*	*- / 17.960*	*- / 17.225*	*- / 648.081*
Support *(All Modification Items)*												
2.1) Data	- / 1.217	- / 0.056	- / 0.057	- / 0.057	- / -	- / 0.057	- / 0.058	- / 0.059	- / 0.060	- / 0.061	- / -	- / 1.625
2.2) Support equipment	- / 1.315	- / 0.056	- / 0.057	- / 0.057	- / -	- / 0.057	- / 0.058	- / 0.059	- / 0.060	- / 0.061	- / -	- / 1.723
2.3) ILS	- / 16.578	- / 1.832	- / 1.832	- / 1.832	- / -	- / 1.832	- / 1.868	- / 1.905	- / 1.910	- / 1.920	- / -	- / 29.677
2.4) Support Costs Other	- / 70.624	- / 2.454	- / 2.499	- / 2.499	- / -	- / 2.499	- / 2.548	- / 2.598	- / 2.610	- / 2.620	- / -	- / 88.452
Subtotal: Support	*- / 89.734*	*- / 4.398*	*- / 4.445*	*- / 4.445*	*- / -*	*- / 4.445*	*- / 4.532*	*- / 4.621*	*- / 4.640*	*- / 4.662*	*- / 0.000*	*- / 121.477*
Installation												
Modification Item 1 of 1: Power Plant Changes	- / 52.959	- / 1.905	- / 1.940	- / 1.940	- / 0.000	- / 1.940	- / 1.978	- / 2.017	- / 2.025	- / 2.030	- / 0.000	- / 66.794
Subtotal: Installation	*- / 52.959*	*- / 1.905*	*- / 1.940*	*- / 1.940*	*- / -*	*- / 1.940*	*- / 1.978*	*- / 2.017*	*- / 2.025*	*- / 2.030*	*- / 0.000*	*- / 66.794*
Total												
Total Cost (Procurement + Support + Installation)	**654.693**	**25.043**	**16.136**	**24.633**	**0.000**	**24.633**	**26.046**	**23.911**	**24.013**	**24.652**	**17.225**	**836.352**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes	**Modification Number / Title:** 1 / Power Plant Changes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Power Plant Changes

Manufacturer Information

Manufacturer Name: Various PPC [8]	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: See Notes:: Installation Name: Power Plant Installations

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	0 / 52.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 52.959
FY 2019	- / -	0 / 1.905	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 1.905
FY 2020	- / -	- / -	0 / 1.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / 1.940
FY 2021	- / -	- / -	- / -	0 / 1.940	0 / 0.000	0 / 1.940	- / -	- / -	- / -	- / -	0 / 0.000	- / 1.940
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.978	- / -	- / -	- / -	0 / 0.000	- / 1.978
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.017	- / -	- / -	0 / 0.000	- / 2.017
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.025	0 / 2.030	0 / 0.000	- / 4.055
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 52.959	0 / 1.905	0 / 1.940	0 / 1.940	0 / 0.000	0 / 1.940	0 / 1.978	0 / 2.017	0 / 2.025	0 / 2.030	0 / 0.000	- / 66.794

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Footnotes:

(1) FY20-FY21 increase due to F402 AV8B kits procurements of the Low Pressure Compressor (LPC) vanes and disks.

(2) FY20-FY21 increase due to F404 F/A 18 hardware purchase of electrical diagnostic support equipment.

(3) FY20-FY21 increase due to F414 F/A 18 E/F support of engine coupling components. Decrease between FY22-FY23 due to quantity reduction of A-18 Afterburner Spray Bar Kits.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0570 / Power Plant Changes	**Modification Number / Title:** 1 / Power Plant Changes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(4) FY20-FY21 increase to perform configuration control efforts for the implementation of changes to the Prognostic Diagnostic Based Management (PDBM) software implementation for fleet incorporation for T64.

(5) FY20-FY21 increase due to Improved Input Module Accelerometer kits for MH-60R/S aircraft.

(6) FY20-FY21 increase due to Nacelle blower improvement kits.

(7) Increase in FY2022: The CH-53K will IOC in Fiscal Year 2021. RDT&E CIP investments will begin in 2019; we expect that design changes will result in the requirement for retrofit kits around 2022.

(8) Admin and Production Leadtimes are averages with various contract and delivery dates.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 560

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	62.055	26.470	21.824	22.682	0.000	22.682	27.608	27.525	31.872	32.745	-	252.781
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	62.055	26.470	21.824	22.682	0.000	22.682	27.608	27.525	31.872	32.745	-	252.781
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**62.055**	**26.470**	**21.824**	**22.682**	**0.000**	**22.682**	**27.608**	**27.525**	**31.872**	**32.745**	**-**	**252.781**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the Joint Primary Aircraft Training System (JPATS). JPATS is a joint, United States Air Force led, acquisition program. Principal JPATS mission is primary training for entry-level student pilots, associated instructor pilots, and primary/intermediate training for United States Navy Naval Flight Officers. JPATS includes the T-6 Texan II, aircraft and Ground Based Training Devices (GBTS) which is a stepped tandem seat, commercially derived aircraft powered by a single turboprop engine.

The overall goal of modifications budgeted is to correct discrepancies, deficiencies and obsolescence discovered after the delivery of the aircraft and to commence upgrades to avionic systems for FAA compliance. Efforts include modifications to address safety, reliability, maintainability, obsolescence and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to avionics systems, may also be driven by new Cyber Security requirements.

Current (FY 2019) Navy T-6 inventory is 294 aircraft (43 T-6A and 251 T-6B aircraft) with aircraft service life thru 2035. The Department of the Navy received delivery of final production Aircraft in 2016. Navy JPATS inventory includes 34 Ground Based Trainer System (GBTS) units (7 T-6A and 27 T-6B representative systems).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 560

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04) (PS Safety)				- / 46.303	- / 10.796	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16) (Safety, Reliability, Improved Mission Capabilities)				- / 15.752	- / 15.674	- / 4.063	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20) (Flight Safety)				- / 0.000	- / 0.000	- / 11.019	- / 4.275	- / 0.000	- / 4.275
P-3a	4 / AIRFRAME/PROPULSION (OSIP 008-20) (PS Safety)				- / 0.000	- / 0.000	- / 4.927	- / 3.881	- / 0.000	- / 3.881
P-3a	5 / AVIONICS (OSIP 009-20) (Safety, Reliability, Improved Mission Capabilities)				- / 0.000	- / 0.000	- / 1.815	- / 14.526	- / 0.000	- / 14.526
P-40	**Total Gross/Weapon System Cost**				**- / 62.055**	**- / 26.470**	**- / 21.824**	**- / 22.682**	**- / 0.000**	**- / 22.682**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04) (PS Safety)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 57.099
P-3a	2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16) (Safety, Reliability, Improved Mission Capabilities)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 35.489
P-3a	3 / PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20) (Flight Safety)				- / 4.091	- / 4.168	- / 10.913	- / 10.645	- / 0.000	- / 45.111
P-3a	4 / AIRFRAME/PROPULSION (OSIP 008-20) (PS Safety)				- / 6.427	- / 8.850	- / 10.146	- / 14.255	- / 0.000	- / 48.486
P-3a	5 / AVIONICS (OSIP 009-20) (Safety, Reliability, Improved Mission Capabilities)				- / 17.090	- / 14.507	- / 10.813	- / 7.845	- / 0.000	- / 66.596
P-40	**Total Gross/Weapon System Cost**				**- / 27.608**	**- / 27.525**	**- / 31.872**	**- / 32.745**	**- / -**	**- / 252.781**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funding in FY 2021 is required for Physiological Episode Mitigation, avionics/airframe/propulsion upgrade kits, and to provide support for Joint Primary Aircraft Training System retrofits.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 1 / JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	46.303	10.796	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.099
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	46.303	10.796	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.099
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**46.303**	**10.796**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.099**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds correction of deficiencies discovered during test and evaluation or operational use to the entire airframe, its components and subassemblies, avionics, related Peculiar Support Equipment, and Ground Based Training Systems.

This OSIP includes modifications to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to avionic systems, may also be driven by new Cyber Security requirements.

Correction of Deficiencies Engineering Change Proposals (ECPs) include: Airframe Structural/Sub-systems; Auto Ignition Relay; Avionics Obsolescence; Onboard Oxygen Generating System; Avionics Hardware/Software Modifications; System Safety Avionics; Controlled Flight Into Terrain Prevention and Crash Survivable Cockpit Voice Recorder; and Safe Arm Handle.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Beginning in FY 2020 budget request JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04) has been broken out between OSIPs Physiological Episodes (OSIP 007-20), Airframe/Propulsion (008-20), and Avionics (009-20), to better align with the program.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 1 / JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6 A/B	**Modification Type:** PS Safety	**Related RDT&E PEs:** 0603208N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Archived ECPs - Organic(*)	- / 16.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.329
1.2.1) Non-recurring Engineering - Organic(*)	- / 0.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.269
2.1.1) Auto Ignition Relay - Organic(*)	144 / 0.185	150 / 0.117	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	294 / 0.302
2.1.2) Avionics Obsolescence - Organic(*)	10 / 0.037	- / 0.961	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.998
2.1.3) Onboard Oxygen Generating System - Concentrator - Organic(*)	98 / 4.062	116 / 2.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	214 / 6.112
2.1.4) Wing Rib 1 - Organic(*) (1)	- / -	30 / 0.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.060
2.1.5) Head Up Display - Organic(*)	- / -	14 / 1.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.725
2.1.6) Archived ECPs - Organic(*)	- / 14.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.136
2.2.1) Non-recurring Engineering - Organic(*) (2)	- / 0.326	- / 2.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.678
Subtotal: Procurement	*- / 35.344*	*- / 7.265*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 42.609*
Support												
3.2) ILS	- / 0.870	- / 0.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.985
3.3) Other Support	- / 7.863	- / 3.416	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.279
3.4) Training Equipment	58 / 0.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 0.284
3.5) Support Equipment	- / 0.048	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.048
3.7) DAWDF Realignment	- / 1.894	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.894
Subtotal: Support	*- / 10.959*	*- / 3.531*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 14.490*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**46.303**	**10.796**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**57.099**

Footnotes:

(1) 2.2.1) Quantity decreased from 56 to 30

(2) 2.2.1) Non-recurring Engineering (NRE): FY 2020 NRE was decreased compared to FY 2019 budget request due to realigning NRE to new OSIPs (007-20, 008-20, and 009-20)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	15.752	15.674	4.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.489
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	15.752	15.674	4.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35.489
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**15.752**	**15.674**	**4.063**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**35.489**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds upgrades to avionic systems necessary for compliance with Federal Aviation Administration 28 May 2010 release DoT/FAA, 14 CFR Part 91: Automated Dependent Surveillance Broadcast (ADS-B) Out performance requirements to support Air Traffic Control (ATC) service final rule. This mandate stipulates that all aircraft required to have unrestricted access to operate in Classes A, B, and C airspace, certain Class E airspace, and other specified airspace requiring ADS-B Out, must be in compliance with this regulation by January 1, 2020.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: System development efforts for this update commenced in FY 2015, with hardware development costs reflected in R-1 Line #90. Non-recurring engineering and support efforts for Engineering Change Proposal development and implementation has commenced.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6 A/B	**Modification Type:** Safety, Reliability, Improved Mission Capabilities	**Related RDT&E PEs:** 0603208N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Aircraft Retrofit kits (T-6A) - Organic(*) (3)	- / -	43 / 1.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 1.348
1.1.2) GBTS Kits (T-6A) - Organic(*) (4)	- / -	7 / 0.071	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.071
1.1.3) Aircraft Retrofit Kits (T-6B) - NonOrganic (5) *Installation 1 of 1*	121 / 8.775	104 / 7.297	24 / 1.672	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	249 / 17.744
1.1.4) GBTS Kits (T-6B) - NonOrganic *Installation 1 of 1*	27 / 0.795	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.795
1.2.1) Non-Recurring Engineering - Organic(*)	- / 0.019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.019
Subtotal: Procurement	*- / 9.589*	*- / 8.716*	*- / 1.672*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 19.977*
Support												
2.3) Support Equipment	- / 0.010	- / 0.006	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.016
2.5) ILS	- / 0.138	- / 0.092	- / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.328
2.6) Other Support (6)	- / 3.217	- / 2.667	- / 0.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.505
Subtotal: Support	*- / 3.365*	*- / 2.765*	*- / 0.719*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 6.849*
Installation												
Installation 1 of 1: GRP: Install Aircraft Retrofit Kits & GBTS - T-6B	- / 2.798	- / 4.193	- / 1.672	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.663
Subtotal: Installation	*- / 2.798*	*- / 4.193*	*- / 1.672*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.663*
Total												
Total Cost (Procurement + Support + Installation)	**15.752**	**15.674**	**4.063**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**35.489**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: Install Aircraft Retrofit Kits & GBTS - T-6B

Manufacturer Information

Manufacturer Name: Dyncorp International ADS-B Out (7)

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018	Oct 2019					
Delivery Dates	Jan 2019	Jan 2020					

Installation Information

Method of Implementation: Contractor Field Mods:: Installation Name: Install Aircraft Retrofit Kits & GBTS - T-6B

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	121 / 2.798	27 / 0.886	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	148 / 3.684
FY 2019	- / -	78 / 3.307	26 / 0.906	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	104 / 4.213
FY 2020	- / -	- / -	24 / 0.766	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.766
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	121 / 2.798	105 / 4.193	50 / 1.672	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	276 / 8.663

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	121	27	26	26	26	26	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276
Out	121	27	26	26	26	26	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276

Footnotes:

(3) Unit cost increase due to acceptance test procedures.

(4) 1.1.2) GBTS Kits (T-6A): Due to different unit costs for the aircraft retrofit and Ground Based Training System (GBTS) kits, a separate GBTS kit line was added to the P3A to price out costs individually.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 2 / AVIONICS UPGRADES FAA COMPLIANCE (OSIP 007-16)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(5) (5) 1.1.3) Aircraft Retrofit Kits (T-6B): A total quantity of 249 retrofit kits are expected to be procured under this Operational Safety Improvement Program. Quantity of 2 test articles installed under development efforts are expected to remain on aircraft for a total of 251 T-6B aircraft. (6) 2.6) Other Support: Automated Dependent Surveillance Broadcast Out modifications that are specific to T-6B aircraft. Support includes, contracting support and Joint Support costs to the United States Air Force. Navy also provides support to Joint program acquisition efforts for T-6A aircraft. (7) Installation T-6B: T-6B Installation schedule, grouped, to include both T-6B Retrofit and GBTS kits. Kits are being bought by Textron Aviation - Defense then Dyncorp International install kits on aircraft.

(6) 2.6) Other Support: Automated Dependent Surveillance Broadcast Out modifications that are specific to T-6B aircraft. Support includes, contracting support and Joint Support costs to the United States Air Force. Navy also provides support to Joint program acquisition efforts for T-6A aircraft.

(7) Installation T-6B: T-6B Installation schedule, grouped, to include both T-6B Retrofit and GBTS kits. Kits are being bought by Textron Aviation - Defense then Dyncorp International install kits on aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 3 / PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	11.019	4.275	0.000	4.275	4.091	4.168	10.913	10.645	0.000	45.111
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	11.019	4.275	0.000	4.275	4.091	4.168	10.913	10.645	0.000	45.111
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**11.019**	**4.275**	**0.000**	**4.275**	**4.091**	**4.168**	**10.913**	**10.645**	**0.000**	**45.111**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety and Improvement Program (OSIP) funds modifications to the T-6 training system to address aircrew physiological episodes (PE). PEs have been increasing in number since formal reporting commenced in 2012. All aircraft systems that contribute to aircrew life support can be causal factors in physiological events. This includes the Onboard Oxygen Generating System (OBOGS) and all associated piping, valves, and monitors, the Environmental Control System (ECS), engine bleed air delivered to the OBOGS and ECS piping, and aircrew alerting systems to warn of failures. Modifications to the aircraft will focus on addressing the highest likelihood causal factors for PEs. These include a new next generation oxygen concentrator, new discrete pressure alerting, OBOGS component improvements to reduce pressure loss, ECS improvements to prevent rapid cockpit decompression, cabin altitude monitoring and alerting, and air quality monitoring and filtration. PE Mitigation efforts prior to FY 2020 were funded out of OSIP 011-04 Corrections of Deficiencies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: FY 2020 and out funds provide for non-recurring engineering, kit procurement, and installation in support of T-6 physiological episode mitigation.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 3 / PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6A/B	**Modification Type:** Flight Safety	**Related RDT&E PEs:** 0603208N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)												
B Kits												
Recurring												
2.1.1) OBOGS Concentrator - Organic [8]	- / -	- / -	162 / 2.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	162 / 2.920
2.1.2) OBOGS Concentrator Next Generation - Organic [9]	- / -	- / -	- / -	98 / 2.992	- / -	98 / 2.992	98 / 2.876	98 / 2.857	- / -	- / -	- / -	294 / 8.725
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 2.920*	*- / 2.992*	*- / -*	*- / 2.992*	*- / 2.876*	*- / 2.857*	*- / -*	*- / -*	*- / 0.000*	*- / 11.645*
Non-Recurring												
2.2.1) Non-recurring Engineering - Organic [10]	- / -	- / -	- / 6.841	- / -	- / -	- / -	- / -	- / -	- / 10.913	- / 10.645	- / -	- / 28.399
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 6.841*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.913*	*- / 10.645*	*- / 0.000*	*- / 28.399*
Subtotal: PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)	*- / -*	*- / -*	*162 / 9.761*	*98 / 2.992*	*- / -*	*98 / 2.992*	*98 / 2.876*	*98 / 2.857*	*- / 10.913*	*- / 10.645*	*- / -*	*456 / 40.044*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 9.761*	*- / 2.992*	*- / -*	*- / 2.992*	*- / 2.876*	*- / 2.857*	*- / 10.913*	*- / 10.645*	*- / 0.000*	*- / 40.044*
Support *(All Modification Items)*												
3.2) ILS	- / -	- / -	- / 0.090	- / 0.092	- / -	- / 0.092	- / 0.094	- / 0.096	- / -	- / -	- / -	- / 0.372
3.3) Other Support	- / -	- / -	- / 1.168	- / 1.191	- / -	- / 1.191	- / 1.121	- / 1.215	- / -	- / -	- / -	- / 4.695
Subtotal: Support	*- / 0.000*	*- / -*	*- / 1.258*	*- / 1.283*	*- / -*	*- / 1.283*	*- / 1.215*	*- / 1.311*	*- / -*	*- / -*	*- / 0.000*	*- / 5.067*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**11.019**	**4.275**	**0.000**	**4.275**	**4.091**	**4.168**	**10.913**	**10.645**	**0.000**	**45.111**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 3 / PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: PHYSIOLOGICAL EPISODE MITIGATION (OSIP 007-20)

Footnotes:

(8) 2.1.1) Onboard Oxygen Generating System - Concentrator: Effort migrated from OSIP 011-04. Effort was executed from OSIP 011-04 in FY2018 and FY2019. Installation will be provided by our Contractor Logistics Service provider, installation is under 25 hours so no installation funding is required. The new Type-0106A Oxygen Concentrator is required to modernize the T-6 OBOGS system and reduce PE events. The USAF has decided not to purchase this model concentrator and this will increase the unit cost. In addition, there are currently 100 Type-0106 models in service/inventory that will require funding for material modifications to upgrade to the Type-0106A standard. Additional Field Downloadable Data (FDD) Test Sets may also be purchased to support the Type-0106A in the field.

(9) 2.1.2 OBOGS Concentrator Next Generation - Incorporates the latest understanding of MIL-STD requirements. Utilizes advanced electronic controls with the latest software development. It's a field maintainable Line Replaceable Unit (LRU) design, built in troubleshooting, and allows internal data recording of performance and exporting to a future onboard crash survivable recorder. Twelve prototypes are currently in testing. Planned production to begin in 3Q2020, and delivery in 1Q2021.

(10) 2.2.1 Non-Recurring Engineering will engineer, test and evaluate a myriad of OBOGS initiatives to address ongoing T-6 aircrew PE concerns.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 4 / AIRFRAME/PROPULSION (OSIP 008-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	4.927	3.881	0.000	3.881	6.427	8.850	10.146	14.255	0.000	48.486
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	4.927	3.881	0.000	3.881	6.427	8.850	10.146	14.255	0.000	48.486
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**4.927**	**3.881**	**0.000**	**3.881**	**6.427**	**8.850**	**10.146**	**14.255**	**0.000**	**48.486**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds airframe, prevention modifications and propulsion discovered during test and evaluation or operational use to the entire airframe, its components and subassemblies, related Peculiar Support Equipment, and Ground Based Training Systems.

This OSIP includes modifications to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to the airframe, may also be driven by propulsion requirements.

Airframe/Propulsion Engineering Change Proposals (ECPs) include: Airframe Structural/Sub-systems modifications; Auto Ignition Relay; Landing Gear Control Handle redesign; and future propulsion modifications.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Continued service life extension of aircraft by continuing incorporation of Engineering Change Proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 4 / AIRFRAME/PROPULSION (OSIP 008-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6 A/B	**Modification Type:** PS Safety	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Canopy Fracturing Initiation System (CFIS) - Ballistic - Organic(*) (11)	- / -	- / -	- / -	115 / 0.050	- / -	115 / 0.050	- / -	- / -	- / -	- / -	- / -	115 / 0.050
2.1.1) Airframe Structural/Sub-systems - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	115 / 1.890	145 / 2.431	34 / 0.581	- / -	- / -	294 / 4.902
2.1.2) Safe Arm Handle Retrofit - Organic (12) *Installation 1 of 1*	- / -	- / -	73 / 0.146	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	73 / 0.146
2.1.3) Braking System Deficiency - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	45 / 2.711	78 / 4.699	134 / 7.805	37 / 2.155	- / -	294 / 17.370
2.1.4) Wing Rib 1 - Organic(*)	- / -	- / -	- / -	82 / 0.164	- / -	82 / 0.164	83 / 0.166	- / -	- / -	- / -	- / -	165 / 0.330
2.2.1) Non-Recurring Engineering - Organic(*)	- / -	- / -	- / 3.000	- / 1.810	- / -	- / 1.810	- / -	- / -	- / -	- / 6.500	- / -	- / 11.310
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 3.146*	*- / 2.024*	*- / -*	*- / 2.024*	*- / 4.767*	*- / 7.130*	*- / 8.386*	*- / 8.655*	*- / 0.000*	*- / 34.108*
Support												
3.2) ILS	- / -	- / -	- / 0.090	- / 0.100	- / -	- / 0.100	- / 0.115	- / 0.120	- / 0.125	- / 1.100	- / -	- / 1.650
3.3) Other Support	- / -	- / -	- / 1.691	- / 1.757	- / -	- / 1.757	- / 1.545	- / 1.600	- / 1.635	- / 4.500	- / -	- / 12.728
Subtotal: Support	*- / 0.000*	*- / -*	*- / 1.781*	*- / 1.857*	*- / -*	*- / 1.857*	*- / 1.660*	*- / 1.720*	*- / 1.760*	*- / 5.600*	*- / 0.000*	*- / 14.378*
Installation												
Installation 1 of 1: Safe Arm Handle Retrofit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**4.927**	**3.881**	**0.000**	**3.881**	**6.427**	**8.850**	**10.146**	**14.255**	**0.000**	**48.486**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 4 / AIRFRAME/PROPULSION (OSIP 008-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: Safe Arm Handle Retrofit

Manufacturer Information

Manufacturer Name: Textron Aviation - Defense, Inc - Safe Arm Handle | Manufacturer Location: Witchta, Kansas

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Field Modification:: Installation Name: Safe Arm Handle Retrofit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0

Footnotes:

(11) 1.1.1) Canopy Fracturing Initiation System (CFIS) - Ballistic previously procured and installed under OSIP 011-04. Due to aircraft availability remaining retrofit kits will not be procured to FY2021.

(12) 2.1.2) Received Safe Armed Handle requirement Rescission Letter

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 5 / AVIONICS (OSIP 009-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	1.815	14.526	0.000	14.526	17.090	14.507	10.813	7.845	0.000	66.596
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	1.815	14.526	0.000	14.526	17.090	14.507	10.813	7.845	0.000	66.596
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**1.815**	**14.526**	**0.000**	**14.526**	**17.090**	**14.507**	**10.813**	**7.845**	**0.000**	**66.596**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) funds avionics upgrades discovered during test and evaluation or operational use to the entire avionics, its components and subassemblies, related Peculiar Support Equipment, and Ground Based Training Systems.

This OSIP includes modifications to address safety, reliability, maintainability, obsolescence, and Diminishing Manufacturing Source (DMSMS) requirements. Modifications, particularly to avionic systems, may also be driven by new Cyber Security requirements.

Avionics Engineering Change Proposals (ECPs) include: Auto Ignition Relay; Avionics Hardware/Software Modifications; System Safety Avionics; Controlled Flight Into Terrain Prevention and Crash Survivable Cockpit Voice Recorder.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Continued avionics extension by continuing incorporation of Engineering Change Proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 5 / AVIONICS (OSIP 009-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6 A/B	**Modification Type:** Safety, Reliability, Improved Mission Capabilities	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.2) Controlled Flight Into Terrain Avoidance - Organic(*)	- / -	- / -	- / -	99 / 4.054	- / -	99 / 4.054	87 / 3.654	66 / 2.869	42 / 1.434	- / -	- / -	294 / 12.011
2.1.3) Safety System Compliance Retrofit - Organic(*) (13)	- / -	- / -	- / -	- / -	- / -	- / -	54 / 1.264	102 / 2.434	72 / 1.753	66 / 1.675	- / -	294 / 7.126
2.1.4) Crash Survivable Cockpit Recorder - NonOrganic *Installation 1 of 1*	- / -	- / -	- / -	99 / 5.940	- / -	99 / 5.940	87 / 4.206	66 / 2.904	42 / 1.472	- / -	- / -	294 / 14.522
2.1.5) Safety System Complaince GBTS - Organic(*) (14)	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.304	14 / 0.334	7 / 0.170	- / -	- / -	34 / 0.808
2.1.6) Avionics Obsolence - Organic(*) (15)	- / -	- / -	- / -	- / -	- / -	- / -	91 / 1.348	90 / 1.360	79 / 1.217	34 / 0.534	- / -	294 / 4.459
2.2.1) Non-recurring Engineering - Organic(*) (16)	- / -	- / -	- / 0.407	- / 1.058	- / -	- / 1.058	- / 1.859	- / 0.895	- / -	- / -	- / -	- / 4.219
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 0.407*	*- / 11.052*	*- / -*	*- / 11.052*	*- / 12.635*	*- / 10.796*	*- / 6.046*	*- / 2.209*	*- / 0.000*	*- / 43.145*
Support												
3.2) ILS	- / -	- / -	- / 0.090	- / 0.100	- / -	- / 0.100	- / 0.105	- / 0.110	- / 0.115	- / 1.100	- / -	- / 1.620
3.3) Other Support	- / -	- / -	- / 1.318	- / 1.434	- / -	- / 1.434	- / 1.259	- / 1.284	- / 2.735	- / 4.536	- / -	- / 12.566
Subtotal: Support	*- / 0.000*	*- / -*	*- / 1.408*	*- / 1.534*	*- / -*	*- / 1.534*	*- / 1.364*	*- / 1.394*	*- / 2.850*	*- / 5.636*	*- / 0.000*	*- / 14.186*
Installation												
Installation 1 of 1: Crash Survivable Cockpit Recorder	- / -	- / -	- / -	- / 1.940	- / 0.000	- / 1.940	- / 3.091	- / 2.317	- / 1.917	- / -	- / 0.000	- / 9.265
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 1.940*	*- / -*	*- / 1.940*	*- / 3.091*	*- / 2.317*	*- / 1.917*	*- / -*	*- / 0.000*	*- / 9.265*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**1.815**	**14.526**	**0.000**	**14.526**	**17.090**	**14.507**	**10.813**	**7.845**	**0.000**	**66.596**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 5 / AVIONICS (OSIP 009-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 1: Crash Survivable Cockpit Recorder

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates			Apr 2021	Apr 2022	Apr 2023	Apr 2024	

Installation Information

Method of Implementation: Contractor Field Modification:: Installation Name: Crash Survivable Cockpit Recorder

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	54 / 1.940	0 / 0.000	54 / 1.940	45 / 1.151	- / -	- / -	- / -	0 / 0.000	99 / 3.091
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.940	42 / 1.158	- / -	- / -	0 / 0.000	87 / 3.098
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 1.159	27 / 0.958	- / -	0 / 0.000	66 / 2.117
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.959	- / -	0 / 0.000	42 / 0.959
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	54 / 1.940	0 / 0.000	54 / 1.940	90 / 3.091	81 / 2.317	69 / 1.917	- / -	0 / 0.000	294 / 9.265

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	27	27	22	23	23	22	22	20	20	19	19	8	21	21	-	-	-	-	-	294
Out	-	-	-	-	-	-	-	-	-	-	-	27	27	22	23	23	22	22	20	20	19	19	8	21	21	-	-	-	-	-	294

Footnotes:

(13) 2.1.3) Safety System Compliance Retrofit - Quantity includes all T-6A and T-6B. Office of the Chief of Naval Operations (OPNAV) and USAF Joint Program office mandate incorporation of Safety of Flight issues.

(14) 2.1.5) Safety System Compliance GBTS - Quantity Includes GBTS for T-6A and T-6B

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0571 / JT Primary Acft Trnr Sys (JPATS)	**Modification Number / Title:** 5 / AVIONICS (OSIP 009-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(15) 2.1.6) Avionics Obsolescence: Modifications to the avionics will be required to upgrade the electronic flight instrument displays, Altitude and Heading Reference (AHRS) controller, Midair Collision Avoidance, Military Flight Operations Quality Assurance (MFOQA) and backup flight instruments and those avionic components associated with the affected aircraft systems to include associated software updates. Previously budgeted under OSIP 011-04.

(16) 2.2.1 increase in FY21 is due to the start of 2.1.2) Controlled Flight Into Terrain Avoidance and 2.1.4) and Crash Survivable Cockpit Recorder. To ensure performance of production components.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	20.368	15.864	39.762	40.401	0.000	40.401	2.658	5.868	6.007	6.145	10.299	147.372
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	20.368	15.864	39.762	40.401	0.000	40.401	2.658	5.868	6.007	6.145	10.299	147.372
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**20.368**	**15.864**	**39.762**	**40.401**	**0.000**	**40.401**	**2.658**	**5.868**	**6.007**	**6.145**	**10.299**	**147.372**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line item supports Physiological Episodes (PE) starting in FY 2019. PE is a continuation of efforts previously funded in BLI 0525 F/A-18 Series and BLI 0569 T-45 Series. Oxygen System Upgrades incorporates Aircrew Oxygen System related modifications to all USN/USMC fixed wing aircraft.

This line item funds Aircraft Integration Modifications for the Enhanced Visual Acuity (EVA) program for USN/USMC Rotary Wing and Tilt Rotor Aircraft and Aircrew Oxygen System related modifications for Physiological Episode (PE) program for fixed wing aircraft. This line item will also be utilized for future Aviation Life Support Modifications as required.

Current aviation life support equipment (ALSE) flight vests worn by HMLA aircrew have excessive bulk which can impede the performance of precision mission tasks. HQMC Aviation has a requirement for a modular aviator body armor vest (ABAV) system capable of being configured for specific airframes (UH-1Y, AH-1Z) that operate over land and water.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / 003-19 Physiological Episodes (Performance Enhancement)				- / 0.000	- / 15.864	- / 37.562	- / 40.401	- / 0.000	- / 40.401
P-3a	2 / 002-23 Enhanced Visual Acuity Mods (Performance Enhancement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / H-1 Vest 019-20 (Performance Enhancement)				- / 0.000	- / 0.000	- / 2.200	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / Inactive OSIPs (N/A)				- / 20.368	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 20.368**	**- / 15.864**	**- / 39.762**	**- / 40.401**	**- / 0.000**	**- / 40.401**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / 003-19 Physiological Episodes (Performance Enhancement)				- / 2.658	- / 2.838	- / 0.000	- / 0.000	- / 0.000	- / 99.323
P-3a	2 / 002-23 Enhanced Visual Acuity Mods (Performance Enhancement)				- / 0.000	- / 3.030	- / 6.007	- / 6.145	- / 10.299	- / 25.481
P-3a	3 / H-1 Vest 019-20 (Performance Enhancement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.200
P-3a	4 / Inactive OSIPs (N/A)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 20.368
P-40	**Total Gross/Weapon System Cost**				**- / 2.658**	**- / 5.868**	**- / 6.007**	**- / 6.145**	**- / 10.299**	**- / 147.372**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2021 funds are requested to incorporate modifications which address the alarming increase in Physiological Episodes (hypoxia and decompression sickness events).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 1 / 003-19 Physiological Episodes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	15.864	37.562	40.401	0.000	40.401	2.658	2.838	0.000	0.000	0.000	99.323
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	15.864	37.562	40.401	0.000	40.401	2.658	2.838	0.000	0.000	0.000	99.323
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**15.864**	**37.562**	**40.401**	**0.000**	**40.401**	**2.658**	**2.838**	**0.000**	**0.000**	**0.000**	**99.323**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Oxygen System Upgrades incorporates Aircrew Oxygen System related modifications to all USN/USMC fixed wing aircraft. Oxygen systems include On-Board Oxygen Generation System (OBOGS), On-Board Inert Gas Generation System (OBIGS), regulators, Oxygen Storage Bottles, and Naval Aircrew Common Ejection Seats (NACES) kits.

Current modifications address the alarming increase in Physiological Episodes (hypoxia and decompression illness events). This is the #1 Commander, Naval Air Force (CNAF) priority and Chief of Naval Air Training (CNATRA) Safety Issue. OBOGS hardware improvements have been qualified to address aging system deficiencies and are being fielded.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 1 / 003-19 Physiological Episodes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: T-45 C, F/A-18 A, F/A-18 B, F/A-18 C, F/A-18 D, F/A-18 E/F, E/A-18 G	**Modification Type:** Performance Enhancement	**Related RDT&E PEs:** 0604264N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 003-19 Physiological Episodes												
B Kits												
Recurring												
2.1.1) NACES F/A-18 (B Kits) - Organic	- / -	322 / 14.390	591 / 26.939	587 / 27.340	- / -	587 / 27.340	18 / 0.862	- / -	- / -	- / -	- / -	1,518 / 69.531
2.1.2) NACES T-45 (B Kits) - Organic	- / -	- / -	188 / 8.742	237 / 11.242	- / -	237 / 11.242	- / -	- / -	- / -	- / -	- / -	425 / 19.984
Subtotal: Recurring	*- / 0.000*	*- / 14.390*	*- / 35.681*	*- / 38.582*	*- / -*	*- / 38.582*	*- / 0.862*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 89.515*
Subtotal: 003-19 Physiological Episodes	*- / -*	*322 / 14.390*	*779 / 35.681*	*824 / 38.582*	*- / -*	*824 / 38.582*	*18 / 0.862*	*- / -*	*- / -*	*- / -*	*- / -*	*1,943 / 89.515*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 14.390*	*- / 35.681*	*- / 38.582*	*- / -*	*- / 38.582*	*- / 0.862*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 89.515*
Support *(All Modification Items)*												
3.5) ILS (1)	- / -	- / 1.118	- / 1.396	- / 1.380	- / -	- / 1.380	- / 1.390	- / 2.322	- / -	- / -	- / -	- / 7.606
3.6) Other Support (2)	- / -	- / 0.356	- / 0.485	- / 0.439	- / -	- / 0.439	- / 0.406	- / 0.516	- / -	- / -	- / -	- / 2.202
Subtotal: Support	*- / 0.000*	*- / 1.474*	*- / 1.881*	*- / 1.819*	*- / -*	*- / 1.819*	*- / 1.796*	*- / 2.838*	*- / -*	*- / -*	*- / 0.000*	*- / 9.808*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**15.864**	**37.562**	**40.401**	**0.000**	**40.401**	**2.658**	**2.838**	**0.000**	**0.000**	**0.000**	**99.323**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 1 / 003-19 Physiological Episodes
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: 003-19 Physiological Episodes

Manufacturer Information

Manufacturer Name: Martin Baker [3]	Manufacturer Location: Denham, United Kingdom
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019	May 2020	Oct 2021				
Delivery Dates	Oct 2020	Jun 2021	Jun 2022				

Footnotes:

[1] The production seat kits have an automatic actuation which is a pre-product improvement for future automatic capability. The input signal has not been identified yet and anticipated to be an ECP for the seat.

[2] Support funding for labor and anticipated ECP/s to the EEOS production kits.

[3] FY19 delivery and FY20 and FY21 contract and deliveries dates adjusted to reflect manufacturing delay.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 2 / 002-23 Enhanced Visual Acuity Mods
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.030	6.007	6.145	10.299	25.481
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.030	6.007	6.145	10.299	25.481
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.030**	**6.007**	**6.145**	**10.299**	**25.481**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Enhanced Visual Acuity (EVA) is a digital replacement for the AN/AVS-9 Aviator Night Vision goggles for all USN/USMC Rotary Wing and Tilt Rotor Aircraft. The system will provide increased resolution under reduced light levels and serve as the display for aircraft Heads Up Display (HUD) systems. APN-5 funding will be utilized for aircraft modifications required to provide electrical power and HUD symbology for the EVA system.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 2 / 002-23 Enhanced Visual Acuity Mods
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E/K, MH-53E, MH-60R, MH-60S, MV-22B	**Modification Type:** Performance Enhancement	**Related RDT&E PEs:** 0604264N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: 002-23 Enhanced Visual Acuity Mods												
A Kits												
Recurring												
1.1.1) MH-60S Install (A-Kits) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	224 / 1.232	224 / 1.232
1.1.2) CH-53K Install (A-Kits) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.480	36 / 0.198	60 / 0.678
1.1.3) CH-53E Install (A-Kits) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.480	48 / 0.264	72 / 0.744
1.1.4) MH-60R Install (A-Kits) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	212 / 1.166	212 / 1.166
1.1.5) MV-22B Install (A-Kits) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.600	32 / 0.864	42 / 0.756	194 / 1.067	280 / 3.287
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.600*	*- / 0.864*	*- / 1.716*	*- / 3.927*	*- / 7.107*
Non-Recurring												
1.2.1) Integration NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.915	- / 4.429	- / 3.245	- / 1.625	- / 11.214
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.915*	*- / 4.429*	*- / 3.245*	*- / 1.625*	*- / 11.214*
Subtotal: 002-23 Enhanced Visual Acuity Mods	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 2.515*	*32 / 5.293*	*90 / 4.961*	*714 / 5.552*	*848 / 18.321*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.515*	*- / 5.293*	*- / 4.961*	*- / 5.552*	*- / 18.321*
Support *(All Modification Items)*												
3.2) Data	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.006	- / 0.006	- / 0.013	- / 0.019	- / 0.044
3.3) Training Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.111	- / 0.111
3.6) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.329	- / 0.313	- / 0.321	- / 1.055	- / 2.018
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.335*	*- / 0.319*	*- / 0.334*	*- / 1.185*	*- / 2.173*
Installation												
Modification Item 1 of 1: 002-23 Enhanced Visual Acuity Mods	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.180	- / 0.395	- / 0.850	- / 3.562	- / 4.987
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.180*	*- / 0.395*	*- / 0.850*	*- / 3.562*	*- / 4.987*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.030**	**6.007**	**6.145**	**10.299**	**25.481**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 2 / 002-23 Enhanced Visual Acuity Mods

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: 002-23 Enhanced Visual Acuity Mods

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Jan 2023	Jan 2024	
Delivery Dates				Jun 2022	Jun 2023	Jun 2024	

Installation Information

Method of Implementation: Contractor Field Team:: Installation Name: Enhanced Visual Acuity

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.180	8 / 0.000	- / -	0 / 0.000	12 / 0.180
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.395	18 / 0.000	0 / 0.000	32 / 0.395
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.850	50 / 0.000	90 / 0.850
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	714 / 3.562	714 / 3.562
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.180	22 / 0.395	58 / 0.850	764 / 3.562	848 / 4.987

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	4	6	8	8	10	15	25	764	848
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	4	6	8	8	10	15	789	848

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 3 / H-1 Vest 019-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	2.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.200
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	2.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.200
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**2.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.200**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Current aviation life support equipment (ALSE) flight vests worn by HMLA aircrew have excessive bulk which can impede the performance of precision mission tasks. HQMC Aviation has a requirement for a modular aviator body armor vest (ABAV) system capable of being configured for specific airframes (UH-1Y, AH-1Z) that operate over land and water. The areas of improvement are intended to produce a modular equipment system that focuses on mission tailoring, enhanced survivability, and enhanced mobility while reducing weight, bulk, and heat stress.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 3 / H-1 Vest 019-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1Z	**Modification Type:** Performance Enhancement	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: H-1 Vest 019-20												
A Kits												
Non-Recurring												
1.2.1) H-1 Vest - Organic	- / -	- / -	1,000 / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,000 / 2.200
Subtotal: Non-Recurring	- / 0.000	- / -	- / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.200
Subtotal: H-1 Vest 019-20	- / -	- / -	1,000 / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,000 / 2.200
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.200
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**2.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.200**

Exhibit P-3a, Individual Modification: PB 2021 Navy		**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 3 / H-1 Vest 019-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: H-1 Vest 019-20		

Manufacturer Information

Manufacturer Name: New MFG - Name	Manufacturer Location: New MFG - Loc
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	20.368	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.368
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	20.368	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.368
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**20.368**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**20.368**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0575 / Aviation Life Support Mods	**Modification Number / Title:** 4 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: N/A	**Modification Type:** N/A	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIPs - Organic(*)	- / 20.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.368
Subtotal: Procurement	*- / 20.368*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 20.368*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**20.368**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**20.368**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,671.872	197.049	158.816	138.480	3.474	141.954	161.970	161.559	162.586	167.048	1,645.435	5,468.289
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,671.872	197.049	158.816	138.480	3.474	141.954	161.970	161.559	162.586	167.048	1,645.435	5,468.289
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,671.872**	**197.049**	**158.816**	**138.480**	**3.474**	**141.954**	**161.970**	**161.559**	**162.586**	**167.048**	**1,645.435**	**5,468.289**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds Common Electronic Countermeasures (ECM) equipment for strike and assault aircraft. The overall goal of the modification budget is to provide a reprogrammable radar and missile warning system, provide attacking missile declaration, sector direction finding, laser detection, and self-protection capability devices to applicable user aircraft. It will also provide for the integration of hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE) that are compatible with mission planning information.

Operational Safety Improvements Program (OSIP) 014-90 AN/APR-39(V)2 Radar Warning Receiver (RWR): The AN/APR-39A/B/C/D (V) 2 Radar Signal Detecting Set is designed for United States Marine Corps (USMC), United States Navy (USN), United States Air Force (USAF), and United States Army (US Army) Assault Support aircraft to provide onboard situational awareness and warning of radar threats. Integration, validation/ verification and procurement of the upgraded APR-39 system (APR-39D (V)2) will continue through FY 2031.

OSIP 006-00 ALE-39 to ALE-47 Retrofit: This OSIP provides funding for retrofit installation of AN/ALE-47 on F/A-18/C/D aircraft lots 12-17 and to procure new AN/ALE-47 Test Sets (ALM-290) to replace original version ALM-286s. The replacement of the AN/ALE-39 Dispenser system with the AN/ALE-47 will correct serious safety problems and greatly improve aircraft survivability. Operational Program Improvement associated with commonality of expendable form factors across DoD and Joint Partners is future focus for Common Carriage Program providing an increase in expendable capacity and operational readiness while reducing logistics footprint.

OSIP 005-08 Direct Infrared Countermeasure (DIRCM) / Department of Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) AN/AAQ-24: This OSIP provides current available technology improvements for survivability to United States Marine Corps aircraft. This budget supports procurement, Engineering Change Proposals (ECPs), integration, validation, Follow-on Test and Evaluation (FOT&E) and fielding of DoN LAIRCM systems on CH-53E/K, KC-130J, P-8A and MV-22 platforms.

OSIP 004-12 Common On-Board Jammer: Integrated Defensive Electronic Counter Measure (IDECM) Block 4 is an ECP to the ALQ-214 intended to render it suitable for operation on the F/A-18C/D aircraft, while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The Electronic Frequency Converter (EFC) enables dataflow via the fiber optic cable to the Fiber Optic Towed Decoy (FOTD) and is part of the IB-4 configuration when installed on the F/A-18E/F aircraft. This OSIP is for the onboard portion of the IB-4 configuration.

OSIP 017-12 Correction of Discrepancies: This OSIP will provide the required correction to multiple sub-components that are obsolete.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 000		

OSIP 004-15 Assault Correction of Discrepancies: Assault of Corrections of Discrepancies OSIP will affect changes to assault Electronic Countermeasure (ECM) equipment in the aircraft that have been delivered for fleet operations. These ECM systems require various upgrade initiatives to keep these aircraft mission capable with a robust defensive system that ensure aircraft survivability.

OSIP 018-17 Assault Direct Infrared Countermeasures (ADIRCM): This OSIP provides funding for the installation of Assault Direct Infrared Countermeasures on the United States Navy/United States Marine Corps chosen material solution for AH-1Z, UH-1Y, and MH-60S aircraft initiated as a response to Joint Urgent Operational Needs Statement (SO-0010).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy | **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity:
1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft

P-1 Line Item Number / Title:
0576 / Common ECM Equipment

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AN/APR-39 RWR (OSIP 014-90) (MISSION CAPABILITY)				- / 413.847	- / 40.310	- / 45.678	- / 31.838	- / 0.000	- / 31.838
P-3a	2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00) (MISSION CAPABILITY)				- / 209.589	- / 4.403	- / 2.805	- / 0.837	- / 0.000	- / 0.837
P-3a	3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08) (MISSION CAPABILITY)				- / 761.277	- / 74.708	- / 65.019	- / 63.418	- / 3.474	- / 66.892
P-3a	4 / COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12) (MISSION CAPABILITY)				- / 472.165	- / 66.854	- / 45.314	- / 42.387	- / 0.000	- / 42.387
P-3a	5 / ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15) (SAFETY/RELIABILITY)				- / 3.094	- / 0.954	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	6 / ASSAULT DIRCM (OSIP 018-17) (TBD)				- / 72.696	- / 9.820	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	7 / INACTIVE OSIPs (TBD)				- / 739.204	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 2,671.872**	**- / 197.049**	**- / 158.816**	**- / 138.480**	**- / 3.474**	**- / 141.954**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / AN/APR-39 RWR (OSIP 014-90) (MISSION CAPABILITY)				- / 36.269	- / 35.830	- / 35.646	- / 47.317	- / 589.236	- / 1,275.971
P-3a	2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00) (MISSION CAPABILITY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.308	- / 224.942
P-3a	3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08) (MISSION CAPABILITY)				- / 76.158	- / 75.302	- / 74.919	- / 98.233	- / 330.306	- / 1,622.814
P-3a	4 / COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12) (MISSION CAPABILITY)				- / 49.543	- / 50.427	- / 52.021	- / 21.498	- / 10.185	- / 810.394
P-3a	5 / ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15) (SAFETY/RELIABILITY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.048
P-3a	6 / ASSAULT DIRCM (OSIP 018-17) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 708.400	- / 790.916
P-3a	7 / INACTIVE OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 739.204
P-40	**Total Gross/Weapon System Cost**				**- / 161.970**	**- / 161.559**	**- / 162.586**	**- / 167.048**	**- / 1,645.435**	**- / 5,468.289**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY21 Baseline funding is required for Common Electronic Countermeasures (ECM) equipment for strike and assault aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 1 / AN/APR-39 RWR (OSIP 014-90)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	413.847	40.310	45.678	31.838	0.000	31.838	36.269	35.830	35.646	47.317	589.236	1,275.971
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	413.847	40.310	45.678	31.838	0.000	31.838	36.269	35.830	35.646	47.317	589.236	1,275.971
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**413.847**	**40.310**	**45.678**	**31.838**	**0.000**	**31.838**	**36.269**	**35.830**	**35.646**	**47.317**	**589.236**	**1,275.971**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/APR-39 family of systems Radar Signal Detecting Set (RSDS) is designed for United States Marine Corps (USMC), United States Navy (USN), United States Air Force (USAF) and United States Army (USA) Assault Support aircraft to provide onboard situational awareness and warning of radar Radio Frequency (RF) threats by Statement of Operational Requirements Document (ORD) number 545-88-00 dated 14 February 2000. The AN/APR-39 family of systems provides control and display of the AN/AAQ-24; AN/AAQ-45, AN/AAR-47, AN/AAR-59 and AN/AAR-61 Missile Warning Systems (MWS) and Chaff dispense commands to the AN/ALE-47 Counter Measure Dispensing System (CMDS). The AN/APR-39 consists of five antennas, one Cockpit Control unit, one Processor, a display, and two, three, or four receivers (dependent on aircraft configuration). This OSIP supports Engineering Change Proposals (ECPs); hardware/software upgrades; Modernized Radar Warning Receiver (MRWR) and Radar Frequency Countermeasures (RFCM) upgrades and interface/integrations to include Integrated Aircraft Survivability Equipment (iASE). This program integrates hardware/software solutions that links Onboard iASE with mission planning/ information systems. iASE includes Radio Frequency (RF), Infrared (IR), and Laser Warning sensors as well as CMDS and expendables. This program has the capability to store (RF) sensor data for post mission threat analysis. Updates required through the Future Year Defense Program (FYDP) for various platforms. The AN/APR-39D (V) 2 corrects deficiencies documented in the AN/APR-39 A/B/C variants by providing correct Direction of Arrival (DOA) information, resolving time delayed detection and correct threat identification improving situational awareness to combat aircrews in a saturated RF environment. This program reconciles documented reliability and maintainability degrades that persist in legacy systems. The AN/APR-39 family of systems are installed on the following USMC and USN assault support aircraft: V-22, H-1, H-60, H-53 and C-130.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The APR-39 is in the production and sustainment phase (MSIII3Q/96). The Department of Navy is the lead service of this joint service program. Integration, validation/verification and procurement of the upgraded APR-39 system (APR-39D (V) 2) will continue through FY 2031.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 1 / AN/APR-39 RWR (OSIP 014-90)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1Z, MV-22, KC-130T, CH-53E/K, HH-60H, MH-60S	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: AN/APR-39 RWR (OSIP 014-90)												
B Kits												
Recurring												
1.1.1) Install Equip AN/APR-39A/C/D(V)2- MV-22 - Organic (1)	37 / 29.876	15 / 13.128	16 / 15.964	10 / 12.196	- / -	10 / 12.196	12 / 14.340	12 / 14.627	12 / 14.919	17 / 21.557	168 / 218.885	299 / 355.492
1.1.2) Install Equip AN/APR-39 D(V)2-H-1 - Organic (2)	14 / 10.126	14 / 9.990	21 / 17.865	11 / 11.640	- / -	11 / 11.640	14 / 14.461	13 / 13.697	13 / 13.971	17 / 18.635	164 / 180.465	281 / 290.850
1.1.3) Install Equip AN/APR-39 D(V)2 - CH-53E - Organic	- / -	- / -	3 / 2.829	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 96.800	83 / 99.629
1.1.4) Install Equipment Conversion B Kits - Organic	12 / 0.866	100 / 1.922	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	112 / 2.788
1.1.5) Archived BKits Recurring - Organic - Organic	- / 159.624	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 159.624
Subtotal: Recurring	*- / 200.492*	*- / 25.040*	*- / 36.658*	*- / 23.836*	*- / -*	*- / 23.836*	*- / 28.801*	*- / 28.324*	*- / 28.890*	*- / 40.192*	*- / 496.150*	*- / 908.383*
Non-Recurring												
1.2.1) Archived BKits Non-Recurring - Organic	- / 28.945	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.945
Subtotal: Non-Recurring	*- / 28.945*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 28.945*
Subtotal: AN/APR-39 RWR (OSIP 014-90)	*63 / 229.437*	*129 / 25.040*	*40 / 36.658*	*21 / 23.836*	*- / -*	*21 / 23.836*	*26 / 28.801*	*25 / 28.324*	*25 / 28.890*	*34 / 40.192*	*412 / 496.150*	*775 / 937.328*
Subtotal: Procurement, All Modification Items	*- / 229.437*	*- / 25.040*	*- / 36.658*	*- / 23.836*	*- / -*	*- / 23.836*	*- / 28.801*	*- / 28.324*	*- / 28.890*	*- / 40.192*	*- / 496.150*	*- / 937.328*
Support *(All Modification Items)*												
2.1) ECO	- / 26.556	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.556
2.2) Support/Training Equipment	- / 4.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.115
2.3) D(V)2 System ECP (3)	- / 62.083	- / 3.434	- / 3.385	- / 3.101	- / -	- / 3.101	- / 2.847	- / 2.671	- / 2.474	- / 2.671	- / 39.800	- / 122.466
2.4) C(V)2 System SW	- / 5.012	- / 0.325	- / 0.339	- / 0.328	- / -	- / 0.328	- / 0.254	- / 0.236	- / 0.140	- / 0.143	- / 0.392	- / 7.169
2.5) D(V)2 System SW	- / 12.871	- / 6.814	- / 3.315	- / 2.919	- / -	- / 2.919	- / 2.814	- / 2.770	- / 2.414	- / 2.462	- / 20.877	- / 57.256
2.6) Data	- / 1.024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.024
2.7) ILS	- / 6.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.660
2.8) Other Support	- / 56.457	- / 1.476	- / 0.737	- / 0.751	- / -	- / 0.751	- / 0.755	- / 0.755	- / 0.753	- / 0.753	- / 15.762	- / 78.199
2.9) Ground/Flight Test Support (4)	- / 9.632	- / 3.221	- / 1.244	- / 0.903	- / -	- / 0.903	- / 0.798	- / 1.074	- / 0.975	- / 1.096	- / 16.255	- / 35.198
Subtotal: Support	*- / 184.410*	*- / 15.270*	*- / 9.020*	*- / 8.002*	*- / -*	*- / 8.002*	*- / 7.468*	*- / 7.506*	*- / 6.756*	*- / 7.125*	*- / 93.086*	*- / 338.643*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 1 / AN/APR-39 RWR (OSIP 014-90)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: UH-1Y, AH-1Z, MV-22, KC-130T, CH-53E/K, HH-60H, MH-60S	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	**413.847**	**40.310**	**45.678**	**31.838**	**0.000**	**31.838**	**36.269**	**35.830**	**35.646**	**47.317**	**589.236**	**1,275.971**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 1 / AN/APR-39 RWR (OSIP 014-90)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: AN/APR-39 RWR (OSIP 014-90)		

Footnotes:

(1) 1.1.1 Price difference between V-22 and H-1 is because of two (2) additional receivers are required due to the size of the aircraft to support coverage. The price for each additional receiver is approximately $80K each. FY21 quantity decreased by one (1) to meet funding controls. FY21 price increase is due to the reduction of quantity of systems being procured.

(2) 1.1.2 Price difference between V-22 and H-1 is because of two (2) additional receivers are required due to the size of the aircraft to support coverage. The price for each additional receiver is approximately $80K each. FY21 price increase is due to the reduction of quantity of systems being procured. FY22 quantity increased based on scheduled H-1 retrofit.

(3) 2.3 FY25 funding increased to cover Diminishing Manufacturing Sources and Material Shortages (DMSMS).

(4) 2.9 FY23 and FY25 funding increased to cover testing required for product improvements and software updates.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	209.589	4.403	2.805	0.837	0.000	0.837	0.000	0.000	0.000	0.000	7.308	224.942
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	209.589	4.403	2.805	0.837	0.000	0.837	0.000	0.000	0.000	0.000	7.308	224.942
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**209.589**	**4.403**	**2.805**	**0.837**	**0.000**	**0.837**	**0.000**	**0.000**	**0.000**	**0.000**	**7.308**	**224.942**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The replacement of the AN/ALE-39 Dispenser System with the AN/ALE-47 will correct serious safety problems and greatly improve aircraft survivability. As a joint program, Under Secretary of Defense (Acquisition Technology & Logistics) memo of November 1986 directed the United States Navy (USN) and United States Army (US Army) to participate in the United States Air Force (USAF) Engineering Manufacturing Development (EMD) phase.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AN/ALE-47 system is in production and being installed in multiple USN, USMC and USAF aircraft. This OSIP provides funding for retrofit installation of AN/ALE-47 on F/A-18/C/D aircraft lots 12-17 and to procure new AN/ALE-47 Test Sets (ALM-290) to replace original version ALM-286s.

Organic government Engineering Change Proposal (ECP) to upgrade both hardware and software of the AN/ALE-47 Countermeasures Dispensing Set (CMDS) Programmer continues. The change will allow for one common Operational Flight Program (OFP) configuration with requirements derived from integrated Aircraft Survivability Equipment (iASE) initial capabilities document (ICD) in support of improved aircrew situational awareness and the baseline for interfacing with platform ASE sensors and Position, Navigation and Time (PNT) data. The ECP modification will take legacy systems and prime them to digitally interface with emerging aircraft networks, thus increasing platform survivability and battlespace awareness for ownship, wingman, and FOB commands. The capability aligns with and supports Joint networked CONOPS for survivability and lethality.

The procurement and delivery of Power PC Circuit Card Assemblies continues to retrofit ALE-47 programmers on aircraft scheduled for incorporation but unable to get upgraded capability during production.

FY 2021 is last funded year, leaving a Cost-to-Complete quantity of (28) for the planned aircraft modifications to accommodate F/A-18 aircraft with extended service life.

Operational Program Improvement associated with commonality of expendable form factors across DoD and Joint Partners is future focus for Common Carriage Program providing an increase in expendable capacity and operational readiness while reducing logistics footprint.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E, EA-6B,UH-1N, MH-53E, F/A-18C/D, AV-8B, MV-22, KC-130F/R/T, H-60, P-3	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Archived AKits/Recurring - Organic(*)	2,539 / 20.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,539 / 20.679
1.1.2) F/A-18 A-Kit - NonOrganic (5) *Installation 1 of 1*	251 / 11.777	15 / 0.760	5 / 0.435	1 / 0.057	- / -	1 / 0.057	- / -	- / -	- / -	- / -	28 / 1.491	300 / 14.520
1.2.1) Archived AKits/Non-Recurring - Organic(*)	22 / 6.458	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 6.458
2.1.1) Archived BKits/Recurring - Organic(*)	6,120 / 74.298	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6,120 / 74.298
2.1.2) F/A-18 B Kits - Organic(*) (6)	251 / 8.166	15 / 0.068	5 / 0.110	1 / 0.066	- / -	1 / 0.066	- / -	- / -	- / -	- / -	28 / 1.344	300 / 9.754
2.1.3) Installment Equipment - Organic(*)	2,316 / 10.300	- / 0.424	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,316 / 10.724
Subtotal: Procurement	*- / 131.678*	*- / 1.252*	*- / 0.545*	*- / 0.123*	*- / -*	*- / 0.123*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.835*	*- / 136.433*
Support												
3.1) Archived Support Costs No Longer Funded In FYDP	- / 9.926	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.926
3.2) F/A-18 ALM-290 Test Sets (7)	- / 2.811	- / 0.570	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.700	- / 4.331
3.3) Other Support	- / 50.350	- / 1.815	- / 1.622	- / 0.560	- / -	- / 0.560	- / -	- / -	- / -	- / -	- / 2.072	- / 56.419
Subtotal: Support	*- / 63.087*	*- / 2.385*	*- / 1.872*	*- / 0.560*	*- / -*	*- / 0.560*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.772*	*- / 70.676*
Installation												
Installation 1 of 1: GRP: F/A-18C/D Installation Costs	- / 14.824	- / 0.766	- / 0.388	- / 0.154	- / 0.000	- / 0.154	- / -	- / -	- / -	- / -	- / 1.701	- / 17.833
Subtotal: Installation	*- / 14.824*	*- / 0.766*	*- / 0.388*	*- / 0.154*	*- / -*	*- / 0.154*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.701*	*- / 17.833*
Total												
Total Cost (Procurement + Support + Installation)	**209.589**	**4.403**	**2.805**	**0.837**	**0.000**	**0.837**	**0.000**	**0.000**	**0.000**	**0.000**	**7.308**	**224.942**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: F/A-18C/D Installation Costs

Manufacturer Information

Manufacturer Name: Organic Installs | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018						
Delivery Dates	Feb 2019						

Installation Information

Method of Implementation: Depot Level Installation:: Installation Name: F/A-18C/D Installation Costs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	251 / 14.824	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	251 / 14.824
FY 2019	- / -	15 / 0.766	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 0.766
FY 2020	- / -	- / -	5 / 0.388	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.388
FY 2021	- / -	- / -	- / -	1 / 0.154	0 / 0.000	1 / 0.154	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.154
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 1.701	28 / 1.701
Total	251 / 14.824	15 / 0.766	5 / 0.388	1 / 0.154	0 / 0.000	1 / 0.154	- / -	- / -	- / -	- / -	28 / 1.701	300 / 17.833

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	251	-	5	5	5	-	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	300
Out	243	8	-	5	5	5	-	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	300

Footnotes:

(5) F/A-18 A-Kit - Line Item 1.1.2: Commander, Naval Air Forces (CNAF) is continuing extension of flight hours and service life on the F/A-18s, possibly to FY 2031, to fill strike fighter shortfall, requiring additional aircraft modifications. FY21 added (1) aircraft, leaving a total Cost-to-Complete quantity of (28) A-kits for the planned aircraft modifications.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 2 / ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(6) F/A-18 B Kits - Line Item 2.1.2: B-kit unit cost and component quantities vary depending on aircraft configuration. The Technical Directive for AFC-566 already approved to give flexibility for stand-alone modifications and scheduled aircraft inductions. FY21 added (1) aircraft, leaving a total Cost-to-Complete quantity of (28) B-kits for the planned aircraft modifications.

(7) F/A-18 ALM-290 Test Sets - Line Item 3.2: Implementation of AFC-566 which increases ALE-47 O-Level maintenance test equipment allowances per squadron, requiring additional quantity procurement. Total Cost-to-Complete quantity of (4) is required for the planned aircraft modifications.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	761.277	74.708	65.019	63.418	3.474	66.892	76.158	75.302	74.919	98.233	330.306	1,622.814
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	761.277	74.708	65.019	63.418	3.474	66.892	76.158	75.302	74.919	98.233	330.306	1,622.814
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**761.277**	**74.708**	**65.019**	**63.418**	**3.474**	**66.892**	**76.158**	**75.302**	**74.919**	**98.233**	**330.306**	**1,622.814**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/AAQ-24 Department of the Navy, Large Aircraft Infrared Countermeasures (DoN LAIRCM) System (B-kit) consists of five components: Missile Warning Sensor (MWS, 5 or 6), processor (1), Guardian Laser Transmitter Assembly (GLTA, 2) and Controller Interface Unit (CIU) (1). The Defense Intelligence Agency (DIA) System Threat Assessment Report (STAR) and current United States Marine Corps (USMC) operations pose surface to air threats requiring DoN LAIRCM capabilities to maintain survivability against improved Man-Portable Air Defense Systems (MANPADS), Rocket Propelled Grenades (RPG), hostile gunfire, Anti-Aircraft Artillery (AAA) and laser-directed weapons. This budget supports procurement, Engineering Change Proposals (ECPs), integration, validation, Follow-on Test and Evaluation (FOT&E) and fielding of DoN LAIRCM systems on CH-53E/K, KC-130J, P-8A, C-40, CMV-22 and MV-22 platforms in accordance with Statement of Operational Requirement Document (ORD) number 756-88-08. Based on FY 2015 Joint Urgent Operational Needs Statement (JUONS) SO-0010, United States Special Operations Command (SOCOM) and United States of Army (USA) programs have approved requirements for DoN LAIRCM integration. This system has the capability to store sensor data for post-mission threat analysis. The DoN LAIRCM program integrates hardware/software solutions that links onboard integrated Aircraft Survivability Equipment (iASE) with platform mission planning/information systems. iASE includes Radio Frequency (RF), Infrared (IR), and Laser Warning Sensors as well as Countermeasures Dispensing Systems (CMDS) and expendables. The DoN LAIRCM configurations include five (5) or six (6) sensors, the GLTA or the Non-GLTA.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: DoN LAIRCM program achieved MS C/ Full Rate Production in January 2010. The Engineering Change Proposals (ECP) provide required improvements and address identified deficiencies (e.g. Advanced Threat Warning (ATW) to improved Missile Warning Sensor (MWS); Improve Probability of detection (Pd), False Alarm Reduction (FAR), Smart Dispensing, Hostile Fire Indication (HFI) and Laser Warning (LW)). DoN LAIRCM will upgrade the system processor in FY 19-22 via ECP. The DoN LAIRCM Processor Upgrade (DLPU) will replace the Back End Processor and update the system s/w, and will integrate the CIU and modified GLTA for horizontal compatibility. DLPU Integration and Test in FY21-22 will support fielding in FY22.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E,MV-22,KC-130J,C-20,C-40	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM /AAQ-24 (OSIP 005-08)												
B Kits												
Recurring												
1.1.1) Archived B Kits - Organic	224 / 281.373	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	224 / 281.373
1.1.2) DIRCM (B Kits) MV-22 - Organic [8]	36 / 79.127	24 / 52.274	22 / 51.551	22 / 51.551	- / -	22 / 51.551	24 / 57.362	20 / 48.758	22 / 54.706	30 / 76.092	108 / 252.656	308 / 724.077
1.1.3) OCO DIRCM (B Kits) MV-22 - Organic	12 / 31.874	- / -	1 / 2.343	- / 0.000	1 / 2.343	1 / 2.343	- / -	- / -	- / -	- / -	- / -	14 / 36.560
1.1.4) DIRCM (B Kits) KC-130J - Organic [9]	30 / 68.282	6 / 10.950	- / -	2 / 3.975	- / -	2 / 3.975	3 / 6.082	7 / 14.474	5 / 10.546	6 / 12.908	16 / 23.004	75 / 150.221
1.1.5) P3I Retrofit - Organic [10]	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.989	44 / 3.433	30 / 2.388	25 / 2.030	206 / 17.335	331 / 27.175
Subtotal: Recurring	*- / 460.656*	*- / 63.224*	*- / 53.894*	*- / 55.526*	*- / 2.343*	*- / 57.869*	*- / 65.433*	*- / 66.665*	*- / 67.640*	*- / 91.030*	*- / 292.995*	*- / 1,219.406*
Non-Recurring												
1.2.1) A/C Integration - Organic [11]	- / 36.598	- / 3.513	- / 1.937	- / 1.826	- / -	- / 1.826	- / 1.849	- / 1.517	- / 0.969	- / 0.932	- / -	- / 49.141
1.2.2) Navy Test - Organic [12]	- / 18.345	- / 2.115	- / 2.274	- / 1.322	- / -	- / 1.322	- / 2.888	- / 1.109	- / 1.086	- / 1.107	- / -	- / 30.246
1.2.3) OCO Navy Test - Organic	- / 1.624	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.624
1.2.4) Archived B Kits Non Recurring - Organic	- / 45.159	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 45.159
Subtotal: Non-Recurring	*- / 101.726*	*- / 5.628*	*- / 4.211*	*- / 3.148*	*- / -*	*- / 3.148*	*- / 4.737*	*- / 2.626*	*- / 2.055*	*- / 2.039*	*- / 0.000*	*- / 126.170*
Subtotal: DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM /AAQ-24 (OSIP 005-08)	*302 / 562.382*	*30 / 68.852*	*23 / 58.105*	*24 / 58.674*	*1 / 2.343*	*25 / 61.017*	*53 / 70.170*	*71 / 69.291*	*57 / 69.695*	*61 / 93.069*	*330 / 292.995*	*952 / 1,345.576*
Subtotal: Procurement, All Modification Items	*- / 562.382*	*- / 68.852*	*- / 58.105*	*- / 58.674*	*- / 2.343*	*- / 61.017*	*- / 70.170*	*- / 69.291*	*- / 69.695*	*- / 93.069*	*- / 292.995*	*- / 1,345.576*
Support *(All Modification Items)*												
2.1) OCO Software Upgrade	- / -	- / -	- / 0.196	- / 0.000	- / 0.247	- / 0.247	- / -	- / -	- / -	- / -	- / -	- / 0.443
2.2) Software Upgrade [13]	- / 2.951	- / 1.910	- / 1.699	- / 1.487	- / -	- / 1.487	- / 1.767	- / 1.706	- / 1.224	- / 1.186	- / 14.833	- / 28.763
2.3) OCO Support Equipment	- / 0.670	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.670
2.4) Support Equipment	- / 6.164	- / 0.684	- / 0.783	- / 0.709	- / -	- / 0.709	- / 0.723	- / 0.738	- / 0.779	- / 0.795	- / 6.315	- / 17.690
2.5) ILS	- / 18.740	- / 0.251	- / 0.235	- / 0.240	- / -	- / 0.240	- / 0.244	- / 0.248	- / 0.254	- / 0.218	- / -	- / 20.430
2.6) OCO Other Support	- / 1.734	- / -	- / 0.867	- / 0.000	- / 0.884	- / 0.884	- / -	- / -	- / -	- / -	- / -	- / 3.485

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53E,MV-22,KC-130J,C-20,C-40	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
2.7) Other Support	- / 102.385	- / 3.011	- / 3.134	- / 2.308	- / -	- / 2.308	- / 3.254	- / 3.319	- / 2.967	- / 2.965	- / 16.163	- / 139.506
2.8) Archived Support Cost No Longer Funded in FYDP	- / 66.251	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.251
Subtotal: Support	*- / 198.895*	*- / 5.856*	*- / 6.914*	*- / 4.744*	*- / 1.131*	*- / 5.875*	*- / 5.988*	*- / 6.011*	*- / 5.224*	*- / 5.164*	*- / 37.311*	*- / 277.238*
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**761.277**	**74.708**	**65.019**	**63.418**	**3.474**	**66.892**	**76.158**	**75.302**	**74.919**	**98.233**	**330.306**	**1,622.814**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 3 / DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM / AAQ-24 (OSIP 005-08)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DIRECTED INFRARED COUNTERMEASURE DoN LAIRCM /AAQ-24 (OSIP 005-08)

Footnotes:

(8) 1.1.2 DoN LAIRCM unit cost varies based on platform configuration (WRA qty) and combining procurements for other customers (Economies of Scale). FY21-24: MV-22 Total Quantity initially assumed 1/3 of MV-22s would receive GLTAs (completed in 2021); the remainder would be procured without GLTA. MV-22 has determined final configuration will be full B-kits (to include GLTAs) for all installs. MV-22 & KC-130J unit cost difference due to aircraft configuration (MV-22 requires six (6) sensors & KC130J requires five (5) sensors). Cost of one (1) sensor is approximately $355K.

(9) 1.1.4 FY21-25. MV-22 & KC-130J unit cost difference due to aircraft configuration (MV-22 requires six (6) sensors & KC130J requires five (5) sensors). Cost of one (1) sensor is approximately $355K.

(10) 1.1.5 Pre-Planned Product Improvement (P3I) is for the GLTA upgrade. Purchase of H/W to upgrade current GLTAs. Quantities indicate the number upgrading per year.

(11) 1.2.1 FY21 - FY25 aligned to resolve DLPU and SIL integration issues.

(12) 1.2.2 Navy Test decreased in FY21 due to DoN LAIRCM Processor Unit (DLPU) upgrades. Production delays and integration issues resulted in test schedule shifts in FY 22 - FY25.

(13) 2.2 Software Upgrade FY21 -FY22 funding increased to support multiple platform integration and Software encryption of the system Operational Flight Program (OFP) and the processor upgrade software.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 4 / COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	472.165	66.854	45.314	42.387	0.000	42.387	49.543	50.427	52.021	21.498	10.185	810.394
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	472.165	66.854	45.314	42.387	0.000	42.387	49.543	50.427	52.021	21.498	10.185	810.394
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**472.165**	**66.854**	**45.314**	**42.387**	**0.000**	**42.387**	**49.543**	**50.427**	**52.021**	**21.498**	**10.185**	**810.394**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Integrated Defensive Electronic Countermeasure (IDECM) Block (IB-4) is an Engineering Change Proposal (ECP) to the ALQ-214 intended to render it suitable for operation on the F/A-18C/D aircraft equipped with ALR-67(V)2 or ALR-67(V)3 Radar Warning Receivers, while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. This ECP will result in a Common On-Board Jammer (COBJ) system that must meet the requirements of the COBJ Block 2 Operational Requirements Document (ORD) #624-78-03 and be compatible with the ALE-55 Fiber Optic Towed Decoy (FOTD). The Integrated Multi-Platform Launch Controller (IMPLC) provides power and communications interface with the ALE-50 and ALE-55 components of the IDECM EW Suite on the F/A-18 E/F aircraft. The Electronic Frequency Converter (EFC) enables dataflow via the fiber optic cable to the FOTD and is part of the IB-4 configuration when installed on the F/A-18E/F aircraft. This Operational Safety Improvement Program (OSIP) is for the onboard portion of the IB-4 configuration. This OSIP also includes procurement of hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE) that are compatible with mission planning information and systems intended to address current and future aircraft threats and modeling and simulation for improved countermeasure capabilities.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The ALQ-214 received Milestone III approval in January 2004 and is still in Full-Rate Production (FRP). FRP 9 was the first ALQ-214 production lot in the IB-4 configuration and was awarded 3rd Qtr FY 2012. Annual production contract awards are expected to continue through FY 2025. A total of 324 IB-4 ALQ-214s are planned for procurement.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 4 / COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F/A-18C/D/E/F	**Modification Type:** MISSION CAPABILITY	**Related RDT&E PEs:** 0604270N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)												
B Kits												
Recurring												
1.1.1) Archived B Kits Install Equipment - Organic	263 / 34.971	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	263 / 34.971
1.1.2) ALQ-214 Retrofit Kits (E/F) Install Equipment - Organic	408 / 6.774	42 / 0.855	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	450 / 7.629
1.1.3) ALQ-214 Install Equipment - Organic [14]	198 / 376.459	13 / 23.435	19 / 36.876	18 / 35.898	- / -	18 / 35.898	23 / 44.514	23 / 45.149	24 / 47.178	6 / 16.519	- / -	324 / 626.028
1.1.4) ALQ-214 SRA Retrofit - Organic	- / -	77 / 23.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	77 / 23.246
Subtotal: Recurring	*- / 418.204*	*- / 47.536*	*- / 36.876*	*- / 35.898*	*- / -*	*- / 35.898*	*- / 44.514*	*- / 45.149*	*- / 47.178*	*- / 16.519*	*- / 0.000*	*- / 691.874*
Non-Recurring												
1.2.1) B-Kits Non Recurring - Organic	- / 1.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.319
Subtotal: Non-Recurring	*- / 1.319*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.319*
Subtotal: COMMON ON-BOARD JAMMER (OBJ) (OSIP 004-12)	*869 / 419.523*	*132 / 47.536*	*19 / 36.876*	*18 / 35.898*	*- / -*	*18 / 35.898*	*23 / 44.514*	*23 / 45.149*	*24 / 47.178*	*6 / 16.519*	*- / -*	*1,114 / 693.193*
Subtotal: Procurement, All Modification Items	*- / 419.523*	*- / 47.536*	*- / 36.876*	*- / 35.898*	*- / -*	*- / 35.898*	*- / 44.514*	*- / 45.149*	*- / 47.178*	*- / 16.519*	*- / 0.000*	*- / 693.193*
Support *(All Modification Items)*												
2.3) Training Equipment	- / 0.855	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.855
2.6) Other Support [15]	- / 51.787	- / 11.680	- / 8.438	- / 6.489	- / -	- / 6.489	- / 5.029	- / 5.278	- / 4.843	- / 4.979	- / 10.185	- / 108.708
2.8) Peculiar Support Equipment	- / -	- / 7.638	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.638
Subtotal: Support	*- / 52.642*	*- / 19.318*	*- / 8.438*	*- / 6.489*	*- / -*	*- / 6.489*	*- / 5.029*	*- / 5.278*	*- / 4.843*	*- / 4.979*	*- / 10.185*	*- / 117.201*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**472.165**	**66.854**	**45.314**	**42.387**	**0.000**	**42.387**	**49.543**	**50.427**	**52.021**	**21.498**	**10.185**	**810.394**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 4 / COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: COMMON ON-BOARD JAMMER (OBJ)(OSIP 004-12)		

Footnotes:

(14) 1.1.3 Unit cost may vary from year to year due to variation of quantities funded from other sources (FMS, APN1, APN6,...). The unit price increase from FY 2020 to FY 2021 is greater then escalation due to the reduction in quantity from 19 units procured to 18 units procured.

(15) 2.6 ALQ-214 Other Support: Funding supports annual ALQ-214 Repair of NAVAIR Test Assets and Program Engineering Support.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 5 / ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.094	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.048
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.094	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.048
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.094**	**0.954**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.048**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: This Operational Safety Improvement Program (OSIP) is for the correction of discrepancies to affect changes to assault Electronic Countermeasure (ECM) equipment in aircraft that have been delivered for fleet operations. These ECM systems require various upgrade initiatives and logistic support to keep these aircraft mission capable with a robust defensive system that ensures its survivability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The contract will modify shop replaceable assemblies with diminished manufacturing source issues and conduct engineering change proposals, and verify testing and evaluations of modification designs. The United States Navy Fleet Support Team will provide system engineering qualifications on aircraft, support equipment, write technical directives, upgrade technical data and perform any additional integrated logistics support requirements. United States Navy and contractor software support activities will integrate software as needed.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 5 / ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MH-SH-60 R/S, AH-1W	**Modification Type:** SAFETY/RELIABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)												
B Kits												
Recurring												
2.1.1) Infrared Source - Organic	443 / 1.914	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	443 / 1.914
Subtotal: Recurring	*- / 1.914*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.914*
Non-Recurring												
2.2.1) B-Kits NRE - Organic	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.600
Subtotal: Non-Recurring	*- / 0.600*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.600*
Subtotal: ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)	*443 / 2.514*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*443 / 2.514*
Subtotal: Procurement, All Modification Items	*- / 2.514*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.514*
Support *(All Modification Items)*												
3.1) Other Support	- / 0.580	- / 0.954	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.534
Subtotal: Support	*- / 0.580*	*- / 0.954*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1.534*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**3.094**	**0.954**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**4.048**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 5 / ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: ASSAULT CORRECTION OF DISCREPANCIES (OSIP 004-15)		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 6 / ASSAULT DIRCM (OSIP 018-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	72.696	9.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	708.400	790.916
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	72.696	9.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	708.400	790.916
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**72.696**	**9.820**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**708.400**	**790.916**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description: Assault Directed Infrared Countermeasure (ADIRCM) is the budget name for DAIRCM which is a lightweight Threat Warning System (TWS) and Infrared Countermeasure (IRCM) developed by the Navy Research Lab under an FY 2004 Office of Naval Research Future Naval Capability (FN04-03), Integrated E/O IR Self-Protect Suite for Rotary Wing Aircraft. PMA272 has funded this Future Naval Capability (FNC) since 2006 as a risk mitigation for both the Joint and Allied Threat Awareness System (JATAS) and the Common Infrared Countermeasures (CIRCM) system. The DAIRCM nomenclature is the AAQ-45 System which offers significant savings in Size, Weight and Power (SWaP) and cost avoidance. The system consists of a centralized processor and laser with high power fiber optic cables leading to 4-6 two-color IR sensors. Each sensor incorporates a pointer tracker, which allows laser energy to be focused on incoming threats.

FY 2017 through FY 2019 Overseas Contingency Operations (OCO) funds for AAQ-45 provides increased survivability against Man-Portable Air Defense Systems (MANPADS), Rocket Propelled Grenades (RPG), hostile gunfire, Anti-Aircraft Artillery (AAA) and laser-directed weapons for combat, assault rotary wing and fixed wing aircraft in theater. FY 2017 OCO funds completed the original Joint Urgent Operational Need Statement (JUONS) fielding requirements. FY 2018 OCO funds are required to procure assets in support of fielding two additional Marine Expeditionary Units (MEUs). The FY 2018 OCO ensured the capability to conduct missions in areas where the JUONS threat exists until the Program of Record (PoR) assets can be fielded. FY 2019 OCO funds are required to support fielding.

Developmental efforts: JUONS phase includes the Non-Recurring Engineering (NRE) required to develop integrate and test all hardware, software and firmware to field AAQ-45. Efforts will also include the manufacturing of AAQ-45 test articles, test bench fixtures, fleet representative hardware and system training. The driving requirements can be found in the classified JUONS SO-0010 and the classified Request for Initiation of Rapid Deployment Capability (RDC) process for an Advanced Threat Warning and Inexhaustible Infrared Countermeasure for Rotary Wing Aircraft (RDC Ser N9/16S139158). Two prime contractors, DRS and Daylight Solutions were awarded sole source contracts for the AAQ-45 Weapons Replaceable Assemblies (WRA). During the JUONS phase, the AAQ-45 system will be installed on the following United States Navy (USN)/United States Marine Corps (USMC) aircraft identified in JUONS SO-0010: AH-1Z, UH-1Y, and MH-60S. The AAQ-45 configuration on these aircraft will include one processor, one laser and four sensors. The USN's MH-60S is the lead platform for AAQ-45 JUONS configuration.

Cost to Complete: Procures and installs 253 A-kits and B-kits for H-1 and 500 A-kits and B-kits for MH 60R/S. Procurement accounts for B-kits that align with the A-kits for H-1 ADIRCM to be fully integrated with APR-39(DV)2 H-1 Mission Computer OFP SW XX in 2025 timeframe. PMA272 to procure FOCA for H-1 to support H-1 unique system platform integration through APR-39D(V)2 to the H-1 mission computer.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 6 / ASSAULT DIRCM (OSIP 018-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: AH-1Z, UH-1Y, MH-60S	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: ASSAULT DIRCM (OSIP 018-17)												
A Kits												
Recurring												
1.1.1) OCO Install Equip AH-1Z - Organic	15 / 21.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 21.225
1.1.2) OCO Install Equip UH-1Y - Organic	12 / 17.175	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 17.175
1.1.3) OCO Install Equip MH-60S - Organic	25 / 17.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 17.104
Subtotal: Recurring	*- / 55.504*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 55.504*
B Kits												
Recurring												
2.1.1) Procure Equip AH-1Z/UH-1Y - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	160 / 708.400	160 / 708.400
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 708.400*	*- / 708.400*
Subtotal: ASSAULT DIRCM (OSIP 018-17)	*52 / 55.504*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*160 / 708.400*	*212 / 763.904*
Subtotal: Procurement, All Modification Items	*- / 55.504*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 708.400*	*- / 763.904*
Support *(All Modification Items)*												
3.1) OCO Other Support	- / 17.192	- / 9.820	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 27.012
Subtotal: Support	*- / 17.192*	*- / 9.820*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 27.012*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**72.696**	**9.820**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**708.400**	**790.916**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 6 / ASSAULT DIRCM (OSIP 018-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: ASSAULT DIRCM (OSIP 018-17)		

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 7 / INACTIVE OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	739.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	739.204
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	739.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	739.204
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**739.204**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**739.204**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0576 / Common ECM Equipment	**Modification Number / Title:** 7 / INACTIVE OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIP - Organic(*)	- / 739.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 739.204
Subtotal: Procurement	*- / 739.204*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 739.204*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**739.204**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**739.204**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0605217N, 0604777N, 0604280N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,696.125	117.487	82.978	143.322	0.000	143.322	129.506	160.168	165.204	187.221	893.497	4,575.508
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,696.125	117.487	82.978	143.322	0.000	143.322	129.506	160.168	165.204	187.221	893.497	4,575.508
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,696.125**	**117.487**	**82.978**	**143.322**	**0.000**	**143.322**	**129.506**	**160.168**	**165.204**	**187.221**	**893.497**	**4,575.508**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds common avionics equipment for multiple aircraft.

The specific modifications budgeted and programmed are:

-The Navigation Satellite Timing and Ranging (NAVSTAR) Global Positioning System (GPS) Naval Warfare program is designed to provide a highly accurate position and time to users worldwide in all weather conditions. The GPS will interface with communication, navigation, and weapon systems equipment (standard attitude heading reference systems, inertial navigation systems, on-board computers, etc.) in selected applications. GPS is a Department of Defense mandated requirement for all aircraft operating in the National Air Space System after the year 2000.

-Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) provides civil upgrades to communication, navigation, and surveillance systems enabling global access to increasingly congested airspace, and GPS based routes and procedures.

-Avionics Component Improvement Program (AvCIP) provides resources to address avionics component critical readiness degraders, performance reliability deficiencies, obsolescence threatening loss of sustainability and top Fleet operational or support cost drivers.

-Secure Communications (SECOM) Avionics Modernization Program provides secure Ultra High Frequency/Very High Frequency, Amplitude Modulation/Frequency Modulation, Anti-Jam radio systems for Line of Sight and Beyond Line of Sight Satellite Communication voice and data communications including modernized cryptographic capabilities and anti-jam waveforms.

-Common Mission Computing and Displays (CMCD) modifies unsustainable mission computers, mission processing capacity and display solutions; while providing improved capacity to meet expanding mission and data transfer requirements. CMCD reduces time and minimizes investment costs required to manage obsolescence and integrate new capabilities on tactical aircraft avionics systems. This introduces Commercial Off the Shelf (COTS) current display processing technologies at an affordable cost allowing capabilities to be introduced into the fleet in an expedited manner. COTS displays and Open Architecture (OA) mission computers have multi-platform applications. Each configuration will be tailored and serve as an enabler to rapidly implement current and future capabilities through the Government's organic Multi-Use Laboratory Environment (MULE). MULE will execute these activities over the equipment's life cycle while reducing dependency on aircraft manufacturers during technology refreshes and capability

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0605217N, 0604777N, 0604280N
Line Item MDAP/MAIS Code: N/A		

insertions. CMCD will contain COTS modules that will be integrated with Government owned OA Core Level Software (CLS) through an organically managed program. This OSIP will centrally manage the fielded mission computing and display systems across multiple platforms to create efficiencies and cost saving to the Naval Aviation Enterprise.

-GPS Modernization is designed to provide GPS Electronic Protection from jamming and interference, support GPS Electronic Attack by denying hostile forces access to space based Positioning, Navigation, and Timing (PNT) information, and GPS Electronic Support by detection, characterization, and geo-location of intentional PNT jamming and unintentional interference sources with the intent to neutralize those sources and mitigate their effects. This effort supports Navy's compliance with Public Law 111-383, which requires that all GPS user equipment be capable of receiving the new GPS M-Code signal after FY 2017.

-Digital Interoperability (DI)/Marine Air Ground Task Force (MAGTF) Agile Network Gateway Link (MANGL) is the United States Marine Corps strategy to bridge multiple generations of technology using three matured capabilities; gateways, software defined radios, and Commercial Off-The-Shelf (COTS) interfaces. This modular integration approach enables iterative migration to advanced waveforms and payloads while providing enhanced digital connectivity between forces using dissimilar technologies. DI/MANGL will enable fleet integration of capabilities on COTS tablets and Government Off-The-Shelf (GOTS) applications. DI/MANGL will also enable logistics tracking and reporting (cargo and personnel) with the use of Radio Frequency Identification technology, advanced Electronic Warfare/Cyber capability, and threat data capturing/off-boarding. The architecture establishes the foundation to enable system performance data off-boarding, as well as data fusion and artificial intelligence augmentation capabilities.

NOTE: DI/MANGL (OSIP 02-23) is not a new start. This OSIP leverages previous efforts in prior years to produce and certify a Digital Interoperability (DI)/Marine Air Ground Task Force (MAGTF) Agile Network Gateway Link (MANGL) reprogrammed from PMA275 BLI 0590 FY23 - FY25. This OSIP will be used to support the commonality of DI/MANGL, resulting in zero sum realignment with no new start.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0605217N, 0604777N, 0604280N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / Global Positioning System (GPS) (OSIP 71-88) (Common Avionics (Safety) (Added Capability))				- / 400.721	- / 10.064	- / 8.118	- / 19.235	- / 0.000	- / 19.235
P-3a	2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01) (Common Avionics Modification)				- / 1,158.195	- / 94.342	- / 31.679	- / 46.441	- / 0.000	- / 46.441
P-3a	3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09) (Common Avionics Modification)				- / 33.774	- / 4.901	- / 5.100	- / 5.608	- / 0.000	- / 5.608
P-3a	4 / Secure Communications (OSIP 10-19) (Common Avionics (Modernization))				- / 0.000	- / 8.180	- / 13.659	- / 22.279	- / 0.000	- / 22.279
P-3a	5 / Common Mission Computing and Displays (CMCD) (OSIP 06-20) (Common Avionics (Modernization))				- / 0.000	- / 0.000	- / 24.422	- / 49.759	- / 0.000	- / 49.759
P-3a	6 / Global Positioning System (GPS) Modernization (OSIP 02-22) (Common Avionics (Modernization))				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	7 / Digital Interoperability for MAGTF Agile Network (OSIP 02-23) (Common Avionics (Modernization))				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8 / Inactive OSIPs (TBD)				- / 1,103.435	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 2,696.125**	**- / 117.487**	**- / 82.978**	**- / 143.322**	**- / 0.000**	**- / 143.322**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / Global Positioning System (GPS) (OSIP 71-88) (Common Avionics (Safety) (Added Capability))				- / 18.635	- / 21.153	- / 22.983	- / 31.792	- / 47.415	- / 580.116
P-3a	2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01) (Common Avionics Modification)				- / 26.194	- / 20.803	- / 9.344	- / 8.345	- / 0.000	- / 1,395.343
P-3a	3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09) (Common Avionics Modification)				- / 5.278	- / 5.389	- / 5.494	- / 5.615	- / 131.075	- / 202.234
P-3a	4 / Secure Communications (OSIP 10-19) (Common Avionics (Modernization))				- / 27.645	- / 58.690	- / 78.814	- / 93.589	- / 265.287	- / 568.143
P-3a	5 / Common Mission Computing and Displays (CMCD) (OSIP 06-20) (Common Avionics (Modernization))				- / 45.774	- / 28.635	- / 20.822	- / 8.182	- / 9.438	- / 187.032
P-3a	6 / Global Positioning System (GPS) Modernization (OSIP 02-22) (Common Avionics (Modernization))				- / 5.980	- / 13.290	- / 14.250	- / 23.377	- / 64.536	- / 121.433
P-3a	7 / Digital Interoperability for MAGTF Agile Network (OSIP 02-23) (Common Avionics (Modernization))				- / 0.000	- / 12.208	- / 13.497	- / 16.321	- / 375.746	- / 417.772
P-3a	8 / Inactive OSIPs (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,103.435
P-40	**Total Gross/Weapon System Cost**				**- / 129.506**	**- / 160.168**	**- / 165.204**	**- / 187.221**	**- / 893.497**	**- / 4,575.508**

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0605217N, 0604777N, 0604280N
Line Item MDAP/MAIS Code: N/A		
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.		
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.		

Justification:
The overall goal of the modifications budgeted in Fiscal Year (FY) 2021 is to procure the common capabilities/equipment required for the individual aircraft platforms.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	400.721	10.064	8.118	19.235	0.000	19.235	18.635	21.153	22.983	31.792	47.415	580.116
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	400.721	10.064	8.118	19.235	0.000	19.235	18.635	21.153	22.983	31.792	47.415	580.116
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**400.721**	**10.064**	**8.118**	**19.235**	**0.000**	**19.235**	**18.635**	**21.153**	**22.983**	**31.792**	**47.415**	**580.116**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navigation Satellite Timing and Ranging (NAVSTAR) Global Positioning System (GPS) is designed to provide highly accurate position and time to users worldwide in all weather conditions. GPS will be integrated with communication, navigation, and weapon systems equipment (attitude heading reference systems, inertial navigation systems, mission computers, etc.). The program procures and modifies GPS equipment such as receivers, antennas, amplifiers, and protection technologies as required for naval aviation platforms. Navigation Warfare (NAVWAR) technologies protect a platform's GPS capability from GPS jamming and unintentional interference. Hardware configurations vary with each Type/Model/Series aircraft. The GPS Operational Requirement Document (ORD) 003-78 dated 22 January 1990 was based on an Air Force General Operating Requirement dated 28 January 1978. The Navy ORD for Enhanced GPS User Equipment for NAVWAR and GPS Modernization was approved on 7 June 2000.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The NAVWAR full rate production approval was received in June 2002. Research, Development, Test and Evaluation, Navy is funded under Program Element 0604777N (FY19 and prior) and 0604280N (FY20 and out).

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All Aircraft as directed by OPNAV	**Modification Type:** Common Avionics (Safety) (Added Capability)	**Related RDT&E PEs:** 0604777N, 0604280N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) NAVWAR Installation Kits (F/A-18E/F and EA-18G w/ panel) - NonOrganic (1) *Installation 1 of 3*	200 / 21.187	48 / 4.162	24 / 2.448	39 / 4.392	- / -	39 / 4.392	36 / 4.135	36 / 4.218	26 / 3.107	22 / 2.682	- / -	431 / 46.331
1.1.2) NAVWAR Installation Kits (F/A-18E/F and EA-18G w/o panel) - NonOrganic (2) *Installation 2 of 3*	- / -	- / -	- / -	24 / 2.704	- / -	24 / 2.704	27 / 3.102	26 / 3.047	35 / 4.183	67 / 8.168	- / -	179 / 21.204
1.1.3) Anti-Jam Installation Kits (AH-1Z/UH-1Y) - NonOrganic *Installation 3 of 3*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.553	36 / 1.128	48 / 1.534	198 / 6.575	300 / 9.790
1.1.4) Archived ECPs - Organic(*)	2,148 / 178.698	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,148 / 178.698
1.2.1) Installation Kits N/R - Organic(*)	- / 4.303	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.303
2.1.1) NAVWAR Installation Equipment (F/A-18E/F and EA-18G w/panel) - Organic(*) (3)	714 / 40.839	48 / 3.355	24 / 2.448	39 / 3.991	- / -	39 / 3.991	36 / 3.773	36 / 3.867	26 / 2.861	22 / 2.469	- / -	945 / 63.603
2.1.2) NAVWAR Installation Equipment (F/A-18E/F and EA-18G w/o panel) - Organic(*) (4)	- / -	- / -	- / -	24 / 2.456	- / -	24 / 2.456	27 / 2.830	26 / 2.792	35 / 3.852	67 / 7.519	- / -	179 / 19.449
2.1.3) Anti-Jam Installation Equipment (AH-1Z/UH-1Y) - Organic(*) (5)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.643	36 / 1.311	48 / 1.783	198 / 7.502	300 / 11.239
2.2.1) Installation Equipment N/R - Organic(*)	- / 23.933	- / 0.480	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 24.413
Subtotal: Procurement	*- / 268.960*	*- / 7.997*	*- / 4.896*	*- / 13.543*	*- / -*	*- / 13.543*	*- / 13.840*	*- / 15.120*	*- / 16.442*	*- / 24.155*	*- / 14.077*	*- / 379.030*
Support												
3.1) NAVWAR Kit ECO	- / 2.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.547
3.2) Data	- / 8.332	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.332
3.3) Training Equipment - GPS	114 / 7.803	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	114 / 7.803
3.4) Training Equipment - NAVWAR	3 / 0.529	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.529
3.5) Support Equipment	4 / 1.034	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.034
3.6) ILS	- / 3.251	- / 0.201	- / 0.300	- / 0.306	- / -	- / 0.306	- / 0.334	- / 0.423	- / 0.433	- / 0.685	- / 11.023	- / 16.956
3.7) Other Support (6)	- / 102.393	- / 1.027	- / 1.747	- / 2.853	- / -	- / 2.853	- / 2.163	- / 2.535	- / 2.686	- / 3.219	- / 10.570	- / 129.193
Subtotal: Support	*- / 125.889*	*- / 1.228*	*- / 2.047*	*- / 3.159*	*- / -*	*- / 3.159*	*- / 2.497*	*- / 2.958*	*- / 3.119*	*- / 3.904*	*- / 21.593*	*- / 166.394*
Installation												
Installation 1 of 3: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/panel)	- / 5.872	- / 0.839	- / 1.175	- / 2.533	- / 0.000	- / 2.533	- / 1.628	- / 1.659	- / 1.842	- / 1.828	- / 3.321	- / 20.697

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All Aircraft as directed by OPNAV	**Modification Type:** Common Avionics (Safety) (Added Capability)	**Related RDT&E PEs:** 0604777N, 0604280N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 2 of 3: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/o panel)	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.670	- / 1.416	- / 1.294	- / 1.321	- / 4.228	- / 8.929
Installation 3 of 3: Anti-Jam Installation Kits (AH-1Z/ UH-1Y)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.286	- / 0.584	- / 4.196	- / 5.066
Subtotal: Installation	*- / 5.872*	*- / 0.839*	*- / 1.175*	*- / 2.533*	*- / -*	*- / 2.533*	*- / 2.298*	*- / 3.075*	*- / 3.422*	*- / 3.733*	*- / 11.745*	*- / 34.692*
Total												
Total Cost (Procurement + Support + Installation)	**400.721**	**10.064**	**8.118**	**19.235**	**0.000**	**19.235**	**18.635**	**21.153**	**22.983**	**31.792**	**47.415**	**580.116**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/panel)

Manufacturer Information

Manufacturer Name: The Boeing Company (7) | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 25

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates	Apr 2021	Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026	Apr 2027

Installation Information

Method of Implementation: [none specified]:: Installation Name: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/panel)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	86 / 5.872	24 / 0.839	60 / 1.175	30 / 1.407	0 / 0.000	30 / 1.407	- / -	- / -	- / -	- / -	0 / 0.000	200 / 9.293
FY 2019	- / -	- / -	- / -	24 / 1.126	0 / 0.000	24 / 1.126	24 / 1.149	- / -	- / -	- / -	0 / 0.000	48 / 2.275
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.479	14 / 0.683	- / -	- / -	0 / 0.000	24 / 1.162
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.976	19 / 0.946	- / -	0 / 0.000	39 / 1.922
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.896	18 / 0.914	0 / 0.000	36 / 1.810
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.914	18 / 0.906	36 / 1.820
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.308	26 / 1.308
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 1.107	22 / 1.107
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	86 / 5.872	24 / 0.839	60 / 1.175	54 / 2.533	0 / 0.000	54 / 2.533	34 / 1.628	34 / 1.659	37 / 1.842	36 / 1.828	66 / 3.321	431 / 20.697

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	86	-	8	8	8	8	8	22	22	15	15	12	12	12	12	5	5	7	7	10	10	10	9	9	9	9	9	9	9	66	431
Out	86	-	8	8	8	8	8	22	22	15	15	12	12	12	12	5	5	7	7	10	10	10	9	9	9	9	9	9	9	66	431

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/o panel)

Manufacturer Information

Manufacturer Name: The Boeing Company | Manufacturer Location: St. Louis, MO

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026

Installation Information

Method of Implementation: [none specified]:: Installation Name: NAVWAR Installation Kits (F/A-18E/F and EA-18G w/o panel)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.670	10 / 0.489	- / -	- / -	0 / 0.000	24 / 1.159
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.927	8 / 0.398	- / -	0 / 0.000	27 / 1.325
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.896	8 / 0.407	0 / 0.000	26 / 1.303
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.914	17 / 0.856	35 / 1.770
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 3.372	67 / 3.372
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.670	29 / 1.416	26 / 1.294	26 / 1.321	84 / 4.228	179 / 8.929

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	10	7	6	6	8	6	6	6	8	6	6	6	84	179
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	10	7	6	6	8	6	6	6	8	6	6	6	84	179

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: Anti-Jam Installation Kits (AH-1Z/UH-1Y)

Manufacturer Information

Manufacturer Name: Raytheon Systems Limited | Manufacturer Location: United Kingdom

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Jan 2023	Jan 2024	Jan 2025
Delivery Dates					Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: Anti-Jam Installation Kits (AH-1Z/UH-1Y)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.286	- / -	0 / 0.000	18 / 0.286
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.584	0 / 0.000	36 / 0.584
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.816	48 / 0.816
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	198 / 3.380	198 / 3.380
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.286	36 / 0.584	246 / 4.196	300 / 5.066

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	4	4	9	9	9	9	246	300
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	4	4	9	9	9	9	246	300

Footnotes:

(1) Starting in FY21 through FY25, the increase in Installation Kits (A-Kit) quantity and total cost are due to new contract, base year plus four option years to award in FY21. This increase starting in FY21 is a result of the addition of F/A-18 E/F and EA-18G aircraft A-Kits from 24 to 60+ (combination of with and without panel A-Kits). A-Kit with panel unit costs increased FY21-25 due to new contract, base year

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 1 / Global Positioning System (GPS) (OSIP 71-88)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

plus four option years to award in FY21. Overall quantities and funding per year for NAVWAR A-Kits increased due to the criticality in the military GPS capability enabler identified in POM21. Without this GPS capability, the aircraft is unable to complete the basic strike fighter mission and renders the aircraft partially mission capable.

(2) Starting in FY21 through FY25, increase is a result of the addition of F/A-18 E/F and EA-18G aircraft A-Kits from 24 to 60+ (combination of with and without panel A-Kits). The addition of the A-Kit without panel increased cost and quantity. Overall quantities and funding per year for NAVWAR A-Kits increased due to the criticality in the military GPS capability enabler identified in POM21. Without this GPS capability, the aircraft is unable to complete the basic strike fighter mission and renders the aircraft partially mission capable.

(3) Starting in FY21 through FY25, increase is a result of the addition of F/A-18 E/F and EA-18G aircraft Installation Equipment (B-Kit) from 24 to 60+ (combination of with and without panel B-Kits). The addition of the B-Kit without panel increased cost and quantity. Overall quantities and funding per year for NAVWAR B-Kit increased due to the criticality in the military GPS capability enabler identified in POM21. Without this GPS capability, the aircraft is unable to complete the basic strike fighter mission and renders the aircraft partially mission capable.

(4) FY21-FY25: Increase to NAVWAR B-Kits (w/o panel) quantity and cost is due to the addition of Lots 36-42 F/A-18 E/F and EA-18G aircraft. To meet fleet demand, budgeted quantities have increased from an annual procurement of 24 to 60+ (combination of with and without panel B-Kits). Overall quantities and funding per year for NAVWAR B-Kits increased due to the criticality in the military GPS capability enabler identified in POM21. Without this GPS capability, the aircraft is unable to complete the basic strike fighter mission and renders the aircraft partially mission capable.

(5) FY21-FY25: Anti-Jam B-Kit costs increased due to updated vendor estimates on anticipated price of antennas. Anti-Jam B-Kit quantities and budget increased to support fleet demands for anti-jam capability.

(6) FY21 increase in Other Support is due to the increased procurements of with panel A-Kits and B-Kits, and the insertion of procurements of the without panel A-Kits and B-Kits.

(7) FY21-25 increases in installation quantity and associated cost is a result of the addition of F/A-18 E/F and EA-18G aircraft A-Kits and B-Kits from 24 to 60+ (combination of with and without panel A-Kits). Overall funding for NAVWAR Installations increased due to the criticality in the military GPS capability enabler that resulted from POM21. Without this GPS capability, the aircraft is unable to complete the basic strike fighter mission and renders the aircraft partially mission capable.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,158.195	94.342	31.679	46.441	0.000	46.441	26.194	20.803	9.344	8.345	0.000	1,395.343
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,158.195	94.342	31.679	46.441	0.000	46.441	26.194	20.803	9.344	8.345	0.000	1,395.343
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,158.195**	**94.342**	**31.679**	**46.441**	**0.000**	**46.441**	**26.194**	**20.803**	**9.344**	**8.345**	**0.000**	**1,395.343**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) provides new and enhanced hardware and software solutions leveraging open architecture where cost effective, to comply with national and worldwide civil and military airspace requirements. Solutions include communication, navigation, surveillance and supporting technologies that facilitate air traffic management, and other civil and military operational capabilities. Impacts of non-compliance with airspace standards will include operational delays, circuitous rerouting, or access denial to controlled airspace.

Prioritization of platform type and quantity is based on missions and anticipated operations in affected airspace. Required functionalities include Mode Select (S), 8.33 kHz Channel Spacing, Required Navigation Performance Area Navigation (RNP RNAV), Reduced Vertical Separation Minimum (RVSM), Automatic Dependent Surveillance - Broadcast (Out) (ADS-B(O)), Mission Planning integration, Protected Instrument Landing System (P-ILS), cockpit aircraft data storage, processing and display capabilities and the procurement of the Flight Management Function (FMF) Enterprise License (Block Buy) for CMV/MV-22, MH-60, and T-45 in support of RNP RNAV.

FY19-FY25 cost per quantity variations are due to FY16 reduction that targeted funding in specific Budget Categories: Installation Kits Non-Recurring (A-Kit N/R), Installation Equipment (B-Kits), Installation Equipment Non-Recurring (B-Kit N/R), and Other Support. The reduction resulted in delayed progress on multiple Type/Model/Series (T/M/S) aircraft for the CNS/ATM capabilities throughout the Future Years Defense Plan. Additionally, cost per quantity variation is due to variations on multiple T/M/S platform aircraft, platform quantities, associated equipment per platform, and cost per equipment. Some Installation Kits (A-Kits) consist of a small number of wire bundles while other A-Kits consist of multiple wire bundles and structural components which increase unit cost. B-Kits vary by T/M/S and capability. Kit components within a platform will vary based on the number of configurations within that platform.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
AH-1Z/UH-1Y Mode S (FY18-FY25), ADS-B(O) (FY19-FY25), RNP RNAV (FY19-FY25)
C-130T Mode S (FY12-FY21), RNP RNAV (FY13-FY21), ADS-B(O) (FY14-FY21), 8.33 kHz (FY12-FY21)
CMV-22B ADS-B(O) (FY19-FY20), Mode S (FY19-FY20), RNP RNAV (FY19-FY22), 8.33 kHz (FY19-FY22)
E-2D RNP RNAV (FY14-FY23), ADS-B(O) (FY15-FY20)
E-6B ADS-B(O) (FY16-FY19), Mode S (FY16-FY19)
EA-18G, ADS-B(O) (FY15-FY20)
F-5 F/N ADS-B(O) (FY16-FY21)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**

F-35 B/C Mode S (FY15-FY21), RVSM (FY15-FY20), RNP RNAV (FY18-FY24), ADS-B(O) (FY18-FY24)
F/A-18C/D RVSM (FY13-FY20), ADS-B(O) (FY15-FY20)
F/A-18E/F ADS-B(O) (FY15-FY20), RNP RNAV (FY18-FY22)
K/C-130J RNP RNAV (FY16-FY19), ADS-B(O) (FY16-FY20)
KC-130T ADS-B(O) (FY16-FY20)
MH-53E Mode S (FY15-FY21) ADS-B(O) (FY16-FY21)
MH-60R/S RNP RNAV (FY16-FY25), ADS-B(O) (FY14-FY20)
MQ-4C ADS-B(O) (FY16-FY20), RVSM (FY16-FY23), 8.33 kHz (FY16-FY20), Mode S (FY16-FY19), RNP RNAV (FY20-FY23)
MQ-8B-C ADS-B(O) (FY16-FY20), Mode S (FY16-FY20), 8.33 kHz(FY16-FY20)
MQ-25-A 8.33 kHz (FY17-FY23), RNP RNAV (FY17-FY24), RVSM (FY17-FY23), Mode S (FY17-FY24), ADS-B(O) (FY17-FY24)
MV-22B RNP RNAV (FY14-FY24), ADS-B(O) (FY15-FY20) Mode S (FY19-FY20)
NP-3C/A Mode S (FY19-FY20), ADS-B(O) (FY19-FY20)
OH-58C ADS-B(O) (FY18-FY19)
P-3C/EP-3E ADS-B(O)(FY15-FY19)
P-8A ADS-B(O) (FY16-FY19)
RQ-4A Mode S (FY19-FY21), ADS-B(O) (FY19-FY21)
T/AV-8B Mode S (FY17-FY21), RNP RNAV (FY13-FY19), ADS-B(O) (FY17-FY21)
T-34C ADS-B(O) (FY17-FY19)
T-38C ADS-B(O) (FY16-FY19), Mode S (FY16-FY19)
T-45 RNP RNAV (FY17-FY19)
UH-72A ADS-B(O) (FY17-FY19)
VH-3D ADS-B(O) (FY17-FY20), Mode S (FY17-FY20)
VH-60N 8.33 kHz (FY14-FY20), Mode S (FY14-FY19), ADS-B(O) (FY16-FY20)
VH-92 ADS-B(O) (FY17-FY20)

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All A/C as directed by OPNAV	**Modification Type:** Common Avionics Modification	**Related RDT&E PEs:** 0605217N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) CNS/ATM Installation Kit (All other A/C excluding TPS platforms) - NonOrganic (8) *Installation 1 of 3*	456 / 30.804	59 / 0.388	14 / 0.051	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	529 / 31.243
1.1.2) CNS/ATM Installation Kit (MQ-8B/C) - Organic(*)	- / -	- / -	60 / 0.036	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.036
1.1.3) CNS/ATM Installation Kit (TPS) - NonOrganic *Installation 2 of 3*	11 / 1.247	13 / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 1.252
1.1.4) CNS/ATM Installation Kits (F-5 Long Lead) - NonOrganic *Installation 3 of 3*	41 / 0.728	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 0.728
1.2.1) Installation Kits N/R - Organic(*)	- / 58.574	- / 0.404	- / 0.614	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 59.592
2.1.1) CNS/ATM Installation Equipment - Organic(*) (9)	2,214 / 196.289	69 / 15.369	65 / 2.353	197 / 18.126	- / -	197 / 18.126	120 / 10.900	115 / 10.618	30 / 2.826	41 / 3.774	- / -	2,851 / 260.255
2.1.2) Archived ECPs - Organic(*)	713 / 2.889	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	713 / 2.889
2.2.1) Installation Equipment N/R - Organic(*)	33 / 372.554	- / 43.148	- / 0.959	- / 1.242	- / -	- / 1.242	- / -	- / -	- / -	- / -	- / -	33 / 417.903
Subtotal: Procurement	*- / 663.085*	*- / 59.314*	*- / 4.013*	*- / 19.368*	*- / -*	*- / 19.368*	*- / 10.900*	*- / 10.618*	*- / 2.826*	*- / 3.774*	*- / 0.000*	*- / 773.898*
Support												
3.1) Engineering Change Orders	- / 1.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.550
3.2) Data	- / 6.179	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.179
3.3) Training (10)	20 / 28.260	- / 3.047	- / 4.870	- / 4.900	- / -	- / 4.900	- / 5.200	- / 0.250	- / -	- / -	- / -	20 / 46.527
3.4) Support Equipment	- / 7.115	- / 0.678	- / 0.039	- / 0.040	- / -	- / 0.040	- / 0.040	- / 0.041	- / 0.042	- / 0.043	- / -	- / 8.038
3.5) ILS (11)	- / 23.941	- / 1.284	- / 0.406	- / 0.276	- / -	- / 0.276	- / 0.219	- / 0.202	- / 0.212	- / 0.166	- / -	- / 26.706
3.6) Other Support (12)	- / 396.869	- / 28.735	- / 16.151	- / 21.530	- / -	- / 21.530	- / 9.835	- / 9.692	- / 6.264	- / 4.362	- / -	- / 493.438
Subtotal: Support	*- / 463.914*	*- / 33.744*	*- / 21.466*	*- / 26.746*	*- / -*	*- / 26.746*	*- / 15.294*	*- / 10.185*	*- / 6.518*	*- / 4.571*	*- / 0.000*	*- / 582.438*
Installation												
Installation 1 of 3: CNS/ATM Installation Kit (All other A/C excluding TPS platforms)	- / 30.734	- / 1.173	- / 0.519	- / 0.327	- / 0.000	- / 0.327	- / -	- / -	- / -	- / -	- / 0.000	- / 32.753
Installation 2 of 3: CNS/ATM Installation Kit (TPS)	- / 0.462	- / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.573
Installation 3 of 3: CNS/ATM Installation Kits (F-5 Long Lead)	- / -	- / -	- / 5.681	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.681
Subtotal: Installation	*- / 31.196*	*- / 1.284*	*- / 6.200*	*- / 0.327*	*- / -*	*- / 0.327*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 39.007*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All A/C as directed by OPNAV	**Modification Type:** Common Avionics Modification	**Related RDT&E PEs:** 0605217N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	1,158.195	94.342	31.679	46.441	0.000	46.441	26.194	20.803	9.344	8.345	0.000	1,395.343

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: CNS/ATM Installation Kit (All other A/C excluding TPS platforms)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020					
Delivery Dates	Dec 2019	Dec 2020					

Installation Information

Method of Implementation: All A/C except NU-1B, O-2A, OH-58A, U-6A, UH-72A,UV-18A:: Installation Name: CNS/ATM Installation Ki

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	381 / 30.734	75 / 1.173	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	456 / 31.907
FY 2019	- / -	- / -	59 / 0.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	59 / 0.519
FY 2020	- / -	- / -	- / -	14 / 0.327	0 / 0.000	14 / 0.327	- / -	- / -	- / -	- / -	0 / 0.000	14 / 0.327
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	381 / 30.734	75 / 1.173	59 / 0.519	14 / 0.327	0 / 0.000	14 / 0.327	- / -	- / -	- / -	- / -	0 / 0.000	529 / 32.753

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	381	19	19	19	18	15	15	15	14	4	4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	529
Out	381	19	19	19	18	15	15	15	14	4	4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	529

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: CNS/ATM Installation Kit (TPS)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Feb 2019						

Installation Information

Method of Implementation: NU-1B, O-2A, OH-58A, U-6A, UH-72A,UV-18A. F-5,F-16:: Installation Name: CNS/ATM Installation Kit (TP

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	11 / 0.462	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.462
FY 2019	- / -	13 / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 0.111
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 0.462	13 / 0.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.573

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	11	-	4	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Out	11	-	4	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: CNS/ATM Installation Kits (F-5 Long Lead)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 19

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: TBD:: Installation Name: CNS/ATM Installation Kits (F-5 Long Lead)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	41 / 5.681	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	41 / 5.681
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	41 / 5.681	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	41 / 5.681

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	14	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41
Out	-	-	-	-	-	-	14	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41

Footnotes:

(8) FY19-FY20: Installation Kit (A-Kit) cost per quantity variation is due to variation in multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment. The Installation Equipment (B-Kit) quantities differ from A-Kits where B-Kits consist of a card or module that will be integrated without A-Kit requirement. A-Kit/B-Kit quantities reflect number of units procured, installation quantity

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 2 / Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

reflects number of aircraft. Certifications are based on a separate certification analysis to confirm system performance, and do not necessarily reflect integration. Production Lead Time is acceptable and does not impact induction of aircraft due to length of aircraft modification. FY21-FY25: No A-Kit or Installation associated with B-Kit procurement.

(9) FY19-FY25: B-Kit cost per quantity variation is due to variation in multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment. FY21-FY25 No A-Kit or installation associated with B-Kit procurement. B-Kit cost growth due to MH-60 Required Navigational Performance/Area Navigation (RNP RNAV).

(10) FY21: Training Equipment cost increased for CMV/MV-22 Trainer in support of RNP RNAV.

(11) FY21 & FY24: Integrated Logistics Support increase is due to CMV/MV-22 trainer and MH-60 Kit procurement in support of RNP RNAV.

(12) FY21: Other Support Cost Category 3.6 increased budget amount identified in FY21 is a result of accelerating the MV/CMV-22 RNP RNAV certification efforts. The MV/CMV-22 RNP RNAV integration was accelerated to start in FY19. As a result, the MV/CMV-22 flight test period was accelerated from FY23 to FY21.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	33.774	4.901	5.100	5.608	0.000	5.608	5.278	5.389	5.494	5.615	131.075	202.234
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	33.774	4.901	5.100	5.608	0.000	5.608	5.278	5.389	5.494	5.615	131.075	202.234
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**33.774**	**4.901**	**5.100**	**5.608**	**0.000**	**5.608**	**5.278**	**5.389**	**5.494**	**5.615**	**131.075**	**202.234**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Avionics Component Improvement Program (AvCIP) provides resources to address critical readiness, reliability deficiencies, obsolescence, loss of sustainability, and top fleet repair cost drivers in naval avionics systems. In the year prior to execution, candidate projects from all Type/Model/Series (T/M/S) and aviation electronics support components are collected, reviewed, competed and selected based upon proposal solution maturity, ability to execute, mission criticality and urgency, degree of readiness, impact on Fleet maintenance or repair cost burden, return on investment, and Fleet advocacy. AvCIP was established under the OSD Business Initiative Council as a better business practice to address cost-wise readiness in support of Naval Aviation Enterprise (NAE) efficiency objectives. AvCIP also supports the NAE strategic imperative of increasing speed of product to the fleet. AvCIP is funded with Aircraft Procurement, Navy (APN) account to cover Non-Recurring Engineering (NRE) for modifications, integration testing, lab assets, qualification testing, engineering and logistics documentation and support services. APN funds can insert modern technology while addressing poor performance or obsolescence (that threatens to down aircraft), and support project modification component procurements, as required. Follow-on procurement tails, if required, will be coordinated with Program Offices and their Operational, Safety and Improvement Programs (OSIPs). Candidate projects are submitted via a rigorous template and reviewed by a panel of Avionics professionals. Analysis shows that funding applied under this program has consistently enabled life cycle sustainment and procurement cost avoidances exceeding a five to one margin.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: AvCIP project selection criteria focus on proposed solution maturity and executability in which the timeframe for target projects to start fielding the solutions is 12-18 months. Units may be transferred to Fleet platforms as operational assets. Future year specific development profiles/milestones will be dependent upon projects competed and selected. Procurements below are representative of initial project lab asset purchases for qualification and production validation.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All Aircraft as directed by OPNAV	**Modification Type:** Common Avionics Modification	**Related RDT&E PEs:** 0605217N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Avionics Component Improvement Program (AvCIP) (OSIP 11-09)												
B Kits												
Recurring												
1.1.1) AvCIP Installation Equipment - NonOrganic (13)	22 / 10.118	- / -	12 / 2.198	12 / 2.212	- / -	12 / 2.212	12 / 2.232	12 / 2.277	12 / 2.313	12 / 2.346	138 / 44.448	232 / 68.144
Subtotal: Recurring	*- / 10.118*	*- / -*	*- / 2.198*	*- / 2.212*	*- / -*	*- / 2.212*	*- / 2.232*	*- / 2.277*	*- / 2.313*	*- / 2.346*	*- / 44.448*	*- / 68.144*
Non-Recurring												
1.2.1) Installation Equipment N/R - Organic (14)	- / 14.125	- / 4.248	- / 2.352	- / 2.168	- / -	- / 2.168	- / 1.770	- / 1.782	- / 1.820	- / 1.842	- / 62.607	- / 92.714
Subtotal: Non-Recurring	*- / 14.125*	*- / 4.248*	*- / 2.352*	*- / 2.168*	*- / -*	*- / 2.168*	*- / 1.770*	*- / 1.782*	*- / 1.820*	*- / 1.842*	*- / 62.607*	*- / 92.714*
Subtotal: Avionics Component Improvement Program (AvCIP) (OSIP 11-09)	*22 / 24.243*	*- / 4.248*	*12 / 4.550*	*12 / 4.380*	*- / -*	*12 / 4.380*	*12 / 4.002*	*12 / 4.059*	*12 / 4.133*	*12 / 4.188*	*138 / 107.055*	*232 / 160.858*
Subtotal: Procurement, All Modification Items	*- / 24.243*	*- / 4.248*	*- / 4.550*	*- / 4.380*	*- / -*	*- / 4.380*	*- / 4.002*	*- / 4.059*	*- / 4.133*	*- / 4.188*	*- / 107.055*	*- / 160.858*
Support *(All Modification Items)*												
2.3) ILS	- / 0.636	- / -	- / 0.100	- / 0.106	- / -	- / 0.106	- / 0.111	- / 0.115	- / 0.118	- / 0.128	- / 5.095	- / 6.409
2.5) Support Equipment	- / 0.158	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.158
2.6) Other Support	- / 8.737	- / 0.653	- / 0.450	- / 0.463	- / -	- / 0.463	- / 0.475	- / 0.495	- / 0.505	- / 0.525	- / 12.573	- / 24.876
Subtotal: Support	*- / 9.531*	*- / 0.653*	*- / 0.550*	*- / 0.569*	*- / -*	*- / 0.569*	*- / 0.586*	*- / 0.610*	*- / 0.623*	*- / 0.653*	*- / 17.668*	*- / 31.443*
Installation												
Modification Item 1 of 1: Avionics Component Improvement Program (AvCIP) (OSIP 11-09)	- / 0.000	- / 0.000	- / 0.000	- / 0.659	- / 0.000	- / 0.659	- / 0.690	- / 0.720	- / 0.738	- / 0.774	- / 6.352	- / 9.933
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.659*	*- / -*	*- / 0.659*	*- / 0.690*	*- / 0.720*	*- / 0.738*	*- / 0.774*	*- / 6.352*	*- / 9.933*
Total												
Total Cost (Procurement + Support + Installation)	**33.774**	**4.901**	**5.100**	**5.608**	**0.000**	**5.608**	**5.278**	**5.389**	**5.494**	**5.615**	**131.075**	**202.234**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Avionics Component Improvement Program (AvCIP) (OSIP 11-09)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates		Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026

Installation Information

Method of Implementation: Equipment is provided to Platform PMA and installed as per airframe ECP/AFC:: Installation Name: AvC

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	12 / 0.659	0 / 0.000	12 / 0.659	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.659
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.690	- / -	- / -	- / -	0 / 0.000	12 / 0.690
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.720	- / -	- / -	0 / 0.000	12 / 0.720
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.738	- / -	0 / 0.000	12 / 0.738
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.774	0 / 0.000	12 / 0.774
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.508	12 / 0.508
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	138 / 5.844	138 / 5.844
Total	- / -	- / -	- / -	12 / 0.659	0 / 0.000	12 / 0.659	12 / 0.690	12 / 0.720	12 / 0.738	12 / 0.774	150 / 6.352	210 / 9.933

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	150	210
Out	-	-	-	-	-	-	-	-	-	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	-	4	4	4	150	210

Footnotes:

(13) No Installation Kit (A-Kit) Procurement associated with the Installation Equipment (B-Kit) Procurement. Prior Year B-Kit Procurement, quantity of (22), no installs required. B-Kits and Installs are estimated based on engineering projections. Actual components to be determined during project selection in the year prior to execution, as outlined in project description/justification on P-3a. Install cost variations are due to variations in kit procurements for multiple aircraft, platform quantities, and associated equipment per platform.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 3 / Avionics Component Improvement Program (AvCIP) (OSIP 11-09)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(14) Installation Equipment Non-Recurring (B-Kit N/R) modification funding is as follows: All T/M/S modifications and Common Avionics Systems. B-Kit cost growth in FY2021 is due to approved FY2020 Future Readiness Cross Functional Team Projects for C-2/E-2 Rate Gyro and 5x5 Display Glass Refresh. Both are 24 month projects and funded with both FY20 and FY21 as annualized efforts for affordability and scheduled deliverables.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 4 / Secure Communications (OSIP 10-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	8.180	13.659	22.279	0.000	22.279	27.645	58.690	78.814	93.589	265.287	568.143
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	8.180	13.659	22.279	0.000	22.279	27.645	58.690	78.814	93.589	265.287	568.143
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**8.180**	**13.659**	**22.279**	**0.000**	**22.279**	**27.645**	**58.690**	**78.814**	**93.589**	**265.287**	**568.143**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Secure Communication Avionics Modernization Program provides secure Ultra High Frequency (UHF)/Very High Frequency (VHF) Amplitude Modulation/Frequency Modulation (AM/FM) Anti-Jam radio systems for Line of Sight (LOS) and Beyond Line of Sight (BLOS) Satellite Communication (SATCOM) voice and data communications including modernized cryptographic capabilities and anti-jam waveforms. The program provides for continued secure communications beyond current National Security Agency (NSA) mandated cryptographic (CRYTPO) Cease Key Dates and overcomes analog HAVEQUICK vulnerabilities with required robust digital encryption/frequency hopping capability. Enables secure LOS and BLOS communications with increased access, significantly increased global coverage, higher bandwidth and Internet Protocol (IP) connectivity. Secure Communications mitigates BLOS and Anti-Jam waveform obsolescence with the additions of the Mobile Users Objective System (MUOS) and Second Generation Anti-Jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN) waveforms.

Only aircraft integrating MUOS require Installation Kits (A-Kit); all others integrating Communications Security (COMSEC) do not.

Development Status/Major Development Milestones: Full Rate Production approved 16 May 2011. FY21-25: The Installation Equipment Non-Recurring is the integration cost for the procurement buys in FY21 through To Complete and for various Type/Model/Series (T/M/S) aircraft to implement S/W modifications to mission computers to incorporate Anti-Jam Waveforms, MUOS, and Crypto Modernization. Installation Kit Recurring cost per quantity variation is due to in multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 4 / Secure Communications (OSIP 10-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All platforms as directed by OPNAV.	**Modification Type:** Common Avionics (Modernization)	**Related RDT&E PEs:** 0605217N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Secure Communications (OSIP 10-19)												
A Kits												
Recurring												
1.1.1) Secure Communications Installation Kits - NonOrganic (15)	- / -	- / -	9 / 0.459	20 / 1.421	- / -	20 / 1.421	43 / 2.864	61 / 3.433	49 / 2.636	68 / 3.602	321 / 18.059	571 / 32.474
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 0.459*	*- / 1.421*	*- / -*	*- / 1.421*	*- / 2.864*	*- / 3.433*	*- / 2.636*	*- / 3.602*	*- / 18.059*	*- / 32.474*
B Kits												
Recurring												
2.1.1) Secure Communications Installation Equipment - Organic (16)	- / -	19 / 2.355	29 / 4.000	29 / 6.126	- / -	29 / 6.126	106 / 16.244	220 / 44.532	356 / 61.039	378 / 67.381	321 / 153.858	1,458 / 355.535
Subtotal: Recurring	*- / 0.000*	*- / 2.355*	*- / 4.000*	*- / 6.126*	*- / -*	*- / 6.126*	*- / 16.244*	*- / 44.532*	*- / 61.039*	*- / 67.381*	*- / 153.858*	*- / 355.535*
Non-Recurring												
2.2.1) Installation Equipment Non-Recurring - Organic (17)	- / -	- / 3.318	- / 7.964	- / 13.164	- / -	- / 13.164	- / 4.442	- / 4.734	- / 8.168	- / 15.555	- / 22.691	- / 80.036
Subtotal: Non-Recurring	*- / 0.000*	*- / 3.318*	*- / 7.964*	*- / 13.164*	*- / -*	*- / 13.164*	*- / 4.442*	*- / 4.734*	*- / 8.168*	*- / 15.555*	*- / 22.691*	*- / 80.036*
Subtotal: Secure Communications (OSIP 10-19)	*- / -*	*19 / 5.673*	*38 / 12.423*	*49 / 20.711*	*- / -*	*49 / 20.711*	*149 / 23.550*	*281 / 52.699*	*405 / 71.843*	*446 / 86.538*	*642 / 194.608*	*2,029 / 468.045*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 5.673*	*- / 12.423*	*- / 20.711*	*- / -*	*- / 20.711*	*- / 23.550*	*- / 52.699*	*- / 71.843*	*- / 86.538*	*- / 194.608*	*- / 468.045*
Support *(All Modification Items)*												
3.3) Training Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.600	- / 0.600	- / -	- / -	- / -	- / 1.200
3.4) Support Equipment	- / -	- / 0.545	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.545
3.5) ILS	- / -	- / 0.046	- / 0.206	- / 0.212	- / -	- / 0.212	- / 0.219	- / 0.225	- / 0.240	- / 0.240	- / 2.388	- / 3.776
3.6) Other Support (18)	- / -	- / 1.916	- / 1.030	- / 1.169	- / -	- / 1.169	- / 1.416	- / 1.448	- / 1.709	- / 1.917	- / 19.416	- / 30.021
Subtotal: Support	*- / 0.000*	*- / 2.507*	*- / 1.236*	*- / 1.381*	*- / -*	*- / 1.381*	*- / 2.235*	*- / 2.273*	*- / 1.949*	*- / 2.157*	*- / 21.804*	*- / 35.542*
Installation												
Modification Item 1 of 1: Secure Communications (OSIP 10-19)	- / 0.000	- / 0.000	- / 0.000	- / 0.187	- / 0.000	- / 0.187	- / 1.860	- / 3.718	- / 5.022	- / 4.894	- / 48.875	- / 64.556
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.187*	*- / -*	*- / 0.187*	*- / 1.860*	*- / 3.718*	*- / 5.022*	*- / 4.894*	*- / 48.875*	*- / 64.556*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 4 / Secure Communications (OSIP 10-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All platforms as directed by OPNAV.	**Modification Type:** Common Avionics (Modernization)	**Related RDT&E PEs:** 0605217N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**8.180**	**13.659**	**22.279**	**0.000**	**22.279**	**27.645**	**58.690**	**78.814**	**93.589**	**265.287**	**568.143**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 4 / Secure Communications (OSIP 10-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Secure Communications (OSIP 10-19)

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: Secure Communications Installation Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	9 / 0.187	0 / 0.000	9 / 0.187	- / -	- / -	- / -	- / -	0 / 0.000	9 / 0.187
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.860	- / -	- / -	- / -	0 / 0.000	20 / 1.860
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 3.718	- / -	- / -	0 / 0.000	43 / 3.718
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	61 / 5.022	- / -	0 / 0.000	61 / 5.022
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	49 / 4.894	0 / 0.000	49 / 4.894
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	68 / 8.543	68 / 8.543
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	321 / 40.332	321 / 40.332
Total	- / -	- / -	- / -	9 / 0.187	0 / 0.000	9 / 0.187	20 / 1.860	43 / 3.718	61 / 5.022	49 / 4.894	389 / 48.875	571 / 64.556

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	3	2	2	2	5	5	5	5	11	11	11	10	16	15	15	15	13	12	12	12	389	571
Out	-	-	-	-	-	-	-	-	-	3	2	2	2	5	5	5	5	11	11	11	10	16	15	15	15	13	12	12	12	389	571

Method of Implementation (Organic): Secure Communications Installation Equipment - Not Installed	**Installation Quantity:** 1458

Footnotes:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 4 / Secure Communications (OSIP 10-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(15) FY21-FY25: Installation Kit (A-Kit) Procurement and Installs increase is associated with Crypto Modernization and Mobile Users Objective System (MUOS) for C-40A, E-2C/D, KC-130J, MV/CMV-22B, CH-53K, MQ-4, P-8A and UC-12. All other aircraft, no A-Kit Procurement or Installs associated with Installation Equipment (B-Kit) Procurement. A-Kit cost per quantity variation is due to multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment.

(16) FY21-FY25: B-Kit Procurement increase is associated with the Crypto Modernization and MUOS for C-40A, E-2C/D, KC-130J, MV/CMV-22B, CH-53K, MQ-4, P-8A, E-6B, F/A-18 E/F/G and UC-12. B-Kit cost per quantity variation is due to multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment. All other aircraft, no A-Kit Procurement or Installs associated with B-Kit Procurement.

(17) FY23-FY25: The Installation Equipment Non-Recurring (B-Kit N/R) is the integration for the procurement buys in FY21 through To Complete for various T/M/S aircraft and to implement the S/W modifications to mission computers to incorporate Anti-Jam Waveforms, MUOS and Crypto Modernization. B-Kit cost per quantity variation is due to multiple T/M/S aircraft, platform quantities, associated equipment per platform, and cost per equipment. All other aircraft, no A-Kit Procurement or Installs associated with B-Kit Procurement.

(18) FY21-FY25: The Other Support cost growth is associated with the procurement of A-Kits and B-Kits for the C-40A, E-2C/D, KC-130J, MV/CMV-22B, CH-53K, MQ-4, P-8A and UC-12 in support of the Crypto Modernization and MUOS.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 5 / Common Mission Computing and Displays (CMCD) (OSIP 06-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	24.422	49.759	0.000	49.759	45.774	28.635	20.822	8.182	9.438	187.032
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	24.422	49.759	0.000	49.759	45.774	28.635	20.822	8.182	9.438	187.032
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**24.422**	**49.759**	**0.000**	**49.759**	**45.774**	**28.635**	**20.822**	**8.182**	**9.438**	**187.032**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Common Mission Computing and Displays (CMCD) modifies unsustainable mission computers, mission processing capacity and display solutions; while providing improved capacity to meet expanding mission and data transfer requirements. CMCD reduces time and minimizes investment costs required to manage obsolescence and integrate new capabilities on tactical aircraft avionics systems. This introduces Commercial Off the Shelf (COTS) current display processing technologies at an affordable cost allowing capabilities to be introduced into the fleet in an expedited manner. COTS displays and Open Architecture (OA) mission computers have multi-platform applications. Each configuration will be tailored and serve as an enabler to rapidly implement current and future software application capabilities through the Government's organic Multi-Use Laboratory Environment (MULE). MULE will execute these activities over the equipment's life cycle while reducing dependency on aircraft manufacturers during technology refreshes and capability insertions. CMCD will contain COTS modules that will be integrated with Government owned OA Core Level Software (CLS) through an organically managed program. This OSIP will centrally manage the fielded mission computing and display systems across multiple platforms to create efficiencies and cost saving to the Naval Aviation Enterprise.

Current funding FY21 through FY25 include T-45 and E-2D. These costs cover modification of the baseline framework to re-host the T-45C legacy Operational Flight Plan (OFP), partition separable OA environments, implement a common open software application and field the retrofits. Funding supports mission computer re-host, platform integration, and test for E-2D mission computer.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Test Readiness Review completed July 2019 and Environmental Qualification testing began in December 2019. A Production Readiness Review will be scheduled the third quarter of FY 2020.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 5 / Common Mission Computing and Displays (CMCD) (OSIP 06-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All platforms as directed by OPNAV.	**Modification Type:** Common Avionics (Modernization)	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Common Mission Computing and Displays (CMCD) (OSIP 06-20)												
B Kits												
Recurring												
2.1.1) CMCD Installation Equipment - Organic [19]	- / -	- / -	6 / 2.005	39 / 10.335	- / -	39 / 10.335	39 / 10.530	38 / 10.450	38 / 10.640	- / -	33 / 9.438	193 / 53.398
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 2.005*	*- / 10.335*	*- / -*	*- / 10.335*	*- / 10.530*	*- / 10.450*	*- / 10.640*	*- / -*	*- / 9.438*	*- / 53.398*
Non-Recurring												
2.2.1) Installation Equipment Non-Recurring - Organic [20]	- / -	- / -	- / 14.430	- / 29.631	- / -	- / 29.631	- / 26.382	- / 9.656	- / 2.152	- / -	- / -	- / 82.251
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 14.430*	*- / 29.631*	*- / -*	*- / 29.631*	*- / 26.382*	*- / 9.656*	*- / 2.152*	*- / -*	*- / 0.000*	*- / 82.251*
Subtotal: Common Mission Computing and Displays (CMCD) (OSIP 06-20)	*- / -*	*- / -*	*6 / 16.435*	*39 / 39.966*	*- / -*	*39 / 39.966*	*39 / 36.912*	*38 / 20.106*	*38 / 12.792*	*- / -*	*33 / 9.438*	*193 / 135.649*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / 16.435*	*- / 39.966*	*- / -*	*- / 39.966*	*- / 36.912*	*- / 20.106*	*- / 12.792*	*- / -*	*- / 9.438*	*- / 135.649*
Support *(All Modification Items)*												
3.5) ILS	- / -	- / -	- / 0.451	- / 0.465	- / -	- / 0.465	- / 0.459	- / 0.463	- / 0.400	- / 0.395	- / -	- / 2.633
3.6) Other Support [21]	- / -	- / -	- / 7.536	- / 9.328	- / -	- / 9.328	- / 8.403	- / 8.066	- / 7.630	- / 7.787	- / -	- / 48.750
Subtotal: Support	*- / 0.000*	*- / -*	*- / 7.987*	*- / 9.793*	*- / -*	*- / 9.793*	*- / 8.862*	*- / 8.529*	*- / 8.030*	*- / 8.182*	*- / 0.000*	*- / 51.383*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**24.422**	**49.759**	**0.000**	**49.759**	**45.774**	**28.635**	**20.822**	**8.182**	**9.438**	**187.032**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 5 / Common Mission Computing and Displays (CMCD) (OSIP 06-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Common Mission Computing and Displays (CMCD) (OSIP 06-20)		

Footnotes:

(19) No Installation Kit (A-Kit) Procurement or Installs associated with Installation Equipment (B-Kit) Procurement. FY21-FY24: B-Kit costs variation due to multiple Type/Model/Series (T/M/S) aircraft, platform quantities, associated equipment per platform, and cost per equipment. Due to FY20 Congressional reduction of funds, B-Kits were reduced in FY20 from (39) to (6). (33) B-Kits realigned to To Complete.

(20) FY21-FY24: Installation Equipment Non-Recurring (B-Kit N/R) cost increase is due to E-2D Mission Computer (MC) Software, Platform/Lead Systems Integration, and test. B-Kit N/R is ongoing to implement the software modifications to Mission Computers for various T/M/S aircraft to incorporate Open Architecture.

(21) FY21-FY25: Other Support cost increase is due to engineering for B-Kit Procurement, Integration and the Government's organic MULE. MULE supports capability insertions, technology refresh and incorporation of materials and products for lab testing.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 6 / Global Positioning System (GPS) Modernization (OSIP 02-22)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	5.980	13.290	14.250	23.377	64.536	121.433
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	5.980	13.290	14.250	23.377	64.536	121.433
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.980**	**13.290**	**14.250**	**23.377**	**64.536**	**121.433**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION:
Global Positioning System (GPS) Modernization funds the Navy's integration of Military Code (M-Code) GPS receivers that are being developed by the Air Force Material Command's Positioning, Navigation, Timing Program Office (PNT PO) Embedded GPS Inertial M-Code (EGI-M) and the Miniaturized Advanced GPS Receiver 2000 with M-Code (MAGR2K-M) programs into Naval Air platforms. Integration of these receivers address emerging threats to GPS by providing access to the new GPS M-Code signal. This effort supports Navy's compliance with Public Law 111-383, which requires that all GPS user equipment be capable of receiving the new GPS M-Code signal after FY 2017.

Research, Development, Test, and Evaluation, Navy for this effort is funded under program element 0604280N.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
PEO C4I approved Project Definition Document (PDD) 9 November 2016; F/A-18E/F GPS Modernization Early Integration contract to support MAGR2K-M on lots 23-25 awarded to Boeing December 2016 followed by the Prime Vendor (Boeing) integration contract awarded January 2018; Prime Vendor (Bell Boeing) Integration contract to support MAGR2K-M integration on MV-22B/CMV-22B awarded December 2018. Operational Evaluation planned for Q2/Q3 FY21 for MV-22B and CMV-22B and Q1/Q2 FY23 for F/A-18E/F (Lots 23-25). EGI-M missionization contract for CH-53K expected to award Q1FY20, followed by Prime Vendor (Lockheed) Integration contract award of Q1FY22 to support a planned operational evaluation of Q3 FY25.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 6 / Global Positioning System (GPS) Modernization (OSIP 02-22)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: All Aircraft as directed by OPNAV	**Modification Type:** Common Avionics (Modernization)	**Related RDT&E PEs:** 0604280N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Global Positioning System (GPS) Modernization (OSIP 02-22)												
B Kits												
Recurring												
2.1.1) GPS Modernization Installation Equipment (MAGR2K-M/EGI-M) - NonOrganic [22]	- / -	- / -	- / -	- / -	- / -	- / -	48 / 4.690	108 / 10.760	108 / 10.980	109 / 19.916	211 / 33.606	584 / 79.952
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.690*	*- / 10.760*	*- / 10.980*	*- / 19.916*	*- / 33.606*	*- / 79.952*
Subtotal: Global Positioning System (GPS) Modernization (OSIP 02-22)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*48 / 4.690*	*108 / 10.760*	*108 / 10.980*	*109 / 19.916*	*211 / 33.606*	*584 / 79.952*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.690*	*- / 10.760*	*- / 10.980*	*- / 19.916*	*- / 33.606*	*- / 79.952*
Support *(All Modification Items)*												
3.5) ILS	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.555	- / 0.566	- / 0.578	- / 0.589	- / 2.780	- / 5.068
3.6) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.735	- / 1.674	- / 2.020	- / 2.191	- / 25.915	- / 32.535
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.290*	*- / 2.240*	*- / 2.598*	*- / 2.780*	*- / 28.695*	*- / 37.603*
Installation												
Modification Item 1 of 1: Global Positioning System (GPS) Modernization (OSIP 02-22)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.290	- / 0.672	- / 0.681	- / 2.235	- / 3.878
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.290*	*- / 0.672*	*- / 0.681*	*- / 2.235*	*- / 3.878*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.980**	**13.290**	**14.250**	**23.377**	**64.536**	**121.433**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 6 / Global Positioning System (GPS) Modernization (OSIP 02-22)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Global Positioning System (GPS) Modernization (OSIP 02-22)

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates				Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: GPS Modernization Installation Equipment (MAGR2K-M/EGI-M)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.290	- / -	- / -	0 / 0.000	48 / 0.290
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	108 / 0.672	- / -	0 / 0.000	108 / 0.672
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	108 / 0.681	0 / 0.000	108 / 0.681
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	109 / 0.761	109 / 0.761
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	211 / 1.474	211 / 1.474
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.290	108 / 0.672	108 / 0.681	320 / 2.235	584 / 3.878

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	27	27	27	27	27	27	27	27	320	584
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	27	27	27	27	27	27	27	27	320	584

Footnotes:

(22) No required Installation Kit (A-Kit) procurement associated with Installation Equipment (B-Kit) Procurement. Decrease in GPS Modernization B-Kit is due to the reduction of MV-22B and CMV-22B B-Kits and associated installs due to platform schedules. Overall B-Kits reduced from 60 to 48 starting in FY23. An additional decrease is due to removing the F/A-18 E/F/G (ANAV M) B-Kits starting in FY23 through FY25. This resulted in overall reduction to both B-Kits and associated installs.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 7 / Digital Interoperability for MAGTF Agile Network (OSIP 02-23)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.208	13.497	16.321	375.746	417.772
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.208	13.497	16.321	375.746	417.772
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**12.208**	**13.497**	**16.321**	**375.746**	**417.772**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Procurement and installation of Digital Interoperability (DI)/Marine Air Ground Taskforce (MAGTF) Agile Networking Gateway Link (MANGL) for MV-22 aircraft and other aircraft as directed by HQ/Marine Corps. Procurement and fielding of DI/MANGL A-Kit, B-Kit and Ancillary Equipment. Digital Interoperability is the United States Marine Corps strategy to bridge multiple generations of technology using three matured capabilities; gateways, software defined radios, and Commercial Off-The-Shelf (COTS) interfaces. This modular integration approach enables iterative migration to advanced waveforms and payloads while providing enhanced digital connectivity between forces using dissimilar technologies. DI/MANGL will enable fleet integration of capabilities on COTS tablets and Government Off-The-Shelf (GOTS) applications. DI/MANGL will also enable logistics tracking and reporting (cargo and personnel) with the use of Radio Frequency Identification technology, advanced Electronic Warfare/Cyber capability, and threat data capturing/off-boarding. The architecture establishes the foundation to enable system performance data off-boarding, as well as data fusion and artificial intelligence augmentation capabilities. Translates messages from one tactical data link to another (i.e. Link 16 to Adaptive Networking Wideband Waveform [ANW2]) with a tactically proven gateway thereby leveraging previous investments. Provides the foundation for Command, Control, Communications, Electromagnetic Spectrum Operations, and Intelligence exploitation of platform/sensor data off-boarding, data fusion, and distributed processing. Enables real-time blue force situational awareness and improved decision-making through the sharing of a Common Operational Picture, including friendly force positions, capabilities, and threat information for both the aircrew and embarked troops. Provides for operations in denied and degraded environments, enables range extension and distributed operations. SRP 2.0 is a single common payload module that is a government configuration controlled architecture, reconfigurable to support simultaneous missions and applications making maximum use of available bandwidth and ensuring interoperability all with a cyber-secure, National Security Agency (NSA) approved, cryptographic solution.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MILESTONE C - 4Q22

NOTE: DI/MANGL (OSIP 02-23) is not a new start. This OSIP leverages previous efforts in prior years to produce and certify a Digital Interoperability (DI)/Marine Air Ground Task Force (MAGTF) Agile Network Gateway Link (MANGL) reprogrammed from PMA275 BLI 0590 FY23 - FY25. This OSIP will be used to support the commonality of DI/MANGL, resulting in zero sum realignment with no new start.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 7 / Digital Interoperability for MAGTF Agile Network (OSIP 02-23)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MV-22 and all platforms as directed by HQ/Marine Corps.	**Modification Type:** Common Avionics (Modernization)	**Related RDT&E PEs:** 0605217N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Digital Interoperability for MAGTF Agile Network (OSIP 02-23)												
A Kits												
Recurring												
1.1.1) Digital Interoperability MAGTF Installation Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 3.762	9 / 3.780	12 / 5.100	274 / 117.820	304 / 130.462
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.762*	*- / 3.780*	*- / 5.100*	*- / 117.820*	*- / 130.462*
B Kits												
Recurring												
2.1.1) Digital Interoperability MAGTF Installation Equipment - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 5.700	9 / 5.749	12 / 7.233	274 / 177.618	304 / 196.300
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.700*	*- / 5.749*	*- / 7.233*	*- / 177.618*	*- / 196.300*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.138	- / 0.104	- / -	- / -	- / 1.242
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.138*	*- / 0.104*	*- / -*	*- / 0.000*	*- / 1.242*
Subtotal: Digital Interoperability for MAGTF Agile Network (OSIP 02-23)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*18 / 10.600*	*18 / 9.633*	*24 / 12.333*	*548 / 295.438*	*608 / 328.004*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.600*	*- / 9.633*	*- / 12.333*	*- / 295.438*	*- / 328.004*
Support *(All Modification Items)*												
3.4) Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.102	3 / 0.103	4 / 0.139	91 / 3.108	101 / 3.452
3.5) ILS	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.486	- / 0.494	- / 3.100	- / 4.080
3.6) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.506	- / 1.511	- / 1.555	- / 16.900	- / 21.472
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.608*	*- / 2.100*	*- / 2.188*	*- / 23.108*	*- / 29.004*
Installation												
Modification Item 1 of 1: Digital Interoperability for MAGTF Agile Network (OSIP 02-23)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.764	- / 1.800	- / 57.200	- / 60.764
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.764*	*- / 1.800*	*- / 57.200*	*- / 60.764*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**12.208**	**13.497**	**16.321**	**375.746**	**417.772**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 7 / Digital Interoperability for MAGTF Agile Network (OSIP 02-23)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: Digital Interoperability for MAGTF Agile Network (OSIP 02-23)

Manufacturer Information

Manufacturer Name: Bell Boeing | Manufacturer Location: St. Louis, Missouri

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Mar 2023	Mar 2024	Mar 2025
Delivery Dates					Jan 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: Digital Interoperability Kits:: Installation Name: Digital Interoperability MAGTF Installation Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 1.764	- / -	0 / 0.000	9 / 1.764
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 1.800	0 / 0.000	9 / 1.800
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.400	12 / 2.400
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	274 / 54.800	274 / 54.800
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 1.764	9 / 1.800	286 / 57.200	304 / 60.764

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	-	3	3	3	286	304
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	-	3	3	3	286	304

Method of Implementation (Organic): Digital Interoperability MAGTF Installation Equipment - Not Installed | **Installation Quantity:** 304

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 8 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,103.435	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,103.435
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,103.435	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,103.435
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,103.435**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,103.435**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0577 / Common Avionics Changes	**Modification Number / Title:** 8 / Inactive OSIPs
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.2) Inactive OSIPs - Organic(*)	- / 1,103.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1,103.435
Subtotal: Procurement	*- / 1,103.435*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 1,103.435*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**1,103.435**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**1,103.435**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	84.259	5.200	5.374	2.142	3.339	5.481	5.599	5.710	5.824	5.940	-	123.387
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	84.259	5.200	5.374	2.142	3.339	5.481	5.599	5.710	5.824	5.940	-	123.387
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**84.259**	**5.200**	**5.374**	**2.142**	**3.339**	**5.481**	**5.599**	**5.710**	**5.824**	**5.940**	**-**	**123.387**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Common Defensive Weapon System (CDWS) consists of a GAU-21 .50 caliber Machine Gun, cradle, ammo box, feed/link chutes and a platform specific mount system. For the MV-22 CDWS, which is in production, Ramp Mount Weapon Systems (RMWS) will be procured. CDWS was procured to replace obsolete GAU-16 and XM-218 .50 caliber Machine Guns. CDWS enhances the warfighters overall capability by providing a safer, more reliable and accurate weapon system with a higher rate of fire. For the CH-53K, which is in production, procurement of the Ramp, Door and Window mounted CDWS may be procured.

Funding also supports the modification of Crew Served Weapons and Weapon Systems, the GAU-21, GAU-17 (M134), and M240D used on Navy/Marine assault and assault support helicopter platforms. The modifications of Crew Served Weapons and Weapon Systems is for the purpose of increased safety and reliability.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06) (MISSION/MISSION ENHANCEMENT)				- / 74.623	- / 5.200	- / 5.374	- / 2.142	- / 3.339	- / 5.481
P-3a	2 / INACTIVE OSIP/DAWDF Realignment (TBD)				- / 9.636	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 84.259**	**- / 5.200**	**- / 5.374**	**- / 2.142**	**- / 3.339**	**- / 5.481**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06) (MISSION/MISSION ENHANCEMENT)				- / 5.599	- / 5.710	- / 5.824	- / 5.940	- / 0.000	- / 113.751
P-3a	2 / INACTIVE OSIP/DAWDF Realignment (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 9.636
P-40	**Total Gross/Weapon System Cost**				**- / 5.599**	**- / 5.710**	**- / 5.824**	**- / 5.940**	**- / -**	**- / 123.387**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2021 baseline funding will procure 20 modified Ramp Mount Weapon System for the MV-22 aircraft and associated support. This support includes updates to tech data packages and provisioning requirements as needed in direct support of modification.

OCO:
FY 2021 OCO reset funding will procure 102 GAU-21 machine guns, 96 M240 machine guns and all associated support.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System	**Modification Number / Title:** 1 / COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	74.623	5.200	5.374	2.142	3.339	5.481	5.599	5.710	5.824	5.940	0.000	113.751
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	74.623	5.200	5.374	2.142	3.339	5.481	5.599	5.710	5.824	5.940	0.000	113.751
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**74.623**	**5.200**	**5.374**	**2.142**	**3.339**	**5.481**	**5.599**	**5.710**	**5.824**	**5.940**	**0.000**	**113.751**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: The Common Defensive Weapon System (CDWS) consists of a GAU-21 .50 caliber Machine Gun, cradle, ammo box, feed/link chutes and a platform specific mount system. For the MV-22 CDWS, which is in production, Ramp Mount Weapon Systems (RMWS) will be procured. CDWS was procured to replace obsolete GAU-16 and XM-218 .50 caliber Machine Guns. CDWS enhances the warfighters overall capability by providing a safer, more reliable and accurate weapon system with a higher rate of fire.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System	**Modification Number / Title:** 1 / COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CH-53D/E/K, UH-1Y, MV-22	**Modification Type:** MISSION/MISSION ENHANCEMENT	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)												
A Kits												
Recurring												
1.1.1) MV-22 - Organic [1]	260 / 16.379	22 / 1.569	22 / 1.600	20 / 1.484	- / -	20 / 1.484	18 / 1.362	18 / 1.390	5 / 0.394	5 / 0.402	- / -	370 / 24.580
1.1.2) GAU-21 - Organic	- / -	93 / 2.209	94 / 2.277	- / 0.000	102 / 2.521	102 / 2.521	102 / 2.571	102 / 2.622	129 / 3.383	129 / 3.451	- / -	751 / 19.034
1.1.3) M240 - Organic	- / -	102 / 0.832	108 / 0.899	- / 0.000	96 / 0.815	96 / 0.815	121 / 1.048	121 / 1.069	156 / 1.405	156 / 1.434	- / -	860 / 7.502
1.1.4) Archived Mods - Organic	752 / 43.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	752 / 43.200
Subtotal: Recurring	*- / 59.579*	*- / 4.610*	*- / 4.776*	*- / 1.484*	*- / 3.336*	*- / 4.820*	*- / 4.981*	*- / 5.081*	*- / 5.182*	*- / 5.287*	*- / 0.000*	*- / 94.316*
B Kits												
Recurring												
2.1.1) Archived B Kits - Organic	415 / 6.659	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	415 / 6.659
Subtotal: Recurring	*- / 6.659*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 6.659*
Subtotal: COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)	*1,427 / 66.238*	*217 / 4.610*	*224 / 4.776*	*20 / 1.484*	*198 / 3.336*	*218 / 4.820*	*241 / 4.981*	*241 / 5.081*	*290 / 5.182*	*290 / 5.287*	*- / -*	*3,148 / 100.975*
Subtotal: Procurement, All Modification Items	*- / 66.238*	*- / 4.610*	*- / 4.776*	*- / 1.484*	*- / 3.336*	*- / 4.820*	*- / 4.981*	*- / 5.081*	*- / 5.182*	*- / 5.287*	*- / 0.000*	*- / 100.975*
Support *(All Modification Items)*												
3.1) Data	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.400
3.2) Support Equipment	- / 1.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.700
3.3) ILS	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000
3.4) Other Support	- / 4.285	- / 0.590	- / 0.598	- / 0.658	- / 0.003	- / 0.661	- / 0.618	- / 0.629	- / 0.642	- / 0.653	- / -	- / 8.676
Subtotal: Support	*- / 8.385*	*- / 0.590*	*- / 0.598*	*- / 0.658*	*- / 0.003*	*- / 0.661*	*- / 0.618*	*- / 0.629*	*- / 0.642*	*- / 0.653*	*- / 0.000*	*- / 12.776*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**74.623**	**5.200**	**5.374**	**2.142**	**3.339**	**5.481**	**5.599**	**5.710**	**5.824**	**5.940**	**0.000**	**113.751**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System	**Modification Number / Title:** 1 / COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: COMMON DEFENSE WEAPON SYSTEM (OSIP 003-06)		

Footnotes:

(1) Unit cost projections for MV-22 can fluctuate based on other DoD and FMS customers procurement requirements. The total contracted quantity may result in a slightly lower or higher projected unit cost for MV-22 CDWS hardware.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System	**Modification Number / Title:** 2 / INACTIVE OSIP/DAWDF Realignment
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	9.636	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.636
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	9.636	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.636
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**9.636**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.636**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0581 / Common Defensive Weapon System	**Modification Number / Title:** 2 / INACTIVE OSIP/DAWDF Realignment
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Inactive OSIP/DAWDF Realignment - Organic(*)	- / 9.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.636
Subtotal: Procurement	*- / 9.636*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.636*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**9.636**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.636**

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0582 / ID Sys

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	362.360	39.133	41.437	35.999	0.000	35.999	13.529	9.793	9.997	5.197	0.005	517.450
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	362.360	39.133	41.437	35.999	0.000	35.999	13.529	9.793	9.997	5.197	0.005	517.450
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**362.360**	**39.133**	**41.437**	**35.999**	**0.000**	**35.999**	**13.529**	**9.793**	**9.997**	**5.197**	**0.005**	**517.450**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

MARK (MK) XIIA Mode 5 provides improved secure cooperative combat identification via the Identification Friend or Foe (IFF) system. Mode 5 compatibility is part of the Combat Identification Family of Systems strategy employed by US and North Atlantic Treaty Organization/Allied forces and will improve situational awareness, reduce fratricide, reduce enemy disruption of IFF functions and ensure the safe return of friendly aircraft. The DoD implementation is governed by AIMS 03-1000A, AIMS 03-1000B and USN requirements defined in ORD 577-06-01 and is designed to be compatible with civilian IFF modes to ensure interoperability of military and civilian aircraft. Mode 5 is a product improvement, which is designed to be installed through engineering changes to digital MARK XII IFF Systems (interrogators and transponders) and their associated cryptographic material on all type/model/series aircraft by 2020.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0582 / ID Sys

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Mark XIIA Mode 5 IFF (OSIP 15-03) (Capability Improvement)				- / 362.360	- / 39.133	- / 41.437	- / 35.999	- / 0.000	- / 35.999
P-40	**Total Gross/Weapon System Cost**				**- / 362.360**	**- / 39.133**	**- / 41.437**	**- / 35.999**	**- / 0.000**	**- / 35.999**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Mark XIIA Mode 5 IFF (OSIP 15-03) (Capability Improvement)				- / 13.529	- / 9.793	- / 9.997	- / 5.197	- / 0.005	- / 517.450
P-40	**Total Gross/Weapon System Cost**				**- / 13.529**	**- / 9.793**	**- / 9.997**	**- / 5.197**	**- / 0.005**	**- / 517.450**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Joint Requirements Oversight Council Memorandums (047-07, 122-08 and 108-13) endorsed an Identification Friend or Foe (IFF) Mode 5 Joint Full Operational Capability in 2020. Navy Initial Operational Capability was achieved in FY12. NSA declared IFF Mode 4 will not be supported after June 2020. Mode 5 provides added security and more data transmissions than Mode 4. Additionally, Mode 5 uses a spread spectrum waveform, which reduces susceptibility to interference.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0582 / ID Sys	**Modification Number / Title:** 1 / Mark XIIA Mode 5 IFF (OSIP 15-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	362.360	39.133	41.437	35.999	0.000	35.999	13.529	9.793	9.997	5.197	0.005	517.450
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	362.360	39.133	41.437	35.999	0.000	35.999	13.529	9.793	9.997	5.197	0.005	517.450
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**362.360**	**39.133**	**41.437**	**35.999**	**0.000**	**35.999**	**13.529**	**9.793**	**9.997**	**5.197**	**0.005**	**517.450**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DESCRIPTION/JUSTIFICATION: MK XIIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). Mode 5 compatibility is part of the Combat Identification Family of Systems strategy employed by US and North Atlantic Treaty Organization (NATO)/Allied forces and will improve situational awareness, reduce fratricide, reduce enemy disruption of IFF functions and ensure the safe return of friendly aircraft. The DoD implementation is governed by AIMS 03-1000A, AIMS 03-1000B and USN requirements defined in ORD # 577-06-01 and is designed to be compatible with civilian IFF modes to ensure interoperability of military and civilian aircraft. Mode 5 upgrades existing Mode 4 IFF equipment, including cryptography, support equipment, and associated hardware and software changes. Mode 5 is designed to be installed through engineering changes to digital MARK XII interrogators and transponders and their associated cryptographic material including, but not limited to the AN/APX-118/123/123A, AN/APX-111, and AN/APX-119. Joint Requirements Oversight
Council Memorandums (047-07, 122-08 and 108-13) endorsed a Joint Full Operational Capability (JFOC) in 2020. Navy IOC was achieved in FY12. Mode 5 will be installed in Navy/Marine Corp/Coast Guard Type/Model/Series aircraft which are currently Mode 4 IFF capable with retrofit phasing to support JFOC.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone C and Low Rate Initial Production was approved in July 2006. Full Rate Production (FRP) was approved July 2012. FRP procurements and Mode 5 Engineering Change Proposals on Navy/Marine Corp aircraft continue as the program continues towards JFOC in 2020.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0582 / ID Sys	**Modification Number / Title:** 1 / Mark XIIA Mode 5 IFF (OSIP 15-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: Various (49 Separate T/M/S)	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604777N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Mark XIIA Mode 5 IFF (OSIP 15-03)												
A Kits												
Recurring												
1.1.1) Mode 5 IFF - NonOrganic (1)	570 / 8.644	19 / 0.293	24 / 0.175	5 / 0.028	- / -	5 / 0.028	- / -	- / -	- / -	- / -	- / -	618 / 9.140
Subtotal: Recurring	*- / 8.644*	*- / 0.293*	*- / 0.175*	*- / 0.028*	*- / -*	*- / 0.028*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 9.140*
B Kits												
Recurring												
2.1.1) Mode 5 IFF - NonOrganic (2)	2,389 / 125.461	169 / 11.675	188 / 13.220	281 / 17.079	- / -	281 / 17.079	119 / 8.705	105 / 6.268	88 / 1.827	2 / 0.043	- / -	3,341 / 184.278
Subtotal: Recurring	*- / 125.461*	*- / 11.675*	*- / 13.220*	*- / 17.079*	*- / -*	*- / 17.079*	*- / 8.705*	*- / 6.268*	*- / 1.827*	*- / 0.043*	*- / 0.000*	*- / 184.278*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic (3)	- / 101.833	- / 12.123	- / 13.997	- / 6.737	- / -	- / 6.737	- / -	- / -	- / -	- / -	- / -	- / 134.690
Subtotal: Non-Recurring	*- / 101.833*	*- / 12.123*	*- / 13.997*	*- / 6.737*	*- / -*	*- / 6.737*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 134.690*
Subtotal: Mark XIIA Mode 5 IFF (OSIP 15-03)	*2,959 / 235.938*	*188 / 24.091*	*212 / 27.392*	*286 / 23.844*	*- / -*	*286 / 23.844*	*119 / 8.705*	*105 / 6.268*	*88 / 1.827*	*2 / 0.043*	*- / -*	*3,959 / 328.108*
Subtotal: Procurement, All Modification Items	*- / 235.938*	*- / 24.091*	*- / 27.392*	*- / 23.844*	*- / -*	*- / 23.844*	*- / 8.705*	*- / 6.268*	*- / 1.827*	*- / 0.043*	*- / 0.000*	*- / 328.108*
Support *(All Modification Items)*												
3.1) Data	- / 3.254	- / 0.385	- / 0.468	- / 0.405	- / -	- / 0.405	- / 0.127	- / 0.087	- / 0.037	- / 0.030	- / -	- / 4.793
3.2) Training Equipment (4)	- / 6.136	- / 2.107	- / 2.408	- / 0.422	- / -	- / 0.422	- / 0.113	- / 0.045	- / -	- / -	- / -	- / 11.231
3.3) Support Equipment	- / 17.627	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.627
3.4) ILS (5)	- / 13.631	- / 1.537	- / 1.568	- / 1.599	- / -	- / 1.599	- / 0.802	- / 0.470	- / 0.110	- / 0.100	- / -	- / 19.817
3.5) Other Support (6)	- / 74.731	- / 7.927	- / 7.989	- / 7.641	- / -	- / 7.641	- / 3.340	- / 2.883	- / 8.013	- / 5.014	- / -	- / 117.538
Subtotal: Support	*- / 115.379*	*- / 11.956*	*- / 12.433*	*- / 10.067*	*- / -*	*- / 10.067*	*- / 4.382*	*- / 3.485*	*- / 8.160*	*- / 5.144*	*- / 0.000*	*- / 171.006*
Installation												
Modification Item 1 of 1: Mark XIIA Mode 5 IFF (OSIP 15-03)	- / 11.043	- / 3.086	- / 1.612	- / 2.088	- / 0.000	- / 2.088	- / 0.442	- / 0.040	- / 0.010	- / 0.010	- / 0.005	- / 18.336
Subtotal: Installation	*- / 11.043*	*- / 3.086*	*- / 1.612*	*- / 2.088*	*- / -*	*- / 2.088*	*- / 0.442*	*- / 0.040*	*- / 0.010*	*- / 0.010*	*- / 0.005*	*- / 18.336*
Total												
Total Cost (Procurement + Support + Installation)	**362.360**	**39.133**	**41.437**	**35.999**	**0.000**	**35.999**	**13.529**	**9.793**	**9.997**	**5.197**	**0.005**	**517.450**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0582 / ID Sys	**Modification Number / Title:** 1 / Mark XIIA Mode 5 IFF (OSIP 15-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Mark XIIA Mode 5 IFF (OSIP 15-03)

Manufacturer Information

Manufacturer Name: BAE	Manufacturer Location: Greenlawn, NY
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	

Installation Information

Method of Implementation: Field Installs Kits and Vendor Depot ECP Install:: Installation Name: Mark XIIA Mode 5 IFF

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2,467 / 11.043	492 / 3.086	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2,959 / 14.129
FY 2019	- / -	- / -	188 / 1.612	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	188 / 1.612
FY 2020	- / -	- / -	- / -	212 / 2.088	0 / 0.000	212 / 2.088	- / -	- / -	- / -	- / -	0 / 0.000	212 / 2.088
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	286 / 0.442	- / -	- / -	- / -	0 / 0.000	286 / 0.442
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	119 / 0.040	- / -	- / -	0 / 0.000	119 / 0.040
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	105 / 0.010	- / -	0 / 0.000	105 / 0.010
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 0.010	22 / 0.004	88 / 0.014
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.001	2 / 0.001
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2,467 / 11.043	492 / 3.086	188 / 1.612	212 / 2.088	0 / 0.000	212 / 2.088	286 / 0.442	119 / 0.040	105 / 0.010	66 / 0.010	24 / 0.005	3,959 / 18.336

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2,467	124	124	122	122	47	47	46	48	53	53	53	53	72	71	71	72	29	30	30	30	26	26	26	27	17	17	16	16	24	3,959
Out	2,467	124	124	122	122	47	47	46	48	53	53	53	53	72	71	71	72	29	30	30	30	26	26	26	27	17	17	16	16	24	3,959

Footnotes:

(1) Total A-kit quantity decrease due to reduction in quantity of AV-8B aircraft to be retrofit with AN/APX-123/Mode 5 due to sunset of Night-Attack configuration aircraft. The A-Kit Recurring unit prices vary from platform-to-platform based on the complexity of the implementation required to achieve the Mode 5 capability. Mode 5 A-Kits for the AV-8B were more complex than some platforms and their removal as well as a lower unit cost for MH-53E A-kits result in a lower average unit cost in total. Mode 5 IFF A-Kits will be required for installation on the C-130T, C-20, C-37, C-40, CH-53E, E-6B, F/A-18C/D, KC-130J, KC-130T, MH-53E, UC-12W, and UC-35 platforms, along with the B-kits. A-Kit applicability and phasing changes (from year to year) are due to refinement in platform requirements and complexity of integration. Many other

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0582 / ID Sys	**Modification Number / Title:** 1 / Mark XIIA Mode 5 IFF (OSIP 15-03)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

platforms only require B-kits (e.g. Mode 5 upgrade of AN/ APX-118 to AN/APX-123A is a form, fit replacement in the aircraft). Installation costs vary by platform based on the implementation required to achieve the Mode 5 capability.

(2) B-kit quantity increase due to requirement for additional Receiver-Transmitter (R/T) Kits for retrofit into -30 CITs for F/A-18 and EA-18G aircraft to address Anti-Jam performance deficiencies. The B-kit Recurring unit cost varies based on what equipment is procured in each year, but overall average has not increased with increased quantities. Installation costs vary by platform based on the implementation required to achieve the Mode 5 capability. The B-Kit solution varies (box or modification kit) from platform-to-platform based on the implementation required to achieve the Mode 5 capability using AN/ APX-123/123A, AN/APX-111, or AN/APX-119 equipment. The AN/APX-119 Mode 5 Kit unit cost is more than three times the cost of the AN/APX-123A Mode 5 kit, and an AN/APX-119 costs twice as much as an APX-123, and requires a separate crypto module. That complexity also drives higher integration and installation costs. All planned AN/APX-123/123A and AN/APX-119 boxes/kits have now been procured. In addition to providing Mode 5, the APX-123/123A, APX-119 and APX-111 systems provide Mode S and ADS-B Out capability. PMA-213 works closely with PMA-209, who provides Mode S and ADS-B Out capability for platforms. To achieve full fielding of both the Mode 5, Mode S and ADS-B Out capabilities, both PMA-213 and PMA-209 Budget Line Items (BLIs) integrate and install end items that are required to meet the full platform installation requirements.

(3) B- B-Kit Non-Recurring estimates are based on the specific platform implementation; thus, costs will vary year to year and have increased overall due to lab, ground and flight tests associated with -30 CIT Built-In-Test faults affecting equipment performance in F/A-18 aircraft, and additional test costs for -40 CIT certification efforts to support fleet introduction.

(4) Training costs are estimated based on platform requirements, e.g. operational, maintenance or computer-based), and phased according to the platform schedule.

(5) ILS Costs are estimated based on platform requirements and phasing and increase as more platforms execute Mode 5 upgrades in a given year.

(6) Other Support costs are estimated based on the platform requirements and phasing and increase as more platforms execute Mode 5 upgrades in a given year. The Other Support cost have not varied significantly over the last several budgets, but will begin to decrease as Mode 5 integration, installation and fielding in a significant number of platforms is completed. Mode 5 integration efforts are ongoing for the current platforms: AV-8B, C-130T, KC-130T, UC-35C/D, C-37, C-40, UC-12W, F/A-18 -40 CIT. The increase in FY24 and FY25 is due to the support required for the F/A-18A+/C/D and execution of an engineering change proposal to address obsolescence that affects AN/APX-123 Shop Replaceable Assemblies (SRAs).

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0586 / P-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	110.102	67.352	74.610	180.530	0.000	180.530	278.013	338.293	343.863	356.052	1,558.331	3,307.146
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	110.102	67.352	74.610	180.530	0.000	180.530	278.013	338.293	343.863	356.052	1,558.331	3,307.146
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**110.102**	**67.352**	**74.610**	**180.530**	**0.000**	**180.530**	**278.013**	**338.293**	**343.863**	**356.052**	**1,558.331**	**3,307.146**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The P-8A is a heavily modified and militarized derivative of Boeing's 737-800 aircraft that provides Broad Area Maritime and Littoral Armed multi-mission support. Number of aircraft in the inventory is as follows: Active duty-71 fielded of 117 funded; National Guard-0; Reserves-0. Designed service life is 25 years with an average service life remaining of 24 years.

OSIP 026-12 provides funding for Correction of Deficiencies revealed during Test and Evaluation (T&E) and discovered during fleet operations that resulted in safety and reliability degradation, as well as Modernization requirements to sensors, avionics, and airframe components via engineering changes. Funding is provided for changes to TacMobile, Increment 2 (Spiral 1) Engineering Change Proposals (ECPs) 2 and 3, which include Multi-Active Coherent, High Altitude Anti-Submarine Warfare Weapon Capability (HAAWC), HAAWC Mid-Course guidance, and Net Enabled Weapon Link-16 message implementation, and mission systems modernization efforts which improve reliability, maintainability and suitability, and correct safety related issues. This OSIP corrects aircraft deficiencies resulting from readiness, obsolescence, safety and Diminishing Manufacturing Sources and Material Shortages (DMSMS), and provides for Pre-Planned Product Improvement (P3I) efforts to modernize aircraft systems performance, improve aircrew safety, and incorporate structural enhancements to enable the airframe to reach its designed/extended service life. In order to more clearly define program requirements, efforts in OSIP 026-12 will transition to the Mission Systems OSIP (006-18) and Aircraft Systems OSIP (001-19) by FY23.

OSIP 006-18 provides funding for P-8A Mission Systems Upgrades to ensure the aircraft continues to meet the Navy's Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and Intelligence, Surveillance and Reconnaissance (ISR) Sea Control requirements by upgrading P-8A mission systems hardware, software, and firmware components. Funding is provided for P-8A Increment 3 (Spiral 2), which consists of a series of ECPs which upgrades P-8A systems, including Combat System architecture improvements, ASW and ASuW sensor improvements, communication capability upgrades, ASuW Net Enabled Weapons (NEW), Higher-Than-Secret (HTS) security capability, and training systems updates and supporting documentation. This OSIP funds Mission Systems improvements identified as fleet prioritized requirements or as a part of the Rapid Capability Insertion (RCI) process to address reliability improvements, obsolescence, periodic technology insertion, urgent operational needs, correction of deficiencies and flight safety issues, including funds to implement various cost effective changes to critical P-8A Weapon systems and corresponding changes to Tactical Operations Center (TOC) and Mobile Tactical Operation Center (MTOC).

OSIP 002-15 provides funding for Chief of Naval Operations Project K-0416 program, which provides a rapid response Anti-Submarine Warfare (ASW) intelligence collection, analysis, and reporting system.

OSIP 001-19 provides funding for P-8A Aircraft Systems Upgrades to enable modifications to the aircraft in order to improve aircrew safety, modernize airframe, engine, weapons and stores, and sonobouy launch system performance, and incorporate structural enhancements to resolve readiness, obsolescence, correction of deficiencies incorporated by Engineering Change Proposals (ECPs), and safety issues

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0586 / P-8 Series	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

required for the airframe to reach its designed/extended service life. Funding is provided for airframe modifications to support changes in Size, Weight, Power, and Cooling (SWAP-C) requirements of aircraft and mission systems equipment or as part of the RCI process, to incorporate fleet prioritized requirements, Quick Reaction Capabilities (QRC) both on a temporary and permanent basis, and to incorporate aircraft and propulsion systems related service bulletins and technical directives.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0586 / P-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12) (Mission Capabilities)				- / 100.725	- / 4.194	- / 3.078	- / 3.734	- / 0.000	- / 3.734
P-3a	2 / CNO Project K-0416 (OSIP 002-15) (Operational Improvement)				- / 7.189	- / 2.000	- / 2.000	- / 2.000	- / 0.000	- / 2.000
P-3a	3 / P-8A Mission Systems RCI (OSIP 006-18) (TBD)				- / 2.188	- / 54.899	- / 62.587	- / 168.454	- / 0.000	- / 168.454
P-3a	4 / P-8A Aircraft Systems (OSIP 001-19) (TBD)				- / 0.000	- / 6.259	- / 6.945	- / 6.342	- / 0.000	- / 6.342
P-40	**Total Gross/Weapon System Cost**				**- / 110.102**	**- / 67.352**	**- / 74.610**	**- / 180.530**	**- / 0.000**	**- / 180.530**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12) (Mission Capabilities)				- / 1.258	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 112.989
P-3a	2 / CNO Project K-0416 (OSIP 002-15) (Operational Improvement)				- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / 0.000	- / 21.189
P-3a	3 / P-8A Mission Systems RCI (OSIP 006-18) (TBD)				- / 266.608	- / 328.038	- / 333.385	- / 345.405	- / 1,466.706	- / 3,028.270
P-3a	4 / P-8A Aircraft Systems (OSIP 001-19) (TBD)				- / 8.147	- / 8.255	- / 8.478	- / 8.647	- / 91.625	- / 144.698
P-40	**Total Gross/Weapon System Cost**				**- / 278.013**	**- / 338.293**	**- / 343.863**	**- / 356.052**	**- / 1,558.331**	**- / 3,307.146**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The P-8A is a heavily modified and militarized derivative of Boeing's 737-800 aircraft that provides Broad Area Maritime and Littoral Armed multi-mission support.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	100.725	4.194	3.078	3.734	0.000	3.734	1.258	0.000	0.000	0.000	0.000	112.989
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	100.725	4.194	3.078	3.734	0.000	3.734	1.258	0.000	0.000	0.000	0.000	112.989
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**100.725**	**4.194**	**3.078**	**3.734**	**0.000**	**3.734**	**1.258**	**0.000**	**0.000**	**0.000**	**0.000**	**112.989**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The P-8A is a heavily modified and militarized derivative of Boeing's 737-800 aircraft that provides Broad Area Maritime and Littoral Armed multi-mission support.

OSIP 026-12 provides funding for the resolution of Correction of Deficiencies revealed during post production Test and Evaluation (T&E) and discovered during fleet operations that resulted in safety and reliability degradation, as well as Modernization requirements to sensors, avionics, and airframe components via engineering changes. Funding is provided for changes to TacMobile, Increment 2 (Spiral 1) Engineering Change Proposals (ECPs) 2 and 3, which include Multi-Active Coherent, High Altitude Anti-Submarine Warfare Weapon Capability (HAAWC), HAAWC Mid-Course guidance, and Net Enabled Weapon Link-16 message implementation, and mission systems modernization efforts which improve reliability, maintainability and suitability, and correct safety related issues. This OSIP corrects aircraft deficiencies resulting from readiness, obsolescence, safety and Diminishing Manufacturing Sources and Material Shortages (DMSMS), and provides for Pre-Planned Product Improvement (P3I) efforts to modernize aircraft systems performance, improve aircrew safety, and incorporate structural enhancements to enable the airframe to reach its designed/extended service life. In order to more clearly define program requirements, efforts in OSIP 026-12 will transition to the Mission Systems OSIP (006-18) and Aircraft Systems OSIP (001-19) by FY23.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
The P-8 Baseline program achieved Milestone (MS)-C in FY10.
Note: Modernization and Safety consist of both various associated A & B kits and individual A & B kits, therefore the ratio of A to B Kits is not always consistent.
Note: The Corrections of Deficiencies include the productionization of test aircraft that will be returned to the fleet.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-8A MMA	**Modification Type:** Mission Capabilities	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Modernization and Safety - NonOrganic *Installation 1 of 9*	59 / 0.627	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 0.627
1.1.2) Prior Year Archive - Organic(*)	- / 51.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 51.218
2.1.1) Modernization and Safety - Organic(*) (1)	70 / 15.056	10 / 0.146	16 / 0.238	16 / 0.242	- / -	16 / 0.242	- / -	- / -	- / -	- / -	- / -	112 / 15.682
2.1.2) Mission Systems MOD - Organic(*)	14 / 0.824	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.824
2.1.3) Acoustics Processor Tech Refresh/Insertion - Organic(*)	52 / 7.372	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 7.372
2.1.4) Airframe MOD - Organic(*)	14 / 0.707	4 / 0.208	4 / 0.212	1 / 0.054	- / -	1 / 0.054	- / -	- / -	- / -	- / -	- / -	23 / 1.181
2.1.5) Aircraft Structural MOD - NonOrganic *Installation 2 of 9*	- / -	10 / 0.014	10 / 0.015	14 / 0.019	- / -	14 / 0.019	- / -	- / -	- / -	- / -	- / -	34 / 0.048
2.1.6) Air Compressor Shroud - NonOrganic *Installation 3 of 9*	11 / 0.407	1 / 0.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.444
2.1.7) Fuel System AUX Drain - NonOrganic *Installation 4 of 9*	- / -	4 / 0.003	12 / 0.010	12 / 0.010	- / -	12 / 0.010	- / -	- / -	- / -	- / -	- / -	28 / 0.023
2.1.8) STA 500F Interference Condition - NonOrganic *Installation 5 of 9*	- / -	6 / 0.057	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.057
2.1.9) Double Walled Fuel Tubes - NonOrganic *Installation 6 of 9*	- / -	7 / 0.099	11 / 0.158	8 / 0.117	- / -	8 / 0.117	- / -	- / -	- / -	- / -	- / -	26 / 0.374
2.1.10) SMPDM Transfer Valve - NonOrganic *Installation 7 of 9*	- / -	- / -	6 / 0.006	12 / 0.012	- / -	12 / 0.012	- / -	- / -	- / -	- / -	- / -	18 / 0.018
2.1.11) STA 500E Retrofit - NonOrganic *Installation 8 of 9*	- / -	6 / 0.024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.024
2.1.13) CVFD Battery Upgrade - Organic(*)	- / -	29 / 0.229	11 / 0.088	16 / 0.128	- / -	16 / 0.128	- / -	- / -	- / -	- / -	- / -	56 / 0.445
2.1.14) CDRS Radiant Mercury - Organic(*)	- / -	20 / 1.020	20 / 1.040	34 / 1.802	- / -	34 / 1.802	- / -	- / -	- / -	- / -	- / -	74 / 3.862
2.1.15) REV A Tailcone Fastener - NonOrganic *Installation 9 of 9*	- / -	7 / 0.011	24 / 0.039	21 / 0.035	- / -	21 / 0.035	- / -	- / -	- / -	- / -	- / -	52 / 0.085
2.2.1) Installation Equipment N/R - Organic(*)	- / 3.769	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.869
Subtotal: Procurement	*- / 79.980*	*- / 1.848*	*- / 1.906*	*- / 2.419*	*- / -*	*- / 2.419*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 86.153*
Support												
3.2) Data	- / 1.700	- / 0.127	- / 0.125	- / 0.025	- / -	- / 0.025	- / 0.018	- / -	- / -	- / -	- / -	- / 1.995
3.3) Training Equipment	9 / 3.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 3.989
3.4) Increment 2 ECP 2 Trainers	15 / 6.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 6.000
3.6) ILS	- / 0.949	- / 0.175	- / 0.175	- / 0.030	- / -	- / 0.030	- / 0.025	- / -	- / -	- / -	- / -	- / 1.354
3.7) Other Support	- / 7.157	- / 0.465	- / 0.305	- / 0.068	- / -	- / 0.068	- / 0.047	- / -	- / -	- / -	- / -	- / 8.042

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-8A MMA	**Modification Type:** Mission Capabilities	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Support	- / 19.795	- / 0.767	- / 0.605	- / 0.123	- / -	- / 0.123	- / 0.090	- / -	- / -	- / -	- / 0.000	- / 21.380
Installation												
Installation 1 of 9: GRP: Modernization and Safety	- / 0.750	- / 0.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.475
Installation 2 of 9: Aircraft Structural MOD	- / -	- / -	- / 0.072	- / 0.074	- / 0.000	- / 0.074	- / 0.117	- / -	- / -	- / -	- / 0.000	- / 0.263
Installation 3 of 9: GRP: Air Compressor Shroud	- / 0.200	- / 0.750	- / 0.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.035
Installation 4 of 9: Fuel System AUX Drain	- / -	- / -	- / 0.143	- / 0.437	- / 0.000	- / 0.437	- / 0.445	- / -	- / -	- / -	- / 0.000	- / 1.025
Installation 5 of 9: STA 500F Interference Condition	- / -	- / 0.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.104
Installation 6 of 9: Double Walled Fuel Tubes	- / -	- / -	- / 0.129	- / 0.206	- / 0.000	- / 0.206	- / 0.153	- / -	- / -	- / -	- / 0.000	- / 0.488
Installation 7 of 9: SMPDM Transfer Valve	- / -	- / -	- / -	- / 0.026	- / 0.000	- / 0.026	- / 0.052	- / -	- / -	- / -	- / 0.000	- / 0.078
Installation 8 of 9: STA 500E Retrofit	- / -	- / -	- / 0.009	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.009
Installation 9 of 9: REV A Tailcone Fastener	- / -	- / -	- / 0.129	- / 0.449	- / 0.000	- / 0.449	- / 0.401	- / -	- / -	- / -	- / 0.000	- / 0.979
Subtotal: Installation	- / 0.950	- / 1.579	- / 0.567	- / 1.192	- / -	- / 1.192	- / 1.168	- / -	- / -	- / -	- / 0.000	- / 5.456
Total												
Total Cost (Procurement + Support + Installation)	**100.725**	**4.194**	**3.078**	**3.734**	**0.000**	**3.734**	**1.258**	**0.000**	**0.000**	**0.000**	**0.000**	**112.989**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 9: GRP: Modernization and Safety

Manufacturer Information

Manufacturer Name: Modernization and Safety | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: Modernization and Safety

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	30 / 0.750	29 / 0.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	59 / 1.475
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	30 / 0.750	29 / 0.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	59 / 1.475

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	30	7	7	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
Out	22	8	7	7	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 9: Aircraft Structural MOD

Manufacturer Information

Manufacturer Name: TBD-Aircraft Structural Mod | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021				
Delivery Dates	Oct 2019	Oct 2020	Oct 2021				

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: Aircraft Structural MOD

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	10 / 0.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.072
FY 2020	- / -	- / -	- / -	10 / 0.074	0 / 0.000	10 / 0.074	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.074
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.117	- / -	- / -	- / -	0 / 0.000	14 / 0.117
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	10 / 0.072	10 / 0.074	0 / 0.000	10 / 0.074	14 / 0.117	- / -	- / -	- / -	0 / 0.000	34 / 0.263

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	3	2	3	2	2	2	3	3	4	4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	34
Out	-	-	-	-	-	3	2	3	2	2	2	3	3	4	4	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	34

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 9: GRP: Air Compressor Shroud

Manufacturer Information

Manufacturer Name: CFM - Air Compressor Shroud | Manufacturer Location: Cincinnati, OH

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019						
Delivery Dates	Oct 2019						

Installation Information

Method of Implementation: Contractor Field MOD Team:: Installation Name: Air Compressor Shroud

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.200	9 / 0.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.950
FY 2019	- / -	- / -	1 / 0.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.085
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.200	9 / 0.750	1 / 0.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.035

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	2	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	2	-	2	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 9: Fuel System AUX Drain

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021				
Delivery Dates	Oct 2019	Oct 2020	Oct 2021				

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: Fuel System AUX Drain

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 0.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.143
FY 2020	- / -	- / -	- / -	12 / 0.437	0 / 0.000	12 / 0.437	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.437
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.445	- / -	- / -	- / -	0 / 0.000	12 / 0.445
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 0.143	12 / 0.437	0 / 0.000	12 / 0.437	12 / 0.445	- / -	- / -	- / -	0 / 0.000	28 / 1.025

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	1	1	1	1	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	28
Out	-	-	-	-	-	1	1	1	1	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	28

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 9: STA 500F Interference Condition

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Feb 2019						

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: STA 500F Interference Condition

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	6 / 0.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.104
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	6 / 0.104	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.104

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	-	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 9: Double Walled Fuel Tubes

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021				
Delivery Dates	Oct 2019	Oct 2020	Oct 2021				

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: Double Walled Fuel Tubes

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	7 / 0.129	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.129
FY 2020	- / -	- / -	- / -	11 / 0.206	0 / 0.000	11 / 0.206	- / -	- / -	- / -	- / -	0 / 0.000	11 / 0.206
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.153	- / -	- / -	- / -	0 / 0.000	8 / 0.153
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	7 / 0.129	11 / 0.206	0 / 0.000	11 / 0.206	8 / 0.153	- / -	- / -	- / -	0 / 0.000	26 / 0.488

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	2	2	1	2	3	3	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
Out	-	-	-	-	-	-	2	2	2	1	2	3	3	3	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	26

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 9: SMPDM Transfer Valve

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 7 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Apr 2020	Apr 2021				
Delivery Dates		Jan 2021	Jan 2022				

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: SMPDM Transfer Valve

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	6 / 0.026	0 / 0.000	6 / 0.026	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.026
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.052	- / -	- / -	- / -	0 / 0.000	12 / 0.052
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	6 / 0.026	0 / 0.000	6 / 0.026	12 / 0.052	- / -	- / -	- / -	0 / 0.000	18 / 0.078

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	2	2	2	-	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Out	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	4	4	4	-	-	-	-	-	-	-	-	-	-	-	-	18

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 8 of 9: STA 500E Retrofit

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019						
Delivery Dates	Oct 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: STA 500E Retrofit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	6 / 0.009	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.009
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	6 / 0.009	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.009

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Out	-	-	-	-	-	-	2	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 1 / P-8A Correction of Deficiences and Modernization (OSIP 026-12)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 9 of 9: REV A Tailcone Fastener

Manufacturer Information

Manufacturer Name: BOEING | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021				
Delivery Dates	Oct 2019	Oct 2020	Oct 2021				

Installation Information

Method of Implementation: Commercial Depot:: Installation Name: REV A Tailcone Fastener

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	7 / 0.129	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.129
FY 2020	- / -	- / -	- / -	24 / 0.449	0 / 0.000	24 / 0.449	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.449
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.401	- / -	- / -	- / -	0 / 0.000	21 / 0.401
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	7 / 0.129	24 / 0.449	0 / 0.000	24 / 0.449	21 / 0.401	- / -	- / -	- / -	0 / 0.000	52 / 0.979

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	2	1	2	4	6	6	8	8	6	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	52
Out	-	-	-	-	-	-	2	2	1	2	4	6	6	8	8	6	6	1	-	-	-	-	-	-	-	-	-	-	-	-	52

Footnotes:

(1) The Modernization and Safety include the productionization test aircraft that will be returned to the fleet. Modernization and Safety consist of both various associated A & B kits and individual A & B kits, therefore the ratio of A to B Kits is not always consistent.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 2 / CNO Project K-0416 (OSIP 002-15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.189	2.000	2.000	2.000	0.000	2.000	2.000	2.000	2.000	2.000	0.000	21.189
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.189	2.000	2.000	2.000	0.000	2.000	2.000	2.000	2.000	2.000	0.000	21.189
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.189**	**2.000**	**2.000**	**2.000**	**0.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**0.000**	**21.189**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Chief of Naval Operations (CNO) Project K-0416 program provides a rapid response Anti-Submarine Warfare intelligence collection, analysis, and reporting system program focused on Operations Plan specific threat submarines, both conventional and nuclear.

The program accomplishes this by introducing advanced collection avionics that operate with special calibrated sensors to provide threat target data for tactical, Science and Technology (S&T), and weapon design uses. The Sound Pressure Level Collection Suite that is installed on the P-8 mission kits contain several Weapons Replaceable Assembly's, both fabricated & procured. The Suite includes a 8201 modulation meter, a panasonic toughbook, and a Beartrap Automated Noise and Digital Integrated Test set, and the acoustic intelligence collection suite.

CNO K-0416 will calibrate P-8 Platforms, forward sited laboratories, and select forward deployed sites with these collection avionics to provide tactical and S&T Intelligence.
Prime performer is the Naval Air Warfare Center (NAWC), Patuxent River. NAWC performs system integration, material acquisition, fabrication, and installation of collection systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The changes identified are minor and do not require approval for full production.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 2 / CNO Project K-0416 (OSIP 002-15)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-8A MMA	**Modification Type:** Operational Improvement	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Airborne Anti-Submarine Warefare Intelligence Equipment - Organic(*)	16 / 1.200	4 / 0.400	4 / 0.400	4 / 0.400	- / -	4 / 0.400	4 / 0.400	4 / 0.400	4 / 0.400	4 / 0.400	- / -	44 / 4.000
2.1.1) Active Target Strength C2 - Organic(*) (2)	3 / 0.600	1 / 0.200	1 / 0.200	1 / 0.200	- / -	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	- / -	10 / 2.000
Subtotal: Procurement	*- / 1.800*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / -*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / 0.000*	*- / 6.000*
Support												
3.1) Support Equipment	- / 0.800	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000
3.2) Other Support (3)	- / 2.189	- / 0.600	- / 1.400	- / 1.400	- / -	- / 1.400	- / 1.400	- / 1.400	- / 1.400	- / 1.400	- / -	- / 11.189
3.3) Interim Contractor Support	- / 2.400	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.000
Subtotal: Support	*- / 5.389*	*- / 1.400*	*- / 1.400*	*- / 1.400*	*- / -*	*- / 1.400*	*- / 1.400*	*- / 1.400*	*- / 1.400*	*- / 1.400*	*- / 0.000*	*- / 15.189*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**7.189**	**2.000**	**2.000**	**2.000**	**0.000**	**2.000**	**2.000**	**2.000**	**2.000**	**2.000**	**0.000**	**21.189**

Footnotes:

(2) B-Kit includes material only.

(3) Other Support includes field fabrication support of B-Kit.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.188	54.899	62.587	168.454	0.000	168.454	266.608	328.038	333.385	345.405	1,466.706	3,028.270
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.188	54.899	62.587	168.454	0.000	168.454	266.608	328.038	333.385	345.405	1,466.706	3,028.270
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.188**	**54.899**	**62.587**	**168.454**	**0.000**	**168.454**	**266.608**	**328.038**	**333.385**	**345.405**	**1,466.706**	**3,028.270**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The P-8A is a heavily modified and militarized derivative of Boeing's 737-800 aircraft that provides Broad Area Maritime and Littoral Armed multi-mission support.

OSIP 006-18 provides funding for P-8A Mission Systems Upgrades to ensure the aircraft continues to meet the Navy's Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and ISR Sea Control requirements by upgrading P-8A mission systems hardware, software, and firmware components. The most significant effort this OSIP provides funding for is P-8A Increment 3 (Spiral 2), which consists of a series of ECPs which upgrades P-8A systems, including Combat System architecture improvements, ASW and ASuW sensor improvements, communication capability upgrades, ASuW Net Enabled Weapons, Higher-Than-Secret security capability, and training systems updates and supporting documentation. This OSIP also funds Mission Systems improvements identified as fleet prioritized requirements or as a part of the Rapid Capability Insertion (RCI) process to address reliability improvements, obsolescence, periodic technology insertion, urgent operational needs, correction of deficiencies and flight safety issues, including funds to implement various cost effective changes to critical P-8A Weapon systems and corresponding changes to Tactical Operations Center and Mobile Tactical Operation Center.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
Increment 3 capabilities are being developed as a series of ECPs.
Note: This modification addresses all P-8A aircraft.
Note: ECP 6 fielding in 3Q2024 includes 7 aircraft (1 squadron) modified, trained and ready to deploy.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: P-8A MMA	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Increment 3 ECP 5 - NonOrganic *Installation 1 of 3*	- / -	16 / 1.559	24 / 2.441	24 / 2.482	- / -	24 / 2.482	25 / 2.628	- / -	- / -	- / -	- / -	89 / 9.110
1.1.2) Increment 3 ECP 6 - NonOrganic *Installation 2 of 3*	- / -	- / -	- / -	8 / 16.541	- / -	8 / 16.541	11 / 23.118	15 / 32.035	15 / 32.545	14 / 30.851	59 / 137.365	122 / 272.455
1.1.3) Other Mission Systems - 6th Workstation - NonOrganic *Installation 3 of 3*	3 / 0.012	24 / 0.071	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.083
2.1.1) Increment 3 ECP 5 - Organic(*)	- / -	16 / 1.239	24 / 1.050	24 / 1.068	- / -	24 / 1.068	25 / 1.131	- / -	- / -	- / -	- / -	89 / 4.488
2.1.2) Increment 3 ECP 6 - Organic(*)	- / -	- / -	- / -	8 / 89.278	- / -	8 / 89.278	11 / 124.775	15 / 172.900	15 / 175.652	14 / 166.510	59 / 730.178	122 / 1,459.293
2.1.3) Other Mission Systems - 6th Workstation - Organic(*)	3 / 1.919	24 / 15.378	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 17.297
2.1.4) Other Mission Systems - Acoustic Receiver - Organic(*) (4)	- / -	97 / 17.984	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	97 / 17.984
2.1.5) Other Mission Systems - MIDS JTRS - Organic(*) (5)	- / -	- / -	43 / 13.846	20 / 6.549	- / -	20 / 6.549	20 / 6.659	- / -	- / -	- / -	- / -	83 / 27.054
2.1.6) Mission Systems Upgrade - Organic(*)	- / -	- / -	- / -	3 / 0.225	- / -	3 / 0.225	3 / 0.229	3 / 0.233	3 / 0.236	3 / 0.240	12 / 1.000	27 / 2.163
2.2.1) Installation Equipment NRE - Organic(*) (6)	- / -	- / 13.755	- / 22.077	- / 5.843	- / -	- / 5.843	- / 4.900	- / 4.645	- / 6.973	- / 19.078	- / -	- / 77.271
2.2.2) Inc3 Maintenance Trainer Modification NRE - Organic(*) (7)	- / -	- / -	- / -	- / 6.270	- / -	- / 6.270	- / 5.491	- / -	- / -	- / -	- / -	- / 11.761
Subtotal: Procurement	*- / 1.931*	*- / 49.986*	*- / 39.414*	*- / 128.256*	*- / -*	*- / 128.256*	*- / 168.931*	*- / 209.813*	*- / 215.406*	*- / 216.679*	*- / 868.543*	*- / 1,898.959*
Support												
3.1) Data	- / -	- / -	- / 1.098	- / 1.688	- / -	- / 1.688	- / 2.167	- / 2.050	- / 1.500	- / 3.200	- / 10.900	- / 22.603
3.2) Increment 3 Aircrew Trainers	- / -	- / -	- / -	5 / 7.838	- / -	5 / 7.838	9 / 14.339	9 / 14.572	9 / 14.804	9 / 15.036	18 / 30.071	59 / 96.660
3.3) ILS (8)	- / -	- / 0.552	- / 2.176	- / 2.388	- / -	- / 2.388	- / 5.869	- / 5.920	- / 5.166	- / 4.998	- / 20.200	- / 47.269
3.4) Other Support (9)	- / 0.257	- / 4.054	- / 9.323	- / 13.639	- / -	- / 13.639	- / 16.595	- / 19.995	- / 20.190	- / 22.734	- / 106.697	- / 213.484
Subtotal: Support	*- / 0.257*	*- / 4.606*	*- / 12.597*	*- / 25.553*	*- / -*	*- / 25.553*	*- / 38.970*	*- / 42.537*	*- / 41.660*	*- / 45.968*	*- / 167.868*	*- / 380.016*
Installation												
Installation 1 of 3: GRP: Increment 3 ECP 5	- / -	- / -	- / 9.600	- / 14.645	- / 0.000	- / 14.645	- / 14.890	- / 15.765	- / -	- / -	- / 0.000	- / 54.900
Installation 2 of 3: GRP: Increment 3 ECP 6	- / -	- / -	- / -	- / -	- / -	- / -	- / 41.490	- / 55.666	- / 71.994	- / 78.364	- / 416.687	- / 664.201
Installation 3 of 3: Other Mission Systems - 6th Workstation	- / -	- / 0.307	- / 0.976	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	- / 1.283
Subtotal: Installation	*- / 0.000*	*- / 0.307*	*- / 10.576*	*- / 14.645*	*- / -*	*- / 14.645*	*- / 58.707*	*- / 75.688*	*- / 76.319*	*- / 82.758*	*- / 430.295*	*- / 749.295*
Total												
Total Cost (Procurement + Support + Installation)	**2.188**	**54.899**	**62.587**	**168.454**	**0.000**	**168.454**	**266.608**	**328.038**	**333.385**	**345.405**	**1,466.706**	**3,028.270**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: GRP: Increment 3 ECP 5

Manufacturer Information

Manufacturer Name: Boeing - Increment 3 ECP 5 | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019	Oct 2019	Oct 2020	Oct 2021			
Delivery Dates	Apr 2020	Oct 2020	Oct 2021	Oct 2022			

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Increment 3 ECP 5

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	16 / 9.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 9.600
FY 2020	- / -	- / -	- / -	24 / 14.645	0 / 0.000	24 / 14.645	- / -	- / -	- / -	- / -	0 / 0.000	24 / 14.645
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	24 / 14.890	- / -	- / -	- / -	0 / 0.000	24 / 14.890
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 15.765	- / -	- / -	0 / 0.000	25 / 15.765
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	16 / 9.600	24 / 14.645	0 / 0.000	24 / 14.645	24 / 14.890	25 / 15.765	- / -	- / -	0 / 0.000	89 / 54.900

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	8	8	6	6	6	6	6	6	6	6	6	6	6	7	-	-	-	-	-	-	-	-	-	89
Out	-	-	-	-	-	-	-	8	8	6	6	6	6	6	6	6	6	6	6	6	7	-	-	-	-	-	-	-	-	-	89

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: GRP: Increment 3 ECP 6

Manufacturer Information

Manufacturer Name: Boeing-Increment 3 ECP 6 | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			May 2022	May 2023	May 2024	May 2025	May 2026

Installation Information

Method of Implementation: Depot:: Installation Name: Increment 3 ECP 6

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 41.490	2 / 10.121	- / -	- / -	0 / 0.000	8 / 51.611
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 45.545	2 / 10.285	- / -	0 / 0.000	11 / 55.830
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 61.709	3 / 15.673	0 / 0.000	15 / 77.382
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 62.691	3 / 16.415	15 / 79.106
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 76.603	14 / 76.603
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 323.669	59 / 323.669
Total	- / -	- / -	- / -	- / -	- / -	- / -	6 / 41.490	11 / 55.666	14 / 71.994	15 / 78.364	76 / 416.687	122 / 664.201

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	1	1	4	5	1	1	6	6	2	1	6	6	76	122
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	1	1	4	5	1	1	6	6	2	89	122

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: Other Mission Systems - 6th Workstation

Manufacturer Information

Manufacturer Name: Boeing - Sixth Work Station A kit | Manufacturer Location: Seattle, WA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Feb 2020						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Other Mission Systems - 6th Workstation

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	3 / 0.307	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.307
FY 2019	- / -	- / -	18 / 0.976	6 / 0.000	0 / 0.000	6 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.976
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	3 / 0.307	18 / 0.976	6 / 0.000	0 / 0.000	6 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	27 / 1.283

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	3	-	-	-	6	6	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Out	-	-	3	-	-	-	6	6	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27

Footnotes:

(4) Acoustic Receiver B-Kit will be installed at the O-Level.

(5) Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) B-Kit will be installed at the O-Level.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 3 / P-8A Mission Systems RCI (OSIP 006-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(6) Lots 1-7 are a different configuration than Lot 8 and beyond, therefore, FY19-21 addresses NRE to incorporate ECP 6 into Lots 1-7. Lot 8 and beyond NRE is budgeted in FY23-25. $12.1M has been added in FY22-25 for NRE and integration of certified and accredited Stores Management Computer (SMC) software for the LRASM ASuW weapon.

(7) Inc3 Maintenance Trainer Modification NRE added to address additional training system components and non-recurring activities identified during front end analysis (FEA).

(8) ILS funding profile reflects the need for supporting the new A and B kits by the stand up of a P-8A retrofit support team.

(9) Other Support funding profile reflects the need for supporting the new A and B kits by the stand up of a P-8A retrofit support team.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	6.259	6.945	6.342	0.000	6.342	8.147	8.255	8.478	8.647	91.625	144.698
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	6.259	6.945	6.342	0.000	6.342	8.147	8.255	8.478	8.647	91.625	144.698
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**6.259**	**6.945**	**6.342**	**0.000**	**6.342**	**8.147**	**8.255**	**8.478**	**8.647**	**91.625**	**144.698**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 001-19 provides funding for P-8A Aircraft Systems Upgrades to enable modifications to the aircraft in order to improve aircrew safety, modernize airframe, engine, weapons and stores, and sonobouy launch system performance, and incorporate structural enhancements to resolve readiness, obsolescence, correction of deficiencies incorporated by Engineering Change Proposals (ECPs), and safety issues required for the airframe to reach its designed/extended service life. Funding is provided for airframe modifications to support changes in Size, Weight, Power, and Cooling (SWAP-C) requirements of aircraft and mission systems equipment or as part of the RCI process, to incorporate fleet prioritized requirements, Quick Reaction Capabilities (QRC) both on a temporary and permanent basis, and to incorporate aircraft and propulsion systems related service bulletins and technical directives.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
No major development milestones. The changes identified will utilize the Engineering Change Proposal (ECP) process.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Aircraft Systems Upgrade 2 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.100	2 / 0.102	3 / 0.156	6 / 0.318	104 / 5.616	117 / 6.292
1.1.2) P-360 - Organic(*)	- / -	5 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.488
2.1.1) J8 Harness - Organic(*)	- / -	14 / 0.224	14 / 0.228	14 / 0.233	- / -	14 / 0.233	14 / 0.237	13 / 0.225	- / -	- / -	- / -	69 / 1.147
2.1.3) P-360 Modification Sensors - Organic(*)	- / -	30 / 1.447	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.447
2.1.4) P-360 Mod Repeaters - Organic(*)	- / -	10 / 0.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.065
2.1.5) P-360 Mod DSAC - Organic(*)	- / -	5 / 0.325	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.325
2.1.6) P-360 Modification - NonOrganic (10) *Installation 1 of 4*	- / -	5 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.488
2.1.7) Aircraft Systems Upgrade - NonOrganic *Installation 2 of 4*	- / -	2 / 0.150	3 / 0.230	3 / 0.234	- / -	3 / 0.234	10 / 0.795	10 / 0.810	12 / 0.990	14 / 1.176	63 / 5.386	117 / 9.771
2.1.8) Aircraft System Upgrade 2 - NonOrganic *Installation 3 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.954	111 / 17.982	117 / 18.936
2.1.9) Engine Fifth Stage - Organic(*)	- / -	10 / 0.500	50 / 2.550	40 / 2.080	- / -	40 / 2.080	40 / 2.120	24 / 1.296	24 / 1.320	24 / 1.344	22 / 1.254	234 / 12.464
2.1.10) Lower Lobe Vibration - NonOrganic *Installation 4 of 4*	- / -	10 / 0.185	14 / 0.260	14 / 0.269	- / -	14 / 0.269	20 / 0.392	20 / 0.400	19 / 0.387	3 / 0.062	- / -	100 / 1.955
2.1.11) Raked Wing Tip - Organic(*)	- / -	- / -	12 / 0.098	30 / 0.657	- / -	30 / 0.657	30 / 0.669	30 / 0.682	30 / 0.695	12 / 0.278	- / -	144 / 3.079
2.1.12) Leading Edge Slat Redesign - Organic(*)	- / -	- / -	6 / 0.031	6 / 0.031	- / -	6 / 0.031	6 / 0.032	6 / 0.032	6 / 0.033	8 / 0.044	85 / 0.467	123 / 0.670
2.1.13) Oil Scavenge Tube - Organic(*)	- / -	- / -	30 / 0.064	33 / 0.072	- / -	33 / 0.072	42 / 0.093	- / -	- / -	- / -	- / -	105 / 0.229
2.1.14) IDG Oil Tube - Organic(*)	- / -	- / -	10 / 0.034	11 / 0.038	- / -	11 / 0.038	15 / 0.052	16 / 0.057	19 / 0.069	19 / 0.070	- / -	90 / 0.320
2.1.15) Starter V-Band Clamp - Organic(*)	- / -	- / -	10 / 0.024	11 / 0.027	- / -	11 / 0.027	16 / 0.040	18 / 0.045	21 / 0.054	5 / 0.013	- / -	81 / 0.203
2.1.16) T/R Blanket Interference - Organic(*)	- / -	- / -	7 / 0.008	8 / 0.009	- / -	8 / 0.009	12 / 0.014	14 / 0.016	17 / 0.020	- / -	- / -	58 / 0.067
2.2.1) Installation Equipment N/R - Organic(*)	- / -	- / 1.612	- / 0.252	- / 0.533	- / -	- / 0.533	- / 1.295	- / 0.860	- / 1.123	- / 1.059	- / 20.994	- / 27.728
Subtotal: Procurement	*- / 0.000*	*- / 5.484*	*- / 3.779*	*- / 4.183*	*- / -*	*- / 4.183*	*- / 5.839*	*- / 4.525*	*- / 4.847*	*- / 5.318*	*- / 51.699*	*- / 85.674*
Support												
3.2) Data	- / -	- / 0.075	- / 0.075	- / 0.055	- / -	- / 0.055	- / 0.060	- / 0.039	- / 0.045	- / 0.060	- / 1.440	- / 1.849
3.5) ILS	- / -	- / 0.100	- / 0.150	- / 0.140	- / -	- / 0.140	- / 0.145	- / 0.110	- / 0.100	- / 0.102	- / 3.024	- / 3.871
3.6) Other Support	- / -	- / 0.300	- / 0.480	- / 0.489	- / -	- / 0.489	- / 0.498	- / 0.507	- / 0.516	- / 0.526	- / 6.615	- / 9.931
Subtotal: Support	*- / 0.000*	*- / 0.475*	*- / 0.705*	*- / 0.684*	*- / -*	*- / 0.684*	*- / 0.703*	*- / 0.656*	*- / 0.661*	*- / 0.688*	*- / 11.079*	*- / 15.651*
Installation												
Installation 1 of 4: P-360 Modification	- / -	- / -	- / 1.217	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.217

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 2 of 4: Aircraft Systems Upgrade	- / -	- / -	- / 0.250	- / 0.383	- / 0.000	- / 0.383	- / 0.390	- / 1.325	- / 1.350	- / 1.650	- / 9.873	- / 15.221
Installation 3 of 4: Aircraft System Upgrade 2	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.974	- / 18.974
Installation 4 of 4: Lower Lobe Vibration	- / -	- / 0.300	- / 0.994	- / 1.092	- / 0.000	- / 1.092	- / 1.215	- / 1.749	- / 1.620	- / 0.991	- / 0.000	- / 7.961
Subtotal: Installation	*- / 0.000*	*- / 0.300*	*- / 2.461*	*- / 1.475*	*- / -*	*- / 1.475*	*- / 1.605*	*- / 3.074*	*- / 2.970*	*- / 2.641*	*- / 28.847*	*- / 43.373*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**6.259**	**6.945**	**6.342**	**0.000**	**6.342**	**8.147**	**8.255**	**8.478**	**8.647**	**91.625**	**144.698**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: P-360 Modification

Manufacturer Information

Manufacturer Name: BOEING	Manufacturer Location: Seattle, WA
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019						
Delivery Dates	Oct 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: P-360 Modification

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	5 / 1.217	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.217
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	5 / 1.217	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.217

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	-	-	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 4: Aircraft Systems Upgrade

Manufacturer Information

Manufacturer Name: TBD- Aircraft Systems Upgrade	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Contractor Field MOD Team:: Installation Name: Aircraft Systems Upgrade

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	2 / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.250
FY 2020	- / -	- / -	- / -	3 / 0.383	0 / 0.000	3 / 0.383	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.383
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.390	- / -	- / -	- / -	0 / 0.000	3 / 0.390
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.325	- / -	- / -	0 / 0.000	10 / 1.325
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.350	- / -	0 / 0.000	10 / 1.350
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.650	0 / 0.000	12 / 1.650
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.795	14 / 1.795
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	63 / 8.078	63 / 8.078
Total	- / -	- / -	2 / 0.250	3 / 0.383	0 / 0.000	3 / 0.383	3 / 0.390	10 / 1.325	10 / 1.350	12 / 1.650	77 / 9.873	117 / 15.221

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	1	-	1	-	1	-	1	1	1	-	1	1	2	2	3	3	2	2	3	3	3	3	3	3	77	117
Out	-	-	-	-	-	-	1	-	1	-	1	-	1	1	1	-	1	1	2	2	3	3	2	2	3	3	3	3	3	80	117

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 4: Aircraft System Upgrade 2

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							Feb 2025
Delivery Dates							Oct 2025

Installation Information

Method of Implementation: Field Mod Team:: Installation Name: Aircraft System Upgrade 2

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.973	6 / 0.973
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	111 / 18.001	111 / 18.001
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	117 / 18.974	117 / 18.974

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	117
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	117

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0586 / P-8 Series	**Modification Number / Title:** 4 / P-8A Aircraft Systems (OSIP 001-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 4: Lower Lobe Vibration

Manufacturer Information

Manufacturer Name: TBD- Lower Lobe Vibration	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Lower Lobe Vibration

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	4 / 0.300	6 / 0.459	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.759
FY 2020	- / -	- / -	7 / 0.535	7 / 0.546	0 / 0.000	7 / 0.546	- / -	- / -	- / -	- / -	0 / 0.000	14 / 1.081
FY 2021	- / -	- / -	- / -	7 / 0.546	0 / 0.000	7 / 0.546	7 / 0.567	- / -	- / -	- / -	0 / 0.000	14 / 1.113
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.648	12 / 0.954	- / -	- / -	0 / 0.000	20 / 1.602
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.795	10 / 0.810	- / -	0 / 0.000	20 / 1.605
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.810	9 / 0.743	0 / 0.000	19 / 1.553
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.248	0 / 0.000	3 / 0.248
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	4 / 0.300	13 / 0.994	14 / 1.092	0 / 0.000	14 / 1.092	15 / 1.215	22 / 1.749	20 / 1.620	12 / 0.991	0 / 0.000	100 / 7.961

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	2	2	3	3	3	4	4	3	3	4	3	4	4	4	6	6	5	5	5	5	5	5	5	4	1	2	-	100
Out	-	-	-	-	2	2	3	3	3	4	4	3	3	4	3	4	4	4	6	6	5	5	5	5	5	5	5	4	1	2	100

Footnotes:

(10) All P-360 Kit Buys will be installed on five Aircraft. There are six Sensors and two Repeaters per Aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604376M, 0604270N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	130.564	11.590	26.536	27.794	0.000	27.794	29.384	24.633	25.130	25.631	91.968	393.230
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	130.564	11.590	26.536	27.794	0.000	27.794	29.384	24.633	25.130	25.631	91.968	393.230
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**130.564**	**11.590**	**26.536**	**27.794**	**0.000**	**27.794**	**29.384**	**24.633**	**25.130**	**25.631**	**91.968**	**393.230**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modification efforts that support the Marine Air Ground Task Force Electronic Warfare (MAGTF EW) mission. These modifications are designed to support improved capabilities to address existing and emerging threats and close gaps in MAGTF EW sufficiency and integration in the EW arena. These capabilities are designed for carriage on an expansive variety of organic air and ground MAGTF assets and include: Collaborative Electronic Attack (EA)/EW Battle Management, EW Services Architecture, and Intrepid Tiger series.

MAGTF EW will support procurement of new technologies and equipment as needed to combat emerging EW technologies and systems.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604376M, 0604270N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13) (RELIABILITY / MISSION CAPABILITY)				- / 126.832	- / 11.590	- / 26.536	- / 27.794	- / 0.000	- / 27.794
P-3a	2 / INACTIVE OSIPS (RELIABILITY / MISSION CAPABILITY)				- / 3.732	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 130.564**	**- / 11.590**	**- / 26.536**	**- / 27.794**	**- / 0.000**	**- / 27.794**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13) (RELIABILITY / MISSION CAPABILITY)				- / 29.384	- / 24.633	- / 25.130	- / 25.631	- / 91.968	- / 389.498
P-3a	2 / INACTIVE OSIPS (RELIABILITY / MISSION CAPABILITY)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.732
P-40	**Total Gross/Weapon System Cost**				**- / 29.384**	**- / 24.633**	**- / 25.130**	**- / 25.631**	**- / 91.968**	**- / 393.230**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The term Electronic Warfare (EW) refers to the use of electromagnetic (EM) energy and Directed Energy (DE) to control the Electromagnetic Spectrum (EMS) or to attack the enemy. EW consists of three divisions: Electronic Attack (EA), Electronic Protect (EP), and Electronic Warfare Support (EWS). Further, some cyber-operations can be enabled by EW operations. Accordingly, the Marine Corps considers the EMS as a war fighting environment that must be fully integrated into the MAGTF Commanders scheme-of-maneuver and concept-of-fires. The concept of operations for MAGTF EW takes advantage of advancements in technology that facilitate integration of airborne and ground-based EW assets to collaboratively interact, providing the MAGTF Commander with the capabilities to control the EMS at the time and place of his/her choosing.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation	**Modification Number / Title:** 1 / INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	126.832	11.590	26.536	27.794	0.000	27.794	29.384	24.633	25.130	25.631	91.968	389.498
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	126.832	11.590	26.536	27.794	0.000	27.794	29.384	24.633	25.130	25.631	91.968	389.498
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**126.832**	**11.590**	**26.536**	**27.794**	**0.000**	**27.794**	**29.384**	**24.633**	**25.130**	**25.631**	**91.968**	**389.498**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Effort for Intrepid Tiger II (IT II) capability is designed to expand electromagnetic spectrum control, spectrum management, and Electronic Warfare (EW) effectiveness against current targets and to provide adaptability to counter future targets as they emerge. Key to this capability is network accessibility that includes EW Services Architecture derived infrastructure for integration on multiple aviation platforms including any MAGTF tactical fixed-wing, tilt-wing, and rotary-wing.

The design includes open architecture-compliant and easily expandable hardware and software. Engineering Change Proposals (ECPs) will be utilized in order to upgrade component technology via Advanced Technology Kits. Advanced Technology Kits will focus on new capability insertion for the Technique Generator, Antennas, Network and EW Services, Interfaces, and other supporting technology.

-Technique Generator Upgrades: Will enable new techniques to provide additional capability that counters existing and anticipated threat systems while maintaining an open architecture to allow future counter threat upgrades.
-Antenna Upgrades: Will expand transmit and receive frequency coverage to that of current and anticipated threat systems dynamically operating in a broad spectrum.
-Network and EW Services Upgrade: Will enable a non-co-located operator access to pod functions and information exchanges via radio signals to enhance operational and tactical flexibility.
-Interface Upgrades: Will enable ground and air based users to configure and monitor pod status, operation and effectiveness.
-Other Supporting Upgrades: Includes hardware and software components that enable functions of power, cooling, status, control and connectivity as through processors, sensors, radios, radio frequency components and support equipment critical to overall pod and system operation to include techniques, mission planning, operational execution, post-flight analysis and shipping containers.

ENGINEERING CHANGES: This AN/ALQ-231 program covers system modifications required to improve reliability/maintainability/availability, enhance mission capability, interface/integrate with evolving electromagnetic spectrum control, spectrum management, and EW systems, and resolve obsolescence issues.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: IT II provides a distributed, networked approach to EW that is designed to increase both organic capability and capacity for the Marine Air-Ground Task Force (MAGTF). The IT II Block 1 USMC fixed-wing variant (IT II (V)1) was approved in early 2012 as a Rapid Deployment Capability (RDC). IT II USMC rotary-wing variant (IT II (V)3) was approved as an RDC in early 2014 with EOC deployment on UH-1 T/M/S aircraft in 2016. The IT II was designated a Program of Record under PEO(T) in May 2017. The IT II Block X is a technology upgrade to the IT II (V)1 that will provide enhanced communications and counter-radar jamming capability for USMC tilt-rotor and fixed-wing aircraft. IT II Block X Rack production will commence in FY 2021 with IT II Block X Pod production following in FY 2023.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation	**Modification Number / Title:** 1 / INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MULTIPLE PLATFORMS	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:** 0604376M, 0604270N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)												
B Kits												
Recurring												
2.1.1) AN/ALQ-231(V)3 (Rotary Wing) - Organic	25 / 25.370	9 / 9.061	20 / 20.337	2 / 2.074	- / -	2 / 2.074	- / -	- / -	- / -	- / -	- / -	56 / 56.842
2.1.2) DF Arrays - Organic (1)	10 / 1.966	6 / 1.158	22 / 4.194	11 / 2.155	- / -	11 / 2.155	- / -	- / -	- / -	- / -	- / -	49 / 9.473
2.1.3) AN/ALQ-231(V)1 BLK X Radar Jammer Rack Upgrade Kits - Organic	- / -	- / -	- / -	11 / 14.349	- / -	11 / 14.349	15 / 19.958	11 / 14.929	5 / 6.922	- / -	- / -	42 / 56.158
2.1.4) AN/ALQ-231(V)1 BLK X Radar Jammer Pod Upgrade Kits - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.972	5 / 15.228	7 / 21.745	24 / 77.966	38 / 120.911
2.1.5) Archived Mods - Organic	- / 35.267	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 35.267
Subtotal: Recurring	*- / 62.603*	*- / 10.219*	*- / 24.531*	*- / 18.578*	*- / -*	*- / 18.578*	*- / 19.958*	*- / 20.901*	*- / 22.150*	*- / 21.745*	*- / 77.966*	*- / 278.651*
Non-Recurring												
2.2.1) Installation Equipment N/R - Organic	- / 6.683	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.683
Subtotal: Non-Recurring	*- / 6.683*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 6.683*
Subtotal: INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)	*35 / 69.286*	*15 / 10.219*	*42 / 24.531*	*24 / 18.578*	*- / -*	*24 / 18.578*	*15 / 19.958*	*13 / 20.901*	*10 / 22.150*	*7 / 21.745*	*24 / 77.966*	*185 / 285.334*
Subtotal: Procurement, All Modification Items	*- / 69.286*	*- / 10.219*	*- / 24.531*	*- / 18.578*	*- / -*	*- / 18.578*	*- / 19.958*	*- / 20.901*	*- / 22.150*	*- / 21.745*	*- / 77.966*	*- / 285.334*
Support *(All Modification Items)*												
3.4) Support Equipment (2)	- / 8.488	- / 0.563	- / 0.645	- / 7.589	- / -	- / 7.589	- / 7.798	- / 2.073	- / 1.286	- / 2.158	- / 6.738	- / 37.338
3.5) ILS (3)	- / 0.760	- / 0.250	- / 0.346	- / 0.599	- / -	- / 0.599	- / 0.614	- / 0.626	- / 0.640	- / 0.653	- / 2.747	- / 7.235
3.6) Other Support	- / 48.298	- / 0.558	- / 1.014	- / 1.028	- / -	- / 1.028	- / 1.014	- / 1.033	- / 1.054	- / 1.075	- / 4.517	- / 59.591
Subtotal: Support	*- / 57.546*	*- / 1.371*	*- / 2.005*	*- / 9.216*	*- / -*	*- / 9.216*	*- / 9.426*	*- / 3.732*	*- / 2.980*	*- / 3.886*	*- / 14.002*	*- / 104.164*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**126.832**	**11.590**	**26.536**	**27.794**	**0.000**	**27.794**	**29.384**	**24.633**	**25.130**	**25.631**	**91.968**	**389.498**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation	**Modification Number / Title:** 1 / INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: INTREPID TIGER II SERIES (AN/ALQ-231) (OSIP 010-13)		

Footnotes:

(1) DF Array unit cost increase from FY 2020 to FY 2021 is based on negotiated options to procure QTY 11 in FY 2021.

(2) Funding increases in FY 2021 and FY 2022 are for support equipment associated with the procurement of the AN/ALQ-231(V)1 BLK X Radar Jammer rack upgrade kits beginning in FY 2021.

(3) ILS funding increases from FY 2020 to FY 2021 due to additional support required for AN/ALQ-231(V)1 BLK X Radar Jammer rack upgrade production.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation	**Modification Number / Title:** 2 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.732	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.732
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.732	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.732
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.732**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.732**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive OSIPs prior year totals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0587 / MAGTF EW for Aviation	**Modification Number / Title:** 2 / INACTIVE OSIPS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-6B	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) INACTIVE OSIPS - Organic(*) (4)	- / 3.732	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.732
Subtotal: Procurement	*- / 3.732*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 3.732*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**3.732**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.732**

Footnotes:

(4) Updated Prior Years to actuals.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	64.986	37.907	31.686	28.774	0.000	28.774	33.819	19.242	16.076	19.646	25.096	277.232
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	64.986	37.907	31.686	28.774	0.000	28.774	33.819	19.242	16.076	19.646	25.096	277.232
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**64.986**	**37.907**	**31.686**	**28.774**	**0.000**	**28.774**	**33.819**	**19.242**	**16.076**	**19.646**	**25.096**	**277.232**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MQ-8 Fire Scout Unmanned Air System provides real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. This line item funds improvements through engineering change orders, correction of deficiencies, obsolescence and safety. This includes items such as modernization, modification and retrofit of air vehicle, avionics, payloads/mission systems and Mission Control Systems (MCS) (also referred to as Ground Control Stations) components and systems. The program will procure a total of 68 air vehicles (30 MQ-8Bs (7 lost to attrition) and 38 MQ-8Cs) to support Fleet requirements. Current inventory is twenty-three (23) MQ-8B and twenty-eight (28) MQ-8C air vehicles. Twenty-three (23) MQ-8B Fire Scout systems are in service, of which twenty-two (22) are available for fleet use. Twenty-eight (28) MQ-8C Fire Scouts are in service with nine (9) additional MQ-8Cs under contract. Twenty-two (22) MQ-8Cs are located at the Fleet Contractor Field Team (CFT) supported storage and maintenance facility at Naval Base Ventura County (NBVC) Pt. Mugu, CA. Two (2) MQ-8B and six (6) MQ-8C Fire Scouts are at Webster Field, MD. These Operational, Safety and Improvement Programs align to the MQ-8B Initial Operational Capability in 2014 and MQ-8C deliveries that commenced in 2015.

The MQ-8 Fire Scout system includes air vehicle(s), payloads (e.g., electro-optical/infra-red/laser designator-range finder, Automated Information System (AIS), voice communications relay, Radar, Weapons and other specialty payloads), MCS (with Tactical Control System and Tactical Common Data Link integrated for interoperability), Unmanned Air Vehicle Common Automatic Recovery System (UCARS) for automatic launch and recovery, training systems, associated spares, and support equipment. The quantities and schedules for MCS and UCARS components are based on host ship requirements, while quantities and schedules for air vehicle components are based on operational deployment plans. The MQ-8 system supports Littoral Combat Ship (LCS) and/or suitably-equipped air capable ship ISR collection for Navy and urgent operational requirements. Designated service life and average service life remaining are currently being computed via a fatigue life evaluation.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	**Date:** February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-3a	1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14) (Readiness/Safety/Performance Sustainment)			253	- / 38.508	- / 16.144	- / 13.156	- / 14.892	- / 0.000	- / 14.892
P-3a	2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17) (Readiness/Safety/Performance Sustainment)				- / 7.280	- / 6.739	- / 7.300	- / 6.587	- / 0.000	- / 6.587
P-3a	3 / MQ-8 Payloads (OSIP 010-17) (Readiness/Performance)				- / 19.198	- / 15.024	- / 11.230	- / 7.295	- / 0.000	- / 7.295
P-40	**Total Gross/Weapon System Cost**				**- / 64.986**	**- / 37.907**	**- / 31.686**	**- / 28.774**	**- / 0.000**	**- / 28.774**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-3a	1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14) (Readiness/Safety/Performance Sustainment)			253	- / 12.059	- / 3.815	- / 3.906	- / 5.068	- / 6.022	- / 113.570
P-3a	2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17) (Readiness/Safety/Performance Sustainment)				- / 5.760	- / 4.205	- / 2.521	- / 1.061	- / 0.480	- / 41.933
P-3a	3 / MQ-8 Payloads (OSIP 010-17) (Readiness/Performance)				- / 16.000	- / 11.222	- / 9.649	- / 13.517	- / 18.594	- / 121.729
P-40	**Total Gross/Weapon System Cost**				**- / 33.819**	**- / 19.242**	**- / 16.076**	**- / 19.646**	**- / 25.096**	**- / 277.232**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY21 funds improvements via engineering change orders, for correction of deficiencies, obsolescence and safety. This includes correction of deficiencies found during operational use and deployments, improvements for maintainability and reliability, safety corrections, Radar/other special payloads, Mission Control System (MCS), and emerging requirements and retrofit of capabilities procured post air vehicle delivery. Budget reflects MQ-8Cs, procurements starting in FY12, being transitioned to Fleet service.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 253	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	38.508	16.144	13.156	14.892	0.000	14.892	12.059	3.815	3.906	5.068	6.022	113.570
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	38.508	16.144	13.156	14.892	0.000	14.892	12.059	3.815	3.906	5.068	6.022	113.570
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**38.508**	**16.144**	**13.156**	**14.892**	**0.000**	**14.892**	**12.059**	**3.815**	**3.906**	**5.068**	**6.022**	**113.570**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Correction of Deficiencies (COD) Operational, Safety and Improvement Program (OSIP) provides resources to correct MQ-8 Air Vehicle deficiencies resulting from readiness, obsolescence, safety and Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues. It also provides for Pre-Planned Product Improvement (P3I) efforts that will improve and modernize system performance, reliability, and maintainability of sensors, avionics, and airframe components to support Intelligence, Surveillance and Reconnaissance (ISR) collection for both Navy and urgent operational requirements. In order to meet emerging deficiencies in the MQ-8B and MQ-8C aircraft, integrated systems and trainers must be modified when critical corrections / changes are identified. Funds will be used to incorporate Engineering Change Proposals (ECP) and implement those changes to sustain and improve operations. Funding supports the upgrade of the communication radio set with the ARC-210 1939A variant, which supports crypto compatibility required by FY21.

Modifications for the MQ-8 aircraft include, but are not limited to: MQ-8B payloads, Video Oriented Transceiver for Exchange of Information (VORTEX) relocation, hot weather modifications, blades, engines, control rods, heavy gauge wiring, engine accelerometers, optical tracker cable, navigation lights, corrosion prevention, light weight doors, Unmanned Aerial Vehicle Common Automated Recovery System (UCARS), lithium ion battery, windscreen, airframe structure, ARC-210 radios, Tactical Common Data Link (TCDL), shipboard interface system, common avionics, software, cyber security, network interfaces, processor upgrades, System Integration Lab (SIL) and Hardware-in-the-Loop (HITL) enhancements, Windows 10 transition, maintenance device updates, and other related systems.

The FY21 budget focus includes Redundancy Upgrade for UCARS, the top safety priority for the MQ-8, and the Processor Upgrade, an obsolescence issue.

This OSIP provides funds to support modifications to address safety and readiness issues and the establishment of Organic Depot Capability for Core Repairables. Modifications will be depot-level performed by Fleet Readiness Centers, contractor artisans, contractor field modification teams, and/or operational-level performed by organic support. Coincident with the MQ-8B deployment on the Littoral Combat Ship (LCS) class, a top ten safety issue list was developed during the program's System Safety Working Group. As solutions become available, aircraft modifications will be implemented to address critical safety issues. Identified issues include icing detection/avoidance, ground handling, airspace awareness, Global Positioning System vulnerabilities, and cyber security.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MQ-8B Initial Operational Capability (IOC) occurred in FY14. The MQ-8B has deployed since FY10 to support Intelligence, Surveillance and Reconnaissance Task Force, Joint Urgent Operational Need, and is embarked aboard the LCS classes of ships as part of the Surface Warfare Mission Package. The MQ-8B will deploy aboard the LCS classes of ships as part of Mine Counter-Measures (MCM) missions beginning in FY19.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 253	
Models of Systems Affected: MQ-8B/C	**Modification Type:** Readiness/Safety/Performance Sustainment	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1) VORTEX Relocation (MQ-8B) - NonOrganic (1) *Installation 1 of 6*	24 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.225
1.2) Heavy Gauge Wiring (MQ-8B) - NonOrganic *Installation 2 of 6*	- / -	23 / 0.026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.026
1.3) Aft Faraday Cage Connectors (MQ-8C) - NonOrganic *Installation 3 of 6*	- / -	17 / 0.017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.017
1.4) Corrosion Prevention (MQ-8C) - NonOrganic *Installation 4 of 6*	2 / 0.005	17 / 0.043	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.048
1.5) Redundancy Upgrade for UCARS (MQ-8C) - NonOrganic (2) *Installation 5 of 6*	- / -	- / -	- / -	16 / 0.348	- / -	16 / 0.348	5 / 0.111	1 / 0.023	1 / 0.024	5 / 0.118	- / -	28 / 0.624
1.6) Processor Upgrade (MQ-8C) - NonOrganic (3) *Installation 6 of 6*	- / -	- / -	- / -	18 / 0.371	- / -	18 / 0.371	9 / 0.191	1 / 0.022	1 / 0.022	5 / 0.109	8 / 0.262	42 / 0.977
1.7) Kaflex Driveshaft & Coupling Assembly Replacement - Organic(*)	- / -	- / -	16 / 0.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.272
2.1.1) ARC-210 Upgrade (MQ-8B) - Organic(*)	12 / 2.380	11 / 1.694	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 4.074
2.1.2) VORTEX Wholeness (MQ-8B) - Organic(*)	- / -	16 / 2.923	6 / 0.753	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 3.676
2.1.3) Lithium Ion Battery Upgrade (MQ-8B/C) - Organic(*)	- / -	31 / 0.249	30 / 0.241	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	61 / 0.490
2.1.4) Redundancy Uprgrade for UCARS (MQ-8C) - Organic(*) (4)	- / -	- / -	- / -	16 / 2.749	- / -	16 / 2.749	5 / 0.884	1 / 0.182	1 / 0.188	5 / 0.966	- / -	28 / 4.969
2.1.5) Processor Upgrade (MQ-8C) - Organic(*) (5)	- / -	- / -	- / -	14 / 3.605	- / -	14 / 3.605	9 / 2.387	1 / 0.273	1 / 0.281	5 / 1.449	12 / 0.262	42 / 8.257
2.1.6) TCDL Radome Durability Uprgrade (MQ-8B) - Organic(*)	- / -	- / -	23 / 0.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.115
2.1.7) Lightweight Doors (MQ-8C) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	9 / 1.854	4 / 0.849	3 / 0.656	1 / 0.225	21 / 4.869	38 / 8.453
2.1.8) Prior Year Modifications - Organic(*)	269 / 7.738	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	269 / 7.738
2.2.1) N/R for MQ-8 Modifications - Organic(*)	- / 18.723	- / 3.833	- / 5.948	- / 2.119	- / -	- / 2.119	- / 1.745	- / -	- / -	- / -	- / -	- / 32.368
Subtotal: Procurement	*- / 29.071*	*- / 8.785*	*- / 7.329*	*- / 9.192*	*- / -*	*- / 9.192*	*- / 7.172*	*- / 1.349*	*- / 1.171*	*- / 2.867*	*- / 5.393*	*- / 72.329*
Support												
3.1) ILS (6)	- / 1.801	- / 0.523	- / 0.670	- / 1.075	- / -	- / 1.075	- / 0.711	- / 0.425	- / 0.861	- / 0.830	- / -	- / 6.896
3.2) Data	- / 1.056	- / 0.462	- / 0.467	- / 0.480	- / -	- / 0.480	- / 0.494	- / 0.300	- / 0.263	- / 0.203	- / -	- / 3.725
3.3) Training Equipment (7)	- / 3.411	- / 2.100	- / 1.761	- / 1.028	- / -	- / 1.028	- / 0.443	- / 0.124	- / 0.398	- / 0.050	- / -	- / 9.315
3.4) Support Equipment	- / 0.451	- / 1.125	- / 1.031	- / 1.239	- / -	- / 1.239	- / 0.687	- / 0.500	- / 0.464	- / 0.408	- / -	- / 5.905

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 253	
Models of Systems Affected: MQ-8B/C	**Modification Type:** Readiness/Safety/Performance Sustainment	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
3.5) Other Support	- / 2.693	- / 2.900	- / 1.270	- / 1.442	- / -	- / 1.442	- / 1.233	- / 0.640	- / 0.668	- / 0.626	- / -	- / 11.472
Subtotal: Support	*- / 9.412*	*- / 7.110*	*- / 5.199*	*- / 5.264*	*- / -*	*- / 5.264*	*- / 3.568*	*- / 1.989*	*- / 2.654*	*- / 2.117*	*- / 0.000*	*- / 37.313*
Installation												
Installation 1 of 6: VORTEX Relocation (MQ-8B)	- / -	- / -	- / 0.280	- / 0.288	- / 0.000	- / 0.288	- / 0.297	- / -	- / -	- / -	- / 0.000	- / 0.865
Installation 2 of 6: Heavy Gauge Wiring (MQ-8B)	- / -	- / 0.042	- / 0.144	- / 0.148	- / 0.000	- / 0.148	- / 0.095	- / -	- / -	- / -	- / 0.000	- / 0.429
Installation 3 of 6: Aft Faraday Cage Connectors (MQ-8C)	- / -	- / -	- / 0.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.204
Installation 4 of 6: Corrosion Prevention (MQ-8C)	- / 0.025	- / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.232
Installation 5 of 6: Redundancy Upgrade for UCARS (MQ-8C)	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567	- / 0.292	- / 0.060	- / 0.062	- / 0.275	- / 1.256
Installation 6 of 6: Processor Upgrade (MQ-8C)	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.360	- / 0.185	- / 0.021	- / 0.022	- / 0.354	- / 0.942
Subtotal: Installation	*- / 0.025*	*- / 0.249*	*- / 0.628*	*- / 0.436*	*- / -*	*- / 0.436*	*- / 1.319*	*- / 0.477*	*- / 0.081*	*- / 0.084*	*- / 0.629*	*- / 3.928*
Total												
Total Cost (Procurement + Support + Installation)	**38.508**	**16.144**	**13.156**	**14.892**	**0.000**	**14.892**	**12.059**	**3.815**	**3.906**	**5.068**	**6.022**	**113.570**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 1 of 6: VORTEX Relocation (MQ-8B)

Manufacturer Information

Manufacturer Name: RED-Inc. | Manufacturer Location: California, MD

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FRC Depot/Contractor Field Mod Team:: Installation Name: VORTEX Relocation (MQ-8B)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	8 / 0.280	8 / 0.288	0 / 0.000	8 / 0.288	8 / 0.297	- / -	- / -	- / -	0 / 0.000	24 / 0.865
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	8 / 0.280	8 / 0.288	0 / 0.000	8 / 0.288	8 / 0.297	- / -	- / -	- / -	0 / 0.000	24 / 0.865

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Out	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	24

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 2 of 6: Heavy Gauge Wiring (MQ-8B)

Manufacturer Information

Manufacturer Name: Carlisle Interconnect Technologies | Manufacturer Location: Kent, WA

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	May 2019						

Installation Information

Method of Implementation: FRC Depot/Contract Field Mod Team:: Installation Name: Heavy Gauge Wiring (MQ-8B)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	2 / 0.042	8 / 0.144	8 / 0.148	0 / 0.000	8 / 0.148	5 / 0.095	- / -	- / -	- / -	0 / 0.000	23 / 0.429
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	2 / 0.042	8 / 0.144	8 / 0.148	0 / 0.000	8 / 0.148	5 / 0.095	- / -	- / -	- / -	0 / 0.000	23 / 0.429

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	2	-	2	2	2	2	2	2	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Out	-	-	-	-	2	-	2	2	2	2	2	2	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	23

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 3 of 6: Aft Faraday Cage Connectors (MQ-8C)

Manufacturer Information

Manufacturer Name: Northrop Grumman Corp | Manufacturer Location: Rancho, Bernardo, CA

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	Sep 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Aft Faraday Cage Connectors (MQ-8C)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	17 / 0.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 0.204
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	17 / 0.204	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 0.204

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	10	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Out	-	-	-	-	-	-	5	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 4 of 6: Corrosion Prevention (MQ-8C)

Manufacturer Information

Manufacturer Name: Northrop Grumman Corp | Manufacturer Location: Rancho Bernardo, CA

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019						
Delivery Dates	May 2019						

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: Corrosion Prevention (MQ-8C)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	2 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.025
FY 2019	- / -	17 / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	17 / 0.207
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 0.025	17 / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 0.232

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	10	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Out	2	-	-	10	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 5 of 6: Redundancy Upgrade for UCARS (MQ-8C)

Manufacturer Information

Manufacturer Name: Northrop Grumman Corp | Manufacturer Location: Rancho Bernardo, CA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Feb 2021	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Nov 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: FRC Depot/Contractor Field Mod Team:: Installation Name: Redundancy Upgrade for UCARS (MQ-8C)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.567	- / -	- / -	- / -	0 / 0.000	16 / 0.567
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.292	- / -	- / -	0 / 0.000	5 / 0.292
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.060	- / -	0 / 0.000	1 / 0.060
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.062	0 / 0.000	1 / 0.062
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.275	5 / 0.275
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.567	5 / 0.292	1 / 0.060	1 / 0.062	5 / 0.275	28 / 1.256

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	5	-	-	-	1	-	-	-	1	-	-	-	5	28
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	-	5	-	-	1	-	-	-	1	-	-	-	5	28

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 253

Installation 6 of 6: Processor Upgrade (MQ-8C)

Manufacturer Information

Manufacturer Name: Northrop Grumman Corp | Manufacturer Location: Rancho Bernardo, CA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

Installation Information

Method of Implementation: Depot FRC/Contractor Field Mod Team:: Installation Name: Processor Upgrade (MQ-8C)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.360	- / -	- / -	- / -	0 / 0.000	18 / 0.360
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.185	- / -	- / -	0 / 0.000	9 / 0.185
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.021	- / -	0 / 0.000	1 / 0.021
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.022	0 / 0.000	1 / 0.022
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.298	5 / 0.298
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.056	8 / 0.056
Total	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.360	9 / 0.185	1 / 0.021	1 / 0.022	13 / 0.354	42 / 0.942

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	4	2	2	3	2	1	-	-	-	1	-	-	-	13	42
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	5	5	2	2	3	2	1	-	-	-	1	-	-	-	13	42

Footnotes:

(1) Vortex Relocation (MQ-8B): Installations slid by two years (FY18 to FY20) due to identified deficiencies in cable connectors. Installs will commence in FY20, eight per year (two/qtr) through FY22.

(2) Redundancy Upgrade for UCARS: Profile based on available funding following MQ-8B divestiture offset. Quantity of 28 kits supports 24 MQ-8C's, two (2) test assets and two (2) SIL assets.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 1 / MQ-8 Correction of Deficiencies and Modernization (OSIP 021-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:** 253	

(3) Processor Upgrade (MQ-8C): Profile based on available funding following MQ-8B divestiture offset. Quantity of 42 kits supports 38 MQ-8C's, two test assets and two SIL assets.

(4) Redundancy Upgrade for UCARS: Profile based on available funding following MQ-8B divestiture offset. Quantity of 28 kits supports 24 MQ-8C's, two (2) test assets and two (2) SIL assets.

(5) Processor Upgrade (MQ-8C): Profile based on available funding following MQ-8B divestiture offset. Optimum profile would support procurement of 12 (FY21), 24 (FY22), and six (FY23). Quantity of 42 kits supports 38 MQ-8C's, two test assets and two SIL assets.

(6) ILS: cost will vary as Engineering Change Proposal requirements change.

(7) Training Equipment: supports update of , but not limited to, Avionics Maintenance Trainer (AMT) and Combined Maintenance Trainer (CMT). AMT and CMT equipment along with other training equipment is required to support training event on both East and West coast locations. Additionally, training equipment is procured as required to support changes in air vehicle configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	7.280	6.739	7.300	6.587	0.000	6.587	5.760	4.205	2.521	1.061	0.480	41.933
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	7.280	6.739	7.300	6.587	0.000	6.587	5.760	4.205	2.521	1.061	0.480	41.933
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**7.280**	**6.739**	**7.300**	**6.587**	**0.000**	**6.587**	**5.760**	**4.205**	**2.521**	**1.061**	**0.480**	**41.933**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Mission Control System (MCS) Operational, Safety and Improvement Program (OSIP) addresses modifications to MCS for hardware. Funding supports the External Communications (EXCOMM) rack and the Unmanned Aerial Vehicle Common Automatic Recovery System (UCARS) obsolete components which require replacement. Non-recurring engineering has been completed to support production. This effort procures the kits required and funds the retrofit of shipboard MD-4 MCS equipment onboard Littoral Combat Ships (LCS), other suitably equipped air-capable ships, and shore-based MD-4B MCS equipment installed at fleet locations. Funding supports the upgrade of the communication radio set with the ARC-210 1939A variant, which supports crypto compatibility required by FY21. Additionally, the radio OEM (Rockwell Collins) completes production and procurement of the ARC-210 1939A variant in FY21.

This budget accelerates MCS upgrades to reduce cyber security vulnerabilities, reduces obsolescence, and supports fleet requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MQ-8B Initial Operational Capability (IOC) occurred in FY14. The MQ-8B has deployed since FY10 to support Intelligence, Surveillance and Reconnaissance (ISR) Task Force, Joint Urgent Operational Need, and is preparing to embark on multiple operational deployments aboard the Littoral Combat Ship (LCS) class as part of the Surface Warfare Mission Package.

MCS and UCARS requirements were aligned from OSIP 021-14 to OSIP 009-17 in FY 2017 budget request.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** Readiness/Safety/Performance Sustainment	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MCS Upgrade EXCOMM Phase II (Ship Based) - NonOrganic (8) *Installation 1 of 2*	- / -	4 / 3.692	4 / 3.870	4 / 3.914	- / -	4 / 3.914	3 / 2.901	2 / 1.987	1 / 1.010	- / -	- / -	18 / 17.374
1.1.2) MCS Upgrade EXCOMM Phase II (Land Based) - NonOrganic *Installation 2 of 2*	5 / 4.315	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 4.315
1.1.3) MCS ARC-210 Upgrade - Organic(*)	1 / 0.327	5 / 1.400	5 / 1.200	6 / 1.440	- / -	6 / 1.440	- / -	- / -	- / -	- / -	- / -	17 / 4.367
1.2.1) N/R for MCS Modifications - Organic(*)	- / 0.589	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.589
Subtotal: Procurement	*- / 5.231*	*- / 5.092*	*- / 5.070*	*- / 5.354*	*- / -*	*- / 5.354*	*- / 2.901*	*- / 1.987*	*- / 1.010*	*- / -*	*- / 0.000*	*- / 26.645*
Support												
2.1) ILS	- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.046
2.2) Other Support	- / 0.343	- / 0.100	- / 0.120	- / 0.135	- / -	- / 0.135	- / 0.139	- / 0.172	- / 0.228	- / 0.240	- / 0.480	- / 1.957
Subtotal: Support	*- / 0.389*	*- / 0.100*	*- / 0.120*	*- / 0.135*	*- / -*	*- / 0.135*	*- / 0.139*	*- / 0.172*	*- / 0.228*	*- / 0.240*	*- / 0.480*	*- / 2.003*
Installation												
Installation 1 of 2: MCS Upgrade EXCOMM Phase II (Ship Based)	- / -	- / -	- / 2.110	- / 1.098	- / 0.000	- / 1.098	- / 2.720	- / 2.046	- / 1.283	- / 0.821	- / 0.000	- / 10.078
Installation 2 of 2: MCS Upgrade EXCOMM Phase II (Land Based)	- / 1.660	- / 1.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.207
Subtotal: Installation	*- / 1.660*	*- / 1.547*	*- / 2.110*	*- / 1.098*	*- / -*	*- / 1.098*	*- / 2.720*	*- / 2.046*	*- / 1.283*	*- / 0.821*	*- / 0.000*	*- / 13.285*
Total												
Total Cost (Procurement + Support + Installation)	**7.280**	**6.739**	**7.300**	**6.587**	**0.000**	**6.587**	**5.760**	**4.205**	**2.521**	**1.061**	**0.480**	**41.933**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: MCS Upgrade EXCOMM Phase II (Ship Based)

Manufacturer Information

Manufacturer Name: NAWC-AD - MCS Upgrade EXCOMM Phase II

Manufacturer Location: NAS Patuxent River, MD

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	

Installation Information

Method of Implementation: Govt Field Mod Team:: Installation Name: MCS Upgrade EXCOMM Phase II (Ship Based)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 2.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.110
FY 2020	- / -	- / -	- / -	4 / 1.098	0 / 0.000	4 / 1.098	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.098
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.720	- / -	- / -	- / -	0 / 0.000	4 / 2.720
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.046	- / -	- / -	0 / 0.000	3 / 2.046
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.283	- / -	0 / 0.000	2 / 1.283
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.821	0 / 0.000	1 / 0.821
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 2.110	4 / 1.098	0 / 0.000	4 / 1.098	4 / 2.720	3 / 2.046	2 / 1.283	1 / 0.821	0 / 0.000	18 / 10.078

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	4	-	-	-	4	-	-	-	4	-	-	-	3	-	-	-	2	-	-	-	1	-	-	-	-	18
Out	-	-	-	-	-	-	-	-	4	-	-	-	4	-	-	-	4	-	-	-	3	-	-	-	2	-	-	-	1	-	18

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 2 / MQ-8 Mission Control System (MCS) Readiness, Obsolescence and Safety (OSIP 009-17)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: MCS Upgrade EXCOMM Phase II (Land Based)

Manufacturer Information

Manufacturer Name: NAWC-AD	Manufacturer Location: NAS Patuxent River, MD
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Govt Field Mod Team:: Installation Name: MCS Upgrade EXCOMM Phase II (Land Based)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	4 / 1.660	1 / 1.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 3.207
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 1.660	1 / 1.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 3.207

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Out	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Footnotes:

(8) MCS Upgrade EXCOMM Phase II (Ship Based): Due to ship(s) availability, FY18 production kits procurements were delayed and rephased through the FYDP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 3 / MQ-8 Payloads (OSIP 010-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	19.198	15.024	11.230	7.295	0.000	7.295	16.000	11.222	9.649	13.517	18.594	121.729
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	19.198	15.024	11.230	7.295	0.000	7.295	16.000	11.222	9.649	13.517	18.594	121.729
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**19.198**	**15.024**	**11.230**	**7.295**	**0.000**	**7.295**	**16.000**	**11.222**	**9.649**	**13.517**	**18.594**	**121.729**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MQ-8 Payloads Operational, Safety and Improvement Program (OSIP) addresses modifications to the MQ-8 Fire Scout System which adds new payloads, such as Radar and Link-16, and adds capability and reliability improvements to existing payloads.

The Radar payload includes the integration of a competitively-selected non-developmental item Radar with the air vehicle, Minotaur data correlation and resource management software and hardware, and Mission Control Station (MCS). This capability will improve the MQ-8 Fire Scout's performance in support of Surface Warfare (SUW) Mission Module for the Littoral Combat Ship (LCS) and urgent operational requirements. Once the hardware and software modifications to the air vehicle and MCS are complete, the MQ-8 Fire Scout Mission System Trainer, Avionics Technicians' Trainer, and Aircraft Mechanics' Trainer will be upgraded to include this capability. Delivered MQ-8C air vehicles will be retrofitted for the upgrades via kits.

Link-16 payload includes the integration of a Link-16 terminal hardware with the air vehicle, integration of a Link-16 processor hardware with the air vehicle, modification of the Mission Processor Unit (MPU) that hosts Minotaur on the air vehicle, and modification of the Mission Control Station (MCS). Link-16 Line of Sight (LOS) capability will disseminate sensor track data to other Link-16 participants contributing to the Common Operational Picture and increasing situational awareness. Additionally, the Link-16 In-Flight Target Update (IFTU) capability will allow for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T). Minotaur software will be used to correlate sensor data and manage the Link-16 network. Non-Recurring Engineering (NRE) for initial Link-16 integration will commence in FY20 for the Link-16 hardware and associated software modification to the MQ-8C air vehicle and MCS. Delivered MQ-8C air vehicles will be retrofitted for the Link-16 upgrades via kits.

Future integration of payloads include Mine Countermeasures (MCM) mission module on LCS and the Data Mission Payload (DMP). Future payload integration efforts will be considered when integrating current efforts.

DEVELOPMENT STATUS AND MAJOR DEVELOPMENT MILESTONES:
Payload Milestones: A maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. Completion of development and integration is anticipated in FY20 with a Follow-on Test and Evaluation
(FOT&E) period starting in 1Q FY21, followed by an Initial Operational Capability (IOC) in 4Q FY21.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 3 / MQ-8 Payloads (OSIP 010-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** Readiness/Performance	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: MQ-8 Payloads (OSIP 010-17)												
A Kits												
Recurring												
1.1.1) MQ-8C Radar A Kits - NonOrganic [9]	8 / 6.505	4 / 3.935	4 / 3.935	2 / 2.026	- / -	2 / 2.026	4 / 4.174	3 / 3.225	2 / 2.214	3 / 3.421	1 / 1.175	31 / 30.610
1.1.2) MQ-8C LINK-16 - Organic	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.130	5 / 0.335	5 / 0.345	4 / 0.284	21 / 1.575	37 / 2.669
Subtotal: Recurring	*- / 6.505*	*- / 3.935*	*- / 3.935*	*- / 2.026*	*- / -*	*- / 2.026*	*- / 4.304*	*- / 3.560*	*- / 2.559*	*- / 3.705*	*- / 2.750*	*- / 33.279*
B Kits												
Recurring												
2.1.1) MQ-8C Radar Upgrade II B Kits - Organic [10]	4 / 4.637	4 / 4.885	4 / 5.257	2 / 2.700	- / -	2 / 2.700	6 / 8.344	2 / 2.865	3 / 4.426	5 / 7.598	5 / 7.869	35 / 48.581
2.1.2) MQ-8C Link-16 - Organic	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.340	5 / 0.876	5 / 0.902	4 / 0.744	21 / 3.893	37 / 6.755
Subtotal: Recurring	*- / 4.637*	*- / 4.885*	*- / 5.257*	*- / 2.700*	*- / -*	*- / 2.700*	*- / 8.684*	*- / 3.741*	*- / 5.328*	*- / 8.342*	*- / 11.762*	*- / 55.336*
Non-Recurring												
2.2.1) B-Kits Non-recurring Engineering - Organic	- / 4.735	- / 3.410	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.145
Subtotal: Non-Recurring	*- / 4.735*	*- / 3.410*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.145*
Subtotal: MQ-8 Payloads (OSIP 010-17)	*12 / 15.877*	*8 / 12.230*	*8 / 9.192*	*4 / 4.726*	*- / -*	*4 / 4.726*	*14 / 12.988*	*15 / 7.301*	*15 / 7.887*	*16 / 12.047*	*48 / 14.512*	*140 / 96.760*
Subtotal: Procurement, All Modification Items	*- / 15.877*	*- / 12.230*	*- / 9.192*	*- / 4.726*	*- / -*	*- / 4.726*	*- / 12.988*	*- / 7.301*	*- / 7.887*	*- / 12.047*	*- / 14.512*	*- / 96.760*
Support *(All Modification Items)*												
3.1) ILS	- / 1.370	- / 0.080	- / 0.190	- / 0.133	- / -	- / 0.133	- / 0.372	- / 0.304	- / 0.101	- / 0.132	- / 0.500	- / 3.182
3.2) Data	- / 0.635	- / -	- / 0.145	- / 0.365	- / -	- / 0.365	- / -	- / -	- / -	- / -	- / 1.500	- / 2.645
3.3) Training Equip. [11]	- / 0.800	- / 0.450	- / 0.600	- / -	- / -	- / -	- / 0.350	- / 1.712	- / 0.408	- / -	- / -	- / 4.320
3.4) Support Equip.	- / -	- / -	- / -	- / 0.413	- / -	- / 0.413	- / 0.273	- / 0.227	- / -	- / -	- / -	- / 0.913
3.5) Other Support	- / 0.516	- / 0.684	- / 0.469	- / 0.478	- / -	- / 0.478	- / 0.247	- / 0.498	- / 0.368	- / 0.748	- / 0.902	- / 4.910
Subtotal: Support	*- / 3.321*	*- / 1.214*	*- / 1.404*	*- / 1.389*	*- / -*	*- / 1.389*	*- / 1.242*	*- / 2.741*	*- / 0.877*	*- / 0.880*	*- / 2.902*	*- / 15.970*
Installation												
Modification Item 1 of 1: MQ-8 Payloads (OSIP 010-17)	- / 0.000	- / 1.580	- / 0.634	- / 1.180	- / 0.000	- / 1.180	- / 1.770	- / 1.180	- / 0.885	- / 0.590	- / 1.180	- / 8.999
Subtotal: Installation	*- / 0.000*	*- / 1.580*	*- / 0.634*	*- / 1.180*	*- / -*	*- / 1.180*	*- / 1.770*	*- / 1.180*	*- / 0.885*	*- / 0.590*	*- / 1.180*	*- / 8.999*
Total												
Total Cost (Procurement + Support + Installation)	**19.198**	**15.024**	**11.230**	**7.295**	**0.000**	**7.295**	**16.000**	**11.222**	**9.649**	**13.517**	**18.594**	**121.729**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 3 / MQ-8 Payloads (OSIP 010-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: MQ-8 Payloads (OSIP 010-17)

Manufacturer Information

Manufacturer Name: Leonardo MW - Radar (MQ-8C)	Manufacturer Location: Edinburgh, UK
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025	

Installation Information

Method of Implementation: FY19 NGC/FY20 and out: Depot (FRC):: Installation Name: MQ-8C Radar A Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	4 / 1.580	4 / 0.634	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 2.214
FY 2019	- / -	- / -	- / -	4 / 1.180	0 / 0.000	4 / 1.180	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.180
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.180	- / -	- / -	- / -	0 / 0.000	4 / 1.180
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.590	- / -	- / -	- / -	0 / 0.000	2 / 0.590
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.180	- / -	- / -	0 / 0.000	4 / 1.180
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.885	- / -	0 / 0.000	3 / 0.885
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.590	0 / 0.000	2 / 0.590
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.885	3 / 0.885
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.295	1 / 0.295
Total	- / -	4 / 1.580	4 / 0.634	4 / 1.180	0 / 0.000	4 / 1.180	6 / 1.770	4 / 1.180	3 / 0.885	2 / 0.590	4 / 1.180	31 / 8.999

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	1	3	-	4	-	-	-	4	-	-	-	6	-	-	-	4	-	-	-	3	-	-	-	2	-	-	4	31
Out	-	-	-	-	-	1	3	-	4	-	-	-	4	-	-	-	6	-	-	-	4	-	-	-	3	-	-	-	2	4	31

Method of Implementation (Organic): MQ-8C LINK-16	**Installation Quantity:** 37
Method of Implementation (Organic): MQ-8C Radar Upgrade II B Kits	**Installation Quantity:** 35

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0588 / MQ-8 Series	**Modification Number / Title:** 3 / MQ-8 Payloads (OSIP 010-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: MQ-8 Payloads (OSIP 010-17)		
Installation Information		
Method of Implementation (Organic): MQ-8C Link-16	**Installation Quantity:** 37	

Footnotes:

(9) MQ-8C Radar A Kits: Radar A-Kit and B-kit procurements for FY21-FY24 and Radar installations for FY22-FY25 were reduced due to the offset for MQ-8B sundown. The offset significantly slows Radar installations and delivery of Radar installed MQ-8Cs to the Fleet and delays completion of Radar modifications on MQ-8C by over two years. The six (6) Radar installations in FY22 include installation of A-kits procured in both FY20 Four (4) and FY21 Two (2). This is required because the prior year A-kit procurement in FY17 could not be installed until FY19 due to delays encountered in system level qualification of the A kit (specifically the Mission Processor Unit). Installs of FY18 and FY19 A kits also are planned to be installed with the same one year delay due the schedule of the Prime A kit procurement contract (in negotiation). FY22 is the first opportunity to correct the installation delay and catch-up to the procurement schedule.

(10) MQ-8C Radar Upgrade II B Kits: Procurements for FY20, FY21, and FY22 are covered by a current, already negotiated IDIQ contract. This contract includes negotiated IDIQ pricing and may incur additional costs depending on the exchange rate at the time of exercising the order.

(11) Training Equip.: Increase in funding from FY22 to FY23 supports the initial procurement support of Link-16 training equipment.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 212

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,599.738	197.838	325.367	334.405	0.000	334.405	377.405	562.100	582.833	498.498	3,695.658	8,173.842
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,599.738	197.838	325.367	334.405	0.000	334.405	377.405	562.100	582.833	498.498	3,695.658	8,173.842
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,599.738**	**197.838**	**325.367**	**334.405**	**0.000**	**334.405**	**377.405**	**562.100**	**582.833**	**498.498**	**3,695.658**	**8,173.842**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the Navy's V-22 aircraft. The V-22 is a tilt rotor, Vertical/Short Takeoff and Landing (V/STOL) aircraft for Joint Service application. The Navy acts as the lead service with support from the United States Air Force (USAF) co-located in the V-22 Program Office. The V-22 Program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the United States Marine Corps, the Carrier Onboard Delivery needs of the Navy, and the special operations needs of the USAF and United States Special Operations Command (USSOCOM). The MV-22 variant is replacing the CH-46E in the Marine Corps and the CMV-22 will replace the C-2A in the Navy. The CV-22 variant replaced the MH-53J, and is providing a new capability and augments the MC-130 in the USAF/USSOCOM inventory for special operations infiltration, exfiltration, and resupply missions. The V-22 is capable of flying over 2,100 nautical miles with a single refueling, giving the Services the advantage of a V/STOL aircraft able to rapidly self-deploy to any location in the world. This line item funds modifications in support of 318 MV-22's and 15 CMV's that will be delivered through FY 2021. The total planned modifications throughout the Future Year's defense program "FYDP" for MV-22 is 333, and 44 CMV-22.

The overall goal of the modifications budgeted in FY 2021 is to maintain commonality, implement structural safety and reliability improvements, and improve capability. These modifications will also improve readiness, increase aircraft availability, and decrease operating costs. FY 2021 focus will be on reducing flight hour costs, and improving Time On Wing, as reflected in the Readiness Operational Safety Improvement Program.

FY 2021 budget request continues the Nacelle Improvement effort which will improve and upgrade the Nacelle and bring it to a common configuration. This effort addresses reliability and maintainability degraders, improving Mission Capable rates by 6 to 8 percent and reducing direct maintenance man-hours. FY 2021 budget request also prioritizes the Common Configuration -Readiness and Modernization (CC-RAM) effort, as it will return 25 to 30 additional Ready Basic Aircraft to the flight line for tasking and improve Mission Capable rates approximately 15 percent. Nacelle Improvements and CC-RAM are the Marine Corps top two priorities for V-22 Readiness.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 212

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 1,177.584	- / 8.783	- / 7.554	- / 6.757	- / 0.000	- / 6.757
P-3a	2 / MV-22 Readiness (OSIP 028-12) (Reliability, Cost-per-flight hour, Reduction in Total Ownership cost)				- / 220.441	- / 55.758	- / 90.450	- / 91.863	- / 0.000	- / 91.863
P-3a	3 / Common Configuration (011-17) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 187.507	- / 67.429	- / 161.858	- / 168.298	- / 0.000	- / 168.298
P-3a	4 / Aerial Refueling (008-18) (Performance, Capability)				- / 14.206	- / 1.076	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / Avionics Improvements (009-19) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 0.000	- / 45.792	- / 60.149	- / 45.876	- / 0.000	- / 45.876
P-3a	6 / CMV Improvements 005-20 (Safety, Improved Mission Capability)				- / 0.000	- / 0.000	- / 5.356	- / 21.611	- / 0.000	- / 21.611
P-3a	7 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 19.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 1,599.738**	**- / 197.838**	**- / 325.367**	**- / 334.405**	**- / 0.000**	**- / 334.405**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 6.998	- / 7.585	- / 7.305	- / 4.810	- / 0.244	- / 1,227.620
P-3a	2 / MV-22 Readiness (OSIP 028-12) (Reliability, Cost-per-flight hour, Reduction in Total Ownership cost)				- / 131.466	- / 166.621	- / 123.494	- / 126.330	- / 1,586.991	- / 2,593.414
P-3a	3 / Common Configuration (011-17) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 177.523	- / 309.314	- / 349.322	- / 281.440	- / 1,279.985	- / 2,982.676
P-3a	4 / Aerial Refueling (008-18) (Performance, Capability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 15.282
P-3a	5 / Avionics Improvements (009-19) (Safety, Reliability, Increased Service Life, Improved Mission Capability)				- / 48.016	- / 66.823	- / 73.309	- / 60.603	- / 699.847	- / 1,100.415
P-3a	6 / CMV Improvements 005-20 (Safety, Improved Mission Capability)				- / 13.402	- / 11.757	- / 29.403	- / 25.315	- / 128.591	- / 235.435
P-3a	7 / FY 2020 Enacted Rescissions (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 19.000
P-40	**Total Gross/Weapon System Cost**				**- / 377.405**	**- / 562.100**	**- / 582.833**	**- / 498.498**	**- / 3,695.658**	**- / 8,173.842**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2020 enacted includes congressional rescissions of $19 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

OSIP 22-01 MV-22 Correction of Deficiencies provides near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. FY21 will continue upgrades to the Cockpit Voice Recorder and the Iridium Antenna as well as installation of previous kit procurements.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 212		

OSIP 28-12 V-22 Readiness supports the correction of readiness degraders impacting V-22 cost per flight hour, Reliability, Maintainability and Availability (RM&A), obsolescence, and reduction of life-cycle costs. In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. FY21 funds are required to address multiple upgrades including Nacelle Improvements, which USMC has identified as a top readiness degrader. The reliability and readiness initiatives included in the proposed OSIP are projected to have a significant positive impact to the V-22 Aircraft platform.

OSIP 011-17 Common Configuration- Readiness and Modernization (CC-RAM) is the Marine Corps' top priority for MV-22 readiness. Modification of 129 Block B and 124 Block C MV-22B aircraft to a common production configuration in support of improved readiness, achieving common configuration (Deputy Commandant for Aviation Goal), and reducing Life Cycle Cost. The reduction of future Operating and Support costs is achieved by the reduction of National Stock Numbers in the supply system, reduction of training and maintenance tasks in the Intelligent Electronic Technical Manuals, and reduction of Non-Recurring Engineering retrofit costs due to multiple aircraft configurations on future engineering changes. FY21 funds are required for CC-RAM kits and associated support.

OSIP 008-18 was established for the MV-22 Aerial Refueling System (VARS) Capability. The VARS is an initiative which would deliver the capability to aerial refuel F/A-18, F-35, AV-8B, V-22 and CH-53E aircraft from the V-22. Funding for this OSIP has been removed from this budget in FY 2020 through the Future Years Defense Plan (FYDP) due to Marine Corps reprioritization.

OSIP 009-19 Avionic Improvements incorporates changes to V-22 avionics systems. Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter Communication System modification, upgraded Mission Computer, updated Data Transfer Module, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrade, and Avionics Interface Units upgrades. Improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), and readiness degrader items will yield a more interoperable and survivable V-22 force to sustain warfighter capability in support of worldwide operations. FY21 will continue upgrades to Advanced Interoperability Multifunction Display, Traffic Collision Avoidance System and Integrated Aircraft Survivability Equipment.

OSIP 005-20 is for the modification of delivered CMV-22s for critical interoperability capabilities including Link-16 for Carrier Strike Group/Expeditionary Strike Group interoperability and secure MILSAT connectivity through integration of Mobile Users Objective System (MUOS). FY21 funds are required to begin the upgrades to the Link 16 /Iridium Improved Intercommunication System (ICS). Also any required modifications for compliance with FAR 121-345/347 for Beyond Line of Sight (BLOS) Air Traffic Control, Required Navigation Performance/Area Navigation capabilities, and Terrain Awareness and Warning System.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,177.584	8.783	7.554	6.757	0.000	6.757	6.998	7.585	7.305	4.810	0.244	1,227.620
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,177.584	8.783	7.554	6.757	0.000	6.757	6.998	7.585	7.305	4.810	0.244	1,227.620
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,177.584**	**8.783**	**7.554**	**6.757**	**0.000**	**6.757**	**6.998**	**7.585**	**7.305**	**4.810**	**0.244**	**1,227.620**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

MV-22 Correction of Deficiencies provides near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are being accomplished by field retrofit. In order to meet emerging deficiencies the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP) and implement those changes to sustain and improve MV-22 system operations. ECPs are implemented to coincide with resources and aircraft availability. These changes provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the MV-22 platform. This modification program may be required to provide timely remedial action for any aircraft system, component or structure. Funds are used to incorporate ECPs to correct emerging deficiencies of the airframe and integrated systems of the aircraft. AVIONICS: Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter Communication System modification, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrade, and Avionics Interface Units upgrades. Software modifications are controlled by the functional requirements document (FRD) and introduced to the fleet for release every two years, or as needed based on emerging fleet requirements. Modifications to the various avionics software configuration items being incorporated into the fleet aircraft also require updates to the Collaborative Automated Maintenance Environment Optimized (CAMEO), Integrated Electronic Technical Manuals (IETMs); and mission planning. Specifically for the mission planning system, the V-22 Unique Planning Component (UPC) for the Joint Mission Planning System (JMPS) must implement frequent software updates in conjunction with production aircraft performance and software changes. Changes to the JMPS UPC in accordance with the FRD must include mission planning specific software regression tests to ensure proper operation and integration with other aircraft UPCs within JMPS. POWER TRANSMISSION AND CONTROL: Changes to the V-22 Power Transmission and Control System will improve reliability and maintainability. COCKPIT: Changes to the V-22 cockpit will improve crew safety, mission suitability and overall reliability. STRUCTURAL: Structural changes to the V-22 will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. RELIABILITY & MAINTAINABILITY FIXES: Includes Corrective Action Plans to make the aircraft compliant with Operation Requirements Document requirements. Communication, Navigation & Surveillance/Air Traffic Management (CNS/ATM) Modification to the V-22 will facilitate Federal Aviation Administration and International Civil Aviation Organization standards compliance in support of Next Gen initiatives, such as Automatic Dependent Surveillance - Broadcast, Required Navigation Performance/Area Navigation, Identification Friend or Foe, Modernization and Global Positioning System (GPS) Modernization in relation to Correction of Deficiencies ECPs.
MTX Kits: Meyers Mini Transmitters are incorporated as friendly force tracking and situational awareness devices.
Enhanced Crash Survivable Memory Unit (Cockpit Voice Recorder): To protect aircraft flight information and facilitate post-mishap investigations, a crash-survivable recorder capable of recording a/c parametric data and aircrew voice communications.
Iridium Antenna: Iridium Antenna is connected to the Troop Commander Station panel allowing ready access to the antenna by systems/equipment (such as brought on to the MV-22 for mission specific operations. Enables ground forces to have access to Distributed Tactical Communication Systems (DTCS) while aboard MV-22s.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

All aircraft except one have been upgraded to a Block B configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capability	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) MTX Kits - Organic(*)	55 / 0.485	4 / 0.039	2 / 0.025	2 / 0.025	- / -	2 / 0.025	3 / 0.039	6 / 0.080	3 / 0.041	4 / 0.055	- / -	79 / 0.789
1.1.2) Enhanced Crash Survivable Memory Unit (Cockpit Voice Recorder) - NonOrganic *Installation 1 of 2*	99 / 2.727	- / -	- / -	24 / 1.440	- / -	24 / 1.440	48 / 2.928	48 / 2.978	35 / 2.208	24 / 1.540	- / -	278 / 13.821
1.1.3) Iridium Antenna - NonOrganic *Installation 2 of 2*	99 / 0.202	48 / 0.108	48 / 0.103	48 / 0.105	- / -	48 / 0.105	48 / 0.107	42 / 0.095	- / -	- / -	- / -	333 / 0.720
1.1.4) Archived ECPs - Organic(*)	6,392 / 595.546	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6,392 / 595.546
1.2.1) Installation Kits N/R - Organic(*)	- / 162.555	- / 1.756	- / 0.230	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 164.541
2.1.1) Archived B Kits - Organic(*)	234 / 63.820	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	234 / 63.820
2.2.1) Installation Equipment N/R - Organic(*)	- / 0.577	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.577
Subtotal: Procurement	*- / 825.912*	*- / 1.903*	*- / 0.358*	*- / 1.570*	*- / -*	*- / 1.570*	*- / 3.074*	*- / 3.153*	*- / 2.249*	*- / 1.595*	*- / 0.000*	*- / 839.814*
Support												
3.2) Software Modifications	- / 10.302	- / 0.012	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.314
3.3) Data	- / 1.384	- / 0.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.558
3.4) Training Equipment	7 / 237.997	- / 0.848	- / 2.268	- / 2.007	- / -	- / 2.007	- / 1.986	- / 2.033	- / 2.533	- / 1.549	- / -	7 / 251.221
3.5) Support Equipment	- / 11.301	- / 0.722	- / 1.201	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.224
3.6) ILS	- / 7.224	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.224
3.7) Other Support	- / 66.684	- / 4.928	- / 3.249	- / 2.774	- / -	- / 2.774	- / 1.298	- / 1.516	- / 1.679	- / 1.316	- / -	- / 83.444
3.8) Interim Contractor Support	- / 10.002	- / -	- / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.082
Subtotal: Support	*- / 344.894*	*- / 6.684*	*- / 6.798*	*- / 4.781*	*- / -*	*- / 4.781*	*- / 3.284*	*- / 3.549*	*- / 4.212*	*- / 2.865*	*- / 0.000*	*- / 377.067*
Installation												
Installation 1 of 2: Enhanced Crash Survivable Memory Unit (Cockpit Voice Recorder)	- / 6.370	- / -	- / -	- / -	- / -	- / -	- / 0.228	- / 0.464	- / 0.472	- / 0.350	- / 0.244	- / 8.128
Installation 2 of 2: Iridium Antenna	- / 0.408	- / 0.196	- / 0.398	- / 0.406	- / 0.000	- / 0.406	- / 0.412	- / 0.419	- / 0.372	- / -	- / 0.000	- / 2.611
Subtotal: Installation	*- / 6.778*	*- / 0.196*	*- / 0.398*	*- / 0.406*	*- / -*	*- / 0.406*	*- / 0.640*	*- / 0.883*	*- / 0.844*	*- / 0.350*	*- / 0.244*	*- / 10.739*
Total												
Total Cost (Procurement + Support + Installation)	**1,177.584**	**8.783**	**7.554**	**6.757**	**0.000**	**6.757**	**6.998**	**7.585**	**7.305**	**4.810**	**0.244**	**1,227.620**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: Enhanced Crash Survivable Memory Unit (Cockpit Voice Recorder)

Manufacturer Information

Manufacturer Name: Bell Boeing - Enhanced Crash Survivable Memory Unit

Manufacturer Location: Amorillo, TX

Administrative Leadtime *(in Months)*: 12

Production Leadtime *(in Months)*: 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026

Installation Information

Method of Implementation: Contractor Forced Retrofit of Components:: Installation Name: Enhanced Crash Survivable Memory Unit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	99 / 6.370	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	99 / 6.370
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.228	- / -	- / -	- / -	0 / 0.000	24 / 0.228
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.464	- / -	- / -	0 / 0.000	48 / 0.464
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.472	- / -	0 / 0.000	48 / 0.472
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.350	0 / 0.000	35 / 0.350
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.244	24 / 0.244
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	99 / 6.370	- / -	- / -	- / -	- / -	- / -	24 / 0.228	48 / 0.464	48 / 0.472	35 / 0.350	24 / 0.244	278 / 8.128

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	99	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	16	16	16	-	16	16	16	-	12	12	11	24	278
Out	99	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	16	16	16	-	16	16	16	-	12	12	11	24	278

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 1 / MV-22 Correction of Defiencies and Pre Block A Through C (OSIP 022-01)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: Iridium Antenna

Manufacturer Information

Manufacturer Name: FRC - Iridium Antenna

Manufacturer Location: FRC - Various

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Jan 2020	Nov 2020	Nov 2021	Nov 2022		
Delivery Dates	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023		

Installation Information

Method of Implementation: Contractor Field Modification:: Installation Name: Iridium Antenna

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	51 / 0.408	48 / 0.196	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	99 / 0.604
FY 2019	- / -	- / -	48 / 0.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	48 / 0.398
FY 2020	- / -	- / -	- / -	48 / 0.406	0 / 0.000	48 / 0.406	- / -	- / -	- / -	- / -	0 / 0.000	48 / 0.406
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.412	- / -	- / -	- / -	0 / 0.000	48 / 0.412
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.419	- / -	- / -	0 / 0.000	48 / 0.419
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	42 / 0.372	- / -	0 / 0.000	42 / 0.372
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	51 / 0.408	48 / 0.196	48 / 0.398	48 / 0.406	0 / 0.000	48 / 0.406	48 / 0.412	48 / 0.419	42 / 0.372	- / -	0 / 0.000	333 / 2.611

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	51	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	-	-	-	-	-	333
Out	51	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	-	-	-	-	-	333

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	220.441	55.758	90.450	91.863	0.000	91.863	131.466	166.621	123.494	126.330	1,586.991	2,593.414
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	220.441	55.758	90.450	91.863	0.000	91.863	131.466	166.621	123.494	126.330	1,586.991	2,593.414
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**220.441**	**55.758**	**90.450**	**91.863**	**0.000**	**91.863**	**131.466**	**166.621**	**123.494**	**126.330**	**1,586.991**	**2,593.414**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program (OSIP) 28-12 is established for the correction of readiness degraders impacting V-22 cost per flight hour, Reliability Maintainability and Availability (RM&A), obsolescence, and reduction of life-cycle costs. These modifications will be accomplished by field retrofit and implemented to coincide with resources and aircraft availability. In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals. The reliability and readiness initiatives included in the proposed OSIP are projected to have a significant positive impact to the V-22 Aircraft platform.

CURRENT/ACTIVE ECPs:
Funds are used to incorporate ECPs to improve readiness and availability of the aircraft.
Rudder Attachment Reliability Improvement is an upgrade to bearings associated with the rear rudder.
Nacelle Improvements: Kits that will improve and upgrade the Nacelle to bring it to a common configuration. Nacelle improvements is a top priority for improving MV-22 readiness. It addresses Nacelle reliability and maintainability degraders as recommended by the Osprey Independent Readiness Review. Nacelle Improvements will reduce wire harness counts, reduce wire interface assemblies, and improve structure and maintenance access ports. Overall, Nacelle Improvements will improve Mission Capable rates by 6 to 8 percent and reduce direct maintenance man-hours.
Drive Tube: This effort will redesign the drive tube which will eliminate an O level recurring inspection as it will decrease stresses at the lower end without affecting the interface with the mast.
V-22 Prop Rotor Gear Box (PRGB) Input Quill/Clutch Redesign: This effort will eliminate resident issues with Input Quill and clutch and to Purge Fleet of Thin Densed Chrome.
Aircraft Bus Tie Circuit Reliability Improvement to provide the ability to power all buses with a battery start of the APU in the presence of a failed Regulated Converter.
Upper and Lower Rod Ends Redesign to prevent excessive wear from normal proprotor operation.
PRGB Atmospheric Protection and Mast Seal Improvement: This initiative reduces corrosion related removals due to water intrusion.
Drive Link/Hub Spring Change: The drive link and hub spring are critical components of the Proprotor Hub Assembly. This effort will reduce the the current safety risk and improve readiness of aircraft.
Engine Thermo Couple Wire Harness: This ECP is a safety issue. This purpose of this change is to replace the copper wire with thermocouple wire (Chromel-Alumel material) and eliminate a source of Measured Gas Temperature calculation errors.
Aft Sponson Fuel Tank: This improvement will increase combat range and endurance of the V-22 and enable accomplishment of the Rapid Ground Refueling (RGR) mission with a single aircraft, greatly enhancing support
to the Marine Air Ground Task Force during expeditionary operations.
Aft Sponson Fuel Tank & Main Landing Gear Bay Fire Suppression System (FSS): This improvement will increase combat range and endurance of the V-22 and enable accomplishment of the RGR mission with a single aircraft, greatly enhancing support to the Marine Air Ground Task Force during expeditionary operations. The kit will also increase FSS protection in the Aft Sponson Bay and Main Landing Gear Bays of the standard V-22.
V-22 Prop-Rotor Blade Improvements: Incorporate Readiness upgrades to improve Prop Rotor Blades such as an erosion protection system.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Shaft Driven Compressor (SDC): Modify the SDC gear train to eliminate high cycle fatigue that leads to early failure of SDC impeller and incorporate improvements to gears and seals.
Conversion Area Harness: Increases reliability of the Conversion Area Harness by upgrading the harness, wire type, ribbons and connectors for MV-22.
Manual Override Switches for Environmental Bus Contractor: Incorporates a manual override switch so that in the event of a dual-VFG failure the aircrew can ensure the continued ability to power both ENV busses and all fuel pumps with the CFG, and make certain all fuel on the aircraft can be utilized during a dual-VFG failure.
Ice Protection System (IPS): Strengthens component parts which have been prone to stress failures or fraying, Central De-ice Device and Nacelle Ice Protection Control Unit / Master Ice Protection Controller.
Troop Seat Retrofit/Pin: Troop Seat retrofit/improvement would upgrade the troop seat from a -507 to a -509 configuration.
O2N2 Sieve Bed Kits: A correction of the O2N2 Concentrator sieve beds is required to address the loss of sieve material pre-load and the resulting loss of function and potential sieve material escapements into the OBOGS or OBIGGS distribution system, a potential health hazard. This change incorporates a new spring retention system to prevent the sieve loss and is changing the overhaul procedure for the sieve beds to prevent reuse of sieve material.

FUTURE ECPs:
APU K8/K9 Improvement: Improve power distribution contactors K8 and K9 that provide power during Auxiliary Power Unit (APU) starts. This change will provide appropriately-rated contactors to prevent damage to the APU, other power distribution components, and the aircraft.
Electrical System Upgrade and reliability improvement effort. Increased V-22 electrical system reliability and capacity is required to accommodate demands on electrical power system as additional systems are added to the V-22.
Electrical System Re-Design Generator Control Unit (GCU) Relocation: The Constant Frequency Generator (CFG) GCU Redesign effort will increase reliability and sustainability by modernizing the GCU, eliminating persistent fluid intrusion, and introducing an I-level maintenance concept.
Swashplate Actuator: Will incorporate engineering for several reliability, safety and life improvements to the current Swashplate Servoactuator.
Gimbal Ring Joint will increase mean time between failures of the swashplate and hub assembly (which includes the gimbal assembly).
Engine Air Particle Separator (EAPS) 2.0: Provides a suitable Improved Inlet Solution (IIS) to increase particle filtration efficiency of the engine air induction subsystem to improve platform readiness and engine TOW when operating in austere environments laden with sand and dust.
Coanda Valve Reliability Improvement: Improves reliability of the Coanda Valve and associated wiring harness. Intent is to reduce "false positive" fault indications while addressing a number of priority failure modes. Other component improvement objectives include improved maintenance footprint, compliance with IUID requirements, and improved harness reparability.

Migrating to OSIP 009-09 in FY 2020
Mission Computer Obsolescence Initiative (MCOI) Retrofit for BLK C: MCOI replaces several components and allows planned capabilities to operate without memory processing power or memory storage. Has a positive Return on Investment compared too many other costs that would be absorbed (avoidance).

Funding in OSIP 028-12 increases in FY21 due to initial kit procurements for IPS, Shaft Driven Compressor, and PRGB Input Quill/Clutch Redesign, and initial installations for APU K8/K9 and Nacelle Improvements.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Reliability, Cost-per-flight hour, Reduction in Total Ownership cost	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Aircraft Bus Tie Circuit Reliability Improvement - NonOrganic *Installation 1 of 10*	151 / 0.624	- / -	60 / 0.150	60 / 0.152	- / -	60 / 0.152	14 / 0.036	- / -	- / -	- / -	- / -	285 / 0.962
1.1.2) APU K8/K9 Improvement - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.702	60 / 0.714	60 / 0.726	60 / 0.738	93 / 1.164	333 / 4.044
1.1.3) Conversion Area Harness - Organic(*) (1)	- / -	1 / 0.128	9 / 1.172	13 / 1.721	- / -	13 / 1.721	16 / 2.154	18 / 2.465	14 / 1.950	16 / 2.266	228 / 32.839	315 / 44.695
1.1.4) Drive Link/Prop Rotor Hub Spring Change - NonOrganic *Installation 2 of 10*	- / -	60 / 13.356	60 / 13.583	30 / 6.907	- / -	30 / 6.907	30 / 7.024	60 / 14.287	15 / 3.633	15 / 3.698	26 / 6.519	296 / 69.007
1.1.5) Drive Tube - NonOrganic (2) *Installation 3 of 10*	60 / 2.615	60 / 2.659	60 / 2.705	30 / 1.375	- / -	30 / 1.375	30 / 1.399	60 / 2.845	11 / 0.531	- / -	- / -	311 / 14.129
1.1.6) Engine Thermo Couple Wire Harness - NonOrganic *Installation 4 of 10*	89 / 1.376	48 / 0.767	48 / 0.780	48 / 0.793	- / -	48 / 0.793	48 / 0.807	- / -	- / -	- / -	- / -	281 / 4.523
1.1.7) Gimbal Ring Joint - NonOrganic *Installation 5 of 10*	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.816	12 / 0.996	12 / 1.013	12 / 1.030	235 / 20.514	281 / 24.369
1.1.8) Ice Protection System (IPS) - Organic(*) (3)	- / -	- / -	- / -	48 / 0.250	- / -	48 / 0.250	48 / 0.254	48 / 0.259	48 / 0.263	48 / 0.267	41 / 0.232	281 / 1.525
1.1.9) Manual Override Switches for Environmental Bus - NonOrganic *Installation 6 of 10*	- / -	50 / 0.062	60 / 0.076	60 / 0.077	- / -	60 / 0.077	14 / 0.018	- / -	- / -	- / -	- / -	184 / 0.233
1.1.10) Rudder Attachment Reliability Improvement - NonOrganic *Installation 7 of 10*	246 / 0.558	13 / 0.048	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	259 / 0.606
1.1.11) Shaft Driven Compressor - NonOrganic (4) *Installation 8 of 10*	- / -	- / -	- / -	86 / 2.580	- / -	86 / 2.580	86 / 2.624	86 / 2.668	75 / 2.367	- / -	- / -	333 / 10.239
1.1.12) Upper and Lower Rod Ends - Organic(*)	- / -	- / -	64 / 5.757	24 / 2.195	- / -	24 / 2.195	24 / 2.233	54 / 5.109	12 / 1.155	24 / 2.349	121 / 12.042	323 / 30.840
1.1.13) V-22 PRGB Input Quill/Clutch Redesign - Organic(*) (5)	- / -	- / -	- / -	30 / 1.500	- / -	30 / 1.500	30 / 1.526	30 / 1.551	60 / 3.156	30 / 1.605	153 / 8.323	333 / 17.661
1.1.14) Aft Sponson & MLGB FSS - NonOrganic *Installation 9 of 10*	48 / 5.500	24 / 2.938	24 / 2.988	24 / 3.039	- / -	24 / 3.039	12 / 1.545	24 / 3.143	14 / 1.865	- / -	- / -	170 / 21.018
1.1.15) CFG GCU Redesign (UTAS) - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	52 / 2.189	64 / 2.740	137 / 5.966	80 / 3.542	- / -	333 / 14.437
1.1.16) Nacelle Improvements - Organic(*) (6)	- / -	- / -	6 / 38.082	9 / 50.845	- / -	9 / 50.845	16 / 91.928	18 / 105.177	14 / 83.195	16 / 96.696	232 / 1,425.929	311 / 1,891.852
1.1.17) O2N2 Sieve Bed Kits - Organic(*)	62 / 0.779	62 / 0.779	62 / 0.794	66 / 0.860	- / -	66 / 0.860	56 / 0.742	- / -	- / -	- / -	- / -	308 / 3.954
1.1.18) Troop Seat Pin - Organic(*)	- / -	- / -	85 / 0.468	98 / 0.549	- / -	98 / 0.549	102 / 0.581	31 / 0.180	- / -	- / -	- / -	316 / 1.778
1.1.19) Coanda Valve Reliability Improvement - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.228	255 / 7.080	- / -	- / -	- / -	300 / 8.308
1.1.20) MCOI Retrofit BLK C - NonOrganic *Installation 10 of 10*	47 / 8.369	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 8.369
1.1.21) Archived ECPs - Organic(*)	3,631 / 100.726	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3,631 / 100.726

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Reliability, Cost-per-flight hour, Reduction in Total Ownership cost	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
1.2.1) Installation Kits N/R - Organic(*)	- / 47.114	- / 8.960	- / 4.379	- / 1.320	- / -	- / 1.320	- / -	- / -	- / -	- / -	- / -	- / 61.773
Subtotal: Procurement	*- / 167.661*	*- / 29.697*	*- / 70.934*	*- / 74.163*	*- / -*	*- / 74.163*	*- / 117.806*	*- / 149.214*	*- / 105.820*	*- / 112.191*	*- / 1,507.562*	*- / 2,335.048*
Support												
3.3) Data	- / 0.807	- / 0.246	- / 0.072	- / 0.072	- / -	- / 0.072	- / 0.072	- / 0.072	- / 0.072	- / 0.072	- / 0.232	- / 1.717
3.4) Training Equipment	- / 0.505	- / 0.223	- / 0.227	- / 0.232	- / -	- / 0.232	- / 0.236	- / 0.241	- / 0.245	- / 0.245	- / 2.855	- / 5.009
3.5) Support Equipment	- / 2.264	- / 0.775	- / 0.789	- / 0.803	- / -	- / 0.803	- / 0.951	- / 1.767	- / 1.121	- / 0.604	- / 4.085	- / 13.159
3.6) ILS (7)	- / 1.019	- / 3.383	- / 0.160	- / 0.168	- / -	- / 0.168	- / 0.171	- / 0.175	- / 0.178	- / 0.182	- / 2.568	- / 8.004
3.7) Other Support	- / 43.510	- / 15.183	- / 12.376	- / 10.205	- / -	- / 10.205	- / 7.136	- / 10.596	- / 10.968	- / 10.910	- / 52.335	- / 173.219
Subtotal: Support	*- / 48.105*	*- / 19.810*	*- / 13.624*	*- / 11.480*	*- / -*	*- / 11.480*	*- / 8.566*	*- / 12.851*	*- / 12.584*	*- / 12.013*	*- / 62.075*	*- / 201.108*
Installation												
Installation 1 of 10: Aircraft Bus Tie Circuit Reliability Improvement	- / 0.731	- / 0.442	- / 0.000	- / 0.599	- / 0.000	- / 0.599	- / 0.610	- / 0.147	- / -	- / -	- / 0.000	- / 2.529
Installation 2 of 10: Drive Link/Prop Rotor Hub Spring Change	- / -	- / -	- / 2.284	- / 2.323	- / 0.000	- / 2.323	- / 1.181	- / 1.201	- / 2.443	- / 0.621	- / 3.622	- / 13.675
Installation 3 of 10: Drive Tube	- / -	- / 1.096	- / 1.115	- / 1.134	- / 0.000	- / 1.134	- / 0.577	- / 0.586	- / 1.193	- / 0.222	- / 0.000	- / 5.923
Installation 4 of 10: Engine Thermo Couple Wire Harness	- / 0.752	- / 1.200	- / 1.220	- / 1.241	- / 0.000	- / 1.241	- / 1.262	- / 1.284	- / -	- / -	- / 0.000	- / 6.959
Installation 5 of 10: Gimbal Ring Joint	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.504	- / 0.615	- / 0.626	- / 13.732	- / 15.477
Installation 6 of 10: Manual Override Switches for Environmental Bus	- / -	- / -	- / 0.526	- / 0.642	- / 0.000	- / 0.642	- / 0.653	- / 0.155	- / -	- / -	- / 0.000	- / 1.976
Installation 7 of 10: Rudder Attachment Reliability Improvement	- / 2.639	- / 0.881	- / 0.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.714
Installation 8 of 10: Shaft Driven Compressor	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.525	- / 0.534	- / 0.543	- / 0.482	- / 0.000	- / 2.084
Installation 9 of 10: Aft Sponson & MLGB FSS	- / 0.553	- / -	- / 0.553	- / 0.281	- / 0.000	- / 0.281	- / 0.286	- / 0.145	- / 0.296	- / 0.175	- / 0.000	- / 2.289
Installation 10 of 10: MCOI Retrofit BLK C	- / -	- / 2.632	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.632
Subtotal: Installation	*- / 4.675*	*- / 6.251*	*- / 5.892*	*- / 6.220*	*- / -*	*- / 6.220*	*- / 5.094*	*- / 4.556*	*- / 5.090*	*- / 2.126*	*- / 17.354*	*- / 57.258*
Total												
Total Cost (Procurement + Support + Installation)	**220.441**	**55.758**	**90.450**	**91.863**	**0.000**	**91.863**	**131.466**	**166.621**	**123.494**	**126.330**	**1,586.991**	**2,593.414**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 10: Aircraft Bus Tie Circuit Reliability Improvement

Manufacturer Information

Manufacturer Name: FRC Various - Aircraft Bus Tie Circuit Reliability Improvement	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jun 2020	Jun 2021	Jun 2022			
Delivery Dates		Oct 2020	Oct 2021	Oct 2022			

Installation Information

Method of Implementation: Contractor Field Modification:: Installation Name: Aircraft Bus Tie Circuit Reliability Improvement

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	95 / 0.731	45 / 0.442	11 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	151 / 1.173
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	60 / 0.599	0 / 0.000	60 / 0.599	- / -	- / -	- / -	- / -	0 / 0.000	60 / 0.599
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.610	- / -	- / -	- / -	0 / 0.000	60 / 0.610
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.147	- / -	- / -	0 / 0.000	14 / 0.147
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	95 / 0.731	45 / 0.442	11 / 0.000	60 / 0.599	0 / 0.000	60 / 0.599	60 / 0.610	14 / 0.147	- / -	- / -	0 / 0.000	285 / 2.529

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	95	12	12	11	10	11	-	-	-	15	15	15	15	15	15	15	15	4	4	3	3	-	-	-	-	-	-	-	-	-	285
Out	95	12	12	11	10	11	-	-	-	15	15	15	15	-	15	15	15	15	4	4	3	3	-	-	-	-	-	-	-	-	285

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 10: Drive Link/Prop Rotor Hub Spring Change

Manufacturer Information

Manufacturer Name: FRC Various - Drive Link/Prop Rotor Hub Spring Change	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Jan 2020	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Contractor Field Mod:: Installation Name: Drive Link/Prop Rotor Hub Spring Change

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	60 / 2.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 2.284
FY 2020	- / -	- / -	- / -	60 / 2.323	0 / 0.000	60 / 2.323	- / -	- / -	- / -	- / -	0 / 0.000	60 / 2.323
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.181	- / -	- / -	- / -	0 / 0.000	30 / 1.181
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.201	- / -	- / -	0 / 0.000	30 / 1.201
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 2.443	- / -	0 / 0.000	60 / 2.443
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.621	0 / 0.000	15 / 0.621
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 1.263	30 / 1.263
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 2.359	26 / 2.359
Total	- / -	- / -	60 / 2.284	60 / 2.323	0 / 0.000	60 / 2.323	30 / 1.181	30 / 1.201	60 / 2.443	15 / 0.621	56 / 3.622	311 / 13.675

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	15	15	15	15	15	15	15	15	8	8	7	7	8	8	7	7	15	15	15	15	15	-	-	-	56	311
Out	-	-	-	-	-	-	15	15	15	15	15	15	15	15	8	8	7	7	8	8	7	7	15	15	15	15	15	-	-	56	311

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 10: Drive Tube

Manufacturer Information

Manufacturer Name: FRC Various - Drive Tube	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Jan 2020	Nov 2020	Nov 2021	Nov 2022	Nov 2023	
Delivery Dates	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024	

Installation Information

Method of Implementation: Contractor Field Mod:: Installation Name: Drive Tube

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	60 / 1.096	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 1.096
FY 2019	- / -	- / -	60 / 1.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 1.115
FY 2020	- / -	- / -	- / -	60 / 1.134	0 / 0.000	60 / 1.134	- / -	- / -	- / -	- / -	0 / 0.000	60 / 1.134
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.577	- / -	- / -	- / -	0 / 0.000	30 / 0.577
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.586	- / -	- / -	0 / 0.000	30 / 0.586
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 1.193	- / -	0 / 0.000	60 / 1.193
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.222	0 / 0.000	11 / 0.222
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	60 / 1.096	60 / 1.115	60 / 1.134	0 / 0.000	60 / 1.134	30 / 0.577	30 / 0.586	60 / 1.193	11 / 0.222	0 / 0.000	311 / 5.923

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	15	15	15	15	15	15	15	15	15	15	15	15	8	8	7	7	8	8	7	7	15	15	15	15	11	-	-	-	-	311
Out	-	-	15	15	15	15	15	15	15	15	15	15	15	15	8	8	7	7	8	8	7	7	15	15	15	15	11	-	-	-	311

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 10: Engine Thermo Couple Wire Harness

Manufacturer Information

Manufacturer Name: FRC Various - Engine Thermo Couple Wire Harness	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022			
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022			

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: Engine Thermo Couple Wire Harness

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	41 / 0.752	48 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	89 / 1.952
FY 2019	- / -	- / -	48 / 1.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	48 / 1.220
FY 2020	- / -	- / -	- / -	48 / 1.241	0 / 0.000	48 / 1.241	- / -	- / -	- / -	- / -	0 / 0.000	48 / 1.241
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	48 / 1.262	- / -	- / -	- / -	0 / 0.000	48 / 1.262
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 1.284	- / -	- / -	0 / 0.000	48 / 1.284
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	41 / 0.752	48 / 1.200	48 / 1.220	48 / 1.241	0 / 0.000	48 / 1.241	48 / 1.262	48 / 1.284	- / -	- / -	0 / 0.000	281 / 6.959

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	41	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	-	-	-	-	-	-	-	-	-	281
Out	31	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	-	-	-	-	-	-	-	-	281

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 10: Gimbal Ring Joint

Manufacturer Information

Manufacturer Name: FRC Various -Gimbal Ring Joint	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates				Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Contractor Field Mod:: Installation Name: Gimbal Ring Joint

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.504	- / -	- / -	0 / 0.000	10 / 0.504
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.615	- / -	0 / 0.000	12 / 0.615
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.626	0 / 0.000	12 / 0.626
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.637	12 / 0.637
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	235 / 13.095	235 / 13.095
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.504	12 / 0.615	12 / 0.626	247 / 13.732	281 / 15.477

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	1	3	3	3	3	3	3	3	3	247	281
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	1	3	3	3	3	3	3	3	250	281

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 6 of 10: Manual Override Switches for Environmental Bus

Manufacturer Information

Manufacturer Name: FRC Various - Manual Override Switches for Environmental Bus	Manufacturer Location: FRC -Various
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022			
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022			

Installation Information

Method of Implementation: Contractor Field Modification:: Installation Name: Manual Override Switches for Environmental Bus

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	50 / 0.526	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	50 / 0.526
FY 2020	- / -	- / -	- / -	60 / 0.642	0 / 0.000	60 / 0.642	- / -	- / -	- / -	- / -	0 / 0.000	60 / 0.642
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	60 / 0.653	- / -	- / -	- / -	0 / 0.000	60 / 0.653
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.155	- / -	- / -	0 / 0.000	14 / 0.155
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	50 / 0.526	60 / 0.642	0 / 0.000	60 / 0.642	60 / 0.653	14 / 0.155	- / -	- / -	0 / 0.000	184 / 1.976

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	15	15	10	10	15	15	15	15	15	15	15	15	4	4	3	3	-	-	-	-	-	-	-	-	-	184
Out	-	-	-	-	-	-	15	15	10	10	15	15	15	15	15	15	15	15	4	4	3	3	-	-	-	-	-	-	-	-	184

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 7 of 10: Rudder Attachment Reliability Improvement

Manufacturer Information

Manufacturer Name: Rudder Attachment Reliability Improvement	Manufacturer Location: N/AN/A
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2018						
Delivery Dates	Nov 2019						

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: Rudder Attachment Reliability Improvement

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	186 / 2.639	60 / 0.881	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	246 / 3.520
FY 2019	- / -	- / -	13 / 0.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 0.194
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	186 / 2.639	60 / 0.881	13 / 0.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	259 / 3.714

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	186	15	15	15	15	7	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	259
Out	186	15	15	15	15	7	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	259

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 8 of 10: Shaft Driven Compressor

Manufacturer Information

Manufacturer Name: FRC Various - Shaft Driven Compressor	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	

Installation Information

Method of Implementation: Contractor Drive-In Mod:: Installation Name: Shaft Driven Compressor

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.525	- / -	- / -	- / -	0 / 0.000	86 / 0.525
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.534	- / -	- / -	0 / 0.000	86 / 0.534
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.543	- / -	0 / 0.000	86 / 0.543
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 0.482	0 / 0.000	75 / 0.482
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	86 / 0.525	86 / 0.534	86 / 0.543	75 / 0.482	0 / 0.000	333 / 2.084

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	22	22	21	21	22	22	21	21	22	22	21	21	19	19	19	18	-	333
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	22	22	21	21	22	22	21	21	22	22	21	21	19	19	19	18	-	333

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 9 of 10: Aft Sponson & MLGB FSS

Manufacturer Information

Manufacturer Name: FRC Various - AFT Sponson Fuel / MLGB / FSS	Manufacturer Location: FRC-Various
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Contractor Field Mod:: Installation Name: Aft Sponson & MLGB FSS

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	48 / 0.553	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	48 / 0.553
FY 2019	- / -	- / -	24 / 0.553	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.553
FY 2020	- / -	- / -	- / -	24 / 0.281	0 / 0.000	24 / 0.281	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.281
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.286	- / -	- / -	- / -	0 / 0.000	24 / 0.286
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.145	- / -	- / -	0 / 0.000	12 / 0.145
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.296	- / -	0 / 0.000	24 / 0.296
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.175	0 / 0.000	14 / 0.175
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	48 / 0.553	- / -	24 / 0.553	24 / 0.281	0 / 0.000	24 / 0.281	24 / 0.286	12 / 0.145	24 / 0.296	14 / 0.175	0 / 0.000	170 / 2.289

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	48	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	6	6	6	6	4	4	3	3	-	170
Out	48	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	6	3	3	3	3	6	6	6	6	4	4	3	3	170

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Installation 10 of 10: MCOI Retrofit BLK C		

Manufacturer Information

Manufacturer Name: Redstone Arsenal Army - MCOI Retrofit BLK C	Manufacturer Location: Redstone, AL
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: MCOI Retrofit BLK C

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	47 / 2.632	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	47 / 2.632
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	47 / 2.632	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	47 / 2.632

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	12	12	12	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
Out	-	12	12	12	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47

Footnotes:

(1) The funding for Nacelle Improvement and Conversion Area Harness Installations have been moved to the CC-RAM kit procurement line (1.1.1 under OSIP 011-17) because installations will be done in conjunction with the CC-RAM modification.

(2) Drive Tube was previously being installed with Drive Link/Prop Rotor Hub Spring. Due to changes in install strategy, this effort now has its own installation schedule.

(3) FY 2021 is the first year of Ice Protection System kit procurement. Ice Protection System kits will be organically installed. Two units per aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 2 / MV-22 Readiness (OSIP 028-12)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(4) FY 2021 is the first year of procurement of Shaft Driven Compressor kits.

(5) FY 2021 is the first year of procurement of PRGB Input Quill/Clutch kits.

(6) Nacelle Improvement Kits and Installations addresses reliability and maintainability degraders and will improve Mission Capable rates by 6 to 8 percent. Kit procurement begins in FY 2020. Non-recurring engineering for this effort was partially funded under OSIP 011-17, and migrated to OSIP 028-12 in FY 2020. The funding for Nacelle Improvement and Conversion Area Harness Installations have been moved to the CC-RAM kit procurement line (1.1.1 under OSIP 011-17) because installations will be done in conjunction with the CC-RAM modification.

(7) Increase to Other ILS from FY 2020 to FY 2021 is due to increase in logistics support needed for V-22 Readiness efforts.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 3 / Common Configuration (011-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	187.507	67.429	161.858	168.298	0.000	168.298	177.523	309.314	349.322	281.440	1,279.985	2,982.676
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	187.507	67.429	161.858	168.298	0.000	168.298	177.523	309.314	349.322	281.440	1,279.985	2,982.676
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**187.507**	**67.429**	**161.858**	**168.298**	**0.000**	**168.298**	**177.523**	**309.314**	**349.322**	**281.440**	**1,279.985**	**2,982.676**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Operational Safety Improvement Program (OSIP) 011-17 is established for the Modification of 129 Block B and 124 Block C MV-22B aircraft to a common production configuration in support of improved readiness, achieving common configuration, and reducing Life Cycle Cost. The reduction of future Operating and Support costs is achieved by the reduction of National Stock Numbers in the supply system, reduction of training and maintenance tasks in the Intelligent Electronic Technical Manuals, and reduction of Non-Recurring Engineering retrofit costs due to multiple aircraft configurations on future engineering changes. This will include funding for approximately 80 Engineering Change Proposals that impact safety, reliability and cost.

Common Configuration- Readiness and Modernization (CC-RAM) is the Marine Corps' top priority for MV-22 readiness. It will have the biggest impact of returning readiness to required levels for combat by consolidating fleet configurations to a 2019 standard, addressing the major issue identified by the Osprey Independent Readiness Review. The MV-22 CC-RAM effort will upgrade 129 MV-22 Block B aircraft to a Block C configuration. CC-RAM will improve Mission Capable rates approximately 15 percent for aircraft undergoing Block B to C modification, and reduce maintenance man hours by approximately 30 percent. Overall, CC-RAM will return 25 to 30 additional Ready Basic Aircraft to the flightline for tasking and greatly simplify logistics and training upon completion. Additionally, there will be a long term cost avoidance of $1.5 to $1.7B with streamlined supply system and engineering requirements for future modifications.

Common Configuration Kits: Kits that will bring retrofit aircraft up to a common configuration.
Nacelle Reliability Upgrades: Kits that will improve and upgrade the Nacelle to bring it to a common configuration. NRE was funded under OSIP 011-17 through FY19. Migrated to OSIP 028-12 in FY20.
Multifunction Display (MFD) and Advanced MFD: or flight displays in cockpit, thirty lb. weight savings, less cooling and power requirements, significant obsolescence avoided, greater pilot display capabilities.
Data Transfer Unit: Replaces obsolete unit.
Gen 5 Radio - ARC 210 Radio upgrade to current generation UHF/VHF/SATCOM Radio Upgrade
Cockpit control unit- Block C upgrade which relocates the unit to provide accessibility for pilot/co-pilot/ and or crew chief
Power Monitor - Block C upgrade for External Power monitor
CSAD-Cabin Situational Awareness Device Upgrade which expands the situational awareness capabilities for the troop commander, providing a moving map, positional data, flight plan, and other pertinent data

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 3 / Common Configuration (011-17)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capability	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Common Configuration - Organic(*) (8)	- / -	4 / 64.028	9 / 147.976	9 / 157.334	- / -	9 / 157.334	9 / 163.657	16 / 294.103	18 / 335.403	14 / 266.208	50 / 1,237.470	129 / 2,666.179
1.2.1) Installation Kits - N/R Common Configuration - Organic(*)	- / 180.929	- / 0.005	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 180.934
2.1.1) Advanced Multi Function Display - Organic(*) (9)	7 / 0.713	9 / 0.853	9 / 0.868	9 / 0.882	- / -	9 / 0.882	16 / 1.595	18 / 1.825	14 / 1.444	16 / 1.678	31 / 3.306	129 / 13.164
2.1.2) Data Transfer System - Organic(*)	7 / 0.343	2 / 0.410	9 / 1.876	9 / 1.908	- / -	9 / 1.908	16 / 3.450	18 / 3.947	14 / 3.122	16 / 3.629	31 / 7.151	122 / 25.836
2.1.3) Gen 5 Radio - Organic(*)	- / -	- / -	9 / 1.539	9 / 1.565	- / -	9 / 1.565	16 / 2.830	18 / 3.238	14 / 2.561	16 / 2.977	31 / 5.865	113 / 20.575
2.1.4) Cockpit Control Unit - Organic(*)	- / -	9 / 0.194	9 / 0.198	9 / 0.201	- / -	9 / 0.201	16 / 0.364	18 / 0.417	14 / 0.329	16 / 0.383	31 / 0.754	122 / 2.840
2.1.5) Power Monitor - Organic(*)	- / -	9 / 0.014	9 / 0.014	9 / 0.014	- / -	9 / 0.014	16 / 0.026	18 / 0.029	14 / 0.023	16 / 0.027	31 / 0.550	122 / 0.697
2.1.6) CSAD - Organic(*)	- / -	9 / 0.225	9 / 0.228	9 / 0.229	- / -	9 / 0.229	16 / 0.338	18 / 0.387	14 / 0.306	16 / 0.356	31 / 0.550	122 / 2.619
Subtotal: Procurement	*- / 181.985*	*- / 65.729*	*- / 152.699*	*- / 162.133*	*- / -*	*- / 162.133*	*- / 172.260*	*- / 303.946*	*- / 343.188*	*- / 275.258*	*- / 1,255.646*	*- / 2,912.844*
Support												
3.1) Support Equipment (10)	- / -	- / -	- / 3.624	- / 1.952	- / -	- / 1.952	- / -	- / -	- / -	- / -	- / -	- / 5.576
3.2) Other Support	- / 5.522	- / 1.700	- / 5.535	- / 4.213	- / -	- / 4.213	- / 5.263	- / 5.368	- / 6.134	- / 6.182	- / 24.339	- / 64.256
Subtotal: Support	*- / 5.522*	*- / 1.700*	*- / 9.159*	*- / 6.165*	*- / -*	*- / 6.165*	*- / 5.263*	*- / 5.368*	*- / 6.134*	*- / 6.182*	*- / 24.339*	*- / 69.832*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**187.507**	**67.429**	**161.858**	**168.298**	**0.000**	**168.298**	**177.523**	**309.314**	**349.322**	**281.440**	**1,279.985**	**2,982.676**

Footnotes:

(8) Common Configuration is being done as a Turn-Key Mod line. Increase from FY 2020 request reflects negotiated pricing in FY 2019-FY 2021 and expected pricing FY 2022 through completion. The funding for Nacelle Improvement (OSIP 28-12 1.1.16) and Conversion Area Harness (OSIP 28-12 1.1.3) Installations has been moved to this CC-RAM kit procurement line because installations will be done in conjunction with the CC-RAM modification.

(9) Quantities for Advanced Multifunction Display, Data Transfer System, Gen 5 Radio, Cockpit Control Unit, Power Monitor, and CSAD have been updated since FY 2020 request to align with CC-RAM aircraft quantities. These items are awarded one year prior to their associated CC-RAM aircraft due to long lead times.

(10) Support Equipment required to upgrade Maintenance Trainer to Common Configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 4 / Aerial Refueling (008-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	14.206	1.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.282
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	14.206	1.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.282
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**14.206**	**1.076**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**15.282**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
The MV-22 Aerial Refueling system effort has been paused starting in FY 2020. Funds for this effort in FY 2020 through the FYDP have been removed from this budget exhibit. FY 2019 funding remaining in this OSIP was executed for support for the effort prior to the pause.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 4 / Aerial Refueling (008-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Performance, Capability	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Electric/Hydraulic A Kits - Organic(*)	10 / 2.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.550
1.1.2) FMU Ugrade - Organic(*)	10 / 0.560	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.560
1.2.1) Installation Kits N/R - Organic(*)	- / 0.130	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.130
2.1.1) Reel Mission Kits - Organic(*)	2 / 3.836	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.836
2.1.2) Mat Mod - Organic(*)	10 / 1.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.020
Subtotal: Procurement	*- / 8.096*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 8.096*
Support												
3.1) Data	- / 1.410	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.410
3.2) Training Equipment	- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.100
3.3) Support Equipment	- / 3.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.150
3.4) ILS	- / 0.135	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.135
3.5) Other Support	- / 1.315	- / 1.076	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.391
Subtotal: Support	*- / 6.110*	*- / 1.076*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 7.186*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**14.206**	**1.076**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**15.282**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	45.792	60.149	45.876	0.000	45.876	48.016	66.823	73.309	60.603	699.847	1,100.415
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	45.792	60.149	45.876	0.000	45.876	48.016	66.823	73.309	60.603	699.847	1,100.415
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**45.792**	**60.149**	**45.876**	**0.000**	**45.876**	**48.016**	**66.823**	**73.309**	**60.603**	**699.847**	**1,100.415**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 009-19 is established to incorporate changes to V-22 Avionics systems, working in concert with the Technical Insertion (TI) schedule to reduce cost, improve coordination, yield common configurations, and improve ready based aircraft. Improvements to safety of flight, maintenance, obsolescence (Diminishing Manufacturing Sources/Material Shortages), and readiness degrader items will yield a more interoperable and survivable V-22 force to sustain warfighter capability in support of worldwide operations.

Current/Active ECPs:

Funds will be utilized to manage, process and incorporate ECPs and implement changes to sustain and improve MV-22 retrofit aircraft readiness, safety, mission availability, structural integrity and components reliability, maintainability and obsolescence conditions.

Funds are used to incorporate ECPs for Avionics Improvements.

AVIONICS: Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter Communication System modification, upgraded Mission Computer, updated Data Transfer Module, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrade, and Avionics Interface Units upgrades. As well as Mission System Upgrade and Midwing Processing Unit obsolescence replacement. Software modifications are controlled by the functional requirements document (FRD) and introduced to the fleet for release every two years, or as needed based on emerging fleet requirements. Modifications to the various avionics software configuration items being incorporated into the fleet aircraft also require updates to the Collaborative Automated Maintenance Environment Optimized (CAMEO), Integrated Electronic Technical Manuals (IETMs); and mission planning. Specifically for the mission planning system, the V-22 Unique Planning Component (UPC) for the Joint Mission Planning System (JMPS) must implement frequent software updates in conjunction with production aircraft performance and software changes. Changes to the JMPS UPC in accordance with the FRD must include mission planning specific software regression tests to ensure proper operation and integration with other aircraft UPCs within JMPS.

Multifunction Display (MFD) and Advanced MFD (ECP migrated from OSIP 22-01): Upgrades flight displays in cockpit, thirty lb. weight savings, less cooling and power requirements, significant obsolescence avoided, greater pilot display capabilities.

V-22 Integrated Aircraft Survivability Equipment (IASE) (ECP previously in OSIP 22-01): Will correct deficiencies of the current RADAR warning system, replace the existing Missile Warning System, implement an active Infra-red countermeasure system, upgrade current countermeasures dispenser and provide integrated threat information on current aircraft main flight displays.

FLIR (ECP migrated from OSIP 22-01): Upgrade the Forward Looking Infrared (FLIR) System Electronics Unit (SEU) with an Enhanced Local Area Processing (ELAP) card to improve visibility for the pilot. The SEU provides digital signal processing of the image obtained via the FLIR optics in the current FLIR unit, and passes the image data to the MV-22 mission computer.

Traffic Collision Avoidance System (TCAS) (ECP migrated from OSIP 22-01): Procurement of kits and installations of the Honeywell MILACAS-XR TCAS into MCOI-equipped MV-22 Block B and C aircraft. MILACAS-XR is identical to the TCAS system already in use aboard the CV-22, and will advise MV-22 pilots of other air traffic in proximity to the MV-22, as well as resolution advisories of what course to fly to avoid colliding with the threat aircraft.

Flight Control System replaces obsolescent flight control computers with upgraded hardware with capability for future improved flight control laws. This critical effort is integral to operational readiness and safety due to limited replacement component availability for current hardware and will have the processing capability to handle additional flight control laws to improve aircraft handling qualities.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

ECP-Training Equipment: Aircraft Maintenance Trainer (AMT): #4, Improves training and pilot proficiency by incorporating modifications to the AMT to reflect most current Block aircraft configuration.
ECP-Training Equipment: Full Fidelity Simulator (FFS) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FFS #1-4 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.
ECP-Training Equipment: FTD UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FTD #1-14 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.
Mission Computer Obsolesence Iniative (MCOI) Retrofit for BLK C (ECP migrated from OSIP 28-12): MCOI replaces several components and allows planned capabilities to operate without memory processing power or memory storage.

Future ECPs:
Digital Interoperability: Provides situational awareness, enhanced command and control, remote and operation of payloads, and tracking of Marines and cargo. It also allows for collaboration and cooperation in a Joint environment.
Joint Avionics Reconfigurable Virtual Information System (JARVIS): Upgraded Open System Architecture

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capability	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Advanced MFD - Organic(*) (11)	- / -	- / -	30 / 0.135	30 / 0.137	- / -	30 / 0.137	48 / 0.223	60 / 0.284	30 / 0.144	- / -	- / -	198 / 0.923
1.1.2) FLIR ELAP - Organic(*)	- / -	100 / 2.405	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 2.405
1.1.3) MCOI BLK C A-Kit - NonOrganic *Installation 1 of 6*	- / -	24 / 1.940	35 / 2.877	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 4.817
1.1.4) Traffic Collision Avoidance System - NonOrganic (12) *Installation 2 of 6*	- / -	- / -	- / -	28 / 2.352	- / -	28 / 2.352	15 / 1.281	30 / 2.563	15 / 1.303	5 / 0.442	32 / 2.875	125 / 10.816
1.1.5) V-22 Integrated Aircraft Survivability Equip DV2 Config A-C - NonOrganic (13) *Installation 3 of 6*	- / -	12 / 9.614	24 / 19.555	12 / 9.944	- / -	12 / 9.944	12 / 10.113	12 / 10.285	12 / 10.459	12 / 10.637	142 / 128.014	238 / 208.621
1.1.6) V-22 Integrated Aircraft Survivability Equip DV2 Config B-C - NonOrganic *Installation 4 of 6*	- / -	12 / 1.043	36 / 3.185	12 / 1.080	- / -	12 / 1.080	- / -	- / -	- / -	- / -	- / -	60 / 5.308
1.1.7) V-22 Integrated Aircraft Survivability LSPR Config D - NonOrganic *Installation 5 of 6*	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.448	24 / 4.979	12 / 2.532	12 / 2.575	273 / 59.577	333 / 72.111
1.1.8) Flight Control System - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 20.400	26 / 22.476	283 / 248.798	333 / 291.674
1.1.9) JARVIS - NonOrganic *Installation 6 of 6*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.408	12 / 0.207	12 / 0.211	285 / 5.509	333 / 6.335
1.2.1) Installation Kits N/R - Organic(*) (14)	- / -	- / -	- / 1.189	- / 1.726	- / -	- / 1.726	- / 0.928	- / 5.541	- / -	- / -	- / -	- / 9.384
2.1.1) JARVIS - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.800	12 / 2.441	12 / 2.482	285 / 59.957	333 / 69.680
2.1.2) Advanced MFD - Organic(*)	- / -	- / -	30 / 0.420	30 / 0.427	- / -	30 / 0.427	48 / 0.695	60 / 0.884	30 / 0.449	- / -	- / -	198 / 2.875
2.1.3) MCOI BLK C - DTS B-Kits - Organic(*)	- / -	20 / 0.905	15 / 0.690	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.595
2.1.4) MCOI BLK C - IAP B-Kits - Organic(*)	- / -	44 / 12.041	15 / 4.127	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 16.168
2.2.1) B Kit NRE - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.407	- / -	- / -	- / -	- / 2.407
Subtotal: Procurement	*- / 0.000*	*- / 27.948*	*- / 32.178*	*- / 15.666*	*- / -*	*- / 15.666*	*- / 15.688*	*- / 32.151*	*- / 37.935*	*- / 38.823*	*- / 504.730*	*- / 705.119*
Support												
3.1) Other Support	- / -	- / 3.574	- / 4.375	- / 4.250	- / -	- / 4.250	- / 6.359	- / 9.414	- / 9.229	- / 8.234	- / 9.136	- / 54.571
3.2) Training Equipment (15)	- / -	- / 5.613	- / 7.853	- / 8.444	- / -	- / 8.444	- / 9.845	- / 9.652	- / 7.344	- / 4.574	- / 48.415	- / 101.740
3.3) Support Equipment (16)	- / -	- / 0.550	- / 0.656	- / 0.669	- / -	- / 0.669	- / 0.328	- / 0.746	- / 0.758	- / 0.770	- / -	- / 4.477
3.4) Software Modifications (17)	- / -	- / 8.107	- / 7.973	- / 5.881	- / -	- / 5.881	- / 8.609	- / 9.269	- / 8.593	- / 1.245	- / -	- / 49.677
Subtotal: Support	*- / 0.000*	*- / 17.844*	*- / 20.857*	*- / 19.244*	*- / -*	*- / 19.244*	*- / 25.141*	*- / 29.081*	*- / 25.924*	*- / 14.823*	*- / 57.551*	*- / 210.465*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: V-22 Series	**Modification Type:** Safety, Reliability, Increased Service Life, Improved Mission Capability	**Related RDT&E PEs:** 0604262N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation												
Installation 1 of 6: MCOI BLK C A-Kit	- / -	- / -	- / 2.766	- / 4.102	- / 0.000	- / 4.102	- / -	- / -	- / -	- / -	- / 0.000	- / 6.868
Installation 2 of 6: Traffic Collision Avoidance System	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.854	- / 0.465	- / 0.947	- / 0.481	- / 1.367	- / 4.114
Installation 3 of 6: V-22 Integrated Aircraft Survivability Equip DV2 Config A-C	- / -	- / -	- / 3.432	- / 6.864	- / 0.000	- / 6.864	- / 3.491	- / 3.550	- / 3.610	- / 3.671	- / 62.790	- / 87.408
Installation 4 of 6: V-22 Integrated Aircraft Survivability Equip DV2 Config B-C	- / -	- / -	- / 0.916	- / -	- / -	- / -	- / 2.842	- / 0.964	- / -	- / -	- / 0.000	- / 4.722
Installation 5 of 6: V-22 Integrated Aircraft Survivability LSPR Config D	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.612	- / 0.622	- / 0.633	- / 16.566	- / 18.433
Installation 6 of 6: JARVIS	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.271	- / 2.172	- / 56.843	- / 63.286
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 7.114*	*- / 10.966*	*- / -*	*- / 10.966*	*- / 7.187*	*- / 5.591*	*- / 9.450*	*- / 6.957*	*- / 137.566*	*- / 184.831*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**45.792**	**60.149**	**45.876**	**0.000**	**45.876**	**48.016**	**66.823**	**73.309**	**60.603**	**699.847**	**1,100.415**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 6: MCOI BLK C A-Kit

Manufacturer Information

Manufacturer Name: MCOI Retrofit BLK C	Manufacturer Location: Redstone, AL
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020					
Delivery Dates	Oct 2019	Oct 2020					

Installation Information

Method of Implementation: Contractor Field Mod Team:: Installation Name: MCOI BLK C A-Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	24 / 2.766	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 2.766
FY 2020	- / -	- / -	- / -	35 / 4.102	0 / 0.000	35 / 4.102	- / -	- / -	- / -	- / -	0 / 0.000	35 / 4.102
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	24 / 2.766	35 / 4.102	0 / 0.000	35 / 4.102	- / -	- / -	- / -	- / -	0 / 0.000	59 / 6.868

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	6	6	6	6	9	9	9	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
Out	-	-	-	-	-	6	6	6	6	9	9	9	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 6: Traffic Collision Avoidance System

Manufacturer Information

Manufacturer Name: FRC Various - Traffic Collision Avoidance System	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 5

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			May 2021	May 2022	May 2023	May 2024	May 2025
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Contractor Forced Retrofit of Components:: Installation Name: Traffic Collision Avoidance System

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	28 / 0.854	- / -	- / -	- / -	0 / 0.000	28 / 0.854
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.465	- / -	- / -	0 / 0.000	15 / 0.465
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.947	- / -	0 / 0.000	30 / 0.947
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.481	0 / 0.000	15 / 0.481
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.159	5 / 0.159
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.208	32 / 1.208
Total	- / -	- / -	- / -	- / -	- / -	- / -	28 / 0.854	15 / 0.465	30 / 0.947	15 / 0.481	37 / 1.367	125 / 4.114

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	4	4	4	3	8	8	7	7	4	4	4	3	37	125
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	4	4	4	3	8	8	7	7	4	4	4	40	125

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 6: V-22 Integrated Aircraft Survivability Equip DV2 Config A-C

Manufacturer Information

Manufacturer Name: FRC Various - V-22 IASE Equip DV2 Config A-C	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: V-22 Integrated Aircraft Survivability Equip D

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	12 / 3.432	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 3.432
FY 2020	- / -	- / -	- / -	24 / 6.864	0 / 0.000	24 / 6.864	- / -	- / -	- / -	- / -	0 / 0.000	24 / 6.864
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.491	- / -	- / -	- / -	0 / 0.000	12 / 3.491
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.550	- / -	- / -	0 / 0.000	12 / 3.550
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.610	- / -	0 / 0.000	12 / 3.610
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.671	0 / 0.000	12 / 3.671
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.671	12 / 3.671
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	142 / 59.119	142 / 59.119
Total	- / -	- / -	12 / 3.432	24 / 6.864	0 / 0.000	24 / 6.864	12 / 3.491	12 / 3.550	12 / 3.610	12 / 3.671	154 / 62.790	238 / 87.408

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	3	3	3	3	6	6	6	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	154	238
Out	-	-	-	-	-	3	3	3	3	6	6	6	6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	154	238

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 6: V-22 Integrated Aircraft Survivability Equip DV2 Config B-C

Manufacturer Information

Manufacturer Name: FRC Various - IASE DV2 Config B-C	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 23

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021				
Delivery Dates	Apr 2020	Apr 2022	Jan 2023				

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: V-22 Integrated Aircraft Survivability Equip D

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	12 / 0.916	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.916
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.842	12 / 0.000	- / -	- / -	0 / 0.000	36 / 2.842
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.964	- / -	- / -	0 / 0.000	12 / 0.964
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	12 / 0.916	- / -	- / -	- / -	24 / 2.842	24 / 0.964	- / -	- / -	0 / 0.000	60 / 4.722

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	60
Out	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	60

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 6: V-22 Integrated Aircraft Survivability LSPR Config D

Manufacturer Information

Manufacturer Name: FRC Various - V-22 IASE LSPR Config D	Manufacturer Location: FRC - Various
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates				Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Contractor Drive-In Modification:: Installation Name: V-22 Integrated Aircraft Survivability LSPR Co

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.612	- / -	- / -	0 / 0.000	12 / 0.612
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.622	- / -	0 / 0.000	24 / 0.622
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.633	0 / 0.000	12 / 0.633
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.633	12 / 0.633
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	273 / 15.933	273 / 15.933
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.612	24 / 0.622	12 / 0.633	285 / 16.566	333 / 18.433

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	6	6	6	6	3	3	3	3	285	333
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	6	6	6	6	3	3	3	3	285	333

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 6 of 6: JARVIS

Manufacturer Information

Manufacturer Name: Physical Optics CORP - JARVIS	Manufacturer Location: Torrance, CA
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Jan 2023	Jan 2024	Jan 2025
Delivery Dates					Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: JARVIS

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.271	- / -	0 / 0.000	24 / 4.271
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.172	0 / 0.000	12 / 2.172
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.172	12 / 2.172
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	285 / 54.671	285 / 54.671
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.271	12 / 2.172	297 / 56.843	333 / 63.286

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	3	3	3	3	297	333
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	3	3	3	3	297	333

Footnotes:

(11) Advanced MFD moved from OSIP 022-01 in FY 2020.

(12) Traffic Collision Avoidance System migrated from OSIP 022-01 in FY 2021.

(13) IASE was previously funded under OSIP 009-19 under one cost element. Due to the nature of the effort and the timing of the installations, this has been split into three cost elements to more accurately show the procurement schedule of the effort.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 5 / Avionics Improvements (009-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(14) FY 2020 to FY 2021 Non-recurring engineering is for TCAS integration engineering.

(15) Training Equipment: Funding required to upgrade Trainers to BLK C configuration. Increase in FY2020 and 2021 is driven by MCOI, TCAS, and MFD upgrades.

(16) Support Equipment: FY20 increase is due to the V-22 Integrated Aircraft Survivability Equipment requirements.

(17) Software modifications is added to OSIP 009-19. This line funds software modifications driven by and specifically needed for the modifications under this OSIP.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	5.356	21.611	0.000	21.611	13.402	11.757	29.403	25.315	128.591	235.435
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	5.356	21.611	0.000	21.611	13.402	11.757	29.403	25.315	128.591	235.435
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**5.356**	**21.611**	**0.000**	**21.611**	**13.402**	**11.757**	**29.403**	**25.315**	**128.591**	**235.435**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 005-20 is established for the modification of delivered CMV-22s for critical interoperability capabilities including Link-16 for Carrier Strike Group/Expeditionary Strike Group (CSG/ESG)interoperability and secure MILSAT connectivity through integration of Mobile Users Objective System (MUOS). Also any required modifications for compliance with FAR 121-345/347 for Beyond Line of Sight (BLOS) Air Traffic Control(ATC), Required Navigation Performance/Area Navigation (RNP/RNAV) capabilities, and Terrain Awareness and Warning System (TAWS).

V-22 Prop Rotor Gear Box (PRGB) Input Quill/Clutch Redesign: This effort will eliminate resident issues with Input Quill and clutch and to Purge Fleet of Thin Densed Chrome.
Upper and Lower Rod Ends Redesign to prevent excessive wear from normal proprotor operation.
Link 16/Iridium/Improved intercommunication System: Air to Air Data Link which improves situational awareness and provides secure voice/Text with other Aircraft; as well as communication with Air Traffic Control.
Mobil User Objective System (MUOS): Improves satellite communications.
Conversion Area Harness: Increases reliability of the Conversion Area Harness by upgrading the harness, wire type, ribbons and connectors.
Nacelle Improvements: Kits that will improve and upgrade the Nacelle to bring it to a common configuration. Nacelle improvements is a top priority for improving MV-22 readiness. It addresses Nacelle reliability and maintainability degraders as recommended by the Osprey Independent Readiness Review. Nacelle Improvements will reduce wire harness counts, reduce wire interface assemblies, and improve structure and maintenance access ports. Overall, Nacelle Improvements will improve Mission Capable rates by 6 to 8 percent and reduce direct maintenance man-hours.
Shaft Driven Compressor (SDC): Modifies the SDC gear train to eliminate high cycle fatigue that leads to early failure of SDC impeller and incorporates improvements to gears and seals.
Coanda Valve Reliability Improvement: Improves reliability of the Coanda Valve and associated wiring harness. Intent is to reduce "false positive" fault indications while addressing a number of priority failure modes. Other component improvement objectives include improved maintenance footprint, compliance with IUID requirements, and improved harness reparability.
Joint Avionics Reconfigurable Virtual Information System (JARVIS): Upgraded Open System Architecture

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CMV-22	**Modification Type:** Safety, Improved Mission Capability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Coanda Valve Reliability Improvement - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.356	- / -	- / -	- / -	3 / 0.807	16 / 1.163
1.1.2) Shaft Driven Compression - NonOrganic *Installation 1 of 5*	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.150	5 / 0.103	5 / 0.155	3 / 0.095	12 / 0.385	30 / 0.888
1.1.3) PRGB Input Quill/Clutch Redesign - Organic(*)	- / -	- / -	- / -	6 / 0.312	- / -	6 / 0.312	6 / 0.317	3 / 0.161	- / -	- / -	- / -	15 / 0.790
1.1.4) Upper & Lower Rod End - Organic(*)	- / -	- / -	- / -	6 / 1.159	- / -	6 / 1.159	6 / 1.178	3 / 0.599	- / -	- / -	- / -	15 / 2.936
1.1.5) Link 16/Iridium/Improved Intercommunication System - NonOrganic *Installation 2 of 5*	- / -	- / -	- / -	6 / 6.600	- / -	6 / 6.600	5 / 5.600	4 / 4.560	6 / 6.960	5 / 5.900	18 / 22.425	44 / 52.045
1.1.6) Mobil User Objective System - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.927	3 / 0.314	- / -	- / -	- / -	12 / 1.241
1.1.7) Conversion Area Harness - NonOrganic *Installation 3 of 5*	- / -	- / -	- / -	3 / 0.384	- / -	3 / 0.384	3 / 0.391	- / -	- / -	- / -	- / -	6 / 0.775
1.1.8) APU K8 / K9 Improvement - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.125	12 / 0.153	15 / 0.194	- / -	- / -	37 / 0.472
1.1.9) CFG / GCU UTAS - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.050	19 / 0.812	- / -	- / -	- / -	44 / 1.862
1.1.10) Troop Seat Pin - Organic(*)	- / -	- / -	- / -	15 / 0.092	- / -	15 / 0.092	10 / 0.061	- / -	- / -	- / -	- / -	25 / 0.153
1.1.11) JARVIS - NonOrganic *Installation 4 of 5*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.104	5 / 0.088	33 / 0.592	44 / 0.784
1.2.1) A Kits Non Recurring - Organic(*)	- / -	- / -	- / 5.100	- / 2.688	- / -	- / 2.688	- / -	- / 2.159	- / 0.804	- / -	- / -	- / 10.751
2.1.1) Nacelle Improvements - NonOrganic *Installation 5 of 5*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 12.900	2 / 11.936	11 / 66.764	15 / 91.600
2.1.2) Link 16/Iridium/Improved Intercommunications System - Organic(*)	- / -	- / -	- / -	6 / 1.392	- / -	6 / 1.392	5 / 1.180	4 / 0.960	6 / 1.464	5 / 1.241	18 / 4.543	44 / 10.780
2.1.3) Jarvis - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.224	5 / 1.037	33 / 6.963	44 / 9.224
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 5.100*	*- / 12.627*	*- / -*	*- / 12.627*	*- / 11.335*	*- / 9.821*	*- / 23.805*	*- / 20.297*	*- / 102.479*	*- / 185.464*
Support												
3.1) Training Equipment	- / -	- / -	- / -	- / 1.270	- / -	- / 1.270	- / -	- / -	- / 0.840	- / -	- / -	- / 2.110
3.2) Support Equipment	- / -	- / -	- / -	- / 2.272	- / -	- / 2.272	- / -	- / -	- / -	- / -	- / -	- / 2.272
3.3) ILS	- / -	- / -	- / 0.256	- / 0.402	- / -	- / 0.402	- / 0.313	- / 0.318	- / 3.560	- / 0.266	- / -	- / 5.115
3.4) Software Mods - MUOS (18)	- / -	- / -	- / -	- / 4.493	- / -	- / 4.493	- / -	- / -	- / -	- / -	- / -	- / 4.493
3.5) Other Support	- / -	- / -	- / -	- / 0.547	- / -	- / 0.547	- / 0.562	- / 0.571	- / 0.739	- / 0.972	- / -	- / 3.391
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.256*	*- / 8.984*	*- / -*	*- / 8.984*	*- / 0.875*	*- / 0.889*	*- / 5.139*	*- / 1.238*	*- / 0.000*	*- / 17.381*
Installation												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CMV-22	**Modification Type:** Safety, Improved Mission Capability	**Related RDT&E PEs:**

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Installation 1 of 5: Shaft Driven Compression	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.025	- / 0.025	- / 0.025	- / 0.105	- / 0.180
Installation 2 of 5: Link 16/Iridium/Improved Intercommunication System	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.712	- / 0.534	- / 0.434	- / 0.663	- / 2.808	- / 5.151
Installation 3 of 5: Conversion Area Harness	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.480	- / 0.488	- / -	- / -	- / 0.000	- / 0.968
Installation 4 of 5: JARVIS	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.092	- / 7.944	- / 9.036
Installation 5 of 5: Nacelle Improvements	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 15.255	- / 17.255
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.192*	*- / 1.047*	*- / 0.459*	*- / 3.780*	*- / 26.112*	*- / 32.590*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**5.356**	**21.611**	**0.000**	**21.611**	**13.402**	**11.757**	**29.403**	**25.315**	**128.591**	**235.435**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 5: Shaft Driven Compression

Manufacturer Information

Manufacturer Name: Bell Boeing - Shaft Driven Compressor	Manufacturer Location: Bell Boeing
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates				Mar 2023	Mar 2024	Mar 2025	Mar 2026

Installation Information

Method of Implementation: [none specified]:: Installation Name: Shaft Driven Compression

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.025	- / -	- / -	0 / 0.000	5 / 0.025
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.025	- / -	0 / 0.000	5 / 0.025
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.025	0 / 0.000	5 / 0.025
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.016	3 / 0.016
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.089	12 / 0.089
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.025	5 / 0.025	5 / 0.025	15 / 0.105	30 / 0.180

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	2	2	1	-	2	2	1	15	30
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	2	2	1	-	2	2	1	15	30

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 5: Link 16/Iridium/Improved Intercommunication System

Manufacturer Information

Manufacturer Name: Bell-Boeing - Link 16 Iridium/Improved Intercommunication System	Manufacturer Location: Bell Boeing
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates			Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025

Installation Information

Method of Implementation: Non-Organic:: Installation Name: Link 16/Iridium/Improved Intercommunication System

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.712	- / -	- / -	- / -	0 / 0.000	6 / 0.712
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.534	- / -	- / -	0 / 0.000	5 / 0.534
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.434	- / -	0 / 0.000	4 / 0.434
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.663	0 / 0.000	6 / 0.663
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.562	5 / 0.562
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 2.246	18 / 2.246
Total	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.712	5 / 0.534	4 / 0.434	6 / 0.663	23 / 2.808	44 / 5.151

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	2	2	1	-	2	2	-	-	2	2	2	-	23	44
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	-	2	2	1	-	2	2	-	-	2	2	2	-	23	44

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 3 of 5: Conversion Area Harness

Manufacturer Information

Manufacturer Name: Bell Boeing - Conversion Area Harness	Manufacturer Location: Bell Boeing
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2020	Nov 2021			
Delivery Dates			Jan 2022	Jan 2023			

Installation Information

Method of Implementation: [none specified]:: Installation Name: Conversion Area Harness

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.480	- / -	- / -	- / -	0 / 0.000	3 / 0.480
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.488	- / -	- / -	0 / 0.000	3 / 0.488
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.480	3 / 0.488	- / -	- / -	0 / 0.000	6 / 0.968

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	6
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	6

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 4 of 5: JARVIS

Manufacturer Information

Manufacturer Name: Physical Optics CORP - JARVIS	Manufacturer Location: Torrance, CA
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Jan 2024	Jan 2025
Delivery Dates						Oct 2024	Oct 2025

Installation Information

Method of Implementation: [none specified]:: Installation Name: JARVIS

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.092	0 / 0.000	6 / 1.092
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.910	5 / 0.910
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 7.034	33 / 7.034
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.092	38 / 7.944	44 / 9.036

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	38	44
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	38	44

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 6 / CMV Improvements 005-20
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 5 of 5: Nacelle Improvements

Manufacturer Information

Manufacturer Name: Bell Boeing - Nacelle Improvements	Manufacturer Location: Amarillo, Texas
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						Jun 2024	Jun 2025
Delivery Dates						Jun 2025	Jun 2026

Installation Information

Method of Implementation: Contractor Drive-in Mod:: Installation Name: Nacelle Improvements

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.000	0 / 0.000	2 / 2.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.034	2 / 2.034
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 13.221	11 / 13.221
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.000	13 / 15.255	15 / 17.255

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	13	15
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	13	15

Footnotes:

(18) Mobil User Objective System (MUOS) software upgrades will be made to the CMV-22 aircraft prior to the installation of the Gen 6 ARC-210 MUOS-capable Radios in order for the system to work properly once installed.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 7 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	19.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	19.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**19.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2020 enacted includes congressional rescissions of $19 million to FY 2019 funding. However, these rescissions are not reflected on the P-40 and associated detail P-3a.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 7 / FY 2020 Enacted Rescissions
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: [No Model Specified]	**Modification Type:** TBD	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: N/A												
Subtotal: N/A	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Support *(All Modification Items)*												
3.1) FY 2020 Enacted Rescissions	- / -	- / 19.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.000
Subtotal: Support	- / 0.000	- / 19.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 19.000
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**19.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**19.000**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0590 / V-22 (Tilt/Rotor Acft) Osprey	**Modification Number / Title:** 7 / FY 2020 Enacted Rescissions

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: N/A

Manufacturer Information

Manufacturer Name: N/A

Manufacturer Location: N/A

Administrative Leadtime *(in Months)*:

Production Leadtime *(in Months)*:

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Support Only Installation

Installation Quantity: 0

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0591 / Next Generation Jammer (NGJ)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0604274N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: P445

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	176.638	0.000	176.638	311.537	457.986	511.251	536.543	2,707.497	4,701.452
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	176.638	0.000	176.638	311.537	457.986	511.251	536.543	2,707.497	4,701.452
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**176.638**	**0.000**	**176.638**	**311.537**	**457.986**	**511.251**	**536.543**	**2,707.497**	**4,701.452**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Next Generation Jammer (NGJ) is the next step in the evolution of Airborne Electronic Attack (AEA) and is a critical capability necessary to address current, emerging, and evolving Electronic Warfare gaps, ensure kill chain wholeness against growing threat capabilities and capacity, keep pace with enemy threat weapon systems' advancements, and support the continuous expansion of the AEA mission areas that exceed the capability of currently fielded systems. NGJ will utilize enhanced techniques and tactics to deliver significantly improved radar and communications jamming effectiveness as well as other classified capabilities. Utilizing an Open Systems Architecture that supports software and hardware updates to rapidly counter emergent and evolving threats, NGJ is a key enabler and force multiplier for operations across the spectrum of missions defined in the Defense Strategic Guidance, including strike warfare, projecting power despite anti-access/area denial challenges, and counterinsurgency/irregular warfare. NGJ will also address the shortfalls in scalability, flexibility, supportability, interoperability, availability, and capability of the existing AN/ALQ-99 Tactical Jamming System.

NGJ-MB A-kit procurement and installation funding (ECP 6472) has been realigned from BLI 0591 OSIP 002-19 (Next Generation Jammer Mid-Band) to BLI 0505 OSIP 011-10 (EA-18G Unique). NGJ-MB A-kits are wiring and cables to be installed into the EA-18G aircraft as part of the H-16 Growler Capability Mod (GCM). All other related ECP funding associated with GCM resides in BLI 0505 OSIP 011-10. Performing these hardware installations simultaneously will provide cost and schedule efficiencies as aircraft are removed from service, run through major disassembly and reassembly only once, rather than multiple times.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0591 / Next Generation Jammer (NGJ)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0604274N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: P445

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19) (RELIABILITY / MISSION CAPABILITY)				- / 0.000	- / 0.000	- / 0.000	- / 176.638	- / 0.000	- / 176.638
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 176.638**	**- / 0.000**	**- / 176.638**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19) (RELIABILITY / MISSION CAPABILITY)				- / 311.537	- / 457.986	- / 511.251	- / 536.543	- / 2,707.497	- / 4,701.452
P-40	**Total Gross/Weapon System Cost**				**- / 311.537**	**- / 457.986**	**- / 511.251**	**- / 536.543**	**- / 2,707.497**	**- / 4,701.452**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY2021 funding is requested to procure three shipsets of AN/ALQ-249 Next Generation Jammer Mid-Band pods for Low Rate Initial Production Lot 1 and its associated support.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0591 / Next Generation Jammer (NGJ)	**Modification Number / Title:** 1 / Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	176.638	0.000	176.638	311.537	457.986	511.251	536.543	2,707.497	4,701.452
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	176.638	0.000	176.638	311.537	457.986	511.251	536.543	2,707.497	4,701.452
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**176.638**	**0.000**	**176.638**	**311.537**	**457.986**	**511.251**	**536.543**	**2,707.497**	**4,701.452**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/ALQ-249 Next Generation Jammer - Mid-Band (NGJ-MB) (formerly known as Next Generation Jammer Increment 1) program will address Airborne Electronic Attack (AEA) capability and sufficiency gaps against enemy threats operating in the middle frequency bands of the electromagnetic spectrum. NGJ-MB will provide the ability to effectively engage enemy threats from increased stand-off distances, employ increased capacity (number of jamming assignments) against enemy targets, and support agile employment by operators. The NGJ-MB system will be integrated on the EA-18G tactical aircraft and will augment and then replace the legacy AN/ALQ-99 Tactical Jamming System Mid-Band pods.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES

Milestone C is scheduled for 4th Quarter FY2020 with Initial Operational Capability scheduled for 4th Quarter FY2022.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0591 / Next Generation Jammer (NGJ)	**Modification Number / Title:** 1 / Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: EA-18G	**Modification Type:** RELIABILITY / MISSION CAPABILITY	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)												
B Kits												
Recurring												
2.1.1) NGJ Mid-Band Pod Shipset - Organic	- / -	- / -	- / -	3 / 114.550	- / -	3 / 114.550	7 / 233.014	12 / 373.387	14 / 423.981	14 / 419.725	78 / 2,368.412	128 / 3,933.069
2.1.2) Non-Recurring - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.420	- / 42.420
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 114.550*	*- / -*	*- / 114.550*	*- / 233.014*	*- / 373.387*	*- / 423.981*	*- / 419.725*	*- / 2,410.832*	*- / 3,975.489*
Subtotal: Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)	*- / -*	*- / -*	*- / -*	*3 / 114.550*	*- / -*	*3 / 114.550*	*7 / 233.014*	*12 / 373.387*	*14 / 423.981*	*14 / 419.725*	*78 / 2,410.832*	*128 / 3,975.489*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / 114.550*	*- / -*	*- / 114.550*	*- / 233.014*	*- / 373.387*	*- / 423.981*	*- / 419.725*	*- / 2,410.832*	*- / 3,975.489*
Support *(All Modification Items)*												
3.1) Support Equipment [1]	- / -	- / -	- / -	- / 15.223	- / -	- / 15.223	- / 26.420	- / 34.779	- / 30.750	- / 67.958	- / 42.642	- / 217.772
3.2) ILS [2]	- / -	- / -	- / -	- / 1.766	- / -	- / 1.766	- / 5.938	- / 10.161	- / 10.806	- / 5.366	- / 27.075	- / 61.112
3.3) Other Support	- / -	- / -	- / -	- / 25.806	- / -	- / 25.806	- / 26.322	- / 26.849	- / 27.386	- / 27.933	- / 210.571	- / 344.867
3.4) Data [3]	- / -	- / -	- / -	- / 10.165	- / -	- / 10.165	- / 17.517	- / 10.731	- / 12.895	- / 14.182	- / 16.377	- / 81.867
3.5) Training Equipment [4]	- / -	- / -	- / -	- / 9.128	- / -	- / 9.128	- / 2.326	- / 2.079	- / 5.433	- / 1.379	- / -	- / 20.345
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 62.088*	*- / -*	*- / 62.088*	*- / 78.523*	*- / 84.599*	*- / 87.270*	*- / 116.818*	*- / 296.665*	*- / 725.963*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**176.638**	**0.000**	**176.638**	**311.537**	**457.986**	**511.251**	**536.543**	**2,707.497**	**4,701.452**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0591 / Next Generation Jammer (NGJ)	**Modification Number / Title:** 1 / Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Next Generation Jammer Mid-Band (NGJ-MB) (OSIP 002-19)		

Footnotes:

(1) Peculiar Support Equipment funding is required for Operational/Intermediate/Depot-Level repair. Phasing of Support Equipment funding is based on planned Carrier Air Wing, Expeditionary, and Reserve squadrons stand-up timelines.

(2) Phasing of ILS is based on planned Carrier Air Wing, Expeditionary, and Reserve squadron stand-up timelines.

(3) Data funding is required for Operational/Intermediate/Depot-Level technical manuals and is determined by Carrier Air Wing, Expeditionary, and Reserve squadron stand-up timelines.

(4) Phasing of Training Equipment is based on IOC and first deployment.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0604800M, 0604840M	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 198		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	586.865	41.218	65.585	153.588	0.000	153.588	183.018	278.209	278.216	226.263	173.744	1,986.706
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	586.865	41.218	65.585	153.588	0.000	153.588	183.018	278.209	278.216	226.263	173.744	1,986.706
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**586.865**	**41.218**	**65.585**	**153.588**	**0.000**	**153.588**	**183.018**	**278.209**	**278.216**	**226.263**	**173.744**	**1,986.706**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-35 Joint Strike Fighter (JSF) Program will develop and deploy a family of highly common, affordable, next generation, stealthy, multi-role strike fighters that meet the needs of multiple services and countries. The United States Marine Corps Short Take Off and Vertical Landing (STOVL) Operational Safety Improvement Program provides near and long term improvements to the fleet, focusing on documented correction of deficiencies related to safety, reliability & maintainability, avionics and aircraft systems and Block upgrades. These modifications and selected component changes are being accomplished by contractor field teams and organic depot retrofit activities.

In order to meet emerging deficiencies, the airframe and integrated systems must be modified as critical corrections/changes are identified. Block upgrades provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the F-35B platform. This modification program will bring early production Low Rate Initial Production aircraft and integrated systems to a common fleet configuration as fielded capabilities evolve over the course of the F-35 program. The modification funding requested in FY2021 enables several distinct efforts pertaining to the Marine F-35B aircraft, to include correction of deficiencies, the block upgrade of hardware and software to a Block 4 configuration, Propulsion and Reliability and Maintainability efforts.

For the F-35 program, the concurrency OSIP will transition to correction of deficiencies in FY2021. Based on production of Lots 2-12 aircrafts, FY2021 funding increased for kits and installs to support Structural Life Limited Parts Group 2 (SLLP2), correction of deficiencies, reliability and maintainability modifications on 113 aircraft, supporting global F-35B operations.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
First Joint Carrier Deployment in March 2021 to Aug 2021

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy | **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity:
1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft

P-1 Line Item Number / Title:
0592 / F-35 STOVL Series

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0604800M, 0604840M | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 198

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14) (Capability Improvement)				- / 169.490	- / 1.520	- / 2.280	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / F-35 STOVL CONCURRENCY (OSIP 023-14) (Capability Improvement)				- / 417.375	- / 37.198	- / 33.186	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19) (Capability Improvement)				- / 0.000	- / 2.500	- / 18.415	- / 115.753	- / 0.000	- / 115.753
P-3a	4 / F-35 STOVL PROPULSION (OSIP 010-20) (Engine Related Modifications)				- / 0.000	- / 0.000	- / 7.697	- / 3.840	- / 0.000	- / 3.840
P-3a	5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20) (Capability Improvement)				- / 0.000	- / 0.000	- / 4.007	- / 28.835	- / 0.000	- / 28.835
P-3a	6 / F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 5.160	- / 0.000	- / 5.160
P-40	**Total Gross/Weapon System Cost**				**- / 586.865**	**- / 41.218**	**- / 65.585**	**- / 153.588**	**- / 0.000**	**- / 153.588**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 173.290
P-3a	2 / F-35 STOVL CONCURRENCY (OSIP 023-14) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 487.759
P-3a	3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19) (Capability Improvement)				- / 101.411	- / 96.955	- / 89.523	- / 61.637	- / 53.769	- / 539.963
P-3a	4 / F-35 STOVL PROPULSION (OSIP 010-20) (Engine Related Modifications)				- / 2.898	- / 4.445	- / 7.405	- / 6.537	- / 1.770	- / 34.592
P-3a	5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20) (Capability Improvement)				- / 65.195	- / 161.777	- / 160.059	- / 155.091	- / 118.205	- / 693.169
P-3a	6 / F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21) (Capability Improvement)				- / 13.514	- / 15.032	- / 21.229	- / 2.998	- / 0.000	- / 57.933
P-40	**Total Gross/Weapon System Cost**				**- / 183.018**	**- / 278.209**	**- / 278.216**	**- / 226.263**	**- / 173.744**	**- / 1,986.706**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Basis for FY2021 budget request: FY2021 F-35B Total Active Inventory is 113 aircraft. Based on production of Lots 2-12 aircrafts, FY2021 funding increased for kits and installs to support Structural Life Limited Parts Group 2 (SLLP2), start of incremental modification efforts to a Block 4 configuration for the highest priority correction of deficiency, reliability and maintainability, and propulsion modifications in support of global F-35B operations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 1 / F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	169.490	1.520	2.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	173.290
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	169.490	1.520	2.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	173.290
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**169.490**	**1.520**	**2.280**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**173.290**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The block upgrade program retrofits United States Marine Corps F-35B aircraft and integrated systems procured under the Low Rate Initial Production (LRIP) contracts and enable the aircraft to a final Block 3F configuration. The final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This effort (OSIP 015-14) focuses on upgrading Blocks 1B, 2A, and 2B aircraft from LRIPs 2-5 to a Block 3i configuration. Block 3i is a stepping stone to the Block 3F configuration. It includes the procurement of Tech Refresh 2 (TR2) hardware for the Block 3i configuration. The parts include new radar modules, new Integrated Core Processor (ICP) modules and rack, and new Electronic Warfare (EW) modules. The Gen III Helmet will also be introduced as part of the Block 3i upgrade. This effort includes tooling and test equipment for Military Service Depots to support the execution of the Block Upgrade program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
All aircraft are planned to be upgraded to a 3F configuration by September 2020.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 1 / F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)												
B Kits												
Recurring												
1.1.1) EQUIPMENT Block 3i - NonOrganic	27 / 127.860	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 127.860
Subtotal: Recurring	*- / 127.860*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 127.860*
Subtotal: F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)	*27 / 127.860*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*27 / 127.860*
Subtotal: Procurement, All Modification Items	*- / 127.860*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 127.860*
Support *(All Modification Items)*												
2.1) ILS	- / 13.968	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.968
2.2) Other Support	- / 17.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.094
2.3) Training Equipment	- / 9.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.234
Subtotal: Support	*- / 40.296*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 40.296*
Installation												
Modification Item 1 of 1: F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)	- / 1.334	- / 1.520	- / 2.280	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.134
Subtotal: Installation	*- / 1.334*	*- / 1.520*	*- / 2.280*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.134*
Total												
Total Cost (Procurement + Support + Installation)	**169.490**	**1.520**	**2.280**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**173.290**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 1 / F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: F-35 STOVL BLOCK 3i/3F UPGRADE (OSIP 015-14)

Manufacturer Information

Manufacturer Name: Lockheed Martin [1]	Manufacturer Location: Fort Worth, TX
Administrative Leadtime *(in Months)*: 11	Production Leadtime *(in Months)*: 39

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot Field Team:: Installation Name: Block 3i

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	7 / 1.334	8 / 1.520	12 / 2.280	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	27 / 5.134
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 1.334	8 / 1.520	12 / 2.280	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	27 / 5.134

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	7	-	3	3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Out	7	-	3	3	2	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27

Footnotes:

[1] Due to long lead time, kits were purchased in prior FY and delivered in FY2019 and FY2020.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 2 / F-35 STOVL CONCURRENCY (OSIP 023-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	417.375	37.198	33.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	487.759
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	417.375	37.198	33.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	487.759
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**417.375**	**37.198**	**33.186**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**487.759**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This effort (OSIP 023-14) funds retrofits due to concurrency changes to correct deficiencies tied to the Joint Contract Specification and discovered after DD-250 of the last aircraft in a given production lot. This includes modifications required to extend aircraft service life currently limited by low-life parts, and relieve capability limitations driven by concurrency of production with development.

The concurrency funding line will procure concurrency modifications approved at the Joint Configuration Control Board (JCCB) and prioritized within the Modifications Requirements Planning Document (MRPD). The MRPD is vetted and approved by the Services and Partners every 6 months to ensure the list accurately reflects existing requirements as well as emerging issues. Per-kit costs will vary for each modification being implemented, and in some cases, will also vary for aircraft from different LRIP lots to implement an individual modification.

Total cost reflects procurement and installation costs in each fiscal year. Support costs include overall modification program planning, scheduling, management, recurring engineering; and support of Military and Service Depots and Depot Field Teams for incorporation of modifications. There are currently over 265 identified highest priority modifications throughout the STOVL fleet using funds from this OSIP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 2 / F-35 STOVL CONCURRENCY (OSIP 023-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: F-35 STOVL CONCURRENCY (OSIP 023-14)												
A Kits												
Recurring												
1.1.1) Structures - NonOrganic [2]	- / 154.698	25 / 13.854	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 168.552
Subtotal: Recurring	*- / 154.698*	*- / 13.854*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 168.552*
B Kits												
Recurring												
2.1.1) Vehicle Systems - Organic	- / 48.193	25 / 3.823	42 / 3.199	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 55.215
2.1.2) Mission Systems - Organic	- / 35.370	- / 4.874	- / 5.742	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 45.986
2.1.3) Propulsion - Organic	- / 114.774	- / 4.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 119.428
2.1.4) Concurrency COD - Organic	- / -	- / -	- / 3.882	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.882
2.1.5) Concurrency - NonOrganic	- / 37.302	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 37.302
Subtotal: Recurring	*- / 235.639*	*- / 13.351*	*- / 12.823*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 261.813*
Subtotal: F-35 STOVL CONCURRENCY (OSIP 023-14)	*- / 390.337*	*50 / 27.205*	*42 / 12.823*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*92 / 430.365*
Subtotal: Procurement, All Modification Items	*- / 390.337*	*- / 27.205*	*- / 12.823*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 430.365*
Support *(All Modification Items)*												
3.1) ILS (Mod Mgmt)	- / 17.470	- / 6.954	- / 3.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 27.522
3.2) Other Support (Over and Above)	- / 9.568	- / 3.039	- / 1.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.872
Subtotal: Support	*- / 27.038*	*- / 9.993*	*- / 4.363*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 41.394*
Installation												
Modification Item 1 of 1: F-35 STOVL CONCURRENCY (OSIP 023-14)	- / 0.000	- / 0.000	- / 16.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 16.000
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 16.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 16.000*
Total												
Total Cost (Procurement + Support + Installation)	**417.375**	**37.198**	**33.186**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**487.759**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 2 / F-35 STOVL CONCURRENCY (OSIP 023-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: F-35 STOVL CONCURRENCY (OSIP 023-14)

Manufacturer Information

Manufacturer Name: Lockheed Martin (3) | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019						
Delivery Dates	Feb 2020						

Installation Information

Method of Implementation: Contract, Depot Activities:: Installation Name: F-35C Concurrency

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	25 / 16.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	25 / 16.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	25 / 16.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	25 / 16.000

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	9	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
Out	-	-	-	-	-	-	-	-	-	-	9	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25

Method of Implementation (Organic): Vehicle Systems | **Installation Quantity:** 67

Footnotes:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 2 / F-35 STOVL CONCURRENCY (OSIP 023-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(2) Cost varies from year to year based on complexity of modifications and aircraft availability to perform modifications as required. FY2021 was determined to be the transition point from concurrency to correction of deficiencies. Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration. Install schedule for Vehicle Systems B Kits will occur in line with Structures A Kits schedule. Install costs previously awarded with material costs. For better visibility install costs have been broken out for direct depot funding and contracting strategy change

(3) Quantities and installation dates will vary with each concurrency modification.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	2.500	18.415	115.753	0.000	115.753	101.411	96.955	89.523	61.637	53.769	539.963
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	2.500	18.415	115.753	0.000	115.753	101.411	96.955	89.523	61.637	53.769	539.963
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**2.500**	**18.415**	**115.753**	**0.000**	**115.753**	**101.411**	**96.955**	**89.523**	**61.637**	**53.769**	**539.963**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

F-35 STOVL Correction of Deficiencies provides near and long term improvements to fielded F-35 jets and focuses on correcting documented deficiencies related to safety, maintainability, life limits, and aircraft systems. Funds are required to manage, prepare, process and incorporate Engineering Change Proposals (ECP) to sustain and improve F-35B system operations. Artisans at the organic depot and contractor field teams perform the installation of these modifications and selected component changes into the Air System. In order to meet emerging deficiencies, the airframe and integrated systems require modifications to resolve the identified deficiencies.

This major thrust under this OSIP is structural life limited parts 2 (SLLP) deficiencies. The SLLP2 program focuses on resolving identified life limits between 2,000 and 4,000 flight hours. Currently, 30 ECPs make up the SLLP2 program scope, requiring a retrofit solution to remove the life limit constraint. In FY2021, the following SLLP2 engineering change proposals are planned to execute Non-Recurring Engineering and tooling efforts: Vertical Tail Forward Shear Fitting Bushing Wear, Horizontal Tail retrofit mod, Vertical Tail Rudder Hinge two bracket, FS402 and 365 limited life modifications, F1 Aft Fuel Floor, FS-472 Bulkhead, FS-496 Bulkhead, FS-425 Bulkhead, Nacelle ventilation inlets, and Wing Front Spar. Prior to the transition to the Correction of Deficiencies OSIP in FY20, previous years SLLP2 ECP Non-Recurring Engineering and material procurements completed under the concurrency OSIP 24-14. 20 of the 30 engineering change proposals have completed engineering and initial material procurement for FY2021 installs. Material procurement for SLLP 2 will continue throughout the Future Years Defense Program (FYDP). The retrofit ECP effectivity of SLLP modification deficiencies vary, ranging from a low of 17 aircraft to a high of 161 aircraft that will undergo installation.

In FY2021 and continuing through the FYDP, Laser Shock Peening (LSP) stood-up at Fleet Readiness Center-East to resolve three ECPs on the F-35B aircraft. The three LSP ECPs are located on the FS-472 Bulkhead, FS-496 Bulkhead, and the Wing Rear Spar. Laser shock peening is a process where a unique high-energy laser is fired at an ablative material on the surface of a metal part to generate pressure pulses up to one million pounds per square inch, which send shock waves through the part. Multiple firings of the laser in a pre-defined surface pattern will impart a layer of residual compressive stress that is up to four times deeper than that attainable from conventional peening treatments. Deeper levels of compressive stress provide greater resistance to potential fatigue and corrosion failures.

Additionally, this OSIP covers the SLLP2 follow-on program known as SLLP3. SLLP3 is the follow on effort to resolve life limits from 4,000 to 8,000 hours, enabling the aircraft to meet full life of 8,000 flight hours. The SLLP3 program starts Non-Recurring Engineering and material buys in FY2023-FY2025.

The program is still establishing the full scope of modifications for both SLLP2 and SLLP3. Teardown of full-scale durability test assets completed in October 2018 with analysis continuing through FY2020. The program expects to identify additional Engineering Change Proposals during analysis and through continued fleet operations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Significant increase in funding under this OSIP in FY2021 is required to support Structural Life Limited Mods material, installation labor and associated support costs across two US organic Depots for F-35B inductions. This includes modifications management, depot site support, and depot over and above activities. Over and above tasks consist of supplementary actions necessary to safely return inducted aircraft to flight status prior to completing the modification event. This includes but not limited to the resolution for the discovery of unknown conditions during the modification, Unit level modification efforts and Production Aircraft Inspection Requirements completed at the depot, and associated activities to induct and deliver an aircraft from the depot.

Failure to fund or a decrease in funds will result in aircraft overflying projected life limits, resulting in increased field maintenance inspections, increase in unscheduled aircraft downtime due to identified repairs, and potential aircraft grounding.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)												
A Kits												
Recurring												
1.1.1) Structures A kits - NonOrganic [4]	- / -	- / -	43 / 14.533	45 / 14.883	- / -	45 / 14.883	44 / 10.126	53 / 8.816	47 / 7.492	49 / 7.965	- / -	281 / 63.815
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / 14.533*	*- / 14.883*	*- / -*	*- / 14.883*	*- / 10.126*	*- / 8.816*	*- / 7.492*	*- / 7.965*	*- / 0.000*	*- / 63.815*
B Kits												
Recurring												
2.1.1) Vehicle Systems - Organic [5]	- / -	- / -	- / -	45 / 5.900	- / -	45 / 5.900	44 / 4.500	45 / 4.553	32 / 3.807	21 / 1.293	- / -	187 / 20.053
2.1.2) Mission Systems - Organic [6]	- / -	- / -	- / -	45 / 6.834	- / -	45 / 6.834	44 / 5.382	45 / 5.440	32 / 2.622	21 / 1.260	- / -	187 / 21.538
2.1.3) Correction of Deficiencies (B Kits) - Organic	- / -	36 / 2.500	27 / 3.882	45 / 7.637	- / -	45 / 7.637	- / -	- / -	- / -	- / -	- / -	108 / 14.019
Subtotal: Recurring	*- / 0.000*	*- / 2.500*	*- / 3.882*	*- / 20.371*	*- / -*	*- / 20.371*	*- / 9.882*	*- / 9.993*	*- / 6.429*	*- / 2.553*	*- / 0.000*	*- / 55.610*
Subtotal: F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)	*- / -*	*36 / 2.500*	*70 / 18.415*	*180 / 35.254*	*- / -*	*180 / 35.254*	*132 / 20.008*	*143 / 18.809*	*111 / 13.921*	*91 / 10.518*	*- / -*	*763 / 119.425*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 2.500*	*- / 18.415*	*- / 35.254*	*- / -*	*- / 35.254*	*- / 20.008*	*- / 18.809*	*- / 13.921*	*- / 10.518*	*- / 0.000*	*- / 119.425*
Support *(All Modification Items)*												
3.1) ILS [7]	- / -	- / -	- / -	- / 12.460	- / -	- / 12.460	- / 12.620	- / 12.872	- / 12.850	- / 6.439	- / 6.568	- / 63.809
3.2) Other Support - LSP Site Support [8]	- / -	- / -	- / -	- / 6.000	- / -	- / 6.000	- / 6.530	- / 6.560	- / 6.590	- / 4.521	- / 4.611	- / 34.812
3.3) Other - Depot Site Support [9]	- / -	- / -	- / -	- / 11.550	- / -	- / 11.550	- / 12.000	- / 11.158	- / 10.570	- / 10.000	- / 10.200	- / 65.478
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 30.010*	*- / -*	*- / 30.010*	*- / 31.150*	*- / 30.590*	*- / 30.010*	*- / 20.960*	*- / 21.379*	*- / 164.099*
Installation												
Modification Item 1 of 1: F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)	- / 0.000	- / 0.000	- / 0.000	- / 50.489	- / 0.000	- / 50.489	- / 50.253	- / 47.556	- / 45.592	- / 30.159	- / 32.390	- / 256.439
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 50.489*	*- / -*	*- / 50.489*	*- / 50.253*	*- / 47.556*	*- / 45.592*	*- / 30.159*	*- / 32.390*	*- / 256.439*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**2.500**	**18.415**	**115.753**	**0.000**	**115.753**	**101.411**	**96.955**	**89.523**	**61.637**	**53.769**	**539.963**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026

Installation Information

Method of Implementation: Contractor Depot:: Installation Name: Structures A kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	43 / 50.489	0 / 0.000	43 / 50.489	- / -	- / -	- / -	- / -	0 / 0.000	43 / 50.489
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	45 / 50.253	- / -	- / -	- / -	0 / 0.000	45 / 50.253
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 47.556	- / -	- / -	0 / 0.000	44 / 47.556
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 45.592	- / -	0 / 0.000	53 / 45.592
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 30.159	0 / 0.000	47 / 30.159
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	49 / 32.390	49 / 32.390
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	43 / 50.489	0 / 0.000	43 / 50.489	45 / 50.253	44 / 47.556	53 / 45.592	47 / 30.159	49 / 32.390	281 / 256.439

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	15	14	14	-	15	15	15	-	15	15	14	-	18	18	17	-	16	16	15	49	281
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	14	14	-	15	15	15	-	15	15	14	-	18	18	17	96	281

Method of Implementation (Organic): Vehicle Systems | **Installation Quantity:** 187

Method of Implementation (Organic): Mission Systems | **Installation Quantity:** 187

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 3 / F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: F-35 STOVL CORRECTION OF DEFICIENCIES (OSIP 004-19)		
Installation Information		
Method of Implementation (Organic): Correction of Deficiencies (B Kits)	**Installation Quantity:** 108	

Footnotes:

(4) Cost varies from year to year based on complexity of modifications and aircraft availability to perform modifications as required. Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration. Cost to complete and quantity to complete vary from year to year depending on the number of ECPS that have been added.

(5) Cost to complete and quantity to complete vary from year to year depending on number ECPs that have been approved.

(6) Cost to complete and quantity to complete vary from year to year depending on number ECPs that have been approved.

(7) Integrated Logistics Support consists of tooling and NRE for the 10 remaining ECPs as well as recurring modification management support and depot planning for USMCs portion of the enterprise cost share; cost remain steady through the FYDP to continue NRE efforts on SLLP3 and other correction of deficiency modifications.

(8) FY2021 standup of Laser Shock Peening (LSP) for the USMC F-35B models requires contractor support to operate the equipment at FRC-E; funding required to obtain the manpower since it can't be operated organically and equipment is owned by the contractor.

(9) Depot Site Support is the USMCs cost share allocation for contractor support at the Organic depots and includes but not limited to field service representatives, field service engineers, support equipment, ALIS, and supply personnel; this cost is based on the percentage of USMC inductions compared to the rest of the inductions at the Organic depot; USMC cost are higher since they will be the primary customer at Fleet Readiness Center-East.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 4 / F-35 STOVL PROPULSION (OSIP 010-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	7.697	3.840	0.000	3.840	2.898	4.445	7.405	6.537	1.770	34.592
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	7.697	3.840	0.000	3.840	2.898	4.445	7.405	6.537	1.770	34.592
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**7.697**	**3.840**	**0.000**	**3.840**	**2.898**	**4.445**	**7.405**	**6.537**	**1.770**	**34.592**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Propulsion Program is established for the correction of engine related readiness degraders impacting F-35 STOVL Reliability Maintainability and Availability (RM&A), production deficiencies, obsolescence, and reduction
of life-cycle costs. These modifications (MODs) will be accomplished by field or depot retrofit and implemented to coincide with resources and aircraft availability. In order to meet the goal of increasing readiness, the propulsion
systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals. The reliability and readiness initiatives included in the proposed
OSIP are projected to have a significant positive impact to the F-35 STOVL F-135 engine.

Reduction in costs based on updated cost estimates and updated Original Equipment Manufacturer (OEM) proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 4 / F-35 STOVL PROPULSION (OSIP 010-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Engine Related Modifications	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.1) Propulsion B Kits - NonOrganic (10) *Installation 1 of 1*	- / -	- / -	85 / 7.397	38 / 1.994	- / -	38 / 1.994	35 / 1.788	63 / 3.412	102 / 5.716	71 / 3.920	- / -	394 / 24.227
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 7.397*	*- / 1.994*	*- / -*	*- / 1.994*	*- / 1.788*	*- / 3.412*	*- / 5.716*	*- / 3.920*	*- / 0.000*	*- / 24.227*
Support												
3.1) Other Support	- / -	- / -	- / 0.300	- / 0.306	- / -	- / 0.306	- / 0.312	- / 0.318	- / 0.324	- / 0.330	- / 0.200	- / 2.090
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.300*	*- / 0.306*	*- / -*	*- / 0.306*	*- / 0.312*	*- / 0.318*	*- / 0.324*	*- / 0.330*	*- / 0.200*	*- / 2.090*
Installation												
Installation 1 of 1: Propulsion B Kits	- / -	- / -	- / -	- / 1.540	- / 0.000	- / 1.540	- / 0.798	- / 0.715	- / 1.365	- / 2.287	- / 1.570	- / 8.275
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 1.540*	*- / -*	*- / 1.540*	*- / 0.798*	*- / 0.715*	*- / 1.365*	*- / 2.287*	*- / 1.570*	*- / 8.275*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**7.697**	**3.840**	**0.000**	**3.840**	**2.898**	**4.445**	**7.405**	**6.537**	**1.770**	**34.592**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 4 / F-35 STOVL PROPULSION (OSIP 010-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: Propulsion B Kits

Manufacturer Information

Manufacturer Name: Pratt Whitney [11] | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: Organic Depot:: Installation Name: Propulsion B Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	85 / 1.540	0 / 0.000	85 / 1.540	- / -	- / -	- / -	- / -	0 / 0.000	85 / 1.540
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	38 / 0.798	- / -	- / -	- / -	0 / 0.000	38 / 0.798
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.715	- / -	- / -	0 / 0.000	35 / 0.715
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	63 / 1.365	- / -	0 / 0.000	63 / 1.365
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	102 / 2.287	0 / 0.000	102 / 2.287
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 1.570	71 / 1.570
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	85 / 1.540	0 / 0.000	85 / 1.540	38 / 0.798	35 / 0.715	63 / 1.365	102 / 2.287	71 / 1.570	394 / 8.275

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	22	21	21	21	10	9	9	10	8	9	9	9	16	15	16	16	26	25	25	26	71	394
Out	-	-	-	-	-	-	-	-	-	-	22	21	21	21	10	9	9	10	8	9	9	9	16	15	16	16	26	25	25	97	394

Footnotes:

[10] Quantities reflect multiple Engineering Change Proposals (ECPs) for propulsion including and are not a one for one relationship to the aircraft. Modifications include: Lift Fan Interstage Vane (Lift Fan ISV), Dual Vane Pump, v9.4 Controller, Main Fuel Throttle Valve, CNAS Actuator, lock wireless fittings, and Multi-Attitude Dearator.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 4 / F-35 STOVL PROPULSION (OSIP 010-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(11) Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	4.007	28.835	0.000	28.835	65.195	161.777	160.059	155.091	118.205	693.169
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	4.007	28.835	0.000	28.835	65.195	161.777	160.059	155.091	118.205	693.169
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**4.007**	**28.835**	**0.000**	**28.835**	**65.195**	**161.777**	**160.059**	**155.091**	**118.205**	**693.169**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Block 4 Program is established to retrofit advanced capabilities on the F-35Bs to increase the capability and lethality of the weapon system to meet current and future threats. Funding is required to upgrade Low Rate Initial Production (LRIP) Lots 9-16, totaling 127 aircraft to a Lot 17 Production configuration. Block 4 incorporation will not follow the traditional Block upgrade approach; instead, modifications will be performed through a Continuous Capability Development and Delivery Concept that entails upgrades to both hardware and software on fielded aircraft on a yearly base. The current modification incorporation schedule synchronizes with planned production cut-in below, except planned installs for Lot 15 capabilities in 2024. This effort includes, but not limited to the below capabilities and associated modification install timelines:

2021(Lot 13) - Weapons Bay and Magazine Retainer Plate
- Weapons Bay Modification - increases the weapons bay carrying volume to accommodate the Small Diameter Bomb II and Block 4 weapons
- Chaff and Flare Magazine Retainer Plate - provides the capability for programmable expendables, programmable magazine load-outs, programmable emergency jettison and quicker inventory

2022(Lot 14) - High-efficiency low voltage power supply (HE-LVPS) and Digital Channelized Receiver / Techniques Generator (DCRTG)
- Adds high efficiency-low voltage power and a second DCRTG to the Electronic Warfare system

2023(Lot 15) - Technical Refresh 3 (TR3), Next Generation Distributed Aperture System (Next Gen DAS), Cooling Mod, and Advanced Communication, Navigation, Identification Processor
- TR3 -integrates new integrated core processor, panoramic cockpit display, and aircraft memory system to meet Block 4 processing, memory, and throughput requirements
- Next Gen DAS - replaces current DAS due to sensor reliability while increasing performance to provide larger pixel focal plane array and higher operating temperatures
- Cooling Mod - increases cooling capacity to support electronic warfare growth and addition of Full Motion Video (FMV)

2024(Lot 16) - Full Motion Video, Embedded GPS and Inertial Navigation System (EGI), Modernized Electronic Warfare Controller(M-EWC), and Modernized Electronic Warfare Processor (M-EWP)
- Full Motion Video - adds the capability to receive encrypted and unencrypted full motion video and still imagery from Operational Facilities and Remote Video Terminals
- EGI - hardware enabler for M-Code/Automatic Dependent Surveillance-Broadcast/Required Navigation Performance/area navigation capabilities
- EWC/EWP - increases 8 core processors (SDD) to 32 providing more than 3 times the processing performance for running advance algorithms and supporting the transition from 12 Receivers (SDD) to 20 Receivers

2025(Lot 17) - Advanced Multi Channel Transceiver Receiver (AMCTR), Band 2/3/4/5 Electronic Warfare (EW) Hardware (HW) and EW Group 2

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

- AMCTR - provides MIDS Modernization Increment 1 (MMI) Concurrent Multi-Netting (CMN) and Concurrent Contention Receive (CCR) capabilities
- Band 2/3/4/5 EW HW - provides Band 2&5 RWR functionality by adding Band 2 Nose Landing Gear Door (NLGD) Aperture, Band 3/4 NLGD Aperture, Band 2/3/4 Array Electronic Module (AEM), Band 3/4/5 AEM, Band 5 Apertures, and Band 5 AEM
- EW Group 2 - adds technology to address the Advancing Threats, to detect and counter the LPI Emitter while providing Band 5 RWR functionality; includes Wideband Receiver, Wideband Notch Filter, Band 2/5 Switch Matrix Module, Aircraft Interface Module (ACIF), M-Quad Upconverter (M-QUC), M-Quad Tuner (M-QTM), M-Digital Channelized Receiver (DCR), M-DCR and Techniques Receiver (DCRTG), M-Analog-to-Digital Converter (ADC), M-Radio Frequency Converter, High Voltage Power Supply (HVPS)

Unit, organic depot, or contractor field teams will complete the modification installs to coincide with resources and aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Block 4 A Kits - Band 2/5 - NonOrganic *Installation 1 of 8*	- / -	- / -	- / -	3 / 1.070	- / -	3 / 1.070	1 / 0.360	1 / 0.367	1 / 0.375	- / -	- / -	6 / 2.172
1.1.2) Block 4 A Kits - Weapons Bay - NonOrganic *Installation 2 of 8*	- / -	- / -	63 / 0.930	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	63 / 0.930
1.1.3) Block 4 A Kits - Mag Retainer Plate/ Rack 2 IBA - NonOrganic *Installation 3 of 8*	- / -	- / -	18 / 0.340	26 / 0.490	- / -	26 / 0.490	19 / 0.360	- / -	- / -	- / -	- / -	63 / 1.190
2.1.1) Block 4 B Kits (Lot 14) - NonOrganic (12) *Installation 4 of 8*	- / -	- / -	25 / 1.737	35 / 2.432	- / -	35 / 2.432	25 / 1.737	- / -	- / -	- / -	- / -	85 / 5.906
2.1.2) Block 4 B Kits (Lot 15) - NonOrganic *Installation 5 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	12 / 20.568	21 / 35.995	19 / 32.567	27 / 46.279	16 / 27.424	95 / 162.833
2.1.3) Block 4 B Kits (Lot 16) - NonOrganic *Installation 6 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	23 / 13.198	21 / 12.050	20 / 11.476	29 / 16.640	17 / 9.755	110 / 63.119
2.1.4) Block 4 B Kits (Lot 17) - NonOrganic *Installation 7 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 100.188	39 / 97.683	29 / 72.636	19 / 47.589	127 / 318.096
2.1.5) Block 4 B Kits (DTIP DMS) - NonOrganic *Installation 8 of 8*	- / -	- / -	- / -	4 / 6.920	- / -	4 / 6.920	2 / 3.460	2 / 3.460	3 / 5.190	3 / 5.190	1 / 1.730	15 / 25.950
2.2.1) Block 4 NRE - NonOrganic(*)	- / -	- / -	- / 0.500	- / 1.430	- / -	- / 1.430	- / 2.200	- / 1.181	- / 1.178	- / 0.870	- / -	- / 7.359
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 3.507*	*- / 12.342*	*- / -*	*- / 12.342*	*- / 41.883*	*- / 153.241*	*- / 148.469*	*- / 141.615*	*- / 86.498*	*- / 587.555*
Support												
3.1) ILS	- / -	- / -	- / 0.500	- / 3.283	- / -	- / 3.283	- / 4.141	- / 4.224	- / 5.202	- / 5.306	- / -	- / 22.656
3.2) Other Support - Tooling Capacity for Mods	- / -	- / -	- / -	- / 4.260	- / -	- / 4.260	- / 16.485	- / -	- / -	- / -	- / -	- / 20.745
Subtotal: Support	*- / 0.000*	*- / -*	*- / 0.500*	*- / 7.543*	*- / -*	*- / 7.543*	*- / 20.626*	*- / 4.224*	*- / 5.202*	*- / 5.306*	*- / 0.000*	*- / 43.401*
Installation												
Installation 1 of 8: Block 4 A Kits - Band 2/5	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.496	- / 0.543	- / 0.154	- / 0.157	- / 2.350
Installation 2 of 8: Block 4 A Kits - Weapons Bay	- / -	- / -	- / -	- / 7.792	- / 0.000	- / 7.792	- / -	- / -	- / -	- / -	- / 0.000	- / 7.792
Installation 3 of 8: Block 4 A Kits - Mag Retainer Plate/ Rack 2 IBA	- / -	- / -	- / -	- / 1.158	- / 0.000	- / 1.158	- / 0.938	- / 0.548	- / -	- / -	- / 0.000	- / 2.644
Installation 4 of 8: Block 4 B Kits (Lot 14)	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.748	- / 2.132	- / 1.748	- / -	- / 0.000	- / 5.628
Installation 5 of 8: Block 4 B Kits (Lot 15)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.328	- / 2.323	- / 15.716	- / 19.367
Installation 6 of 8: Block 4 B Kits (Lot 16)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.556	- / 2.230	- / 7.590	- / 12.376
Installation 7 of 8: Block 4 B Kits (Lot 17)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.155	- / 7.187	- / 10.342
Installation 8 of 8: Block 4 B Kits (DTIP DMS)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.136	- / 0.213	- / 0.308	- / 1.057	- / 1.714

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Subtotal: Installation	- / 0.000	- / -	- / -	- / 8.950	- / -	- / 8.950	- / 2.686	- / 4.312	- / 6.388	- / 8.170	- / 31.707	- / 62.213
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**4.007**	**28.835**	**0.000**	**28.835**	**65.195**	**161.777**	**160.059**	**155.091**	**118.205**	**693.169**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 8: Block 4 A Kits - Band 2/5

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates			Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 A Kits - Band 2/5

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.496	- / -	- / -	0 / 0.000	3 / 1.496
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.543	- / -	0 / 0.000	1 / 0.543
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.154	0 / 0.000	1 / 0.154
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.157	1 / 0.157
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.496	1 / 0.543	1 / 0.154	1 / 0.157	6 / 2.350

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	-	-	-	1	-	-	1	6
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	-	-	2	6

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 8: Block 4 A Kits - Weapons Bay

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020					
Delivery Dates		Jan 2021					

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 A Kits - Weapons Bay

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	63 / 7.792	0 / 0.000	63 / 7.792	- / -	- / -	- / -	- / -	0 / 0.000	63 / 7.792
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	63 / 7.792	0 / 0.000	63 / 7.792	- / -	- / -	- / -	- / -	0 / 0.000	63 / 7.792

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	21	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-	63

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 8: Block 4 A Kits - Mag Retainer Plate/ Rack 2 IBA

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022			
Delivery Dates		Jan 2021	Jan 2022	Jan 2023			

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 A Kits - Mag Retainer Plate/ Rack 2 IBA

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	18 / 1.158	0 / 0.000	18 / 1.158	- / -	- / -	- / -	- / -	0 / 0.000	18 / 1.158
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.938	- / -	- / -	- / -	0 / 0.000	26 / 0.938
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.548	- / -	- / -	0 / 0.000	19 / 0.548
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	18 / 1.158	0 / 0.000	18 / 1.158	26 / 0.938	19 / 0.548	- / -	- / -	0 / 0.000	63 / 2.644

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	6	6	6	-	9	9	8	-	7	6	6	-	-	-	-	-	-	-	-	-	63
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	-	9	9	8	-	7	6	6	-	-	-	-	-	63

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 4 of 8: Block 4 B Kits (Lot 14)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Dec 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: [none specified]:: Installation Name: Block 4 B Kits (Lot 14)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.748	- / -	- / -	- / -	0 / 0.000	25 / 1.748
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 2.132	- / -	- / -	0 / 0.000	35 / 2.132
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.748	- / -	0 / 0.000	25 / 1.748
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.748	35 / 2.132	25 / 1.748	- / -	0 / 0.000	85 / 5.628

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	8	8	-	12	12	11	-	9	8	8	-	-	-	-	-	85
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	8	8	-	12	12	11	-	9	8	8	-	85

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 5 of 8: Block 4 B Kits (Lot 15)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates				Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 B Kits (Lot 15)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.328	- / -	0 / 0.000	12 / 1.328
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 2.323	0 / 0.000	21 / 2.323
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 2.116	19 / 2.116
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 3.014	27 / 3.014
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 10.586	16 / 10.586
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.328	21 / 2.323	62 / 15.716	95 / 19.367

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	-	7	7	7	62	95
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	83	95

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 6 of 8: Block 4 B Kits (Lot 16)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates				Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 B Kits (Lot 16)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.556	- / -	0 / 0.000	23 / 2.556
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 2.230	0 / 0.000	21 / 2.230
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 2.183	20 / 2.183
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 3.229	29 / 3.229
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 2.178	17 / 2.178
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.556	21 / 2.230	66 / 7.590	110 / 12.376

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	7	-	7	7	7	66	110
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	7	87	110

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 7 of 8: Block 4 B Kits (Lot 17)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Jan 2023	Jan 2024	Jan 2025
Delivery Dates					Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 B Kits (Lot 17)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.155	0 / 0.000	40 / 3.155
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 3.138	39 / 3.138
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.427	29 / 2.427
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 1.622	19 / 1.622
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.155	87 / 7.187	127 / 10.342

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	13	13	87	127
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	127	127

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 5 / F-35 STOVL BLOCK 4 UPGRADE (OSIP 012-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 8 of 8: Block 4 B Kits (DTIP DMS)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates			Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Block 4 B Kits (DTIP DMS)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.136	- / -	- / -	0 / 0.000	4 / 0.136
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.213	- / -	0 / 0.000	2 / 0.213
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.308	0 / 0.000	2 / 0.308
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.455	3 / 0.455
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.446	3 / 0.446
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.156	1 / 0.156
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.136	2 / 0.213	2 / 0.308	7 / 1.057	15 / 1.714

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	1	1	-	-	1	1	-	7	15
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	1	1	-	9	15

Footnotes:

(12) In FY21, Weapons bay modification is the only depot level mod across 63 aircraft; other items procured in 2020/2021 timeframe are installed by unit personnel.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 6 / F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	5.160	0.000	5.160	13.514	15.032	21.229	2.998	0.000	57.933
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	5.160	0.000	5.160	13.514	15.032	21.229	2.998	0.000	57.933
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**5.160**	**0.000**	**5.160**	**13.514**	**15.032**	**21.229**	**2.998**	**0.000**	**57.933**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program is established for the correction of readiness degraders impacting F-35 STOVL cost per flight hour, Reliability Maintainability and Availability (RM&A), obsolescence, and reduction
of life-cycle costs. These modifications will be accomplished by field mod team and implemented to coincide with resources and aircraft availability.

In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP's). Individual ECPs will be listed once identified. The reliability and readiness initiatives included in the proposed OSIP are projected to have a significant positive impact to the F-35 STOVL Aircraft platform. Reliability and maintainability efforts started in FY2019 resulted from the Secretary of Defense's 80% Mission Capability mandate. These efforts are used to close the gap to 80% or further improve the reliability and maintainability of the weapon system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 6 / F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 STOVL	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800M, 0604840M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)												
A Kits												
Recurring												
1.1.1) Reliability and Maintainability (A Kits) - Organic (13)	- / -	- / -	- / -	50 / 2.548	- / -	50 / 2.548	81 / 4.054	90 / 4.510	127 / 6.369	17 / 0.899	- / -	365 / 18.380
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 2.548*	*- / -*	*- / 2.548*	*- / 4.054*	*- / 4.510*	*- / 6.369*	*- / 0.899*	*- / 0.000*	*- / 18.380*
B Kits												
Recurring												
2.1.1) Reliability and Maintainability (B Kits) - Organic (14)	- / -	- / -	- / -	50 / 2.412	- / -	50 / 2.412	81 / 9.060	90 / 10.122	127 / 14.460	17 / 2.000	- / -	365 / 38.054
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 2.412*	*- / -*	*- / 2.412*	*- / 9.060*	*- / 10.122*	*- / 14.460*	*- / 2.000*	*- / 0.000*	*- / 38.054*
Subtotal: F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)	*- / -*	*- / -*	*- / -*	*100 / 4.960*	*- / -*	*100 / 4.960*	*162 / 13.114*	*180 / 14.632*	*254 / 20.829*	*34 / 2.899*	*- / -*	*730 / 56.434*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / 4.960*	*- / -*	*- / 4.960*	*- / 13.114*	*- / 14.632*	*- / 20.829*	*- / 2.899*	*- / 0.000*	*- / 56.434*
Support *(All Modification Items)*												
3.1) Other Support (15)	- / -	- / -	- / -	- / 0.200	- / -	- / 0.200	- / 0.400	- / 0.400	- / 0.400	- / 0.099	- / -	- / 1.499
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 0.200*	*- / -*	*- / 0.200*	*- / 0.400*	*- / 0.400*	*- / 0.400*	*- / 0.099*	*- / 0.000*	*- / 1.499*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**5.160**	**0.000**	**5.160**	**13.514**	**15.032**	**21.229**	**2.998**	**0.000**	**57.933**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0592 / F-35 STOVL Series	**Modification Number / Title:** 6 / F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: F-35 STOVL RELIABILITY AND MAINTAINABILITY (OSIP 009-21)		

Footnotes:

(13) Unit level install supporting weapons bay mod. No install costs associated with this OSIP.

(14) Cost varies from year to year based on complexity of modifications and aircraft availability to perform modifications as required. High quantities due to Reliability and Maintainability (R&M) projects are projected to be numerous small ECP's that can occur quickly and be installed at the organic/unit level. All support costs were covered under Concurrency (OSIP 004-19). The B Kits Correction of Deficiencies were unit level installs and had no costs associated with the B Kits.

(15) Other Support required to manage aircraft modification, as the increase in modifications takes place, more Other Support funding is required.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0604800N, 0604840N	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 198

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	153.342	25.483	15.358	105.452	0.000	105.452	98.847	178.094	172.164	177.534	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	153.342	25.483	15.358	105.452	0.000	105.452	98.847	178.094	172.164	177.534	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**153.342**	**25.483**	**15.358**	**105.452**	**0.000**	**105.452**	**98.847**	**178.094**	**172.164**	**177.534**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-35 Joint Strike Fighter (JSF) Program will develop and deploy a family of highly common, affordable, next generation, stealthy, multi-role strike fighters that meet the needs of multiple services and countries. The United States Navy Carrier Variant (CV) correction of deficiencies effort provides near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are being accomplished by field and depot retrofit.

In order to meet emerging deficiencies the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate concurrency changes to sustain and improve F-35C system operations.

Block upgrades provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the F-35C platform. This modification program will bring early production aircraft and integrated systems to a common fleet configuration as fielded capabilities evolve over the course of the F-35 program. The increase of modification funding in FY2021 enables several distinct efforts pertaining to the USN F-35C aircraft, correction of deficiencies, the block upgrade of hardware and software to a Block 4 configuration, Propulsion, and Reliability and Maintainability efforts.

For the F-35 program, the concurrency OSIP will transition to correction of deficiencies in FY2021. FY2021 funding increased across the FYDP for kits to support Structural Life Limited Parts Group 2 (SLLP2), start of modification efforts to a Block 4 configuration, correction of deficiencies, propulsion, reliability and maintainability modifications in support of global F-35C operations.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
First Navy Deployment is July 2020 to May 2022.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0604800N, 0604840N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 198

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14) (Capability Improvement)				- / 59.884	- / 2.482	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / F-35 CV CONCURRENCY (OSIP 024-14) (Capability Improvement)				- / 93.458	- / 21.787	- / 6.539	- / 1.930	- / 0.000	- / 1.930
P-3a	3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21) (Capability Improvement)				- / 0.000	- / 1.214	- / 1.260	- / 73.458	- / 0.000	- / 73.458
P-3a	4 / F-35 CV PROPULSION (OSIP 013-20) (Engine Related Modifications)				- / 0.000	- / 0.000	- / 4.559	- / 3.359	- / 0.000	- / 3.359
P-3a	5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20) (Capability Improvement)				- / 0.000	- / 0.000	- / 3.000	- / 23.735	- / 0.000	- / 23.735
P-3a	6 / F-35 CV RELIABILITY AND MAINTAINABILITY (OSIP 002-21) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 2.970	- / 0.000	- / 2.970
P-40	**Total Gross/Weapon System Cost**				**- / 153.342**	**- / 25.483**	**- / 15.358**	**- / 105.452**	**- / 0.000**	**- / 105.452**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 62.366
P-3a	2 / F-35 CV CONCURRENCY (OSIP 024-14) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 123.714
P-3a	3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21) (Capability Improvement)				- / 63.070	- / 67.347	- / 66.177	- / 63.514	Continuing	Continuing
P-3a	4 / F-35 CV PROPULSION (OSIP 013-20) (Engine Related Modifications)				- / 2.688	- / 2.123	- / 1.000	- / 1.000	- / 0.400	- / 15.129
P-3a	5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20) (Capability Improvement)				- / 30.339	- / 106.800	- / 103.300	- / 110.300	Continuing	Continuing
P-3a	6 / F-35 CV RELIABILITY AND MAINTAINABILITY (OSIP 002-21) (Capability Improvement)				- / 2.750	- / 1.824	- / 1.687	- / 2.720	- / 0.000	- / 11.951
P-40	**Total Gross/Weapon System Cost**				**- / 98.847**	**- / 178.094**	**- / 172.164**	**- / 177.534**	**Continuing**	**Continuing**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Basis for FY2021 budget request: FY2021 F-35C Total Active Inventory is 54 aircraft. Based on production lots 4-12 aircraft, FY2021 funding increased across the FYDP for kits to support Structural Life Limited Parts Group 2 (SLLP2), start of incremental modification efforts to a Block 4 configuration, correction of deficiencies, propulsion, reliability and maintainability modifications in support of global F-35C operations.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 1 / F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	59.884	2.482	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	62.366
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	59.884	2.482	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	62.366
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**59.884**	**2.482**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**62.366**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The block upgrade program retrofits United States Navy F-35C aircraft and integrated systems procured under the Low Rate Initial Production (LRIP) contracts to a final Block 3F configuration. The final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This effort (OSIP 016-14) focuses on upgrading Blocks 2A and 2B aircraft from LRIPs 4-5 to a Block 3i configuration. Block 3i is a stepping stone to the Block 3F configuration. It includes the procurement of Tech Refresh 2 (TR2) hardware for the Block 3i configuration. The parts include new radar modules, new Integrated Core Processor (ICP) modules and rack, and new Electronic Warfare (EW) modules. The Gen III helmet will also be introduced as part of the Block 3i upgrade. This effort includes tooling and test equipment for Military Service Depots to support execution of the Block Upgrade program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
All aircraft are planned to be upgraded to a 3F configuration by September 2020.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 1 / F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)												
B Kits												
Recurring												
1.1.1) EQUIPMENT Block 3i - NonOrganic (1)	12 / 45.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 45.499
Subtotal: Recurring	*- / 45.499*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 45.499*
Subtotal: F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)	*12 / 45.499*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 45.499*
Subtotal: Procurement, All Modification Items	*- / 45.499*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 45.499*
Support *(All Modification Items)*												
2.1) ILS	- / 4.157	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.157
2.2) Other Support	- / 5.426	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.426
2.3) Training Equipment	- / 3.175	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.175
Subtotal: Support	*- / 12.758*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 12.758*
Installation												
Modification Item 1 of 1: F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)	- / 1.627	- / 2.482	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.109
Subtotal: Installation	*- / 1.627*	*- / 2.482*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.109*
Total												
Total Cost (Procurement + Support + Installation)	**59.884**	**2.482**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**62.366**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 1 / F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: F-35 CV BLOCK 3i/3F UPGRADE (OSIP 016-14)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot Field Team:: Installation Name: Block 3i

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	6 / 1.627	6 / 2.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 4.109
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 1.627	6 / 2.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 4.109

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	6	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Out	6	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12

Footnotes:

(1) Installs costs increased due to acceleration of Tech Refresh (TR-2) in support of mission capability 80% initiative.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 2 / F-35 CV CONCURRENCY (OSIP 024-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	93.458	21.787	6.539	1.930	0.000	1.930	0.000	0.000	0.000	0.000	0.000	123.714
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	93.458	21.787	6.539	1.930	0.000	1.930	0.000	0.000	0.000	0.000	0.000	123.714
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**93.458**	**21.787**	**6.539**	**1.930**	**0.000**	**1.930**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**123.714**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This effort (OSIP 024-14) funds retrofits due to concurrency changes to correct deficiencies tied to the Joint Contract Specification and discovered after DD-250 of the last aircraft in a given production lot. This includes modifications required to extend aircraft service life currently limited by low-life parts and relieve capability limitations driven by concurrency of production with development.

The concurrency funding line will procure concurrency modifications approved at the Joint Configuration Control Board (JCCB) and prioritized within the Modifications Requirements Planning Document (MRPD). The MRPD is vetted and approved by the Services and Partners every 6 months to ensure the list accurately reflects existing requirements as well as emerging issues. Per-kit costs will vary for each modification being implemented, and in some cases, will also vary for aircraft from different LRIP lots to implement an individual modification.

Total cost reflects procurement and installation costs in each fiscal year. Support costs include overall modification program planning, scheduling, and management; and support of Military and Service Depots and Depot Field Teams for incorporation of modifications.

There are currently over 215 identified highest priority modifications throughout the CV fleet using funds from this OSIP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 2 / F-35 CV CONCURRENCY (OSIP 024-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Structures - Organic(*) (2)	- / 50.865	32 / 9.204	22 / 1.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 61.415
2.1.1) Vehicle Systems - NonOrganic *Installation 1 of 1*	- / 14.362	32 / 1.812	22 / 1.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 17.714
2.1.2) Mission Systems - NonOrganic(*)	- / 9.587	- / 2.401	- / 0.971	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.959
2.1.3) Propulsion - NonOrganic(*)	- / 8.741	- / 2.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.506
2.1.4) Concrrency COD - NonOrganic(*)	- / -	- / -	- / 1.341	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.341
2.1.5) Concurrency - Organic(*)	- / 2.336	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.336
Subtotal: Procurement	*- / 85.891*	*- / 16.182*	*- / 5.198*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 107.271*
Support												
3.1) ILS (Mod Mmt)	- / 4.053	- / 2.853	- / 0.083	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.989
3.2) Other Support	- / 3.514	- / 2.752	- / 0.316	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.582
Subtotal: Support	*- / 7.567*	*- / 5.605*	*- / 0.399*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 13.571*
Installation												
Installation 1 of 1: GRP: F-35C Concurrency	- / -	- / -	- / 0.942	- / 1.930	- / 0.000	- / 1.930	- / -	- / -	- / -	- / -	- / 0.000	- / 2.872
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.942*	*- / 1.930*	*- / -*	*- / 1.930*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.872*
Total												
Total Cost (Procurement + Support + Installation)	**93.458**	**21.787**	**6.539**	**1.930**	**0.000**	**1.930**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**123.714**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 2 / F-35 CV CONCURRENCY (OSIP 024-14)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: GRP: F-35C Concurrency

Manufacturer Information

Manufacturer Name: Lockheed Martin [3] | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020					
Delivery Dates	Feb 2020	Feb 2021					

Installation Information

Method of Implementation: Contract, Depot Activities:: Installation Name: F-35C Concurrency

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	32 / 0.942	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	32 / 0.942
FY 2020	- / -	- / -	- / -	22 / 1.930	0 / 0.000	22 / 1.930	- / -	- / -	- / -	- / -	0 / 0.000	22 / 1.930
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	32 / 0.942	22 / 1.930	0 / 0.000	22 / 1.930	- / -	- / -	- / -	- / -	0 / 0.000	54 / 2.872

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	11	11	10	-	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
Out	-	-	-	-	-	-	-	-	-	-	11	11	10	-	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54

Footnotes:

[2] Cost varies from year to year based on complexity of modifications and aircraft availability to perform modifications as required. FY2021 was determined to be the transition point from concurrency to correction of deficiencies. Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration. Install schedule for Vehicle Systems B Kits will occur in line with Structures A Kits schedule.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 2 / F-35 CV CONCURRENCY (OSIP 024-14)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) Quantities and installation dates will vary with each concurrency modification.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	1.214	1.260	73.458	0.000	73.458	63.070	67.347	66.177	63.514	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	1.214	1.260	73.458	0.000	73.458	63.070	67.347	66.177	63.514	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**1.214**	**1.260**	**73.458**	**0.000**	**73.458**	**63.070**	**67.347**	**66.177**	**63.514**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

F-35 CV Correction of Deficiencies provides near and long term improvements to fielded F-35 jets and focuses on correcting documented deficiencies related to safety, maintainability, life limits, and aircraft systems. Funds are required to manage, prepare, process and incorporate Engineering Change Proposals (ECP) to sustain and improve F-35C system operations. Artisans at the organic depot and contractor field teams perform the installation of these modifications and selected component changes into the Air System. In order to meet emerging deficiencies, the airframe and integrated systems require modifications to resolve the identified deficiencies.

This major thrust under this OSIP is structural life limited parts 2 (SLLP) deficiencies. The SLLP2 program focuses on resolving identified life limits between 2,000 and 4,000 flight hours. Currently, 32 ECPs make up the SLLP2 program scope, requiring a retrofit solution to remove the life limit constraint. In FY2021, the following SLLP2 engineering change proposals are planned to execute Non-Recurring Engineering and tooling efforts: FS383 Lower Frame Limited Life, Feed Tank Upper Covers, F2 Fuel Floor, Center Fuselage FS 346 lower frame, Glove Fairing for LRIP 9-10 aircraft, FS-450 Bulkhead, and FS-365 Lower Region parts. Prior to the transition to the Correction of Deficiencies OSIP in FY2020, previous years SLLP2 ECP Non-Recurring Engineering and material procurements completed under the concurrency OSIP 24-14. 21 of the 32 engineering change proposals have completed engineering and initial material procurement for FY2021 installs. Material procurement for SLLP 2 will continue throughout the Future Years Defense Program (FYDP). The retrofit ECP effectivity of SLLP modification deficiencies vary, ranging from a low of 11 aircraft (Lot 4-5) to a high of 51 aircraft (Lots 4-13) that will undergo installation.

In FY2021, Laser Shock Peening (LSP) is planned for standup to induct the first F-35C aircraft at Ogden Air Logistics Center. Laser shock peening is a process where a unique high energy laser is fired at an ablative material on the surface of a metal part to generate pressure pulses up to one million pounds per square inch, which send shock waves through the part. Multiple firings of the laser in a pre-defined surface pattern will impart a layer of residual compressive stress that is up to four times deeper than that attainable from conventional peening treatments. Deeper levels of compressive stress provide greater resistance to potential fatigue and corrosion failures.

Additionally, this OSIP covers the SLLP2 follow-on program known as SLLP3. SLLP3 is the follow on effort to resolve life limits from 4,000 to 8,000 hours, enabling the aircraft to meet full life of 8,000 flight hours. The SLLP3 program starts Non-Recurring Engineering and material buys in FY2023-FY2025.

The program is still establishing the full scope of modifications for both SLLP2 and SLLP3. Teardown of full-scale durability test assets completed in November 2019 with analysis continuing through Q4 2020. The program expects to identify additional Engineering Change Proposals during analysis and through continued fleet operations.

Significant increase in funding under this OSIP in FY2021 is required to support Structural Life Limited Mods material, installation labor and associated support costs across two US organic Depots for F-35C inductions. This includes modifications management, depot site support and depot over and above activities.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Failure to fund or a decrease in funds will result in aircraft overflying projected life limits, resulting in increased field maintenance inspections, increase in unscheduled aircraft downtime due to identified repairs, and potential aircraft grounding.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Structures A kits - NonOrganic *Installation 1 of 3*	- / -	- / -	- / -	28 / 23.120	- / -	28 / 23.120	20 / 8.570	22 / 12.270	28 / 10.771	26 / 9.474	- / -	124 / 64.205
2.1.1) Vehicle Systems - Organic (4) *Installation 2 of 3*	- / -	- / -	- / -	28 / 4.872	- / -	28 / 4.872	20 / 1.407	22 / 1.445	28 / 1.000	26 / 0.550	- / -	124 / 9.274
2.1.2) Mission Systems - NonOrganic(*) (5)	- / -	- / -	- / -	- / 5.600	- / -	- / 5.600	- / 0.533	- / 1.142	- / 1.466	- / 0.650	- / -	- / 9.391
2.1.3) Correction of Deficiencies (B Kits) - NonOrganic *Installation 3 of 3*	- / -	24 / 1.214	22 / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Subtotal: Procurement	*- / 0.000*	*- / 1.214*	*- / 0.774*	*- / 33.592*	*- / -*	*- / 33.592*	*- / 10.510*	*- / 14.857*	*- / 13.237*	*- / 10.674*	*Continuing*	*Continuing*
Support												
3.1) ILS (6)	- / -	- / -	- / -	- / 8.000	- / -	- / 8.000	- / 8.240	- / 8.490	- / 8.740	- / 8.540	- / -	- / 42.010
3.2) Other Support (Depot Site Support) (7)	- / -	- / -	- / -	- / 4.000	- / -	- / 4.000	- / 4.080	- / 4.162	- / 4.245	- / 4.330	- / -	- / 20.817
3.3) Other Support (LSP) (8)	- / -	- / -	- / -	- / 4.200	- / -	- / 4.200	- / 4.284	- / 4.370	- / 4.457	- / 4.546	- / -	- / 21.857
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 16.200*	*- / -*	*- / 16.200*	*- / 16.604*	*- / 17.022*	*- / 17.442*	*- / 17.416*	*- / 0.000*	*- / 84.684*
Installation												
Installation 1 of 3: Structures A kits	- / -	- / -	- / -	- / 22.162	- / 0.000	- / 22.162	- / 35.956	- / 35.468	- / 35.498	- / 35.424	- / 0.000	- / 164.508
Installation 2 of 3: Vehicle Systems	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -
Installation 3 of 3: Correction of Deficiencies (B Kits)	- / -	- / -	- / 0.486	- / 1.504	- / 0.000	- / 1.504	- / -	- / -	- / -	- / -	- / 0.000	- / 1.990
Subtotal: Installation	*- / 0.000*	*- / -*	*- / 0.486*	*- / 23.666*	*- / -*	*- / 23.666*	*- / 35.956*	*- / 35.468*	*- / 35.498*	*- / 35.424*	*- / 0.000*	*- / 166.498*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**1.214**	**1.260**	**73.458**	**0.000**	**73.458**	**63.070**	**67.347**	**66.177**	**63.514**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 3: Structures A kits

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Depot Installation:: Installation Name: Structures A kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	28 / 22.162	0 / 0.000	28 / 22.162	- / -	- / -	- / -	- / -	0 / 0.000	28 / 22.162
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	20 / 35.956	- / -	- / -	- / -	0 / 0.000	20 / 35.956
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 35.468	- / -	- / -	0 / 0.000	22 / 35.468
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 35.498	- / -	0 / 0.000	28 / 35.498
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 35.424	0 / 0.000	26 / 35.424
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	28 / 22.162	0 / 0.000	28 / 22.162	20 / 35.956	22 / 35.468	28 / 35.498	26 / 35.424	0 / 0.000	124 / 164.508

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	-	-	-	-	-	10	9	9	-	7	7	6	-	8	7	7	-	10	9	9	-	9	9	8	-	124
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	9	9	-	7	7	6	-	8	7	7	-	10	9	9	26	124

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 3: Vehicle Systems

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Vehicle Systems

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.000	6 / 0.000	- / -	- / -	0 / 0.000	22 / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.000	3 / 0.000	- / -	0 / 0.000	18 / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.000	2 / 0.000	0 / 0.000	13 / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.000	2 / 0.000	11 / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 0.000	25 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.000	21 / 0.000	14 / 0.000	11 / 0.000	27 / 0.000	89 / -

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	6	6	5	5	5	3	4	4	3	2	3	3	3	27	89
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	6	6	5	5	5	3	4	4	3	2	3	3	30	89

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 3 of 3: Correction of Deficiencies (B Kits)

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020					
Delivery Dates	Feb 2020	Feb 2021					

Installation Information

Method of Implementation: Contract, Depot:: Installation Name: Correction of Deficiencies (B Kits)

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	24 / 0.486	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 0.486
FY 2020	- / -	- / -	- / -	22 / 1.504	0 / 0.000	22 / 1.504	- / -	- / -	- / -	- / -	0 / 0.000	22 / 1.504
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	24 / 0.486	22 / 1.504	0 / 0.000	22 / 1.504	- / -	- / -	- / -	- / -	0 / 0.000	46 / 1.990

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	12	12	-	-	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
Out	-	-	-	-	-	-	-	-	-	-	12	12	-	-	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46

Footnotes:

(4) Install schedule for Vehicle Systems B Kits will occur in line with Structures A Kits schedule. Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration.

(5) Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 3 / F-35 CV CORRECTION OF DEFICIENCIES (OSIP 001-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(6) Integrated Logistics Support consists of tooling and NRE for the 11 remaining ECPs as well as recurring modification management support and depot planning for USN's portion of the enterprise cost share.

(7) Depot Site Support is the Navys cost share allocation for contractor support at the Organic depots and includes but not limited to field service representatives, field service engineers, support equipment, ALIS, and supply personnel; this cost is based on the percentage of Navy inductions compared to the rest of the inductions at the Organic depot.

(8) FY2021 standup of laser shock peening (LSP) for the USN F-35C models requires contractor support to operate the equipment at Ogden Air Logistics Center; funding required to obtain the manpower since it cannot be operated organically and equipment is owned by the contractor.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 4 / F-35 CV PROPULSION (OSIP 013-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	4.559	3.359	0.000	3.359	2.688	2.123	1.000	1.000	0.400	15.129
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	4.559	3.359	0.000	3.359	2.688	2.123	1.000	1.000	0.400	15.129
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**4.559**	**3.359**	**0.000**	**3.359**	**2.688**	**2.123**	**1.000**	**1.000**	**0.400**	**15.129**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Propulsion Program is established for the correction of engine related readiness degraders impacting F-35 CV Reliability Maintainability and Availability (RM&A), production deficiencies, obsolescence, and reduction
of life-cycle costs. These modifications (MODs) will be accomplished by field or depot retrofit and implemented to coincide with resources and aircraft availability. In order to meet the goal of increasing readiness, the propulsion
systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals. The reliability and readiness initiatives included in the proposed
OSIP are projected to have a significant positive impact to the F-35 CV F-135 engine.

Reduction in costs based on updated cost estimates and updated Original Equipment Manufacturer (OEM) proposals.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 4 / F-35 CV PROPULSION (OSIP 013-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Engine Related Modifications	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
2.1.1) Propulsion B Kits - NonOrganic (9) *Installation 1 of 1*	- / -	- / -	54 / 4.559	30 / 2.124	- / -	30 / 2.124	53 / 1.929	43 / 0.886	20 / 0.099	20 / 0.426	- / -	220 / 10.023
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 4.559*	*- / 2.124*	*- / -*	*- / 2.124*	*- / 1.929*	*- / 0.886*	*- / 0.099*	*- / 0.426*	*- / 0.000*	*- / 10.023*
Support												
3.1) Other Support	- / -	- / -	- / -	- / 0.150	- / -	- / 0.150	- / 0.156	- / 0.162	- / 0.052	- / 0.174	- / -	- / 0.694
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 0.150*	*- / -*	*- / 0.150*	*- / 0.156*	*- / 0.162*	*- / 0.052*	*- / 0.174*	*- / 0.000*	*- / 0.694*
Installation												
Installation 1 of 1: Propulsion B Kits	- / -	- / -	- / -	- / 1.085	- / 0.000	- / 1.085	- / 0.603	- / 1.075	- / 0.849	- / 0.400	- / 0.400	- / 4.412
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 1.085*	*- / -*	*- / 1.085*	*- / 0.603*	*- / 1.075*	*- / 0.849*	*- / 0.400*	*- / 0.400*	*- / 4.412*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**4.559**	**3.359**	**0.000**	**3.359**	**2.688**	**2.123**	**1.000**	**1.000**	**0.400**	**15.129**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 4 / F-35 CV PROPULSION (OSIP 013-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 1: Propulsion B Kits

Manufacturer Information

Manufacturer Name: Pratt Whitney [10] | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: Contractor Depot:: Installation Name: Propulsion B Kits

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	54 / 1.085	0 / 0.000	54 / 1.085	- / -	- / -	- / -	- / -	0 / 0.000	54 / 1.085
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.603	- / -	- / -	- / -	0 / 0.000	30 / 0.603
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 1.075	- / -	- / -	0 / 0.000	53 / 1.075
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.849	- / -	0 / 0.000	43 / 0.849
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.400	0 / 0.000	20 / 0.400
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.400	20 / 0.400
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	54 / 1.085	0 / 0.000	54 / 1.085	30 / 0.603	53 / 1.075	43 / 0.849	20 / 0.400	20 / 0.400	220 / 4.412

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	14	13	13	14	-	10	10	10	14	13	13	13	10	11	11	11	5	5	5	5	20	220
Out	-	-	-	-	-	-	-	-	-	-	14	13	13	14	-	10	10	10	14	13	13	13	10	11	11	11	5	5	5	25	220

Footnotes:

[9] Multiple kits are required for each aircraft due to the various Engineering Change Proposals (ECPs). These ECP's include, Dual Vane Pump, v9.4 Controller, Main Fuel Throttle Valve, CNAS Actuator, lock wireless fittings, and Multi-Attitude Dearator.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 4 / F-35 CV PROPULSION (OSIP 013-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(10) Kit quantities are a roll-up based upon induction of aircraft in each year. Each kit contains a range of five to fifteen ECP's depending on the aircraft LRIP configuration.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	3.000	23.735	0.000	23.735	30.339	106.800	103.300	110.300	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	3.000	23.735	0.000	23.735	30.339	106.800	103.300	110.300	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**3.000**	**23.735**	**0.000**	**23.735**	**30.339**	**106.800**	**103.300**	**110.300**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Block 4 Program is established to retrofit advanced capabilities on the F-35Cs to increase the capability and lethality of the weapon system to meet current and future threats. Funding is required to upgrade Low Rate Initial Production (LRIP) Lots 11-16, totaling 106 aircraft to a Lot 17 Production configuration. Block 4 incorporation will not follow the traditional Block upgrade approach; instead, modifications will be performed through a Continuous Capability Development and Delivery Concept that entails upgrades to both hardware and software on fielded aircraft on a yearly base. The current modification incorporation schedule synchronizes with planned production cut-in below, except planned installs for Lot 15 capabilities in 2024. This effort includes, but not limited to the below capabilities and associated modification install timelines:

2021 - Weapons Bay and Magazine Retainer Plate
- Weapons Bay Modification - increases the weapons bay carrying volume to accommodate Block 4 weapons
- Chaff and Flare Magazine Retainer Plate - provides the capability for programmable expendables, programmable magazine load-outs, programmable emergency jettison and quicker inventory

2022 - High-efficiency low voltage power supply (HE-LVPS) and Digital Channelized Receiver / Techniques Generator (DCRTG)
- Adds high efficiency-low voltage power and a second DCRTG to the Electronic Warfare system

2023 - Technical Refresh 3 (TR3), Next Generation Distributed Aperture System (Next Gen DAS), Cooling Mod, and Advanced Communication, Navigation, Identification Processor
- TR3 - integrates new integrated core processor, panoramic cockpit display, and aircraft memory system to meet Block 4 processing, memory, and throughput requirements
- Next Gen DAS - replaces current DAS due to sensor reliability while increasing performance to provide larger pixel focal plane array and higher operating temperatures
- Cooling Mod - increases cooling capacity to support electronic warfare growth and addition of Full Motion Video (FMV)

2024 - Full Motion Video, Embedded GPS and Inertial Navigation System (EGI), Modernized Electronic Warfare Controller(M-EWC), and Modernized Electronic Warfare Processor (M-EWP)
- Full Motion Video - adds the capability to receive encrypted and unencrypted full motion video and still imagery from Operational Facilities and Remote Video Terminals
- EGI - hardware enabler for M-Code/Automatic Dependent Surveillance-Broadcast/Required Navigation Performance/area navigation capabilities
- EWC/EWP - increases 8 core processors (SDD) to 32 providing more than 3 times the processing performance for running advance algorithms and supporting the transition from 12 Receivers (SDD) to 20 receivers

2025 - Advanced Multi Channel Transceiver Receiver (AMCTR), Band 2/3/4/5 Electronic Warfare (EW) Hardware (HW) and EW Group 2

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

- AMCTR - provides MIDS Modernization Increment 1 (MMI) Concurrent Multi-Netting (CMN) and Concurrent Contention Receive (CCR) capabilities
- Band 2/3/4/5 EW HW - provides Band 2&5 RWR functionality by adding Band 2 Nose Landing Gear Door (NLGD) Aperture, Band 3/4 NLGD Aperture, Band 2/3/4 Array Electronic Module (AEM), Band 3/4/5 AEM, Band 5 Apertures, and Band 5 AEM
- EW Group 2 - adds technology to address the Advancing Threats, to detect and counter the LPI Emitter while providing Band 5 RWR functionality; includes Wideband Receiver, Wideband Notch Filter, Band 2/5 Switch Matrix Module, Aircraft Interface Module (ACIF), M-Quad Upconverter (M-QUC), M-Quad Tuner (M-QTM), M-Digital Channelized Receiver (DCR), M-DCR and Techniques Receiver (DCRTG), M-Analog-to-Digital Converter (ADC), M-Radio Frequency Converter, High Voltage Power Supply (HVPS)

Unit, organic depot, or contractor field teams will complete the modification installs to coincide with resources and aircraft availability.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Block 4 Kit A - Organic(*) (11)	- / -	- / -	18 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 1.000
2.1.1) Block 4 B Kits Mag Retainer Plate - NonOrganic (12) *Installation 1 of 2*	- / -	- / -	13 / 0.130	17 / 0.173	- / -	17 / 0.173	13 / 0.120	10 / 0.090	6 / 0.060	- / -	- / -	59 / 0.573
2.1.2) Block 4 B Kits Weapons Bay - NonOrganic *Installation 2 of 2*	- / -	- / -	9 / 0.360	12 / 0.480	- / -	12 / 0.480	8 / 0.320	5 / 0.020	5 / 0.020	- / -	- / -	39 / 1.200
2.1.3) Block 4 B Kits HE-LVPS/2nd DCRTG - NonOrganic *Installation 2 of 2*	- / -	- / -	9 / 0.630	12 / 0.857	- / -	12 / 0.857	8 / 0.560	5 / 0.350	5 / 0.350	- / -	- / -	39 / 2.747
2.1.4) Block 4 B Kits TR3/Next Gen DAS/Cooling Mod - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.140	15 / 25.710	16 / 27.430	15 / 25.710	Continuing	Continuing
2.1.5) Block 4 B Kits FMV/EGI/EWC/EWP - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	10 / 5.740	20 / 11.480	18 / 10.330	13 / 7.460	Continuing	Continuing
2.1.6) Block 4 B kits AMCTR - NonOrganic *Installation 2 of 2*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 60.110	22 / 55.100	18 / 45.080	Continuing	Continuing
2.2.1) Block 4 NRE - NonOrganic(*) (13)	- / -	- / -	- / 0.880	- / 5.240	- / -	- / 5.240	- / 2.848	- / 2.622	- / 1.652	- / 1.722	- / -	- / 14.964
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 3.000*	*- / 6.750*	*- / -*	*- / 6.750*	*- / 14.728*	*- / 100.382*	*- / 94.942*	*- / 79.972*	*Continuing*	*Continuing*
Support												
3.1) ILS	- / -	- / -	- / -	- / 4.916	- / -	- / 4.916	- / 5.000	- / 5.200	- / 5.210	- / 7.170	- / -	- / 27.496
3.2) Other Support (14)	- / -	- / -	- / -	- / 9.452	- / -	- / 9.452	- / 9.550	- / -	- / -	- / -	- / -	- / 19.002
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 14.368*	*- / -*	*- / 14.368*	*- / 14.550*	*- / 5.200*	*- / 5.210*	*- / 7.170*	*- / 0.000*	*- / 46.498*
Installation												
Installation 1 of 2: Block 4 B Kits Mag Retainer Plate	- / -	- / -	- / -	- / 2.617	- / 0.000	- / 2.617	- / 0.618	- / 0.538	- / 0.421	- / 0.275	- / 0.000	- / 4.469
Installation 2 of 2: GRP: Block 4 Installs	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.443	- / 0.680	- / 2.727	- / 22.883	- / 41.800	- / 68.533
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 2.617*	*- / -*	*- / 2.617*	*- / 1.061*	*- / 1.218*	*- / 3.148*	*- / 23.158*	*- / 41.800*	*- / 73.002*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**3.000**	**23.735**	**0.000**	**23.735**	**30.339**	**106.800**	**103.300**	**110.300**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 1 of 2: Block 4 B Kits Mag Retainer Plate

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026

Installation Information

Method of Implementation: [none specified]:: Installation Name: Block 4 B Kits Mag Retainer Plate

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	13 / 2.617	0 / 0.000	13 / 2.617	- / -	- / -	- / -	- / -	0 / 0.000	13 / 2.617
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.618	- / -	- / -	- / -	0 / 0.000	17 / 0.618
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.538	- / -	- / -	0 / 0.000	13 / 0.538
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.421	- / -	0 / 0.000	10 / 0.421
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.275	0 / 0.000	6 / 0.275
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	13 / 2.617	0 / 0.000	13 / 2.617	17 / 0.618	13 / 0.538	10 / 0.421	6 / 0.275	0 / 0.000	59 / 4.469

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	5	4	4	-	6	6	5	-	5	4	4	-	4	3	3	-	2	2	2	-	59
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4	4	-	6	6	5	-	5	4	4	-	4	3	3	6	59

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Installation 2 of 2: GRP: Block 4 Installs

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 4 | Production Leadtime *(in Months)*: 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Jan 2022	Jan 2023	Jan 2024	Jan 2025	Jan 2026	Jan 2027

Installation Information

Method of Implementation: Contract, Depot Artisians:: Installation Name: Block 4 Installs

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.443	- / -	- / -	- / -	0 / 0.000	18 / 0.443
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.680	- / -	- / -	0 / 0.000	24 / 0.680
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.727	- / -	0 / 0.000	29 / 2.727
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	69 / 22.883	0 / 0.000	69 / 22.883
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	66 / 22.533	66 / 22.533
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 19.267	46 / 19.267
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.443	24 / 0.680	29 / 2.727	69 / 22.883	112 / 41.800	252 / 68.533

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	-	8	8	8	-	11	10	8	-	24	24	21	112	252
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	-	8	8	8	-	11	10	8	181	252

Footnotes:

(11) FY20 new start for material procurement on Weapons Bay, Magazine Retainer Plate, and HE-LVPS/2nd DCRTG capabilities to include magazine retainer plate and weapons bay modification.

(12) FY21 funds required to procure hardware to include 2nd DCRTG, HE-LVPS, and material options for magazine retainer plates and weapons bay modification kits. FY22 material increase due to initial buy of TR-3, Next Gen DAS, Cooling Modification, Full motion Video and EGI. FY23 material procures full block 4 capability kits including EW group 2 and Full Motion Video

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 5 / F-35 CV BLOCK 4 UPGRADE (OSIP 011-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(13) FY20 new start for NRE on magazine retainer plate and weapons bay modification. FY21 funds required to start NRE efforts for Next Gen DAS, Full Motion Video, EGI, and cooling modification.

(14) FY21 procures tooling to increase manufacturing capacity for Next Gen DAS and EGI, without tooling program will be extended from a 4-year to an 8-year or longer retrofit program due to competing production and spares demands

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 6 / F-35 CV RELIABILITY AND MAINTAINABILITY (OSIP 002-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	2.970	0.000	2.970	2.750	1.824	1.687	2.720	0.000	11.951
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	2.970	0.000	2.970	2.750	1.824	1.687	2.720	0.000	11.951
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**2.970**	**0.000**	**2.970**	**2.750**	**1.824**	**1.687**	**2.720**	**0.000**	**11.951**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Operational Safety Improvement Program is established for the correction of readiness degraders impacting F-35 CV cost per flight hour, Reliability Maintainability and Availability (RM&A), obsolescence, and reduction of life-cycle costs. These modifications will be accomplished by field mod team and implemented to coincide with resources and aircraft availability.

In order to meet the goal of increasing readiness, the airframe and integrated systems must be modified as critical RM&A issues are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP's). Individual ECPs will be listed once identified. The reliability and readiness initiatives included in the proposed OSIP are projected to have a significant positive impact to the F-35 CV Aircraft platform. Reliability and maintainability efforts started in FY2019, resulted from the Secretary of Defense's 80% Mission Capability mandate. These efforts are used to close the gap to 80% or futher improve the reliability and maintainability of the weapon system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Funds transferred from concurrency to correction of deficiencies in FY2021.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0593 / F-35 CV Series	**Modification Number / Title:** 6 / F-35 CV RELIABILITY AND MAINTAINABILITY (OSIP 002-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35 CV	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800N, 0604840N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
1.1.1) Reliability and Maintainability (A Kits) - Organic(*) (15)	- / -	- / -	- / -	22 / 1.188	- / -	22 / 1.188	22 / 1.100	15 / 0.730	13 / 0.675	22 / 1.088	- / -	94 / 4.781
2.1.1) Reliability and Maintainability (B KITS) - Organic(*) (16)	- / -	- / -	- / -	33 / 1.782	- / -	33 / 1.782	33 / 1.650	22 / 1.094	20 / 1.012	33 / 1.632	- / -	141 / 7.170
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / -*	*- / 2.970*	*- / -*	*- / 2.970*	*- / 2.750*	*- / 1.824*	*- / 1.687*	*- / 2.720*	*- / 0.000*	*- / 11.951*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**2.970**	**0.000**	**2.970**	**2.750**	**1.824**	**1.687**	**2.720**	**0.000**	**11.951**

Footnotes:

(15) Unit level install supporting weapons bay mod. No install costs associated with this OSIP.

(16) Cost varies from year to year based on complexity of modifications and aircraft availability to perform modifications as required. High quantities due to Reliability and Maintainability (R&M) projects are projected to be numerous small ECP's that can occur quickly and be installed at the organic/unit level. All support costs were covered under Concurrency (OSIP 023-14). The B Kits Correction of Deficiencies were unit level installs and had no costs associated with the B Kits.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0595 / QRC

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	62.822	103.909	181.831	126.618	18.507	145.125	19.490	19.818	20.223	20.626	63.710	637.554
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	62.822	103.909	181.831	126.618	18.507	145.125	19.490	19.818	20.223	20.626	63.710	637.554
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**62.822**	**103.909**	**181.831**	**126.618**	**18.507**	**145.125**	**19.490**	**19.818**	**20.223**	**20.626**	**63.710**	**637.554**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Details of this P-1 item are classified.

Justification:
Justification of this request is provided separately.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305220N, 0305421N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 373		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.262	53.278	27.994	12.998	0.000	12.998	0.000	94.533	73.294	95.446	249.617	620.422
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.262	53.278	27.994	12.998	0.000	12.998	0.000	94.533	73.294	95.446	249.617	620.422
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.262**	**53.278**	**27.994**	**12.998**	**0.000**	**12.998**	**0.000**	**94.533**	**73.294**	**95.446**	**249.617**	**620.422**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the MQ-4C Triton Unmanned Air System (UAS) to deliver the Multi-Intelligence (Multi-INT) and future configurations. MQ-4C Triton aircraft and ground stations in the Multi-INT configuration are integral to the Navy's Maritime Intelligence, Surveillance, Reconnaissance and Targeting (MISR&T) transition plan. Modifications will include sensor, electronics and communication subsystems that provide Triton's Multi-INT Integrated Functional Capability 4.0 (IFC 4.0) configuration and future ECPs.

In FY 2021, this line establishes three (3) new OSIPs commencing in FY 2023 to incorporate future Engineering Changes Proposals (ECPs) to correct and modernize the aircraft platform; improve and refresh ground segment equipment; and improve mission system payloads in order to maintain maritime dominance.

The MQ-4C Triton Unmanned Air System (UAS) is integral to recapitalizing the Navy's Maritime Patrol and Reconnaissance Force. The MQ-4C Triton UAS provides a persistent maritime and littoral ISR data collection and dissemination capability to the fleet, serving as a force multiplier for the Joint Force and Fleet Commander, enhancing situational awareness of the battle space and shortening the sensor-to-shooter kill chain. Teamed with its manned-capability counterpart, the P-8A, Triton will be a key component of the Navy's family of systems to achieve maritime domain awareness. The MQ-4C air vehicle, mission control system, specialized sensors, and communications suite will play a significant role in achieving the Navy's strategic vision for the 21st century. The Triton system, as a persistence ISR enabler, provides the supported combatant commander and fleet commander with unparalleled situational awareness of the maritime battle space to develop and sustain the Common Operational Tactical Picture (COTP). The system will also serve as a Fleet response plan enabler with a persistent, global force offering to provide critical trip wire information for intelligence preparation of the environment. Triton will connect to both the Global Information Grid and the Distributed Common Ground System-Navy information backbone to provide the Warfighter with unprecedented levels of battlespace awareness to synchronize actions necessary to maintain maritime Full Spectrum Superiority. Triton's on-station time and range enables unmatched awareness of the maritime battlespace by sustaining the COTP for Surface Warfare and Overseas Contingency Operations.

MQ-4C Triton includes an endurance-class UAS that will operate from land-based sites around the world. Unmanned aircraft at each operating location will provide persistent maritime ISR by being airborne 24 hours a day, 7 days a week out to ranges of 2,000 nautical miles. Worldwide access will be achieved by providing coverage to nearly all the world's high-density sea-lanes, littorals and areas of national interest from its operating locations. Triton will leverage the Maritime Patrol and Reconnaissance Forces community to enhance manpower, training and maintenance efficiencies.

MQ-4C Triton UAS sensors will provide detection, classification, tracking and identification of maritime targets. Sensors to fulfill mission requirements include maritime radar, electro-optical/infrared and Electronic Support Measures systems. Additionally, Triton will have a communications relay capability linking dispersed forces in the theater of operation and serving as a node in the Navy's networked strategy. The MQ-4C Triton UAS will support the Fleet Commander's COTP of the battlespace, day and night. The UAS will cue other Navy assets for further situational investigation and/or attack, and will also provide battle damage

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305220N, 0305421N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 373		

assessment of the area of interest. Tactical-level data analysis will occur in real-time at shore-based Mission Control Systems via satellite communications. Further intelligence exploitation can be conducted at shore-based sites or aboard Carrier Vessel Nuclear/Landing Helicopter Dock ships.

The aircraft inventory objective for the MQ-4C Triton in FY 2021 is projected to be 2 System Development and Demonstration, 1 System Demonstration Test Article, and 7 LRIP aircraft.

DT&E: 4Q FY 2012 - 1Q FY 2021
OT&E: 2Q FY 2022 - 4Q FY 2022
IOC: 4Q FY 2022
FRP: 2Q FY 2023

OSIP 009-18 MQ-4C Triton Upgrades - Multi-INT:
This OSIP funds modifications to the baseline MQ-4C Triton Unmanned Air System (UAS) to deliver the Multi-Intelligence (Multi-INT) configuration. MQ-4C Triton aircraft and ground stations in the Multi-INT configuration are integral to the Navy's ISR transition plan. Modifications will include sensor, electronics and communication subsystems that provide Triton's Multi-INT (IFC 4.0) configuration.

OSIP 011-21 MQ-4C Triton Aircraft Systems Correction of Deficiencies and Modernization:
This OSIP funds Correction of Production Deficiencies and Modernization to correct MQ-4C Production Air Vehicle deficiencies resulting from readiness, obsolescence, safety and Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues and modifications required to outpace technological threats.

OSIP 012-21 MQ-4C Triton Ground Segment Technology Improvements:
This OSIP funds Correction of Production Deficiencies and Modernization to correct MQ-4C Ground Segment (Main Operating Base (MOB) and Forward Operating Base (FOB), and standalone Trainers) Production deficiencies resulting from readiness, obsolescence, safety and Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues and modifications required to outpace technological threats.

OSIP 013-21 MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion:
This OSIP funds modifications to the MQ-4C Payloads Mission Systems to include, but not limited to, SIGINT systems, radar systems and EO/IR systems in order to outpace technological threats and maintain Triton Interoperability as well proactively upgrading obsolescence issues and delivering performance enhancements.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0305220N, 0305421N | **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 373

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / MQ-4C Triton Upgrades (OSIP 009-18) (Added capability)				- / 13.262	- / 53.278	- / 27.994	- / 12.998	- / 0.000	- / 12.998
P-3a	2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21) (Added capability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21) (Added capability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21) (Added capability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 13.262**	**- / 53.278**	**- / 27.994**	**- / 12.998**	**- / 0.000**	**- / 12.998**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / MQ-4C Triton Upgrades (OSIP 009-18) (Added capability)				- / 0.000	- / 55.510	- / 33.833	- / 0.000	- / 0.000	- / 196.875
P-3a	2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21) (Added capability)				- / 0.000	- / 5.586	- / 7.863	- / 23.510	- / 49.390	- / 86.349
P-3a	3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21) (Added capability)				- / 0.000	- / 14.926	- / 14.674	- / 25.050	- / 130.815	- / 185.465
P-3a	4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21) (Added capability)				- / 0.000	- / 18.511	- / 16.924	- / 46.886	- / 69.412	- / 151.733
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 94.533**	**- / 73.294**	**- / 95.446**	**- / 249.617**	**- / 620.422**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2021 request resources hardware and installation costs to upgrade ground stations (Qty 1) to the Multi-INT (IFC 4.0) configuration. The FY 2021 request also establishes (3) new OSIPs commencing in FY 2023 to address: (1) Aircraft Platform Systems Correction of Production Deficiencies and Modernization, (2) Ground Segment Improvements, and (3) Payloads Mission System Improvements and Technology Insertion. Initial effort in these OSIPs focuses on non-recurring engineering required to refresh and improve systems and incorporate technology improvements into the aircraft and ground segment.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 1 / MQ-4C Triton Upgrades (OSIP 009-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.262	53.278	27.994	12.998	0.000	12.998	0.000	55.510	33.833	0.000	0.000	196.875
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.262	53.278	27.994	12.998	0.000	12.998	0.000	55.510	33.833	0.000	0.000	196.875
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.262**	**53.278**	**27.994**	**12.998**	**0.000**	**12.998**	**0.000**	**55.510**	**33.833**	**0.000**	**0.000**	**196.875**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of this OSIP is to upgrade Baseline aircraft and ground stations (Main Operating Base (MOB) and Forward Operating Base (FOB)) to Multi-Intelligence (Multi-INT) Integrated Functional Capability 4.0 (IFC 4.0). The ground stations also include the stand-alone MOB used for training. The technical components of the Multi-INT retrofits for the unmanned aircraft include, but are not limited to: addition of Signals Intelligence (SIGINT) antennas and systems, new High Gain Common Data Link (CDL) antenna and associated avionics, addition of a Keyed Broad Area Maritime Surveillance Airborne Recorder (K-BAR), new Airborne Mission Processor, new airborne network hardware, addition of high assurance internet protocol encryptors (HAIPE), new Voice Communications, new Cross Domain Solution (CDS), and air vehicle aircraft modifications to mitigate Electromagnetic Interference (EMI).

The technical components of the Multi-INT retrofits for the MOB/FOB include, but are not limited to: addition of a K-BAR docking station, addition of Mission Execution equipment (replaces existing payload hardware), new communication and network equipment, addition of CDS, and addition of a Sensitive Compartmented Information Facility (SCIF) Data Facility.

FY 2022 retrofits outlined in prior budgets have been rephased to align with system fielding schedules.

Development Status/Major Development Milestones: Multi-INT Triton Initial Operational Capability in FY 2022.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	P-1 Line Item Number / Title: 0596 / MQ-4 Series	Modification Number / Title: 1 / MQ-4C Triton Upgrades (OSIP 009-18)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
Models of Systems Affected: MQ-4C Triton	Modification Type: Added capability	Related RDT&E PEs: 0305421N

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: MQ-4C Triton Upgrades (OSIP 009-18)												
A Kits												
Recurring												
1.1.1) Multi-INT (IFC 4.0) Aircraft Upgrade A Kit - NonOrganic (1)	1 / 5.089	2 / 10.118	- / -	- / -	- / -	- / -	- / -	3 / 16.428	- / -	- / -	- / -	6 / 31.635
Subtotal: Recurring	*- / 5.089*	*- / 10.118*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 16.428*	*- / -*	*- / -*	*- / 0.000*	*- / 31.635*
B Kits												
Recurring												
2.1.1) Multi-INT (IFC 4.0) Aircraft Upgrade B Kit - Organic	1 / 8.069	2 / 17.324	- / -	- / -	- / -	- / -	- / -	3 / 28.983	- / -	- / -	- / -	6 / 54.376
2.1.2) Multi-INT (IFC 4.0) Main and Forward Operating Base upgrade - NonOrganic (2)	- / -	- / -	2 / 17.947	1 / 6.385	- / -	1 / 6.385	- / -	1 / 9.130	- / -	- / -	- / -	4 / 33.462
Subtotal: Recurring	*- / 8.069*	*- / 17.324*	*- / 17.947*	*- / 6.385*	*- / -*	*- / 6.385*	*- / -*	*- / 38.113*	*- / -*	*- / -*	*- / 0.000*	*- / 87.838*
Non-Recurring												
2.2.1) N/R for Multi-INT (IFC 4.0) Upgrade - Organic (3)	- / -	- / -	- / 0.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.404
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / 0.404*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.404*
Subtotal: MQ-4C Triton Upgrades (OSIP 009-18)	*2 / 13.158*	*4 / 27.442*	*2 / 18.351*	*1 / 6.385*	*- / -*	*1 / 6.385*	*- / -*	*7 / 54.541*	*- / -*	*- / -*	*- / -*	*16 / 119.877*
Subtotal: Procurement, All Modification Items	*- / 13.158*	*- / 27.442*	*- / 18.351*	*- / 6.385*	*- / -*	*- / 6.385*	*- / -*	*- / 54.541*	*- / -*	*- / -*	*- / 0.000*	*- / 119.877*
Support *(All Modification Items)*												
3.1) Training Equipment (4)	- / -	- / 6.238	- / 5.580	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.818
3.2) Other Support (5)	- / 0.104	- / 0.602	- / 1.131	- / 0.555	- / -	- / 0.555	- / -	- / 0.969	- / 0.105	- / -	- / -	- / 3.466
Subtotal: Support	*- / 0.104*	*- / 6.840*	*- / 6.711*	*- / 0.555*	*- / -*	*- / 0.555*	*- / -*	*- / 0.969*	*- / 0.105*	*- / -*	*- / 0.000*	*- / 15.284*
Installation												
Modification Item 1 of 1: MQ-4C Triton Upgrades (OSIP 009-18)	- / 0.000	- / 18.996	- / 2.932	- / 6.058	- / 0.000	- / 6.058	- / 0.000	- / 0.000	- / 33.728	- / 0.000	- / 0.000	- / 61.714
Subtotal: Installation	*- / 0.000*	*- / 18.996*	*- / 2.932*	*- / 6.058*	*- / -*	*- / 6.058*	*- / -*	*- / -*	*- / 33.728*	*- / -*	*- / 0.000*	*- / 61.714*
Total												
Total Cost (Procurement + Support + Installation)	**13.262**	**53.278**	**27.994**	**12.998**	**0.000**	**12.998**	**0.000**	**55.510**	**33.833**	**0.000**	**0.000**	**196.875**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 1 / MQ-4C Triton Upgrades (OSIP 009-18)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Upgrades (OSIP 009-18)

Manufacturer Information

Manufacturer Name: Multiple Manufacturers - Operating Base (6) | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Oct 2019	Dec 2020		Dec 2022		
Delivery Dates		Nov 2021	Sep 2021		Mar 2024		

Manufacturer Name: Multiple Manufacturers-Aircraft Upgrade (7) | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 9 | Production Leadtime *(in Months)*: 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019				Dec 2022		
Delivery Dates	Apr 2020				Mar 2024		

Installation Information

Method of Implementation: Contractor:: Installation Name: Multi-INT (IFC 4.0) Aircraft Upgrade A Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	1 / 6.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 6.800
FY 2019	- / -	2 / 12.196	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 12.196
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 28.320	- / -	0 / 0.000	3 / 28.320
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	3 / 18.996	- / -	- / -	- / -	- / -	- / -	- / -	3 / 28.320	- / -	0 / 0.000	6 / 47.316

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 1 / MQ-4C Triton Upgrades (OSIP 009-18)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Upgrades (OSIP 009-18)

Installation Information

Method of Implementation: Contractor:: Installation Name: Multi-INT (IFC 4.0) Aircraft Upgrade A Kit

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	6
Out	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6

Method of Implementation: Contractor:: Installation Name: Multi-INT (IFC 4.0) Main and Forward Operating Base upgrade

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	1 / 2.932	1 / 3.029	0 / 0.000	1 / 3.029	- / -	- / -	- / -	- / -	0 / 0.000	2 / 5.961
FY 2021	- / -	- / -	- / -	1 / 3.029	0 / 0.000	1 / 3.029	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.029
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.408	- / -	0 / 0.000	1 / 5.408
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 2.932	2 / 6.058	0 / 0.000	2 / 6.058	- / -	- / -	1 / 5.408	- / -	0 / 0.000	4 / 14.398

Installation Schedule

		FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4
Out	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4

Method of Implementation (Organic): Multi-INT (IFC 4.0) Aircraft Upgrade B Kit

Installation Quantity: 6

Footnotes:

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 1 / MQ-4C Triton Upgrades (OSIP 009-18)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(1) The A Kit for aircraft B11 was procured and installed with FY 2019 funding in FY 2020. See footnote (2) for additional information.

(2) Multi-INT Main and Forward Operating Base installation upgrade can be completed in parallel with Multi-INT aircraft installation upgrade. The procurement of the upgrade kit and installation for Main Operating Base (MOB)-7 was originally budgeted in FY 2019, but a rescission was proposed during the FY 2020 appropriations process and the Department of the Navy withheld the amount of the proposed rescission. In order to preserve the contract option and maintain the delivery schedule, the program procured MOB-7 using FY 2020 funding. When the proposed rescission was withdrawn, the FY 2019 funds previously budgeted for MOB-7 were used to fund the A Kit, B Kit, and Installation on aircraft B11, which was originally budgeted in FY 2020.

(3) FY 2020 nonrecurring required to execute Multi-INT upgrade.

(4) Training equipment upgrade aligns with Multi-INT MOB/FOB upgrade.

(5) Other Support funds government support for aircraft modification, installation, calibration and testing required for acceptance.

(6) MOB/FOB quantity of 4 represents 2 MOBs and 2 FOBs. Unit costs and delivery leadtimes will vary because the MOB contains additional mission systems and operator workstations as compared to the FOB.

(7) The induction date represents the beginning of the aircraft de-mod period and begins prior to delivery of A-kit. Installation of the A-kit commences once de-mod is complete and the A-kit has delivered.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.586	7.863	23.510	49.390	86.349
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.586	7.863	23.510	49.390	86.349
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.586**	**7.863**	**23.510**	**49.390**	**86.349**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 011-21 provides funding for MQ-4C aircraft platform system modifications to modernize airframes, engines, core avionics, and incorporate aircraft structural enhancements and improvements. Funding is provided for airframe modifications to support changes in Size, Weight, Power, and Cooling (SWAP-C) requirements of aircraft and payload equipment or as part of the Rapid Capability Insertion (RCI) process, to incorporate Pace the Threat both on a temporary and permanent basis, and to incorporate aircraft and propulsion systems related service bulletins and technical directives.

This OSIP provides funding for safety, reliability, maintainability, and suitability degradation in aircraft systems. Funding is also provided for Modernization requirements for avionics and airframe components via engineering changes. Effort includes the correction of supportability and interoperability deficiencies, resolution of aircraft systems obsolescence, and weight savings initiatives through insertion of commercial and government off the shelf (COTS/GOTS) technology onto the MQ-4C. Integration of already-qualified airborne systems will be primary solution sets, but if required, the ruggedization of the COTS/GOTS from land or water fielded systems may be pursued.

Modifications for the MQ-4C aircraft include, but are not limited to: Global Positioning System (GPS) M Code, Automated Collision Avoidance System (ACAS), Integrated Missions Management Computer (IMMC), Sense and Avoid, Anti-Ice / De-Ice, Electromagnetic Interference (EMI) and TEMPEST COD, Corrosion Prevention, airframe structure, maintenance device updates, Divert Kit, and Fatigue Service Life Limiters.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-4C Triton	**Modification Type:** Added capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)												
A Kits												
Recurring												
1.1.1) Air Vehicle Communications Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.504	10 / 7.670	11 / 8.609	23 / 17.783
1.1.2) Air Vehicle Avionics Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.226	10 / 6.260	11 / 7.029	23 / 14.515
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.730*	*- / 13.930*	*- / 15.638*	*- / 32.298*
Non-Recurring												
1.2.1) NRE Hardware (Communications) - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.610	- / 0.305	- / -	- / -	- / 0.915
1.2.2) NRE Hardware (Avionics) - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.610	- / 0.305	- / -	- / -	- / 0.915
1.2.3) NRE Software - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.866	- / 1.933	- / 0.129	- / 0.132	- / 6.060
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.086*	*- / 2.543*	*- / 0.129*	*- / 0.132*	*- / 7.890*
B Kits												
Recurring												
2.1.1) Air Vehicle Communications Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.810	10 / 4.130	11 / 4.642	23 / 9.582
2.1.2) Air Vehicle Avionics Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.660	10 / 2.267	11 / 2.543	23 / 5.470
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.470*	*- / 6.397*	*- / 7.185*	*- / 15.052*
Subtotal: MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.086*	*8 / 6.743*	*40 / 20.456*	*44 / 22.955*	*92 / 55.240*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.086*	*- / 6.743*	*- / 20.456*	*- / 22.955*	*- / 55.240*
Support *(All Modification Items)*												
3.2) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / 1.120	- / 1.503	- / 1.570	- / 4.693
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.500*	*- / 1.120*	*- / 1.503*	*- / 1.570*	*- / 4.693*
Installation												
Modification Item 1 of 1: MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.551	- / 24.865	- / 26.416
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.551*	*- / 24.865*	*- / 26.416*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:

Models of Systems Affected: MQ-4C Triton	Modification Type: Added capability	Related RDT&E PEs:

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**5.586**	**7.863**	**23.510**	**49.390**	**86.349**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 2 / MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Platform Systems Correction of Deficiencies and Modernization (OSIP 011-21)

Manufacturer Information

Manufacturer Name: TBD [8]	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 7	Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						May 2024	May 2025
Delivery Dates						May 2025	May 2026

Installation Information

Method of Implementation: Non-Organic:: Installation Name: Platform

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.551	0 / 0.000	4 / 1.551
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 8.354	20 / 8.354
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 16.511	22 / 16.511
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.551	42 / 24.865	46 / 26.416

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	42	46
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	46

Footnotes:

[8] For efficiency, installations funded in OSIP 011-21 are planned to occur concurrently with installations funded in OSIP 013-21. A total of two (2) aircraft inductions are planned in FY 2025, with five (5) modifications performed per aircraft.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.926	14.674	25.050	130.815	185.465
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.926	14.674	25.050	130.815	185.465
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**14.926**	**14.674**	**25.050**	**130.815**	**185.465**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 012-21 provides funding for MQ-4C ground segment upgrades to enable modifications to improve the Mission Control System (MCS), modernize trainers and training systems, ground-based communication systems, networks and interoperability, and incorporate cyber enhancements. This OSIP provides funding for safety, reliability, maintainability, and suitability degradation in the ground segment. Funding is also provided for modernization requirements to the ground segment via engineering changes.

This OSIP funds improvements identified as fleet-prioritized requirements or as a part of the Rapid Capability Insertion (RCI) process to address reliability improvements, obsolescence, periodic technology insertion, urgent operational needs, flight safety issues, corresponding changes to MOB/FOB/Mission System Trainer (MST) and technical directives. This OSIP corrects ground segment obsolescence, supportability, and interoperability deficiencies as well as providing insertion of commercial and government off the shelf (COTS/GOTS) technology. Integration of already-qualified systems will be primary solution sets, but if required the ruggedization of the COTS/GOTS from land or water fielded systems may be pursued.

Modifications for the MQ-4C ground segment include, but are not limited to: ARC-210 radios, communication avionics, software, cyber security, trainers, network interfaces, processor tech refreshes and upgrades, Sense and Avoid ECP, Navy System Integration Lab (NSIL) upgrade to IFC 4.0 and later configurations and Hardware-in-the-Loop (HITL) enhancements, maintenance device updates, and other related systems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-4C Triton	**Modification Type:** Added capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)												
A Kits												
Recurring												
1.1.1) MOB Mission Control Station (MCS) Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 3.500	6 / 5.550	19 / 36.721	30 / 45.771
1.1.2) FOB Mission Control Station (MCS) Kit - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.500	4 / 3.000	8 / 18.316	15 / 22.816
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.000*	*- / 8.550*	*- / 55.037*	*- / 68.587*
Non-Recurring												
1.2.1) Hardware NRE: Command and Control Refresh - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.300	- / 2.886	- / -	- / -	- / 8.186
1.2.2) Hardware NRE: Processing & Exploitation - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.400	- / 23.830	- / 30.230
1.2.3) Software Re-host NRE: Command and Control Refresh - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.422	- / 6.580	- / -	- / -	- / 16.002
1.2.4) Software Re-host NRE: Processing & Exploitation - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.388	- / 37.770	- / 45.158
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.722*	*- / 9.466*	*- / 13.788*	*- / 61.600*	*- / 99.576*
Subtotal: MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.722*	*8 / 14.466*	*10 / 22.338*	*27 / 116.637*	*45 / 168.163*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.722*	*- / 14.466*	*- / 22.338*	*- / 116.637*	*- / 168.163*
Support *(All Modification Items)*												
3.1) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.204	- / 0.208	- / 0.212	- / 2.035	- / 2.659
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.204*	*- / 0.208*	*- / 0.212*	*- / 2.035*	*- / 2.659*
Installation												
Modification Item 1 of 1: MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.500	- / 12.143	- / 14.643
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.500*	*- / 12.143*	*- / 14.643*
Total												

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-4C Triton	**Modification Type:** Added capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**14.926**	**14.674**	**25.050**	**130.815**	**185.465**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 7 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						May 2024	May 2025
Delivery Dates						May 2025	May 2026

Manufacturer Name: TBD | Manufacturer Location: TBD1

Administrative Leadtime *(in Months)*: 7 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						May 2024	May 2025
Delivery Dates						May 2025	May 2026

Installation Information

Method of Implementation: Contractor:: Installation Name: MOB Mission Control Station (MCS) Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.000	0 / 0.000	5 / 2.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.200	6 / 2.200
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 7.993	19 / 7.993
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.000	25 / 10.193	30 / 12.193

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 3 / MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Ground Segment Technology Improvements (OSIP 012-21)

Installation Information

Method of Implementation: Contractor:: Installation Name: MOB Mission Control Station (MCS) Kit

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	25	30
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30

Method of Implementation: Contractor:: Installation Name: FOB Mission Control Station (MCS) Kit

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.500	0 / 0.000	3 / 0.500
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.750	4 / 0.750
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.200	8 / 1.200
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.500	12 / 1.950	15 / 2.450

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	12	15
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	15

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.511	16.924	46.886	69.412	151.733
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.511	16.924	46.886	69.412	151.733
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**18.511**	**16.924**	**46.886**	**69.412**	**151.733**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OSIP 013-21 provides funding for MQ-4C Triton payloads upgrades to enable modifications to the mission systems in order to improve the Multi-Function Active Sensor (MFAS) and Sense and Avoid Radar, electro-optical/infrared (EO/IR) systems, Automatic Information Systems (AIS) and signals intelligence (SIGINT) system enhancements. This OSIP provides funding for safety, reliability, maintainability, and suitability degradation in MQ-4C payloads. Funding is also provided for modernization requirements for MQ-4C payloads via engineering changes.

This OSIP funds improvements identified as fleet-prioritized requirements or as a part of the Rapid Capability Insertion (RCI) process to address reliability improvements, obsolescence, periodic technology insertion, urgent operational needs, and flight safety issues, corresponding changes to aircraft and technical directives. This OSIP corrects payload obsolescence, supportability, and interoperability deficiencies as well as providing weight savings initiatives through insertion of commercial and government off the shelf (COTS/GOTS) technology onto the MQ-4C. Integration of already-qualified airborne systems will be primary solution sets, but if required the ruggedization of the COTS/GOTS from land or water fielded systems may be pursued.

Modifications for the MQ-4C payloads include, but are not limited to: MFAS radar, EO/IR systems, Electronic Support Measures (ESM), Signals Intelligence (SIGINT), High and Low Band payloads, Remote Quick Look (RQL), Higher Than Secret (HTS) payloads, Sense and Avoid Engineering Change Proposal (ECP), maintenance device updates, and other related systems. This OSIP also allows the MQ-4C the flexibility to react in real-time against current and emergent threats with the most sophisticated equipment available. This flexibility allows upgrades to current aircraft and training systems, modernization of computer / software-based applications and will maintain Information Assurance requirements as upgrades are performed to support critical missions deemed vital to our national security.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-4C Triton	**Modification Type:** Added capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)												
A Kits												
Recurring												
1.1.1) Multi-Function Active Sensor (MFAS) Radar - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.440	10 / 22.260	11 / 24.486	23 / 51.186
1.1.2) Electro-Optical / Infrared (EO/IR) Payloads - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.560	10 / 8.000	11 / 8.800	23 / 18.360
1.1.3) Signals Intelligence (SIGINT) Payloads - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.840	10 / 9.400	11 / 10.340	23 / 21.580
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.840*	*- / 39.660*	*- / 43.626*	*- / 91.126*
Non-Recurring												
1.2.1) Multi-Function Active Sensor (MFAS) Payloads NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.000	- / 3.750	- / -	- / -	- / 8.750
1.2.2) Electro-Optical / Infrared (EO/IR) Payloads NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.250	- / 1.847	- / -	- / -	- / 4.097
1.2.3) Signals Intelligence (SIGINT) Payloads NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.791	- / 2.093	- / -	- / -	- / 4.884
1.2.4) Software Re-host NRE - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.463	- / 0.364	- / 4.069	- / 3.470	- / 15.366
Subtotal: Non-Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.504*	*- / 8.054*	*- / 4.069*	*- / 3.470*	*- / 33.097*
Subtotal: MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.504*	*6 / 15.894*	*30 / 43.729*	*33 / 47.096*	*69 / 124.223*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.504*	*- / 15.894*	*- / 43.729*	*- / 47.096*	*- / 124.223*
Support *(All Modification Items)*												
3.1) Other Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.007	- / 1.030	- / 1.052	- / 1.660	- / 4.749
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.007*	*- / 1.030*	*- / 1.052*	*- / 1.660*	*- / 4.749*
Installation												
Modification Item 1 of 1: MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.105	- / 20.656	- / 22.761
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.105*	*- / 20.656*	*- / 22.761*

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-4C Triton	**Modification Type:** Added capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**18.511**	**16.924**	**46.886**	**69.412**	**151.733**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0596 / MQ-4 Series	**Modification Number / Title:** 4 / MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 1: MQ-4C Triton Payloads Mission Systems Improvements and Technology Insertion (OSIP 013-21)

Manufacturer Information

Manufacturer Name: TBD [9] | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 7 | Production Leadtime *(in Months)*: 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates						May 2024	May 2025
Delivery Dates						May 2025	May 2026

Installation Information

Method of Implementation: Non-Organic:: Installation Name: Payload

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.105	0 / 0.000	6 / 2.105
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 9.711	30 / 9.711
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 10.945	33 / 10.945
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.105	63 / 20.656	69 / 22.761

Installation Schedule

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	63	69
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	69

Footnotes:

[9] For efficiency, installations funded in OSIP 013-21 are planned to occur concurrently with installations funded in OSIP 011-21. A total of two (2) aircraft inductions are planned in FY 2025, with five (5) modification performed per aircraft.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	21.019	61.032	18.550	0.000	18.550	32.512	31.456	27.969	28.779	-	221.317
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	21.019	61.032	18.550	0.000	18.550	32.512	31.456	27.969	28.779	-	221.317
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**21.019**	**61.032**	**18.550**	**0.000**	**18.550**	**32.512**	**31.456**	**27.969**	**28.779**	**-**	**221.317**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The requirement for the RQ-21A Unmanned Aircraft System is defined in a Capability Development Document, dated 18 November 2008 and further defined in the Capability Production Document, dated 15 February 2013. The RQ-21A program entered the Engineering and Manufacturing Development (EMD) phase of the acquisition process as an Acquisition Category III program on 26 July 2010. On 19 August 2014 RQ-21A was designated an Acquisition Category II program.

The RQ-21A system provides the Marine Expeditionary Force and subordinate commands (divisions and regiments) and USN Naval Special Warfare (NSW) a dedicated Intelligence, Surveillance, and Reconnaissance system capable of delivering intelligence products directly to the tactical commander in real time. The RQ-21A system is capable of providing actionable intelligence and communications relay for 12-hour continuous operations per day with a short surge capability of 24-hours continuous operations for l0 days. The system has an operating radius of 50 nautical miles, further extendable through hub and spoke operations. The Air Vehicle is capable of airspeeds up to 80 nautical miles per hour with a service ceiling of 15,000 feet. The Marine Corps has procured a quantity of 21 RQ-21 systems. The Navy has procured a quantity of 10 RQ-21 systems. There are no future plans to buy more RQ-21 systems at this time, but System Component - Air Vehicles will be procured.

An RQ-21A system consists of five air vehicles, two ground control stations, modular multi-mission plug and play payloads, one launcher, one recovery system, and support equipment. Standard payloads include a turret mounted Electro Optic/Infrared (EO/IR) camera and a communications relay package with automated identification ship capability, carried in the payload bay.

The RQ-21A system will continue to evolve and upgrade capabilities to satisfy capability shortfalls, new requirements, and reliability, maintainability, safety issues and system configuration changes. Upgraded capabilities may include Navy Command and Control integration, Extended Range, Weapons Integration, Heavy Fuel Engine, Laser Designator, Frequency Agile Communications Relay, Digital Common Data Link, new launch and recovery methods, parts durability and manufacturability, and cyclic refresh of the Electro-Optical/Infrared (EO/IR) camera.

Exhibit P-40, Budget Line Item Justification: PB 2021 Navy	Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / RQ-21 Correction Of Deficiencies (004-20) (Correction of Deficiencies)				- / 0.000	- / 21.019	- / 61.032	- / 18.550	- / 0.000	- / 18.550
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 21.019**	**- / 61.032**	**- / 18.550**	**- / 0.000**	**- / 18.550**

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)	Quantity / Total Cost (Each) / ($ M)
P-3a	1 / RQ-21 Correction Of Deficiencies (004-20) (Correction of Deficiencies)				- / 32.512	- / 31.456	- / 27.969	- / 28.779	- / 0.000	- / 221.317
P-40	**Total Gross/Weapon System Cost**				**- / 32.512**	**- / 31.456**	**- / 27.969**	**- / 28.779**	**- / -**	**- / 221.317**

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2021 funds are required to retrofit USMC RQ-21A systems with EO/IR turret upgrades that include, but are not limited to: laser designator capability and optics improvements required for effective identification, perform critical extruded mast upgrade retrofits for USMC and NSW recovery systems, retrofit five NSW RQ-21 air vehicles (AV) with Unmanned Radio frequency Receiver (SURFR) Payload Suite enabling special collection in operational theaters, retrofit twelve NSW RQ-21 AV's with Visual detection and Ranging (ViDAR) payload to provide wide-area imaging capability, system configuration changes and upgrades required to maintain safe flight operations and support costs related to both USMC and USN RQ-21 system retrofits.

The FY 2021 funding request was reduced by $11.371M to account for the availability of prior year execution balances.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series	**Modification Number / Title:** 1 / RQ-21 Correction Of Deficiencies (004-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	21.019	61.032	18.550	0.000	18.550	32.512	31.456	27.969	28.779	0.000	221.317
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	21.019	61.032	18.550	0.000	18.550	32.512	31.456	27.969	28.779	0.000	221.317
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**21.019**	**61.032**	**18.550**	**0.000**	**18.550**	**32.512**	**31.456**	**27.969**	**28.779**	**0.000**	**221.317**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

RQ-21 Blackjack Correction of Deficiencies provides near and long term improvements to fielded RQ-21 systems, and focuses on correcting documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are being accomplished by field retrofit performed by contractor artisans and organic support. In order to meet emerging deficiencies, the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP) and implement those changes in order to sustain and improve RQ-21 system operations. ECPs are implemented to coincide with resources and aircraft availability. These changes provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the RQ-21 platform. This modification program may be required to provide timely remedial action for any aircraft system, component or structure.

FY 2019-2023 funding will modify the current Electro Optical/Infrared camera turret to include a laser designator capability and optics improvements for USMC systems. The retrofit will modify NSW and USMC air vehicles and with the rest being upgraded through attrition.

FY 2019-2021 funding will upgrade the current welded mast recovery systems with extruded aluminum masts recovery systems which are more durable for the USMC and NSW systems. This will strengthen the recovery mast and addresses critical safety concerns. Each RQ-21 system contains one recovery system.

FY 2020 will retrofit NSW RQ-21 AV's with UHF/VHF Transponders that provide IFF capability to distinguish friendly UAS and provide safety of flight, especially against friendly counter UAS efforts in theater.

FY 2020-2023 funding is required to retrofit NSW RQ-21 AV's with Unmanned Radio frequency Receiver (SURFR) Payload Suite enabling special collection in operational theaters.

FY 2020-2022 funding will retrofit NSW RQ-21 AV's with Visual detection and Ranging (ViDAR) payload to provide wide-area imaging capability to NSW.

FY 2021-2025 funding will support system configuration and upgrades required to maintain safe flight operations of the RQ-21A Blackjack system including USMC and NSW Communications Suites to enable multi-channel voice communications to/from the RQ-21 as if it were a manned aircraft to enable kill-chain linkage.

FY 2022-2025 funding supports the modification of the air vehicles to incorporate a Vertical Takeoff and Landing (VTOL) kit. This retrofit will allow for more expeditionary employment of the RQ-21A system, reduced capture damage and mishap rate, and will reduce the footprint of systems where the capability is employed. Funds from FY 2022-2025 will retrofit USN NSW and USMC systems.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series	**Modification Number / Title:** 1 / RQ-21 Correction Of Deficiencies (004-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

FY 2022-2025 funding is required to perform future payload upgrade retrofits, extended range, and communications suite upgrades that improve capability to USMC and USN NSW users.

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series	**Modification Number / Title:** 1 / RQ-21 Correction Of Deficiencies (004-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-21	**Modification Type:** Correction of Deficiencies	**Related RDT&E PEs:** 0305239M

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*	Qty *(Each)* / Total Cost *($ M)*
Procurement												
Modification Item 1 of 1: RQ-21 Correction Of Deficiencies (004-20)												
B Kits												
Recurring												
1.1.1) EO/IR Turret Upgrade - Organic - Organic (1)	- / -	6 / 15.340	8 / 29.264	2 / 5.354	- / -	2 / 5.354	2 / 5.354	1 / 2.677	- / -	- / -	- / -	19 / 57.989
1.1.2) Mast Upgrade - Organic (2)	- / -	8 / 2.530	6 / 3.060	5 / 2.600	- / -	5 / 2.600	- / -	- / -	- / -	- / -	- / -	19 / 8.190
1.1.3) VTOL Upgrade - Organic - Organic (3)	- / -	- / -	- / -	- / -	- / -	- / -	7 / 7.429	8 / 8.528	9 / 9.623	9 / 9.623	- / -	33 / 35.203
1.1.4) SURFR Payload Suite - USN - Organic (4)	- / -	- / -	25 / 18.750	5 / 5.306	- / -	5 / 5.306	12 / 9.180	8 / 6.360	- / -	- / -	- / -	50 / 39.596
1.1.5) ViDAR payload - USN - Organic (5)	- / -	- / -	18 / 3.600	12 / 2.448	- / -	12 / 2.448	20 / 4.160	- / -	- / -	- / -	- / -	50 / 10.208
1.1.6) UHF/VHF Transponder Communications - USN - Organic	- / -	- / -	37 / 3.034	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 3.034
1.1.7) Future Payload Upgrades USN - Organic	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.687	10 / 11.037	14 / 15.623	14 / 15.623	- / -	41 / 45.970
1.1.8) Other System Configuration Changes - Organic (6)	- / -	- / -	- / -	- / 0.229	- / -	- / 0.229	- / 0.126	- / 0.133	- / 0.143	- / 0.182	- / -	- / 0.813
Subtotal: Recurring	*- / 0.000*	*- / 17.870*	*- / 57.708*	*- / 15.937*	*- / -*	*- / 15.937*	*- / 29.936*	*- / 28.735*	*- / 25.389*	*- / 25.428*	*- / 0.000*	*- / 201.003*
Subtotal: RQ-21 Correction Of Deficiencies (004-20)	*- / -*	*14 / 17.870*	*94 / 57.708*	*24 / 15.937*	*- / -*	*24 / 15.937*	*44 / 29.936*	*27 / 28.735*	*23 / 25.389*	*23 / 25.428*	*- / -*	*249 / 201.003*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 17.870*	*- / 57.708*	*- / 15.937*	*- / -*	*- / 15.937*	*- / 29.936*	*- / 28.735*	*- / 25.389*	*- / 25.428*	*- / 0.000*	*- / 201.003*
Support *(All Modification Items)*												
2.1) ILS	- / -	- / 1.326	- / 1.221	- / 1.002	- / -	- / 1.002	- / 1.030	- / 1.052	- / 1.063	- / 1.347	- / -	- / 8.041
2.2) Data	- / -	- / 0.771	- / 0.251	- / 0.239	- / -	- / 0.239	- / 0.244	- / 0.249	- / 0.254	- / 0.360	- / -	- / 2.368
2.3) Other Support (7)	- / -	- / 1.052	- / 1.852	- / 1.372	- / -	- / 1.372	- / 1.302	- / 1.420	- / 1.263	- / 1.644	- / -	- / 9.905
Subtotal: Support	*- / 0.000*	*- / 3.149*	*- / 3.324*	*- / 2.613*	*- / -*	*- / 2.613*	*- / 2.576*	*- / 2.721*	*- / 2.580*	*- / 3.351*	*- / 0.000*	*- / 20.314*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**21.019**	**61.032**	**18.550**	**0.000**	**18.550**	**32.512**	**31.456**	**27.969**	**28.779**	**0.000**	**221.317**

Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	**P-1 Line Item Number / Title:** 0598 / RQ-21 Series	**Modification Number / Title:** 1 / RQ-21 Correction Of Deficiencies (004-20)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: RQ-21 Correction Of Deficiencies (004-20)		

Footnotes:

(1) Each Turret Upgrade kit contains 5 turrets to retrofit all 5 air vehicles in a RQ-21A system. FY 2021 base quantities and funding are for two USMC RQ-21 kits.

(2) Mast upgrades quantities reflect upgrades per RQ-21A system. FY2021 base quantities and funding are for three USMC RQ-21 upgrades and two NSW RQ-21 upgrades, replacing welded masts.

(3) VTOL kit includes equipment to retrofit all 5 air vehicles in a RQ-21A system for both USMC and USN NSW systems.

(4) Unmanned Radio Frequency Receiver (SURFR) Payload Suite for the RQ-21A enables special collection in Theaters. FY 2021 Quantity reflects 5 RQ-21 system component - air vehicles modified with SURFR.

(5) Visual Detection and Ranging (ViDAR) payload for the RQ-21A that provides a wide-area imaging capability for the air vehicle. FY 2021 Quantity reflects 12 RQ-21 system component - air vehicles modified with ViDAR.

(6) Other system configuration changes includes, but is not limited to, emergent upgrades required to maintain safe flight operations.

(7) Includes engineering and logistics support required to properly prepare and execute system retrofits in support of both the USMC and NSW.