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Department of Defense Fiscal Year (FY) 2019 Budget Estimates

February 2018



Navy

Justification Book Volume 2 of 5

Other Procurement, Navy

BA 2

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The estimated cost for this report for the Department of the Navy (DON) is \$54,969.

The estimated total cost for supporting the DON budget justification material is approximately \$1,643,653 for the 2018 fiscal year. This includes \$79,753 in supplies and \$1,563,900 in labor.

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Navy • Budget Estimates FY 2019 • Procurement

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Department of Defense Appropriations Act, 2019

Other Procurement, Navy

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance (except ordnance for new aircraft, new ships, and ships authorized for conversion); the purchase of passenger motor vehicles for replacement only; 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, \$9,601,528,000, to remain available for obligation until September 30, 2021.

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation	FY 2017 (Base + OCO)	FY 2018	FY 2018	FY 2018
		PB Request with CR Adj Base	Total PB Requests* with CR Adj Base	PB Request with CR Adj OCO
Other Procurement, Navy	6,651,966	6,585,009	6,210,084	251,083
Total Department of the Navy	6,651,966	6,585,009	6,210,084	251,083

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
Other Procurement, Navy	251,083	25,750		25,750
Total Department of the Navy	251,083	25,750		25,750

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation

	FY 2018	FY 2018	FY 2018
	Total	Less Enacted	Remaining Req
	PB Requests*	DIV B	with CR Adj
-----	-----	-----	-----
Other Procurement, Navy	6,461,167	6,461,167	6,461,167
Total Department of the Navy	6,461,167	6,461,167	6,461,167

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Department of the Navy
FY 2019 President's Budget
Exhibit P-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Other Procurement, Navy	9,414,355	187,173	9,601,528
Total Department of the Navy	9,414,355	187,173	9,601,528

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Other Procurement, Navy

Budget Activity	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO
01. Ships Support Equipment	2,145,022	3,076,818	2,711,893	30,348
02. Communications & Electronics Equip	2,088,792	2,565,260	2,555,260	62,622
03. Aviation Support Equipment	418,972	441,542	441,542	29,245
04. Ordnance Support Equipment	1,010,342	929,371	929,371	34,406
05. Civil Engineering Support Equip	80,041	99,619	99,619	5,136
06. Supply Support Equipment	317,564	510,285	510,285	584
07. Personnel & Command Support Equip	391,606	376,329	376,329	56,540
08. Spares and Repair Parts	199,627	278,565	278,565	1,178
20. Undistributed		-1,692,780	-1,692,780	31,024
Total Other Procurement, Navy	6,651,966	6,585,009	6,210,084	251,083

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Department of the Navy
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 (Dollars in Thousands)

Appropriation: Other Procurement, Navy

Budget Activity	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
01. Ships Support Equipment	30,348			
02. Communications & Electronics Equip	65,722	15,000		15,000
03. Aviation Support Equipment	29,245			
04. Ordnance Support Equipment	62,806			
05. Civil Engineering Support Equip	5,136			
06. Supply Support Equipment	584			
07. Personnel & Command Support Equip	56,540	10,750		10,750
08. Spares and Repair Parts	1,178			
20. Undistributed	-476			
Total Other Procurement, Navy	251,083	25,750		25,750

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Other Procurement, Navy

Budget Activity	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
01. Ships Support Equipment	2,742,241	2,742,241	-----
02. Communications & Electronics Equip	2,635,982	2,635,982	-----
03. Aviation Support Equipment	470,787	470,787	-----
04. Ordnance Support Equipment	992,177	992,177	-----
05. Civil Engineering Support Equip	104,755	104,755	-----
06. Supply Support Equipment	510,869	510,869	-----
07. Personnel & Command Support Equip	443,619	443,619	-----
08. Spares and Repair Parts	279,743	279,743	-----
20. Undistributed	-1,719,006	-1,719,006	-----
Total Other Procurement, Navy	6,461,167	6,461,167	-----

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Other Procurement, Navy

Budget Activity	FY 2019 Base	FY 2019 OCO	FY 2019 Total
01. Ships Support Equipment	3,180,536	28,260	3,208,796
02. Communications & Electronics Equip	3,176,305	62,150	3,238,455
03. Aviation Support Equipment	502,933	21,156	524,089
04. Ordnance Support Equipment	1,047,675	33,580	1,081,255
05. Civil Engineering Support Equip	112,448	8,638	121,086
06. Supply Support Equipment	604,532	500	605,032
07. Personnel & Command Support Equip	463,088	32,889	495,977
08. Spares and Repair Parts	326,838		326,838
20. Undistributed			
Total Other Procurement, Navy	9,414,355	187,173	9,601,528

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -			
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost				
Budget Activity 01: Ships Support Equipment														

Ship Propulsion Equipment														
1 Surface Power Equipment														
		A		15,514		41,910		41,910			U			
2 Hybrid Electric Drive (HED)														
				10,983		6,331		6,331			U			
Generators														
3 Surface Combatant HM&E														
		A		27,447		27,392		27,392			U			
Navigation Equipment														
4 Other Navigation Equipment														
		A		62,970		65,943		65,943			U			
Other Shipboard Equipment														
5 Sub Periscope, Imaging and Supt Equip Prog														
		A		151,963		151,240		151,240			U			
6 DDG Mod														
		A		429,614		603,355		603,355			U			
7 Firefighting Equipment														
		A		13,752		15,887		15,887			U			
8 Command and Control Switchboard														
		A		2,140		2,240		2,240			U			
9 LHA/LHD Midlife														
		A		22,768		30,287		4,287			U			
10 Pollution Control Equipment														
		B		16,510		17,293		17,293			U			
11 Submarine Support Equipment														
		A		8,995		27,990		27,990			U			
12 Virginia Class Support Equipment														
		A		63,908		46,610		46,610			U			
13 LCS Class Support Equipment														
				43,819		47,955		47,955			U			
14 Submarine Batteries														
				22,459		17,594		17,594			U			

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	e	
					with CR Adj OCO								Emergency
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Budget Activity 01: Ships Support Equipment													

Ship Propulsion Equipment													
1	Surface Power Equipment	A										U	
2	Hybrid Electric Drive (HED)											U	
Generators													
3	Surface Combatant HM&E	A										U	
Navigation Equipment													
4	Other Navigation Equipment	A										U	
Other Shipboard Equipment													
5	Sub Periscope, Imaging and Supt Equip Prog	A										U	
6	DDG Mod	A										U	
7	Firefighting Equipment	A										U	
8	Command and Control Switchboard	A										U	
9	LHA/LHD Midlife	A										U	
10	Pollution Control Equipment	B										U	
11	Submarine Support Equipment	A										U	
12	Virginia Class Support Equipment	A										U	
13	LCS Class Support Equipment											U	
14	Submarine Batteries											U	

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Ident Code	Quantity	Cost	Total PB Requests* with CR Adj	Less Enacted DIV B P.L.115-96***	Base + OCO + Emergency**	Repairs	Remaining Req with CR Adj	S e c
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-
Budget Activity 01: Ships Support Equipment										

Ship Propulsion Equipment										
1 Surface Power Equipment	A			41,910				41,910	U	
2 Hybrid Electric Drive (HED)				6,331				6,331	U	
Generators										
3 Surface Combatant HM&E	A			27,392				27,392	U	
Navigation Equipment										
4 Other Navigation Equipment	A			65,943				65,943	U	
Other Shipboard Equipment										
5 Sub Periscope, Imaging and Supt Equip Prog	A			151,240				151,240	U	
6 DDG Mod	A			603,355				603,355	U	
7 Firefighting Equipment	A			15,887				15,887	U	
8 Command and Control Switchboard	A			2,240				2,240	U	
9 LHA/LHD Midlife	A			4,287				4,287	U	
10 Pollution Control Equipment	B			17,293				17,293	U	
11 Submarine Support Equipment	A			27,990				27,990	U	
12 Virginia Class Support Equipment	A			46,610				46,610	U	
13 LCS Class Support Equipment				47,955				47,955	U	
14 Submarine Batteries				17,594				17,594	U	

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
----	-----	-----	-----	-----	-----	-----	-----	-	
Budget Activity 01: Ships Support Equipment									

Ship Propulsion Equipment									
1 Surface Power Equipment	A		19,700			19,700	U		
2 Hybrid Electric Drive (HED)							U		
Generators									
3 Surface Combatant HM&E	A		23,495			23,495	U		
Navigation Equipment									
4 Other Navigation Equipment	A		63,330			63,330	U		
Other Shipboard Equipment									
5 Sub Periscope, Imaging and Supt Equip Prog	A		178,421			178,421	U		
6 DDG Mod	A		487,999			487,999	U		
7 Firefighting Equipment	A		28,143			28,143	U		
8 Command and Control Switchboard	A		2,248			2,248	U		
9 LHA/LHD Midlife	A		37,694			37,694	U		
10 Pollution Control Equipment	B		20,883			20,883	U		
11 Submarine Support Equipment	A		37,155			37,155	U		
12 Virginia Class Support Equipment	A		66,328			66,328	U		
13 LCS Class Support Equipment			47,241			47,241	U		
14 Submarine Batteries			27,987			27,987	U		

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)			FY 2018 PB Request with CR Adj Base			FY 2018 Total PB Requests* with CR Adj Base			FY 2018 PB Request with CR Adj OCO			S e c -
			Quantity	Cost	-----	Quantity	Cost	-----	Quantity	Cost	-----	Quantity	Cost	-----	
			-----	-----	----	-----	-----	----	-----	-----	----	-----	-----	----	
15	LPD Class Support Equipment			32,052			61,908			61,908					U
16	DDG 1000 Class Support Equipment	A		33,404											U
17	Strategic Platform Support Equip	A		14,571			15,812			15,812					U
18	DSSP Equipment	A		806			4,178			4,178					U
19	CG Modernization	A		319,920			306,050			306,050					U
20	LCAC	A		3,090			5,507			5,507					U
21	Underwater EOD Programs			34,650			55,922			55,922			12,348		U
22	Items Less Than \$5 Million	A		65,994			96,909			96,909					U
23	Chemical Warfare Detectors	A		2,873			3,036			3,036					U
24	Submarine Life Support System	A		4,543			10,364			10,364					U
Reactor Plant Equipment															
25	Reactor Power Units	A					324,925								U
26	Reactor Components	A		342,158			534,468			534,468					U
Ocean Engineering															
27	Diving and Salvage Equipment	A		8,176			10,619			10,619					U
Small Boats															
28	Standard Boats	A		59,033			46,094			46,094			18,000		U
Production Facilities Equipment															
29	Operating Forces Ipe	A		71,921			191,541			191,541					U

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	e	
					with CR Adj OCO								
----	-----	----	-----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----
15	LPD Class Support Equipment												U
16	DDG 1000 Class Support Equipment	A											U
17	Strategic Platform Support Equip	A											U
18	DSSP Equipment	A											U
19	CG Modernization	A											U
20	LCAC	A											U
21	Underwater EOD Programs				12,348								U
22	Items Less Than \$5 Million	A											U
23	Chemical Warfare Detectors	A											U
24	Submarine Life Support System	A											U
Reactor Plant Equipment													
25	Reactor Power Units	A											U
26	Reactor Components	A											U
Ocean Engineering													
27	Diving and Salvage Equipment	A											U
Small Boats													
28	Standard Boats	A			18,000								U
Production Facilities Equipment													
29	Operating Forces Ipe	A											U

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total		Less Enacted	Total		Less Enacted	Remaining Req		
		PB Requests*	DIV B	P.L.115-96***	Base + OCO +	MDDE + Ship	Base + OCO +	Emergency	e	
Ident	Code	Quantity	Cost		Quantity	Cost	Quantity	Cost	c	-
-----	-----	-----	----	-----	-----	----	-----	-----	-----	-
15	LPD Class Support Equipment		61,908				61,908		U	
16	DDG 1000 Class Support Equipment	A							U	
17	Strategic Platform Support Equip	A		15,812			15,812		U	
18	DSSP Equipment	A		4,178			4,178		U	
19	CG Modernization	A		306,050			306,050		U	
20	LCAC	A		5,507			5,507		U	
21	Underwater EOD Programs			68,270			68,270		U	
22	Items Less Than \$5 Million	A		96,909			96,909		U	
23	Chemical Warfare Detectors	A		3,036			3,036		U	
24	Submarine Life Support System	A		10,364			10,364		U	
Reactor Plant Equipment										
25	Reactor Power Units	A							U	
26	Reactor Components	A		534,468			534,468		U	
Ocean Engineering										
27	Diving and Salvage Equipment	A		10,619			10,619		U	
Small Boats										
28	Standard Boats	A		64,094			64,094		U	
Production Facilities Equipment										
29	Operating Forces Ipe	A		191,541			191,541		U	

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
15	LPD Class Support Equipment			65,033				65,033	U
16	DDG 1000 Class Support Equipment	A		89,700				89,700	U
17	Strategic Platform Support Equip	A		22,254				22,254	U
18	DSSP Equipment	A		3,629				3,629	U
19	CG Modernization	A		276,446				276,446	U
20	LCAC	A		3,709				3,709	U
21	Underwater EOD Programs			78,807		9,200		88,007	U
22	Items Less Than \$5 Million	A		126,865				126,865	U
23	Chemical Warfare Detectors	A		2,966				2,966	U
24	Submarine Life Support System	A		11,968				11,968	U
Reactor Plant Equipment									
25	Reactor Power Units	A		346,325				346,325	U
26	Reactor Components	A		497,063				497,063	U
Ocean Engineering									
27	Diving and Salvage Equipment	A		10,706				10,706	U
Small Boats									
28	Standard Boats	A		49,771		19,060		68,831	U
Production Facilities Equipment									
29	Operating Forces Ipe	A		225,181				225,181	U

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Department of the Navy
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 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)			FY 2018 PB Request with CR Adj Base			FY 2018 Total PB Requests* with CR Adj Base			FY 2018 PB Request with CR Adj OCO		
			Quantity	Cost		Quantity	Cost		Quantity	Cost		Quantity	Cost	
			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Other Ship Support														
30	Nuclear Alterations	A		172,718									U	
31	LCS Common Mission Modules Equipment			14,670			34,666			34,666			U	
32	LCS MCM Mission Modules			29,724			55,870			55,870			U	
33	LCS ASW Mission Modules												U	
34	LCS SUW Mission Modules			21,064			52,960			52,960			U	
35	LCS In-Service Modernization	A					74,426			74,426			U	
Logistic Support														
36	LSD Midlife & Modernization			20,813			89,536			75,536			U	
Total Ships Support Equipment				2,145,022			3,076,818			2,711,893			30,348	
Budget Activity 02: Communications & Electronics Equip														
Ship Sonars														
37	SPQ-9B Radar	A		10,376			30,086			20,086			U	
38	AN/SQQ-89 Surf ASW Combat System	A		87,824			102,222			102,222			U	
39	SSN Acoustic Equipment	A		288,265			287,553			287,553		43,500	U	
40	Undersea Warfare Support Equipment	A		7,163			13,653			13,653			U	
ASW Electronic Equipment														
41	Submarine Acoustic Warfare System	A		21,291			21,449			21,449			U	
42	SSTD	A		6,893			12,867			12,867			U	

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	e	
					with CR Adj OCO								
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Other Ship Support													
30	Nuclear Alterations	A											U
31	LCS Common Mission Modules Equipment												U
32	LCS MCM Mission Modules												U
33	LCS ASW Mission Modules												U
34	LCS SUW Mission Modules												U
35	LCS In-Service Modernization	A											U
Logistic Support													
36	LSD Midlife & Modernization												U
Total Ships Support Equipment													
					-----	30,348	-----	-----	-----	-----	-----	-----	-----
Budget Activity 02: Communications & Electronics Equip													
Ship Sonars													
37	SPQ-9B Radar	A											U
38	AN/SQQ-89 Surf ASW Combat System	A											U
39	SSN Acoustic Equipment	A			43,500								U
40	Undersea Warfare Support Equipment	A											U
ASW Electronic Equipment													
41	Submarine Acoustic Warfare System	A											U
42	SSTD	A											U

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018		
			Total PB Requests* with CR Adj	Quantity	Cost	Less Enacted DIV B P.L.115-96***	Quantity	Cost	Remaining Req with CR Adj Base + OCO + Emergency** Repairs	Quantity	Cost
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-
Other Ship Support											
30	Nuclear Alterations	A								U	
31	LCS Common Mission Modules Equipment			34,666				34,666		U	
32	LCS MCM Mission Modules			55,870				55,870		U	
33	LCS ASW Mission Modules									U	
34	LCS SUW Mission Modules			52,960				52,960		U	
35	LCS In-Service Modernization	A		74,426				74,426		U	
Logistic Support											
36	LSD Midlife & Modernization			75,536				75,536		U	
Total Ships Support Equipment											
				2,742,241				2,742,241			
Budget Activity 02: Communications & Electronics Equip											
Ship Sonars											
37	SPQ-9B Radar	A		20,086				20,086		U	
38	AN/SQQ-89 Surf ASW Combat System	A		102,222				102,222		U	
39	SSN Acoustic Equipment	A		331,053				331,053		U	
40	Undersea Warfare Support Equipment	A		13,653				13,653		U	
ASW Electronic Equipment											
41	Submarine Acoustic Warfare System	A		21,449				21,449		U	
42	SSTD	A		12,867				12,867		U	

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Department of the Navy
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 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Ship Support									
30	Nuclear Alterations	A							U
31	LCS Common Mission Modules Equipment		46,732				46,732	U	
32	LCS MCM Mission Modules		124,147				124,147	U	
33	LCS ASW Mission Modules		57,294				57,294	U	
34	LCS SUW Mission Modules		26,006				26,006	U	
35	LCS In-Service Modernization	A	70,526				70,526	U	
Logistic Support									
36	LSD Midlife & Modernization		4,784				4,784	U	
Total Ships Support Equipment			3,180,536			28,260		3,208,796	
Budget Activity 02: Communications & Electronics Equip									
Ship Sonars									
37	SPQ-9B Radar	A	20,309				20,309	U	
38	AN/SQQ-89 Surf ASW Combat System	A	115,459				115,459	U	
39	SSN Acoustic Equipment	A	318,189				318,189	U	
40	Undersea Warfare Support Equipment	A	10,134				10,134	U	
ASW Electronic Equipment									
41	Submarine Acoustic Warfare System	A	23,815				23,815	U	
42	SSTD	A	11,277				11,277	U	

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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018				FY 2018				S e c -	
			FY 2017 (Base + OCO)		PB Request with CR Adj Base		Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO			
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost		
----	-----	----	-----	---	-----	---	-----	---	-----	---	-	
43	Fixed Surveillance System	A	145,701		300,102		300,102				U	
44	SURTASS	A		43,743		30,180		30,180			U	
Electronic Warfare Equipment												
45	AN/SLQ-32	A		244,001		240,433		240,433			U	
Reconnaissance Equipment												
46	Shipboard IW Exploit	A		169,021		187,007		187,007			U	
47	Automated Identification System (AIS)			764		510		510			U	
Other Ship Electronic Equipment												
48	Cooperative Engagement Capability	B		17,965		23,892		23,892			U	
49	Naval Tactical Command Support System (NTCSS)	A		12,336		10,741		10,741			U	
50	ATDLS	A		24,395		38,016		38,016			U	
51	Navy Command and Control System (NCCS)			4,556		4,512		4,512			U	
52	Minesweeping System Replacement	A		26,764		31,531		31,531			U	
53	Shallow Water MCM	B		8,875		8,796		8,796			U	
54	Navstar GPS Receivers (SPACE)	A		7,102		15,923		15,923			U	
55	American Forces Radio and TV Service	A		4,577		2,730		2,730			U	
56	Strategic Platform Support Equip	A		8,972		6,889		6,889			U	
Aviation Electronic Equipment												
57	Ashore ATC Equipment	A		68,392		71,882		71,882			U	

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Total PB Requests+ with CR Adj		FY 2018 Emergency Requests**		Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency		S e c -			S e c -
			OCO	Quantity	Cost	Quantity		Quantity	Cost		Quantity	Cost	
----	-----	----	-----	----	----	-----	-----	-----	-----	-----	-----	-----	-----
43	Fixed Surveillance System	A											U
44	SURTASS	A											U
	Electronic Warfare Equipment												
45	AN/SLQ-32	A											U
	Reconnaissance Equipment												
46	Shipboard IW Exploit	A											U
47	Automated Identification System (AIS)												U
	Other Ship Electronic Equipment												
48	Cooperative Engagement Capability	B											U
49	Naval Tactical Command Support System (NTCSS)	A											U
50	ATDLS	A											U
51	Navy Command and Control System (NCCS)												U
52	Minesweeping System Replacement	A											U
53	Shallow Water MCM	B											U
54	Navstar GPS Receivers (SPACE)	A											U
55	American Forces Radio and TV Service	A											U
56	Strategic Platform Support Equip	A											U
	Aviation Electronic Equipment												
57	Ashore ATC Equipment	A											U

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018			
		Total		Less Enacted	P.L.115-96***		Remaining Req	Base + OCO + S		Base + OCO + S	
		PB Requests*	with CR Adj	DIV B	MDDE + Ship	Repairs	Emergency	e	Emergency	e	
Ident Code	Quantity	Cost		Quantity	Cost		Quantity	Cost		Quantity	Cost
-----	-----	----	-----	-----	----	-----	-----	----	-----	-----	-
43 Fixed Surveillance System	A	300,102					300,102	U			
44 SURTASS	A	30,180					30,180	U			
Electronic Warfare Equipment											
45 AN/SLQ-32	A	240,433					240,433	U			
Reconnaissance Equipment											
46 Shipboard IW Exploit	A	187,007					187,007	U			
47 Automated Identification System (AIS)			510					510	U		
Other Ship Electronic Equipment											
48 Cooperative Engagement Capability	B	23,892					23,892	U			
49 Naval Tactical Command Support System (NTCSS)	A	10,741					10,741	U			
50 ATDLS	A	38,016					38,016	U			
51 Navy Command and Control System (NCCS)			4,512					4,512	U		
52 Minesweeping System Replacement	A	31,531					31,531	U			
53 Shallow Water MCM	B	8,796						8,796	U		
54 Navstar GPS Receivers (SPACE)	A	15,923					15,923	U			
55 American Forces Radio and TV Service	A	2,730					2,730	U			
56 Strategic Platform Support Equip	A	6,889					6,889	U			
Aviation Electronic Equipment											
57 Ashore ATC Equipment	A	71,882					71,882	U			

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
----	-----	-----	-----	-----	-----	-----	-----	-	
43	Fixed Surveillance System	A	237,780		56,950		294,730	U	
44	SURTASS	A		57,872			57,872	U	
Electronic Warfare Equipment									
45	AN/SLQ-32	A		420,344			420,344	U	
Reconnaissance Equipment									
46	Shipboard IW Exploit	A		220,883			220,883	U	
47	Automated Identification System (AIS)			4,028			4,028	U	
Other Ship Electronic Equipment									
48	Cooperative Engagement Capability	B		44,173			44,173	U	
49	Naval Tactical Command Support System (NTCSS)	A		10,991			10,991	U	
50	ATDLS	A		34,526			34,526	U	
51	Navy Command and Control System (NCCS)			3,769			3,769	U	
52	Minesweeping System Replacement	A		35,709			35,709	U	
53	Shallow Water MCM	B		8,616			8,616	U	
54	Navstar GPS Receivers (SPACE)	A		10,703			10,703	U	
55	American Forces Radio and TV Service	A		2,626			2,626	U	
56	Strategic Platform Support Equip	A		9,467			9,467	U	
Aviation Electronic Equipment									
57	Ashore ATC Equipment	A		70,849			70,849	U	

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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018				FY 2018		FY 2018			
			FY 2017 (Base + OCO)		PB Request with CR Adj Base		Total PB Requests* with CR Adj Base		PB Request with CR Adj OCO		PB Request with CR Adj OCO	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
58	Afloat ATC Equipment	A	29,411		44,611		44,611					U
59	ID Systems	A		22,177		21,239		21,239				U
60	Joint Precision Approach And Landing System (U
61	Naval Mission Planning Systems	A		13,910		11,976		11,976			2,550	U
	Other Shore Electronic Equipment											
62	Tactical/Mobile C4I Systems	A		23,908		32,425		32,425			7,900	U
63	DCGS-N	A		23,610		13,790		13,790			6,392	U
64	CANES			207,730		322,754		322,754				U
65	RADIAC	A		8,092		10,718		10,718				U
66	CANES-Intell			35,313		48,028		48,028				U
67	GPETE	A		6,428		6,861		6,861				U
68	MASF					8,081		8,081				U
69	Integ Combat System Test Facility	A		8,376		5,019		5,019				U
70	EMI Control Instrumentation	A		3,971		4,188		4,188				U
71	Items Less Than \$5 Million	A		47,664		105,292		105,292				U
	Shipboard Communications											
72	Shipboard Tactical Communications	A		9,671		23,695		23,695				U
73	Ship Communications Automation	A		109,191		103,990		103,990				U
74	Communications Items Under \$5M	A		10,077		18,577		18,577				U

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Total PB Requests+ with CR Adj		Quantity	Cost	Emergency Requests**		Quantity	Cost	Less Enacted Div B P.L.115-96***		S e c
			OCO	Emergency			Repairs	MDDE + Ship			Remaining Req Emergency	Remaining Req Emergency	
----	-----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
58	Afloat ATC Equipment		A										U
59	ID Systems		A										U
60	Joint Precision Approach And Landing System (U
61	Naval Mission Planning Systems		A		2,550								U
	Other Shore Electronic Equipment												
62	Tactical/Mobile C4I Systems		A		7,900								U
63	DCGS-N		A		6,392								U
64	CANES												U
65	RADIAC		A										U
66	CANES-Intell												U
67	GPETE		A										U
68	MASF												U
69	Integ Combat System Test Facility		A										U
70	EMI Control Instrumentation		A										U
71	Items Less Than \$5 Million		A										U
	Shipboard Communications												
72	Shipboard Tactical Communications		A										U
73	Ship Communications Automation		A										U
74	Communications Items Under \$5M		A										U

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total		Less Enacted	Total		Less Enacted	Remaining Req		
		PB Requests*	DIV B	P.L.115-96***	Base + OCO +	MDDE + Ship	Base + OCO +	Emergency	e	
Ident	Code	Quantity	Cost		Quantity	Cost	Quantity	Cost	c	-
-----	-----	-----	----	-----	-----	----	-----	-----	-----	-
58	Afloat ATC Equipment	A	44,611				44,611		U	
59	ID Systems	A	21,239				21,239		U	
60	Joint Precision Approach And Landing System (U	
61	Naval Mission Planning Systems	A	14,526				14,526		U	
	Other Shore Electronic Equipment									
62	Tactical/Mobile C4I Systems	A	40,325				40,325		U	
63	DCGS-N	A	20,182				20,182		U	
64	CANES		322,754				322,754		U	
65	RADIAC	A	10,718				10,718		U	
66	CANES-Intell		48,028				48,028		U	
67	GPETE	A	6,861				6,861		U	
68	MASF		8,081				8,081		U	
69	Integ Combat System Test Facility	A	5,019				5,019		U	
70	EMI Control Instrumentation	A	4,188				4,188		U	
71	Items Less Than \$5 Million	A	105,292				105,292		U	
	Shipboard Communications									
72	Shipboard Tactical Communications	A	23,695				23,695		U	
73	Ship Communications Automation	A	103,990				103,990		U	
74	Communications Items Under \$5M	A	18,577				18,577		U	

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Department of the Navy
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 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
58	Afloat ATC Equipment	A		47,890				47,890	U
59	ID Systems	A		26,163				26,163	U
60	Joint Precision Approach And Landing System (38,094				38,094	U
61	Naval Mission Planning Systems	A		11,966				11,966	U
Other Shore Electronic Equipment									
62	Tactical/Mobile C4I Systems	A		42,010				42,010	U
63	DCGS-N	A		12,896				12,896	U
64	CANES			423,027				423,027	U
65	RADIAC	A		8,175				8,175	U
66	CANES-Intell			54,465				54,465	U
67	GPETE	A		5,985				5,985	U
68	MASF			5,413				5,413	U
69	Integ Combat System Test Facility	A		6,251				6,251	U
70	EMI Control Instrumentation	A		4,183				4,183	U
71	Items Less Than \$5 Million	A		148,350				148,350	U
Shipboard Communications									
72	Shipboard Tactical Communications	A		45,450				45,450	U
73	Ship Communications Automation	A		105,087				105,087	U
74	Communications Items Under \$5M	A		41,123				41,123	U

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017		FY 2018		FY 2018		FY 2018	
			Quantity	Cost	PB Request with CR Adj		Total Base	PB Requests* with CR Adj	PB Request with CR Adj	
					Base	OCO			Base	OCO
----	-----	----	-----	----	-----	-----	-----	-----	-----	-----
Submarine Communications										
75	Submarine Broadcast Support	A		31,068			29,669		29,669	
76	Submarine Communication Equipment	A		62,305			86,204		86,204	
Satellite Communications										
77	Satellite Communications Systems	A		14,414			14,654		14,654	
78	Navy Multiband Terminal (NMT)			33,992			69,764		69,764	
Shore Communications										
79	Joint Communications Support Element (JCSE)	A		4,156			4,256		4,256	
Cryptographic Equipment										
80	Info Systems Security Program (ISSP)	A		92,454			89,663		89,663	
81	MIO Intel Exploitation Team	A		920			961		961	
Cryptologic Equipment										
82	Cryptologic Communications Equip	A		23,698			11,287		11,287	2,280
Other Electronic Support										
83	DON UAS 1***	A		2,517						U
84	DON UAS 2***	A		4,927						U
85	DON ACTS**	A		1,545						U
86	Coast Guard Equipment	A		32,291			36,584		36,584	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018 e		
					with CR Adj OCO							Emergency	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Submarine Communications													
75	Submarine Broadcast Support	A		15,000					15,000	U			
76	Submarine Communication Equipment	A								U			
Satellite Communications													
77	Satellite Communications Systems	A								U			
78	Navy Multiband Terminal (NMT)	A								U			
Shore Communications													
79	Joint Communications Support Element (JCSE)	A								U			
Cryptographic Equipment													
80	Info Systems Security Program (ISSP)	A								U			
81	MIO Intel Exploitation Team	A								U			
Cryptologic Equipment													
82	Cryptologic Communications Equip	A	5,380							U			
Other Electronic Support													
83	DON UAS 1***	A								U			
84	DON UAS 2***	A								U			
85	DON ACTS***	A								U			
86	Coast Guard Equipment	A								U			

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018		
			Total PB Requests* with CR Adj	Quantity	Cost	Less Enacted DIV B P.L.115-96***	Quantity	Cost	Remaining Req with CR Adj Base + OCO + Emergency** Repairs	Quantity	Cost
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-
Submarine Communications											
75	Submarine Broadcast Support	A			44,669				44,669	U	
76	Submarine Communication Equipment	A			86,204				86,204	U	
Satellite Communications											
77	Satellite Communications Systems	A			14,654				14,654	U	
78	Navy Multiband Terminal (NMT)				69,764				69,764	U	
Shore Communications											
79	Joint Communications Support Element (JCSE)	A			4,256				4,256	U	
Cryptographic Equipment											
80	Info Systems Security Program (ISSP)	A			89,663				89,663	U	
81	MIO Intel Exploitation Team	A			961				961	U	
Cryptologic Equipment											
82	Cryptologic Communications Equip	A			16,667				16,667	U	
Other Electronic Support											
83	DON UAS 1***	A								U	
84	DON UAS 2***	A								U	
85	DON ACTS***	A								U	
86	Coast Guard Equipment	A			36,584				36,584	U	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Submarine Communications									
75	Submarine Broadcast Support	A	30,897				30,897	U	
76	Submarine Communication Equipment	A		78,580			78,580	U	
Satellite Communications									
77	Satellite Communications Systems	A	41,205		3,200		44,405	U	
78	Navy Multiband Terminal (NMT)			113,885			113,885	U	
Shore Communications									
79	Joint Communications Support Element (JCSE)	A	4,292				4,292	U	
Cryptographic Equipment									
80	Info Systems Security Program (ISSP)	A	153,526				153,526	U	
81	MIO Intel Exploitation Team	A		951			951	U	
Cryptologic Equipment									
82	Cryptologic Communications Equip	A	14,209		2,000		16,209	U	
Other Electronic Support									
83	DON UAS 1***	A						U	
84	DON UAS 2***	A						U	
85	DON ACTS***	A						U	
86	Coast Guard Equipment	A	40,713				40,713	U	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Drug Interdiction Support											
87	Other Drug Interdiction Support	A	16,000								U
			-----	-----	-----	-----	-----	-----	-----	-----	
	Total Communications & Electronics Equip			2,088,792			2,565,260		2,555,260		62,622
Budget Activity 03: Aviation Support Equipment											
Sonobuoys											
88	Sonobuoys - All Types	A	158,588		173,616		173,616				U
			-----	-----	-----	-----	-----	-----	-----	-----	
Aircraft Support Equipment											
89	Weapons Range Support Equipment	A	58,116		72,110		72,110				U
90	Aircraft Support Equipment	A	115,551		108,482		108,482				U
91	Advanced Arresting Gear (AAG)	A			10,900		10,900				U
92	Meteorological Equipment	A	29,015		21,137		21,137				U
93	DCRS/DPL	A	632		660		660				U
94	Airborne Mine Countermeasures	A	27,542		20,605		20,605				U
95	Lamps Equipment										U
96	Aviation Support Equipment	A	29,528		34,032		34,032		29,245		U
97	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	-----	-----	-----	-----	-----	-----	-----	-----	U
	Total Aviation Support Equipment		418,972		441,542		441,542		29,245		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018 e		
					PB Requests+ with CR Adj OCO							Quantity	Cost
	Drug Interdiction Support												
87	Other Drug Interdiction Support	A									U		
	Total Communications & Electronics Equip				65,722		15,000				15,000		
	Budget Activity 03: Aviation Support Equipment												
	Sonobuoys												
88	Sonobuoys - All Types	A									U		
	Aircraft Support Equipment												
89	Weapons Range Support Equipment	A									U		
90	Aircraft Support Equipment	A									U		
91	Advanced Arresting Gear (AAG)	A									U		
92	Meteorological Equipment	A									U		
93	DCRS/DPL	A									U		
94	Airborne Mine Countermeasures	A									U		
95	Lamps Equipment										U		
96	Aviation Support Equipment	A		29,245							U		
97	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A									U		
	Total Aviation Support Equipment			29,245									

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total PB Requests*	Less Enacted DIV B	P.L.115-96***	Remaining Req with CR Adj	Base + OCO + Emergency**	MDDE + Ship Repairs	Base + OCO + Emergency	S	
		Ident Code	Quantity	Cost	Quantity	Cost	Quantity	Cost	c	
	-----	-----	-----	-----	-----	-----	-			
Drug Interdiction Support										
87 Other Drug Interdiction Support	A	-----	-----	-----	-----	-----	U			
Total Communications & Electronics Equip		2,635,982				2,635,982				
Budget Activity 03: Aviation Support Equipment										
Sonobuoys										
88 Sonobuoys - All Types	A	173,616			173,616	U				
Aircraft Support Equipment										
89 Weapons Range Support Equipment	A	72,110			72,110	U				
90 Aircraft Support Equipment	A	108,482			108,482	U				
91 Advanced Arresting Gear (AAG)	A	10,900			10,900	U				
92 Meteorological Equipment	A	21,137			21,137	U				
93 DCRS/DPL	A	660			660	U				
94 Airborne Mine Countermeasures	A	20,605			20,605	U				
95 Lamps Equipment						U				
96 Aviation Support Equipment	A	63,277			63,277	U				
97 UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	-----	-----	-----	-----	U				
Total Aviation Support Equipment		470,787			470,787					

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
----	-----	-----	-----	-----	-----	-----	-----	-	
Drug Interdiction Support									
87	Other Drug Interdiction Support	A	-----	-----	-----	-----	-----	U	
Total Communications & Electronics Equip									
			3,176,305		62,150		3,238,455		
Budget Activity 03: Aviation Support Equipment									
Sonobuoys									
88	Sonobuoys - All Types	A	177,891		21,156		199,047	U	
Aircraft Support Equipment									
89	Weapons Range Support Equipment	A	93,864				93,864	U	
90	Aircraft Support Equipment	A	111,724				111,724	U	
91	Advanced Arresting Gear (AAG)	A	11,054				11,054	U	
92	Meteorological Equipment	A	21,072				21,072	U	
93	DCRS/DPL	A	656				656	U	
94	Airborne Mine Countermeasures	A	11,299				11,299	U	
95	Lamps Equipment		594				594	U	
96	Aviation Support Equipment	A	39,374				39,374	U	
97	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	35,405				35,405	U	
Total Aviation Support Equipment									
			502,933		21,156		524,089		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 04: Ordnance Support Equipment											
	Ship Gun System Equipment	A		6,191		5,277		5,277			U
	98 Ship Gun Systems Equipment	A									
	Ship Missile Systems Equipment	A		307,447		272,359		272,359		2,436	U
	99 Ship Missile Support Equipment	A									
	100 Tomahawk Support Equipment	A		67,062		73,184		73,184			U
	FBM Support Equipment	A									
	101 Strategic Missile Systems Equip	A		215,138		246,221		246,221			U
	ASW Support Equipment	A									
	102 SSN Combat Control Systems	A		144,715		129,972		129,972			U
	103 ASW Support Equipment	A		36,431		23,209		23,209			U
	Other Ordnance Support Equipment	A									
	104 Explosive Ordnance Disposal Equip	B		92,655		15,596		15,596		31,970	U
	105 Items Less Than \$5 Million	A		6,243		5,981		5,981			U
	Other Expendable Ordnance	A									
	106 Submarine Training Device Mods	A		46,746		74,550		74,550			U
	107 Surface Training Equipment	A		87,714		83,022		83,022			U
	Total Ordnance Support Equipment			1,010,342		929,371		929,371		34,406	

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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018	S e c	
					with CR Adj OCO								
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Budget Activity 04: Ordnance Support Equipment													
	Ship Gun System Equipment												
98	Ship Gun Systems Equipment	A											U
	Ship Missile Systems Equipment												
99	Ship Missile Support Equipment	A			2,436								U
100	Tomahawk Support Equipment	A											U
	FBM Support Equipment												
101	Strategic Missile Systems Equip	A											U
	ASW Support Equipment												
102	SSN Combat Control Systems	A											U
103	ASW Support Equipment	A											U
	Other Ordnance Support Equipment												
104	Explosive Ordnance Disposal Equip	B			60,370								U
105	Items Less Than \$5 Million	A											U
	Other Expendable Ordnance												
106	Submarine Training Device Mods	A											U
107	Surface Training Equipment	A											U
	Total Ordnance Support Equipment				62,806								

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Ident Code	Quantity	Cost	Total PB Requests* with CR Adj	Less Enacted DIV B P.L.115-96***	Base + OCO + Emergency**	Repairs	Remaining Req with CR Adj Base + OCO + Emergency	S e c
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-
Budget Activity 04: Ordnance Support Equipment										

Ship Gun System Equipment										
98	Ship Gun Systems Equipment	A		5,277				5,277	U	
Ship Missile Systems Equipment										
99	Ship Missile Support Equipment	A		274,795				274,795	U	
100	Tomahawk Support Equipment	A		73,184				73,184	U	
FBM Support Equipment										
101	Strategic Missile Systems Equip	A		246,221				246,221	U	
ASW Support Equipment										
102	SSN Combat Control Systems	A		129,972				129,972	U	
103	ASW Support Equipment	A		23,209				23,209	U	
Other Ordnance Support Equipment										
104	Explosive Ordnance Disposal Equip	B		75,966				75,966	U	
105	Items Less Than \$5 Million	A		5,981				5,981	U	
Other Expendable Ordnance										
106	Submarine Training Device Mods	A		74,550				74,550	U	
107	Surface Training Equipment	A		83,022				83,022	U	
Total Ordnance Support Equipment										
				992,177				992,177		

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Department of the Navy
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 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
----	-----	-----	-----	-----	-----	-----	-----	-	
Budget Activity 04: Ordnance Support Equipment									

Ship Gun System Equipment									
98	Ship Gun Systems Equipment	A	5,337				5,337	U	
Ship Missile Systems Equipment									
99	Ship Missile Support Equipment	A	213,090				213,090	U	
100	Tomahawk Support Equipment	A	92,890				92,890	U	
FBM Support Equipment									
101	Strategic Missile Systems Equip	A	271,817				271,817	U	
ASW Support Equipment									
102	SSN Combat Control Systems	A	129,501				129,501	U	
103	ASW Support Equipment	A	19,436				19,436	U	
Other Ordnance Support Equipment									
104	Explosive Ordnance Disposal Equip	B	14,258		33,580		47,838	U	
105	Items Less Than \$5 Million	A	5,378				5,378	U	
Other Expendable Ordnance									
106	Submarine Training Device Mods	A	65,543				65,543	U	
107	Surface Training Equipment	A	230,425				230,425	U	
Total Ordnance Support Equipment									
			1,047,675		33,580		1,081,255		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -			
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost				
Budget Activity 05: Civil Engineering Support Equip														
Civil Engineering Support Equipment														
108 Passenger Carrying Vehicles														
109 General Purpose Trucks	A		9,078		5,299		5,299				U			
110 Construction & Maintenance Equip	A		4,794		2,946		2,946				496 U			
111 Fire Fighting Equipment	A		18,553		34,970		34,970				U			
112 Tactical Vehicles	B		14,199		2,541		2,541				2,304 U			
113 Amphibious Equipment	A		13,824		19,699		19,699				2,336 U			
114 Pollution Control Equipment	A		7,676		12,162		12,162				U			
115 Items Under \$5 Million	A		2,321		2,748		2,748				U			
116 Physical Security Vehicles	A		8,501		18,084		18,084				U			
Total Civil Engineering Support Equip	A		1,095		1,170		1,170				U			
			-----		-----		-----				-----			
			80,041		99,619		99,619				5,136			
Budget Activity 06: Supply Support Equipment														
Supply Support Equipment														
117 Supply Equipment														
118 First Destination Transportation	A		16,978		21,797		21,797				164 U			
119 Special Purpose Supply Systems	A		5,115		5,572		5,572				420 U			
Total Supply Support Equipment	A		295,471		482,916		482,916				U			
			317,564		510,285		510,285				584			

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018			
			Total	PB Requests+ with CR Adj	OCO	Emergency	Requests**	Emergency	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	FY 2018 Remaining Req
			Quantity	Cost	-----	Quantity	Cost	-----	Quantity	Cost	Emergency	e
			-----	-----	-----	-----	-----	-----	-----	-----	-----	c

Budget Activity 05: Civil Engineering Support Equip

Civil Engineering Support Equipment

108 Passenger Carrying Vehicles	A									U
109 General Purpose Trucks	A		496							U
110 Construction & Maintenance Equip	A									U
111 Fire Fighting Equipment	A		2,304							U
112 Tactical Vehicles	B		2,336							U
113 Amphibious Equipment	A									U
114 Pollution Control Equipment	A									U
115 Items Under \$5 Million	A									U
116 Physical Security Vehicles	A									U
Total Civil Engineering Support Equip			5,136							

Budget Activity 06: Supply Support Equipment

Supply Support Equipment

117 Supply Equipment	A		164							U
118 First Destination Transportation	A		420							U
119 Special Purpose Supply Systems	A									U
Total Supply Support Equipment			584							

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018			
			Total PB Requests*	Less Enacted DIV B P.L.115-96***	Remaining Req with CR Adj	Base + OCO + Emergency**	MDDE + Ship Repairs	Base + OCO + Emergency	Quantity	Cost	Quantity	Cost
			with CR Adj			Base + OCO + Emergency**	Repairs	Base + OCO + Emergency	Quantity	Cost	Quantity	Cost
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-		

Budget Activity 05: Civil Engineering Support Equip

Civil Engineering Support Equipment

108 Passenger Carrying Vehicles	A	5,299			5,299	U
109 General Purpose Trucks	A	3,442			3,442	U
110 Construction & Maintenance Equip	A	34,970			34,970	U
111 Fire Fighting Equipment	A	4,845			4,845	U
112 Tactical Vehicles	B	22,035			22,035	U
113 Amphibious Equipment	A	12,162			12,162	U
114 Pollution Control Equipment	A	2,748			2,748	U
115 Items Under \$5 Million	A	18,084			18,084	U
116 Physical Security Vehicles	A	1,170			1,170	U
Total Civil Engineering Support Equip		104,755			104,755	

Budget Activity 06: Supply Support Equipment

Supply Support Equipment

117 Supply Equipment	A	21,961			21,961	U
118 First Destination Transportation	A	5,992			5,992	U
119 Special Purpose Supply Systems	A	482,916			482,916	U
Total Supply Support Equipment		510,869			510,869	

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
----	-----	----	-----	-----	-----	-----	-----	-	
Budget Activity 05: Civil Engineering Support Equip									
Civil Engineering Support Equipment									
108	Passenger Carrying Vehicles	A	4,867		170		5,037	U	
109	General Purpose Trucks	A	2,674		400		3,074	U	
110	Construction & Maintenance Equip	A	20,994				20,994	U	
111	Fire Fighting Equipment	A	17,189		770		17,959	U	
112	Tactical Vehicles	B	19,916		7,298		27,214	U	
113	Amphibious Equipment	A	7,400				7,400	U	
114	Pollution Control Equipment	A	2,713				2,713	U	
115	Items Under \$5 Million	A	35,540				35,540	U	
116	Physical Security Vehicles	A	1,155				1,155	U	
	Total Civil Engineering Support Equip		112,448		8,638		121,086		
Budget Activity 06: Supply Support Equipment									
Supply Support Equipment									
117	Supply Equipment	A	18,786				18,786	U	
118	First Destination Transportation	A	5,375		500		5,875	U	
119	Special Purpose Supply Systems	A	580,371				580,371	U	
	Total Supply Support Equipment		604,532		500		605,032		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -			
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost				
Budget Activity 07: Personnel & Command Support Equip														
<hr/>														
Training Devices														
120	Training Support Equipment	A									U			
121	Training and Education Equipment	A		6,347		25,624		25,624			U			
Command Support Equipment														
122	Command Support Equipment	A		44,666		59,076		59,076		21,650	U			
123	Medical Support Equipment	A		11,959		4,383		4,383			U			
125	Naval MIP Support Equipment	A		1,925		2,030		2,030			U			
126	Operating Forces Support Equipment	A		3,822		7,500		7,500		15,800	U			
127	C4ISR Equipment	A		9,073		4,010		4,010			U			
128	Environmental Support Equipment	A		19,439		23,644		23,644		1,000	U			
129	Physical Security Equipment	A		109,825		101,982		101,982		15,890	U			
130	Enterprise Information Technology	A		88,799		19,789		19,789			U			
Other														
133	Next Generation Enterprise Service	A		84,176		104,584		104,584			U			
999	Classified Programs			11,575		23,707		23,707		2,200	U			
Total Personnel & Command Support Equip				391,606		376,329		376,329		56,540				

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018			FY 2018			FY 2018			Remaining Req e	S e		
			Total	PB Requests+ with CR Adj	OCO	Emergency	Requests**	Emergency	Less Enacted Div B	P.L.115-96***	MDDE + Ship Repairs	FY 2018			
			Quantity	Cost	-----	Quantity	Cost	-----	Quantity	Cost	-----	Quantity	Cost	-----	
Budget Activity 07: Personnel & Command Support Equip															
<hr/>															
Training Devices															
120	Training Support Equipment	A											U		
121	Training and Education Equipment	A											U		
Command Support Equipment															
122	Command Support Equipment	A		21,650			7,650					7,650	U		
123	Medical Support Equipment	A											U		
125	Naval MIP Support Equipment	A											U		
126	Operating Forces Support Equipment	A		15,800									U		
127	C4ISR Equipment	A											U		
128	Environmental Support Equipment	A		1,000									U		
129	Physical Security Equipment	A		15,890			3,100					3,100	U		
130	Enterprise Information Technology	A											U		
Other															
133	Next Generation Enterprise Service	A											U		
999	Classified Programs			2,200									U		
Total Personnel & Command Support Equip				56,540			10,750						10,750		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018		FY 2018		FY 2018	
			Total PB Requests* with CR Adj	Quantity Emergency**	Less Enacted DIV B P.L.115-96***	Quantity Repairs	Remaining Req with CR Adj	Base + OCO + MDDE + Ship
-----	-----	-----	-----	-----	-----	-----	-----	-----
Budget Activity 07: Personnel & Command Support Equip								

Training Devices								
120	Training Support Equipment	A						U
121	Training and Education Equipment	A		25,624			25,624	U
Command Support Equipment								
122	Command Support Equipment	A		88,376			88,376	U
123	Medical Support Equipment	A		4,383			4,383	U
125	Naval MIP Support Equipment	A		2,030			2,030	U
126	Operating Forces Support Equipment	A		23,300			23,300	U
127	C4ISR Equipment	A		4,010			4,010	U
128	Environmental Support Equipment	A		24,644			24,644	U
129	Physical Security Equipment	A		120,972			120,972	U
130	Enterprise Information Technology	A		19,789			19,789	U
Other								
133	Next Generation Enterprise Service	A		104,584			104,584	U
999	Classified Programs			25,907			25,907	U
Total Personnel & Command Support Equip								
				443,619			443,619	

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2019		FY 2019		FY 2019		S e c -
			Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	
----	-----	-----	-----	-----	-----	-----	-----	-	
Budget Activity 07: Personnel & Command Support Equip									

Training Devices									
120	Training Support Equipment	A	3,400				3,400	U	
121	Training and Education Equipment	A	24,283				24,283	U	
Command Support Equipment									
122	Command Support Equipment	A	66,681				66,681	U	
123	Medical Support Equipment	A	3,352		6,500		9,852	U	
125	Naval MIP Support Equipment	A	1,984				1,984	U	
126	Operating Forces Support Equipment	A	15,131				15,131	U	
127	C4ISR Equipment	A	3,576				3,576	U	
128	Environmental Support Equipment	A	31,902		2,200		34,102	U	
129	Physical Security Equipment	A	175,436		19,389		194,825	U	
130	Enterprise Information Technology	A	25,393				25,393	U	
Other									
133	Next Generation Enterprise Service	A	96,269				96,269	U	
999	Classified Programs		15,681		4,800		20,481	U	
Total Personnel & Command Support Equip			463,088		32,889		495,977		

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Department of the Navy
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)			FY 2018 PB Request with CR Adj Base			FY 2018 Total PB Requests* with CR Adj Base			FY 2018 PB Request with CR Adj OCO		
			Quantity	Cost		Quantity	Cost		Quantity	Cost		Quantity	Cost	
			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Budget Activity 08: Spares and Repair Parts														

Spares and Repair Parts														
134	Spares and Repair Parts	A	199,627			278,565			278,565			1,178 U		
Total Spares and Repair Parts														
				199,627			278,565			278,565		1,178		
Budget Activity 20: Undistributed														

Undistributed														
135	Adj to Match Continuing Resolution	A			-1,692,780			-1,692,780			31,024 U			
Total Undistributed														
				-1,692,780			-1,692,780			31,024				
Total Other Procurement, Navy														
			6,651,966			6,585,009			6,210,084			251,083		

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018				FY 2018				FY 2018			
		Ident Code	Quantity	Cost	Total	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96***	MDDE + Ship Repairs	Remaining Req Emergency	FY 2018 e			
					PB Requests+ with CR Adj OCO						Quantity	Cost	Quantity
		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
Budget Activity 08: Spares and Repair Parts													

Spares and Repair Parts													
134	Spares and Repair Parts	A	1,178	-----	-----	-----	-----	-----	-----	-----	U		
Total Spares and Repair Parts													

Budget Activity 20: Undistributed													

Undistributed													
135	Adj to Match Continuing Resolution	A	-476	-----	-----	-----	-----	-----	-----	-----	U		
Total Undistributed													

Total Other Procurement, Navy													

251,083 25,750 25,750													

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2018			FY 2018			FY 2018		
		Total	Less Enacted		P.B Requests*	DIV B		Remaining Req		
		with CR Adj	P.L.115-96***		Base + OCO +	MDDE + Ship		with CR Adj	Base + OCO +	S
Ident	Emergency**	Repairs	Code	Quantity	Cost	Quantity	Cost	e		
-----	-----	-----	-----	-----	-----	-----	-----	-		

Budget Activity 08: Spares and Repair Parts

Spares and Repair Parts

134 Spares and Repair Parts	A	279,743	-----	-----	279,743	U
Total Spares and Repair Parts		279,743			279,743	

Budget Activity 20: Undistributed

Undistributed

135 Adj to Match Continuing Resolution	A	-1,719,006	-----	-----	-1,719,006	U
Total Undistributed		-1,719,006			-1,719,006	
Total Other Procurement, Navy		6,461,167			6,461,167	

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Department of the Navy
 FY 2019 President's Budget
 Exhibit P-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1810N Other Procurement, Navy

Line No	Item Nomenclature	FY 2019			FY 2019			FY 2019			S e c -
		Ident Code	Base Quantity	Cost	OCO Quantity	Cost	Total Quantity	Cost	Cost		
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Budget Activity 08: Spares and Repair Parts											

Spares and Repair Parts											
134	Spares and Repair Parts	A	326,838	-----	-----	-----	326,838	U	-----	-----	
Total Spares and Repair Parts											

326,838											

Budget Activity 20: Undistributed											

Undistributed											
135	Adj to Match Continuing Resolution	A	-----	-----	-----	-----	-----	U	-----	-----	
Total Undistributed											

Total Other Procurement, Navy											

9,414,355											

187,173											

9,601,528											

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Appropriation 1810N: Other Procurement, Navy

Line #	BA	BSA	Line Item Number	Line Item Title	Page
1	01	01	0131	Surface Power Equipment.....	Volume 1 - 1
2	01	01	0140	Hybrid Electric Drive (HED).....	Volume 1 - 15
3	01	02	0200	Surface Combatant HM&E.....	Volume 1 - 21
4	01	06	0670	Other Navigation Equipment.....	Volume 1 - 41
5	01	09	0840	Sub Periscope, Imaging and Supt Equip Prog.....	Volume 1 - 133
6	01	09	0900	DDG Mod.....	Volume 1 - 183
7	01	09	0910	Firefighting Equipment.....	Volume 1 - 261
8	01	09	0925	Command and Control Switchboard.....	Volume 1 - 281
9	01	09	0933	LHA/LHD Midlife.....	Volume 1 - 289
10	01	09	0935	Pollution Control Equipment.....	Volume 1 - 315
11	01	09	0941	Submarine Support Equipment.....	Volume 1 - 333
12	01	09	0942	Virginia Class Support Equipment.....	Volume 1 - 343
13	01	09	0944	LCS Class Support Equipment.....	Volume 1 - 361
14	01	09	0945	Submarine Batteries.....	Volume 1 - 371
15	01	09	0946	LPD Class Support Equipment.....	Volume 1 - 377
16	01	09	0947	DDG 1000 Class Support Equipment.....	Volume 1 - 431

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Line #	BA	BSA	Line Item Number	Line Item Title	Page
17	01	09	0950	Strategic Platform Support Equip.....	Volume 1 - 439
18	01	09	0955	Deep Subm Sys Proj (DSSP) Equip.....	Volume 1 - 449
19	01	09	0960	CG Modernization.....	Volume 1 - 453
20	01	09	0970	LCAC.....	Volume 1 - 493
21	01	09	0977	Underwater EOD Programs.....	Volume 1 - 497
22	01	09	0981	Items less than \$5 Million.....	Volume 1 - 523
23	01	09	0989	Chemical Warfare Detectors.....	Volume 1 - 573
24	01	09	0990	Submarine Life Support System.....	Volume 1 - 603
25	01	10	1010	Reactor Power Units.....	Volume 1 - 609
26	01	10	1020	Reactor Components.....	Volume 1 - 613
27	01	11	1130	Diving and Salvage Equipment.....	Volume 1 - 617
28	01	12	1210	Standard Boats.....	Volume 1 - 635
29	01	14	1445	Operating Forces IPE.....	Volume 1 - 649
30	01	15	1480	Nuclear Alterations.....	Volume 1 - 685
31	01	15	1600	LCS Common Mission Modules Equipment.....	Volume 1 - 689
32	01	15	1601	LCS MCM Mission Modules.....	Volume 1 - 699
33	01	15	1602	LCS ASW Mission Modules.....	Volume 1 - 711
34	01	15	1603	LCS SUW Mission Modules.....	Volume 1 - 723

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Line #	BA	BSA	Line Item Number	Line Item Title	Page
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36	01	16	1610	LSD Midlife & Modernization.....	Volume 1 - 741

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37	02	02	2026	SPQ-9B Radar.....	Volume 2 - 1
38	02	02	2136	AN/SQQ-89 Surf ASW Cmbt Sys.....	Volume 2 - 11
39	02	02	2150	SSN Acoustic Equipment.....	Volume 2 - 39
40	02	02	2176	Undersea Warfare Support Equipment.....	Volume 2 - 85
41	02	03	2210	Submarine Acoustic Warfare System.....	Volume 2 - 93
42	02	03	2213	Surface Ship Torpedo Def (SSTD).....	Volume 2 - 121
43	02	03	2225	Fixed Surveillance System.....	Volume 2 - 129
44	02	03	2237	SURTASS.....	Volume 2 - 133
45	02	04	2312	AN/SLQ-32.....	Volume 2 - 157
46	02	05	2360	Shipboard IW Exploit.....	Volume 2 - 193
47	02	05	2361	Automatic Identification System (AIS).....	Volume 2 - 221

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49	02	07	2611	Naval Tact Cmd Supt Sys (NTCSS).....	Volume 2 - 253
50	02	07	2614	Adv Tact Data Link Sys (ATDLS).....	Volume 2 - 263
51	02	07	2618	Navy Command and Control System (NCCS).....	Volume 2 - 279
52	02	07	2622	Minesweeping System Replacement.....	Volume 2 - 287
53	02	07	2624	Shallow Water MCM.....	Volume 2 - 301
54	02	07	2657	NAVSTAR GPS Receivers (Space).....	Volume 2 - 311
55	02	07	2666	American Forces Radio and TV Service (AFRTS).....	Volume 2 - 323
56	02	07	2676	Strategic Platform Support Equip.....	Volume 2 - 329
57	02	09	2820	Ashore ATC Equipment.....	Volume 2 - 333
58	02	09	2830	Afloat ATC Equipment.....	Volume 2 - 389
59	02	09	2851	ID Systems.....	Volume 2 - 427
60	02	09	2867	Joint Precision Approach and Landing System(JPALS).....	Volume 2 - 465
61	02	09	2876	Naval Mission Planning Systems.....	Volume 2 - 471
62	02	10	2906	Tactical/Mobile C4I Systems.....	Volume 2 - 477
63	02	10	2914	Distributed Common Ground System-Navy (DCGS-N).....	Volume 2 - 501
64	02	10	2915	CANES.....	Volume 2 - 523
65	02	10	2920	RADIAC.....	Volume 2 - 537

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66	02	10	2925	CANES Intell.....	Volume 2 - 549
67	02	10	2940	Gen Purp Elec Test Equip (GPETE).....	Volume 2 - 561
68	02	10	2950	Network Tactical Common Data Link (CDL).....	Volume 2 - 567
69	02	10	2960	Integ Combat System Test Facility.....	Volume 2 - 573
70	02	10	2970	EMI Control Instrumentation.....	Volume 2 - 577
71	02	10	2980	Items less than \$5 Million.....	Volume 2 - 581
72	02	11	3010	Shipboard Tactical Comms.....	Volume 2 - 611
73	02	11	3050	Ship Communications Automation.....	Volume 2 - 621
74	02	11	3057	Communications Items under \$5M.....	Volume 2 - 645
75	02	12	3107	Submarine Broadcast Support.....	Volume 2 - 651
76	02	12	3130	Submarine Communication Equipment.....	Volume 2 - 673
77	02	13	3215	Satellite Communications Systems.....	Volume 2 - 709
78	02	13	3216	Navy Multiband Terminal (NMT).....	Volume 2 - 735
79	02	14	3302	Joint Communications Support Element (JCSE).....	Volume 2 - 757
80	02	15	3415	Info Systems Security Program (ISSP).....	Volume 2 - 761
81	02	15	3417	MIO Intel Exploitation Team.....	Volume 2 - 801
82	02	16	3501	Cryptologic Communications Equip.....	Volume 2 - 805
86	02	17	3620	Coast Guard Equipment.....	Volume 2 - 817

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88	03	01	4048	Sonobuoys - All Types.....	Volume 3 - 1
89	03	03	4204	Weapons Range Support Equipment.....	Volume 3 - 13
90	03	03	4213	Aircraft Support Equipment.....	Volume 3 - 23
91	03	03	4217	Advanced Arresting Gear (AAG).....	Volume 3 - 67
92	03	03	4226	Meteorological Equipment.....	Volume 3 - 77
93	03	03	4242	DCRS/DPL.....	Volume 3 - 85
94	03	03	4248	Legacy Airborne MCM.....	Volume 3 - 89
95	03	03	4250	Common Control System.....	Volume 3 - 103
96	03	03	4268	Aviation Support Equipment.....	Volume 3 - 107
97	03	03	4269	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn.....	Volume 3 - 131

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100	04	03	5253	Tomahawk Support Equipment.....	Volume 4 - 57
101	04	04	5358	Strategic Missile Systems Equip.....	Volume 4 - 63
102	04	05	5420	SSN Combat Control Systems.....	Volume 4 - 87
103	04	05	5429	ASW Support Equipment.....	Volume 4 - 119
104	04	06	5509	Explosive Ordnance Disposal Equip.....	Volume 4 - 131
105	04	06	5543	Items Less Than \$5 Million.....	Volume 4 - 143
106	04	07	5661	Submarine Training Device Mods.....	Volume 4 - 149
107	04	07	5664	Surface Training Equipment.....	Volume 4 - 159

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109	05	01	6007	General Purpose Trucks.....	Volume 5 - 13
110	05	01	6024	Construction & Maint Equip.....	Volume 5 - 21
111	05	01	6027	Fire Fighting Equipment.....	Volume 5 - 33

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113	05	01	6033	Amphibious Equipment.....	Volume 5 - 45
114	05	01	6058	Pollution Control Equipment.....	Volume 5 - 53
115	05	01	6060	Items under \$5 million.....	Volume 5 - 57
116	05	01	6075	Physical Security Vehicles.....	Volume 5 - 69

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122	07	02	8106	Command Support Equipment.....	Volume 5 - 129
123	07	02	8109	Medical Support Equipment.....	Volume 5 - 159
125	07	02	8114	Naval MIP Support Equipment.....	Volume 5 - 169
126	07	02	8118	Operating Forces Supt Equip.....	Volume 5 - 175
127	07	02	8120	C4ISR Equipment.....	Volume 5 - 181
128	07	02	8126	Environmental Support Equipment.....	Volume 5 - 185
129	07	02	8128	Physical Security Equipment.....	Volume 5 - 197
130	07	02	8161	Enterprise Information Technology.....	Volume 5 - 207
133	07	05	8164	Next Generation Enterprise Service.....	Volume 5 - 223

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AN/SQQ-89 Surf ASW Cmbt Sys	2136	38	02	02.....	Volume 2 - 11
ASW Support Equipment	5429	103	04	05.....	Volume 4 - 119
Adv Tact Data Link Sys (ATDLS)	2614	50	02	07.....	Volume 2 - 263
Advanced Arresting Gear (AAG)	4217	91	03	03.....	Volume 3 - 67
Afloat ATC Equipment	2830	58	02	09.....	Volume 2 - 389
Aircraft Support Equipment	4213	90	03	03.....	Volume 3 - 23
American Forces Radio and TV Service (AFRTS)	2666	55	02	07.....	Volume 2 - 323
Amphibious Equipment	6033	113	05	01.....	Volume 5 - 45
Ashore ATC Equipment	2820	57	02	09.....	Volume 2 - 333
Automatic Identification System (AIS)	2361	47	02	05.....	Volume 2 - 221
Aviation Support Equipment	4268	96	03	03.....	Volume 3 - 107
C4ISR Equipment	8120	127	07	02.....	Volume 5 - 181
CANES	2915	64	02	10.....	Volume 2 - 523
CANES Intell	2925	66	02	10.....	Volume 2 - 549
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Command Support Equipment	8106	122	07	02.....	Volume 5 - 129
Command and Control Switchboard	0925	8	01	09.....	Volume 1 - 281
Common Control System	4250	95	03	03.....	Volume 3 - 103
Communications Items under \$5M	3057	74	02	11.....	Volume 2 - 645
Construction & Maint Equip	6024	110	05	01.....	Volume 5 - 21
Cooperative Engagement Capability	2606	48	02	07.....	Volume 2 - 227
Cryptologic Communications Equip	3501	82	02	16.....	Volume 2 - 805
DCRS/DPL	4242	93	03	03.....	Volume 3 - 85
DDG 1000 Class Support Equipment	0947	16	01	09.....	Volume 1 - 431
DDG Mod	0900	6	01	09.....	Volume 1 - 183
Deep Subm Sys Proj (DSSP) Equip	0955	18	01	09.....	Volume 1 - 449
Distributed Common Ground System-Navy (DCGS-N)	2914	63	02	10.....	Volume 2 - 501
Diving and Salvage Equipment	1130	27	01	11.....	Volume 1 - 617
EMI Control Instrumentation	2970	70	02	10.....	Volume 2 - 577
Enterprise Information Technology	8161	130	07	02.....	Volume 5 - 207
Environmental Support Equipment	8126	128	07	02.....	Volume 5 - 185
Explosive Ordnance Disposal Equip	5509	104	04	06.....	Volume 4 - 131
Fire Fighting Equipment	6027	111	05	01.....	Volume 5 - 33
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Gen Purp Elec Test Equip (GPETE)	2940	67	02	10.....	Volume 2 - 561
General Purpose Trucks	6007	109	05	01.....	Volume 5 - 13
Hybrid Electric Drive (HED)	0140	2	01	01.....	Volume 1 - 15
ID Systems	2851	59	02	09.....	Volume 2 - 427
Info Systems Security Program (ISSP)	3415	80	02	15.....	Volume 2 - 761
Integ Combat System Test Facility	2960	69	02	10.....	Volume 2 - 573
Items Less Than \$5 Million	5543	105	04	06.....	Volume 4 - 143
Items less than \$5 Million	0981	22	01	09.....	Volume 1 - 523
Items less than \$5 Million	2980	71	02	10.....	Volume 2 - 581
Items under \$5 million	6060	115	05	01.....	Volume 5 - 57
Joint Communications Support Element (JCSE)	3302	79	02	14.....	Volume 2 - 757
Joint Precision Approach and Landing System(JPALS)	2867	60	02	09.....	Volume 2 - 465
LCAC	0970	20	01	09.....	Volume 1 - 493
LCS ASW Mission Modules	1602	33	01	15.....	Volume 1 - 711
LCS Class Support Equipment	0944	13	01	09.....	Volume 1 - 361
LCS Common Mission Modules Equipment	1600	31	01	15.....	Volume 1 - 689
LCS In-Service Modernization	1604	35	01	15.....	Volume 1 - 733
LCS MCM Mission Modules	1601	32	01	15.....	Volume 1 - 699

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LPD Class Support Equipment	0946	15	01	09.....	Volume 1 - 377
LSD Midlife & Modernization	1610	36	01	16.....	Volume 1 - 741
Legacy Airborne MCM	4248	94	03	03.....	Volume 3 - 89
MIO Intel Exploitation Team	3417	81	02	15.....	Volume 2 - 801
Medical Support Equipment	8109	123	07	02.....	Volume 5 - 159
Meteorological Equipment	4226	92	03	03.....	Volume 3 - 77
Minesweeping System Replacement	2622	52	02	07.....	Volume 2 - 287
NAVSTAR GPS Receivers (Space)	2657	54	02	07.....	Volume 2 - 311
Naval MIP Support Equipment	8114	125	07	02.....	Volume 5 - 169
Naval Mission Planning Systems	2876	61	02	09.....	Volume 2 - 471
Naval Tact Cmd Supt Sys (NTCSS)	2611	49	02	07.....	Volume 2 - 253
Navy Command and Control System (NCCS)	2618	51	02	07.....	Volume 2 - 279
Navy Multiband Terminal (NMT)	3216	78	02	13.....	Volume 2 - 735
Network Tactical Common Data Link (CDL)	2950	68	02	10.....	Volume 2 - 567
Next Generation Enterprise Service	8164	133	07	05.....	Volume 5 - 223
Nuclear Alterations	1480	30	01	15.....	Volume 1 - 685
Operating Forces IPE	1445	29	01	14.....	Volume 1 - 649
Operating Forces Supt Equip	8118	126	07	02.....	Volume 5 - 175

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Physical Security Vehicles	6075	116	05	01.....	Volume 5 - 69
Pollution Control Equipment	0935	10	01	09.....	Volume 1 - 315
Pollution Control Equipment	6058	114	05	01.....	Volume 5 - 53
RADIAC	2920	65	02	10.....	Volume 2 - 537
Reactor Components	1020	26	01	10.....	Volume 1 - 613
Reactor Power Units	1010	25	01	10.....	Volume 1 - 609
SPQ-9B Radar	2026	37	02	02.....	Volume 2 - 1
SSN Acoustic Equipment	2150	39	02	02.....	Volume 2 - 39
SSN Combat Control Systems	5420	102	04	05.....	Volume 4 - 87
SURTASS	2237	44	02	03.....	Volume 2 - 133
Satellite Communications Systems	3215	77	02	13.....	Volume 2 - 709
Shallow Water MCM	2624	53	02	07.....	Volume 2 - 301
Ship Communications Automation	3050	73	02	11.....	Volume 2 - 621
Ship Gun Systems Equipment	5111	98	04	02.....	Volume 4 - 1
Ship Missile Support Equipment	5231	99	04	03.....	Volume 4 - 7
Shipboard IW Exploit	2360	46	02	05.....	Volume 2 - 193
Shipboard Tactical Comms	3010	72	02	11.....	Volume 2 - 611

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Spares and Repair Parts	9020	134	08	01.....	Volume 5 - 231
Special Purpose Supply Systems	7069	119	06	01.....	Volume 5 - 89
Standard Boats	1210	28	01	12.....	Volume 1 - 635
Strategic Missile Systems Equip	5358	101	04	04.....	Volume 4 - 63
Strategic Platform Support Equip	0950	17	01	09.....	Volume 1 - 439
Strategic Platform Support Equip	2676	56	02	07.....	Volume 2 - 329
Sub Periscope, Imaging and Supt Equip Prog	0840	5	01	09.....	Volume 1 - 133
Submarine Acoustic Warfare System	2210	41	02	03.....	Volume 2 - 93
Submarine Batteries	0945	14	01	09.....	Volume 1 - 371
Submarine Broadcast Support	3107	75	02	12.....	Volume 2 - 651
Submarine Communication Equipment	3130	76	02	12.....	Volume 2 - 673
Submarine Life Support System	0990	24	01	09.....	Volume 1 - 603
Submarine Support Equipment	0941	11	01	09.....	Volume 1 - 333
Submarine Training Device Mods	5661	106	04	07.....	Volume 4 - 149
Supply Equipment	7025	117	06	01.....	Volume 5 - 73
Surface Combatant HM&E	0200	3	01	02.....	Volume 1 - 21
Surface Power Equipment	0131	1	01	01.....	Volume 1 - 1
Surface Ship Torpedo Def (SSTD)	2213	42	02	03.....	Volume 2 - 121
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Training Support Equipment	8081	120	07	01.....	Volume 5 - 93
Training and Education Equipment	8101	121	07	01.....	Volume 5 - 113
UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	4269	97	03	03.....	Volume 3 - 131
Undersea Warfare Support Equipment	2176	40	02	02.....	Volume 2 - 85
Underwater EOD Programs	0977	21	01	09.....	Volume 1 - 497
Virginia Class Support Equipment	0942	12	01	09.....	Volume 1 - 343
Weapons Range Support Equipment	4204	89	03	03.....	Volume 3 - 13

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:								
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars				2026 / SPQ-9B Radar								
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	191.564	10.376	20.086	20.309	0.000	20.309	26.315	27.949	28.480	25.958	763.419	1,114.456
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	191.564	10.376	20.086	20.309	0.000	20.309	26.315	27.949	28.480	25.958	763.419	1,114.456
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	191.564	10.376	20.086	20.309	0.000	20.309	26.315	27.949	28.480	25.958	763.419	1,114.456
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.550	0.287	1.003	-	1.003	0.666	0.117	0.130	0.144	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The FY 2019 funding request was reduced by \$.126 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.												
This program provides for procurement of AN/SPQ-9B Radars whose primary mission is to detect and track low flying Anti-Ship Missile targets in heavy clutter. The mission of the AN/SPQ-9B has been expanded to include the capability to detect and classify periscopes. The Periscope Detection and Discrimination (PDD) capability has been designed and incorporated to operate concurrently with the Anti-Ship Missile Defense (ASMD) capability.												
[BR5IN AN/SPQ-9B FMP INSTALLATIONS]: Provided funding to install AN/SPQ-9B Radar systems. AN/SPQ-9B systems are installed using Alteration Installation Teams (AITs) that require Planning Yard Design Services Allocation (DSA) funds one and two years prior to installation. Advanced Planning (AP) is required one year prior to installation.												
[BR6IN AN/SPQ-9B NON FMP INSTALLATIONS]: Provided funding for the installation of equipment for Land Based Test Sites (LBTS).												
[P40A / BR040 TRANSMITTER UPGRADE FMP]: Funding was provided for installations of AN/SPQ-9B Transmitter Upgrades on LPD-17.												
[P40A / BR040 TRANSMITTER UPGRADE NON-FMP EQUIPMENT]: Funding provided for Transmitter Upgrade Processor installations at Surface Warfare Engineering Facility (SWEF) and Combat Systems Engineering Development Site (CSEDS) (both non-FMP).												
[P40A / BR042 AN/SPQ-9B ENGINEERING CHANGE PROPOSALS (ECP)]: Procures product improvements generated by Engineering Change Proposals (ECPs); corrects problems reported by Fleet units; upgrades unreliable components and replaces obsolete components and parts no longer in production for AN/SPQ-9B Radar; and addresses supportability concerns. Purchases and installs ECPs, including Antenna Shock Upgrade Kits, Antenna Radar Components, Digital Signal Processor (DSP) Kits, Periscope Detection and Discrimination (PDD) Kits and engineering change kit hardware components. Antenna Shock Upgrade Kits are installed during Antenna Restorations. DSP and PDD kits are installed conjunctively via Alteration Installation Team (AIT) and can be accomplished outside of a CNO Availability.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2026 / SPQ-9B Radar
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		
[P40A / BR830 AN/SPQ-9B PRODUCTION SUPPORT]: Provides support for production of hardware and hardware components and is composed primarily of Warfare Center Activity support, Software Support Activity (SSA), Integrated Logistics Agent (ILA), Acquisition Engineering Agent (AEA), Technical Design Agent (TDA) and Professional Support Services (PSS). Also includes support for cybersecurity compliance and software certification.		
[P3A / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT]: Procures AN/SPQ-9B Radars to add Anti-Ship Missile Defense (ASMD) capability to Shipboard Combat Systems. Procures radars to support combat systems on the following ship classes: CG, LHA, DDG, CVN, LHD, LPD, U.S. Coast Guard National Security Cutter and a Training Unit. Systems procured for Cruisers/Destroyers (CRUDES) and Amphibious Ships in FY14 and beyond will also include the Periscope Detection and Discrimination (PDD) capability.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars				P-1 Line Item Number / Title: 2026 / SPQ-9B Radar				
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	SPQ-9B Radar				- / 126.428	- / 1.245	- / 4.169	- / 3.033
P-3a	1 / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT (TBD)				- / 65.136	- / 9.131	- / 15.917	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 191.564	- / 10.376	- / 20.086	- / 20.309
Exhibits Schedule		FY 2020		FY 2021	FY 2022	FY 2023	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)
P-40a	SPQ-9B Radar				- / -	- / -	- / -	- / -
P-3a	1 / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT (TBD)				- / 18.758	- / 19.682	- / 20.451	- / 680.206
P-40	Total Gross/Weapon System Cost				- / 26.315	- / 27.949	- / 28.480	- / 763.419
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.								
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.								

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2026 / SPQ-9B Radar									Aggregated Items Title: SPQ-9B Radar						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) BR040 AN/SPQ-9B RADAR																				
1.1) BR040 ANTENNA	A		2,529K	7	17.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.2) BR040 ANTENNA TEST STAND	A		1,025K	1	1.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.3) BR040 TRANSMITTER UPGRADE FMP	A		-	-	12.961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.4) BR040 TRANSMITTER UPGRADE NON-FMP EQUIPMENT	A		-	-	2.958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) BR040 AN/SPQ-9B RADAR</i>			-	-	34.645	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2) BR042 AN/SPQ-9B ENGINEERING CHANGE PROPOSALS (ECP)																				
2.1) BR042 MISCELLANEOUS ECPs ⁽¹⁾	A		-	-	38.280	-	-	0.401	-	-	2.103	-	-	0.928	-	-	-	-	-	0.928
2.2) BR042 ANTENNA SHOCK UPGRADE KITS	A		527,428.57	7	3.692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) BR042 DIGITAL SIGNAL PROCESSOR KITS - PROCUREMENTS	A		380,800.00	5	1.904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4) BR042 DIGITAL SIGNAL PROCESSOR KITS - INSTALLS	A		56,000.00	5	0.280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) BR042 PDD KITS - PROCUREMENT	A		700,555.56	9	6.305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6) BR042 PDD KITS - INSTALLS	A		240,000.00	9	2.160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 2) BR042 AN/SPQ-9B ENGINEERING CHANGE PROPOSALS (ECP)</i>			-	-	52.621	-	-	0.401	-	-	2.103	-	-	0.928	-	-	-	-	-	0.928
3) BR830 AN/SPQ-9B PRODUCTION SUPPORT																				
3.1) BR830 AN/SPQ-9B PRODUCTION SUPPORT ⁽²⁾	A		-	-	17.535	-	-	0.844	-	-	2.066	-	-	2.105	-	-	-	-	-	2.105
<i>Subtotal: 3) BR830 AN/SPQ-9B PRODUCTION SUPPORT</i>			-	-	17.535	-	-	0.844	-	-	2.066	-	-	2.105	-	-	-	-	-	2.105
4) BRCA1 AN/SPQ-9B RADAR COMPONENTS																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2026 / SPQ-9B Radar									Aggregated Items Title: SPQ-9B Radar						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.1) BRCA1 AN/ SPQ-9B RADAR COMPONENTS	A		7,400K	2	14.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 4) BRCA1 AN/SPQ-9B RADAR COMPONENTS</i>			-	-	14.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5) BRCA2 AN/SPQ-9B RADAR COMPONENTS																				
5.1) BRCA2 AN/ SPQ-9B RADAR COMPONENTS	A		6,800K	1	6.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 5) BRCA2 AN/SPQ-9B RADAR COMPONENTS</i>			-	-	6.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6) WAXXX ACQUISITION WORKFORCE FUND																				
6.1) WAXXX ACQUISITION WORKFORCE FUND-2009	A		-	-	0.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 6) WAXXX ACQUISITION WORKFORCE FUND</i>			-	-	0.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	126.428	-	-	1.245	-	-	4.169	-	-	3.033	-	-	-	-	3.033	

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

Footnotes:

- (1) Miscellaneous ECPs primarily funds product improvements, corrects problems reported by Fleet units, upgrades unreliable components, replaces obsolete components/parts no longer in production, and addresses supportability concerns.
- (2) AN/SPQ-9B Production Support provides support for production of hardware and production hardware components and is composed primarily of Warfare Center Activity support, Software Support Activity (SSA), Integrated Logistics Agent (ILA), Acquisition Engineering Agent (AEA), Technical Design Agent (TDA) and Professional Support Services (PSS). Also includes support for cybersecurity compliance packages in the enterprise mission assurance support service (eMASS), element, and combat system certifications.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2026 / SPQ-9B Radar									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	65.136	9.131	15.917	17.276	0.000	17.276	18.758	19.682	20.451	20.846	680.206	867.403
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	65.136	9.131	15.917	17.276	0.000	17.276	18.758	19.682	20.451	20.846	680.206	867.403
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	65.136	9.131	15.917	17.276	0.000	17.276	18.758	19.682	20.451	20.846	680.206	867.403
(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:												
[BR040 AN/SPQ-9B RADAR FMP EQUIPMENT] Procures AN/SPQ-9B Radars to add Anti-Ship Missile Defense (ASMD) capability to Shipboard Combat Systems. Procures radars to support combat systems on the following ship classes: CG, LHA, DDG, CVN, LHD, LPD, U.S. Coast Guard National Security Cutter and a Training Unit. Systems procured for Cruisers/Destroyer (CRUDES) and Amphibious Ships in FY14 and beyond also include the Periscope Detection and Discrimination (PDD) capability.												
Notes: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT:												
1) The current production contract was awarded in December 2015. This contract includes a total of twelve FY14, FY15 and FY16 funded SPQ-9B radars being procured across several appropriations (OPN, SCN, FMS). The first radar delivered 24 months after award. All follow-on radars will be delivered at a rate of one every other month.												
2) SPQ-9B was moved from BLI 5110 to BLI 2026 in FY2004. Prior to 2004, the procurement of the first five AN/SPQ-9B systems was funded under the Mk 86 program under BLI 5110. The installation costs for four out of five of these installs were included in the 2026 budget. This explains the difference of 81 installations and only 77 procurements in this budget (delta 4).												
3) Due to the shipyard requirement to fully fund the DDG 84 installation prior to start of the availability in January 2019, funding for the installation of the FY17 radar on DDG 84 is in FY19 despite the planned radar delivery of November 2019. The DDG 84 availability starts in January 2019 and ends in April 2020.												
4) The radar unit cost increase above inflation from FY18 (\$5,712K) to FY19 (\$6,298K) is due to the total Economic Order Quantity procurement of 20-25 radars in FY18 (Including SCN and FMS units) versus 6 in FY19.												
5) The FMP unit install cost in FY18 of three radars (\$728K) appears lower than the FY19 unit install cost (\$1.075M) due to FY16 budget installation funding decisions which required retainment of FY14 and FY15 installation funds in order to accommodate a reduction in FY16. The resulting surplus in FY14 and FY15 installation funds were used to forward fund part of the installation costs, thus enabling FY18 installation funding to be reduced. The installation funding profile returns to its nominal phasing for FY19 and out and the total funding (sum of DSA, AP, and Installation funds) remains stable across hulls.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2026 / SPQ-9B Radar										Modification Number / Title: 1 / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/SPQ-9B RADAR FMP EQUIPMENT			Modification Type: TBD						Related RDT&E PEs: 0604501N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT</i>													
B Kits													
Recurring													
1.1.1) BR040 AN/SPQ-9B RADAR FMP EQUIPMENT - NonOrganic ⁽³⁾	7 / 44.190	1 / 5.712	2 / 11.424	2 / 12.597	- / -	2 / 12.597	2 / 12.864	2 / 13.646	2 / 14.305	2 / 14.577	57 / 464.094	77 / 593.409	
1.1.2) BR040 AN/SPQ-9B NON-RECURRING (TDP) - Organic	- / 1.888	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.888	
<i>Subtotal: Recurring</i>	- / 46.078	- / 5.712	- / 11.424	- / 12.597	- / -	- / 12.597	- / 12.864	- / 13.646	- / 14.305	- / 14.577	- / 464.094	- / 595.297	
<i>Subtotal: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT</i>	7 / 46.078	1 / 5.712	2 / 11.424	2 / 12.597	- / -	2 / 12.597	2 / 12.864	2 / 13.646	2 / 14.305	2 / 14.577	57 / 464.094	77 / 595.297	
<i>Subtotal: Procurement, All Modification Items</i>	- / 46.078	- / 5.712	- / 11.424	- / 12.597	- / -	- / 12.597	- / 12.864	- / 13.646	- / 14.305	- / 14.577	- / 464.094	- / 595.297	
Installation													
<i>Modification Item 1 of 1: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT</i>													
<i>Subtotal: Installation</i>	- / 19.058	- / 3.419	- / 4.493	- / 4.679	- / 0.000	- / 4.679	- / 5.894	- / 6.036	- / 6.146	- / 6.269	- / 216.112	- / 272.106	
Total													
Total Cost (Procurement + Support + Installation)	65.136	9.131	15.917	17.276	0.000	17.276	18.758	19.682	20.451	20.846	680.206	867.403	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2026 / SPQ-9B Radar										Modification Number / Title: 1 / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT																																		
Manufacturer Information																																		
Manufacturer Name: NORTHROP GRUMMAN														Manufacturer Location: BALTIMORE, MD																				
Administrative Leadtime (in Months): 0														Production Leadtime (in Months): 18																				
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	May 2018		May 2018		Mar 2019		Mar 2020		Mar 2021		Mar 2022		Mar 2023																					
Delivery Dates	Nov 2019		Jan 2020		Sep 2020		Sep 2021		Sep 2022		Sep 2023		Sep 2024																					
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: BR040 AN/SPQ-9B RADAR FMP EQUIPMENT																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 19.058	0 / 2.881	3 / 2.184	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 24.123																		
FY 2017			- / -	0 / 0.538	0 / 1.216	1 / 1.075	0 / 0.000	1 / 1.075	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.829																		
FY 2018			- / -	- / -	0 / 1.093	0 / 2.474	0 / 0.000	0 / 2.474	2 / 2.186	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 5.753																		
FY 2019			- / -	- / -	- / -	0 / 1.130	0 / 0.000	0 / 1.130	0 / 2.556	2 / 2.258	- / -	- / -	- / -	- / -	0 / 0.000	2 / 5.944																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.152	0 / 2.604	2 / 2.302	- / -	- / -	- / -	0 / 0.000	2 / 6.058																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.174	0 / 2.648	2 / 2.358	- / -	- / -	- / -	0 / 0.000	2 / 6.180																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.196	0 / 2.670	0 / 2.370	0 / 2.370	2 / 6.236																			
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.241	2 / 5.242																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 208.500	57 / 208.500																		
Total			8 / 19.058	0 / 3.419	3 / 4.493	1 / 4.679	0 / 0.000	1 / 4.679	2 / 5.894	2 / 6.036	2 / 6.146	2 / 6.269	61 / 216.112	61 / 216.112	81 / 272.106																			
Installation Schedule																																		
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot												
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4														
In	8	-	-	-	-	1	1	1	-	1	-	-	1	1	-	1	1	-	-	1	1	-	-	61	81									
Out	8	-	-	-	-	-	1	1	1	-	-	-	-	2	1	-	1	1	-	-	1	1	-	-	1	61	81							
Footnotes:																																		
(3) 1) The current production contract was awarded in December 2015. This contract includes a total of twelve FY14, FY15 and FY16 funded SPQ-9B radars being procured across several appropriations (OPN, SCN, FMS). The first radar delivered 24 months after award. All follow-on radars will be delivered at a rate of one every other month. 2) SPQ-9B was moved from BLI 5110 to BLI 2026 in FY2004. Prior to 2004, the procurement of the first five AN/SPQ-9B systems was funded under the Mk 86 program under BLI 5110. The installation costs for four out of five of these installs were included in the 2026 budget. This																																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2	P-1 Line Item Number / Title: 2026 / SPQ-9B Radar	Modification Number / Title: 1 / BR040 AN/SPQ-9B RADAR FMP EQUIPMENT
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
explains the difference of 81 installations and only 77 procurements in this budget (delta 4). 3) Due to the shipyard requirement to fully fund the DDG 84 installation prior to start of the availability in January 2019, funding for the installation of the FY17 radar on DDG 84 is in FY19 despite the planned radar delivery of November 2019. The DDG 84 availability starts in January 2019 and ends in April 2020. 4) The radar unit cost increase above inflation from FY18 (\$5,712K) to FY19 (\$6,298K) is due to the total Economic Order Quantity procurement of 20-25 radars in FY18 (including SCN and FMS units) versus 6 in FY19. 5) The FMP unit install cost in FY18 of three radars (\$728K) appears lower than the FY19 unit install cost (\$1.075M) due to FY16 budget installation funding decisions which required retainment of FY14 and FY15 installation funds in order to accommodate a reduction in FY16. The resulting surplus in FY14 and FY15 installation funds were used to forward fund part of the installation costs, thus enabling FY18 installation funding to be reduced. The installation funding profile returns to its nominal phasing for FY19 and out and the total funding (sum of DSA, AP, and Installation funds) remains stable across hulls.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars					P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys								
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0205620N, 0603553N						
Line Item MDAP/MAIS Code: N/A													
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	1,790.423	87.824	102.222	115.459	0.000	115.459	125.586	127.452	132.673	135.329	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	1,790.423	87.824	102.222	115.459	0.000	115.459	125.586	127.452	132.673	135.329	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	1,790.423	87.824	102.222	115.459	0.000	115.459	125.586	127.452	132.673	135.329	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	2.058	0.869	3.091	-	3.091	1.080	0.906	1.001	1.112	Continuing	Continuing	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
The FY 2019 funding request was reduced by \$.498 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.													
The FY 2019 funding request was reduced by \$5.553 million to account for the availability of prior year execution balances.													
Anti-Submarine Warfare (ASW) remains a Navy core competency in a dynamic and uncertain maritime environment. U.S. adversaries continue to develop asymmetric capabilities and capacities to deter, disrupt, or delay the entry of U.S. and allied naval forces, and pose a constant challenge as the Maritime Strategy is implemented. Evolving submarine technologies offer enhanced stealth, speed, endurance, weapons, and operational proficiency, trends foretelling that the adversary submarine of the future will have a significantly larger sphere of influence, while presenting less vulnerability to ASW forces. The effective offensive engagement range of the adversary submarine of the future will continue to match or outrange individual U.S. and multinational platform sensors and weapons in many tactical environments. Submarines are an increasing threat to all Naval and Allied ships, particularly modern diesel subs and faster torpedoes. Not only can the presence of potential hostile submarines delay naval combatant action until they are located and neutralized, submarines can also disrupt all seaborne logistics supply for any ground campaign as well as maritime commerce. ASW forces must be effective in all operating environments, ranging from the deep open ocean to the littorals, and are key to countering adversarial anti-access and area denial strategies.													
The AN/SQQ-89(V) Surface Ship ASW Combat System provides integrated Undersea Warfare (USW) combat management, fire control, command and control, and on-board training to enable surface combatants to engage USW targets in both open ocean and littoral environments. The AN/SQQ-89(V) is a system comprised of many subsystems, which integrate the helo and its sensors, the ship's own organic sensors, weapons, torpedo detection, and a high fidelity Surface ASW Synthetic Trainer (SAST). Variants of the AN/SQQ-89(V) are currently in operation on practically all in-service CG47 and DDG51 Class Surface Combatants.													
AN/SQQ-89A(V)15 Surface Ship USW Combat System Upgrade - Detailed Description: A major upgrade to the AN/SQQ-89(V) legacy system, the AN/SQQ-89A(V)15 significantly decreases ship vulnerability to torpedo attack, improves surface ship USW shallow water warfighting capability in the littoral, and mitigates Commercial-Off-The-Shelf (COTS) obsolescence and supportability issues. The AN/SQQ-89A(V)15 upgrade was reported as a critical need for surface ASW operations by SECNAV. A Fleet Forces Command (FFC) Urgent Operational Needs (UON) report identified the Fleet need for AN/SQQ-89A(V)15 upgrades. The need for the AN/SQQ-89A(V)15 is also articulated in the U.S. Pacific Command (PACOM) Integrated Priorities List (IPL); in Office of the Chief of Naval Operations (OPNAV) 'Surface ASW Capabilities Build' funding priorities letters; in a 7th Fleet Bottom Up review report; and in the U.S. Fleet Forces Command (USFFC) ASW Integrated Prioritized Capabilities List (IPCL).													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205620N, 0603553N
Line Item MDAP/MAIS Code: N/A		
<p>The AN/SQQ-89A(V)15 upgrade is programmed for backfit on: Select CG47 Class Baseline 3 and 4 (CG59-73) ships via OP,N BLI 0960 (Cruiser Modernization); DDG51 Class Flight I/II (DDG51-78) ships via OP,N BLI 0900 (DDG Modernization) and OP,N BLI 2136 (represented here); and DDG51 Class Flight IIA and follow (DDG79+) ships via OP,N BLI 2136 (represented here).</p> <p>The AN/SQQ-89A(V)15 upgrade, developed under RDT&E,N PE 0205620N, capitalizes on previously fielded AN/SQQ-89(V)15 systems. The AN/SQQ-89A(V)15 is comprised of a tactical towed array sensor, the Multi-Function Towed Array (MFTA), and will replace standard, militarized, legacy components with Commercial-Off-The-Shelf (COTS) hardware to provide an ASW combat system with the capability for mid-frequency bistatic and multi-static sonar operations. The AN/SQQ-89A(V)15 features a mid-frequency bistatic hull/towed Sonar Echo Tracker Classifier (ETC); hull/towed Sonar with Acoustic Intercept (ACI) fused data for significantly improved torpedo defense; Handling & Stowage Group (H&SG) for MFTA operation; Torpedo Setting Panel (TSP); passive towed array processing; common sub/surface sensor performance and prediction; common NAVAIR/Surface Light Airborne Multi-Purpose System (LAMPS) processing; portable software; integrated supportability; and on-board training via the Surface ASW Synthetic Trainer (SAST). The AN/SQQ-89A(V)15 will be interoperable with AEGIS Weapons System (AWS) baselines; is Open Architecture (OA) compliant (meeting OA Level 3 requirements); provides significant reductions in weight, space, cooling, and power requirements over legacy AN/SQQ-89(V) systems; is Grade A shock qualified; supports Digital Fire Control Integration (DFCI) capability; and is integrated with the Battle Force Tactical Trainer (BFTT).</p> <p>AN/SQQ-89A(V)15 Technology Insertion/Refresh. Additionally, to be effective against increasingly stealthy threats in an often ambiguous undersea environment, future sensors must be environmentally adaptive, have very low false alarm rates, and exploit the full range of current and future submarine detection vulnerabilities. Via the Advanced Capability Build (ACB) process under RDT&E,N PE 0205620N (ACB-13, ACB-15, ACB-17, etc.), these types of maturing/proven USW technologies will be folded into the AN/SQQ-89A(V)15 production and future technology refresh programs (fielded starting in FY 2016). Leveraging the submarine community's Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (ARCI) process, the AN/SQQ-89A(V)15 Tech Refresh program procures upgraded software/hardware technology for all CG47/DDG51 Class surface combatant platforms with a previously fielded AN/SQQ-89A(V)15. This process has proven to manage obsolescence, take advantage of commercial development efforts, and continue to pace the threat to ensure systems remain effective well into the 21st century. Studies of the submarine and surface ASW technology show that system upgrades are most critical 6-9 years after initial installation of the AN/SQQ-89A(V)15, as failure rates within this period begin to rise. Establishing a stable technology refresh program will ensure the Fleet maintains critical Undersea Warfare capability (threat-pacing improvements) and productivity (Increased Operational Availability (Ao)) while reducing the Total Ownership Cost (TOC) to the Navy.</p> <p>AN/SQQ-89A(V)15 YEAR TO YEAR FUNDING PROFILE FROM PROCUREMENT TO INSTALL:</p> <p>1st Year - Procurement of Equipment.</p> <p>2nd Year - Ordering of incidental installation material and perform mandatory planning yard design tasks and ship checks. This is shown as a quantity of "0" with requested funds in the year before the installation of equipment.</p> <p>3rd Year - Installation of Equipment.</p> <p>An average, aggregate AN/SQQ-89A(V)15 shipset unit cost is comprised of multiple contract/funding vehicles. Additionally, these unit costs can vary as they are dependent on the pre-existing legacy AN/SQQ-89(V) configuration of each ship.</p> <p>FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.</p> <p>AN/SQQ-89A(V)15 production shipset delivery time is 18 months after contract award. Each subsequent system procured in an FY is delivered one month later than the previous system. Delivery of equipment to the shipyard is preferably no later than 30-90 days prior to a CONUS (Continental U.S.) installation start date, and no later than 120 days prior to a non-CONUS installation start date. Installations are assigned to specific ships as per Fleet priorities/requirements, and based on ship availabilities. Fleet availability periods to support a major upgrade such as the AN/SQQ-89A(V)15 normally occur only once every three years in a ship's schedule.</p> <p>FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205620N, 0603553N
Line Item MDAP/MAIS Code: N/A	YEAR-TO-YEAR BUDGET CONTROL COMPARISON: - FY 2018 (\$102.222 million) to FY 2019 (\$115.459 million) increase (\$+13.237 million) is due to the net effect of the following differences in FY 2019: Addition/ramp-up of a major MFTA Engineering Change (EC) effort, 2 additional A(V)15 FLT I/II buys, 3 additional A(V)15 Tech Refresh buys, 1 additional FOT&E event, 1 additional SCSC Wallops upgrade, 2 less CSSQT events, 1 less A(V)15 FLT IIA install, 1 less A(V)15 FLT I/II install, 1 less FLTASWTRACEN upgrade, 1 less SSES upgrade. The FY 2019 funding request was reduced by \$5.553 million to account for the availability of prior year execution balances. This was driven by competition award issues which delayed the award of a new AN/SQQ-89A(V)15 OK-410 Handling & Stowage Group (H&SG) contract.	
[P40A / DB400 - DDG51 CLASS SYSTEM COMPONENTS - SQQ-89A(V)15]: DB400 Cost Elements/Descriptions as Follows: [P40A / SYSTEM UPDATES (NON RECURRING ENGINEERING)]: 1.1 Consists of the NRE efforts associated with the technology refresh/replacement of legacy AN/SQQ-89(V) equipment with updated Commercial-Off-The-Shelf (COTS) processors, including material procurement, fabrication, and integration of Government Furnished Property (GFP), as performed by the prime contractor. Hardware reviews will be conducted on an annual basis to determine if hardware changes are warranted based on Commercial-Off-The-Shelf (COTS) obsolescence and to identify applicable state-of-the-practice hardware components. This line also includes start-up/transition funding required for the AN/SQQ-89(V) prime in the first year of each new production/design agent contract. [P40A / EC'S (ENGINEERING CHANGES)]: 1.2 Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades to previously fielded and in-production AN/SQQ-89A(V)15 systems. Funding will be used to support non-recurring first article test efforts associated with the changing Commercial-Off-The-Shelf (COTS) environment as well as Reliability, Maintainability, and Availability (RM&A) modifications requested by the Fleet; correct deficiencies identified through Fleet use; upgrade unreliable components; replace obsolete components; and correct design errors found during testing. Note: This line includes a major FY 2018 (\$4.707M) and FY 2019 (\$10.118M) Multi-Function Towed Array (MFTA) Engineering Change (EC) which is required to address and resolve deficiencies in the current MFTA TB-37 version's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues. In FY 2018, funding (\$4.707M of the EC's \$6.448M budget) is required to complete the shipboard towed array receiver EC. In FY 2019, funding (\$10.118M of the EC's \$11.731M budget) is required to assemble the array and towed array receiver, conduct array and receiver acceptance test & evaluation efforts to certify they meet current AN/SQQ-89A(V)15 USW Combat System performance envelope specifications, and implement the EC in production. The MFTA TB-37 is the towed array version that is currently in production and employed by the AN/SQQ-89A(V)15 USW Combat System. [P40A / ILS (INTEGRATED LOGISTICS SUPPORT)]: 1.3 Funding is provided for all ILS planning and coordination elements associated with every AN/SQQ-89A(V)15 modification/procurement/installation, including: configuration management and control of the hardware and software associated with each modification such as Maintenance and Material Management (3M); planned and corrective maintenance procedures and drawings; supporting the procurement of upgrades to Technical Training Equipment (TTE) for shore training sites; changes to maintenance concepts and associated updates to technical documentation, such as technical manuals; development of revisions to both operator and maintenance training materials as part of the initial training curriculum development; revisions to the Navy Training System Plan; initial conduct of instructor training (train-the-trainer) until such time that the training community assumes the responsibility; modifications to supply support related provisioning data and identification of related changes to Allowance Parts Lists (APLs) and Program Support Data (PSD) spares procurement lists; and Packaging, Handling, Storage and Transportation (PHST) support during the procurement, Installation and Checkout (INCO), and testing stages of the AN/SQQ-89A(V)15 to meet evolving capabilities. [P40A / AIE (AEGIS INTEGRATION EVENTS)]: 1.4 Recurring engineering support services associated with AN/SQQ-89A(V)15 equipment at the Surface Combatant Systems Center (SCSC) Wallops Island, VA test facility to support land-based testing, external interface testing, and AEGIS Integration Event (AIE) production systems testing for interoperability risk reduction analysis purposes as necessary to certify that each incremental AN/SQQ-89A(V)15 hardware/software build is compatible with multiple AEGIS Weapons System (AWS) baselines prior to installation. [P40A / CSSQT (COMBAT SYSTEMS SHIP QUALIFICATION TRIALS)]: 1.5 CSSQTs are required per Naval Sea Systems Instruction 90963.1C for all ships undergoing significant conversion/modernization availabilities. CSSQTs consist of a series of at-sea exercises and tests to verify/certify the AN/SQQ-89A(V)15 or AN/SQQ-89A(V)15 Technology Refresh system has been installed properly and can be operated and maintained safely and effectively. CSSQTs follow every AN/SQQ-89A(V)15 FLT I/II/IIA first-of-its-kind or AN/SQQ-89A(V)15 Technology Refresh installation. Note: CSSQT costs are dependent on the number, scope and complexity of CSSQTs planned per Fiscal Year (FY). CSSQTs planned for AN/SQQ-89A(V)15 FLT I/II/IIA installs are higher in cost, scope and complexity than those for AN/SQQ-89A(V)15		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205620N, 0603553N
Line Item MDAP/MAIS Code: N/A		
Technology Refreshes. In FY 2017 (\$4.206M), five (5) CSSQTs are planned (two for AN/SQQ-89A(V)15 FLT IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs). In FY 2018 (\$6.686M), seven (7) CSSQTs are planned (four for AN/SQQ-89A(V)15 FLT I/II/IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs). In FY 2019 (\$4.903M), five (5) CSSQTs are planned (two for AN/SQQ-89A(V)15 FLT I/II/IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs).		
[P40A / FOT&E (FOLLOW-ON OPERATIONAL TEST & EVALUATION)]: 1.6 Represents the final independent test of each new increment of the AN/SQQ-89A(V)15 production baseline (i.e. ACB-13, ACB-15, ACB-17, etc.) conducted in support of the Director, Operational Test and Evaluation Title X review and report to the Congress. Follow-On Operational Test & Evaluation events are conducted to ensure each increment meets the operational effectiveness and suitability requirements for each incremental AN/SQQ-89 ACB production baseline, along with its readiness and performance goals. Each test cycle is planned the year after initial ACB baseline fielding to allow time for installation and to verify performance prior to conducting the FOT&E. Note: FOT&E costs are primarily biennial driven, and dependent on the scope and complexity of the next new AN/SQQ-89 Advanced Capability Build (ACB) production baseline release being tested. In FY 2017 (\$1.542M), funding is required to conduct an FOT&E event on the next new AN/SQQ-89 ACB production baseline release. There is no requirement to conduct an FOT&E event in FY 2018. In FY 2019 (\$2.048M), funding is required to conduct an FOT&E event on the next new AN/SQQ-89 ACB production baseline release.		
[P40A / FLTASWTRACEN (FLEET ASW TRAINING CENTER)]: 1.7 Upgrade of AN/SQQ-89A(V)15 training equipment for the Fleet ASW Training Center, San Diego, CA. Training system improvements are a critical factor in achieving warfighter competencies and mission readiness. Equipment must be upgraded periodically to ensure continued support of the latest backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines and to implement Fleet prioritized warfighting training improvements to meet evolving capabilities. Note: FLTASWTRACEN costs are primarily biennial driven, and dependent on the scope and complexity of training equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. There is no requirement to upgrade equipment at the FLTASWTRACEN in FY 2017. In FY 2018 (\$0.945M), funding is required to upgrade the equipment at FLTASWTRACEN. There is no requirement to upgrade equipment at the FLTASWTRACEN in FY 2019.		
[P40A / SSES (SURFACE SHIP ENGINEERING SITE)]: 1.8 Procurement of AN/SQQ-89A(V)15 equipment for land-based sites, including the SSES at the prime vendor's facility, to support production system integration and interoperability testing. Equipment includes simulation hardware, test tools, fabrication and test of mod kits (hardware and operational software), and laboratory equipment. Equipment must be upgraded periodically to ensure continued support of the latest backfit AN/SQQ-89A(V)15 Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. Note: SSES costs are primarily biennial driven, and dependent on the scope and complexity of shore site equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. There is no requirement to upgrade equipment at the SSES land-based site in FY 2017. In FY 2018 (\$2.032M), funding is required to upgrade the equipment at the SSES land-based site. There is no requirement to upgrade equipment at the SSES land-based site in FY 2019.		
[P40A / SCSC (SURFACE COMBATANT SYSTEMS CENTER)]: 1.9 Procurement of AN/SQQ-89A(V)15 equipment for land-based sites including the Surface Combatant Systems Center (SCSC) at Wallops Island, VA, to support production system integration and interoperability testing. Equipment includes simulation hardware, test tools, fabrication and test of mod kits (hardware and operational software), and laboratory equipment. Equipment must be upgraded periodically to ensure continued support of the latest backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. Note: SCSC Wallops costs are primarily biennial driven, and dependent on the scope and complexity of shore site equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. In FY 2017 (\$1.957M), funding is required to upgrade the equipment at the SCSC Wallops land-based site. There is no requirement to upgrade equipment at the SCSC Wallops land-based site in FY 2018. In FY 2019 (\$1.910M), funding is required to upgrade the equipment at the SCSC Wallops land-based site.		
[P40A / MFTA (MULTI-FUNCTION TOWED ARRAY) MAJOR EQUIPMENT]: 1.10 Procurement of MFTA full module sets required for expeditious replacement in the event of major damage (the TB-37 MFTA component is considered a principle item). The MFTA is a key component of the AN/SQQ-89A(V)15 USW Combat System upgrade on Surface Combatants and enables ships to have active bi-statics, Continuous Active Sonar (CAS), adaptive beamforming, passive bellringers, and the use of new sensors for advanced torpedo detection. FY 2019 and prior MFTA procurements are of the TB-37 version. FY 2020 and forward MFTA procurements are of the TB-37X version (major engineering change to be completed in FY 2019) which is required to address and resolve deficiencies in the current MFTA TB-37 version's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.		
[P40A / DB830 - PRODUCTION ENGINEERING - SQQ-89A(V)15]: DB830 Cost Element/Description as Follows:		

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Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars	P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205620N, 0603553N
Line Item MDAP/MAIS Code: N/A		
[P40A / PRODUCTION ENGINEERING]: 2.1 Funding is for AN/SQQ-89A(V)15 program In-Service Engineering Agent (ISEA), Software Support Activity (SSA), Acquisition Engineering Agent (AEA), and Technical Design Agent (TDA) efforts in performing the following functions: writing of contracts; review and evaluation of production design data, documentation and Contract Data Requirements Lists (CDRLs); letting of production contract awards; on-site engineering support at the prime integrator's facility; production configuration control and quality assurance (Production Inspection Test (PIT) and Production Reliability Acceptance Test (PRAT)); witnessing of segment/system integration tests and preparation of reports; conduct of first article and factory acceptance tests; collection of performance metrics; generation/assessment of Software Problem Reports (SPRs) and coordination with vendors; value and maintenance engineering; coordination with AEGIS regarding interface definition and ship integration; support safety review and AEGIS Integration Events (AIE); provide plans, procedures and inputs to support Information Assurance (IA) mandates; provide status reports and technical briefings; support meetings with program office; and all other production support efforts directly related to delivery of AN/SQQ-89A(V)15 software and hardware.		
[P40A / DB900 - CONSULTING SERVICES - SQQ-89A(V)15]: DB900 Cost Element/Description as Follows:		
[P40A / CONSULTING SERVICES]: 3.1 Funding to provide assistance in the following areas: program and financial management; system specification validation; production planning; business case and market analyses; vendor cost, schedule, performance, production, and contract deliverable monitoring; installation planning and coordination; Integrated Logistics Support (ILS) asset management, planning, documentation, and coordination; and evaluation of Engineering Change Proposals (ECPs).		
[P3A / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE]: See the following:		
AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of AN/SQQ-89A(V)15 equipment for subsequent backfit installation on all DDG79-112 Flight IIA ships. An average, aggregate AN/SQQ-89A(V)15 unit cost is indicated, however, it should be noted that this cost is comprised of multiple contract/funding vehicles. Additionally, the subdivision of these unit costs to a specific ship can vary as they are dependent on the pre-existing configuration of each ship.		
AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE - COST CODE DB6IN INSTALLATION: Funding is for the full-up physical installation of the major AN/SQQ-89A(V)15 upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard.		
[P3A / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE]: See the following:		
AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of AN/SQQ-89A(V)15 equipment for subsequent backfit installation on select DDG51-78 FLT I/II ships. An average, aggregate AN/SQQ-89A(V)15 unit cost is indicated, however, it should be noted that this cost is comprised of multiple contract/funding vehicles. Additionally, the subdivision of these unit costs to a specific ship can vary as they are dependent on the pre-existing configuration of each ship.		
AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE - COST CODE DB6IN INSTALLATION: Funding is for the full-up physical installation of the major AN/SQQ-89A(V)15 upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard.		
[P3A - 3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE]: See the following:		
AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of a subset of AN/SQQ-89A(V)15 equipment, specifically the Multi-Function Towed Array (MFTA) and Handling & Stowage Group (H&SG), for subsequent installation on all DDG113 and follow ships during their Post Delivery Availability (PDA) or Post Shakedown Availability (PSA) periods, to upgrade the ASW sonar suite from an AN/SQQ-89(V)15 configuration to the AN/SQQ-89A(V)15 configuration.		
AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE - COST CODE DB6IN INSTALLATION: Physical installation of the H&SG and MFTA on DDG113 and follow ships during their PDA or PSA period which includes the installation of an egress, under-deck stiffeners, cables, bulkheads, opening and closing of the transom, the winch, levelwind, fairlead and control station, decking, painting, and final		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars	P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205620N, 0603553N
Line Item MDAP/MAIS Code: N/A		
system testing, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard.		
[P3A - 4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH]: See the following: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH - COST CODE DB400 PROCUREMENT: Procurement of software/hardware technology upgrades for all CG47/DDG51 Class surface combatant platforms with a previously fielded AN/SQQ-89A(V)15, as necessary to manage obsolescence, take advantage of commercial development efforts, and continue to pace the threat and ensure the system remains effective well into the 21st century. Updating the hardware and software will ensure the Fleet maintains critical Undersea Warfare capability while reducing obsolescence. Establishing a technology refresh program provides a method for rapid response to meet Fleet Anti-Submarine Warfare (ASW) requirements. AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH - COST CODE DB6IN INSTALLATION: Funding is for the physical installation of the AN/SQQ-89A(V)15 Technology Refresh upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:							
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars				2136 / AN/SQQ-89 Surf ASW Cmbt Sys							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0205620N, 0603553N				
Line Item MDAP/MAIS Code: N/A											
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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-40a	AN/SQQ-89(V) SURFACE ASW COMBAT SYSTEM				- / 1,300.582	- / 21.853	- / 28.278	- / 30.643	- / -	- / 30.643	
P-3a	1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE (Warfighting Capability)				- / 405.366	- / 21.966	- / 23.437	- / 6.737	- / 0.000	- / 6.737	
P-3a	2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE (Warfighting Capability)				- / 20.274	- / 9.515	- / 10.904	- / 23.785	- / 0.000	- / 23.785	
P-3a	3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE (Warfighting Capability)				- / 23.659	- / 13.255	- / 16.205	- / 16.211	- / 0.000	- / 16.211	
P-3a	4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH (Warfighting Capability)				- / 40.542	- / 21.235	- / 23.398	- / 38.083	- / 0.000	- / 38.083	
P-40	Total Gross/Weapon System Cost				- / 1,790.423	- / 87.824	- / 102.222	- / 115.459	- / 0.000	- / 115.459	
Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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-40a	AN/SQQ-89(V) SURFACE ASW COMBAT SYSTEM				- / -	- / -	- / -	- / -	- / -	- / -	
P-3a	1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE (Warfighting Capability)				- / 5.841	- / 12.071	- / 1.211	- / 18.669	- / 7.535	- / 502.833	
P-3a	2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE (Warfighting Capability)				- / 22.778	- / 22.145	- / 31.865	- / 7.344	- / 9.800	- / 158.410	
P-3a	3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE (Warfighting Capability)				- / 17.247	- / 17.475	- / 17.821	- / 18.188	Continuing	Continuing	
P-3a	4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH (Warfighting Capability)				- / 49.261	- / 40.127	- / 51.213	- / 59.895	Continuing	Continuing	
P-40	Total Gross/Weapon System Cost				- / 125.586	- / 127.452	- / 132.673	- / 135.329	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The OP,N BLI 2136 budget primarily supports the upgrade of legacy, in-service AN/SQQ-89(V) systems to the superior AN/SQQ-89A(V)15 USW Combat System baseline. Additionally, the OP,N BLI 2136 budget will be responsible for periodic technology refresh initiatives in conjunction with previously fielded AN/SQQ-89A(V)15 systems across all CG47 and DDG51 Class platforms (software/hardware technology upgrades/insertions) to pace the threat and remain effective well into the 21st century.

YEAR-TO-YEAR BUDGET CONTROL COMPARISON:

- FY 2018 (\$102.222 million) to FY 2019 (\$115.459 million) increase (\$+13.237 million) is due to the net effect of the following differences in FY 2019: Addition/ramp-up of a major MFTA Engineering Change (EC) effort, 2 additional A(V)15 FLT I/II buys, 3 additional A(V)15 Tech Refresh buys, 1 additional FOT&E event, 1 additional SCSC Wallops upgrade, 2 less CSSQT events, 1 less A(V)15 FLT IIA install, 1 less A(V)15 FLT I/II install, 1 less FLTASWTRACEN upgrade, 1 less SSES upgrade.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2						P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys									Aggregated Items Title: AN/SQQ-89(V) SURFACE ASW COMBAT SYSTEM					
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) DB400 - DDG51 CLASS SYSTEM COMPONENTS - SQQ-89A(V)15																				
1.1) SYSTEM UPDATES (NON RECURRING ENGINEERING) ⁽¹⁾			-	-	15.663	-	-	1.809	-	-	1.848	-	-	1.529	-	-	-	-	-	1.529
1.2) EC'S (ENGINEERING CHANGES) ⁽²⁾			-	-	1,093.930	-	-	1.705	-	-	6.448	-	-	11.731	-	-	-	-	-	11.731
1.3) ILS (INTEGRATED LOGISTICS SUPPORT) ⁽³⁾			-	-	36.732	-	-	3.219	-	-	3.086	-	-	3.096	-	-	-	-	-	3.096
1.4) AIE (AEGIS INTEGRATION EVENTS) ⁽⁴⁾			-	-	20.315	-	-	2.640	-	-	2.587	-	-	0.979	-	-	-	-	-	0.979
1.5) CSSQT (COMBAT SYSTEMS SHIP QUALIFICATION TRIALS) ⁽⁵⁾			-	-	27.143	-	-	4.206	-	-	6.686	-	-	4.903	-	-	-	-	-	4.903
1.6) FOT&E (FOLLOW-ON OPERATIONAL TEST & EVALUATION) ⁽⁶⁾			-	-	4.943	-	-	1.542	-	-	-	-	-	2.048	-	-	-	-	-	2.048
1.7) FLTASWTRACEN (FLEET ASW TRAINING CENTER) ⁽⁷⁾			-	-	3.472	-	-	-	-	-	0.945	-	-	-	-	-	-	-	-	-
1.8) SSSES (SURFACE SHIP ENGINEERING SITE) ⁽⁸⁾			-	-	12.165	-	-	-	-	-	2.032	-	-	-	-	-	-	-	-	-
1.9) SCSC (SURFACE COMBATANT SYSTEMS CENTER) ⁽⁹⁾			-	-	2.301	-	-	1.957	-	-	-	-	-	1.910	-	-	-	-	-	1.910
Subtotal: 1) DB400 - DDG51 CLASS SYSTEM COMPONENTS - SQQ-89A(V)15			-	-	1,216.664	-	-	17.078	-	-	23.632	-	-	26.196	-	-	-	-	-	26.196
2) DB830 - PRODUCTION ENGINEERING - SQQ-89A(V)15																				
2.1) PRODUCTION ENGINEERING ⁽¹⁰⁾			-	-	66.155	-	-	3.309	-	-	3.204	-	-	3.191	-	-	-	-	-	3.191

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys									Aggregated Items Title: AN/SQQ-89(V) SURFACE ASW COMBAT SYSTEM							
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
<i>Subtotal: 2) DB830 - PRODUCTION ENGINEERING - SQQ-89A(V)15</i>			-	-	66.155	-	-	3.309	-	-	3.204	-	-	3.191	-	-	-	-	-	3.191	
3) DB900 - CONSULTING SERVICES - SQQ-89A(V)15			3.1) CONSULTING SERVICES ⁽¹⁾			-	-	17.763	-	-	1.466	-	-	1.442	-	-	1.256	-	-	-	1.256
<i>Subtotal: 3) DB900 - CONSULTING SERVICES - SQQ-89A(V)15</i>			-	-	17.763	-	-	1.466	-	-	1.442	-	-	1.256	-	-	-	-	-	1.256	
Total			-	-	1,300.582	-	-	21.853	-	-	28.278	-	-	30.643	-	-	-	-	-	30.643	

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

Footnotes:

(1) 1.1 SYSTEM UPDATES (NON RECURRING ENGINEERING): Consists of the NRE efforts associated with the technology refresh/replacement of legacy AN/SQQ-89(V) equipment with updated Commercial-Off-The-Shelf (COTS) processors, including material procurement, fabrication, and integration of Government Furnished Property (GFP), as performed by the prime contractor. Hardware reviews will be conducted on an annual basis to determine if hardware changes are warranted based on Commercial-Off-The-Shelf (COTS) obsolescence and to identify applicable state-of-the-practice hardware components. This line also includes start-up/transition funding required for the AN/SQQ-89(V) prime in the first year of each new production/design agent contract.

(2) 1.2 EC'S (ENGINEERING CHANGES): Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades to previously fielded and in-production AN/SQQ-89A(V)15 systems. Funding will be used to support non-recurring first article test efforts associated with the changing Commercial-Off-The-Shelf (COTS) environment as well as Reliability, Maintainability, and Availability (RM&A) modifications requested by the Fleet; correct deficiencies identified through Fleet use; upgrade unreliable components; replace obsolete components; and correct design errors found during testing. The FY 2017 (\$1.705M) to FY 2018 (\$6.448M) to FY 2019 (\$11.731M) increases are driven by a major FY 2018-2019 Multi-Function Towed Array (MFTA) Engineering Change (EC) which is required to address and resolve deficiencies in the current MFTA TB-37 version's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues. In FY 2018, funding (\$4.707M of the EC's \$6.448M budget) is required to complete the shipboard towed array receiver EC. In FY 2019, funding (\$10.118M of the EC's \$11.731M budget) is required to assemble the array and towed array receiver, conduct array and receiver acceptance test & evaluation efforts to certify they meet current AN/SQQ-89A(V)15 USW Combat System performance envelope specifications, and implement the EC in production. The MFTA TB-37 is the towed array version that is currently in production and employed by the AN/SQQ-89A(V)15 USW Combat System.

(3) 1.3 ILS (INTEGRATED LOGISTICS SUPPORT): Funding is provided for all ILS planning and coordination elements associated with every AN/SQQ-89A(V)15 modification/procurement/installation, including: configuration management and control of the hardware and software associated with each modification such as Maintenance and Material Management (3M); planned and corrective maintenance procedures and drawings; supporting the procurement of upgrades to Technical Training Equipment (TTE) for shore training sites; changes to maintenance concepts and associated updates to technical documentation, such as technical manuals; development of revisions to both operator and maintenance training materials as part of the initial training curriculum development; revisions to the Navy Training System Plan; initial conduct of instructor training (train-the-trainer) until such time that the training community assumes the responsibility; modifications to supply support related provisioning data and identification of related changes to Allowance Parts Lists (APLs) and Program Support Data (PSD) spares procurement lists; and Packaging, Handling, Storage and Transportation (PHST) support during the procurement, Installation and Checkout (INCO), and testing stages of the AN/SQQ-89A(V)15 to meet evolving capabilities.

(4) 1.4 AIE (AEGIS INTEGRATION EVENTS): Recurring engineering support services associated with AN/SQQ-89A(V)15 equipment at the Surface Combatant Systems Center (SCSC) Wallops Island, VA test facility to support land-based testing, external interface testing, and AEGIS Integration Event (AIE) production systems testing for interoperability risk reduction analysis purposes as necessary to certify that each incremental AN/SQQ-89A(V)15 hardware/software build is compatible with multiple AEGIS Weapons System (AWS) baselines prior to installation.

(5) 1.5 CSSQT (Combat Systems Qualification Trials): CSSQTs are required per Naval Sea Systems Instruction 90963.1C for all ships undergoing significant conversion/modernization availabilities. CSSQTs consist of a series of at-sea exercises and tests to verify/certify the AN/SQQ-89A(V)15 or AN/SQQ-89A(V)15 Technology Refresh system has been installed properly and can be operated and maintained safely and effectively. CSSQTs follow every AN/SQQ-89A(V)15 FLT I/II/IIA first-of-its-kind or AN/SQQ-89A(V)15 Technology Refresh installation. CSSQT costs are dependent on the number, scope and complexity of CSSQTs planned per Fiscal Year (FY). CSSQTs planned for AN/SQQ-89A(V)15 FLT I/II/IIA installs are higher in cost, scope and complexity than those for AN/SQQ-89A(V)15 Technology Refreshes. In FY 2017 (\$4.206M), five (5) CSSQTs are planned (two for AN/SQQ-89A(V)15 FLT IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs). In FY 2018 (\$6.686M), seven (7) CSSQTs are planned (four for AN/SQQ-89A(V)15 FLT I/II/IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs). In FY 2019 (\$4.903M), five (5) CSSQTs are planned (two for AN/SQQ-89A(V)15 FLT I/II/IIA installs and three for AN/SQQ-89A(V)15 Technology Refresh installs).

(6) 1.6 FOT&E (Follow-On Operational Test & Evaluation): Represents the final independent test of each new increment of the AN/SQQ-89A(V)15 production baseline (i.e. ACB-13, ACB-15, ACB-17, etc.) conducted in support of the Director, Operational Test and Evaluation Title X review and report to the Congress. Follow-On Operational Test & Evaluation events are conducted to ensure each increment meets the operational effectiveness and suitability requirements for each incremental AN/SQQ-89 ACB production baseline, along with its readiness and performance goals. Each test cycle is planned the year after initial ACB baseline fielding to allow time for installation and to verify performance prior to conducting the FOT&E. FOT&E costs are primarily biennial driven, and dependent on the scope and complexity of the next new AN/SQQ-89 Advanced Capability Build (ACB) production baseline release being tested. In FY 2017 (\$1.542M),

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2	P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys	Aggregated Items Title: AN/SQQ-89(V) SURFACE ASW COMBAT SYSTEM
funding is required to conduct an FOT&E event on the next new AN/SQQ-89 ACB production baseline release. There is no requirement to conduct an FOT&E event in FY 2018. In FY 2019 (\$2.048M), funding is required to conduct an FOT&E event on the next new AN/SQQ-89 ACB production baseline release.		
(7) 1.7 FLTASWTRACEN (Fleet ASW Training Center, San Diego, CA): Upgrade of AN/SQQ-89A(V)15 training equipment for the Fleet ASW Training Center, San Diego, CA. Training system improvements are a critical factor in achieving warfighter competencies and mission readiness. Equipment must be upgraded periodically to ensure continued support of the latest backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines and to implement Fleet prioritized warfighting training improvements to meet evolving capabilities. FLTASWTRACEN costs are primarily biennial driven, and dependent on the scope and complexity of training equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. There is no requirement to upgrade equipment at the FLTASWTRACEN in FY 2017. In FY 2018 (\$0.945M), funding is required to upgrade the equipment at FLTASWTRACEN. There is no requirement to upgrade equipment at the FLTASWTRACEN in FY 2019.		
(8) 1.8 SSES (Surface Ship Engineering Site, Prime Vendor's Facility): Procurement of AN/SQQ-89A(V)15 equipment for land-based sites, including the SSES at the prime vendor's facility, to support production system integration and interoperability testing. Equipment includes simulation hardware, test tools, fabrication and test of mod kits (hardware and operational software), and laboratory equipment. Equipment must be upgraded periodically to ensure continued support of the latest backfit AN/SQQ-89A(V)15 Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. SSES costs are primarily biennial driven, and dependent on the scope and complexity of shore site equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. There is no requirement to upgrade equipment at the SSES land-based site in FY 2017. In FY 2018 (\$2.032M), funding is required to upgrade the equipment at the SSES land-based site. There is no requirement to upgrade equipment at the SSES land-based site in FY 2019.		
(9) 1.9 SCSC (Surface Combatant Systems Center, Wallops Island, VA): Procurement of AN/SQQ-89A(V)15 equipment for land-based sites including the Surface Combatant Systems Center (SCSC) at Wallops Island, VA, to support production system integration and interoperability testing. Equipment includes simulation hardware, test tools, fabrication and test of mod kits (hardware and operational software), and laboratory equipment. Equipment must be upgraded periodically to ensure continued support of the latest backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. SCSC Wallops costs are primarily biennial driven, and dependent on the scope and complexity of shore site equipment to be upgraded to ensure continued support of the latest AN/SQQ-89A(V)15 backfit Advanced Capability Build (ACB) and AEGIS Weapon System (AWS) baselines. In FY 2017 (\$1.957M), funding is required to upgrade the equipment at the SCSC Wallops land-based site. There is no requirement to upgrade equipment at the SCSC Wallops land-based site in FY 2018. In FY 2019 (\$1.910M), funding is required to upgrade the equipment at the SCSC Wallops land-based site.		
(10) 2.1 PRODUCTION ENGINEERING: Funding is for AN/SQQ-89A(V)15 program In-Service Engineering Agent (ISEA), Software Support Activity (SSA), Acquisition Engineering Agent (AEA), and Technical Design Agent (TDA) efforts in performing the following functions: writing of contracts; review and evaluation of production design data, documentation and Contract Data Requirements Lists (CDRLs); letting of production contract awards; on-site engineering support at the prime integrator's facility; production configuration control and quality assurance (Production Inspection Test (PIT) and Production Reliability Acceptance Test (PRAT)); witnessing of segment/system integration tests and preparation of reports; conduct of first article and factory acceptance tests; collection of performance metrics; generation/assessment of Software Problem Reports (SPRs) and coordination with vendors; value and maintenance engineering; coordination with AEGIS regarding interface definition and ship integration; support safety review and AEGIS Integration Events (AIE); provide plans, procedures and inputs to support Information Assurance (IA) mandates; provide status reports and technical briefings; support meetings with program office; and all other production support efforts directly related to delivery of AN/SQQ-89A(V)15 software and hardware.		
(11) 3.1 CONSULTING SERVICES: Funding to provide assistance in the following areas: program and financial management; system specification validation; production planning; business case and market analyses; vendor cost, schedule, performance, production, and contract deliverable monitoring; installation planning and coordination; Integrated Logistics Support (ILS) asset management, planning, documentation, and coordination; and evaluation of Engineering Change Proposals (ECPs).		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	405.366	21.966	23.437	6.737	0.000	6.737	5.841	12.071	1.211	18.669	7.535	502.833	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	405.366	21.966	23.437	6.737	0.000	6.737	5.841	12.071	1.211	18.669	7.535	502.833	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	405.366	21.966	23.437	6.737	0.000	6.737	5.841	12.071	1.211	18.669	7.535	502.833	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: [AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE] See the following: AN/SQQ-89A(V)15 YEAR TO YEAR FUNDING PROFILE FROM PROCUREMENT TO INSTALL: 1st Year - Procurement of Equipment. 2nd Year - Ordering of incidental installation material and perform mandatory planning yard design tasks and ship checks. This is shown as a quantity of "0" with requested funds in the year before the installation of equipment. 3rd Year - Installation of Equipment. AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of AN/SQQ-89A(V)15 equipment for subsequent backfit installation on all DDG79-112 Flight IIA ships. An average, aggregate AN/SQQ-89A(V)15 unit cost is indicated, however, it should be noted that this cost is comprised of multiple contract/funding vehicles. Additionally, the subdivision of these unit costs to a specific ship can vary as they are dependent on the pre-existing configuration of each ship. AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE - COST CODE DB6IN INSTALLATION: Funding is for the full-up physical installation of the major AN/SQQ-89A(V)15 upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard. The AN/SQQ-89A(V)15 requires a CNO (Chief of Naval Operations) availability period. The installation is accomplished by Alteration Installation Team (AIT) and shipyard personnel together. The AIT personnel are responsible for the removal of all AN/SQQ-89(V) legacy equipment, addition and modification of foundations, and installation, connectorization, and test of all new AN/SQQ-89A(V)15 equipment. The shipyard personnel are responsible for all rigging activities, hull access cuts, and installation of the Handling & Stowage Gear (H&SG) on non-tailed (i.e. no towed array) DDG51 Class Flight IIA hulls, which is required for the operation of the tactical towed sonar, the Multi-Function Towed Array (MFTA). AN/SQQ-89A(V)15 production shipset delivery time is 18 months after contract award. Each subsequent system procured in an FY is delivered one month later than the previous system. Delivery of equipment to the shipyard is preferably no later than 30-90 days prior to a CONUS (Continental U.S.) installation start date and no later than 120 days prior to a non-CONUS installation start date. Installations are assigned to specific ships as per Fleet priorities/requirements, and based on ship availabilities, as identified in the Fleet Modernization Program Management Information System (FMPMIS). Significant maintenance availability periods to support a major upgrade such as the AN/SQQ-89A(V)15 normally occur only once every three years in a ship's schedule.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2	P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys	Modification Number / Title: 1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016.		
FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Upgrade of legacy AN/SQQ-89(V) systems on all DDG79-112 ships to AN/SQQ-89A(V)15 configuration			Modification Type: Warfighting Capability						Related RDT&E PEs: 0205620N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE</i>													
B Kits													
Recurring													
1.1.1) AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE - NonOrganic ⁽¹²⁾	30 / 275.595	1 / 11.127	1 / 11.328	- / -	- / -	- / -	- / -	1 / 12.071	- / -	1 / 12.507	- / -	34 / 322.628	
<i>Subtotal: Recurring</i>	- / 275.595	- / 11.127	- / 11.328	- / -	- / -	- / -	- / -	- / 12.071	- / -	- / 12.507	- / 0.000	- / 322.628	
<i>Subtotal: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE</i>	30 / 275.595	1 / 11.127	1 / 11.328	- / -	- / -	- / -	- / -	1 / 12.071	- / -	1 / 12.507	- / -	34 / 322.628	
<i>Subtotal: Procurement, All Modification Items</i>	- / 275.595	- / 11.127	- / 11.328	- / -	- / -	- / -	- / -	- / 12.071	- / -	- / 12.507	- / 0.000	- / 322.628	
Installation													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE</i>													
<i>Subtotal: Installation</i>	- / 129.771	- / 10.839	- / 12.109	- / 6.737	- / 0.000	- / 6.737	- / 5.841	- / 0.000	- / 1.211	- / 6.162	- / 7.535	- / 180.205	
Total													
Total Cost (Procurement + Support + Installation)	405.366	21.966	23.437	6.737	0.000	6.737	5.841	12.071	1.211	18.669	7.535	502.833	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys					Modification Number / Title: 1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE								
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:								
Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE																
Manufacturer Information																
Manufacturer Name: Lockheed Martin					Manufacturer Location: Manassas, VA											
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 18											
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023								
Contract Dates	Mar 2017	Mar 2018														
Delivery Dates	Sep 2018	Sep 2019														
Manufacturer Name: TBD (Competitive Procurement)					Manufacturer Location: TBD (Competitive Procurement)											
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 18											
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023								
Contract Dates						Mar 2021					Mar 2023					
Delivery Dates						Sep 2022					Sep 2024					
Installation Information																
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete					
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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					
Prior Years	26 / 129.771	2 / 10.839	2 / 10.982	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000					
FY 2017	- / -	- / -	0 / 1.127	1 / 5.590	0 / 0.000	1 / 5.590	- / -	- / -	- / -	- / -	0 / 0.000					
FY 2018	- / -	- / -	- / -	0 / 1.147	0 / 0.000	0 / 1.147	1 / 5.841	- / -	- / -	- / -	0 / 0.000					
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.211	1 / 6.162	0 / 0.000					
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.535					
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
Total	26 / 129.771	2 / 10.839	2 / 12.109	1 / 6.737	0 / 0.000	1 / 6.737	1 / 5.841	- / -	0 / 1.211	1 / 6.162	1 / 7.535					
											34 / 180.205					

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2												P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 1 / AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE														
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																								
Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE																																				
Installation Information																																				
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG79-112 FLT IIA UPGRADE																																				
Installation Schedule																																				
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4								
In	26	-	1	1	-	-	1	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	34								
Out	25	1	-	1	1	-	-	1	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	1	34								

Footnotes:

(12) AN/SQQ-89A(V)15 production shipset delivery time is 18 months after contract award. Each subsequent system procured in an FY is delivered one month later than the previous system. Delivery of equipment to the shipyard is preferably no later than 30-90 days prior to a CONUS (Continental U.S.) installation start date and no later than 120 days prior to a non-CONUS installation start date. Installations are assigned to specific ships as per Fleet priorities/requirements, and based on ship availabilities, as identified in the Fleet Modernization Program Management Information System (FMPMIS). Significant maintenance availability periods to support a major upgrade such as the AN/SQQ-89A(V)15 normally occur only once every three years in a ship's schedule. FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016. FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys						Modification Number / Title: 2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	20.274	9.515	10.904	23.785	0.000	23.785	22.778	22.145	31.865	7.344	9.800	158.410
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	20.274	9.515	10.904	23.785	0.000	23.785	22.778	22.145	31.865	7.344	9.800	158.410
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	20.274	9.515	10.904	23.785	0.000	23.785	22.778	22.145	31.865	7.344	9.800	158.410
(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: [AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE] See the following: AN/SQQ-89A(V)15 YEAR TO YEAR FUNDING PROFILE FROM PROCUREMENT TO INSTALL: 1st Year - Procurement of Equipment. 2nd Year - Ordering of incidental installation material and perform mandatory planning yard design tasks and ship checks. This is shown as a quantity of "0" with requested funds in the year before the installation of equipment. 3rd Year - Installation of Equipment. AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of AN/SQQ-89A(V)15 equipment for subsequent backfit installation on select DDG51-78 FLT I/II ships. An average, aggregate AN/SQQ-89A(V)15 unit cost is indicated, however, it should be noted that this cost is comprised of multiple contract/funding vehicles. Additionally, the subdivision of these unit costs to a specific ship can vary as they are dependent on the pre-existing configuration of each ship. NOTE: Procurement of an AN/SQQ-89A(V)15 for DDG51 Class FLT I/II ships does not require the OK-410 Handling & Stowage Group (H&SG) subsystem as needed with DDG51 Class FLT IIA ships. AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE - COST CODE DB6IN INSTALLATION: Funding is for the full-up physical installation of the major AN/SQQ-89A(V)15 upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard. The AN/SQQ-89A(V)15 requires a CNO (Chief of Naval Operations) availability period. The installation is accomplished by Alteration Installation Team (AIT) and shipyard personnel together. The AIT personnel are responsible for the removal of all AN/SQQ-89A(V) legacy equipment, addition and modification of foundations, and installation, connectorization, and test of all new AN/SQQ-89A(V)15 equipment. The shipyard personnel are responsible for all rigging activities and hull access cuts. AN/SQQ-89A(V)15 production shipset delivery time is 18 months after contract award. Each subsequent system procured in an FY is delivered one month later than the previous system. Delivery of equipment to the shipyard is preferably no later than 30-90 days prior to a CONUS (Continental U.S.) installation start date and no later than 120 days prior to a non-CONUS installation start date. Installations are assigned to specific ships as per Fleet priorities/requirements, and based on ship availabilities, as identified in the Fleet Modernization Program Management Information System (FMPMIS). Significant maintenance availability periods to support a major upgrade such as the AN/SQQ-89A(V)15 normally occur only once every three years in a ship's schedule.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2	P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys	Modification Number / Title: 2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016.		
FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Upgrade of legacy AN/SQQ-89(V) systems on select DDG51-78 ships to AN/SQQ-89A(V)15 configuration			Modification Type: Warfighting Capability						Related RDT&E PEs: 0205620N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE</i>													
B Kits													
Recurring													
1.1.1) AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE - NonOrganic (13)		2 / 18.905	1 / 9.515	- / -	2 / 19.231	- / -	2 / 19.231	2 / 20.452	1 / 10.339	2 / 21.052	- / -	- / -	10 / 99.494
<i>Subtotal: Recurring</i>		- / 18.905	- / 9.515	- / -	- / 19.231	- / -	- / 19.231	- / 20.452	- / 10.339	- / 21.052	- / -	- / 0.000	- / 99.494
<i>Subtotal: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE</i>		2 / 18.905	1 / 9.515	- / -	2 / 19.231	- / -	2 / 19.231	2 / 20.452	1 / 10.339	2 / 21.052	- / -	- / -	10 / 99.494
<i>Subtotal: Procurement, All Modification Items</i>		- / 18.905	- / 9.515	- / -	- / 19.231	- / -	- / 19.231	- / 20.452	- / 10.339	- / 21.052	- / -	- / 0.000	- / 99.494
Installation													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE</i>		- / 1.369	- / 0.000	- / 10.904	- / 4.554	- / 0.000	- / 4.554	- / 2.326	- / 11.806	- / 10.813	- / 7.344	- / 9.800	- / 58.916
<i>Subtotal: Installation</i>		- / 1.369	- / -	- / 10.904	- / 4.554	- / -	- / 4.554	- / 2.326	- / 11.806	- / 10.813	- / 7.344	- / 9.800	- / 58.916
Total													
Total Cost (Procurement + Support + Installation)		20.274	9.515	10.904	23.785	0.000	23.785	22.778	22.145	31.865	7.344	9.800	158.410

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys						Modification Number / Title: 2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE												
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE																					
Manufacturer Information																					
Manufacturer Name: Lockheed Martin					Manufacturer Location: Manassas, VA																
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates	Mar 2017		Mar 2019	Mar 2020																	
Delivery Dates	Sep 2018		Sep 2020	Sep 2021																	
Manufacturer Name: TBD (Competitive Procurement)					Manufacturer Location: TBD (Competitive Procurement)																
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates					Mar 2021	Mar 2022															
Delivery Dates					Sep 2022	Sep 2023															
Installation Information																					
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE																					
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.369	- / -	2 / 9.782	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 11.151									
FY 2017	- / -	- / -	0 / 1.122	1 / 4.554	0 / 0.000	1 / 4.554	- / -	- / -	- / -	- / -	0 / 0.000	1 / 5.676									
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.326	2 / 9.438	- / -	- / -	0 / 0.000	2 / 11.764									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.368	2 / 9.608	- / -	0 / 0.000	2 / 11.976										
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.205	1 / 4.890	0 / 0.000	1 / 6.095										
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.454	2 / 9.800	2 / 12.254										
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
Total	0 / 1.369	- / -	2 / 10.904	1 / 4.554	0 / 0.000	1 / 4.554	0 / 2.326	2 / 11.806	2 / 10.813	1 / 7.344	2 / 9.800	10 / 58.916									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2												P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 2 / AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE														
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																								
Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE																																				
Installation Information																																				
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG51-78 (SELECT) FLT I/II UPGRADE																																				
Installation Schedule																																				
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4								

Footnotes:

(13) AN/SQQ-89A(V)15 production shipset delivery time is 18 months after contract award. Each subsequent system procured in an FY is delivered one month later than the previous system. Delivery of equipment to the shipyard is preferably no later than 30-90 days prior to a CONUS (Continental U.S.) installation start date and no later than 120 days prior to a non-CONUS installation start date. Installations are assigned to specific ships as per Fleet priorities/requirements, and based on ship availabilities, as identified in the Fleet Modernization Program Management Information System (FMPMIS). Significant maintenance availability periods to support a major upgrade such as the AN/SQQ-89A(V)15 normally occur only once every three years in a ship's schedule. FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016. FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys						Modification Number / Title: 3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	23.659	13.255	16.205	16.211	0.000	16.211	17.247	17.475	17.821	18.188	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	23.659	13.255	16.205	16.211	0.000	16.211	17.247	17.475	17.821	18.188	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	23.659	13.255	16.205	16.211	0.000	16.211	17.247	17.475	17.821	18.188	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: [AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE] See the following: AN/SQQ-89A(V)15 YEAR TO YEAR FUNDING PROFILE FROM PROCUREMENT TO INSTALL: 1st Year - Procurement of Equipment. 2nd Year - Ordering of incidental installation material and perform mandatory planning yard design tasks and ship checks. This is shown as a quantity of "0" with requested funds in the year before the installation of equipment. 3rd Year - Installation of Equipment. AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE - COST CODE DB400 PROCUREMENT: Procurement of a subset of AN/SQQ-89A(V)15 equipment, specifically the Multi-Function Towed Array (MFTA) and Handling & Stowage Group (H&SG), for subsequent installation on all DDG113 and follow ships during their Post Delivery Availability (PDA) or Post Shakedown Availability (PSA) periods, to upgrade the ASW sonar suite from an AN/SQQ-89(V)15 configuration to the AN/SQQ-89A(V)15 configuration. AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE - COST CODE DB6IN INSTALLATION: Physical installation of the H&SG and MFTA on DDG113 and follow ships during their PDA or PSA period which includes the installation of an egress, under-deck stiffeners, cables, bulkheads, opening and closing of the transom, the winch, levelwind, fairlead and control station, decking, painting, and final system testing, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard. FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016. FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Upgrade of in-line AN/SQQ-89(V)15 on all DDG113 and follow ships to AN/SQQ-89A(V)15 configuration			Modification Type: Warfighting Capability						Related RDT&E PEs: 0205620N				
Financial Plan		Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE</i>													
B Kits													
Recurring													
1.1.1) AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE - NonOrganic ⁽¹⁴⁾		4 / 21.462	2 / 11.014	2 / 11.157	2 / 11.074	- / -	2 / 11.074	2 / 12.017	2 / 12.151	2 / 12.393	2 / 12.662	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 21.462	- / 11.014	- / 11.157	- / 11.074	- / -	- / 11.074	- / 12.017	- / 12.151	- / 12.393	- / 12.662	Continuing	Continuing
<i>Subtotal: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE</i>		4 / 21.462	2 / 11.014	2 / 11.157	2 / 11.074	- / -	2 / 11.074	2 / 12.017	2 / 12.151	2 / 12.393	2 / 12.662	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 21.462	- / 11.014	- / 11.157	- / 11.074	- / -	- / 11.074	- / 12.017	- / 12.151	- / 12.393	- / 12.662	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE</i>		- / 2.197	- / 2.241	- / 5.048	- / 5.137	- / 0.000	- / 5.137	- / 5.230	- / 5.324	- / 5.428	- / 5.526	- / 10.889	- / 47.020
<i>Subtotal: Installation</i>		- / 2.197	- / 2.241	- / 5.048	- / 5.137	- / -	- / 5.137	- / 5.230	- / 5.324	- / 5.428	- / 5.526	- / 10.889	- / 47.020
Total													
Total Cost (Procurement + Support + Installation)		23.659	13.255	16.205	16.211	0.000	16.211	17.247	17.475	17.821	18.188	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys						Modification Number / Title: 3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE										
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:									
Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE																			
Manufacturer Information																			
Manufacturer Name: Lockheed Martin					Manufacturer Location: Syracuse, NY														
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 18														
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates	Mar 2017	Mar 2018	Mar 2019																
Delivery Dates	Sep 2018	Sep 2019	Sep 2020																
Manufacturer Name: TBD (Competitive Procurement)					Manufacturer Location: TBD (Competitive Procurement)														
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 18														
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates				Mar 2020	Mar 2021	Mar 2022	Mar 2023												
Delivery Dates				Sep 2021	Sep 2022	Sep 2023	Sep 2024												
Installation Information																			
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE																			
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total							
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.197	1 / 2.241	2 / 4.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 9.048							
FY 2017	- / -	- / -	0 / 0.438	2 / 4.692	0 / 0.000	2 / 4.692	- / -	- / -	- / -	- / -	0 / 0.000	2 / 5.130							
FY 2018	- / -	- / -	- / -	0 / 0.445	0 / 0.000	0 / 0.445	2 / 4.777	- / -	- / -	- / -	0 / 0.000	2 / 5.222							
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.453	2 / 4.863	- / -	- / -	0 / 0.000	2 / 5.316							
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.461	2 / 4.958	- / -	0 / 0.000	2 / 5.419								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.470	2 / 5.048	0 / 0.000	2 / 5.518									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.478	2 / 5.149	2 / 5.627								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 5.740	2 / 5.740								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -								
Total	1 / 2.197	1 / 2.241	2 / 5.048	2 / 5.137	0 / 0.000	2 / 5.137	2 / 5.230	2 / 5.324	2 / 5.428	2 / 5.526	4 / 10.889	18 / 47.020							

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2												P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys											Modification Number / Title: 3 / AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code: <i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE</i>																										
Installation Information																																						
Method of Implementation: AIT and SHIPYARD:: Installation Name: AN/SQQ-89A(V)15 - DDG113 AND FOLLOW MFTA/HANDLER UPGRADE																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	-	4	18											
Out	1	-	1	-	-	-	2	-	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	4	18											

Footnotes:

(¹⁴) FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016. FY 2020 and follow increased AN/SQQ-89A(V)15 shipset procurement unit costs reflect the transition from the MFTA TB-37 array to the MFTA TB-37X array, which is required to address and resolve deficiencies in the current MFTA TB-37 array's reliability (by changing from a Towed Array Integrated Product Team (TAIPT) telemetry to a more reliable telemetry), as well as address and resolve parts obsolescence issues.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	40.542	21.235	23.398	38.083	0.000	38.083	49.261	40.127	51.213	59.895	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	40.542	21.235	23.398	38.083	0.000	38.083	49.261	40.127	51.213	59.895	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	40.542	21.235	23.398	38.083	0.000	38.083	49.261	40.127	51.213	59.895	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: [AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH] See the following: AN/SQQ-89A(V)15 YEAR TO YEAR FUNDING PROFILE FROM PROCUREMENT TO INSTALL: 1st Year - Procurement of Equipment. 2nd Year - Ordering of incidental installation material and perform mandatory planning yard design tasks and ship checks. This is shown as a quantity of "0" with requested funds in the year before the installation of equipment. 3rd Year - Installation of Equipment. AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH - COST CODE DB400 PROCUREMENT: Leveraging the submarine community's Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (ARCI) process, the AN/SQQ-89A(V)15 Tech Refresh program procures upgraded software/hardware technology for all CG47/DDG51 Class surface combatant platforms with a previously fielded AN/SQQ-89A(V)15. This process has proven to manage obsolescence, take advantage of commercial development efforts, and continue to pace the threat to ensure systems remain effective well into the 21st century. Studies of the submarine and surface ASW technology show that system upgrades are most critical 6-9 years after initial installation of the AN/SQQ-89A(V)15, as failure rates within this period begin to rise. Establishing a stable technology refresh program will ensure the Fleet maintains critical Undersea Warfare capability (threat-pacing improvements) and productivity (Increased Operational Availability (Ao)) while reducing the Total Ownership Cost (TOC) to the Navy. AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH - COST CODE DB6IN INSTALLATION: Funding is for the physical installation of the AN/SQQ-89A(V)15 Technology Refresh upgrade, the ordering of incidental installation material in the year prior to the actual installation, and Design Services Allocation (DSA) required for mandatory planning yard design tasks and ship checks that must be completed within the one year period leading up to the actual installation in the shipyard. FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys										Modification Number / Title: 4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Technology refresh of previously fielded AN/SQQ-89A(V)15 USW Combat Systems			Modification Type: Warfighting Capability						Related RDT&E PEs: 0205620N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH</i>													
B Kits													
Recurring													
1.1.1) AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH - NonOrganic ⁽¹⁵⁾		8 / 34.896	3 / 13.628	3 / 13.874	6 / 28.388	- / -	6 / 28.388	8 / 38.711	4 / 19.571	5 / 24.905	9 / 45.803	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 34.896	- / 13.628	- / 13.874	- / 28.388	- / -	- / 28.388	- / 38.711	- / 19.571	- / 24.905	- / 45.803	Continuing	Continuing
<i>Subtotal: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH</i>		8 / 34.896	3 / 13.628	3 / 13.874	6 / 28.388	- / -	6 / 28.388	8 / 38.711	4 / 19.571	5 / 24.905	9 / 45.803	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 34.896	- / 13.628	- / 13.874	- / 28.388	- / -	- / 28.388	- / 38.711	- / 19.571	- / 24.905	- / 45.803	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH</i>		- / 5.646	- / 7.607	- / 9.524	- / 9.695	- / 0.000	- / 9.695	- / 10.550	- / 20.556	- / 26.308	- / 14.092	- / 49.617	- / 153.595
<i>Subtotal: Installation</i>		- / 5.646	- / 7.607	- / 9.524	- / 9.695	- / -	- / 9.695	- / 10.550	- / 20.556	- / 26.308	- / 14.092	- / 49.617	- / 153.595
Total													
Total Cost (Procurement + Support + Installation)		40.542	21.235	23.398	38.083	0.000	38.083	49.261	40.127	51.213	59.895	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys						Modification Number / Title: 4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH												
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Modification Item 1 of 1: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH																					
Manufacturer Information																					
Manufacturer Name: Lockheed Martin					Manufacturer Location: Manassas, VA																
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 17																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates	Mar 2017	Mar 2018	Mar 2019	Mar 2020																	
Delivery Dates	Aug 2018	Aug 2019	Aug 2020	Aug 2021																	
Manufacturer Name: TBD (Competitive Procurement)					Manufacturer Location: TBD (Competitive Procurement)																
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 17																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates					Mar 2021	Mar 2022	Mar 2023														
Delivery Dates					Aug 2022	Aug 2023	Aug 2024														
Installation Information																					
Method of Implementation: AIT:: Installation Name: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH																					
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 5.646	3 / 7.607	3 / 8.869	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 22.122									
FY 2017	- / -	- / -	0 / 0.655	3 / 9.028	0 / 0.000	3 / 9.028	- / -	- / -	- / -	- / -	0 / 0.000	3 / 9.683									
FY 2018	- / -	- / -	- / -	0 / 0.667	0 / 0.000	0 / 0.667	3 / 9.192	- / -	- / -	- / -	0 / 0.000	3 / 9.859									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.358	6 / 18.713	- / -	- / -	0 / 0.000	6 / 20.071									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.843	8 / 25.400	- / -	0 / 0.000	8 / 27.243									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.908	4 / 12.928	0 / 0.000	4 / 13.836									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.164	5 / 16.193	5 / 17.357									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 33.424	9 / 33.424									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -									
Total	2 / 5.646	3 / 7.607	3 / 9.524	3 / 9.695	0 / 0.000	3 / 9.695	3 / 10.550	6 / 20.556	8 / 26.308	4 / 14.092	14 / 49.617	46 / 153.595									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2												P-1 Line Item Number / Title: 2136 / AN/SQQ-89 Surf ASW Cmbt Sys											Modification Number / Title: 4 / AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH																																						
Installation Information																																						
Method of Implementation: AIT:: Installation Name: AN/SQQ-89A(V)15 - TECHNOLOGY INSERTION/REFRESH																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	1	-	-	1	1	1	-	1	2	2	1	1	2	3	2	-	2	2	-	14	46										
Out	2	-	-	2	1	-	2	1	-	-	1	1	1	-	1	2	2	1	1	2	3	2	-	2	2	-	14	46										

Footnotes:

(15) FY 2018 and follow increased AN/SQQ-89A(V)15 installation unit costs reflect projections for when the shipyards transition from Multi-Ship/Multi-Option (MS/MO) to a Firm-Fixed Price (FFP) contracting strategy, as directed by the Fleet Forces Command Naval Message, dated March FY 2016.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars					2150 / SSN Acoustic Equipment												
ID Code (A=Service Ready, B=Not Service Ready): B			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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	0.000	288.265	331.053	318.189	0.000	318.189	378.968	441.021	427.711	499.564	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	0.000	288.265	331.053	318.189	0.000	318.189	378.968	441.021	427.711	499.564	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	0.000	288.265	331.053	318.189	0.000	318.189	378.968	441.021	427.711	499.564	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	8.178	22.381	20.540	-	20.540	22.317	22.137	21.512	20.500	Continuing	Continuing					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program procures submarine systems and equipment for installation on all classes of submarines to maintain clear acoustical, tactical, and operational superiority over submarine and surface combatants in all scenarios through detection, classification, localization, and contact following. All future acoustic upgrades of Acoustic Rapid COTS Insertion (A-RCI) equipment are incorporated into this budget item. Future procurements, detailed below, are focused on supporting Littoral Warfare, Regional Sea Denial, Strike Group Support, Diesel Submarine Detection, Surveillance, and Peacetime Engagement. A-RCI is a multi-phased, evolutionary development effort geared toward addressing acoustic superiority issues through the rapid introduction of interim products applicable to SSN 688, 688I Flight, SSN21, SSGN, VA Class, and SSBN 726 Class Submarines. A-RCI Phase II provided towed array processing improvements; A-RCI Phase III provides spherical array processing improvements, and A-RCI Phase IV provides AN/BSY-1 High Frequency Upgrades for SSN 688I, SSGN, and Seawolf Classes. As part of Navy's plan to maintain acoustic superiority for in-service submarines, reduce obsolescence, and provide increased capability, the A-RCI program will modernize and sustain approximately 8-12 SSNs and 2-3 SSBNs per year through executing bi-annual software Advanced Processing Builds (APBs) and bi-annual hardware Technical Insertions (TIs). A-RCI annual funding varies based on the number of modernizations funded as well as the particular class of submarine being modernized.																	
Towed system procurements of TB-29X and TB-34X provide reliability improvements to maintain acoustic superiority, increase the service life, reduce failures, and maintain the inventory of arrays available for fleet use. Towed Array Refurbishment & Reliability Upgrades sustain current in-service TB-16/34 fat line and TB-23/29A thin line towed arrays. Towed System procurements provide upgrade/support for OK-276, OK-634, OK-542 and OA-9070 Series Towed Array Handlers installed on SSN688, SSN 688I, SSN21, SSGN, VA Class, and SSBN 726 Class Submarines.																	
Procurement of Low Cost Conformal Array (LCCA) provides enhanced situational awareness and collision avoidance capability in high contact density environments experienced in the littorals. Procurement of VA Unique Sensors sustains unique hull sensor systems for the VA platforms under the Critical Transducer Program as VA Class submarines transition into fleet service.																	
Procurement of the OHIO Class Large Vertical Array (LVA) provides improved detection and enhanced tactical situational awareness capability for tracking targets of interest, and supports acoustic superiority objectives for the OHIO class submarines. SSBN systems will be approximately half the width of their SSN counterparts. This variance reflects the difference in mission, expected environment, and requirements.																	
Procurement of the VIRGINIA Class Large Vertical Array (LVA) provides improved detection and enhanced tactical situational awareness capability for tracking targets of interest, and supports acoustic superiority objectives for the VIRGINIA class submarines. SSN systems will be approximately twice the width of their SSBN counterparts. This variance reflects the difference in mission, expected environment, and requirements.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
Procurement of the High Frequency Sail Array (HFSA) provides high frequency active and passive capability supporting ASW and ASUW for SSNs, and contact avoidance for SSNs and SSBNs. This capability enables close in situational awareness with high bearing accuracy. HFSA improves situational awareness and tactical control in high density contact areas, of particular importance for Pacific Fleet SSBNs based at Bangor WA inside the Puget Sound with three major commercial shipping ports.		
Procurement of hydrophones, transducers, cables, associated Out-Board Electronics bottles (OBE), and acoustic windows for In-Service Undersea Warfare Sonars on all classes of submarines are required to support units in the fleet on a replacement basis, at regularly scheduled ship overhauls, and at interim availabilities when units are defective, and for upgrades.		
Installation funds are for actual hardware installations during shipyard and pier-side availabilities. Procurements support a 12-24 month lead time for installations.		
[P40A / SA102 TOWED SYSTEMS]: Procures TB-34X Fatline and TB-29X Thinline Arrays to provide increase acoustic capability and reliability to the fleet. The program supports N8's response to the Fleet Forces Command's Urgent Operational Needs Statement message (dated 15 June 2009) which requests that a reliable Thinline Towed Array is critically needed to support submarine operations in the Western Pacific Area of Operations, refurbishment/upgrades reliability improvements to TB-16 series, TB-23, TB-29A to maintain in-service Towed Array inventory and increased array availability. Reliability improvements include new telemetry, hose material, improved internal connectors, hydrophones, tow cables, Vibration Isolation Modules (VIMS), and Heading Sensors.		
[P40A / SA105 SONAR SUPPORT EQUIPMENT]: Funds provided to procure BQN-17(A) and associated equipment.		
[P40A / SA106 HULL SENSORS]: Procurement of Low Cost Conformal Array (LCCA) provides enhanced situational awareness and collision avoidance capability, and VA Unique Sensors required to sustain unique hull sensor systems for the VA platforms under the Critical Transducer Program.		
[P40A / SA201 BLOCK CHANGES]: Minor Engineering Change Proposals (ECP's) and hardware changes affecting all classes of submarines are procured through this line. Funding will be used to support non-recurring first article test efforts associated with the changing COTS environment as well as Reliability, Maintainability, and Availability modifications requested by the Fleet. This line also supports the procurement of hardware necessary to implement the ECP's into the System or end item being procured.		
[P40A / SA202 PRODUCTION/ENGINEERING SUPPORT]: Funding supports the procurement of Acoustics Upgrades equipment, Towed Systems hardware, and Large Vertical Array equipment.		
[P40A / SA203 TOWED ARRAY UNIQUE TEST EQUIPMENT]: Funding procures various towed array test equipment simulators and handling system/stowage tube inspection test equipment.		
[P40A / SA302 OP TRAINER UPGRADES]: Funding procures hardware upgrades and production engineering for Acoustic Upgrades operational trainer sites.		
[P40A / SA303 COTS SUPPORTABILITY UPGRADES]: Provides for Technology Refresh/Insertion for A-RCI kits. Tech Refresh provides for Software and Hardware updates to accommodate shifts in technology to the execution procurement years' "current state-of-the-practice" hardware. A-RCI has already undergone several technology insertion phases to accommodate integrating Advanced Processing Builds (APBs). Updates are necessary for signal and display processing hardware as APBs are introduced or as commercial support for the hardware is phased out. Tech Insertion procures the hardware necessary to upgrade and back fit the A-RCI kits. When A-RCI systems are being upgraded to subsequent phases of A-RCI, signal processing and display hardware will be procured from this line to accommodate common technology consistent with the APB being implemented in the year of introduction. In future years, requirements include additional equipment in technology insertion to prevent COTS hardware from becoming unsupportable/obsolete. Funding also supports the procurement and engineering for COTS Underwater Comms.		
[P40A / SA401 INITIAL TRAINING]: Provides for initial training curriculum development, training management materials, exercise control group development, pilot services, and services to the Fleet.		
[P40A / SA900 CONSULTING SERVICES]: Includes specification validation, contract deliverable monitoring, prime contractor monitoring for cost, schedule, and performance slips, ILS planning, and coordination of GFI. Additional support will include production planning, business case analysis, technical refresh and insertion planning and market analysis to review implementation strategies for procurement of current year "state of the practice" hardware in Acoustics programs. Consulting services will also provide production monitoring, installation planning and coordination support.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
[P40A - 2 / PU100 SONAR SWITCHES AND TRANSDUCERS]: Included in this line are procurements of transducers, hydrophones, windows, cables, Out-Board Electronics (OBE), domes and their associated mounting hardware, and other support equipment and materials for the following Undersea Warfare Sonars: BSY-1, BSY-2, BQQ-5, BQQ-6, BQQ-10, BQG-5, BQS-15, BQS-14A, WQC-2, WLR-9/12, BQN-13, BQN-17, BQA-8, BQH-1 and BQS-25.		
[P40A - 2 / PU200 ENGINEERING CHANGES]: Funds ECPs, Value Engineering awards, and hardware changes affecting the SSN 688, 688I, SEAWOLF, SSBN 726 (TRIDENT), SSGN/SSBN, and VA Class submarines.		
[P40A - 2 / PU300 PROGRAM SUPPORT]: Supports the procurement of equipment of sonar hydrophones, transducers, cables, Out-Board Electronics (OBEs), and acoustic windows for In-Service Undersea Warfare Sonars.		
[P3A / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT]: Funding supports Technology Insertion, HF Active Components, and Transmit Group.		
[P3A - 2 / SA101 SSBN LEGACY INTERFACE HARDWARE]: The addition of SSBN Legacy Interface Hardware in FY 2019 supports emergent Engineering Change Proposals (ECPs) and hardware changes necessary to address significantly expanded power and infrastructure driven by required capability improvements. These funds support the conversion of the SSBN from a legacy Sonar system to the A-RCI model requiring upgrades to the power and infrastructure of the platform.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy

Date: February 2018

Appropriation / Budget Activity / Budget Sub Activity:

1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip /
BSA 2: Ship Sonars

P-1 Line Item Number / Title:

2150 / SSN Acoustic Equipment

ID Code (A=Service Ready, B=Not Service Ready): B

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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-40a	SSN Acoustics				- / 0.000	- / 135.585	- / 160.550	- / 139.548	- / -	- / 139.548
P-40a	Sonar Switches and Transducers				- / 0.000	- / 11.592	- / 12.012	- / 12.562	- / -	- / 12.562
P-3a	1 / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT (SHIPALT)				- / 0.000	- / 2.182	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / SA101 SSBN LEGACY INTERFACE HARDWARE (SHIPALT)				- / 0.000	- / 0.000	- / 0.000	- / 11.652	- / 0.000	- / 11.652
P-3a	3 / SA106 LOW COST CONFORMAL ARRAY KITS (SHIPALT)				- / 0.000	- / 12.974	- / 13.234	- / 13.498	- / 0.000	- / 13.498
P-3a	4 / SA106 HIGH FREQUENCY SAIL ARRAY (TBD)				- / 0.000	- / 3.846	- / 6.117	- / 6.120	- / 0.000	- / 6.120
P-3a	5 / SA106 OHIO CLASS LARGE VERTICAL ARRAY (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 18.525	- / 0.000	- / 18.525
P-3a	6 / SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	7 / SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 13.274	- / 47.836	- / 62.603	- / 0.000	- / 62.603
P-3a	8 / SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 0.000	- / 0.000	- / 16.264	- / 0.000	- / 16.264
P-3a	9 / SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 12.037	- / 12.278	- / 3.415	- / 0.000	- / 3.415
P-3a	10 / SA303 VIRGINIA CLASS TECHNICAL INSERTION W/ CONVERSION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 16.957	- / 3.348	- / 0.000	- / 0.000	- / 0.000
P-3a	11 / SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 55.810	- / 47.011	- / 10.245	- / 0.000	- / 10.245
P-3a	12 / SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS) (SHIPALT)				- / 0.000	- / 24.008	- / 28.667	- / 23.757	- / 0.000	- / 23.757
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 288.265	- / 331.053	- / 318.189	- / 0.000	- / 318.189

Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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-40a	SSN Acoustics				- / -	- / -	- / -	- / -	- / -	- / -
P-40a	Sonar Switches and Transducers				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT (SHIPALT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.182
P-3a	2 / SA101 SSBN LEGACY INTERFACE HARDWARE (SHIPALT)				- / 27.527	- / 20.902	- / 5.046	- / 0.000	- / 0.000	- / 65.127
P-3a	3 / SA106 LOW COST CONFORMAL ARRAY KITS (SHIPALT)				- / 13.769	- / 14.044	- / 14.325	- / 14.612	Continuing	Continuing
P-3a	4 / SA106 HIGH FREQUENCY SAIL ARRAY (TBD)				- / 8.405	- / 6.492	- / 2.249	- / 0.000	- / 0.000	- / 33.229
P-3a	5 / SA106 OHIO CLASS LARGE VERTICAL ARRAY (TBD)				- / 18.896	- / 29.400	- / 29.989	- / 30.588	Continuing	Continuing
P-3a	6 / SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY (TBD)				- / 43.405	- / 44.273	- / 65.077	- / 66.379	Continuing	Continuing
P-3a	7 / SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS) (SHIPALT)				- / 55.560	- / 11.974	- / 34.519	- / 71.583	Continuing	Continuing

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: N/A							
Line Item MDAP/MAIS Code: N/A											
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023				
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	8 / SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS) (SHIPALT)				- / 21.283	- / 4.788	- / 0.000	- / 0.000	- / 0.000	- / 42.335	
P-3a	9 / SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 0.000	- / 9.666	- / 13.555	Continuing	Continuing	
P-3a	10 / SA303 VIRGINIA CLASS TECHNICAL INSERTION W/ CONVERSION KITS (SWFTS) (SHIPALT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 20.305	
P-3a	11 / SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS) (SHIPALT)				- / 27.872	- / 133.851	- / 85.775	- / 34.504	Continuing	Continuing	
P-3a	12 / SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS) (SHIPALT)				- / 25.478	- / 19.010	- / 27.803	- / 42.202	Continuing	Continuing	
P-40	Total Gross/Weapon System Cost				- / 378.968	- / 441.021	- / 427.711	- / 499.564	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.											
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.											
Justification: FY 2019 marks the first procurement of the LVA (SSBN variant). Additional funds are also allocated to support the procurement and installation A-RCI modernization equipment for SSBNs. The addition of SSBN Legacy Interface Hardware in FY 2019 supports emergent Engineering Change Proposals (ECPs) and hardware changes necessary to address significantly expanded power and infrastructure driven by required capability improvements. These funds support the conversion of the SSBN from a legacy Sonar system to the A-RCI model requiring upgrades to the power and infrastructure of the platform. FY 2019 also reflects one-time increases for block changes, production/ engineering support, install support, COTS Undersea Warfare (UWC) engineering support, and shipyard installation industrial support to address the expedited procurement and installation activities required to upgrade the power and infrastructure of SSBN modernization equipment. Funds also support the following procurement requirements to support submarine modernizations: Acoustic Rapid COTS Insertion (A-RCI) equipment (6 SSN 688I, 2 SSGN, and 2 SSBN); TB-34X Fatline (5) and TB-29X Thinline (4) towed arrays; towed array refurbishment & reliability upgrades to sustain current in-service TB-16/34 Fatline and TB-23/29A Thinline arrays; OK-276, OK-634, OK-542, and OA-9070 Series Towed Array Handlers; LCCA (2) for SSNs and HFSA (2) for SSBNs; and various hull sensors, transducers, and associated equipment for all classes of In-Service submarines.											

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment									Aggregated Items Title: SSN Acoustics						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) SA102 TOWED SYSTEMS ⁽¹⁾																				
1.1) TB-34X FATLINE TOWED ARRAYS	B		-	-	-	1,248K	9	11.236	1,273K	12	15.281	1,299K	5	6.495	-	-	-	1,299K	5	6.495
1.2) TB-29X THIN LINE TOWED ARRAYS	B		-	-	-	4,200K	7	29.400	4,284K	12	51.408	4,370K	5	21.848	-	-	-	4,370K	5	21.848
1.3) TOWED ARRAY REFURBISHMENT & UPGRADES	A		-	-	-	-	-	29.219	-	-	29.803	-	-	31.556	-	-	-	-	-	31.556
1.4) TOWED ARRAY HANDLER SYSTEM UPGRADE	A		-	-	-	-	-	7.408	-	-	7.556	-	-	7.708	-	-	-	-	-	7.708
<i>Subtotal: 1) SA102 TOWED SYSTEMS</i>			-	-	0.000	-	-	77.263	-	-	104.048	-	-	67.607	-	-	-	-	-	67.607
2) SA105 SONAR SUPPORT EQUIPMENT																				
2.1) BQN-17	A		-	-	-	-	-	0.887	-	-	0.905	-	-	0.923	-	-	-	-	-	0.923
<i>Subtotal: 2) SA105 SONAR SUPPORT EQUIPMENT</i>			-	-	0.000	-	-	0.887	-	-	0.905	-	-	0.923	-	-	-	-	-	0.923
3) SA106 HULL SENSORS																				
3.1) VA UNIQUE SENSOR	A		-	-	-	-	-	5.405	-	-	5.513	-	-	5.623	-	-	-	-	-	5.623
<i>Subtotal: 3) SA106 HULL SENSORS</i>			-	-	0.000	-	-	5.405	-	-	5.513	-	-	5.623	-	-	-	-	-	5.623
4) SA201 BLOCK CHANGES																				
4.1) TOWED SYSTEMS ECP'S	A		-	-	-	-	-	1.701	-	-	1.735	-	-	1.770	-	-	-	-	-	1.770
4.2) ACOUSTICS ⁽²⁾	A		-	-	-	-	-	3.022	-	-	3.082	-	-	5.385	-	-	-	-	-	5.385
<i>Subtotal: 4) SA201 BLOCK CHANGES</i>			-	-	0.000	-	-	4.723	-	-	4.817	-	-	7.155	-	-	-	-	-	7.155
5) SA202 PRODUCTION/ENGINEERING SUPPORT																				
5.1) ACOUSTICS ⁽³⁾	A		-	-	-	-	-	3.168	-	-	3.231	-	-	5.644	-	-	-	-	-	5.644
5.2) TOWED ARRAYS/HANDLING EQUIPMENT	A		-	-	-	-	-	3.111	-	-	3.173	-	-	3.236	-	-	-	-	-	3.236
<i>Subtotal: 5) SA202 PRODUCTION/ ENGINEERING SUPPORT</i>			-	-	0.000	-	-	6.279	-	-	6.404	-	-	8.880	-	-	-	-	-	8.880
6) SA203 TOWED ARRAY UNIQUE TEST EQUIPMENT																				
6.1) TOWED ARRAY UNIQUE TEST EQUIPMENT	A		-	-	-	-	-	1.259	-	-	1.284	-	-	1.310	-	-	-	-	-	1.310
<i>Subtotal: 6) SA203 TOWED ARRAY UNIQUE TEST EQUIPMENT</i>			-	-	0.000	-	-	1.259	-	-	1.284	-	-	1.310	-	-	-	-	-	1.310
7) SA302 OP TRAINER UPDATES																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment									Aggregated Items Title: SSN Acoustics						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
7.1) OP TRAINER GFE	A		-	-	-	-	-	1.112	-	-	1.134	-	-	1.157	-	-	-	-	-	1.157
<i>Subtotal: 7) SA302 OP TRAINER UPDATES</i>			-	-	0.000	-	-	1.112	-	-	1.134	-	-	1.157	-	-	-	-	-	1.157
8) SA303 COTS SUPPORTABILITY UPDATES⁽⁴⁾																				
8.1) INSTALL SUPPORT	A		-	-	-	-	-	1.534	-	-	1.430	-	-	2.732	-	-	-	-	-	2.732
8.2) AEMP	A		-	-	-	-	-	5.559	-	-	5.182	-	-	5.783	-	-	-	-	-	5.783
8.3) COTS UWC ENGINEERING SUPPORT	A		-	-	-	-	-	1.764	-	-	1.644	-	-	3.142	-	-	-	-	-	3.142
8.4) COTS TECH INSERTION	A		-	-	-	-	-	19.521	-	-	18.198	-	-	20.309	-	-	-	-	-	20.309
8.5) SHIPYARD INSTALLATION INDUSTRIAL SUPPORT	A		-	-	-	-	-	5.713	-	-	5.335	-	-	10.178	-	-	-	-	-	10.178
<i>Subtotal: 8) SA303 COTS SUPPORTABILITY UPDATES</i>			-	-	0.000	-	-	34.091	-	-	31.789	-	-	42.144	-	-	-	-	-	42.144
9) SA401 INITIAL TRAINING																				
9.1) ACOUSTICS	A		-	-	-	-	-	1.777	-	-	1.812	-	-	1.848	-	-	-	-	-	1.848
9.2) TOWED ARRAY	A		-	-	-	-	-	0.667	-	-	0.680	-	-	0.694	-	-	-	-	-	0.694
<i>Subtotal: 9) SA401 INITIAL TRAINING</i>			-	-	0.000	-	-	2.444	-	-	2.492	-	-	2.542	-	-	-	-	-	2.542
10) SA900 CONSULTING SERVICES																				
10.1) ACOUSTICS	A		-	-	-	-	-	1.419	-	-	1.447	-	-	1.476	-	-	-	-	-	1.476
10.2) TOWED SYSTEMS	A		-	-	-	-	-	0.703	-	-	0.717	-	-	0.731	-	-	-	-	-	0.731
<i>Subtotal: 10) SA900 CONSULTING SERVICES</i>			-	-	0.000	-	-	2.122	-	-	2.164	-	-	2.207	-	-	-	-	-	2.207
Total			-	-	0.000	-	-	135.585	-	-	160.550	-	-	139.548	-	-	-	-	-	139.548

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

Footnotes:

- (1) SA102 TOWED SYSTEMS - Refurbishment & Upgrades are variable year-to-year based on projected Towed Array inventory requirements necessary to support submarine deployment schedules.
- (2) SA201 BLOCK CHANGES - Acoustics increase in FY19 reflects one-time increase to address emergent Engineering Change Proposals (ECPs) and hardware changes necessary to address significantly expanded power and infrastructure driven by required capability improvements of SSBN modernization equipment. The FY19 increase above inflation provides the necessary funding to upgrade existing equipment to support SSBNs transition to the SWFTS acoustic model.
- (3) SA202 PRODUCTION/ENGINEERING SUPPORT - Acoustics increase in FY19 reflects one-time increase to support expedited procurement of Acoustics Upgrades equipment to address increased power and infrastructure requirements driven by required capability improvements of SSBN modernization equipment. The FY19 increase above inflation provides the necessary funding to upgrade existing equipment to support SSBNs transition to the SWFTS acoustic model.
- (4) SA303 COTS SUPPORTABILITY UPDATES - Install Support, COTS UWC Engineering Support, and Shipyard Installation Industrial Support increases in FY19 support expedited procurement and emergent installation support to address increased power and infrastructure requirements of SSBN modernization equipment. The FY19 increase above inflation provides the necessary funding to upgrade existing equipment to support SSBNs transition to the SWFTS acoustic model.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment									Aggregated Items Title: Sonar Switches and Transducers						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) PU100 SONAR SWITCHES AND TRANSDUCERS⁽⁵⁾																				
1.1) TR-353	A		-	-	-	-	-	6,367.25	100	0.637	6,494.59	100	0.649	-	-	-	6,494.59	100	0.649	
1.2) CW-1147 DOME	A		-	-	-	18,727.20	10	0.187	19,101.74	10	0.191	19,483.78	10	0.195	-	-	-	19,483.78	10	0.195
1.3) CW-1181E DOME	A		-	-	-	5,202.00	15	0.078	5,306.04	18	0.096	5,412.16	18	0.097	-	-	-	5,412.16	18	0.097
1.4) DT-574 100FT	A		-	-	-	2,080.80	100	0.208	2,122.42	100	0.212	2,164.86	100	0.216	-	-	-	2,164.86	100	0.216
1.5) MX-12309 SSGN HFSA WINDOW	A		-	-	-	-	-	188,213.00	1	0.188	191,977.26	1	0.192	-	-	-	191,977.26	1	0.192	
1.6) CABLES	A		-	-	-	-	-	0.710	-	-	0.550	-	-	0.748	-	-	-	-	-	0.748
1.7) DT-574 50FT	A		-	-	-	572.70	300	0.172	584.15	300	0.175	595.84	300	0.179	-	-	-	595.84	300	0.179
1.8) CW-1181C	A		-	-	-	5,202.00	20	0.104	5,306.04	20	0.106	5,412.16	20	0.108	-	-	-	5,412.16	20	0.108
1.9) MX-10624 Window	A		-	-	-	13,941.36	10	0.139	14,220.19	10	0.142	14,504.59	10	0.145	-	-	-	14,504.59	10	0.145
1.10) DT-5740 LSA OBE	A		-	-	-	17,006.53	20	0.340	17,346.67	20	0.347	17,693.60	20	0.354	-	-	-	17,693.60	20	0.354
1.11) DT-511 Hydrophone	A		-	-	-	29,408.64	15	0.441	29,996.82	15	0.450	30,596.75	15	0.459	-	-	-	30,596.75	15	0.459
1.12) DT-592 Hydrophone	A		-	-	-	41,346.54	18	0.744	42,173.47	18	0.759	43,016.94	18	0.774	-	-	-	43,016.94	18	0.774
1.13) TR-233 Transducer	A		-	-	-	10,404.00	20	0.208	10,612.08	20	0.212	10,824.32	20	0.216	-	-	-	10,824.32	20	0.216
1.14) TR-282 Transducer	A		-	-	-	28,469.13	7	0.199	29,038.51	7	0.203	29,619.28	7	0.207	-	-	-	29,619.28	7	0.207
1.15) TR-302 Transducer	A		-	-	-	-	-	-	23,801.38	18	0.428	24,277.41	18	0.437	-	-	-	24,277.41	18	0.437
1.16) TR-302 Window	A		-	-	-	1,040.40	10	0.010	1,061.21	10	0.011	1,082.43	10	0.011	-	-	-	1,082.43	10	0.011
1.17) TR-321 Transducer	A		-	-	-	17,000.00	9	0.153	17,340.00	9	0.156	17,686.80	9	0.159	-	-	-	17,686.80	9	0.159
1.18) TR-321 V CTD	A		-	-	-	19,058.23	20	0.381	19,439.40	20	0.389	19,828.19	20	0.397	-	-	-	19,828.19	20	0.397
1.19) TR-338 Transducer	A		-	-	-	24,000.00	15	0.360	24,480.00	15	0.367	24,969.60	15	0.375	-	-	-	24,969.60	15	0.375
1.20) TR-341 Transducer	A		-	-	-	18,360.00	20	0.367	18,727.20	20	0.375	19,101.74	20	0.382	-	-	-	19,101.74	20	0.382
1.21) WAA OBE	A		-	-	-	12,484.80	50	0.624	12,734.50	50	0.637	12,989.19	50	0.649	-	-	-	12,989.19	50	0.649
1.22) NCC CONNECTORS	A		-	-	-	1,040.40	52	0.054	1,061.21	52	0.055	1,082.43	50	0.054	-	-	-	1,082.43	50	0.054
1.23) DT-699 HFSA RECEIVE	A		-	-	-	73,868.40	6	0.443	75,345.77	6	0.452	76,852.68	6	0.461	-	-	-	76,852.68	6	0.461
1.24) TR-364 HFSP XMIT	A		-	-	-	161,807.14	1	0.162	165,043.28	1	0.165	168,344.15	1	0.168	-	-	-	168,344.15	1	0.168
1.25) TR-317	A		-	-	-	-	-	-	4,244.83	650	2.759	4,329.73	650	2.814	-	-	-	4,329.73	650	2.814
1.26) TR-281	A		-	-	-	23,327.62	6	0.140	23,794.18	6	0.143	24,270.06	6	0.146	-	-	-	24,270.06	6	0.146

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2					P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment									Aggregated Items Title: Sonar Switches and Transducers						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.27) TR-302 Transducer First Article	A		-	-	-	150,000.00	2	0.300	-	-	-	-	-	-	-	-	-	-	-	-
1.28) TR-317 FIRST ARTICLE	A		-	-	-	81,640.00	20	1.633	-	-	-	-	-	-	-	-	-	-	-	-
1.29) TR-353 FIRST ARTICLE	A		-	-	-	81,640.00	20	1.633	-	-	-	-	-	-	-	-	-	-	-	-
1.30) DT-513 Hydrophone	A		-	-	-	4,373.17	82	0.359	4,460.63	75	0.335	4,549.84	85	0.387	-	-	-	4,549.84	85	0.387
1.31) DT-100 HFSA RECEIVE	A		-	-	-	78,030.00	2	0.156	79,590.60	2	0.159	81,182.41	3	0.244	-	-	-	81,182.41	3	0.244
<i>Subtotal: 1) PU100 SONAR SWITCHES AND TRANSDUCERS</i>			-	-	0.000	-	-	10.305	-	-	10.699	-	-	11.223	-	-	-	-	-	11.223
2) PU200 ENGINEERING CHANGES																				
2.1) ENGINEERING CHANGES	A		-	-	-	-	-	0.214	-	-	0.219	-	-	0.223	-	-	-	-	-	0.223
<i>Subtotal: 2) PU200 ENGINEERING CHANGES</i>			-	-	0.000	-	-	0.214	-	-	0.219	-	-	0.223	-	-	-	-	-	0.223
3) PU300 PROGRAM SUPPORT																				
3.1) PROGRAM SUPPORT	A		-	-	-	-	-	1.073	-	-	1.094	-	-	1.116	-	-	-	-	-	1.116
<i>Subtotal: 3) PU300 PROGRAM SUPPORT</i>			-	-	0.000	-	-	1.073	-	-	1.094	-	-	1.116	-	-	-	-	-	1.116
Total			-	-	0.000	-	-	11.592	-	-	12.012	-	-	12.562	-	-	-	-	-	12.562

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

Footnotes:

(5) Due to Fleet usage requirements to maintain submarines in an operational status, adjustments are made to quantities throughout the FYDP. Items not procured in a single year do not impact the production line.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 1 / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	2.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.182
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	2.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.182
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	2.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.182
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding supports Technology Insertion, HF Active Components, and Transmit Group.												
[SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT] Funding supports Technology Insertion, HF Active Components, and Transmit Group.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							Modification Number / Title: 1 / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT							Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA101 ACOUSTIC UPGRAGES SSN 21 LEGACY REPLACEMENT</i>												
B Kits												
Recurring												
1.1.1) SA101 ACOUSTIC UPGRAGES SSN 21 LEGACY REPLACEMENT - NonOrganic ⁽⁶⁾	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: SA101 ACOUSTIC UPGRAGES SSN 21 LEGACY REPLACEMENT</i>	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: SA101 ACOUSTIC UPGRAGES SSN 21 LEGACY REPLACEMENT</i>	- / 0.000	- / 2.182	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.182
<i>Subtotal: Installation</i>	- / 0.000	- / 2.182	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	0.000	2.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.182

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment								Modification Number / Title: 1 / SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT																														
Manufacturer Information																														
Manufacturer Name: Lockheed Martin								Manufacturer Location: VA																						
Administrative Leadtime (in Months): 2								Production Leadtime (in Months): 12																						
Dates	FY 2017		FY 2018		FY 2019			FY 2020		FY 2021		FY 2022		FY 2023																
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: SA101 ACOUSTIC UPGRADES SSN 21 LEGACY REPLACEMENT																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.182	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.182																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			- / -	1 / 2.182	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.182																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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:																														
(6) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 2 / SA101 SSBN LEGACY INTERFACE HARDWARE			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	11.652	0.000	11.652	27.527	20.902	5.046	0.000	0.000	65.127
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	11.652	0.000	11.652	27.527	20.902	5.046	0.000	0.000	65.127
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	11.652	0.000	11.652	27.527	20.902	5.046	0.000	0.000	65.127
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding supports procurement of hardware to accommodate increased power requirements of SSBN modernization equipment.												
[SA101 SSBN LEGACY INTERFACE HARDWARE] Funding supports procurement of hardware to accommodate increased power requirements of SSBN modernization equipment.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 2 / SA101 SSBN LEGACY INTERFACE HARDWARE			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA101 SSBN LEGACY INTERFACE HARDWARE</i>												
B Kits												
Recurring												
1.1.1) SA101 SSBN LEGACY INTERFACE HARDWARE - NonOrganic	- / -	- / -	- / -	2 / 11.652	- / -	2 / 11.652	3 / 17.828	1 / 6.062	- / -	- / -	- / -	6 / 35.542
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 11.652	- / -	- / 11.652	- / 17.828	- / 6.062	- / -	- / -	- / 0.000	- / 35.542
<i>Subtotal: SA101 SSBN LEGACY INTERFACE HARDWARE</i>	- / -	- / -	- / -	2 / 11.652	- / -	2 / 11.652	3 / 17.828	1 / 6.062	- / -	- / -	- / -	6 / 35.542
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / 11.652	- / -	- / 11.652	- / 17.828	- / 6.062	- / -	- / -	- / 0.000	- / 35.542
Installation												
<i>Modification Item 1 of 1: SA101 SSBN LEGACY INTERFACE HARDWARE</i>	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 14.840	- / 5.046	- / 0.000	- / 0.000	- / 29.585
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.840	- / 5.046	- / -	- / 0.000	- / 29.585
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	11.652	0.000	11.652	27.527	20.902	5.046	0.000	0.000	65.127

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 2 / SA101 SSBN LEGACY INTERFACE HARDWARE																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: SA101 SSBN LEGACY INTERFACE HARDWARE																																		
Manufacturer Information																																		
Manufacturer Name: Lockheed Martin							Manufacturer Location: Manassas, VA																											
Administrative Leadtime (in Months): 6							Production Leadtime (in Months): 12																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates					Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022																					
Delivery Dates					Dec 2019		Dec 2020		Dec 2021		Dec 2022		Dec 2023																					
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: SA101 SSBN LEGACY INTERFACE HARDWARE																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 9.699	2 / 9.699																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 14.840	3 / 14.840																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 5.046	1 / 5.046																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 29.585	6 / 29.585																	
Installation Schedule																																		
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot												
	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												
Out	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	-	-	-	6												

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 3 / SA106 LOW COST CONFORMAL ARRAY KITS			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	12.974	13.234	13.498	0.000	13.498	13.769	14.044	14.325	14.612	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	12.974	13.234	13.498	0.000	13.498	13.769	14.044	14.325	14.612	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	12.974	13.234	13.498	0.000	13.498	13.769	14.044	14.325	14.612	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement of Low Cost Conformal Array (LCCA) to provide enhanced situational awareness and collision avoidance capability.												
[SA106 HULL SENSORS LOW COST CONFORMAL ARRAY KITS] Procurement of Low Cost Conformal Array (LCCA) to provide enhanced situational awareness and collision avoidance capability.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							Modification Number / Title: 3 / SA106 LOW COST CONFORMAL ARRAY KITS			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT							Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: SA106 LOW COST CONFORMAL ARRAY KITS													
B Kits													
Recurring													
1.1.1) SA106 HULL SENSORS LOW COST CONFORMAL ARRAY KITS - NonOrganic (7)		2 / 0.000	2 / 9.437	2 / 9.626	2 / 9.818	- / -	2 / 9.818	2 / 10.015	2 / 10.215	2 / 10.419	2 / 10.628	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 0.000	- / 9.437	- / 9.626	- / 9.818	- / -	- / 9.818	- / 10.015	- / 10.215	- / 10.419	- / 10.628	Continuing	Continuing
<i>Subtotal: SA106 LOW COST CONFORMAL ARRAY KITS</i>		2 / 0.000	2 / 9.437	2 / 9.626	2 / 9.818	- / -	2 / 9.818	2 / 10.015	2 / 10.215	2 / 10.419	2 / 10.628	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 9.437	- / 9.626	- / 9.818	- / -	- / 9.818	- / 10.015	- / 10.215	- / 10.419	- / 10.628	Continuing	Continuing
Installation													
Modification Item 1 of 1: SA106 LOW COST CONFORMAL ARRAY KITS		- / 0.000	- / 3.537	- / 3.608	- / 3.680	- / 0.000	- / 3.680	- / 3.754	- / 3.829	- / 3.906	- / 3.984	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 0.000	- / 3.537	- / 3.608	- / 3.680	- / -	- / 3.680	- / 3.754	- / 3.829	- / 3.906	- / 3.984	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		0.000	12.974	13.234	13.498	0.000	13.498	13.769	14.044	14.325	14.612	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 3 / SA106 LOW COST CONFORMAL ARRAY KITS																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: SA106 LOW COST CONFORMAL ARRAY KITS																																	
Manufacturer Information																																	
Manufacturer Name: LOCKHEED MARTIN							Manufacturer Location: SYRACUSE, NY																										
Administrative Leadtime (<i>in Months</i>): 6							Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Apr 2017		Apr 2018		Apr 2019		Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2024																		
Delivery Dates	Apr 2018		Apr 2019		Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2024																				
Installation Information																																	
Method of Implementation: SHIPALT:: Installation Name: SA106 HULL SENSORS LOW COST CONFORMAL ARRAY KITS																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.537	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.537																	
FY 2017			- / -	- / -	2 / 3.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.608																	
FY 2018			- / -	- / -	- / -	2 / 3.680	0 / 0.000	2 / 3.680	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.680																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.754	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.754																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.829	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.829																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.906	- / -	- / -	- / -	0 / 0.000	2 / 3.906																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.984	- / -	- / -	0 / 0.000	2 / 3.984																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.063	2 / 4.063																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			- / -	2 / 3.537	2 / 3.608	2 / 3.680	0 / 0.000	2 / 3.680	2 / 3.754	2 / 3.829	2 / 3.906	2 / 3.984	Continuing	Continuing																			
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot											
	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	-	Cont.	Cont.									
Out	-	-	-	2	-	-	-	2	-	-	-	-	2	-	-	-	2	-	-	-	2	-	Cont.	Cont.									
Footnotes:																																	
(7) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 4 / SA106 HIGH FREQUENCY SAIL ARRAY			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	3.846	6.117	6.120	0.000	6.120	8.405	6.492	2.249	0.000	0.000	33.229
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	3.846	6.117	6.120	0.000	6.120	8.405	6.492	2.249	0.000	0.000	33.229
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	3.846	6.117	6.120	0.000	6.120	8.405	6.492	2.249	0.000	0.000	33.229
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: [SA106 HIGH FREQUENCY SAIL ARRAY] The High Frequency Sail Array (HFSA) provides high frequency active and passive capability supporting Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASUW) for SSNs, and contact avoidance for SSNs and SSBNs.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 4 / SA106 HIGH FREQUENCY SAIL ARRAY			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA106 HIGH FREQUENCY SAIL ARRAY</i>												
B Kits												
Recurring												
1.1.1) SA106 HIGH FREQUENCY SAIL ARRAY - NonOrganic		- / -	2 / 3.846	1 / 1.961	2 / 4.001	- / -	2 / 4.001	2 / 4.081	1 / 2.082	- / -	- / -	- / -
<i>Subtotal: Recurring</i>		- / 0.000	- / 3.846	- / 1.961	- / 4.001	- / -	- / 4.001	- / 4.081	- / 2.082	- / -	- / -	- / 0.000
<i>Subtotal: SA106 HIGH FREQUENCY SAIL ARRAY</i>		- / -	2 / 3.846	1 / 1.961	2 / 4.001	- / -	2 / 4.001	2 / 4.081	1 / 2.082	- / -	- / -	- / -
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 3.846	- / 1.961	- / 4.001	- / -	- / 4.001	- / 4.081	- / 2.082	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: SA106 HIGH FREQUENCY SAIL ARRAY</i>		- / 0.000	- / 0.000	- / 4.156	- / 2.119	- / 0.000	- / 2.119	- / 4.324	- / 4.410	- / 2.249	- / 0.000	- / 0.000
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 4.156	- / 2.119	- / -	- / 2.119	- / 4.324	- / 4.410	- / 2.249	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	0.000	3.846	6.117	6.120	0.000	6.120	8.405	6.492	2.249	0.000	0.000	33.229

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 4 / SA106 HIGH FREQUENCY SAIL ARRAY																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: SA106 HIGH FREQUENCY SAIL ARRAY																																		
Manufacturer Information																																		
Manufacturer Name: NUWC Report							Manufacturer Location: Newport, RI																											
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 17																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Dec 2016		Dec 2017		Dec 2018		Dec 2019		Dec 2020																									
Delivery Dates	May 2018		May 2019		May 2020		May 2021		May 2022																									
Installation Information																																		
Method of Implementation: SHIPALT:: Installation Name: SA106 HIGH FREQUENCY SAIL ARRAY																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	2 / 4.156	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2018			- / -	- / -	- / -	1 / 2.119	0 / 0.000	1 / 2.119	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.324	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.410	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.249	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
Total			- / -	- / -	2 / 4.156	1 / 2.119	0 / 0.000	1 / 2.119	2 / 4.324	2 / 4.410	1 / 2.249	- / -	- / -	0 / 0.000																				
Installation Schedule																																		
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot											
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4														
In	-	-	-	-	-	2	-	-	-	1	-	-	2	-	-	2	-	-	-	-	8													
Out	-	-	-	-	-	2	-	-	-	1	-	-	2	-	-	2	-	-	-	-	8													

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 5 / SA106 OHIO CLASS LARGE VERTICAL ARRAY			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	18.525	0.000	18.525	18.896	29.400	29.989	30.588	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	18.525	0.000	18.525	18.896	29.400	29.989	30.588	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	18.525	0.000	18.525	18.896	29.400	29.989	30.588	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: [SA106 OHIO CLASS LARGE VERTICAL ARRAY] The Large Vertical Array (LVA) provides improved detection and enhanced tactical situational awareness capability for tracking targets of interest, and supports acoustic superiority objectives for OHIO class submarines. SSBN systems will be approximately half the width of their SSN counterparts. This variance reflects the difference in mission, expected environment, and requirements.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							Modification Number / Title: 5 / SA106 OHIO CLASS LARGE VERTICAL ARRAY			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: SA106 OHIO CLASS LARGE VERTICAL ARRAY													
B Kits													
Recurring													
1.1.1) SA106 OHIO CLASS LARGE VERTICAL ARRAY - NonOrganic		- / -	- / -	- / -	1 / 18.525	- / -	1 / 18.525	1 / 18.896	1 / 19.273	1 / 19.659	1 / 20.052	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / -	- / 18.525	- / -	- / 18.525	- / 18.896	- / 19.273	- / 19.659	- / 20.052	Continuing	Continuing
<i>Subtotal: SA106 OHIO CLASS LARGE VERTICAL ARRAY</i>		- / -	- / -	- / -	1 / 18.525	- / -	1 / 18.525	1 / 18.896	1 / 19.273	1 / 19.659	1 / 20.052	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / -	- / 18.525	- / -	- / 18.525	- / 18.896	- / 19.273	- / 19.659	- / 20.052	Continuing	Continuing
Installation													
Modification Item 1 of 1: SA106 OHIO CLASS LARGE VERTICAL ARRAY		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.127	- / 10.330	- / 10.536	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.127	- / 10.330	- / 10.536	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	18.525	0.000	18.525	18.896	29.400	29.989	30.588	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 5 / SA106 OHIO CLASS LARGE VERTICAL ARRAY																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: SA106 OHIO CLASS LARGE VERTICAL ARRAY																																	
Manufacturer Information																																	
Manufacturer Name: Electric Boat							Manufacturer Location: Groton, CT																										
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 24																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates							Nov 2018		Nov 2019		Nov 2020		Nov 2021		Nov 2022																		
Delivery Dates							Nov 2020		Nov 2021		Nov 2022		Nov 2023		Nov 2024																		
Installation Information																																	
Method of Implementation: SHIPALT:: Installation Name: SA106 OHIO CLASS LARGE VERTICAL ARRAY																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.127	- / -	- / -	0 / 0.000	1 / 10.127																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.330	- / -	- / -	0 / 0.000	1 / 10.330																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.536	- / -	- / -	0 / 0.000	1 / 10.536																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.747	1 / 10.747																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.962	1 / 10.962																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.127	1 / 10.330	1 / 10.536	Continuing	Continuing																	
Installation Schedule																																	
PYS				FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot							
	Q1	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	-	-	-	Cont.	Cont.							
Out	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	Cont.	Cont.							

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 6 / SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	0.000	0.000	0.000	43.405	44.273	65.077	66.379	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	0.000	0.000	0.000	43.405	44.273	65.077	66.379	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	0.000	0.000	0.000	43.405	44.273	65.077	66.379	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: [SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY] Procurement of the VIRGINIA Class Large Vertical Array (LVA) provides improved detection and enhanced tactical situational awareness capability for tracking targets of interest, and supports acoustic superiority objectives for the VIRGINIA class submarines. SSN systems will be approximately twice the width of their SSBN counterparts. This variance reflects the difference in mission, expected environment, and requirements.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 6 / SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY</i>													
B Kits													
Recurring													
1.1.1) SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 43.405	1 / 44.273	1 / 45.159	1 / 46.062	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 43.405	- / 44.273	- / 45.159	- / 46.062	Continuing	Continuing	
<i>Subtotal: SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY</i>	- / -	- / -	- / -	- / -	- / -	- / -	1 / 43.405	1 / 44.273	1 / 45.159	1 / 46.062	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 43.405	- / 44.273	- / 45.159	- / 46.062	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY</i>	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 20.317	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	0.000	0.000	0.000	43.405	44.273	65.077	66.379	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 6 / SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY																	
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																	
Modification Item 1 of 1: SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY																															
Manufacturer Information																															
Manufacturer Name: Electric Boat							Manufacturer Location: Groton, CT																								
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 24																								
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates							Nov 2019		Nov 2020		Nov 2021		Nov 2022																		
Delivery Dates							Nov 2021		Nov 2022		Nov 2023		Nov 2024																		
Installation Information																															
Method of Implementation: TBD:: Installation Name: SA106 VIRGINIA CLASS LARGE VERTICAL ARRAY																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 19.918	- / -	0 / 0.000	1 / 19.918															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 20.317	0 / 0.000	1 / 20.317																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 20.723	1 / 20.723																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 21.137	1 / 21.137																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 19.918	1 / 20.317	Continuing	Continuing															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	Cont.	Cont.					
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	Cont.	Cont.					

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 7 / SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	13.274	47.836	62.603	0.000	62.603	55.560	11.974	34.519	71.583	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	13.274	47.836	62.603	0.000	62.603	55.560	11.974	34.519	71.583	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	13.274	47.836	62.603	0.000	62.603	55.560	11.974	34.519	71.583	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides technology insertion upgrade kits to previously installed A-RCI systems, providing the latest and most current capability and includes tech insertion to Legacy Replacement components.												
[SA303 688I TECHNOLOGY INSERTION KITS (SWFTS)] Provides technology insertion upgrade kits to previously installed A-RCI systems, providing the latest and most current capability and includes tech insertion to Legacy Replacement components.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							Modification Number / Title: 7 / SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: SSN			Modification Type: SHIPALT							Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)													
B Kits													
Non-Recurring													
1.1.1) SA303 688i TECHNOLOGY INSERTION KITS (SWFTS) - NonOrganic ⁽⁸⁾		6 / 0.000	- / -	6 / 47.836	6 / 48.792	- / -	6 / 48.792	5 / 41.473	- / -	4 / 34.519	7 / 61.617	Continuing	Continuing
<i>Subtotal: Non-Recurring</i>		- / 0.000	- / -	- / 47.836	- / 48.792	- / -	- / 48.792	- / 41.473	- / -	- / 34.519	- / 61.617	Continuing	Continuing
<i>Subtotal: SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)</i>		6 / 0.000	- / -	6 / 47.836	6 / 48.792	- / -	6 / 48.792	5 / 41.473	- / -	4 / 34.519	7 / 61.617	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / 47.836	- / 48.792	- / -	- / 48.792	- / 41.473	- / -	- / 34.519	- / 61.617	Continuing	Continuing
Installation													
Modification Item 1 of 1: SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)		- / 0.000	- / 13.274	- / 0.000	- / 13.811	- / 0.000	- / 13.811	- / 14.087	- / 11.974	- / 0.000	- / 9.966	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 0.000	- / 13.274	- / -	- / 13.811	- / -	- / 13.811	- / 14.087	- / 11.974	- / -	- / 9.966	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		0.000	13.274	47.836	62.603	0.000	62.603	55.560	11.974	34.519	71.583	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 7 / SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: SA303 688/688I TECHNOLOGY INSERTION KITS (SWFTS)																																	
Manufacturer Information																																	
Manufacturer Name: Lockheed Martin							Manufacturer Location: VA																										
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates			Apr 2018		Apr 2019		Apr 2020				Apr 2022		Apr 2023																				
Delivery Dates			Apr 2019		Apr 2020		Apr 2021				Apr 2023		Apr 2024																				
Installation Information																																	
Method of Implementation: SHIPALT:: Installation Name: SA303 688i TECHNOLOGY INSERTION KITS (SWFTS)																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 13.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 13.274																		
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2018			- / -	- / -	- / -	6 / 13.811	0 / 0.000	6 / 13.811	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 13.811																		
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	6 / 14.087	- / -	- / -	- / -	- / -	0 / 0.000	6 / 14.087																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 11.974	- / -	- / -	- / -	0 / 0.000	5 / 11.974																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.966	0 / 0.000																		
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 17.789	7 / 17.789																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																		
Total			- / -	6 / 13.274	- / -	6 / 13.811	0 / 0.000	6 / 13.811	6 / 14.087	5 / 11.974	- / -	4 / 9.966	Continuing	Continuing																			
Installation Schedule																																	
PYS				FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		TC	Tot														
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2															
In	-	-	-	6	-	-	-	-	-	3	3	-	3	3	-	2	3	-	-	-	2	2											
Out	-	-	-	6	-	-	-	-	-	3	3	-	3	3	-	2	3	-	-	-	2	2											

Footnotes:

(8) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 8 / SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	16.264	0.000	16.264	21.283	4.788	0.000	0.000	0.000	42.335
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	16.264	0.000	16.264	21.283	4.788	0.000	0.000	0.000	42.335
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	16.264	0.000	16.264	21.283	4.788	0.000	0.000	0.000	42.335
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides technology insertion upgrade kits to previously installed A-RCI systems, providing the latest and most current capability and includes tech insertion to Legacy Replacement components on SSGN class submarines. [SSGN TECHNOLOGY INSERTION KITS (SWFTS)] Provides technology insertion upgrade kits to previously installed A-RCI systems, providing the latest and most current capability and includes tech insertion to Legacy Replacement components on SSGN class submarines.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 8 / SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN			Modification Type: SHIPALT					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)												
B Kits												
Non-Recurring												
1.1.1) SSGN TECHNOLOGY INSERTION KITS (SWFTS) - NonOrganic		- / -	- / -	- / -	2 / 16.264	- / -	2 / 16.264	2 / 16.589	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring		- / 0.000	- / -	- / -	- / 16.264	- / -	- / 16.264	- / 16.589	- / -	- / -	- / -	- / 0.000
Subtotal: SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)		- / -	- / -	- / -	2 / 16.264	- / -	2 / 16.264	2 / 16.589	- / -	- / -	- / -	- / -
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / -	- / 16.264	- / -	- / 16.264	- / 16.589	- / -	- / -	- / -	- / 0.000
Installation												
Modification Item 1 of 1: SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.694	- / 4.788	- / 0.000	- / 0.000	- / 0.000
Subtotal: Installation		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 4.694	- / 4.788	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	16.264	0.000	16.264	21.283	4.788	0.000	0.000	42.335

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 8 / SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)																
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																
Modification Item 1 of 1: SA303 SSGN TECHNOLOGY INSERTION KITS (SWFTS)																														
Manufacturer Information																														
Manufacturer Name: Lockheed Martin							Manufacturer Location: VA																							
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 12																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates					Apr 2019		Apr 2020																							
Delivery Dates					Apr 2020		Apr 2021																							
Installation Information																														
Method of Implementation: SHIPALT:: Installation Name: SSGN TECHNOLOGY INSERTION KITS (SWFTS)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	214.694	- / -	- / -	- / -	- / -	0 / 0.000	214.694														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	214.788	- / -	- / -	- / -	- / -	0 / 0.000	214.788														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	214.694	214.788	- / -	- / -	- / -	0 / 0.000	419.482														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	4					

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 9 / SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	12.037	12.278	3.415	0.000	3.415	0.000	0.000	9.666	13.555	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	12.037	12.278	3.415	0.000	3.415	0.000	0.000	9.666	13.555	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	12.037	12.278	3.415	0.000	3.415	0.000	0.000	9.666	13.555	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Inserts Tech Insertions onto Seawolf Class Submarines.												
[SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)] Provides Tech Insertions onto Seawolf Class Submarines.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment								Modification Number / Title: 9 / SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)		
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)</i>													
B Kits													
Recurring													
1.1.1) SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS) - NonOrganic ⁽⁹⁾	1 / 0.000	1 / 8.755	1 / 8.930	- / -	- / -	- / -	- / -	- / -	1 / 9.666	1 / 9.859	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 0.000	- / 8.755	- / 8.930	- / -	- / -	- / -	- / -	- / -	- / 9.666	- / 9.859	Continuing	Continuing	
<i>Subtotal: SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)</i>	1 / 0.000	1 / 8.755	1 / 8.930	- / -	- / -	- / -	- / -	- / -	1 / 9.666	1 / 9.859	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 8.755	- / 8.930	- / -	- / -	- / -	- / -	- / -	- / 9.666	- / 9.859	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / 3.282	- / 3.348	- / 3.415	- / 0.000	- / 3.415	- / 0.000	- / 0.000	- / 0.000	- / 3.696	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	0.000	12.037	12.278	3.415	0.000	3.415	0.000	0.000	9.666	13.555	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 9 / SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)													
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:													
Modification Item 1 of 1: SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)																											
Manufacturer Information																											
Manufacturer Name: Lockheed Martin							Manufacturer Location: VA																				
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																				
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																				
Contract Dates	Apr 2017	Apr 2018				Apr 2022																					
Delivery Dates	Apr 2018	Apr 2019				Apr 2023																					
Installation Information																											
Method of Implementation: SHIPALT:: Installation Name: SA303 SSN 21 TECHNICAL INSERTION KITS (SWFTS)																											
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total													
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.282												
FY 2017			- / -	- / -	1 / 3.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.348												
FY 2018			- / -	- / -	- / -	1 / 3.415	0 / 0.000	1 / 3.415	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.415												
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.696	0 / 0.000	1 / 3.696											
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.770	1 / 3.770											
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
Total			- / -	1 / 3.282	1 / 3.348	1 / 3.415	0 / 0.000	1 / 3.415	- / -	- / -	- / -	- / -	- / -	1 / 3.696	Continuing	Continuing											
Installation Schedule																											
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021		FY 2022				FY 2023		TC	Tot	
	Q1	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	-	Cont.	Cont.	
Out	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	Cont.	Cont.	
Footnotes:																											
(9) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																											

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 10 / SA303 VIRGINIA CLASS TECHNICAL INSERTION W/ CONVERSION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	16.957	3.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.305
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	16.957	3.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.305
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	16.957	3.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.305
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides initial technology insertion upgrade for A-RCI installed systems on the VA Class, providing the latest and most current capability. [SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)] Provides initial technology insertion upgrade for A-RCI installed systems on the VA Class, providing the latest and most current capability.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 10 / SA303 VIRGINIA CLASS TECHNICAL INSERTION W/ CONVERSION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)</i>												
B Kits												
Recurring												
1.1.1) SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS) - NonOrganic ⁽¹⁰⁾	1 / 0.000	1 / 13.675	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 13.675
<i>Subtotal: Recurring</i>	- / 0.000	- / 13.675	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 13.675
<i>Subtotal: SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)</i>	1 / 0.000	1 / 13.675	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 13.675
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 13.675	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 13.675
Installation												
<i>Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)</i>	- / 0.000	- / 3.282	- / 3.348	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.630
<i>Subtotal: Installation</i>	- / 0.000	- / 3.282	- / 3.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 6.630
Total												
Total Cost (Procurement + Support + Installation)	0.000	16.957	3.348	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.305

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment									Modification Number / Title: 10 / SA303 VIRGINIA CLASS TECHNICAL INSERTION W/ CONVERSION KITS (SWFTS)																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																
Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)																													
Manufacturer Information																													
Manufacturer Name: Lockheed Martin							Manufacturer Location: Syracuse, NY																						
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																						
Contract Dates	Apr 2017																												
Delivery Dates	Apr 2018																												
Installation Information																													
Method of Implementation: SHIPALT:: Installation Name: SA303 VIRGINIA CLASS TECHNICAL INSERTION W/CONVERSION KITS (SWFTS)																													
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.282														
FY 2017			- / -	- / -	1 / 3.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.348														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total			- / -	1 / 3.282	1 / 3.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 6.630														
Installation Schedule																													
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot						
	Q1	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:																													
(10) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 11 / SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	55.810	47.011	10.245	0.000	10.245	27.872	133.851	85.775	34.504	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	55.810	47.011	10.245	0.000	10.245	27.872	133.851	85.775	34.504	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	55.810	47.011	10.245	0.000	10.245	27.872	133.851	85.775	34.504	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides technology insertion upgrade kits to previously A-RCI installed systems on the VA Class, providing the latest and most current capability. [SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)] Provides technology insertion upgrade kits to previously A-RCI installed systems on the VA Class, providing the latest and most current capability.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 11 / SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)</i>												
B Kits												
Recurring												
1.1.1) SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS) - NonOrganic (11)	1 / 0.000	6 / 52.528	3 / 26.789	- / -	- / -	- / -	3 / 27.872	13 / 123.192	4 / 38.663	2 / 19.718	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 0.000	- / 52.528	- / 26.789	- / -	- / -	- / -	- / 27.872	- / 123.192	- / 38.663	- / 19.718	Continuing	Continuing
<i>Subtotal: SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)</i>	1 / 0.000	6 / 52.528	3 / 26.789	- / -	- / -	- / -	3 / 27.872	13 / 123.192	4 / 38.663	2 / 19.718	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 52.528	- / 26.789	- / -	- / -	- / -	- / 27.872	- / 123.192	- / 38.663	- / 19.718	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)</i>												
<i>Subtotal: Installation</i>	- / 0.000	- / 3.282	- / 20.222	- / 10.245	- / 0.000	- / 10.245	- / 0.000	- / 10.659	- / 47.112	- / 14.786	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	0.000	55.810	47.011	10.245	0.000	10.245	27.872	133.851	85.775	34.504	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 11 / SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)																																	
Manufacturer Information																																	
Manufacturer Name: Lockheed Martin							Manufacturer Location: VA																										
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Apr 2017		Apr 2018				Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2023		Apr 2023																
Delivery Dates	Apr 2018		Apr 2019				Apr 2021		Apr 2022		Apr 2023		Apr 2024																				
Installation Information																																	
Method of Implementation: SHIPALT:: Installation Name: SA303 VIRGINIA CLASS TECHNICAL INSERTION KITS (SWFTS)																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.282	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.282																		
FY 2017			- / -	- / -	6 / 20.222	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 20.222																		
FY 2018			- / -	- / -	- / -	3 / 10.245	0 / 0.000	3 / 10.245	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 10.245																		
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.659	- / -	- / -	0 / 0.000	3 / 10.659																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 47.112	- / -	- / -	0 / 0.000	13 / 47.112																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 14.786	- / -	0 / 0.000	4 / 14.786																		
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.541	2 / 7.541																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																		
Total			- / -	1 / 3.282	6 / 20.222	3 / 10.245	0 / 0.000	3 / 10.245	- / -	3 / 10.659	13 / 47.112	4 / 14.786	Continuing	Continuing																			
Installation Schedule																																	
PYS				FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		TC	Tot														
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
In	-	-	-	1	-	2	2	2	-	-	3	-	-	-	-	3	3	4	2	-	-												
Out	-	-	-	1	-	-	2	2	-	-	3	-	-	-	-	3	3	4	2	-	-												
Footnotes:																																	
(11) FY17 installations reflected in this BLI 2150 exhibit utilize equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment						Modification Number / Title: 12 / SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	24.008	28.667	23.757	0.000	23.757	25.478	19.010	27.803	42.202	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	24.008	28.667	23.757	0.000	23.757	25.478	19.010	27.803	42.202	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	24.008	28.667	23.757	0.000	23.757	25.478	19.010	27.803	42.202	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: Provides sonar modernization to the SSBN (TRIDENT) Class Submarine Fleet.												
[SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)] Provides sonar modernization to the SSBN (TRIDENT) Class Submarine Fleet.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment							Modification Number / Title: 12 / SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSN ACOUSTICS			Modification Type: SHIPALT							Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)</i>												
B Kits												
Non-Recurring												
1.1.1) SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS) - NonOrganic ⁽¹²⁾	2 / 0.000	3 / 15.814	3 / 16.130	2 / 10.969	- / -	2 / 10.969	3 / 16.782	1 / 5.706	4 / 23.280	4 / 23.746	Continuing	Continuing
<i>Subtotal: Non-Recurring</i>	- / 0.000	- / 15.814	- / 16.130	- / 10.969	- / -	- / 10.969	- / 16.782	- / 5.706	- / 23.280	- / 23.746	Continuing	Continuing
<i>Subtotal: SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)</i>	2 / 0.000	3 / 15.814	3 / 16.130	2 / 10.969	- / -	2 / 10.969	3 / 16.782	1 / 5.706	4 / 23.280	4 / 23.746	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 15.814	- / 16.130	- / 10.969	- / -	- / 10.969	- / 16.782	- / 5.706	- / 23.280	- / 23.746	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)</i>	- / 0.000	- / 8.194	- / 12.537	- / 12.788	- / 0.000	- / 12.788	- / 8.696	- / 13.304	- / 4.523	- / 18.456	Continuing	Continuing
<i>Subtotal: Installation</i>	- / 0.000	- / 8.194	- / 12.537	- / 12.788	- / -	- / 12.788	- / 8.696	- / 13.304	- / 4.523	- / 18.456	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	0.000	24.008	28.667	23.757	0.000	23.757	25.478	19.010	27.803	42.202	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2				P-1 Line Item Number / Title: 2150 / SSN Acoustic Equipment										Modification Number / Title: 12 / SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)																																	
Manufacturer Information																																	
Manufacturer Name: Lockheed Martin							Manufacturer Location: Manassas, VA																										
Administrative Leadtime (<i>in Months</i>): 6							Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Apr 2017		Apr 2018		Apr 2019		Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2024																		
Delivery Dates	Apr 2018		Apr 2019		Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2024																				
Installation Information																																	
Method of Implementation: SHIPALT:: Installation Name: SA303 SSBN TECHNICAL INSERTION CONVERSION (SWFTS)																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 8.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 8.194																	
FY 2017			- / -	- / -	3 / 12.537	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 12.537																	
FY 2018			- / -	- / -	- / -	3 / 12.788	0 / 0.000	3 / 12.788	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 12.788																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	2 / 8.696	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 8.696																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 13.304	- / -	- / -	- / -	- / -	0 / 0.000	3 / 13.304																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.523	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.523																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 18.456	- / -	0 / 0.000	4 / 18.456																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 18.825	4 / 18.825																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			- / -	2 / 8.194	3 / 12.537	3 / 12.788	0 / 0.000	3 / 12.788	2 / 8.696	3 / 13.304	1 / 4.523	4 / 18.456	Continuing	Continuing																			
Installation Schedule																																	
PYS				FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		TC	Tot														
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2															
In	-	-	-	2	-	-	-	3	-	-	-	2	1	-	-	2	1	-	-	2	2												
Out	-	-	-	2	-	-	-	3	-	-	-	2	1	-	-	2	1	-	-	2	2												
Footnotes:																																	
(12) FY17 installation reflected in this BLI 2150 exhibit utilizes equipment previously procured under BLI 2147 due to BLI 2147 and BLI 2181 merging into BLI 2150 beginning in FY17.																																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars					2176 / Undersea Warfare Support Equipment												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0603512N, 0604518N									
Line Item MDAP/MAIS Code: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	98.656	7.163	13.653	10.134	0.000	10.134	9.008	10.339	11.854	14.999	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	98.656	7.163	13.653	10.134	0.000	10.134	9.008	10.339	11.854	14.999	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	98.656	7.163	13.653	10.134	0.000	10.134	9.008	10.339	11.854	14.999	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 FY 2019 funding request was reduced by \$.068 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.																	
VM301 - AIRCRAFT CARRIER TACTICAL SUPPORT CENTER (CV-TSC):																	
The AN/SQQ-34 Aircraft Carrier Tactical Support Center (CV-TSC) program provides increased situational awareness to the Carrier Strike Group (CSG) in support of force protection, primarily in the area of ASW. Through the integration of off-board sensors and signal, data and display processors, the AN/SQQ-34 is utilized in detecting, classifying, and localizing threats. An integrated element of the Carrier Combat System, the AN/SQQ-34 supports the tactical deployment of embarked ASW and Surface Warfare (SUW) assets. The program provides technical refreshes to legacy AN/SQQ-34 systems on all Carriers and shore sites in support of Fleet introduction and shipboard integration of the MH-60R Multi-Mission Helicopter. Upgrades to legacy systems will enable exchange of sensor, tactical and imagery data with the MH-60R initially and eventually with P-8 and Triton Unmanned Aircraft Systems (UAS) aircraft. It completes the Kill Chain by linking sensor platform to sensor controllers and the ASW/SUW commanders. In order to support multiple MH-60R Multi-Mission Helicopters, the Common Data Link (CDL) will also be upgraded. CDL is the Navy Aircraft Carrier ultra wide-band, digital, secure data link, comprised of radio equipment that provides configuration-controlled and standardized wide-band, digital, and secure communication paths between multiple reconnaissance sensors and their users. Initially, a single User Interface Group (UIG) upgrade to CDL will be fielded in concert with CV-TSC/MH-60R deployments, providing a single MH-60R/aircraft link.																	
VM401 - SURFACE SONAR WINDOWS AND DOMES:																	
AN/SQS-26/53 Sonar Dome Rubber Windows (SDRW) are installed on CG47 and DDG51 class ships. This program provides emergency replacement, wire-reinforced, pressurized rubber acoustic windows and attachment hardware, which experience failure due to corrosion, fatigue, and impact damage. The SDRW significantly improves the surface ship sonar performance by reducing flow-induced self-noise and by providing increased source level receiving and sensitivity resulting from reduced attenuation. This program provides production engineering in support of technical evaluations, failure analysis, implementation of the in-water one-side backscatter X-ray program, Government Furnished Equipment (GFE) refurbishments, and field service engineering; and complete engineering design work and material tests. This program also provides drawings, configuration management information, new design and fabrication technology, incorporation of lessons learned and required testing, and construct sub-element to confirm single-stage cure.																	
VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS)																	
USW-DSS provides an integrated, near-real time, net-centric ASW Command and Control (C2) capability across multiple surface platforms and critical shore sites. USW-DSS provides a critical C2 capability for the Sea Combat, Theater USW (TUSW), and ASW Commanders, and enables the ability to plan and conduct USW operations, alignment of sensors for exploitation of the environment, allocation of resources,																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars		P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603512N, 0604518N
Line Item MDAP/MAIS Code: N/A optimization of operations and risk, and vulnerability assessment. It provides USW Commanders with an expanded net-centric USW capability across CSG platforms (CVNs, CG/DDGs, and Integrated Undersea Surveillance System (IUS)) as well as supporting shore nodes to include Theater Surface Combatants (TSC), Training, Naval Oceanographic Processing Facility (NOPF), and Commander Task Force (CTF). This program procures and installs USW-DSS on CSG platforms and supporting shore nodes via permanent ship alterations (SHIPALTs). In FY 2009 USW-DSS transitioned to a software application hosted on the Integrated Shipboard Network System (ISNS) and in FY 2014 started installing as part of the Consolidated Afloat Network and Enterprise Services (CANES). Workstation procurements are required to support the ISNS and CANES configured ships as well as shore nodes. USW-DSS capability is phased to effectively deliver software improvements to the warfighter. The current software version, Build 2 Release 3 (B2R3), will continue to field until the follow-on Build 3 (B3) is fielded in FY 2019. In FY 2021, non-recurring engineering effort will begin to field Theater Anti-Submarine Warfare (ASW) upgrades to USW-DSS systems, with the integrated Common Operational Picture (COP), to shore nodes operating in the multi-level security environment.		
YEAR-TO-YEAR BUDGET CONTROL COMPARISON: - FY 2017 (\$7.163M) to FY 2018 (\$13.653M) increase (\$+6.490M) is driven by the requirement for improvements and tech refreshes of USW-DSS to avoid obsolescence and improve reliability and maintainability. The tech refresh includes all USW-DSS/UYQ-100 hardware Technical Insertion (TI)-08 baseline afloat and shore sites, including Surveillance Towed Array Sensor System (SURTASS) ships, Theater commands, support nodes, and Tactical Training Equipment (TTE). - FY 2018 (\$13.653M) to FY 2019 (\$10.134M) decrease (\$-3.519M) is driven by the reduced (as compared to FY 2018) requirement for the USW-DSS program's procurement of shore site, tactical trainer, and tech refresh upgrades in FY 2019.		
[P40A / VM301 - AIRCRAFT CARRIER TACTICAL SUPPORT CENTER (CV-TSC)]: VM301 - AIRCRAFT CARRIER TACTICAL SUPPORT CENTER (CV-TSC) [P40A / CV-TSC Technology Insert/Refresh & ECP Implementation]: VM301 - CV-TSC Technology Insert/Refresh & ECP Implementation: Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades to previously fielded and in-production AN/SQQ-34 systems. Funding used to implement ECPs to correct deficiencies identified through Fleet use; upgrade unreliable components; replace obsolete components; and address Information Assurance (IA) issues.		
[P40A / VM401 - SURFACE SONAR WINDOWS AND DOMES]: VM401 - SURFACE SONAR WINDOWS AND DOMES [P40A / Surface Sonar Windows and Domes]: VM401 - Surface Sonar Windows and Domes: Procure SDRWs, shipping fixtures, and fairing angles for emergency replacement on CG 47 and DDG 51 class hulls. [P40A / Production Support]: VM401 - SDRW Production Support: Funding is provided for production engineering in support of technical evaluations, failure analysis, implementation of the in-water one-side backscatter X-ray program, Government Furnished Equipment (GFE) refurbishments, and field service engineering; and complete engineering design work and material tests. This program also provides drawings, configuration management information, new design and fabrication technology, incorporation of lessons learned and required testing, and construct sub-element to confirm single-stage cure.		
[P40A / VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS)]: VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS) [P40A / Carrier Strike Group (CSG) Shipsets]: VM601 - USW-DSS/Carrier Strike Group (CSG) Shipsets: Consists of the complete USW-DSS (hardware, software, and support equipment). [P40A / Backfit To Post-OPEVAL]: VM601 - USW-DSS/Backfit To Post-OPEVAL: Consists of updates to existing USW-DSS Build 2 Release 3 systems in the Fleet with changes dictated by the FY 2013 OPEVAL of USW-DSS Build 2 Release 3. [P40A / ISNS to CANES S/W Shipsets]: VM601 - USW-DSS/ISNS/CANES S/W Shipsets: Consists of USW-DSS Build 2 Release 3 software load onto ISNS/CANES platforms. Include updates from ISNS to CANES as well as new CANES software and workstation suites. Schedule is dependent upon/coordinated with ISNS/CANES fielding. [P40A / Shore Sites and Tactical Trainers]: VM601 - USW-DSS/Shore Sites and Tactical Trainers: Consists of USW-DSS post-OPEVAL Build 2 Release 3 shore/lab assets and Tactical Training Equipment systems, which are full hardware/software suites. USW-DSS Build 3 will be loaded on all training and shore site nodes beginning in FY 2019.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars	P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603512N, 0604518N
Line Item MDAP/MAIS Code: N/A		
[P40A / USW-DSS Tech Refresh]: VM601 - USW-DSS Tech Refresh: Funding is for hardware/software technology upgrades to previously fielded USW-DSS/UYQ-100 hardware Technical Insertion (TI)-08 baseline afloat and shore sites, including Surveillance Towed Array Sensor System (SURTASS) ships, Theater commands, support nodes, and Tactical Training Equipment (TTE).		
[P40A / Engineering Changes (ECs)]: VM601 - USW-DSS/Engineering Changes: Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades. Funding will be used to support Reliability, Maintainability, and Availability (RM&A) modifications, correct deficiencies identified through Fleet use, and upgrade of unreliable components.		
[P40A / System Technical Support]: VM601 - USW-DSS/System Technical Support: Funding is for the USW-DSS program Software Support Activity efforts in performing the following functions: generation/assessment of Software Problem Reports (SPRs)/Software Trouble Reports (STRs); responding to Fleet software change requests; Configuration Management (CM); software Quality Assurance (QA); software installation automation; and software recovery support.		
[P40A / Production Support]: VM601 - USW-DSS/Production Support: Consists of on-site engineering support; CANES Integrated Product Team (IPT) Support; Information Assurance (IA) certification support; production quality assurance; system sustainability support; Integrated Logistics Support (ILS) product updates/support; status reporting and technical briefings; program office support; and all other production support efforts directly related to delivery of USW-DSS to both ISNS/CANES and ultimately the Fleet.		
[P40A / CANES S/W Shipsets]: VM601 - CANES S/W Shipsets: Consists of initial loads of the post-OPEVAL USW-DSS Build 2 Release 3 software suite on new CANES ships, which includes changes dictated by the FY 2013 OPEVAL of USW-DSS Build 2 Release 3. Schedule is dependent on/coordinated with CANES fielding. Prior Years reflect ISNS software shipsets.		
[P40A / Theater ASW Build Out]: VM601 - Theater ASW Build Out: Non-recurring engineering effort required to incorporate/field Theater Anti-Submarine Warfare (ASW) upgrades to USW-DSS systems, with the integrated Common Operational Picture (COP), to shore nodes operating in the multi-level security environment. Upgraded systems will include laboratory, tactical, and training shore nodes.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 2: Ship Sonars				P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0603512N, 0604518N					
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-40a	Undersea Warfare Support Equipment	P-5a			- / 98.656	- / 7.163	- / 13.653	- / 10.134	- / -	- / 10.134
P-40	Total Gross/Weapon System Cost				- / 98.656	- / 7.163	- / 13.653	- / 10.134	- / 0.000	- / 10.134

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

YEAR-TO-YEAR BUDGET CONTROL COMPARISON:

- FY 2017 (\$7.163M) to FY 2018 (\$13.653M) increase (\$+6.490M) is driven by the requirement for improvements and tech refreshes of USW-DSS to avoid obsolescence and improve reliability and maintainability. The tech refresh includes all USW-DSS/UYQ-100 hardware Technical Insertion (TI)-08 baseline afloat and shore sites, including Surveillance Towed Array Sensor System (SURTASS) ships, Theater commands, support nodes, and Tactical Training Equipment (TTE).

- FY 2018 (\$13.653M) to FY 2019 (\$10.134M) decrease (\$-3.519M) is driven by the reduced (as compared to FY 2018) requirement for the USW-DSS program's procurement of shore site, tactical trainer, and tech refresh upgrades in FY 2019.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2						P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment									Aggregated Items Title: Undersea Warfare Support Equipment					
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) PROGRAMS COMPLETED UNDER THIS P-1 LINE ITEM IN PRIOR YEARS																				
1.1) Programs Completed Under this P-1 Line Item in Prior Years ⁽¹⁾			-	-	4.807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 1) PROGRAMS COMPLETED UNDER THIS P-1 LINE ITEM IN PRIOR YEARS</i>			-	-	4.807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) VM301 - AIRCRAFT CARRIER TACTICAL SUPPORT CENTER (CV-TSC)																				
2.1) CV-TSC Technology Insert/ Refresh & ECP Implementation ⁽²⁾	A		-	-	10.516	-	-	0.315	-	-	0.338	-	-	0.334	-	-	-	-	-	0.334
<i>Subtotal: 2) VM301 - AIRCRAFT CARRIER TACTICAL SUPPORT CENTER (CV-TSC)</i>			-	-	10.516	-	-	0.315	-	-	0.338	-	-	0.334	-	-	-	-	-	0.334
3) VM401 - SURFACE SONAR WINDOWS AND DOMES																				
3.1) Surface Sonar Windows and Domes ^{(3)(t)}	A		2,874K	11	31.615	2,219K	1	2.219	2,241K	1	2.241	2,264K	1	2.264	-	-	-	2,264K	1	2.264
3.2) Production Support ⁽⁴⁾			-	-	11.167	-	-	0.166	-	-	0.290	-	-	0.231	-	-	-	-	-	0.231
<i>Subtotal: 3) VM401 - SURFACE SONAR WINDOWS AND DOMES</i>			-	-	42.782	-	-	2.385	-	-	2.531	-	-	2.495	-	-	-	-	-	2.495
4) VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS)																				
4.1) Carrier Strike Group (CSG) Shipsets ⁽⁵⁾	A		11,812K	1	11.812	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) Backfit To Post-OPEVAL ^{(6)(t)}	A		20,000.00	26	0.520	21,000.00	17	0.357	-	-	-	-	-	-	-	-	-	-	-	-
4.3) ISNS to CANES S/W Shipsets ^{(7)(t)}	A		17,500.00	26	0.455	65,000.00	2	0.130	-	-	-	-	-	-	-	-	-	-	-	-
4.4) Shore Sites and Tactical Trainers ^{(8)(t)}	A		-	-	3.645	445,000.00	2	0.890	450,000.00	4	1.800	460,000.00	1	0.460	-	-	-	460,000.00	1	0.460
4.5) USW-DSS Tech Refresh ^{(9)(t)}	A		-	-	-	-	-	-	311,000.00	12	3.732	315,000.00	5	1.575	-	-	-	315,000.00	5	1.575
4.6) Engineering Changes (ECs) ⁽¹⁰⁾			-	-	5.023	-	-	0.843	-	-	1.110	-	-	1.076	-	-	-	-	-	1.076
4.7) System Technical Support ⁽¹¹⁾			-	-	6.207	-	-	0.766	-	-	2.204	-	-	2.197	-	-	-	-	-	2.197
4.8) Production Support ⁽¹²⁾			-	-	10.243	-	-	0.321	-	-	0.858	-	-	0.814	-	-	-	-	-	0.814

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2						P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment								Aggregated Items Title: Undersea Warfare Support Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.9) CANES S/W Shipsets (13)(t)	A		98,000.00	27	2.646	68,000.00	17	1.156	90,000.00	12	1.080	91,000.00	13	1.183	-	-	-	91,000.00	13	1.183
<i>Subtotal: 4) VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS)</i>			-	-	40.551	-	-	4.463	-	-	10.784	-	-	7.305	-	-	-	-	-	7.305
Total			-	-	98.656	-	-	7.163	-	-	13.653	-	-	10.134	-	-	-	-	-	10.134
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(t) indicates the presence of a P-5a																				
Footnotes:																				
(1) (1) Programs Completed Under This P-1 Line Item in Prior Years. Includes \$4.807M for the VM201 Acoustic Communications (ACOMMS) and Depth Sounders program that was completed in FY 2016.																				
(2) (2.1) VM301 - CV-TSC Technology Insert/Refresh & ECP Implementation: Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades to previously fielded and in-production AN/SQQ-34 systems. Funding used to implement ECPs to correct deficiencies identified through Fleet use; upgrade unreliable components; replace obsolete components; and address Information Assurance (IA) issues.																				
(3) (3.1) VM401 - Surface Sonar Windows and Domes: Procure SDRWs, shipping fixtures, and fairing angles for emergency replacement on CG 47 and DDG 51 class hulls.																				
(4) (3.2) VM401 - SDRW Production Support: Funding is provided for production engineering in support of technical evaluations, failure analysis, implementation of the in-water one-side backscatter X-ray program, Government Furnished Equipment (GFE) refurbishments, and field service engineering; and complete engineering design work and material tests. This program also provides drawings, configuration management information, new design and fabrication technology, incorporation of lessons learned and required testing, and construct sub-element to confirm single-stage cure.																				
(5) (4.1) VM601 - USW-DSS/Carrier Strike Group (CSG) Shipsets: Consists of the complete USW-DSS (hardware, software, and support equipment).																				
(6) (4.2) VM601 - USW-DSS/Backfit To Post-OPEVAL: Consists of updates to existing USW-DSS Build 2 Release 3 systems in the Fleet with changes dictated by the FY 2013 OPEVAL of USW-DSS Build 2 Release 3.																				
(7) (4.3) VM601 - USW-DSS/ISNS/CANES S/W Shipsets: Consists of USW-DSS Build 2 Release 3 software load onto ISNS/CANES platforms. Include updates from ISNS to CANES as well as new CANES software and workstation suites. Schedule is dependent upon/coordinated with ISNS/CANES fielding.																				
(8) (4.4) VM601 - USW-DSS/Shore Sites and Tactical Trainers: Consists of USW-DSS post-OPEVAL Build 2 Release 3 shore/lab assets and Tactical Training Equipment systems, which are full hardware/software suites. USW-DSS Build 3 will be loaded on all training and shore site nodes beginning in FY 2019.																				
(9) (4.5) VM601 - USW-DSS Tech Refresh: Funding is for hardware/software technology upgrades to previously fielded USW-DSS/UYQ-100 hardware Technical Insertion (TI)-08 baseline afloat and shore sites, including Surveillance Towed Array Sensor System (SURTASS) ships, Theater commands, support nodes, and Tactical Training Equipment (TTE).																				
(10) (4.6) VM601 - USW-DSS/Engineering Changes: Consists of Engineering Change Proposals (ECPs) and hardware/software changes/upgrades. Funding will be used to support Reliability, Maintainability, and Availability (RM&A) modifications, correct deficiencies identified through Fleet use, and upgrade of unreliable components.																				
(11) (4.7) VM601 - USW-DSS/System Technical Support: Funding is for the USW-DSS program Software Support Activity efforts in performing the following functions: generation/assessment of Software Problem Reports (SPRs)/Software Trouble Reports (STRs); responding to Fleet software change requests; Configuration Management (CM); software Quality Assurance (QA); software installation automation; and software recovery support.																				
(12) (4.8) VM601 - USW-DSS/Production Support: Consists of on-site engineering support; CANES Integrated Product Team (IPT) Support; Information Assurance (IA) certification support; production quality assurance; system sustainability support; Integrated Logistics Support (ILS) product updates/support; status reporting and technical briefings; program office support; and all other production support efforts directly related to delivery of USW-DSS to both ISNS/CANES and ultimately the Fleet.																				
(13) (4.9) VM601 - CANES S/W Shipsets: Consists of initial loads of the post-OPEVAL USW-DSS Build 2 Release 3 software suite on new CANES ships, which includes changes dictated by the FY 2013 OPEVAL of USW-DSS Build 2 Release 3. Schedule is dependent on/coordinated with CANES fielding. Prior Years reflect ISNS software shipsets. Beginning in 2018, Build 3 will replace Build 2 Release 3.																				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 2			P-1 Line Item Number / Title: 2176 / Undersea Warfare Support Equipment					Aggregated Items: Undersea Warfare Support Equipment				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3) VM401 - SURFACE SONAR WINDOWS AND DOMES												
3.1) Surface Sonar Windows and Domes ⁽³⁾		2016	UTC Aerospace Systems (formerly Goodrich) / Jacksonville, FL	SS / FP	NAVEA	Jan 2016	Jan 2017	1	2,197K	Y		
3.1) Surface Sonar Windows and Domes ⁽³⁾		2017	UTC Aerospace Systems (formerly Goodrich) / Jacksonville, FL	SS / FP	NAVSEA	Aug 2017	Aug 2018	1	2,219K	Y		
3.1) Surface Sonar Windows and Domes ⁽³⁾		2018	UTC Aerospace Systems (formerly Goodrich) / Jacksonville, FL	SS / FP	NAVSEA	Mar 2018	Mar 2019	1	2,241K	Y		
3.1) Surface Sonar Windows and Domes ⁽³⁾		2019	UTC Aerospace Systems (formerly Goodrich) / Jacksonville, FL	SS / FP	NAVSEA	Mar 2019	Mar 2020	1	2,264K	Y		
4) VM601 - UNDERSEA WARFARE DECISION SUPPORT SYSTEM (USW-DSS)												
4.2) Backfit To Post-OPEVAL ⁽⁶⁾		2016	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2015	Feb 2016	26	20,000.00	Y		
4.2) Backfit To Post-OPEVAL ⁽⁶⁾		2017	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2016	Feb 2017	17	21,000.00	Y		
4.3) ISNS to CANES S/W Shipsets ⁽⁷⁾		2016	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2015	Feb 2016	7	65,000.00	Y		
4.3) ISNS to CANES S/W Shipsets ⁽⁷⁾		2017	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2016	Feb 2017	2	65,000.00	Y		
4.4) Shore Sites and Tactical Trainers ⁽⁸⁾		2017	Progeny Systems, Corporation / Manassas, VA	C / CPFF	NAVSEA	Nov 2016	Apr 2017	2	445,000.00	Y		
4.4) Shore Sites and Tactical Trainers ⁽⁸⁾		2018	Progeny Systems, Corporation / Manassas, VA	C / CPFF	NAVSEA	Dec 2017	May 2018	4	450,000.00	Y		
4.4) Shore Sites and Tactical Trainers ⁽⁸⁾		2019	Progeny Systems, Corporation / Manassas, VA	C / CPFF	NAVSEA	Nov 2018	Apr 2019	1	460,000.00	Y		
4.5) USW-DSS Tech Refresh ⁽⁹⁾		2018	Progeny Systems, Corporation / Manassas, VA	C / CPFF	NAVSEA	Dec 2017	May 2018	12	311,000.00	Y		
4.5) USW-DSS Tech Refresh ⁽⁹⁾		2019	Progeny Systems, Corporation / Manassas, VA	C / CPFF	NAVSEA	Nov 2018	Apr 2019	5	315,000.00	Y		
4.9) CANES S/W Shipsets ⁽¹³⁾		2016	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2015	Feb 2016	8	66,000.00	Y		
4.9) CANES S/W Shipsets ⁽¹³⁾		2017	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2016	Feb 2017	17	68,000.00	Y		
4.9) CANES S/W Shipsets ⁽¹³⁾		2018	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2017	Feb 2018	12	90,000.00	Y		
4.9) CANES S/W Shipsets ⁽¹³⁾		2019	NUWC/Keyport / Keyport, WA	WR	NAVSEA	Nov 2018	Feb 2019	13	91,000.00	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment					2210 / Submarine Acoustic Warfare 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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	114.194	21.291	21.449	23.815	0.000	23.815	25.156	25.309	26.065	26.600	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	114.194	21.291	21.449	23.815	0.000	23.815	25.156	25.309	26.065	26.600	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	114.194	21.291	21.449	23.815	0.000	23.815	25.156	25.309	26.065	26.600	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.366	2.023	0.661	-	0.661	0.490	0.487	1.026	0.605	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The Submarine Acoustic Warfare System (SAWS) program provides submarines with expendable defensive countermeasures and the systems necessary to externally launch them against torpedo and acoustic sensor threats. This program provides ongoing production of countermeasure devices needed to sustain fleet inventories, improvements to enhance the readiness and effectiveness of countermeasure devices and associated external countermeasure launcher (ECL) systems on all U.S. submarines. The expendable devices, Acoustic Device Countermeasures (ADC) are produced in two primary versions 3" ADC's are launched through the Internal Countermeasure Launcher (ICL) and 6" devices are launched through ECL Systems. An updated increased Acoustic Augmentation Support Program(AASP)SHIPALT installation cost estimate has slowed installs through FYDP and funds are shifted to accommodate increases in CSA engineering technology refresh and insertion costs, driven by ADC MK5 (NGCM) testing, and introduction in FY22-24.															
WM018 - The Acoustic Augmentation Support Program (AASP) provides acoustic augmenting systems in appropriate configurations for all submarine classes (except SEAWOLF) installed as temporary equipment (TEMPALT). A permanently installed Ship Alteration (SHIPALT) configuration for VIRGINIA Class Block I/II/III design was completed in FY16 and installations will start in FY17 (delayed from FY16 because budget insufficient for installation costs). A SHIPALT for VIRGINIA Class Block IV will be developed in FY17 and installations will start in FY26, gradually phasing out the TEMPALTS on VIRGINIA Class. Reliability and refresh upgrades sustain current in-service AASP systems with new components and software updates to maintain reliability.															
WM019 - The Countermeasure Set, Acoustic (CSA) program procures and supports the inboard electronic system necessary for preparing and launching 6" Acoustic Device Countermeasures (ADCs) from all 688i and newer U.S. submarines. The CSA program provides obsolescence support for legacy systems and engineering changes to accommodate modified and planned new devices, such as the ADC MK5. Four efforts are supported: (1) the "Technology Refresh" effort is designing, building, testing and certifying replacement components for obsolete CSA MK2 systems (MOD0/3/4) on 688i SSN and OHIO SSBN submarines, with the refresh occurring in FY17-FY20. (2) The "CSA MK3 Technology Insertion" effort is federating the CSA MK3 system with Submarine Warfare Federated Tactical System (SWFTS) to facilitate the ADC MK5 and Submarine Torpedo Defense Tactical Decision Aid (SubTDS TacDA) upon introduction. A phased approach was taken to allow a more efficient incremental implementation of initial capabilities. Required funding is expected to level off after ADC MK5 device fielding and address recurring upgrades with Advanced Processor Build/ Technology Insertion (APB/TI) cycles. (3) The "CSA MK4 Technology Insertion" effort replaces CSA MK2 MOD2 with CSA MK4 as a "SWFTS-federated" system on VIRGINIA Class Block I and II submarines (10 hulls) to accommodate the introduction of ADC MK5 devices. Non-recurring engineering will complete, with installs starting in FY19. (4) The fourth effort is the ongoing support of engineering issues across all CSA systems as they arise.															
[P40A / WM014 6 INCH]: WM014 6 INCH - The 6" Countermeasures program procures, reworks, and refreshes ADC MK3 (torpedo countermeasure) devices, ADC MK4 (SONAR countermeasure) devices, and associated Launch Tubes in order to maintain submarine fleet countermeasure device inventory levels in accordance with the Naval Munition Requirements Process															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment		P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare 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		
(NMRP). The 6" Countermeasure program tracks and implements device improvements through configuration control and an Engineering Change Proposal (ECP) process. A Service Life Extension Program (SLEP) was initiated in FY14 for ADC MK3 and MK4 devices to extend the usability of 6" devices. A new competitive production contract is planned to be awarded in FY19.		
[P40A / WM015 3 INCH]: WM015 3 INCH - The 3" Countermeasures program procures ADC MK2 MODs 3, 5, and 7 countermeasure devices in order to maintain submarine fleet countermeasure device inventory levels in accordance with the Naval Munition Requirements Process (NMRP). The 3" Countermeasures program tracks and implements device improvements through configuration control and the ECP process.		
[P40A / NEXT GENERATION COUNTERMEASURE (NGCM) ADC MK5]: The Submarine Torpedo Defense System (SubTDS) Program to support a FY24 IOC will transition the ADC MK5 into production a full and open competitive production contract to be awarded in FY23		
[P40A / WM022 GAS GENERATOR MK77]: WM022 Gas Generator MK 77 - The MK77 Gas Generator (GG) program procures the energetic components required to launch the ADC MK3 and ADC MK4 countermeasure devices from the External Countermeasure Launchers (ECLs). The GG program also reworks existing devices to extend their service life, and tracks and implements device improvements through configuration control and ECP process. A SLEP for MK77 MOD0 devices was completed in FY16, resulted in extending the service life from two (2) to four (4) years for all devices except those installed aboard SSGN class submarines.		
[P40A / WM830 PRODUCTION ENGINEERING]: WM830 - Production Engineering - The Production Engineering line provides production engineering services for SAWS Technical Design Agent (TDA) and In-Service Engineering Agent (ISEA) across all SAWS systems, including AASP.		
[P40A / PRODUCTION ENGINEERING]: Production Engineering adjustment commensurate with anticipated work. To support the ordnance assessment that is planned to extend the service life.		
[P40A / WM900 CONSULTING SERVICES]: WM900 Consulting Services - The Consulting Services line procures contractor support services for all SAWS programs.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment					P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System							
ID Code (A=Service Ready, B=Not Service Ready): A					Program Elements for Code B Items: N/A							
Line Item MDAP/MAIS Code: N/A												
Exhibits Schedule				Prior Years		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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-40a	Submarine Acoustic Warfare System	P-5a, P-21			- / 80.455	- / 9.279	- / 7.643	- / 13.433	- / -	- / 13.433		
P-3a	1 / AASP WM018 (Tactical TEMPALT)				- / 6.669	- / 2.843	- / 3.022	- / 4.061	- / 0.000	- / 4.061		
P-3a	2 / CSA WM019 (SHIPALT, OCMOD, EC)				- / 27.070	- / 9.169	- / 10.784	- / 6.321	- / 0.000	- / 6.321		
P-40	Total Gross/Weapon System Cost				- / 114.194	- / 21.291	- / 21.449	- / 23.815	- / 0.000	- / 23.815		
Exhibits Schedule				FY 2020		FY 2021	FY 2022	FY 2023	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-40a	Submarine Acoustic Warfare System	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -		
P-3a	1 / AASP WM018 (Tactical TEMPALT)				- / 2.504	- / 2.553	- / 5.757	- / 4.901	- / 34.449	- / 66.759		
P-3a	2 / CSA WM019 (SHIPALT, OCMOD, EC)				- / 7.403	- / 7.991	- / 7.137	- / 8.373	Continuing	Continuing		
P-40	Total Gross/Weapon System Cost				- / 25.156	- / 25.309	- / 26.065	- / 26.600	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The FY 2019 funding request was reduced by \$0.037 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

Increase in funding request from FY18 to FY19 (~\$2 million) provides for the new MK3/4 ADC Non-Recurring Engineering support.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3					P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System								Aggregated Items Title: Submarine Acoustic Warfare System				
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) WM014 6 INCH																	
1.1) 6" Countermeasure Launch Tube ^{(1)(t)}	A		9,121.98	828	7.553	5,125.00	177	0.907	5,770.00	125	0.721	-	-	-	-	-	-
1.2) ADC MK3 (TORPEDO) NEW ^{(2)(t)}	A		29,089.16	572	16.639	42,657.14	35	1.493	41,952.38	42	1.762	-	-	-	-	-	-
1.3) ADC MK3 NON RECURRING ⁽³⁾	A		-	-	-	-	-	-	-	-	-	-	7.200	-	-	-	7.200
1.4) MK 3 ADC SLEP ^{(4)(t)}	A		9,789.92	238	2.330	16,000.00	28	0.448	14,850.00	20	0.297	-	-	-	-	-	-
1.6) ADC MK 4 SLEP ^{(5)(t)}	A		11,779.07	86	1.013	11,750.00	12	0.141	-	-	-	-	-	-	-	-	-
Subtotal: 1) WM014 6 INCH			-	-	27.535	-	-	2.989	-	-	2.780	-	-	7.200	-	-	7.200
2) WM015 3 INCH																	
2.1) NAE BEACON ^{(6)(t)}	A		5,680.71	2,421	13.753	-	-	-	-	-	-	-	-	-	-	-	-
2.2) ADC MK2 ^{(7)(t)}	A		5,509.80	1,530	8.430	6,000.00	100	0.600	6,185.00	100	0.619	5,941.06	509	3.024	-	-	5,941.06
Subtotal: 2) WM015 3 INCH			-	-	22.183	-	-	0.600	-	-	0.619	-	-	3.024	-	-	3.024
3) WM022 GAS GENERATOR MK77																	
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}	A		10,781.07	1,416	15.266	20,492.75	138	2.828	18,975.00	80	1.518	19,337.50	80	1.547	-	-	19,337.50
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}	A		9,185.96	570	5.236	12,390.24	41	0.508	12,463.00	40	0.499	12,700.00	40	0.508	-	-	12,700.00
Subtotal: 3) WM022 GAS GENERATOR MK77			-	-	20.502	-	-	3.336	-	-	2.017	-	-	2.055	-	-	2.055
4) WM830 PRODUCTION ENGINEERING																	
4.1) PRODUCTION ENGINEERING	A		-	-	8.028	-	-	1.894	-	-	1.758	-	-	0.601	-	-	0.601
Subtotal: 4) WM830 PRODUCTION ENGINEERING			-	-	8.028	-	-	1.894	-	-	1.758	-	-	0.601	-	-	0.601
5) WM900 CONSULTING SERVICES																	
5.1) CONSULTING SERVICES	A		-	-	2.207	-	-	0.460	-	-	0.469	-	-	0.553	-	-	0.553
Subtotal: 5) WM900 CONSULTING SERVICES			-	-	2.207	-	-	0.460	-	-	0.469	-	-	0.553	-	-	0.553
Total			-	-	80.455	-	-	9.279	-	-	7.643	-	-	13.433	-	-	13.433

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

(t) indicates the presence of a P-5a

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy	Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3	P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System	Aggregated Items Title: Submarine Acoustic Warfare System

Footnotes:

- (1) Starting in FY19, LT's are included in next contract for ADC MK3 and MK4.
- (2) No new devices will be procured in FY19, due to new contract.
- (3) New ADC MK3/4 contract awards in FY19 with NRE cost for startup, including First Article Testing of \$7.2 million, based on historical expenditure on startup effort.
- (4) Starting in FY17, The program office began an effort to optimize inventory by maximizing service life extensions of expiring devices. The SLEP quantities were reduced due to a lack of suitable devices for SLEP. The program is investigating a further extension of service life.
- (5) The reduction in SLEP units does not translate fully into new units because some funding is being used to fund the TI to investigate the 16 year SLEP study in FY17 & FY18 second ISEA support, IMA Tech support, ILS, and etc. An effort to more accurately define the requirements and inventory levels that started in FY17 has led to a rebalancing effort within the program element to achieve the NMRP levels by recurring SLEP. The increase in SLEP procurements, more actual SLEP quantities were reduced from the plan due to an unavailability of assets to SLEP.
- (6) The budget for NAE Beacons is no longer necessary due to ADC MK2 MOD7 incorporating NAE Beacon functionality.
- (7) Quantity in FY19 is increased to attain inventory objective as well as maintain cost within step ladder pricing in conjunction with Surface Ship ADC procurements.
- (8) Cost of MK77 reflects only unit cost of MK77 MOD1 in new production. MK77 MOD1 GGs are procured as wholly new devices; Unit cost includes prorated share of management and engineering oversight. MK77 MOD1 new production is broken out for clarification of units and unit cost where MK77 MOD0 rework is planned. The increase in APUC by 10% is the historical amount that has been added to the unit price to cover the engineering efforts of the ISEA and TDA. This has normally been spread out across all devices.
- (9) MK77 GGs Mod0 are broken out for clarification of units and unit cost because they are reworked units, not wholly new units.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System					Aggregated Items: Submarine Acoustic Warfare System				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) WM014 6 INCH												
1.1) 6" Countermeasure Launch Tube (1)(t)		2014	FRC -SW / San Diego, CA	WR	NAVSEA	Aug 2014	Feb 2015	75	11,560.00	Y		
1.1) 6" Countermeasure Launch Tube (1)(t)		2015	FRC -SW / San Diego, CA	WR	NAVSEA	Aug 2015	Aug 2015	109	7,293.58	Y		
1.1) 6" Countermeasure Launch Tube (1)(t)		2016	FRC -SW / San Diego, CA	WR	NAVSEA	Aug 2016	Aug 2016	200	5,000.00	Y		
1.1) 6" Countermeasure Launch Tube (1)(t)		2017	FRC -SW / San Diego, CA	WR	NAVSEA	Apr 2017	Apr 2017	177	5,125.00	Y		
1.1) 6" Countermeasure Launch Tube (1)(t)		2018	FRC -SW / San Diego, CA	WR	NAVSEA	Apr 2018	Apr 2018	125	5,770.00	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2013	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Jun 2013	Jun 2015	125	34,400.00	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2014	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Dec 2013	Dec 2015	70	33,200.00	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2015	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Dec 2014	Dec 2016	52	33,326.92	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2016	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Dec 2015	Dec 2016	40	0.00	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2017	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Apr 2017	Apr 2017	35	42,657.14	Y		
1.2) ADC MK3 (TORPEDO) NEW (2)(t)		2018	TBD / TBD	C / TBD	NAVSEA	Jun 2018	Jun 2018	42	41,952.38	N	Jun 2019	
1.4) MK 3 ADC SLEP (4)(t)		2015	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Aug 2015	Aug 2015	88	6,022.73	N	Aug 2015	
1.4) MK 3 ADC SLEP (4)(t)		2016	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Aug 2016	Aug 2016	150	12,000.00	N	Aug 2017	
1.4) MK 3 ADC SLEP (4)(t)		2017	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Jun 2017	Jun 2017	28	16,000.00	N	Jun 2018	
1.4) MK 3 ADC SLEP (4)(t)		2018	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Jun 2018	Jun 2018	20	14,850.00	N	Jun 2019	
1.6) ADC MK 4 SLEP (5)(t)		2015	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Sep 2015	Aug 2016	36	11,472.22	Y		
1.6) ADC MK 4 SLEP (5)(t)		2016	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Nov 2015	Oct 2016	50	12,000.00	Y		
1.6) ADC MK 4 SLEP (5)(t)		2017	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Apr 2017	Oct 2018	12	11,750.00	Y		
2) WM015 3 INCH												
2.1) NAE BEACON (6)(t)		2014	ULTRA / BRAINTREE, MA	SS / IDIQ	NAVICP	May 2014	Apr 2016	670	6,604.48	Y		
2.1) NAE BEACON (6)(t)		2015	ULTRA / BRAINTREE, MA	SS / IDIQ	NAVICP	Aug 2015	Jul 2017	808	4,445.54	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System					Aggregated Items: Submarine Acoustic Warfare System				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1) NAE BEACON ^{(6)(t)}		2016	ULTRA / BRAINTREE, MA	SS / IDIQ	NAVICP	May 2016	Apr 2017	514	4,900.00	Y		
2.2) ADC MK2 ^{(7)(t)}		2011	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	May 2011	May 2013	354	5,389.83	Y		
2.2) ADC MK2 ^{(7)(t)}		2012	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	May 2012	May 2014	808	5,476.49	Y		
2.2) ADC MK2 ^{(7)(t)}		2014	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	May 2014	May 2016	280	5,664.29	Y		
2.2) ADC MK2 ^{(7)(t)}		2016	ULTRA / BRAINTREE, MA	C / FFP	NAVSEA	Jul 2016	Jul 2017	88	5,802.00	Y		
2.2) ADC MK2 ^{(7)(t)}		2017	ULTRA / BRAINTREE, MA	C / FFP	NUWC/KEYPORT	May 2017	Aug 2017	100	6,000.00	N	Jul 2017	
2.2) ADC MK2 ^{(7)(t)}		2018	ULTRA / BRAINTREE, MA	C / FFP	NUWC/KEYPORT	May 2018	Aug 2018	100	6,185.00	N	May 2019	
2.2) ADC MK2 ^{(7)(t)}		2019	ULTRA / BRAINTREE, MA	C / FFP	NUWC/KEYPORT	May 2019	Aug 2019	509	5,941.06	N	Feb 2021	
3) WM022 GAS GENERATOR MK77												
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}		2014	NSWC/INDIAN HEAD / NSWC INDIAN HEAD	WR	NSWC INDIAN HEAD	Mar 2014	Mar 2015	250	10,508.00	Y		
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}		2015	NSWC/INDIAN HEAD / NSWC INDIAN HEAD	WR	NSWC INDIAN HEAD	Mar 2015	Mar 2016	80	19,587.00	Y		
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}		2017	NSWC/INDIAN HEAD / NSWC INDIAN HEAD	WR	NSWC INDIAN HEAD	Mar 2017	Mar 2018	138	20,492.75	Y		
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}		2018	NSWC/INDIAN HEAD / NSWC INDIAN HEAD	WR	NSWC INDIAN HEAD	Mar 2018	Sep 2018	80	18,975.00	Y		
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ^{(8)(t)}		2019	NSWC/INDIAN HEAD / NSWC INDIAN HEAD	WR	NSWC INDIAN HEAD	Mar 2019	Sep 2019	80	19,337.50	Y		
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}		2015	NSWC/IH / INDIAN HEAD, MD	WR	NSWC INDIAN HEAD	Mar 2015	Sep 2015	270	7,266.00	Y		
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}		2016	NSWC/IH / INDIAN HEAD, MD	WR	NSWC INDIAN HEAD	Mar 2016	Sep 2016	300	10,911.67	Y		
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}		2017	NSWC/IH / INDIAN HEAD, MD	WR	NSWC INDIAN HEAD	Mar 2017	Sep 2017	41	12,390.24	Y		
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}		2018	NSWC/IH / INDIAN HEAD, MD	WR	NSWC INDIAN HEAD	Mar 2018	Sep 2018	40	12,463.00	Y		
3.2) Gas Generator MK77 Mod 0 ^{(9)(t)}		2019	NSWC/IH / INDIAN HEAD, MD	WR	NSWC INDIAN HEAD	Oct 2018	Apr 2019	40	12,700.00	Y		

^(t) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3										P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System										Aggregated Items: Submarine Acoustic Warfare System																							
Items (Units in Each)							Fiscal Year 2011												Fiscal Year 2012												B A L A N C E												
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2010	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P														
1) WM014 6 INCH																																											
1.1) 6" Countermeasure Launch Tube ⁽¹⁾																																											
Prior Years Deliveries: 444																																											
1	2014	NAVY	75	0	75																																75						
1	2015	NAVY	109	0	109																																109						
1	2016	NAVY	200	0	200																																200						
1	2017	NAVY	177	0	177																																177						
1	2018	NAVY	125	0	125																																125						
1.2) ADC MK3 (TORPEDO) NEW ⁽²⁾																																											
Prior Years Deliveries: 285																																											
2	2013	NAVY	125	0	125																																	125					
2	2014	NAVY	70	0	70																																	70					
2	2015	NAVY	52	0	52																																	52					
2	2016	NAVY	40	0	40																																	40					
2	2017	NAVY	35	0	35																																	35					
3	2018	NAVY	42	0	42																																	42					
1.4) MK 3 ADC SLEP ⁽⁴⁾																																											
4	2015	NAVY	88	0	88																																	88					
4	2016	NAVY	150	0	150																																	150					
4	2017	NAVY	28	0	28																																	28					
4	2018	NAVY	20	0	20																																	20					
1.6) ADC MK 4 SLEP ⁽⁵⁾																																											
5	2015	NAVY	36	0	36																																	36					
5	2016	NAVY	50	0	50																																		50				
5	2017	NAVY	12	0	12																																		12				
2) WM015 3 INCH																																											
2.1) NAE BEACON ⁽⁶⁾																																											
Prior Years Deliveries: 429																																											
6	2014	NAVY	670	0	670																																		670				
6	2015	NAVY	808	0	808																																		808				
6	2016	NAVY	514	0	514																																		514				
2.2) ADC MK2 ⁽⁷⁾																																											
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P													

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3										P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System											Aggregated Items: Submarine Acoustic Warfare System												
Items (Units in Each)							Fiscal Year 2011												Fiscal Year 2012												B A L A N C E		
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2010	BAL DUE AS OF 1 OCT		O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7	2011	NAVY	354	0	354																											354	
7	2012	NAVY	808	0	808																											808	
7	2014	NAVY	280	0	280																											280	
7	2016	NAVY	88	0	88																											88	
7	2017	NAVY	100	0	100																											100	
7	2018	NAVY	100	0	100																											100	
7	2019	NAVY	509	0	509																											509	
3) WM022 GAS GENERATOR MK77																																	
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ⁽⁸⁾																																	
Prior Years Deliveries: 1086																																	
8	2014	NAVY	250	0	250																												250
8	2015	NAVY	80	0	80																												80
8	2017	NAVY	138	0	138																												138
8	2018	NAVY	80	0	80																												80
8	2019	NAVY	80	0	80																												80
3.2) Gas Generator MK77 Mod 0 ⁽⁹⁾																																	
9	2015	NAVY	270	0	270																												270
9	2016	NAVY	300	0	300																												300
9	2017	NAVY	41	0	41																												41
9	2018	NAVY	40	0	40																												40
9	2019	NAVY	40	0	40																												40
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3										P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System										Aggregated Items: Submarine Acoustic Warfare System																					
Items (Units in Each)							Fiscal Year 2013												Fiscal Year 2014												B A L A N C E										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P												
1) WM014 6 INCH																																									
1.1) 6" Countermeasure Launch Tube ⁽¹⁾																																									
Prior Years Deliveries: 444																																									
1	2014	NAVY	75	0	75																																A -	-	75		
1	2015	NAVY	109	0	109																																			109	
1	2016	NAVY	200	0	200																																			200	
1	2017	NAVY	177	0	177																																			177	
1	2018	NAVY	125	0	125																																			125	
1.2) ADC MK3 (TORPEDO) NEW ⁽²⁾																																									
Prior Years Deliveries: 285																																									
2	2013	NAVY	125	0	125																																			125	
2	2014	NAVY	70	0	70																																			70	
2	2015	NAVY	52	0	52																																			52	
2	2016	NAVY	40	0	40																																			40	
2	2017	NAVY	35	0	35																																			35	
3	2018	NAVY	42	0	42																																			42	
1.4) MK 3 ADC SLEP ⁽⁴⁾																																									
4	2015	NAVY	88	0	88																																			88	
4	2016	NAVY	150	0	150																																			150	
4	2017	NAVY	28	0	28																																			28	
4	2018	NAVY	20	0	20																																			20	
1.6) ADC MK 4 SLEP ⁽⁵⁾																																									
5	2015	NAVY	36	0	36																																				36
5	2016	NAVY	50	0	50																																				50
5	2017	NAVY	12	0	12																																				12
2) WM015 3 INCH																																									
2.1) NAE BEACON ⁽⁶⁾																																									
Prior Years Deliveries: 429																																									
6	2014	NAVY	670	0	670																																			670	
6	2015	NAVY	808	0	808																																			808	
6	2016	NAVY	514	0	514																																			514	
2.2) ADC MK2 ⁽⁷⁾																																									
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P											

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity:																					Aggregated Items:													
1810N / 02 / 3																					Submarine Acoustic Warfare System													
Items (Units in Each)							Fiscal Year 2013														Fiscal Year 2014													
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT		Calendar Year 2013														Calendar Year 2014													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	B A L A N C E			
7	2011	NAVY	354	0	354	-	-	-	-	-	30	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	29	0						
7	2012	NAVY	808	0	808	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	67	67	67	67	473					
7	2014	NAVY	280	0	280																								280					
7	2016	NAVY	88	0	88																									88				
7	2017	NAVY	100	0	100																									100				
7	2018	NAVY	100	0	100																									100				
7	2019	NAVY	509	0	509																									509				
3) WM022 GAS GENERATOR MK77																																		
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ⁽⁸⁾																																		
Prior Years Deliveries: 1086																																		
8	2014	NAVY	250	0	250																										250			
8	2015	NAVY	80	0	80																										80			
8	2017	NAVY	138	0	138																										138			
8	2018	NAVY	80	0	80																										80			
8	2019	NAVY	80	0	80																										80			
3.2) Gas Generator MK77 Mod 0 ⁽⁹⁾																																		
9	2015	NAVY	270	0	270																										270			
9	2016	NAVY	300	0	300																										300			
9	2017	NAVY	41	0	41																										41			
9	2018	NAVY	40	0	40																										40			
9	2019	NAVY	40	0	40																										40			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2019 Navy																					Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3										P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System											Aggregated Items: Submarine Acoustic Warfare System																						
Items (Units in Each)							Fiscal Year 2015												Fiscal Year 2016											B A L A N C E													
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P													
7	2011	NAVY	354	354	0																															0							
7	2012	NAVY	808	335	473	67	67	67	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	0								
7	2014	NAVY	280	0	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	23	23	23	165						
7	2016	NAVY	88	0	88																																				88		
7	2017	NAVY	100	0	100																																			100			
7	2018	NAVY	100	0	100																																			100			
7	2019	NAVY	509	0	509																																			509			
3) WM022 GAS GENERATOR MK77																																											
3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ⁽⁸⁾																																											
Prior Years Deliveries: 1086																																											
8	2014	NAVY	250	0	250	-	-	-	-	-	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	0				
8	2015	NAVY	80	0	80						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31			
8	2017	NAVY	138	0	138																																				138		
8	2018	NAVY	80	0	80																																				80		
8	2019	NAVY	80	0	80																																				80		
3.2) Gas Generator MK77 Mod 0 ⁽⁹⁾																																											
9	2015	NAVY	270	0	270						A -	-	-	-	-	-	-	-	-	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	0
9	2016	NAVY	300	0	300																																					275	
9	2017	NAVY	41	0	41																																					41	
9	2018	NAVY	40	0	40																																				40		
9	2019	NAVY	40	0	40																																				40		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P													

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O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018																																																																																																																																																																																																																						
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2	2013	NAVY	125	125	0																								0																																																																																																																																																																																																											
2	2014	NAVY	70	60	10	5	5																						0																																																																																																																																																																																																											
2	2015	NAVY	52	0	52	-	-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0																																																																																																																																																																																																											
2	2016	NAVY	40	0	40	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0																																																																																																																																																																																																											
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3	2018	NAVY	42	0	42																								30																																																																																																																																																																																																											
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4	2015	NAVY	88	88	0																								0																																																																																																																																																																																																											
4	2016	NAVY	150	26	124	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0																																																																																																																																																																																																												
4	2017	NAVY	28	0	28																								0																																																																																																																																																																																																											
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5	2015	NAVY	36	6	30	3	3	3	3	3	3	3	3	3	3	3	3	3										0																																																																																																																																																																																																												
5	2016	NAVY	50	0	50	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5								0																																																																																																																																																																																																												
5	2017	NAVY	12	0	12																								12																																																																																																																																																																																																											
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6	2014	NAVY	670	334	336	56	56	56	56	56	56	56	56	56	56	56	56	56										0																																																																																																																																																																																																												
6	2015	NAVY	808	0	808	-	-	-	-	-	-	-	-	-	-	-	-	-	67	67	67	67	67	67	67	67	67	0																																																																																																																																																																																																												
6	2016	NAVY	514	0	514	-	-	-	-	-	-	-	-	-	-	-	-	-	66	66	66	66	66	66	66	66	66	0																																																																																																																																																																																																												
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O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Fiscal Year 2017																					Fiscal Year 2018										B A L A N C E
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								
7	2011	NAVY	354	354	0																										0						
7	2012	NAVY	808	808	0																										0						
7	2014	NAVY	280	115	165	23	23	23	24	24	24	24	24																	0							
7	2016	NAVY	88	0	88	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	8	8	8	8	8	0								
7	2017	NAVY	100	0	100											A -	-	-	8	8	8	8	8	8	9	9	9	9	9	0							
7	2018	NAVY	100	0	100																									84							
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8	2014	NAVY	250	250	0																										0						
8	2015	NAVY	80	49	31	7	6	6	6	6																				0							
8	2017	NAVY	138	0	138						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	12	55							
8	2018	NAVY	80	0	80																									73							
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9	2015	NAVY	270	270	0																										0						
9	2016	NAVY	300	25	275	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25										0							
9	2017	NAVY	41	0	41						A -	-	-	-	-	-	4	4	4	4	4	4	4	4	3	3	3	2	2	0							
9	2018	NAVY	40	0	40																									4	36						
9	2019	NAVY	40	0	40																										40						
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2	2014	NAVY	70	70	0																								0																																				
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2	2016	NAVY	40	40	0																								0																																				
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">O C R O #</th> <th rowspan="2">M F R Y</th> <th rowspan="2">SERVICE</th> <th rowspan="2">PROC QTY</th> <th rowspan="2">ACCEPT PRIOR TO 1 OCT 2018</th> <th rowspan="2">BAL DUE AS OF 1 OCT</th> <th colspan="12">Calendar Year 2019</th> <th colspan="12">Calendar Year 2020</th> </tr> <tr> <th>O C T</th> <th>N O V</th> <th>D E C</th> <th>J A N</th> <th>F E B</th> <th>M A R</th> <th>A P R</th> <th>M A Y</th> <th>J U N</th> <th>J U L</th> <th>A U G</th> <th>S E P</th> <th>O C T</th> <th>N O V</th> <th>D E C</th> <th>J A N</th> <th>F E B</th> <th>M A R</th> <th>A P R</th> <th>M A Y</th> <th>J U N</th> <th>J U L</th> <th>A U G</th> <th>S E P</th> </tr> </thead> <tbody> <tr> <td>7</td><td>2011</td><td>NAVY</td><td>354</td><td>354</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> <tr> <td>7</td><td>2012</td><td>NAVY</td><td>808</td><td>808</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> <tr> <td>7</td><td>2014</td><td>NAVY</td><td>280</td><td>280</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> <tr> <td>7</td><td>2016</td><td>NAVY</td><td>88</td><td>88</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> <tr> <td>7</td><td>2017</td><td>NAVY</td><td>100</td><td>100</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> <tr> <td>7</td><td>2018</td><td>NAVY</td><td>100</td><td>16</td><td>84</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>8</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>9</td><td>43</td><td>43</td><td>43</td><td>43</td><td>43</td><td>42</td><td>42</td><td>42</td><td>0</td></tr> <tr> <td>7</td><td>2019</td><td>NAVY</td><td>509</td><td>0</td><td>509</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>A -</td><td>-</td><td>-</td><td>43</td><td>43</td><td>43</td><td>43</td><td>42</td><td>42</td><td>42</td><td>0</td></tr> </tbody> </table>																			O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	7	2011	NAVY	354	354	0																									0	7	2012	NAVY	808	808	0																								0	7	2014	NAVY	280	280	0																								0	7	2016	NAVY	88	88	0																								0	7	2017	NAVY	100	100	0																								0	7	2018	NAVY	100	16	84	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	43	43	43	43	43	42	42	42	0	7	2019	NAVY	509	0	509																A -	-	-	43	43	43	43	42	42	42	0										
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020																																																																																																																																																																																																																																																																																					
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7	2018	NAVY	100	16	84	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	43	43	43	43	43	42	42	42	0																																																																																																																																																																																																																																																																										
7	2019	NAVY	509	0	509																A -	-	-	43	43	43	43	42	42	42	0																																																																																																																																																																																																																																																																								

3) WM022 GAS GENERATOR MK77

3.1) GAS GENERATOR MK77 MOD 1 NEW PRODUCTION ⁽⁸⁾

Prior Years Deliveries: 1086

8	2014	NAVY	250	250	0																									0
8	2015	NAVY	80	80	0																								0	
8	2017	NAVY	138	83	55	11	11	11	11	11																		0		
8	2018	NAVY	80	7	73	7	7	7	7	7																		0		
8	2019	NAVY	80	0	80															A -	-	-	-	-	-	6	6	6	0	

3.2) Gas Generator MK77 Mod 0 ⁽⁹⁾

9	2015	NAVY	270	270	0																									0
9	2016	NAVY	300	300	0																								0	
9	2017	NAVY	41	41	0																								0	
9	2018	NAVY	40	4	36	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	0		
9	2019	NAVY	40	0	40	A -	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	0		

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System					Aggregated Items: Submarine Acoustic Warfare System				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial			Reorder					
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	FRC -SW - San Diego, CA				0	0	0	0	0	0	0	0	
2	ULTRA - BRAINTREE, MA	192	288	576	0	0	0	0	7	2	12	14	
3	TBD - TBD				0	0	0	0	0	0	0	0	
4	ULTRA - BRAINTREE, MA				0	0	0	0	0	0	0	0	
5	ULTRA - BRAINTREE, MA	192	288	576	8	2	11	13	8	2	11	13	
6	ULTRA - BRAINTREE, MA	840	1,440	2,880	0	0	0	0	5	3	11	14	
7	ULTRA - BRAINTREE, MA	840	1,440	2,880	0	1	0	1	0	1	12	13	
8	NSWC/INDIAN HEAD - NSWC INDIAN HEAD	48	480	960	0	0	0	0	6	5	6	11	
9	NSWC/IH - INDIAN HEAD, MD	48	480	960	0	0	0	0	0	5	6	11	

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System					Modification Number / Title: 1 / AASP WM018			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	6.669	2.843	3.022	4.061	0.000	4.061	2.504	2.553	5.757	4.901	34.449	66.759
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	6.669	2.843	3.022	4.061	0.000	4.061	2.504	2.553	5.757	4.901	34.449	66.759
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	6.669	2.843	3.022	4.061	0.000	4.061	2.504	2.553	5.757	4.901	34.449	66.759
(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: The Acoustic Augmentation Support Program (AASP) provides acoustic augmenting systems in appropriate configurations for all submarine classes (except SEAWOLF) installed as temporary equipment (a TEMPALT). A permanently installed Ship Alteration (SHIPALT) configuration for VIRGINIA Class Block I/II/III was developed and installations will start in FY17 (delayed from FY16 due to budget insufficient for installation cost estimates). A permanent SHIPALT for VIRGINIA Class Block IV will be developed in FY17 and installations will start in FY26, gradually phasing out the TEMPALTS on VIRGINIA Class. Reliability and refresh upgrades sustain current in-service AASP systems with new components and software updates to maintain reliability.												
[WM018 AASP Support] Includes production support for BLK I-IV SHIPALTS and the AASP reliability and refurbishment upgrade.												
[WM018 AASP (Acoustic Augmentation Support Program)] AASP includes costs of procuring new systems and reuse of available components, including the HLF-1, for SHIPALT installation such that "unit cost" is a mix of new and used components. An additional HLF-1 transducer (not a complete full system) is procured in FY17 (\$587K) and FY19 (\$610K).												
[WM018 AASP Reliability and Refurbishment Upgrade] Reliability and refurbishment upgrade to sustain current in-service AASP systems.												
[WM018 AASP (Acoustic Augmentation Support Program)] Non-recurring costs to produce AASP SHIPALT Package.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System							Modification Number / Title: 1 / AASP WM018			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/BQT-1			Modification Type: Tactical TEMPALT					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: AASP WM018													
B Kits													
Recurring													
1.1.1) WM018 AASP Support - Organic ⁽¹⁰⁾	- / 0.165	- / 0.274	- / 0.175	- / 0.445	- / -	- / 0.445	- / 0.454	- / 0.463	- / 0.472	- / 0.482	- / 3.654	- / 6.584	
1.1.2) WM018 AASP (Acoustic Augmentation Support Program) - NonOrganic ⁽¹¹⁾	1 / 0.864	1 / 0.879	2 / 1.821	1 / 1.524	- / -	1 / 1.524	1 / 0.932	1 / 0.951	3 / 2.907	1 / 0.988	9 / 9.634	20 / 20.500	
1.1.3) WM018 AASP Reliability and Refurbishment Upgrade - NonOrganic ⁽¹²⁾	1 / 1.315	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.114	- / -	6 / 0.731	8 / 2.160	
Subtotal: Recurring	- / 2.344	- / 1.153	- / 1.996	- / 1.969	- / -	- / 1.969	- / 1.386	- / 1.414	- / 3.493	- / 1.470	- / 14.019	- / 29.244	
Non-Recurring													
1.2.1) WM018 AASP (Acoustic Augmentation Support Program) - Organic	- / 3.950	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.310	
Subtotal: Non-Recurring	- / 3.950	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.310
Subtotal: AASP WM018	2 / 6.294	1 / 1.513	2 / 1.996	1 / 1.969	- / -	1 / 1.969	1 / 1.386	1 / 1.414	4 / 3.493	1 / 1.470	15 / 14.019	28 / 33.554	
Subtotal: Procurement, All Modification Items	- / 6.294	- / 1.513	- / 1.996	- / 1.969	- / -	- / 1.969	- / 1.386	- / 1.414	- / 3.493	- / 1.470	- / 14.019	- / 33.554	
Installation													
Modification Item 1 of 1: AASP WM018	- / 0.375	- / 1.330	- / 1.026	- / 2.092	- / 0.000	- / 2.092	- / 1.118	- / 1.139	- / 2.264	- / 3.431	- / 20.430	- / 33.205	
Subtotal: Installation	- / 0.375	- / 1.330	- / 1.026	- / 2.092	- / -	- / 2.092	- / 1.118	- / 1.139	- / 2.264	- / 3.431	- / 20.430	- / 33.205	
Total													
Total Cost (Procurement + Support + Installation)	6.669	2.843	3.022	4.061	0.000	4.061	2.504	2.553	5.757	4.901	34.449	66.759	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3							P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System							Modification Number / Title: 1 / AASP WM018																
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: AASP WM018							MDAP/MAIS Code:																							
Manufacturer Information																														
Manufacturer Name: HydroAcoustics, Inc							Manufacturer Location: Henritta, NY																							
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 10																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Jan 2017		Jan 2018		Jan 2019		Jan 2020		Jan 2021		Jan 2022		Jan 2023																	
Delivery Dates	Nov 2017		Nov 2018		Nov 2019		Nov 2020		Nov 2021		Nov 2022		Nov 2023																	
Manufacturer Name: NUWC Newport							Manufacturer Location: Newport, Rhode Island																							
Administrative Leadtime (in Months): 1							Production Leadtime (in Months): 2																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Jun 2017										Oct 2021																			
Delivery Dates	Sep 2017										Jan 2022																			
Installation Information																														
Method of Implementation: AIT:: Installation Name: WM018 AASP (Acoustic Augmentation Support Program)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)																			
Prior Years	- / -	1 / 0.390	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.390																
FY 2017	- / -	- / -	1 / 1.026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.026																
FY 2018	- / -	- / -	- / -	2 / 2.092	0 / 0.000	2 / 2.092	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.092																
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.118	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.118																
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.139	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.139																
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.132	- / -	- / -	- / -	0 / 0.000	1 / 1.132																
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.431																
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.988	1 / 0.988																
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 12.343	9 / 12.343																
Total	- / -	1 / 0.390	1 / 1.026	2 / 2.092	0 / 0.000	2 / 2.092	1 / 1.118	1 / 1.139	1 / 1.132	3 / 3.431	10 / 13.331	20 / 23.659																		
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	10	20				
Out	-	-	1	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	1	-	2	-	-	1	10	20				

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System								Modification Number / Title: 1 / AASP WM018															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:															
<i>Modification Item 1 of 1: AASP WM018</i>																											
Installation Information																											
Method of Implementation: AIT:: Installation Name: WM018 AASP Reliability and Refurbishment Upgrade																											
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total													
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.375	1 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.315													
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.132	- / -	0 / 0.000	1 / 1.132													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 7.099	6 / 7.099													
Total			0 / 0.375	1 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.132	- / -	6 / 7.099	8 / 9.546													
Installation Schedule																											
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	6	8					
Out	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	6	8					

Footnotes:

- (10) Includes production support for SHIPALT 4678. FY17 Increased 1.1.1 with funds from 1.1.3. This increase is due to the Information Assurance (IA) effort. FY19 increase in 1.1.1 is due to installations and support. These costs are for 2 FTE to manage the effort (including the IA requirements) and match with the SWFTS upgrade cycle.
- (11) An additional HLF-1 transducer is procured in FY19 (\$610K) which increases the unit cost per system. Anticipated cost for installation in FY16 exceeded available funds, consequently, the installation was shifted to FY17 with the additional funding identified.
- (12) Installations will occur one or two years after procurement due to long term availabilities scheduling. Installation quantities updated in order to accommodate the current budget with the new increased installation cost. FY17 Installations used FY16 funds and FY17 Installation funds. A second AASP SHIPALT installation accomplished in FY17 with available funds due to NRE Cost reduction. One installation is planned in FY18 and two in FY19.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System						Modification Number / Title: 2 / CSA WM019			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	27.070	9.169	10.784	6.321	0.000	6.321	7.403	7.991	7.137	8.373	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	27.070	9.169	10.784	6.321	0.000	6.321	7.403	7.991	7.137	8.373	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	27.070	9.169	10.784	6.321	0.000	6.321	7.403	7.991	7.137	8.373	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:													
WM019 - The Countermeasure Set, Acoustic (CSA) program procures and supports the inboard electronic system necessary for preparing and launching 6" Acoustic Device Countermeasures (ADCs) from all 688i and newer U.S. submarines. This inboard system consists of the Torpedo Defense Controller (TDC), Launch Control Panels (LCPs), and associated cabling, in a class-by-class configuration. The CSA program provides obsolescence support for legacy systems and engineering changes to accommodate modified and planned new devices, such as the ADC MK5. Four efforts are supported: (1) the "Technology Refresh" effort is designing, building, testing and certifying replacement components for obsolete CSA MK2 systems (MOD0/3/4) on 688i SSN and OHIO SSBN submarines, with the refresh occurring in FY17-FY20. (2) The "CSA MK3 Technology Insertion" effort is federating the CSA MK3 system with Submarine Warfare Federated Tactical System (SWFTS) to facilitate the ADC MK5 and Submarine Torpedo Defense Tactical Decision Aid (SubTDS TacDA) upon introduction. A phased approach was taken to allow a more efficient incremental implementation of initial capabilities. Required funding is expected to level off after ADC MK5 device fielding and address recurring upgrades with Technology Insertion/Advanced Processor Build (TI/APB). (3) The "CSA MK4 Technology Insertion" effort replaces CSA MK2 MOD2 with CSA MK4 as a "SWFTS-federated" system on VIRGINIA Class Block I and II submarines (10 hulls) to accommodate the introduction of ADC MK5 devices. Non-recurring engineering, production testing, EQT and SHIPALT/Logistics documentation will continue in FY18, with installs starting in FY19 to better align with overall submarine availabilities scheduling. (4) The fourth effort is the ongoing support of engineering issues across all CSA systems as they arise.													
[WM019 CSA MK3 Engineering Changes (LAN, SWFTS, TDA)] WM019 CSA MK3 Engineering Changes - (LAN, SWFTS, TacDA) - Organic] Technology insertion effort that supports and designs engineering changes for SSGN, SEAWOLF, and VA Blk III and follow ships, including the Countermeasures Set Acoustic (CSA) system, Torpedo Defense Controller (TDC), and Launch Control Panels (LCPs). This supports changes to correct obsolescence, and engineering changes necessary to accommodate modified devices and new devices, such as the ADC MK5.													
[WM019 ECPs CSA MK2 MOD 2 Conversion to MK 4] WM019 - ECPs CSA MK2 MOD2 Conversion to CSA MK4 - Organic] Technology insertion effort that converts CSA MK2 MOD2 to CSA MK4 to accommodate introduction of ADC MK5 to Virginia Class Block 1 and 2 Ships (10 hulls). Proofing will complete in FY18, with replacement installations starting in FY19 to better align with overall submarine availabilities scheduling.													
[WM019 CSA MK2 MOD 0 OBSOLESCENCE] WM019 - CSA MK2 MOD0 Obsolescence - NonOrganic Technical refresh effort that designs, builds, tests and certifies replacement components for obsolete CSA MK2 MOD4 on 688i ships and CSA MK2 MOD0 and 3 on SSBNs. Upgrades will occur in FY16-FY20.													
[WM019 CSAMK2 MOD2 CONVERSION to CSA MK4] WM019 - CSA MK2 MOD2 Conversion to CSA MK4 - Non Organic Technology Insertion effort that procures engineering change kits and systems including Countermeasures Set Acoustic (CSA) system, Torpedo Defense Controller (TDC), Launch Control Panels (LCPs), and CSA support system assets to correct obsolescence, including engineering changes necessary to accommodate modified devices and new devices, such as the ADC MK5.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3	P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System
ID Code (A=Service Ready, B=Not Service Ready) : [WM019 CSAMK3 Kits and Systems] WM019 - CSA MK3 Kits and Systems - NonOrganic Procures engineering change kits and systems in support of SAWS including Countermeasures Set Acoustic (CSA) system, Torpedo Defense Controller (TDC), Launch Control Panels (LCPs), CSA support system assets to correct obsolescence, including engineering changes necessary to accommodate modified devices and new devices, such as the ADC MK5.	MDAP/MAIS Code: [WM019 CSA MK2 MOD 2 Conversion to CSA MK4] WM019 - CSA MK2 MOD2 Conversion to CSA MK4 - Organic Nonrecurring costs for the Technology Insertion CSA MK4. [WM019 CSA ISEA] WM019 - CSA ISEA Supports engineering issues across all systems and platforms as they arise, using ISEA support.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System							Modification Number / Title: 2 / CSA WM019			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Countermeasure Set Acoustic			Modification Type: SHIPALT, OCMOD, EC							Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CSA WM019													
B Kits													
Recurring													
1.1.1) WM019 CSA MK3 Engineering Changes (LAN, SWFTS, TDA) - Organic ⁽¹³⁾	- / 9.345	- / 0.711	- / 1.813	- / 1.205	- / -	- / 1.205	- / 1.144	- / 1.836	- / 1.246	- / 1.500	Continuing	Continuing	
1.1.2) WM019 ECPs CSA MK2 MOD 2 Conversion to MK 4 - Organic ⁽¹⁴⁾	- / -	- / 4.579	- / 2.515	- / 1.226	- / -	- / 1.226	- / 1.817	- / 2.089	- / 1.835	- / 1.500	Continuing	Continuing	
1.1.3) WM019 CSA MK2 MOD 0 OBSOLESCENCE - NonOrganic ⁽¹⁵⁾	42 / 4.106	- / 0.650	- / 0.663	- / 0.379	- / -	- / 0.379	- / 0.206	- / -	- / -	- / -	- / -	42 / 6.004	
1.1.4) WM019 CSAMK2 MOD2 CONVERSION to CSA MK4 - NonOrganic ⁽¹⁶⁾	- / -	3 / 1.652	5 / 2.142	2 / 0.860	- / -	2 / 0.860	7 / 1.000	4 / 0.675	4 / 0.675	4 / 0.675	Continuing	Continuing	
1.1.5) WM019 CSAMK3 Kits and Systems - NonOrganic ⁽¹⁷⁾	3 / 0.430	- / -	4 / 0.760	3 / 0.675	- / -	3 / 0.675	8 / 1.000	7 / 1.628	4 / 0.500	6 / 1.125	Continuing	Continuing	
Subtotal: Recurring	- / 13.881	- / 7.592	- / 7.893	- / 4.345	- / -	- / 4.345	- / 5.167	- / 6.228	- / 4.256	- / 4.800	Continuing	Continuing	
Non-Recurring													
1.2.1) WM019 CSA MK2 MOD 2 Conversion to CSA MK4 - Organic ⁽¹⁸⁾	- / 7.641	- / -	- / 1.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.998
Subtotal: Non-Recurring	- / 7.641	- / -	- / 1.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: CSA WM019	45 / 21.522	3 / 7.592	9 / 9.250	5 / 4.345	- / -	5 / 4.345	15 / 5.167	11 / 6.228	8 / 4.256	10 / 4.800	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 21.522	- / 7.592	- / 9.250	- / 4.345	- / -	- / 4.345	- / 5.167	- / 6.228	- / 4.256	- / 4.800	Continuing	Continuing	
Support (All Modification Items)													
2.1) WM019 CSA ISEA ⁽¹⁹⁾	- / 5.148	- / 0.752	- / 0.771	- / 0.750	- / -	- / 0.750	- / 0.791	- / 0.862	- / 0.961	- / 1.057	Continuing	Continuing	
Subtotal: Support	- / 5.148	- / 0.752	- / 0.771	- / 0.750	- / -	- / 0.750	- / 0.791	- / 0.862	- / 0.961	- / 1.057	Continuing	Continuing	
Installation													
Modification Item 1 of 1: CSA WM019	- / 0.400	- / 0.825	- / 0.763	- / 1.226	- / 0.000	- / 1.226	- / 1.445	- / 0.901	- / 1.920	- / 2.516	Continuing	Continuing	
Subtotal: Installation	- / 0.400	- / 0.825	- / 0.763	- / 1.226	- / -	- / 1.226	- / 1.445	- / 0.901	- / 1.920	- / 2.516	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	27.070	9.169	10.784	6.321	0.000	6.321	7.403	7.991	7.137	8.373	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System					Modification Number / Title: 2 / CSA WM019								
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1:</i> CSA WM019								MDAP/MAIS Code:								
Manufacturer Information																
Manufacturer Name: CSA MK3 RAYTHEON				Manufacturer Location: Keyport, WA												
Administrative Leadtime (<i>in Months</i>): 6				Production Leadtime (<i>in Months</i>): 18												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates		Apr 2018	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023									
Delivery Dates		Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024									
Manufacturer Name: CSA MK2 Obsolescence NUWC Keyport				Manufacturer Location: Keyport, WA												
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 16												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	Feb 2017	Feb 2018	Feb 2019													
Delivery Dates	Jun 2018	Jun 2019	Jun 2020													
Manufacturer Name: CSA MK 2 to MK4 RAYTHEON				Manufacturer Location: Keyport, WA												
Administrative Leadtime (<i>in Months</i>): 6				Production Leadtime (<i>in Months</i>): 18												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	Apr 2017	Apr 2018	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023									
Delivery Dates	Oct 2018	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024									
Installation Information																
Method of Implementation: AIT:: Installation Name: WM019 CSA MK2 MOD 0 OBSOLESCENCE																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete					
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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					
Prior Years	8 / 0.400	16 / 0.825	10 / 0.563	5 / 0.286	0 / 0.000	5 / 0.286	3 / 0.175	- / -	- / -	- / -	0 / 0.000					
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
Total	8 / 0.400	16 / 0.825	10 / 0.563	5 / 0.286	0 / 0.000	5 / 0.286	3 / 0.175	- / -	- / -	- / -	0 / 0.000					
											42 / 2.249					

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3								P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System												Modification Number / Title: 2 / CSA WM019											
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
Modification Item 1 of 1: CSA WM019																															
Installation Information																															
Method of Implementation: AIT:: Installation Name: WM019 CSA MK2 MOD 0 OBSOLESCENCE																															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	-	-	10	-	-	-	5	-	-	-	3	-	-	-	-	-	-	-	-	42						
Out	8	-	-	16	-	-	-	10	-	-	-	5	-	-	-	3	-	-	-	-	-	-	-	-	42						
Method of Implementation: AIT:: Installation Name: WM019 CSAMK2 MOD2 CONVERSION to CSA MK4																															
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)				
Prior Years	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -							
FY 2017	-	/ -	-	/ -	-	/ -	-	3 / 0.810	0 / 0.000	3 / 0.810	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	0 / 0.000	3 / 0.810									
FY 2018	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	5 / 0.810	-	/ -	-	/ -	-	/ -	0 / 0.000	5 / 0.810								
FY 2019	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	2 / 0.556	-	/ -	-	/ -	0 / 0.000	2 / 0.556										
FY 2020	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	6 / 1.000	1 / 0.115	0 / 0.000	7 / 1.115													
FY 2021	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	4 / 0.675	0 / 0.000	4 / 0.675														
FY 2022	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	4 / 0.675	4 / 0.675															
FY 2023	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	4 / 0.675	4 / 0.675															
To Complete	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	Continuing	Continuing											
Total	-	/ -	-	/ -	-	/ -	-	3 / 0.810	0 / 0.000	3 / 0.810	5 / 0.810	-	2 / 0.556	6 / 1.000	5 / 0.790	Continuing	Continuing														
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	1	-	1	6	-	-	-	5	-	Cont.	Cont.					
Out	-	-	-	-	-	-	-	-	1	1	1	2	-	2	1	-	1	-	1	6	-	-	-	5	-	Cont.	Cont.				
Method of Implementation: AIT:: Installation Name: WM019 CSAMK3 Kits and Systems																															
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)				
Prior Years	-	/ -	-	/ -	-	2 / 0.200	1 / 0.130	0 / 0.000	1 / 0.130	-	1 / -	-	1 / -	-	1 / -	-	1 / -	-	1 / -	0 / 0.000	3 / 0.330										

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2210 / Submarine Acoustic Warfare System								Modification Number / Title: 2 / CSA WM019																					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																					
<i>Modification Item 1 of 1: CSA WM019</i>																																	
Installation Information																																	
Method of Implementation: AIT:: Installation Name: WM019 CSAMK3 Kits and Systems																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.460	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.460																		
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.345	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.345																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.920	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.920																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.726	- / -	- / -	- / -	- / -	3 / 0.345	7 / 2.071																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.460	4 / 0.460																		
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.208	6 / 1.208																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																		
Total			- / -	- / -	2 / 0.200	1 / 0.130	0 / 0.000	1 / 0.130	4 / 0.460	3 / 0.345	8 / 0.920	4 / 1.726	Continuing	Continuing																			
Installation Schedule																																	
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot			
	Q1	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	-	-	-	4	-	-	-	1	2	-	1	2	2	3	-	4	-	-	Cont.	Cont.				
Out	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	4	-	-	-	1	2	-	1	2	2	-	-	4	-	-	Cont.	Cont.

Footnotes:

- (13) For FY18, accommodated internal shifts to address continuing TI/APB changes: Increased VIRGINIA Block I/II OPN procurements of CSA MK4 systems as part of the Economical Order Quantity (EOQ) maximization and increase CSA MK3 Engineering Change Instruction (ECI) will be installed and 3 CSA MK4 installation are funded and the SEAWOLF SHIPALT NRE will begin.
- (14) The changes needed to include SEAWOLF submarine class to the CSA MK3 connection to SWFTS in FY21.
- (15) FY18 accommodated increase in Installation and Checkout (INCO) spares reducing the FY19 costs to support the FY19 installations.
- (16) Economic order quantities in FY18 afforded us the ability to procure 3 additional CSA MK4 units for installation in FY19. FY20 reflects an additional full new system procurement (restored from previous FY17 reduction (\$430K of the \$1.0M shown)). The balance of (\$570K) procures six (6) upgrade kits and software at EOQ pricing of approx. \$95K/kit. Cost estimate for upgrade kits from FY21-23 changed to \$168K due to anticipated increased complexity and assumed actual unit costs. Two units were procured in FY16 but they were environmental qualification test (EQT) units that were never delivered to the Fleet.
- (17) Procurement of CSA MK3 kits was updated in order to support planned installations, upgrades and modernizations of fielded systems on SSGN and VIRGINIA Block III/IV.
- (18) In FY19, NRE for CSA MK4 not needed and was reallocated within CSA Subhead.
- (19) Installations were updated to reflect the current install schedule on Naval Tool for Interoperability Risk Assessment (NTIRA).
- (22)VIRGINIA Block I/II OPN procurements of initial CSA MK4 to maximize the Economical Order Quantities (EOQ) from 10 systems in FY17-FY20 at \$5.65M to equivalent 10 systems in FY17-FY19 at \$4.65M.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment					2213 / Surface Ship Torpedo Def (SSTD)										
ID Code (A=Service Ready, B=Not Service Ready): B			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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	158.231	6.893	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	158.231	6.893	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	158.231	6.893	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.535	0.853	0.799	-	0.799	1.239	1.817	2.007	2.203	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY 2019 funding request was reduced by \$0.234 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.															
Surface Ship Torpedo Defense (SSTD) provides a layered torpedo defense capability to protect surface ships. Under the OPN appropriation, SSTD funds the AN/SLQ-25 (NIXIE) system and the Torpedo Warning System (TWS). The AN/SLQ-25 (NIXIE) system provides towed persistent countermeasure capability. The TWS provides automated torpedo detection, classification, localization, and alertment capability.															
WL101 AN/SLQ-25A UPGRADE KITS: Procures the upgrade of the AN/SLQ-25 (NIXIE) towed acoustic countermeasure system to the AN/SLQ-25C configuration. The AN/SLQ-25C enhances ship survivability against future torpedo threats. No future AN/SLQ-25C upgrade kit procurement is planned.															
WL102 Torpedo Warning System (TWS): Procures the Torpedo Warning System (TWS). TWS is an automated Torpedo Detection, Classification, and Localization (TDCL) system that generates warning alerts on incoming threat torpedoes. The TWS consists of towed active acoustic source and receive sensors, processing cabinets and workstations, and Countermeasure Anti-Torpedo (CAT) ready stows mounted port and starboard. The TWS subfunctional groups are called the Target Acquisition Group (TAG), Tactical Control Group (TCG), and Ready Stow Group (RSG).															
WL106 AN/SLQ-25 ENGINEERING CHANGES: The AN/SLQ-25 NIXIE is the Navy's primary Surface Ship Torpedo Defense (SSTD) system, providing towed persistent countermeasure capability to protect over 185 surface ships from torpedoes. WL106, AN/SLQ-25 ENGINEERING CHANGES, consists of two major efforts in FY 2019: (1) Engineering Changes for AN/SLQ-25C and earlier variants and (2) continuation of the system technical refresh, started in FY 2018, that will result in the new configuration baseline, AN/SLQ-25E. The following details each of the two major efforts. (1) Funding for AN/SLQ-25 Engineering Changes provides for hardware and software configuration changes to current production baselines to resolve emergent hardware obsolescence issues, provides for software updates, and provides for cyber security and program protection updates. These recurring efforts include investigation and resolution of AN/SLQ-25 Trouble Reports, including those resulting from service-identified issues, some of which could render key system functions inoperable if not corrected. These efforts are critical to the extension of the military service life of the system until all AN/SLQ-25C systems are modified to AN/SLQ-25E. (2) As a result of costly hardware obsolescence issues with the AN/SLQ-25C baseline that have precluded the continued production of this variant, a technical refresh began in FY 2018 under the nomenclature AN/SLQ-25E. The AN/SLQ-25E updates the hardware and software architecture to a Commercial Off The Shelf (COTS-based), open, and modular configuration. The nonrecurring design efforts in FY 2019 are needed to deliver AN/SLQ-25E systems to new construction ships starting in FY 2020. The following new construction ships will be the first groups to receive the AN/SLQ-25E system: LPD-29 and T-AO 207															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment		P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
in FY 2020; and DDG 128, T-AO 208, DDG 129, and T-AO 209 in FY 2021. Procurement of AN/SLQ-25E system upgrade kits begins in FY2020 to resolve AN/SLQ-25C obsolescence issues by back fitting systems.		
WL830 PRODUCTION ENGINEERING (IN-HOUSE): Funding provides specification preparation and validation, production planning, contract deliverable monitoring, prime contractor monitoring for cost, schedule, and performance and Integrated Logistics Support (ILS) planning, review and evaluation of obsolescence issues, and coordination of government furnished information (GFI) and government furnished equipment (GFE).		
WL840 QUALITY ASSURANCE: Funding under this cost code provides for quality assurance efforts including conducting quality assurance reviews of the contractor and subcontractors, documentation indicating contractor conformity to product performance requirements, and review of objective quality evidence.		
WL860 ACCEPTANCE TEST & ENGINEERING: Funding under this cost code provides for production acceptance of contractor hardware. Acceptance testing includes government acceptance testing support with operationally trained subject matter experts and software support engineers.		
WL900 PRODUCTION ENGINEERING (OUT-HOUSE): Consulting services for FY 2012 and prior provide production monitoring, installation planning and coordination support.		
WL900 CONSULTING SERVICES: Funding under this cost code provides for contractor support to the program office for production monitoring, installation planning and coordination support.		
WL905 PRODUCTION ENGINEERING CONTRACTOR: Funding under this cost code provides for production engineering tasks performed by the hardware contractor.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment				P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)				
ID Code (A=Service Ready, B=Not Service Ready): B		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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Surface Ship Torpedo Def (SSTD)				- / 153.402	- / 3.532	- / -	- / -
P-3a	1 / WL106 ENGINEERING CHANGES (TBD)				- / 4.829	- / 3.361	- / 12.867	- / 11.277
P-40	Total Gross/Weapon System Cost				- / 158.231	- / 6.893	- / 12.867	- / 11.277
Exhibits Schedule		FY 2020		FY 2021	FY 2022	FY 2023	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)
P-40a	Surface Ship Torpedo Def (SSTD)				- / -	- / -	- / -	- / -
P-3a	1 / WL106 ENGINEERING CHANGES (TBD)				- / 12.831	- / 13.104	- / 13.349	- / 13.636
P-40	Total Gross/Weapon System Cost				- / 12.831	- / 13.104	- / 13.349	- / 13.636

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3							P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)							Aggregated Items Title: Surface Ship Torpedo Def (SSTD) ⁽¹⁾						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) WL101 AN/SLQ-25A UPGRADE KITS																				
1.1) 25A Modification Kits	A		528,387.85	214	113.075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) WL101 AN/SLQ-25A UPGRADE KITS</i>			-	-	113.075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3) WL103 AN/SLQ-25X (TWS COMPATIBLE SYSTEM) HARDWARE																				
3.1) WL103 AN/SLQ-25X (TWS COMPATIBLE SYSTEM) HARDWARE	A		3,788K	1	3.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) WL103 AN/SLQ-25X (TWS COMPATIBLE SYSTEM) HARDWARE</i>			-	-	3.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4) WL104 AN-SLQ-25D EC-2 ()																				
4.1) AN-SLQ-25C EC-2 ()	A		13,447K	1	13.447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 4) WL104 AN-SLQ-25D EC-2 ()</i>			-	-	13.447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5) WL105 AN-SLQ-25C CVN BATTLE SPARE																				
5.1) HARDWARE	A		-	-	1.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 5) WL105 AN-SLQ-25C CVN BATTLE SPARE</i>			-	-	1.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6) WL106 ENGINEERING CHANGE ⁽²⁾																				
6.1) EC-1 UPDATE SLQ-25	A		-	-	1.400	-	-	0.700	-	-	-	-	-	-	-	-	-	-	-	
6.2) TECH REFRESH EC SLQ-25	A		-	-	0.468	-	-	0.468	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 6) WL106 ENGINEERING CHANGE</i>			-	-	1.868	-	-	1.168	-	-	-	-	-	-	-	-	-	-	-	
7) WL830 PRODUCTION ENGINEERING																				
7.1) PRODUCTION ENGINEERING IN-HOUSE	A		-	-	12.917	-	-	0.364	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 7) WL830 PRODUCTION ENGINEERING</i>			-	-	12.917	-	-	0.364	-	-	-	-	-	-	-	-	-	-	-	
8) WL840 QUALITY ASSURANCE																				
8.1) QUALITY ASSURANCE (IN-HOUSE)	A		-	-	1.064	-	-	0.200	-	-	-	-	-	-	-	-	-	-	-	
8.2) Torpedo Warning System (TWS) Quality Assurance	A		-	-	-	-	-	0.212	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3							P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)							Aggregated Items Title: Surface Ship Torpedo Def (SSTD) ⁽¹⁾						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: 8) WL840 QUALITY ASSURANCE</i>			-	-	1.064	-	-	0.412	-	-	-	-	-	-	-	-	-	-	-	-
9) WL860 ACCEPTANCE TEST AND ENGINEERING																				
9.1) ACCEPTANCE TESTING & ENGINEERING	A		-	-	1.324	-	-	0.500	-	-	-	-	-	-	-	-	-	-	-	-
9.2) TWS Acceptance Testing & Engineering	A		-	-	-	-	-	0.496	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 9) WL860 ACCEPTANCE TEST AND ENGINEERING</i>			-	-	1.324	-	-	0.996	-	-	-	-	-	-	-	-	-	-	-	-
10) WL900 SERVICES																				
10.1) PRODUCTION ENGINEERING (OUT-HOUSE)	A		-	-	0.925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.2) CONSULTING SERVICES	A		-	-	1.694	-	-	0.250	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 10) WL900 SERVICES</i>			-	-	2.619	-	-	0.250	-	-	-	-	-	-	-	-	-	-	-	-
11) WL905 PRODUCTION ENGINEERING CONTRACTOR																				
11.1) PRODUCTION ENGINEERING CONTRACTOR	A		-	-	1.800	-	-	0.342	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 11) WL905 PRODUCTION ENGINEERING CONTRACTOR</i>			-	-	1.800	-	-	0.342	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	153.402	-	-	3.532	-	-	-	-	-	-	-	-	-	-	-	-

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

Footnotes:

⁽¹⁾ Moved WL101, WL103, WL104 from P-3a to P-40A since funding is in prior years.

⁽²⁾ Moved WL 106 to P-3a after FY 17 to show all AN/SLQ-25 engineering change costs in one exhibit. After FY17 AN/SLQ-25 EC-1 Update and Tech Refresh moved to the P-3a Exhibit for WL106 to show all AN/SLQ-25 engineering change costs in one exhibit.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)						Modification Number / Title: 1 / WL106 ENGINEERING CHANGES			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	4.829	3.361	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	4.829	3.361	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	4.829	3.361	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	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:													
[WL106 Engineering Changes SLQ-25] WL106 AN/SLQ-25 ENGINEERING CHANGES: The AN/SLQ-25 NIXIE is the Navy's primary Surface Ship Torpedo Defense (SSTD) system, providing towed persistent countermeasure capability to protect over 185 surface ships from torpedoes. WL106, AN/SLQ-25 ENGINEERING CHANGES, consists of two major efforts in FY 2019: (1) Engineering Changes for AN/SLQ-25C and earlier variants and (2) continuation of the system technical refresh, started in FY 2018, that will result in the new configuration baseline, AN/SLQ-25E. The following details each of the two major efforts. (1) Funding for AN/SLQ-25 Engineering Changes provides for hardware and software configuration changes to current production baselines to resolve emergent hardware obsolescence issues, provides for software updates, and provides for cyber security and program protection updates. These recurring efforts include investigation and resolution of AN/SLQ-25 Trouble Reports, including those resulting from service-identified issues, some of which could render key system functions inoperable if not corrected. These efforts are critical to the extension of the military service life of the system until all AN/SLQ-25C systems are modified to AN/SLQ-25E. (2) As a result of costly hardware obsolescence issues with the AN/SLQ-25C baseline that have precluded the continued production of this variant, a technical refresh began in FY 2018 under the nomenclature AN/SLQ-25E. The AN/SLQ-25E updates the hardware and software architecture to a Commercial Off The Shelf (COTS-based), open, and modular configuration. The nonrecurring design efforts in FY 2019 are needed to deliver AN/SLQ-25E systems to new construction ships starting in FY 2020. The following new construction ships will be the first groups to receive the AN/SLQ-25E system: LPD-29 and T-AO 207 in FY 2020; and DDG 128, T-AO 208, DDG 129, and T-AO 209 in FY 2021. Procurement of AN/SLQ-25E system upgrade kits begins in FY2020 to resolve AN/SLQ-25C obsolescence issues by back fitting systems.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)							Modification Number / Title: 1 / WL106 ENGINEERING CHANGES			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: WL106 ENGINEERING CHANGES													
B Kits													
Recurring													
1.1.1) WL106 Engineering Changes SLQ-25 - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.886	5 / 5.406	3 / 3.016	5 / 6.196	Continuing	Continuing	
1.1.2) WL106 ECPs - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.893	- / 0.910	- / 0.927	- / 0.951	Continuing	Continuing	
1.1.4) WL106 TECH REFRESH EC SLQ-25 - Organic	- / -	- / -	- / 0.718	- / 0.486	- / -	- / 0.486	- / 0.496	- / 0.506	- / 0.516	- / 0.529	- / -	- / 3.251	
1.1.5) WL106 EC-1 UPDATE SLQ-25 - Organic	- / -	- / -	- / 0.713	- / 0.713	- / -	- / 0.713	- / 0.727	- / 0.756	- / 0.772	- / 0.796	- / -	- / 4.477	
Subtotal: Recurring	- / 0.000	- / -	- / 1.431	- / 1.199	- / -	- / 1.199	- / 5.002	- / 7.578	- / 5.231	- / 8.472	Continuing	Continuing	
Non-Recurring													
1.2.1) WL106 AN/SLQ-25 Tech Refresh - Non - Organic	- / 4.829	- / 3.361	- / 5.400	- / 4.270	- / -	- / 4.270	- / 2.112	- / -	- / -	- / -	- / -	- / -	- / 19.972
1.2.2) WL106 AN/SLQ-25 Tech Refresh - Organic	- / -	- / -	- / 4.206	- / 2.264	- / -	- / 2.264	- / 1.056	- / -	- / -	- / -	- / -	- / -	- / 7.526
Subtotal: Non-Recurring	- / 4.829	- / 3.361	- / 9.606	- / 6.534	- / -	- / 6.534	- / 3.168	- / -	- / -	- / -	- / -	- / -	- / 27.498
Subtotal: WL106 ENGINEERING CHANGES	- / 4.829	- / 3.361	- / 11.037	- / 7.733	- / -	- / 7.733	3 / 8.170	5 / 7.578	3 / 5.231	5 / 8.472	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 4.829	- / 3.361	- / 11.037	- / 7.733	- / -	- / 7.733	- / 8.170	- / 7.578	- / 5.231	- / 8.472	Continuing	Continuing	
Support (All Modification Items)													
2.1) WL830 AN/SLQ-25 Production Engineering In House ⁽³⁾	- / -	- / -	- / 0.514	- / 0.860	- / -	- / 0.860	- / 1.616	- / 1.235	- / 0.773	- / 0.700	Continuing	Continuing	
2.2) WL840 AN/SLQ-25 Quality Assurance	- / -	- / -	- / 0.204	- / 0.400	- / -	- / 0.400	- / 0.861	- / 0.889	- / 0.891	- / 0.865	Continuing	Continuing	
2.3) WL860 AN/SLQ-25 Acceptance Test and Engineering ⁽⁴⁾	- / -	- / -	- / 0.509	- / 0.829	- / -	- / 0.829	- / 0.700	- / 0.635	- / 0.645	- / 0.732	Continuing	Continuing	
2.4) WL900 AN/SLQ-25 Consulting Services	- / -	- / -	- / 0.255	- / 1.100	- / -	- / 1.100	- / 1.122	- / 1.144	- / 1.167	- / 1.182	Continuing	Continuing	
2.5) WL905 AN/SLQ-25 Production Engineering Contractor	- / -	- / -	- / 0.348	- / 0.355	- / -	- / 0.355	- / 0.362	- / 0.369	- / 0.377	- / 0.385	Continuing	Continuing	
Subtotal: Support	- / 0.000	- / -	- / 1.830	- / 3.544	- / -	- / 3.544	- / 4.661	- / 4.272	- / 3.853	- / 3.864	Continuing	Continuing	
Installation													
Modification Item 1 of 1: WL106 ENGINEERING CHANGES	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.254	- / 4.265	- / 1.300	- / 4.350	- / 11.169	
Subtotal: Installation	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.254	- / 4.265	- / 1.300	- / 4.350	- / 11.169	
Total													
Total Cost (Procurement + Support + Installation)	4.829	3.361	12.867	11.277	0.000	11.277	12.831	13.104	13.349	13.636	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2213 / Surface Ship Torpedo Def (SSTD)									Modification Number / Title: 1 / WL106 ENGINEERING CHANGES																		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																		
Modification Item 1 of 1: WL106 ENGINEERING CHANGES																															
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: WL106 Engineering Changes SLQ-25																															
Installation Cost			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020	FY 2021		FY 2022		FY 2023		To Complete	Total									
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.254	- / -	- / -	0 / 0.000	3 / 1.254														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 4.265	- / -	0 / 0.000	5 / 4.265															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.300	- / -	0 / 0.000	3 / 1.300															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 4.350	- / -	5 / 4.350																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -																
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.254	5 / 4.265	3 / 1.300	5 / 4.350	16 / 11.169														
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	2	-	1	2	-	5	16						
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	1	2	2	-	1	2	-	5	16						
Method of Implementation (Organic): WL106 ECPs - Not Installed													Installation Quantity: 0																		

Footnotes:

(3) Moved Support Costs to P-3a from P-40A to show all costs associated with Engineering Changes.

(4) Increase in FY19 due to establishing the acceptance test procedures.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment										P-1 Line Item Number / Title: 2225 / Fixed Surveillance 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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	1,265.794	145.701	300.102	237.780	56.950	294.730	103.603	360.611	104.691	107.049	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	1,265.794	145.701	300.102	237.780	56.950	294.730	103.603	360.611	104.691	107.049	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	1,265.794	145.701	300.102	237.780	56.950	294.730	103.603	360.611	104.691	107.049	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
The FY 2019 funding request was reduced by \$1.380 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.													
Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.													
[P40A / Classified (2225)]: Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.													
[P40A / Classified (222506)]: Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment				P-1 Line Item Number / Title: 2225 / Fixed Surveillance 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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-40a	Fixed Surveillance System				- / 1,265.794	- / 145.701	- / 300.102	- / 237.780	- / 56.950	- / 294.730
P-40	Total Gross/Weapon System Cost				- / 1,265.794	- / 145.701	- / 300.102	- / 237.780	- / 56.950	- / 294.730

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

The FY2019 funding request was reduced by \$1.380M to reflect the Department of the Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, and more efficient government.

OCO:

Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3					P-1 Line Item Number / Title: 2225 / Fixed Surveillance System									Aggregated Items Title: Fixed Surveillance System						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) Classified																				
1.1) Classified (2225)	A		-	-	1,186.865	-	-	138.699	-	-	293.118	-	-	230.781	-	-	56.950	-	-	287.731
1.2) Classified (222506)	A		-	-	78.929	-	-	7.002	-	-	6.984	-	-	6.999	-	-	-	-	-	6.999
<i>Subtotal: 1) Classified</i>			-	-	1,265.794	-	-	145.701	-	-	300.102	-	-	237.780	-	-	56.950	-	-	294.730
Total			-	-	1,265.794	-	-	145.701	-	-	300.102	-	-	237.780	-	-	56.950	-	-	294.730

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

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment					P-1 Line Item Number / Title: 2237 / SURTASS												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0204311N									
Line Item MDAP/MAIS Code: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	100.889	43.743	30.180	57.872	0.000	57.872	22.084	18.188	24.462	24.918	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	100.889	43.743	30.180	57.872	0.000	57.872	22.084	18.188	24.462	24.918	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	100.889	43.743	30.180	57.872	0.000	57.872	22.084	18.188	24.462	24.918	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	-	2.111	2.782	-	2.782	3.611	7.600	2.990	2.753	Continuing	Continuing					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
The FY 2019 funding request was reduced by \$.395 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.																	
PROGRAM COVERAGE: Surveillance Towed Array Sensor System (SURTASS) is the mobile, tactical, and strategic arm of the Navy's undersea surveillance capability that provides deep ocean and littoral acoustic detection and cueing for tactical weapon platforms against diesel and nuclear submarines as well as surface vessels in any given Area of Operations worldwide. Dedicated Anti-Submarine Warfare (ASW) T-AGOS ships tow long acoustic arrays that collect acoustic data and relay that data to shore facilities via satellites for processing and fusion of the resulting contact data with other sensors. Currently, there are five Small Waterplane Area Twin Hull (SWATH) T-AGOS ships operating in the Pacific area. Ship configurations are:																	
T-AGOS 22 USNS LOYAL (1), supports passive operations using the TB-29A Twinline (TL-29A) array, providing improved detection and classification capability. This ship class uses the Integrated Common Processor (ICP) signal processing and display system common with the SSN Advanced Rapid Commercial Off the Shelf (COTS) Insertion (ARCI) Sonar Processing System;																	
Three (3) T-AGOS SWATH-P platforms, T-AGOS 19 USNS VICTORIOUS, T-AGOS 20 USNS ABLE, and T-AGOS 21 USNS EFFECTIVE, supporting passive/active operations, configured with the ICP processing and display system, the TL-29A array, and the Compact Low Frequency Active (CLFA) transmit capability;																	
One (1) Low Frequency Active (LFA) equipped ship, T-AGOS 23 USNS IMPECCABLE, configured with the ICP Processing and Display system, the TL-29A array, and the Low Frequency Active (LFA) transmit capability. The active capability provides greatly improved detection against diesel submarines as well as the quiet nuclear submarine threat.																	
In addition to the five platforms described above, two (2) shore sites are configured with the ICP processing and display suites to receive the T-AGOS acoustic data via SHF satellite communication links. One of the two shore sites is equipped with two (2) SURTASS Team Trainers (STTs) to support Home Port Training Periods.																	
A cost sharing agreement with Japan also provides a shore site and two Japanese SWATH ships with similar capability to the T-AGOS SWATH ships for the Western Pacific region. The Japanese Auxiliary Ocean Surveillance (JAOS) ships are being upgraded to the TL-29A array in FY17. A third Japanese SWATH ship is planned for delivery in 2021 with mission equipment funding programmed in FY19.																	
[P3A - 6 / VG007 - Field Changes/Modifications]: VG007																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment		P-1 Line Item Number / Title: 2237 / SURTASS
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204311N
Line Item MDAP/MAIS Code: N/A Field Changes/Modifications - Provide for correction of deficiencies identified by Fleet use, array support equipment, communications equipment, and replacement of aging/unsupported equipment.		
VG776 Installation of Equipment - Installation Agents: SSC LANT, SSC PAC, Military Sealift Command, and Lockheed Martin.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 3: ASW Electronic Equipment				P-1 Line Item Number / Title: 2237 / SURTASS						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0204311N					
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-3a	1 / VG006 - Integrated Common Processor (N/A)				- / 37.394	- / 7.363	- / 13.052	- / 13.385	- / 0.000	- / 13.385
P-3a	5 / VG006 - SURTASS-E (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 10.000	- / 0.000	- / 10.000
P-3a	2 / VG006 - TL-29A U.S. Twinline Arrays (N/A)				- / 44.687	- / 19.000	- / 1.785	- / 1.820	- / 0.000	- / 1.820
P-3a	3 / VG006 - J-AOS (N/A)				- / 0.000	- / 15.000	- / 0.000	- / 28.354	- / 0.000	- / 28.354
P-3a	4 / VG006 - SURTASS Team Trainer (N/A)				- / 6.590	- / 1.277	- / 4.194	- / 1.750	- / 0.000	- / 1.750
P-3a	6 / VG007 - Field Changes/Modifications (N/A)				- / 12.218	- / 1.103	- / 11.149	- / 2.563	- / 0.000	- / 2.563
P-40	Total Gross/Weapon System Cost				- / 100.889	- / 43.743	- / 30.180	- / 57.872	- / 0.000	- / 57.872
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-3a	1 / VG006 - Integrated Common Processor (N/A)				- / 11.556	- / 11.572	- / 15.786	- / 17.270	- / 3.570	- / 130.948
P-3a	5 / VG006 - SURTASS-E (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.000
P-3a	2 / VG006 - TL-29A U.S. Twinline Arrays (N/A)				- / 1.860	- / 1.018	- / 1.935	- / 1.974	- / 0.000	- / 74.079
P-3a	3 / VG006 - J-AOS (N/A)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 43.354
P-3a	4 / VG006 - SURTASS Team Trainer (N/A)				- / 4.500	- / 1.750	- / 4.700	- / 1.750	Continuing	Continuing
P-3a	6 / VG007 - Field Changes/Modifications (N/A)				- / 4.168	- / 3.848	- / 2.041	- / 3.924	- / 0.000	- / 41.014
P-40	Total Gross/Weapon System Cost				- / 22.084	- / 18.188	- / 24.462	- / 24.918	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:

FY 2019 requests funding (\$29.000 million) for Japanese Auxiliary Ocean Surveillance (J-AOS) Ships and funding (\$10.000 million) for Expeditionary Surveillance Towed Array Sensor System (E-SURTASS). Details are in individual exhibit P-3As.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS								Modification Number / Title: 1 / VG006 - Integrated Common Processor	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	37.394	7.363	13.052	13.385	0.000	13.385	11.556	11.572	15.786	17.270	3.570	130.948
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	37.394	7.363	13.052	13.385	0.000	13.385	11.556	11.572	15.786	17.270	3.570	130.948
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	37.394	7.363	13.052	13.385	0.000	13.385	11.556	11.572	15.786	17.270	3.570	130.948
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY17 and out-year funding continues cyclical ICP technical refresh of hardware.

ICP system configuration varies from ship to ship depending upon the type of arrays used (passive only, or passive and active). Additionally, Tech refresh efforts can be more significant in some years than others based on a range of factors, which include end of life components that require refresh; the need to incorporate significant cyber security and program protection improvements to reduce existing and projected threat vectors as well as the overall program protection posture and related requirements; inspections and testing into a particular ICP system undergoing refresh; or the need to update Configuration Control Models (CCMs) or Engineering Measurements Program (EMP) systems for each major hardware refresh. Accordingly, the procurement and installation costs will vary from one platform to another, depending on the configuration and the ship.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS							Modification Number / Title: 1 / VG006 - Integrated Common Processor			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Integrated Common Processor			Modification Type: N/A					Related RDT&E PEs: 0204311N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: VG006 - Integrated Common Processor</i>													
B Kits													
Recurring													
1.1.1) Integrated Common Processor - NonOrganic ⁽¹⁾	23 / 29.360	5 / 5.163	7 / 10.652	7 / 10.184	- / -	7 / 10.184	7 / 8.755	6 / 9.422	10 / 13.186	10 / 13.770	- / -	75 / 100.492	
<i>Subtotal: Recurring</i>	- / 29.360	- / 5.163	- / 10.652	- / 10.184	- / -	- / 10.184	- / 8.755	- / 9.422	- / 13.186	- / 13.770	- / 0.000	- / 100.492	
<i>Subtotal: VG006 - Integrated Common Processor</i>	23 / 29.360	5 / 5.163	7 / 10.652	7 / 10.184	- / -	7 / 10.184	7 / 8.755	6 / 9.422	10 / 13.186	10 / 13.770	- / -	75 / 100.492	
<i>Subtotal: Procurement, All Modification Items</i>	- / 29.360	- / 5.163	- / 10.652	- / 10.184	- / -	- / 10.184	- / 8.755	- / 9.422	- / 13.186	- / 13.770	- / 0.000	- / 100.492	
Installation													
<i>Modification Item 1 of 1: VG006 - Integrated Common Processor</i>													
<i>Subtotal: Installation</i>	- / 8.034	- / 2.200	- / 2.400	- / 3.201	- / 0.000	- / 3.201	- / 2.801	- / 2.150	- / 2.600	- / 3.500	- / 3.570	- / 30.456	
Total													
Total Cost (Procurement + Support + Installation)	37.394	7.363	13.052	13.385	0.000	13.385	11.556	11.572	15.786	17.270	3.570	130.948	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 1 / VG006 - Integrated Common Processor												
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
<i>Modification Item 1 of 1: VG006 - Integrated Common Processor</i>																					
Manufacturer Information																					
Manufacturer Name: Lockheed Martin					Manufacturer Location: VA																
Administrative Leadtime (in Months): 2					Production Leadtime (in Months): 12																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates	Jan 2017	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023														
Delivery Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024														
Manufacturer Name: Various					Manufacturer Location: Various																
Administrative Leadtime (in Months): 2					Production Leadtime (in Months): 12																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates	Jan 2017	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023														
Delivery Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024														
Installation Information																					
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: Integrated Common Processor																					
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 8.034	5 / 2.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	23 / 10.234									
FY 2017	- / -	- / -	5 / 2.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.400									
FY 2018	- / -	- / -	- / -	7 / 3.201	0 / 0.000	7 / 3.201	- / -	- / -	- / -	- / -	0 / 0.000	7 / 3.201									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.801	- / -	- / -	- / -	0 / 0.000	7 / 2.801									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.150	- / -	- / -	0 / 0.000	7 / 2.150									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.600	- / -	0 / 0.000	6 / 2.600									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.500	0 / 0.000	10 / 3.500									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.570	10 / 3.570									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
Total	18 / 8.034	5 / 2.200	5 / 2.400	7 / 3.201	0 / 0.000	7 / 3.201	7 / 2.801	7 / 2.150	6 / 2.600	10 / 3.500	10 / 3.570	75 / 30.456									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3												P-1 Line Item Number / Title: 2237 / SURTASS																										
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
<i>Modification Item 1 of 1: VG006 - Integrated Common Processor</i>																																						
Installation Information																																						
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: Integrated Common Processor																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	-	-	3	2	-	-	3	2	-	1	3	3	-	2	3	2	-	2	3	2	-	1	3	2	-	4	3	3	10	75							
Out	16	2	-	-	3	2	-	-	3	2	1	-	3	3	2	-	3	2	2	-	3	2	1	3	2	-	4	3	3	10	75							

Footnotes:

(¹) ICP system configuration varies from ship to ship depending upon the type of arrays used (passive only, or passive and active). Additionally, Tech refresh efforts can be more significant in some years than others based on a range of factors, which include end of life components that require refresh; the need to incorporate significant cyber security and program protection improvements to reduce existing and projected threat vectors as well as the overall program protection posture and related requirements; inspections and testing into a particular ICP system undergoing refresh; or the need to update Configuration Control Models (CCMs) or Engineering Measurements Program (EMP) systems for each major hardware refresh. Accordingly, the procurement and installation costs will vary from one platform to another, depending on the configuration and the ship. Installation cost variance: The 9.1% unit installation cost increase from FY17 to FY18 is due to 1) constraints and additional installation requirements based upon ship availability and 2) the additional installation requirements needed to support the active/passive arrays vice the passive systems.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 5 / VG006 - SURTASS-E			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	10.000	0.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	10.000	0.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	10.000	0.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Expeditionary Surveillance Towed Array Sensor System (SURTASS-E) is a Rapid Prototyping, Experimentation and Demonstration (RPED) project, tasked to re-package, test and demonstrate a SURTASS-like acoustic surveillance system which can be used as a surrogate for some of the capabilities provided by traditional T-AGOS class vessels. The \$10M in FY19 provides for procurement of a production TL-29A Twin Line Towed Array plus supporting towed array assemblies and components required to provide the expeditionary capability to the fleet for extended testing and development. Initial program investment funding includes \$1.0M FY17 RDTEN and \$20.0M FY18 RDTEN.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 5 / VG006 - SURTASS-E			
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: 0204311N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: VG006 - SURTASS-E</i>												
B Kits												
Recurring												
1.1.1) SURTASS-E Arrays - NonOrganic												
- / -												
1 / 10.000												
Subtotal: Recurring												
- / 0.000												
Subtotal: VG006 - SURTASS-E												
- / -												
1 / 10.000												
Subtotal: Procurement, All Modification Items												
- / 0.000												
Installation												
<i>Modification Item 1 of 1: VG006 - SURTASS-E</i>												
- / 0.000												
Subtotal: Installation												
- / 0.000												
Total												
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	10.000	0.000	10.000	0.000	0.000	0.000	0.000	10.000

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3								P-1 Line Item Number / Title: 2237 / SURTASS								Modification Number / Title: 5 / VG006 - SURTASS-E														
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:																						
Modification Item 1 of 1: VG006 - SURTASS-E																														
Manufacturer Information																														
Manufacturer Name: LOCKHEED MARTIN								Manufacturer Location: SYRACUSE, NY																						
Administrative Leadtime (<i>in Months</i>): 2								Production Leadtime (<i>in Months</i>): 19																						
Dates	FY 2017		FY 2018		FY 2019				FY 2020		FY 2021		FY 2022		FY 2023															
Contract Dates					Dec 2018																									
Delivery Dates					Jul 2020																									
Installation Information																														
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: SURTASS-E Arrays																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
FY 2018	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
FY 2019	-	/	-	/	-	/	-	/	-	/	-	/	-	/	110.000	-	/	-	/	010.000	-	/								
FY 2020	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
FY 2021	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
FY 2022	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
FY 2023	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
To Complete	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/								
Total	-	/	-	/	-	/	-	/	-	/	-	/	-	/	110.000	-	/	-	/	010.000	-	/								
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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							
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS					Modification Number / Title: 2 / VG006 - TL-29A U.S. Twinline Arrays				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	44.687	19.000	1.785	1.820	0.000	1.820	1.860	1.018	1.935	1.974	0.000	74.079
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	44.687	19.000	1.785	1.820	0.000	1.820	1.860	1.018	1.935	1.974	0.000	74.079
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	44.687	19.000	1.785	1.820	0.000	1.820	1.860	1.018	1.935	1.974	0.000	74.079
(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 TL-29A Twinline is a shallow water variant of the common array produced by NAVSEA. The array consists of 2 shorter array lengths and array support equipment, and is designed for increased surveillance capability in high clutter environments and littoral areas. Funding in FY18-FY23 is also provided to refurbish existing TL-29A array legs. Support equipment procurement is for ancillary test sets, array headline and roll control systems, tow cables, and array leader cables.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 2 / VG006 - TL-29A U.S. Twinline Arrays			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: TL-29A Twinline Arrays			Modification Type: N/A				Related RDT&E PEs: 0204311N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> VG006 - TL-29A U.S. Twinline Arrays												
B Kits												
Recurring												
1.1.1) U.S. Twinline Arrays - NonOrganic ⁽²⁾		8 / 43.787	2 / 19.000	1 / 1.785	1 / 1.820	- / -	1 / 1.820	1 / 1.860	1 / 1.018	1 / 1.935	1 / 1.974	- / -
<i>Subtotal: Recurring</i>		- / 43.787	- / 19.000	- / 1.785	- / 1.820	- / -	- / 1.820	- / 1.860	- / 1.018	- / 1.935	- / 1.974	- / 0.000
<i>Subtotal: VG006 - TL-29A U.S. Twinline Arrays</i>		8 / 43.787	2 / 19.000	1 / 1.785	1 / 1.820	- / -	1 / 1.820	1 / 1.860	1 / 1.018	1 / 1.935	1 / 1.974	- / -
<i>Subtotal: Procurement, All Modification Items</i>		- / 43.787	- / 19.000	- / 1.785	- / 1.820	- / -	- / 1.820	- / 1.860	- / 1.018	- / 1.935	- / 1.974	- / 0.000
Installation												
<i>Modification Item 1 of 1:</i> VG006 - TL-29A U.S. Twinline Arrays		- / 0.900	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.900
<i>Subtotal: Installation</i>		- / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.900
Total												
Total Cost (Procurement + Support + Installation)	44.687	19.000	1.785	1.820	0.000	1.820	1.860	1.018	1.935	1.974	0.000	74.079

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2237 / SURTASS												Modification Number / Title: 2 / VG006 - TL-29A U.S. Twinline Arrays										
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: VG006 - TL-29A U.S. Twinline Arrays</i>															MDAP/MAIS Code:											
Manufacturer Information																										
Manufacturer Name: LOCKHEED MARTIN															Manufacturer Location: SYRACUSE, NY											
Administrative Leadtime (<i>in Months</i>): 2															Production Leadtime (<i>in Months</i>): 19											
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																			
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																			
Delivery Dates	Jul 2018	Jul 2019	Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024																			
Installation Information																										
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: U.S. Twinline Arrays																										
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.900										
FY 2017			- / -	- / -	- / -	2 / 0.000	0 / 0.000	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / -										
FY 2018			- / -	- / -	- / -	1 / 0.000	0 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / -										
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	1 / -										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	- / -	0 / 0.000	1 / -										
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	0 / 0.000	1 / -										
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	0 / 0.000	1 / -										
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	1 / 0.000	1 / -									
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
Total			8 / 0.900	- / -	- / -	3 / 0.000	0 / 0.000	3 / 0.000	1 / 0.000	1 / 0.000	1 / 0.000	1 / 0.000	1 / 0.000	1 / 0.000	1 / 0.000	16 / 0.900										
Installation Schedule																										
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023						
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot			
In	8	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-	1	-	-	1	1	16
Out	8	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	-	1	-	-	1	1	16
Footnotes:																										
(2) The TL-29A Twinline is a shallow water variant of the common array produced by NAVSEA. The array consists of two shorter array lengths and array support equipment, and is designed for increased surveillance capability in high clutter environments and littoral areas. Support equipment procurement is for ancillary test sets, array headline and roll control systems, tow cable, and leader cables. Installation funding is not required for the support equipment. FY17 funded two U.S. rotational pool arrays. FY18-FY23 funds refurbishment of one (1) array leg per year, which is less costly than procurement of new arrays.																										
Installation Remarks: Installation only occurs on six T-AGOS platforms, and as of FY17, a TASW SURTASS platform. Historically, an array is lost or severely damaged every 18 months. Last array was lost																										

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3	P-1 Line Item Number / Title: 2237 / SURTASS	Modification Number / Title: 2 / VG006 - TL-29A U.S. Twinline Arrays
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Sept 2006; last array severely damaged was Jul 2014. Without a ready asset in theater, if an array is lost or damaged, a SURTASS ship cannot deploy and execute its mission. Future assets to be delivered are initially provided as ready assets, and installed as needed.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 3 / VG006 - J-AOS			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	15.000	0.000	28.354	0.000	28.354	0.000	0.000	0.000	0.000	0.000	43.354
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	15.000	0.000	28.354	0.000	28.354	0.000	0.000	0.000	0.000	0.000	43.354
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	15.000	0.000	28.354	0.000	28.354	0.000	0.000	0.000	0.000	0.000	43.354
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

New P-3A to break out the J-AOS TL-29A array requirements from the U.S. requirements.

The J-AOS TL-29A procurement costs are associated with upgrading to a new array type and array support infrastructure, including two complete towed arrays and associated tow hardware and dry end equipment. A third rotational pool array, modules, dry side equipment and support equipment procurement was moved from FY21 to FY19. A third J-AOS ship is being constructed with commissioning scheduled for FY21. The ship requires outfitting with a mission system with procurement of a TL-29A array system and associated tow hardware, dry end equipment and installation. The program is funded with both FMS and OPN, and the \$15M in FY17 and the \$9.4M in FY19 represent the U.S. share of the total cost of the J-AOS TL-29A upgrade program. The U.S. cost share for the outfitting of the new J-AOS platform (J-3) is \$19.6M. All installation costs are paid via FMS funds.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 3 / VG006 - J-AOS			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: [No Model Specified]			Modification Type: N/A				Related RDT&E PEs: 02040311N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: VG006 - J-AOS</i>												
B Kits												
Recurring												
1.1.1) J-AOS - NonOrganic	- / -	1 / 15.000	- / -	2 / 28.354	- / -	2 / 28.354	- / -	- / -	- / -	- / -	- / -	3 / 43.354
<i>Subtotal: Recurring</i>	- / 0.000	- / 15.000	- / -	- / 28.354	- / -	- / 28.354	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: VG006 - J-AOS</i>	- / -	1 / 15.000	- / -	2 / 28.354	- / -	2 / 28.354	- / -	- / -	- / -	- / -	- / -	3 / 43.354
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 15.000	- / -	- / 28.354	- / -	- / 28.354	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: VG006 - J-AOS</i>												
<i>Subtotal: Installation</i>												
Total												
Total Cost (Procurement + Support + Installation)	0.000	15.000	0.000	28.354	0.000	28.354	0.000	0.000	0.000	0.000	0.000	43.354

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3										P-1 Line Item Number / Title: 2237 / SURTASS								Modification Number / Title: 3 / VG006 - J-AOS												
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: VG006 - J-AOS																														
Manufacturer Information																														
Manufacturer Name: LOCKHEED MARTIN										Manufacturer Location: SYRACUSE, NY																				
Administrative Leadtime (<i>in Months</i>): 2										Production Leadtime (<i>in Months</i>): 19																				
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Dec 2016				Dec 2018																									
Delivery Dates	Jul 2018				Jul 2020																									
Installation Information																														
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: J-AOS																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	1 / 0.000	0 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / -										
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / -										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
Total			- / -	- / -	- / -	- / -	1 / 0.000	0 / 0.000	1 / 0.000	- / -	2 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / -										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3					

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 4 / VG006 - SURTASS Team Trainer		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	6.590	1.277	4.194	1.750	0.000	1.750	4.500	1.750	4.700	1.750	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	6.590	1.277	4.194	1.750	0.000	1.750	4.500	1.750	4.700	1.750	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	6.590	1.277	4.194	1.750	0.000	1.750	4.500	1.750	4.700	1.750	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The SURTASS Team Trainer (STT) provides SURTASS crews with three high fidelity synthetic and live playback training capabilities to support Home Port Training Periods (HPTP) and Pre-Deployment Certification Periods (PDCP).

Each STT will receive a hardware tech refresh on a six-year cycle and receive a major software update installation on a two-year cycle, so that 3 STTs hardware tech refreshes and 9 major software installations would be performed over a given six-year period. Tech refresh and software updates for the STTs will continue on this cycle.

The 4-7% procurement cost growth between FY18, FY20, and FY22 accounts for the additional STT capabilities incorporated to provide operators with the means to address more sophisticated threat targets and environments. Similarly, installation costs increase slightly from FY17 to FY19 as a result of additional integration and testing considerations related to increasingly more sophisticated and capable STT suites.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS							Modification Number / Title: 4 / VG006 - SURTASS Team Trainer			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: SURTASS Team Trainer			Modification Type: N/A					Related RDT&E PEs: 0204311N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: VG006 - SURTASS Team Trainer</i>													
B Kits													
Recurring													
1.1.1) SURTASS Team Trainer - NonOrganic	2 / 6.341	- / -	1 / 4.194	- / -	- / -	- / -	1 / 4.500	- / -	1 / 4.700	- / -	Continuing	Continuing	
<i>Subtotal: Recurring</i>	<i>- / 6.341</i>	<i>- / -</i>	<i>- / 4.194</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 4.500</i>	<i>- / -</i>	<i>- / 4.700</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>	
<i>Subtotal: VG006 - SURTASS Team Trainer</i>	<i>2 / 6.341</i>	<i>- / -</i>	<i>1 / 4.194</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1 / 4.500</i>	<i>- / -</i>	<i>1 / 4.700</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 6.341</i>	<i>- / -</i>	<i>- / 4.194</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 4.500</i>	<i>- / -</i>	<i>- / 4.700</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>	
Installation													
<i>Modification Item 1 of 1: VG006 - SURTASS Team Trainer</i>													
<i>Subtotal: Installation</i>	<i>- / 0.249</i>	<i>- / 1.277</i>	<i>- / 0.000</i>	<i>- / 1.750</i>	<i>- / 0.000</i>	<i>- / 1.750</i>	<i>- / 0.000</i>	<i>- / 1.750</i>	<i>- / 0.000</i>	<i>- / 1.750</i>	<i>- / 0.000</i>	<i>- / 1.750</i>	<i>- / 0.000</i>
Total	Total Cost (Procurement + Support + Installation)	6.590	1.277	4.194	1.750	0.000	1.750	4.500	1.750	4.700	1.750	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3				P-1 Line Item Number / Title: 2237 / SURTASS									Modification Number / Title: 4 / VG006 - SURTASS Team Trainer																	
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: VG006 - SURTASS Team Trainer													MDAP/MAIS Code:																	
Manufacturer Information																														
Manufacturer Name: NSWC CD							Manufacturer Location: BETHESDA, MD																							
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 14																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates		Jan 2018		Jan 2020		Jan 2022																								
Delivery Dates		Feb 2019		Feb 2021		Feb 2023																								
Manufacturer Name: Lockheed Martin							Manufacturer Location: VA																							
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 14																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates		Jan 2018		Jan 2020		Jan 2022																								
Delivery Dates		Feb 2019		Feb 2021		Feb 2023																								
Installation Information																														
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: SURTASS Team Trainer																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.249	1 / 1.277	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.526																
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018	- / -	- / -	- / -	1 / 1.750	0 / 0.000	1 / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.750																
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.750	- / -	- / -	- / -	0 / 0.000	1 / 1.750																
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.750	0 / 0.000	1 / 1.750															
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total	1 / 0.249	1 / 1.277	- / -	1 / 1.750	0 / 0.000	1 / 1.750	- / -	1 / 1.750	- / -	1 / 1.750	- / -	1 / 1.750	0 / 0.000	5 / 6.776																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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			

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS					Modification Number / Title: 6 / VG007 - Field Changes/Modifications				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	12.218	1.103	11.149	2.563	0.000	2.563	4.168	3.848	2.041	3.924	0.000	41.014
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	12.218	1.103	11.149	2.563	0.000	2.563	4.168	3.848	2.041	3.924	0.000	41.014
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	12.218	1.103	11.149	2.563	0.000	2.563	4.168	3.848	2.041	3.924	0.000	41.014
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Field Changes/Modifications for correction of deficiencies identified by Fleet use, array support, communications equipment and replacement of aging/unsupportable equipment. Additional FY19-FY23 funding will facilitate transition to an upgraded command and control system, including installation of the Consolidated Afloat Network Enterprise System (CANES). Other aging End-of-life systems, including Global Command and Control System-Maritime (GCCS-M), UHF Line-of-sight Satellite (LOS/SAT), and ship's gyro will need to be replaced in order to ensure continuity of operations should the primary acoustic path to shore become inoperable.

Cost growth is reflective of funding for C4I Modernization added in POM-18. Costs for individual C4I systems being procured are varied, resulting in the variability in individual unit costs across the fiscal years, with the primary procurements occurring in FY18.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS						Modification Number / Title: 6 / VG007 - Field Changes/Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Field Changes/ Modifications			Modification Type: N/A					Related RDT&E PEs: 0204311N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: VG007 - Field Changes/ Modifications												
B Kits												
Recurring												
1.1.1) Field Changes/Modifications - NonOrganic		68 / 8.341	5 / 0.637	5 / 10.828	5 / 2.157	- / -	5 / 2.157	5 / 3.791	5 / 3.501	5 / 1.541	5 / 3.424	- / -
<i>Subtotal: Recurring</i>		- / 8.341	- / 0.637	- / 10.828	- / 2.157	- / -	- / 2.157	- / 3.791	- / 3.501	- / 1.541	- / 3.424	- / 0.000
<i>Subtotal: VG007 - Field Changes/Modifications</i>		68 / 8.341	5 / 0.637	5 / 10.828	5 / 2.157	- / -	5 / 2.157	5 / 3.791	5 / 3.501	5 / 1.541	5 / 3.424	- / -
<i>Subtotal: Procurement, All Modification Items</i>		- / 8.341	- / 0.637	- / 10.828	- / 2.157	- / -	- / 2.157	- / 3.791	- / 3.501	- / 1.541	- / 3.424	- / 0.000
Installation												
Modification Item 1 of 1: VG007 - Field Changes/ Modifications		- / 3.877	- / 0.466	- / 0.321	- / 0.406	- / 0.000	- / 0.406	- / 0.377	- / 0.347	- / 0.500	- / 0.500	- / 0.000
<i>Subtotal: Installation</i>		- / 3.877	- / 0.466	- / 0.321	- / 0.406	- / -	- / 0.406	- / 0.377	- / 0.347	- / 0.500	- / 0.500	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		12.218	1.103	11.149	2.563	0.000	2.563	4.168	3.848	2.041	3.924	0.000

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3			P-1 Line Item Number / Title: 2237 / SURTASS					Modification Number / Title: 6 / VG007 - Field Changes/Modifications								
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: VG007 - Field Changes/Modifications</i>								MDAP/MAIS Code:								
Manufacturer Information																
Manufacturer Name: SSC PAC				Manufacturer Location: San Diego, CA												
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 10												
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023								
Contract Dates	Nov 2016	Nov 2017	Nov 2018		Nov 2019	Nov 2020	Nov 2021	Nov 2022								
Delivery Dates	Sep 2017	Sep 2018	Sep 2019		Sep 2020	Sep 2021	Sep 2022	Sep 2023								
Manufacturer Name: SSC LANT				Manufacturer Location: Charleston, SC												
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 10												
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023								
Contract Dates	Nov 2016	Nov 2017	Nov 2018		Nov 2019	Nov 2020	Nov 2021	Nov 2022								
Delivery Dates	Sep 2017	Sep 2018	Sep 2019		Sep 2020	Sep 2021	Sep 2022	Sep 2023								
Manufacturer Name: Lockheed Martin				Manufacturer Location: VA												
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 10												
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023								
Contract Dates	Nov 2016	Nov 2017	Nov 2018		Nov 2019	Nov 2020	Nov 2021	Nov 2022								
Delivery Dates	Sep 2017	Sep 2018	Sep 2019		Sep 2020	Sep 2021	Sep 2022	Sep 2023								
Installation Information																
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: Field Changes/Modifications																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)				
Prior Years	68 / 3.877	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	68 / 3.877				
FY 2017	- / -	5 / 0.466	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.466				
FY 2018	- / -	- / -	5 / 0.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.321				
FY 2019	- / -	- / -	- / -	5 / 0.406	0 / 0.000	5 / 0.406	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.406				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.377	- / -	- / -	- / -	0 / 0.000	5 / 0.377				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.347	- / -	- / -	- / -	0 / 0.000	5 / 0.347				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.500	- / -	- / -	0 / 0.000	5 / 0.500				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.500	- / -	0 / 0.000	5 / 0.500				
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
Total	68 / 3.877	5 / 0.466	5 / 0.321	5 / 0.406	0 / 0.000	5 / 0.406	5 / 0.377	5 / 0.347	5 / 0.500	5 / 0.500	0 / 0.000	103 / 6.794				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 3												P-1 Line Item Number / Title: 2237 / SURTASS											Modification Number / Title: 6 / VG007 - Field Changes/Modifications																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																											
Modification Item 1 of 1: VG007 - Field Changes/Modifications																																							
Installation Information																																							
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: Field Changes/Modifications																																							
Installation Schedule																																							
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot									
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4															
In	68	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	103												
Out	68	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	-	-	5	-	103												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 4: Electronic Warfare Equipment				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: 0204228N					Other Related Program Elements: N/A			
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	783.154	244.001	240.433	420.344	0.000	420.344	554.399	693.782	498.954	478.252	1,262.099	5,175.418
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	783.154	244.001	240.433	420.344	0.000	420.344	554.399	693.782	498.954	478.252	1,262.099	5,175.418
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	783.154	244.001	240.433	420.344	0.000	420.344	554.399	693.782	498.954	478.252	1,262.099	5,175.418
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	1.002	11.976	9.903	-	9.903	8.670	7.532	13.220	8.582	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The FY 2019 funding request was reduced by \$19.630 million to account for the availability of prior year execution balances.												
The AN/SLQ-32(V) provides a family of modular ship born electronic warfare equipment which is installed on all surface combatants, aircraft carriers, amphibious ships and auxiliaries in the surface Navy. The system provides early detection, analysis, threat warning and protection from anti-ship missiles. The OPN 2312 budget supports the AN/SLQ-32(V)6 and AN/SLQ-32(V)7 variants through procurement and installation. The SEWIP Block 1B3 and Block 2 units are installed conjunctively and comprise the AN/SLQ-32(V)6 system. The SEWIP Block 1B3, Block 2 and Block 3 units are installed conjunctively and comprise the AN/SLQ-32(V)7 system.												
TC056: SURFACE ELECTRONIC WARFARE (EW) IMPROVEMENTS BLOCK 1 The Surface Electronic Warfare (EW) Improvement Program (SEWIP) will develop a modern, highly capable family of EW systems by block upgrade of the current AN/SLQ-32 system that is robust in detecting and countering current and future threats and will extend the service life of AN/SLQ3-2(V) systems. Funding procures upgrades to the current AN/SLQ-32 system.												
BLOCK 1B1 - SMALL SHIP ELECTRONIC MEASURES SYSTEM (SSESMS): Small Ship Electronic Support Measures System (SSESMS) provides Specific Emitter Identification (SEI) capability to various ships/ship classes in a stand-alone configuration. Tech Refresh funding is provided to address obsolescence and reliability issues presenting affecting fielded systems.												
BLOCK 1B2 - FEDERATED SPECIFIC EMITTER IDENTIFICATION (SEI): The federated SEI, consisting of SEI hardware plus an ICAD modification kit, fully integrates SEI functionality with the ICAD/Q-70 console. Tech Refresh funding is provided to address obsolescence and reliability issues affecting fielded systems.												
BLOCK 1B3 - HIGH GAIN HIGH SENSITIVITY (HGHS): High Gain High Sensitivity (HGHS) Adjunct Sensor is a critical improvement for threat correlation, situational awareness, and extending the battle space. Engineering Change Proposal (ECP) funding is provided to support changes resulting from software and hardware trouble reports from production, shipboard installations and/or land based testing. Tech Refresh funding is provided to address obsolescence and reliability issues affecting fielded systems. The SEWIP Block 1B3 and Block 2 units are installed conjunctively to compose the AN/SLQ-32(V)6 system. The SEWIP Block 1B3, Block 2 and Block 3 units are installed conjunctively to compose the AN/SLQ-32(V)7 system. The SEWIP Block 1B3 P-3a funding has been broken out to separately show systems installed with SEWIP Block 2 (FMP Block 1B3 for SLQ-32												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 4: Electronic Warfare Equipment		P-1 Line Item Number / Title: 2312 / AN/SLQ-32
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204228N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
(V)6) and systems installed with SEWIP Block 2 and Block 3 (FMP Block 1B3 for SLQ-32 (V)7). For FMP Block 1B3 systems for SLQ-32 (V)7, production lead times for Block 1B3 are 15 months and these systems are then delivered to the Block 3 Integration Facility, NSWC Crane, 6 months (180 days) prior to delivery as part of an integrated SLQ-32 (V)7 system. The 180 days is required for integration and testing with SEWIP Block 3 at the NSCW Crane Integration Facility.		
TC059: SURFACE ELECTRONIC WARFARE (EW) IMPROVEMENTS BLOCK 2 Block 2 will provide AN/SLQ-32(V) an upgraded antenna, receiver, and combat systems interface. The upgrades will pace the threat, improve detection and accuracy and mitigate Electromagnetic Interference (EMI). The Block 2 hardware cost includes the SEWIP Block 2 ES system, SLA-10D blunker, Common Processing System, Common Display System, Liquid Conditioning Unit and Data Adaptation Processor. The SEWIP Block 1B3 and Block 2 units are installed conjunctively and compose the AN/SLQ-32(V)6 system. The SEWIP Block 1B3, Block 2 and Block 3 units are installed conjunctively to compose the AN/SLQ-32(V)7 system. The SEWIP Block 2 P-3a funding has been broken out to separately show systems installed with SEWIP Block 1B3 (FMP Block 2 for SLQ-32 (V)6) and systems installed with SEWIP Block 1B3 and Block 3 (FMP Block 2 for SLQ-32 (V)7). For FMP Block 2 systems for SLQ-32 (V)7, production lead times for Block 2 are 17 months and these systems are then delivered to the system integrator, NSWC Crane, 6 months (180 days) prior to delivery as part of an integrated SLQ-32 (V)7 system. The 180 days is required for integration and testing with SEWIP Block 3 at the NSWC Crane Integration Facility.		
TC060: SURFACE ELECTRONIC WARFARE (EW) IMPROVEMENTS BLOCK 3: Block 3 will provide an Electronic Attack (EA) capability improvement required for the AN/SLQ-32(V) system to keep pace with the threat. SEWIP Block 3 will provide a common EA capability to surface combatants (CVN, DDG, LHD) outfitted with the active variant of the AN/SLQ-32, mainly the (V)3 and (V)4, as well as select new-construction platforms. The program builds on the EW Electronic Support (ES) capability delivered by Blocks 1 and 2. Development Status/Major Milestones are: Long Lead Material (LLM) was procured Q4 FY17, Milestone C Low Rate Initial Production (LRIP) Q4 FY18, IOT&E Q1 FY21, FRP is Q2 FY22. The SEWIP Block 1B3, Block 2 and Block 3 units compose the AN/SLQ-32(V)7 system. This may be accomplished as a conjunctive installation with all SEWIP components installed at the same time or as a non-conjunctive installation by installing the SEWIP Block 3 on a ship with SEWIP Block 1B3 and 2 previously installed.		
Block 3T (AN/SLQ-59) will provide an Electronic Attack (EA) capability improvement required for the AN/SLQ32(V) system to keep pace with the threat. Block 3T provides initial, limited interim capability of a focused application of the Naval Research Lab (NRL) Transportable EW Module (TEWM) system to meet an urgent operational needs (UON) statement.		
TC5IN: FMP INSTALLATIONS Shipboard installation of AN/SLQ-32(V) ECP/Field Changes and the Surface EW Improvements Blocks 1, 2 and 3.		
TC6IN: NON-FMP INSTALLATIONS Installation of AN/SLQ-32(V) ECP/Field Changes and the Surface EW Improvements Blocks 1, 2 and 3 at Shore Site Facilities.		
[P40A / TC956 - USCG WMSL AN/SLQ-32 B(V)2]: TC956 - UNITED STATES COAST GUARD (USCG) WMSL AN/SLQ-32B(V)2: This is a new requirement at PB19 to support USCG WMSL 758 and 759 and is in accordance with the requirements of OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material. NTNO material is procured by the Navy and installed by the USCG.		
[P40A / TC959 - SEWIP BLOCK 2 LITE FOR USCG OPC SHIPS]: TC959 - SEWIP BLOCK 2 LITE FOR UNITED STATES COAST GUARD (USCG) OPC SHIPS: This details the requirements for SEWIP Block 1B2 and SEWIP Lite systems in support of USCG OPC ships. These requirements were included in the SEWIP Block 1B1, TC056, and SEWIP Block 2, TC059, P-3a budget exhibits at PB18. OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material applies.		
Block 2 Lite is a variant of the Block 2 specifically tailored for the needs of small ships, such as LCS, OPC and the Fast Frigate, to address fleet emergent needs for a robust, capable, and sustainable EW system that meets the space, weight and power limitations of these smaller ships.		
[P40A / SEWIP BLOCK 1B2 UNITS USCG SHIP UNITS]: Notes:		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 4: Electronic Warfare Equipment	P-1 Line Item Number / Title: 2312 / AN/SLQ-32	
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204228N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
(1) This line was previously located in "TC056 - BLOCK 1B2 FEDERATED SEI" but was split out due to OPNAVINST 4000.79A for Navy Type - Navy Owned material (NTNO). NTNO material is procured by the Navy and installed by the USCG. (2) Cost increase from FY20-FY21 is a result of redesign due to multiple obsolescence issues.		
[P40A / SEWIP BLOCK 1B2 UNITS USCG SHORE UNITS]: Note: (1) This line was previously located in "TC056 - BLOCK 1B2 FEDERATED SEI" but was split out due to OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material. NTNO material is procured by the Navy and installed by the USCG.		
[P40A / SEWIP BLOCK 2 LITE USCG SHIP UNITS]: Notes: (1) This line was previously located in "TC056 - BLOCK 1B3 HGHS" but was split out due to OPNAVINST 4000.79A for Navy Type - Navy Owned material (NTNO). NTNO material is procured by the Navy and installed by the USCG. (2) The Block 2 Lite - OPC requirements have changed since PB18. The two units procured in prior year are now shown as shore units; these were depicted as one ship and one shore at PB18. These units are required for one shore site unit and an Environmental Test Qualification (EQT) unit. One ship unit has been added in FY18 and FY19 to support OPC 1 and OPC 2, respectively, based on in yard need dates for these ships.		
[P40A / SEWIP BLOCK 2 LITE USCG SHORE UNITS]: Note: This line was previously located in "TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM" but was split out due to OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material. NTNO material is procured by the Navy and installed by the USCG.		
[P40A / SEWIP BLOCK 2 LITE USCG SHORE INSTALL]: Note: This line was previously located in "TC056 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM" Shore Site Installs will be funded through the SEWIP Program.		
[P40A / TC960 - SOLID STATE PRODUCT SUPPORT INTEGRATOR (PSI)]: TC960 - SOLID STATE PRODUCT SUPPORT INTEGRATOR (PSI) The Solid State Product Support Integrator (PSI) for Radio Frequency (RF) funding line supports the stand-up of this capability for select components of SEWIP Block 3. The Solid State PSI, will provide engineering analysis and product support strategies as well as test and repair capabilities for the high band (HB) and low band (LB) transmit (Tx) and receive (Rx) components of SEWIP Block 3. Solid State PSI funding supports the procurements (investment expense) of HB and LB Tx and Rx module test and repair equipment in FY20-24. The Solid State PSI capability is shared with AMDR.		
Note: (1) TC960 Solid State PSI Procurements provide the following, Test Fixture (FY20), Text Set (FY21), Repair Equipment (FY22), and Calibration Equipment (FY23).		
[P40A / TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM]: TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM (MRTS) The Multipurpose Reconfigurable Training System (MRTS) is a new requirement at PB19 and provides support for Fleet maintenance training for SEWIP Block 2 and SEWIP Block 3. MRTS simulates the tactical system's components and subcomponents necessary for training without requiring the procurement of a full SEWIP Block 1B3, Block 2, or Block 3 system. This has resulted in an overall reduction of one shore site unit for each Block (procurement and installation) since PB18.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 4: Electronic Warfare Equipment				P-1 Line Item Number / Title: 2312 / AN/SLQ-32					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: 0204228N			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	AN/SLQ-32	P-5a			- / 10.126	- / 0.829	- / 11.336	- / 13.061	- / -
P-3a	1 / TC056 - BLOCK 1B1 SSES (SHIPALT/AIT)				- / 43.707	- / 0.119	- / 1.632	- / 0.000	- / 0.000
P-3a	2 / TC056 - BLOCK 1B2 FEDERATED SEI (SHIPALT/AIT)				- / 54.569	- / 1.184	- / 2.096	- / 3.152	- / 0.000
P-3a	3 / TC056 - BLOCK 1B3 HGH (SHIPALT/AIT)				- / 67.741	- / 19.698	- / 14.497	- / 26.422	- / 0.000
P-3a	4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM (SHIPALT/AIT)				- / 527.691	- / 150.016	- / 131.434	- / 228.705	- / 0.000
P-3a	5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM (SHIPALT/AIT)				- / 0.000	- / 28.909	- / 71.509	- / 149.004	- / 0.000
P-3a	6 / TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System (SHIPALT/AIT)				- / 79.320	- / 43.246	- / 7.929	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 783.154	- / 244.001	- / 240.433	- / 420.344	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-40a	AN/SLQ-32	P-5a			- / -	- / -	- / -	- / -	- / -
P-3a	1 / TC056 - BLOCK 1B1 SSES (SHIPALT/AIT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / TC056 - BLOCK 1B2 FEDERATED SEI (SHIPALT/AIT)				- / 1.903	- / 4.377	- / 2.386	- / 5.170	- / 9.451
P-3a	3 / TC056 - BLOCK 1B3 HGH (SHIPALT/AIT)				- / 24.691	- / 29.278	- / 22.134	- / 15.448	- / 19.221
P-3a	4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM (SHIPALT/AIT)				- / 237.649	- / 266.944	- / 164.226	- / 88.588	- / 163.878
P-3a	5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM (SHIPALT/AIT)				- / 281.734	- / 379.793	- / 297.758	- / 357.762	- / 980.815
P-3a	6 / TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System (SHIPALT/AIT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 130.495
P-40	Total Gross/Weapon System Cost				- / 554.399	- / 693.782	- / 498.954	- / 478.252	- / 1,262.099
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: The increase from FY 2018 to FY 2019 is attributed to the procurement of six additional Block 2 units, two additional Block 3 units, and eight Block 2 installations.									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4					P-1 Line Item Number / Title: 2312 / AN/SLQ-32									Aggregated Items Title: AN/SLQ-32						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) TC956 - USCG WMSL AN/SLQ-32 B(V)2																				
1.1) WMSL 758 AN/ SLQ-32 B(V)2 ^(†)	A		-	-	-	-	-	-	2,513K	1	2,513	-	-	-	-	-	-	-	-	
1.2) WMSL 759 AN/ SLQ-32 B(V)2 ^(†)	A		-	-	-	-	-	-	-	-	2,543K	1	2,543	-	-	-	2,543K	1	2,543	
<i>Subtotal: 1) TC956 - USCG WMSL AN/SLQ-32 B(V)2</i>			-	-	0.000	-	-	-	-	2.513	-	2.543	-	-	-	-	-	-	2.543	
2) TC959 - SEWIP BLOCK 2 LITE FOR USCG OPC SHIPS																				
2.1) SEWIP BLOCK 1B2 UNITS USCG SHIP UNITS ^(†)	A		-	-	-	-	-	-	370,000.00	1	0.370	370,000.00	1	0.370	-	-	-	370,000.00	1	0.370
2.2) SEWIP BLOCK 1B2 UNITS USCG SHORE UNITS	A		370,000.00	2	0.740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.3) SEWIP BLOCK 2 LITE USCG SHIP UNITS ^(†)	A		-	-	-	-	-	-	4,701K	1	4.701	4,846K	1	4.846	-	-	-	4,846K	1	4.846
2.4) SEWIP BLOCK 2 LITE USCG SHORE UNITS	A		4,693K	2	9.386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.5) SEWIP BLOCK 2 LITE USCG SHORE INSTALL	A		-	-	-	414,500.00	2	0.829	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 2) TC959 - SEWIP BLOCK 2 LITE FOR USCG OPC SHIPS</i>			-	-	10.126	-	-	0.829	-	5.071	-	5.216	-	-	-	-	-	-	5.216	
4) TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM																				
4.1) SEWIP BLOCK 2 MRTS UNITS ^(†)	A		-	-	-	-	-	-	-	-	600,000.00	2	1.200	-	-	-	600,000.00	2	1.200	
4.3) SEWIP BLOCK 2 MRTS SOFTWARE NRE	A		-	-	-	-	-	-	-	-	3.752	-	-	-	-	-	-	-	-	
4.4) SEWIP BLOCK 3 MRTS SOFTWARE NRE	A		-	-	-	-	-	-	-	-	-	-	-	4.102	-	-	-	-	4.102	
<i>Subtotal: 4) TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM</i>			-	-	0.000	-	-	-	-	3.752	-	5.302	-	-	-	-	-	-	5.302	
Total			-	-	10.126	-	-	0.829	-	11.336	-	13.061	-	-	-	-	-	-	13.061	

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

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32					Aggregated Items: AN/SLQ-32				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) TC956 - USCG WMSL AN/SLQ-32 B(V)2												
1.1) WMSL 758 AN/SLQ-32 B(V)2		2018	Crane Organic / Crane, Indiana	C / FFP	None	Nov 2017	Sep 2018	1	2,513K	N		Mar 2014
1.2) WMSL 759 AN/SLQ-32 B(V)2		2019 ⁽¹⁾	Crane Organic / Crane, Indiana	C / FFP	None	Nov 2018	Sep 2019	1	2,543K	N		Mar 2014
2) TC959 - SEWIP BLOCK 2 LITE FOR USCG OPC SHIPS												
2.1) SEWIP BLOCK 1B2 UNITS USCG SHIP UNITS		2018 ⁽²⁾	General Dynamics AIC / Fair Lakes, VA	C / FFP	NSWC Crane	Feb 2018	Apr 2019	1	370,000.00	Y		Mar 2016
2.1) SEWIP BLOCK 1B2 UNITS USCG SHIP UNITS		2019	General Dynamics AIC / Fair Lakes, VA	C / FFP	NSWC Crane	Feb 2019	Apr 2020	1	370,000.00	N		Mar 2016
2.3) SEWIP BLOCK 2 LITE USCG SHIP UNITS		2018	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Mar 2018	Aug 2018	1	4,701K	Y		Mar 2015
2.3) SEWIP BLOCK 2 LITE USCG SHIP UNITS		2019	Lockheed Martin / Syracuse, NY	C / FFP	Washington Navy Yard	Mar 2019	Aug 2019	1	4,846K	N		Mar 2015
4) TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM												
4.1) SEWIP BLOCK 2 MRTS UNITS		2019 ⁽³⁾	TBD / TBD	C / TBD	TBD	Mar 2019	Mar 2020	2	600,000.00	Y		Aug 2016

Footnotes:

⁽¹⁾ TC956 - USCG WMSL AN/SLQ-32B(V)2: This is a new requirement at PB19 to support United States Coast Guard (USCG) WMSL 758 and 759 and is in accordance with the requirements of OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material. NTNO material is procured by the Navy and installed by the USCG.

⁽²⁾ TC959 - SEWIP BLOCK 2 LITE FOR USCG OPC SHIPS: This details the requirements for SEWIP Block 1B2 and SEWIP Lite systems in support of USCG OPC ships. These requirements were included in the SEWIP Block 1B1, TC056, and SEWIP Block 2, TC059, P-3a budget exhibits at PB18. OPNAVINST 4000.79A for Navy Type - Navy Owned (NTNO) material applies. Block 2 Lite is a variant of the Block 2 specifically tailored for the needs of small ships, such as LCS, OPC and the Fast Frigate, to address fleet emergent needs for a robust, capable, and sustainable EW system, that meets the space, weight and power limitations of these smaller ships. OPC requirements have changed since PB18. The two units procured in prior year are now shown as shore units; these were depicted as one ship and one shore at PB18. These units are required for one shore site unit and an Environmental Test Qualification (EQT) unit. See P40A note on Page 3 for additional details.

⁽³⁾ TC960 - MULTIPURPOSE RECONFIGURABLE TRAINING SYSTEM (MRTS): The Multipurpose Reconfigurable Training System (MRTS) is a new requirement at PB19 and provides support for Fleet maintenance training for SEWIP Block 2 and SEWIP Block 3. MRTS simulates the tactical system's components and subcomponents necessary for training without requiring the procurement of a full SEWIP Block 1B3, Block 2, or Block 3 system. This has resulted in an overall reduction of one shore site unit for each Block (procurement and installation) since PB18.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32						Modification Number / Title: 1 / TC056 - BLOCK 1B1 SSESMM			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	43.707	0.119	1.632	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.458
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	43.707	0.119	1.632	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.458
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	43.707	0.119	1.632	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.458
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Small Ship Electronic Support Measures System (SSESMM) provides Specific Emitter Identification (SEI) capability to various ships/ship classes in a stand-alone configuration. Tech Refresh funding is provided to address obsolescence and reliability issues affecting fielded systems.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32							Modification Number / Title: 1 / TC056 - BLOCK 1B1 SSESMM			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: TC056 SURFACE EW IMPROVEMENTS BLOCK 1: BLOCK 1B1 - SSESMM			Modification Type: SHIPALT/AIT					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: TC056 - BLOCK 1B1 SSESMM													
B Kits													
Recurring													
1.1.1) CNSG EQUIPMENT - NonOrganic ⁽⁴⁾	15 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.000
1.1.2) FMP SHIP UNITS (Field Change) - NonOrganic	85 / 18.226	37 / 0.119	44 / 0.132	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	166 / 18.477
<i>Subtotal: Recurring</i>	<i>- / 18.226</i>	<i>- / 0.119</i>	<i>- / 0.132</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i> / 18.477						
<i>Subtotal: TC056 - BLOCK 1B1 SSESMM</i>	<i>100 / 18.226</i>	<i>37 / 0.119</i>	<i>44 / 0.132</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>181 / 18.477</i>						
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 18.226</i>	<i>- / 0.119</i>	<i>- / 0.132</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i> / 18.477						
Support (All Modification Items)													
2.1) Production Support	- / 8.704	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.704
2.2) Tech Refresh ⁽⁵⁾	- / 3.479	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.479
<i>Subtotal: Support</i>	<i>- / 12.183</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i> / 12.183
Installation													
Modification Item 1 of 1: TC056 - BLOCK 1B1 SSESMM	- / 13.298	- / 0.000	- / 1.500	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 14.798
<i>Subtotal: Installation</i>	<i>- / 13.298</i>	<i>- / -</i>	<i>- / 1.500</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i> / 14.798						
Total													
Total Cost (Procurement + Support + Installation)	43.707	0.119	1.632	0.000	0.000	0.000	45.458						

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 1 / TC056 - BLOCK 1B1 SSESMS																		
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: TC056 - BLOCK 1B1 SSESMS												MDAP/MAIS Code:																		
Manufacturer Information																														
Manufacturer Name: General Dynamics AIS								Manufacturer Location: Fair Lakes VA																						
Administrative Leadtime (in Months): 1								Production Leadtime (in Months): 3																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2017	Jan 2018																												
Delivery Dates	Mar 2018	Apr 2018																												
Installation Information																														
Method of Implementation: SHIPALT/AIT:: Installation Name: CNSG EQUIPMENT																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)													
Prior Years			15 / 2.206	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 2.206																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			15 / 2.206	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 2.206																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15					
Method of Implementation: SHIPALT/AIT:: Installation Name: FMP SHIP UNITS (Field Change)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)					
Prior Years			68 / 11.092	- / -	17 / 0.261	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	85 / 11.353																

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 1 / TC056 - BLOCK 1B1 SSESMS																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1: TC056 - BLOCK 1B1 SSESMS</i>																														
Installation Information																														
Method of Implementation: SHIPALT/AIT:: Installation Name: FMP SHIP UNITS (Field Change)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)															
FY 2017			- / -	- / -	37 / 0.566	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	37 / 0.566																
FY 2018			- / -	- / -	44 / 0.673	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	44 / 0.673																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			68 / 11.092	- / -	98 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	166 / 12.592																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	68	-	-	-	-	17	38	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	166				
Out	52	16	-	-	-	-	17	38	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	166				

Footnotes:

(4) Fifteen (15) units procured by Chief Naval Security Group (CNSG)

(5) Additional Tech Refresh procurements were required in FY16-FY18 to implement tech refresh changes. The Tech Refresh hardware consists of circuit cards and an Operating System update. The tech refresh applies to all in-service CG, DDG, and Amphibious ships with SEI systems (114 ships).

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 2 / TC056 - BLOCK 1B2 FEDERATED SEI	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	54.569	1.184	2.096	3.152	0.000	3.152	1.903	4.377	2.386	5.170	9.451	84.288
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	54.569	1.184	2.096	3.152	0.000	3.152	1.903	4.377	2.386	5.170	9.451	84.288
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	54.569	1.184	2.096	3.152	0.000	3.152	1.903	4.377	2.386	5.170	9.451	84.288
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The federated SEI, consisting of SEI hardware plus an ICAD modification kit, fully integrates SEI functionality with the ICAD/Q-70 console. Tech Refresh funding is provided to address obsolescence and reliability issues affecting fielded systems.												
Notes: (1) Procurement of 1B2 systems in support of USCG OPC ships has been moved into a P-40A exhibit (TC959) within this budget in accordance with OPNAVINST 4000.79A for Navy Type - Navy Owned material. (2) Cost increase from FY20-FY21 is a result of redesign due to multiple obsolescence issues.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32							Modification Number / Title: 2 / TC056 - BLOCK 1B2 FEDERATED SEI				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:				
Models of Systems Affected: TC056 SURFACE EW IMPROVEMENTS BLOCK 1: BLOCK 1B2 - FEDERATED SEI			Modification Type: SHIPALT/AIT							Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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														
<i>Modification Item 1 of 1:</i> TC056 - BLOCK 1B2 FEDERATED SEI														
B Kits														
Recurring														
1.1.1) FMP SHIP UNITS - NonOrganic		60 / 22.200	3 / 1.110	3 / 1.110	2 / 0.740	- / -	2 / 0.740	2 / 0.770	5 / 2.865	1 / 0.585	5 / 2.985	2 / 1.242	83 / 33.607	
1.1.2) NON-FMP SHORE SITE UNITS - NonOrganic		2 / 0.682	- / -	1 / 0.370	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.052	
Subtotal: Recurring		- / 22.882	- / 1.110	- / 1.480	- / 0.740	- / -	- / 0.740	- / 0.770	- / 2.865	- / 0.585	- / 2.985	- / 1.242	- / 34.659	
Subtotal: TC056 - BLOCK 1B2 FEDERATED SEI		62 / 22.882	3 / 1.110	4 / 1.480	2 / 0.740	- / -	2 / 0.740	2 / 0.770	5 / 2.865	1 / 0.585	5 / 2.985	2 / 1.242	86 / 34.659	
Subtotal: Procurement, All Modification Items		- / 22.882	- / 1.110	- / 1.480	- / 0.740	- / -	- / 0.740	- / 0.770	- / 2.865	- / 0.585	- / 2.985	- / 1.242	- / 34.659	
Support (All Modification Items)														
2.1) Production Support		- / 7.935	- / -	- / 0.120	- / 0.125	- / -	- / 0.125	- / 0.127	- / 0.129	- / 0.132	- / 0.134	- / 1.177	- / 9.879	
2.2) Tech Refresh		- / 5.739	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.215	- / 7.954
2.3) Engineering Change Proposals (ECPs)		- / -	- / -	- / -	- / 0.033	- / -	- / 0.033	- / 0.035	- / 0.069	- / 0.035	- / 0.035	- / 0.018	- / 0.112	- / 0.302
2.4) INCO Spares		- / -	- / -	- / -	- / 0.258	- / -	- / 0.258	- / 0.264	- / 0.242	- / 0.165	- / 0.196	- / 0.832	- / 1.957	
Subtotal: Support		- / 13.674	- / -	- / 0.120	- / 0.416	- / -	- / 0.416	- / 0.426	- / 0.440	- / 0.332	- / 0.348	- / 4.336	- / 20.092	
Installation														
<i>Modification Item 1 of 1:</i> TC056 - BLOCK 1B2 FEDERATED SEI		- / 18.013	- / 0.074	- / 0.496	- / 1.996	- / 0.000	- / 1.996	- / 0.707	- / 1.072	- / 1.469	- / 1.837	- / 3.873	- / 29.537	
Subtotal: Installation		- / 18.013	- / 0.074	- / 0.496	- / 1.996	- / -	- / 1.996	- / 0.707	- / 1.072	- / 1.469	- / 1.837	- / 3.873	- / 29.537	
Total														
Total Cost (Procurement + Support + Installation)		54.569	1.184	2.096	3.152	0.000	3.152	1.903	4.377	2.386	5.170	9.451	84.288	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 2 / TC056 - BLOCK 1B2 FEDERATED SEI																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: TC056 - BLOCK 1B2 FEDERATED SEI																																	
Manufacturer Information																																	
Manufacturer Name: General Dynamics AIS							Manufacturer Location: Fair Lakes, VA																										
Administrative Leadtime (in Months): 1							Production Leadtime (in Months): 14																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Aug 2017		Feb 2018		Feb 2019		Feb 2020		Feb 2021		Feb 2022		Feb 2023																				
Delivery Dates	Oct 2018		Apr 2019		Apr 2020		Apr 2021		Apr 2022		Apr 2023		Apr 2024																				
Installation Information																																	
Method of Implementation: SHIPALT/AIT:: Installation Name: FMP SHIP UNITS																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 17.793	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 17.793																		
FY 2017			- / -	0 / 0.032	0 / 0.138	3 / 1.158	0 / 0.000	3 / 1.158	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.328																		
FY 2018			- / -	0 / 0.042	0 / 0.138	2 / 0.815	0 / 0.000	2 / 0.815	1 / 0.359	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.354																		
FY 2019			- / -	- / -	- / -	0 / 0.023	0 / 0.000	0 / 0.023	0 / 0.098	2 / 0.819	- / -	- / -	- / -	0 / 0.000	2 / 0.940																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.020	0 / 0.124	2 / 0.828	- / -	- / -	0 / 0.000	2 / 0.972																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.010	0 / 0.129	1 / 0.621	4 / 1.689	0 / 0.000	5 / 2.449																			
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.010	0 / 0.053	1 / 0.431	1 / 0.494																			
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.010	0 / 0.095	5 / 2.404	5 / 2.509																			
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.038	2 / 1.038																			
Total			60 / 17.793	0 / 0.074	0 / 0.276	5 / 1.996	0 / 0.000	5 / 1.996	1 / 0.487	2 / 1.072	3 / 1.469	4 / 1.837	8 / 3.873	83 / 28.877																			
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot										
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
In	60	-	-	-	-	-	-	3	-	-	2	-	1	-	-	1	1	-	-	2	1	3	1	-	-	8	83						
Out	60	-	-	-	-	-	-	-	3	-	-	2	-	1	-	-	1	1	-	-	-	2	1	3	1	-	-	8	83				

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32									Modification Number / Title: 2 / TC056 - BLOCK 1B2 FEDERATED SEI																		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																		
Modification Item 1 of 1: TC056 - BLOCK 1B2 FEDERATED SEI																															
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: NON-FMP SHORE SITE UNITS																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.220	- / -	1 / 0.220	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.440																	
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.220	- / -	- / -	- / -	0 / 0.000	1 / 0.220																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				1 / 0.220	- / -	1 / 0.220	- / -	- / -	- / -	1 / 0.220	- / -	- / -	- / -	0 / 0.000	3 / 0.660																
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	-	-	-	-	-	-	-	-	-	3								
Out	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3								

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32					Modification Number / Title: 3 / TC056 - BLOCK 1B3 HGHS				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	67.741	19.698	14.497	26.422	0.000	26.422	24.691	29.278	22.134	15.448	19.221	239.130
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	67.741	19.698	14.497	26.422	0.000	26.422	24.691	29.278	22.134	15.448	19.221	239.130
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	67.741	19.698	14.497	26.422	0.000	26.422	24.691	29.278	22.134	15.448	19.221	239.130
(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:

Block 1B3: High Gain High Sensitivity (HGHS)

High Gain High Sensitivity (HGHS) Adjunct Sensor is a critical improvement for threat correlation, situational awareness, and extending the battle space. Engineering Change Proposal (ECP) funding is provided to support changes resulting from software and hardware trouble reports from production, shipboard installations and/or land based testing. Tech Refresh funding is provided to address obsolescence and reliability issues affecting fielded systems. The SEWIP Block 1B3 and Block 2 units are installed conjunctively to compose the AN/SLQ-32(V)6 system. The SEWIP Block 1B3, Block 2 and Block 3 units are installed conjunctively to compose the AN/SLQ-32(V)7 system. The SEWIP Block 1B3 P-3a funding has been broken out to separately show systems installed with SEWIP Block 2 (FMP Block 1B3 for SLQ-32 (V)6) and systems installed with SEWIP Block 2 and Block 3 (FMP Block 1B3 for SLQ-32 (V)7). For FMP Block 1B3 systems for SLQ-32 (V)6 and (V)7, production lead time for Block 1B3 is 15 months and these systems are then delivered to the system integrator, NSWC Crane, 6 months (A-180 days) prior to the start of the installation availability for integration into a SLQ-32 (V)6 or (V)7 system. 135 days is required for integration and testing with SEWIP Blocks 1B2 and 1B3 for SLQ-32 (V)6 and SEWIP Blocks 1B2, 1B3 and 3 for SLQ-32(V7), 15 days for preparation for shipment and delivery to the shipyard 30 days prior to the start of the availability (A-30).

Notes:

(1) Production Support provides for Government oversight of production, Government and Original Equipment Manufacturer (OEM) support of production related software and hardware problems, and engineering as well as integrated logistics support efforts in support of production and fielding.

(2) Engineering Change Proposal (ECP) funding is to address reliability, obsolescence, and other issues associated with production, and is estimated at 3% of the total hardware cost.

(3) Installation cost estimates have been revised based on actual costs of installations to date.

(4) Total SEWIP Block 1B3 quantities being procured are the same as PB18. As a result, FMP Block 1B3 for SLQ-32(V)6 increased by seven units due to the acceleration of the SLQ-32(V)6 installation schedule. FMP Block 1B3 for SLQ-32(V)7 decreased by six units due to the decision to install six systems as non-conjunctive. One shore site system was eliminated due to the adoption of MRTS for training.

(5) Funding for Installation and Check Out (INCO) spares to support FY18-FY23 procured units is called out separately in the SEWIP Block 1B3 Support line 2.4. The increase from FY18 to FY19 is to address the INCO spares deficiencies caused by higher than anticipated failure rates.

(6) For FMP Block 1B3 systems, the production lead time is 15 months, and these systems are then delivered to the system integrator, NSWC Crane, 6 months prior to the start of the installation availability (A-180 days) where integration, testing, and preparation for shipment is conducted. 135 days are required for integration and testing of the SEWIP Blocks 1B2, 1B3 and 2 into an SLQ-32(V)6 system, preparation

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4	P-1 Line Item Number / Title: 2312 / AN/SLQ-32
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
for shipment (15 days) and delivery to the shipyard 30 days prior to the start of the availability (A-30). The four FY19 units installed in Q1FY22 are scheduled for delivery to the Government between 15 Mar 2021 and 3 May 2021. The integration start dates for these units are required to start no later than 15 Aug - 15 Sep 2021 in order to prepare the systems for installation	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32							Modification Number / Title: 3 / TC056 - BLOCK 1B3 HGHS			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: TC056 SURFACE EW IMPROVEMENTS BLOCK 1 - BLOCK 1B3 HGHS			Modification Type: SHIPALT/AIT					Related RDT&E PEs: 0604757N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: TC056 - BLOCK 1B3 HGHS													
B Kits													
Recurring													
1.1.1) FMP BLOCK 1B3 for SLQ-32 (V)6 - NonOrganic	32 / 34.805	13 / 9.165	9 / 6.255	15 / 10.365	- / -	15 / 10.365	14 / 9.870	8 / 5.752	4 / 2.932	1 / 0.748	- / -	96 / 79.892	
1.1.2) FMP BLOCK 1B3 for SLQ-32 (V)7 - NonOrganic	- / -	1 / 0.705	1 / 0.695	1 / 0.691	- / -	1 / 0.691	5 / 3.525	9 / 6.471	4 / 2.932	1 / 0.748	2 / 1.526	24 / 17.293	
1.1.3) NON-FMP BLOCK 1B3 SHORE SITE - NonOrganic	7 / 8.731	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 8.731	
1.1.4) BLK 1B3 GFE UNIT FOR BLK 3 OEM - NonOrganic	2 / 2.602	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.602	
Subtotal: Recurring	- / 46.138	- / 9.870	- / 6.950	- / 11.056	- / -	- / 11.056	- / 13.395	- / 12.223	- / 5.864	- / 1.496	- / 1.526	- / 108.518	
Subtotal: TC056 - BLOCK 1B3 HGHS	41 / 46.138	14 / 9.870	10 / 6.950	16 / 11.056	- / -	16 / 11.056	19 / 13.395	17 / 12.223	8 / 5.864	2 / 1.496	2 / 1.526	129 / 108.518	
Subtotal: Procurement, All Modification Items	- / 46.138	- / 9.870	- / 6.950	- / 11.056	- / -	- / 11.056	- / 13.395	- / 12.223	- / 5.864	- / 1.496	- / 1.526	- / 108.518	
Support (All Modification Items)													
2.1) Production Support	- / 10.344	- / 2.156	- / 2.306	- / 2.446	- / -	- / 2.446	- / 2.189	- / 2.233	- / 2.278	- / 1.841	- / 1.500	- / 27.293	
2.2) Tech Refresh	- / 0.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.989	- / 5.427
2.3) Engineering Change Proposals (ECPs)	- / 0.915	- / 0.137	- / 0.210	- / 0.250	- / -	- / 0.250	- / 0.320	- / 0.320	- / 0.150	- / 0.110	- / 0.110	- / 1.252	
2.4) INCO Spares	- / -	- / -	- / 0.282	- / 1.592	- / -	- / 1.592	- / 0.263	- / 0.940	- / 0.776	- / -	- / -	- / 3.853	
Subtotal: Support	- / 11.697	- / 2.293	- / 2.798	- / 4.288	- / -	- / 4.288	- / 2.772	- / 3.493	- / 3.204	- / 1.951	- / 6.599	- / 39.095	
Installation													
Modification Item 1 of 1: TC056 - BLOCK 1B3 HGHS	- / 9.906	- / 7.535	- / 4.749	- / 11.078	- / 0.000	- / 11.078	- / 8.524	- / 13.562	- / 13.066	- / 12.001	- / 11.096	- / 91.517	
Subtotal: Installation	- / 9.906	- / 7.535	- / 4.749	- / 11.078	- / -	- / 11.078	- / 8.524	- / 13.562	- / 13.066	- / 12.001	- / 11.096	- / 91.517	
Total													
Total Cost (Procurement + Support + Installation)	67.741	19.698	14.497	26.422	0.000	26.422	24.691	29.278	22.134	15.448	19.221	239.130	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32									Modification Number / Title: 3 / TC056 - BLOCK 1B3 HGHS																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: TC056 - BLOCK 1B3 HGHS																														
Manufacturer Information																														
Manufacturer Name: General Dynamics AIS							Manufacturer Location: Fair Lakes VA																							
Administrative Leadtime (<i>in Months</i>): 1							Production Leadtime (<i>in Months</i>): 15																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																					
Contract Dates	Jan 2018	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023																							
Delivery Dates	Apr 2019	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024																							
Installation Information																														
Method of Implementation: SHIPALT/AIT:: Installation Name: FMP BLOCK 1B3 for SLQ-32 (V)6																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 8.166	13 / 7.419	6 / 2.780	4 / 2.312	0 / 0.000	4 / 2.312	- / -	- / -	- / -	- / -	0 / 0.000	32 / 20.677																
FY 2017			- / -	0 / 0.116	0 / 0.938	10 / 5.927	0 / 0.000	10 / 5.927	3 / 1.776	- / -	- / -	- / -	0 / 0.000	13 / 8.757																
FY 2018			- / -	- / -	0 / 0.541	0 / 0.880	0 / 0.000	0 / 0.880	4 / 2.616	5 / 2.996	- / -	- / -	0 / 0.000	9 / 7.033																
FY 2019			- / -	- / -	- / -	0 / 1.504	0 / 0.000	0 / 1.504	0 / 1.099	11 / 6.793	4 / 2.426	- / -	0 / 0.000	15 / 11.822																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.661	0 / 0.883	12 / 7.379	2 / 1.227	0 / 0.000	14 / 11.150																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.120	0 / 0.406	8 / 4.909	0 / 0.000	8 / 6.435																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.567	0 / 0.206	4 / 2.484	4 / 3.257																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.142	0 / 0.051	1 / 0.621	1 / 0.814																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			9 / 8.166	13 / 7.535	6 / 4.259	14 / 10.623	0 / 0.000	14 / 10.623	7 / 7.152	16 / 11.792	16 / 10.920	10 / 6.393	5 / 3.105	96 / 69.945																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	3	-	2	8	-	-	6	2	3	2	7	3	4	-	-	5	5	5	1	4	1	3	8	2	3	1	4	5	96
Out	7	2	3	-	2	8	-	-	6	2	3	2	7	3	4	-	-	5	5	5	1	4	1	3	8	2	3	1	9	96
Method of Implementation: [none specified]:: Installation Name: FMP BLOCK 1B3 for SLQ-32 (V)7																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Prior Years				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -			

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 3 / TC056 - BLOCK 1B3 HGHS																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: TC056 - BLOCK 1B3 HGHS																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: FMP BLOCK 1B3 for SLQ-32 (V)7																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
FY 2017				- / -	- / -	0 / 0.135	0 / 0.049	0 / 0.000	0 / 0.049	1 / 0.592	- / -	- / -	- / -	0 / 0.000	1 / 0.776															
FY 2018				- / -	- / -	0 / 0.135	0 / 0.049	0 / 0.000	0 / 0.049	1 / 0.592	- / -	- / -	- / -	0 / 0.000	1 / 0.776															
FY 2019				- / -	- / -	- / -	0 / 0.137	0 / 0.000	0 / 0.137	0 / 0.050	1 / 0.599	- / -	- / -	0 / 0.000	1 / 0.786															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.138	0 / 0.611	1 / 0.809	4 / 2.455	0 / 0.000	5 / 4.013															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.560	0 / 0.912	4 / 2.712	5 / 3.100	9 / 7.284																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.425	0 / 0.298	4 / 2.544	4 / 3.267																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.143	1 / 0.680	1 / 0.823																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.667	2 / 1.667																
Total				- / -	- / -	0 / 0.270	0 / 0.235	0 / 0.000	0 / 0.235	2 / 1.372	1 / 1.770	1 / 2.146	8 / 5.608	12 / 7.991	24 / 19.392															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	1	1	2	12	24			
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	1	-	-	4	1	1	1	14	24			
Method of Implementation: AIT:: Installation Name: NON-FMP BLOCK 1B3 SHORE SITE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.380	- / -	1 / 0.220	1 / 0.220	0 / 0.000	1 / 0.220	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.820														
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total				5 / 1.380	- / -	1 / 0.220	1 / 0.220	0 / 0.000	1 / 0.220	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.820														

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4												P-1 Line Item Number / Title: 2312 / AN/SLQ-32											Modification Number / Title: 3 / TC056 - BLOCK 1B3 HGHS							
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: TC056 - BLOCK 1B3 HGHS																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: NON-FMP BLOCK 1B3 SHORE SITE																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7					
Out	5	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7					
Method of Implementation: AIT:: Installation Name: BLK 1B3 GFE UNIT FOR BLK 3 OEM																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total				
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)			
Prior Years	2 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.360								
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
Total	2 / 0.360	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.360								
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32						Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	527.691	150.016	131.434	228.705	0.000	228.705	237.649	266.944	164.226	88.588	163.878	1,959.131		
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	527.691	150.016	131.434	228.705	0.000	228.705	237.649	266.944	164.226	88.588	163.878	1,959.131		
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	527.691	150.016	131.434	228.705	0.000	228.705	237.649	266.944	164.226	88.588	163.878	1,959.131		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>														
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Description:														
TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM														
Block 2 will provide AN/SLQ-32(V) an upgraded antenna, receiver, and combat systems interface. The upgrades will pace the threat, improve detection and accuracy and mitigate Electromagnetic Interference (EMI). The Block 2 hardware cost includes the SEWIP Block 2 ES system, SLA-10D blunker, Common Processing System, Common Display System, Liquid Conditioning Unit and Data Adaptation Processor. The SEWIP Block 1B3 and Block 2 units are installed conjunctively and compose the AN/SLQ-32(V)6 system. The SEWIP Block 1B3, Block 2 and Block 3 units are installed conjunctively to compose the AN/SLQ-32(V)7 system. The SEWIP Block 2 P-3a funding has been broken out to separately show systems installed with SEWIP Block 1B3 (FMP Block 2 for SLQ-32 (V)6) and systems installed with SEWIP Block 1B3 and Block 3 (FMP Block 2 for SLQ-32 (V)7). For FMP Block 2 systems for SLQ-32 (V)6 and (V)7, the production lead time is 17 months and these systems are then delivered to the system integrator, NSWC Crane, 6 months (A-180 days) prior to the start of the installation availability for integration into a SLQ-32 (V)6 or (V)7 system. 135 days is required for integration and testing with SEWIP Blocks 1B2 and 1B3 for SLQ-32 (V)6 and SEWIP Blocks 1B2, 1B3 and 3 for SLQ-32(V)7, 15 days for preparation for shipment and delivery to the shipyard 30 days prior to the start of the availability (A-30).														
Notes:														
(1) Production Support provides for Government production oversight and original equipment manufacturer (OEM) support of production. This includes software, hardware problems, and integrated logistics support for production and fielding. Production support cost has increased from FY18 to FY19 due to additional Government oversight requirements and additional Government and OEM support for unplanned efforts including Environmental Qualification Test (EQT) fixes, retrofit of an upgraded Liquid Conditioning Unit (LCU), and next Generation VME replacement. These fixes and upgrades impact both new systems as well as previously fielding systems, resulting in an increase level of effort.														
(2) Tech Refresh funding in FY19-FY23 will provide for the procurement and retrofit of an upgraded Liquid Cooling Unit (LCU), implement enhanced cybersecurity safeguards and upgrade to the Next Generation VME system replacement. Tech Refresh of the LCU will address reliability and support cost drivers of the current configuration. Enhanced cybersecurity safeguards are required for the AN/SLQ-32(V)6 system to continue to be part of the integrated combat system. The next Generation VME system replacement will update SEWIP Block 2 to VPX (also known a VITA 46) to correct VMEbus bandwidth limitations, which will address obsolescence and reliability issues affecting fielded systems.														
(3) Engineering Change Proposal (ECP) funding addresses reliability, obsolescence, and other issues associated with production, and is estimated based on historical SEWIP Block 2 ECP expenditures. SEWIP Block 2 ECP funding supports the Non-Recurring Engineering for anticipated hardware and software combat system integration issues and Fleet reported trouble reports. FY19 ECP increases due to the incorporation of the cost of the Design Agent services contract. Design agent services in FY19 are necessary to address hardware configuration changes necessary to address and correct producibility, reliability and maintainability, as well as, Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues with the SEWIP Block 2 ES system and associated equipment.														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4	P-1 Line Item Number / Title: 2312 / AN/SLQ-32	Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(4) Procurement of SEWIP Block 2 Lite systems in support of USCG OPC Class ships has been moved into a P-40a exhibit (TC959) within this budget in accordance with OPNAVINST 4000.79A for Navy Type - Navy Owned material. The total SEWIP Block 2 quantities being procured is the same as PB18. As a result, FMP Block 2 for SLQ-32(V)6 increased by seven units due to the acceleration of the SLQ-32(V)6 installation schedule. FMP Block 2 for SLQ-32(V)7 decreased by six units due to the decision to install six systems as non-conjunctive. One shore site system was eliminated due to the adoption of MRTS for training.		
(5) Installation costs have been reduced to reflect the actual costs for SEWIP Block 2 installations to date.		
(6) Funding for Installation and Check Out (INCO) spares to support FY18-FY23 procured units is called out separately in the SEWIP Block 2 hardware line as 1.1.5.		
(7) SEWIP Block 2 H/W unit cost increase from FY18 to FY19 is due to increased Common Processing Solution (CPS) and Common Display Solution (CDS) price increases due to multiple contract modifications for obsolescence resolution and transitioning from the TI-12 configuration in FY18 to the TI-16 configurations in FY19.		
(8) The SEWIP Block 2 MRTS (shown on the P-40a exhibit TC960) eliminates the need for an SLQ-32(V)6 shore system (Block 1B3 and Block 2) at Corry Station which was planned for installation in FY19.		
(9) For FMP Block 1B3 systems, the production lead time is 15 months and these systems are then delivered to the system integrator, NSW Crane, 6 months prior to the start of the installation availability (A-180 days) where integration, testing, and preparation for shipment is conducted. 135 days are required for integration and testing of the SEWIP Blocks 1B2, 1B3 and 2 into an SLQ-32(V)6 system, preparation for shipment (15 days) and delivery to the shipyard 30 days prior to the start of the availability (A-30). The four FY19 units installed in Q1FY22 are scheduled for delivery to the Government between 15 Mar 2021 and 3 May 2021. The integration start dates for these units are required to start no later than 15 Aug - 15 Sep 2021 in order to prepare the systems for installation.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: TC059 SURFACE EW IMPROVEMENTS BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM			Modification Type: SHIPALT/AIT						Related RDT&E PEs: 0604757N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM</i>													
B Kits													
Recurring													
1.1.1) FMP BLOCK 2 for SLQ-32 (V)6 - NonOrganic	35 / 370.909	10 / 90.142	9 / 81.239	15 / 135.705	- / -	15 / 135.705	14 / 126.882	8 / 73.960	4 / 37.724	1 / 9.618	- / -	96 / 926.179	
1.1.2) FMP BLOCK 2 for SLQ-32 (V)7 - NonOrganic	- / -	1 / 9.014	1 / 9.026	1 / 9.047	- / -	1 / 9.047	5 / 45.315	9 / 83.205	4 / 37.724	1 / 9.618	2 / 19.620	24 / 222.569	
1.1.3) NON-FMP BLK2 SHORE SITE UNITS - NonOrganic	7 / 53.529	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 53.529	
1.1.4) BLK2 GFE FOR BLK3 OEM - NonOrganic	1 / 11.556	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 11.556	
1.1.5) INCO Spares - Organic	- / -	- / -	- / 3.064	- / 4.752	- / -	- / 4.752	- / 3.690	- / 3.807	- / 3.979	- / 0.569	- / 1.612	- / 26.023	
<i>Subtotal: Recurring</i>	- / 435.994	- / 99.156	- / 93.329	- / 149.504	- / -	- / 149.504	- / 175.887	- / 160.972	- / 79.427	- / 19.805	- / 25.782	- / 1,239.856	
<i>Subtotal: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM</i>	43 / 435.994	11 / 99.156	10 / 93.329	16 / 149.504	- / -	16 / 149.504	19 / 175.887	17 / 160.972	8 / 79.427	2 / 19.805	2 / 25.782	128 / 1,239.856	
<i>Subtotal: Procurement, All Modification Items</i>	- / 435.994	- / 99.156	- / 93.329	- / 149.504	- / -	- / 149.504	- / 175.887	- / 160.972	- / 79.427	- / 19.805	- / 25.782	- / 1,239.856	
Support (All Modification Items)													
2.1) Production Support	- / 32.561	- / 10.269	- / 6.686	- / 9.827	- / -	- / 9.827	- / 6.576	- / 5.147	- / 4.613	- / 2.245	- / 7.919	- / 85.843	
2.2) Tech Refresh	- / -	- / -	- / -	- / 2.500	- / -	- / 2.500	- / 2.600	- / 6.975	- / 2.500	- / 0.120	- / 64.366	- / 79.061	
2.3) Engineering Change Proposals (ECPs)	- / 10.971	- / 1.994	- / 3.007	- / 6.968	- / -	- / 6.968	- / 6.998	- / 20.763	- / 7.267	- / 1.789	- / 4.447	- / 64.204	
<i>Subtotal: Support</i>	- / 43.532	- / 12.263	- / 9.693	- / 19.295	- / -	- / 19.295	- / 16.174	- / 32.885	- / 14.380	- / 4.154	- / 76.732	- / 229.108	
Installation													
<i>Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM</i>	- / 48.165	- / 38.597	- / 28.412	- / 59.906	- / 0.000	- / 59.906	- / 45.588	- / 73.087	- / 70.419	- / 64.629	- / 61.364	- / 490.167	
<i>Subtotal: Installation</i>	- / 48.165	- / 38.597	- / 28.412	- / 59.906	- / -	- / 59.906	- / 45.588	- / 73.087	- / 70.419	- / 64.629	- / 61.364	- / 490.167	
Total													
Total Cost (Procurement + Support + Installation)	527.691	150.016	131.434	228.705	0.000	228.705	237.649	266.944	164.226	88.588	163.878	1,959.131	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																																		
Manufacturer Information																																		
Manufacturer Name: Lockheed Martin							Manufacturer Location: Syracuse, NY																											
Administrative Leadtime (in Months): 1							Production Leadtime (in Months): 17																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Mar 2017		Mar 2018		Mar 2019		Mar 2020		Mar 2021		Mar 2022		Mar 2023																					
Delivery Dates	Aug 2018		Aug 2019		Aug 2020		Aug 2021		Aug 2022		Aug 2023		Aug 2023																					
Installation Information																																		
Method of Implementation: SHIPALT/AIT:: Installation Name: FMP BLOCK 2 for SLQ-32 (V)6																																		
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 42.754	13 / 38.262	6 / 19.171	7 / 22.072	0 / 0.000	7 / 22.072	- / -	- / -	- / -	- / -	- / -	0 / 0.000	35 / 122.259																		
FY 2017				- / -	0 / 0.335	0 / 4.014	7 / 22.865	0 / 0.000	7 / 22.865	3 / 9.572	- / -	- / -	- / -	- / -	0 / 0.000	10 / 36.786																		
FY 2018				- / -	- / -	0 / 2.913	0 / 4.743	0 / 0.000	0 / 4.743	4 / 14.101	5 / 16.146	- / -	- / -	- / -	0 / 0.000	9 / 37.903																		
FY 2019				- / -	- / -	- / -	0 / 8.109	0 / 0.000	0 / 8.109	0 / 5.927	11 / 36.604	4 / 13.072	- / -	- / -	0 / 0.000	15 / 63.712																		
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	0 / 8.592	0 / 4.759	12 / 39.764	2 / 6.614	0 / 0.000	14 / 59.729																			
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.039	0 / 2.192	8 / 26.457	0 / 0.000	8 / 34.688																				
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.056	0 / 1.109	4 / 13.387	4 / 17.552																			
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.764	0 / 0.227	1 / 3.346	1 / 4.337																			
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
Total				9 / 42.754	13 / 38.597	6 / 26.098	14 / 57.789	0 / 0.000	14 / 57.789	7 / 38.192	16 / 63.548	16 / 58.848	10 / 34.407	5 / 16.733	96 / 376.966																			
Installation Schedule																																		
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		FY 2023		TC													
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			Q4											
In	9	3	-	2	8	-	-	6	2	3	2	7	3	4	-	-	5	5	5	1	4	1	3	8	2	3	1	4	5	96				
Out	7	2	3	-	2	8	-	-	6	2	3	2	7	3	4	-	-	5	5	5	1	4	1	3	8	2	3	1	9	96				

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																															
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: FMP BLOCK 2 for SLQ-32 (V)7																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	0 / 0.728	0 / 0.264	0 / 0.000	0 / 0.264	1 / 3.191	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.183															
FY 2018				- / -	- / -	0 / 0.728	0 / 0.264	0 / 0.000	0 / 0.264	1 / 3.191	- / -	- / -	- / -	- / -	0 / 0.000	1 / 4.183															
FY 2019				- / -	- / -	- / -	0 / 0.731	0 / 0.000	0 / 0.731	0 / 0.268	1 / 3.229	- / -	- / -	- / -	0 / 0.000	1 / 4.228															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.746	0 / 3.291	1 / 4.363	4 / 13.229	0 / 0.000	5 / 21.629																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.019	0 / 4.916	4 / 14.615	5 / 18.268	9 / 40.818																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.292	0 / 1.605	4 / 13.708	4 / 17.605																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.773	1 / 3.667	1 / 4.440																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 8.988	2 / 8.988																
Total				- / -	- / -	0 / 1.456	0 / 1.259	0 / 0.000	0 / 1.259	2 / 7.396	1 / 9.539	1 / 11.571	8 / 30.222	12 / 44.631	24 / 106.074																
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	1	1	2	12	24			
Out	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	1	-	-	4	1	1	1	14	24			
Method of Implementation: [none specified]:: Installation Name: NON-FMP BLK2 SHORE SITE UNITS																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.553	- / -	1 / 0.858	1 / 0.858	0 / 0.000	1 / 0.858	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 6.269														
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32								Modification Number / Title: 4 / TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: NON-FMP BLK2 SHORE SITE UNITS																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				5 / 4.553	- / -	1 / 0.858	1 / 0.858	0 / 0.000	1 / 0.858	- / -	- / -	- / -	- / -	0 / 0.000	7 / 6.269															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7					
Out	5	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7					
Method of Implementation: [none specified]:: Installation Name: BLK2 GFE FOR BLK3 OEM																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.858	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.858														
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total				1 / 0.858	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.858														

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4												P-1 Line Item Number / Title: 2312 / AN/SLQ-32																										
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: TC059 - BLOCK 2 ELECTRONIC SUPPORT (ES) SYSTEM																																						
Installation Information																																						
Method of Implementation: [none specified]:: Installation Name: BLK2 GFE FOR BLK3 OEM																																						
Installation Schedule																																						
	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot							
		Q1	Q2	Q3	Q4	Q1	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													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32						Modification Number / Title: 5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete		Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	0.000	28.909	71.509	149.004	0.000	149.004	281.734	379.793	297.758	357.762	980.815	2,547.284		
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Net Procurement (P-1) (\$ in Millions)	0.000	28.909	71.509	149.004	0.000	149.004	281.734	379.793	297.758	357.762	980.815	2,547.284		
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Total Obligation Authority (\$ in Millions)	0.000	28.909	71.509	149.004	0.000	149.004	281.734	379.793	297.758	357.762	980.815	2,547.284		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>														
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-		
Description:														
Block 3 will provide an Electronic Attack (EA) capability improvement required for the AN/SLQ-32(V) system to keep pace with the threat. SEWIP Block 3 will provide a common EA capability to surface combatants (CVN, DDG, LHD) outfitted with the active variant of the AN/SLQ-32, mainly the (V)3 and (V)4, as well as select new-construction platforms. The program builds on the EW Electronic Support (ES) capability delivered by Blocks 1 and 2. Development Status/Major Milestones are: Long Lead Material (LLM) was procured Q4 FY17, Milestone C Low Rate Initial Production (LRIP) Q4 FY18, IOT&E Q1 FY21, FRP is Q2 FY22. The SEWIP Block 1B3, Block 2 and Block 3 units compose the AN/SLQ-32(V)7 system. This may be accomplished as a conjunctive installation with all SEWIP components installed at the same time or as a non-conjunctive installation by installing the SEWIP Block 3 on a ship with SEWIP Block 1B3 and 2 previously installed.														
Notes:														
(1) Production Support provides for Government oversight of production, Government and original equipment manufacturer (OEM) support of production related software and hardware problems, and engineering as well as integrated logistics support efforts in support of production and fielding. Funding for installation and Check Out (INCO) spares to support procured units previously included as part of production support has been called out separately in the SEWIP Block 3 hardware line as 1.1.3.														
(2) INCO spares requirements are based on the updated Program Support Data sheets, SEWIP Block 3 hardware reliability projections, and the level at which SEWIP INCO spares requirements have been funded via the OPN 9020 budget. The increase in SEWIP Block 3 INCO requirements from FY18 to FY19 is due to the increase in the number of supported systems from two (2) in FY18 to four (4) in FY19 based on current hardware reliability projections.														
(3) SEWIP Block 3 Engineering Change Proposal (ECP) funding amounts are estimated based on the current maturity of the design and the anticipated changes during production. ECP costs are higher in FY19-23 due to the inclusion of design agent services requirements to address hardware configuration changes necessary for installation on CVN and LHD class ships.														
(4) The total lead time for production of FY17 units is 22 months, due to the procurement of long lead time materials, while the production lead time for FY18-FY21 units is 18 months.														
(5) SEWIP Block 3 installation costs include the procurement of four (4) quad plates per shipset to mount the SEWIP Block 3 antennas. The installation costs also include the procurement of High Efficiency, Super Capacity (HES-C) chiller unit upgrades required for certain DDG, LHD, and CVN ships (18 of the 49 SEWIP Block 3 installations). The quad plates and HES-C chiller unit upgrades are required two (2) years ahead of shipboard installation to support integration at NSWC Crane.														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4	P-1 Line Item Number / Title: 2312 / AN/SLQ-32	Modification Number / Title: 5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(6) The requirement for SEWIP Block 3 Large Radar Cross Section (LRCS) systems have been eliminated since PB18 as it has been determined that the SRCS system can meet the SEWIP Block 3 operational requirements. All units procured will be SEWIP Block 3 Small Radar Cross Section (SRCS) systems.		
(7) The current SEWIP Block 3 development contract was awarded in FY15 and includes fixed price production options for FY17 and FY18 which were bid in a competitive environment prior to the start of system development. The program will procure FY17 and FY18 units at these contract prices. A new competitive contract will be awarded for FY19-FY23 production requirements. The estimated FY19-FY23 Block 3 unit costs are based on actuals from the current SEWIP Block 3 development contract which reflect the current bill of material and labor costs and are higher than the production unit costs included in the current competitively awarded contract at award.		
(8) The SEWIP Block 3 MRTS (P-40A exhibit TC960) eliminates the need for an SLQ-32V(7) shore system at Corry Station which was planned for an FY19 installation.		
(9) For FY18 and forward, the FMP Block 3 systems production lead time is 18 months, and these systems are then delivered to the system integrator, NSWC Crane, 6 months prior to the start of the installation availability (A-180 days) where integration, testing, and preparation for shipment is conducted. 135 days are required for integration and testing of the SEWIP Blocks 1B2, 1B3, 2 and 3 into an SLQ-32(V)7 system, preparation for shipment (15 days) and delivery to the shipyard 30 days prior to the start of the availability (A-30).		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: TC060 SURFACE EW IMPROVEMENTS BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM			Modification Type: SHIPALT/AIT						Related RDT&E PEs: 0604757N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM													
B Kits													
Recurring													
1.1.1) FMP BLOCK 3 (SMALL RCS) for SLQ-32(V)7 - NonOrganic		- / -	1 / 25.379	1 / 17.479	4 / 90.700	- / -	4 / 90.700	8 / 185.024	11 / 259.501	7 / 168.434	7 / 171.808	9 / 244.640	48 / 1,162.965
1.1.2) NON-FMP BLK3 SHORE SITE UNITS - NonOrganic		- / -	- / -	1 / 17.479	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 17.479
1.1.3) Installation and Check Out (INCO) Spares - Organic		- / -	- / -	- / 10.234	- / 13.830	- / -	- / 13.830	- / 15.858	- / 6.886	- / 7.268	- / 5.430	- / 11.290	- / 70.796
Subtotal: Recurring		- / 0.000	- / 25.379	- / 45.192	- / 104.530	- / -	- / 104.530	- / 200.882	- / 266.387	- / 175.702	- / 177.238	- / 255.930	- / 1,251.240
Subtotal: TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM		- / -	1 / 25.379	2 / 45.192	4 / 104.530	- / -	4 / 104.530	8 / 200.882	11 / 266.387	7 / 175.702	7 / 177.238	9 / 255.930	49 / 1,251.240
Subtotal: Procurement, All Modification Items		- / 0.000	- / 25.379	- / 45.192	- / 104.530	- / -	- / 104.530	- / 200.882	- / 266.387	- / 175.702	- / 177.238	- / 255.930	- / 1,251.240
Support (All Modification Items)													
2.1) Production Support		- / -	- / 3.530	- / 9.989	- / 11.630	- / -	- / 11.630	- / 8.549	- / 6.580	- / 9.496	- / 6.404	- / 52.310	- / 108.488
2.2) Engineering Change Proposals (ECP)		- / -	- / -	- / 2.420	- / 4.592	- / -	- / 4.592	- / 13.840	- / 20.090	- / 12.260	- / 8.363	- / 9.190	- / 70.755
Subtotal: Support		- / 0.000	- / 3.530	- / 12.409	- / 16.222	- / -	- / 16.222	- / 22.389	- / 26.670	- / 21.756	- / 14.767	- / 61.500	- / 179.243
Installation													
Modification Item 1 of 1: TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM		- / 0.000	- / 0.000	- / 13.908	- / 28.252	- / 0.000	- / 28.252	- / 58.463	- / 86.736	- / 100.300	- / 165.757	- / 663.385	- / 1,116.801
Subtotal: Installation		- / 0.000	- / -	- / 13.908	- / 28.252	- / -	- / 28.252	- / 58.463	- / 86.736	- / 100.300	- / 165.757	- / 663.385	- / 1,116.801
Total													
Total Cost (Procurement + Support + Installation)		0.000	28.909	71.509	149.004	0.000	149.004	281.734	379.793	297.758	357.762	980.815	2,547.284

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4							P-1 Line Item Number / Title: 2312 / AN/SLQ-32							Modification Number / Title: 5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM																
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:																							
Modification Item 1 of 1: TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM																														
Manufacturer Information																														
Manufacturer Name: NORTHROP GRUMMAN							Manufacturer Location: BALTIMORE, MD																							
Administrative Leadtime (<i>in Months</i>): 0							Production Leadtime (<i>in Months</i>): 18																							
Dates		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																
Contract Dates		Aug 2017		Sep 2018		Mar 2019		Mar 2020		Mar 2021		Mar 2022		Mar 2023																
Delivery Dates		Jun 2019		Mar 2020		Sep 2020		Sep 2021		Sep 2022		Sep 2023		Sep 2024																
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: FMP BLOCK 3 (SMALL RCS) for SLQ-32(V)7																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	0 / 6.954	0 / 2.424	0 / 0.000	0 / 2.424	1 / 14.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 23.647								
FY 2018			- / -	- / -	0 / 6.954	0 / 2.424	0 / 0.000	0 / 2.424	1 / 14.269	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 23.647								
FY 2019			- / -	- / -	- / -	0 / 23.404	0 / 0.000	0 / 23.404	0 / 9.686	4 / 55.714	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 88.804								
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 16.558	0 / 19.843	3 / 53.556	5 / 68.666	0 / 0.000	8 / 158.623																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	0 / 11.179	0 / 35.441	3 / 70.583	8 / 127.710	11 / 244.913																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 11.303	0 / 19.293	7 / 128.016	7 / 158.612																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 7.215	7 / 170.135	7 / 177.350															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 237.524	9 / 237.524															
Total			- / -	- / -	0 / 13.908	0 / 28.252	0 / 0.000	0 / 28.252	2 / 54.782	4 / 86.736	3 / 100.300	8 / 165.757	31 / 663.385	48 / 1,113.120																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	4	-	-	-	1	-	2	5	-	1	2	31	48			
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	4	-	-	-	1	-	2	5	-	1	33	48				

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 5 / TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM																	
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																	
Modification Item 1 of 1: TC060 - BLOCK 3 ELECTRONIC ATTACK (EA) SYSTEM																															
Installation Information																															
Method of Implementation: AIT:: Installation Name: NON-FMP BLK3 SHORE SITE UNITS																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.681	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.681															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total				- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.681	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.681															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	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						

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32						Modification Number / Title: 6 / TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	79.320	43.246	7.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	130.495
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	79.320	43.246	7.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	130.495
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	79.320	43.246	7.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	130.495
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Block 3T (also referred to as nomenclature AN/SLQ-59) will provide an Electronic Attack (EA) capability improvement required for the AN/SLQ32(V) system to keep pace with the threat. Block 3T provides initial, limited interim capability of a focused application of the Naval Research Lab (NRL) Transportable EW Module (TEWM) system to meet an urgent operational needs statement.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4			P-1 Line Item Number / Title: 2312 / AN/SLQ-32									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System			Modification Type: SHIPALT/AIT						Related RDT&E PEs: 0604757N			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System</i>												
B Kits												
Recurring												
1.1.1) FMP Ship Units - NonOrganic	10 / 49.752	5 / 25.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 75.692
<i>Subtotal: Recurring</i>	- / 49.752	- / 25.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System</i>	10 / 49.752	5 / 25.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 75.692
<i>Subtotal: Procurement, All Modification Items</i>	- / 49.752	- / 25.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Production Support	- / 1.370	- / 2.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.470
<i>Subtotal: Support</i>	- / 1.370	- / 2.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System</i>	- / 28.198	- / 15.206	- / 7.929	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 51.333
<i>Subtotal: Installation</i>	- / 28.198	- / 15.206	- / 7.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	79.320	43.246	7.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	130.495

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 4				P-1 Line Item Number / Title: 2312 / AN/SLQ-32										Modification Number / Title: 6 / TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: TC060 - BLOCK 3T SURFACE EW IMPROVEMENTS EA System																																		
Manufacturer Information																																		
Manufacturer Name: Exelis							Manufacturer Location: Boalsburg, PA																											
Administrative Leadtime (in Months): 0							Production Leadtime (in Months): 6																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Apr 2017																																	
Delivery Dates	Sep 2017																																	
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: FMP Ship Units																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 27.960	4 / 8.731	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 36.691																		
FY 2017			0 / 0.238	2 / 6.475	3 / 7.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 14.642																		
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total			6 / 28.198	6 / 15.206	3 / 7.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 51.333																		
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021		FY 2022		FY 2023		TC	Tot										
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15										
Out	3	3	2	2	-	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15										

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment					2360 / Shipboard IW Exploit										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	999.873	169.021	187.007	220.883	0.000	220.883	225.348	263.170	288.949	299.719	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	999.873	169.021	187.007	220.883	0.000	220.883	225.348	263.170	288.949	299.719	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	999.873	169.021	187.007	220.883	0.000	220.883	225.348	263.170	288.949	299.719	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	1.375	6.513	4.978	-	4.978	5.868	5.639	4.065	2.999	Continuing	Continuing			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY19 funding request was reduced by \$2.722M to account for the availability of prior year execution balances.															
[P5 / 1U013 SSEE Increment E ECP]: Engineering Change Proposal (ECP)/Obsolescence procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and unsupportable equipment for the Ships Signal Exploitation Equipment (SSEE) Increment E program and incorporates Pre-Planned Product Improvements (P3I) for the acquisition and localization of Signals of Interest (SOI) and Electronic Warfare (EW). These changes allow for a common logistic support baseline and provide the hardware and software to incorporate P3I/new COTS base technologies. Specifically, this funds field change kits/ECPs that may also include all or some of the following upgrades; Tapered Slot Antennas (TSA), Hostile Force Integration Targeting Subsystems (HITS) hosted on Digital Receiver Technology (DRT), Radio Frequency Distribution Unit (RFDU) Backfits, Digital Tuners, Global Positioning System (GPS) Selective Availability Anti-Spoofing Modules (SAASM), Medusa, various antenna types(including Red Falcon), various hardware (to include blade servers) and software upgrades, and equipment to provide Information Operation (IO)/EW acquisition capabilities and localization of modern threat communications and SOI.															
[P5 / 1U016 Spectral]: The Spectral Program is an incremental acquisition, Government Off-The-Shelf/Commercial Off-The-Shelf (GOTS/COTS) program that provides cryptologic signals exploitation capabilities designed to meet the requirements for shipboard cryptologic operations within the Ship's Signal Exploitation Space (SSES) aboard a variety of ship classes and shore facilities. The Spectral system will provide a mobile, passive capability to detect, classify, track, and determine the intent of enemy units through exploitation of their command and control emissions. The system searches the Radio Frequency (RF) spectrum based on operator-defined search strategies with the receivers under computer control, alerts the operator when a signal is detected and creates signal files to be used for on-line and post processing. The Spectral System will leverage existing architectures and support the integrated fires construct with Shipboard Combat Systems providing non-kinetic engagement to enhance combat effectiveness. The system will be scalable, reconfigurable to mission, modular, remutable and dynamically reprogrammable in response to new threats and capabilities. The system is upgraded incrementally as improvements are developed. The Spectral System will deliver improved information/cyber Warfare planning, exploitation, and attack capabilities across Naval platforms.															
[P5 / 1U020 SSEE Modifications Engineering Change Proposal - Ship]: Engineering Change Proposal (ECP)/Obsolescence procures COTS/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and end-of-life (EOL) equipment for the SSEE MODS program. ECP incorporates Pre-Planned Product Improvements (P3I) for the acquisition and localization of the latest Signals of Interest (SOI) and Information Operations (IO). ECP maintains and improves upon SSEE MODS capability and relevance within a rapidly evolving threat environment.															
[P5 / 1U029 Information Warfare (IW) Training Equipment]: IW training equipment provides operator, unit or multi-unit level training on SSEE Increment F V 7/8 (Tactical Cryptologic Systems) (TCS). This equipment enhances initial skills, provides refresher training and increases proficiency of the operator on TCS through the generation and replay of operational scenarios by software simulation versus hardware															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment		P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit
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		
simulation. IW training equipment is updated based on new variants of Ships Signal Exploitation Equipment (SSEE) systems. Additionally this line supports the procurement of the STALLION (formerly known as Cryptologic On-Line Trainer) hardware for shipboard IW team training. Stallion is a web-based/Service Oriented Architecture (SOA) scenario training system that emulates Navy tactical Signal Intelligence (SIGINT)/Information Operations (IO) system functionality. Stallion is delivered turnkey to the Center for Information Dominance Learning Sites (CIDLS).		
[P5 / 1U060 ICADS]: Integrated Communications and Data System (ICADS) ((AN/URC-148(V)) is a Chief of Naval Operations (CNO) directed mission critical system providing advanced simulation capabilities and limited back-up communications for Naval platforms. The two Increments provide scalable capability dependent on host platform requirements. Specific program details held at a higher classification.		
[P5 / 1U014 SSEE Increment F (All Variants) ECP]: Engineering Change Proposal (ECP)/Obsolescence procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and end-of-life (EOL) equipment for the Ship's Signal Exploitation Equipment (SSEE) Increment F program (All Variants). ECP incorporates Pre-Planned Product Improvement (P3I) for the acquisition and localization of the latest Signals of Interest (SOI) and Information Operations (IO). ECP's maintain and improve upon SSEE Increment F's (All Variants) capability and relevance within a rapidly evolving threat environment. ECP equipment will also be used to enable SSEE Increment F(V)7/8 (TCS) to meet its scalable and modular capacity. Anti-Access, Area Denial (A2AD) capabilities integrated into the SSEE Systems will enable maritime power projection in enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state) use of the radio frequency spectrum, improving the Fleet's ability to communicate and operate therein. These systems will be deployed supporting Assured Command and Control, Battlespace Awareness, and Integrated Fires. INMARSAT Antenna ECP to replace obsolete and end-of-life (EOL) antenna. This antenna fulfills a High Gain Aperture requirement across the fleet as well as expandability to GX coverage and availability to interchangeable RF modules to support current CONOPs. This antenna will also increase DoD's cybersecurity posture while ensuring all SSEE systems and their components operate with latest supported hardware. Procurement profile to support new construction Navy ships. Flexibility to integrate and deliver capability under the P3I construct is maximized using the SSEE Collaborative Development and Integration Environment which utilizes the Amazon WebServices.gov (AWS) cloud infrastructure as the independent medium by provisioning capability of a Virtual Private Cloud architecture to automatically provision, deploy, and configure user capability for integration. The Navy Tactical Data Network (NTDN) is a cybersecurity initiative enabling National/Tactical Integration with US Navy Surface Cryptologic Systems by deploying NSAnet afloat with special SIGINT processing capabilities, enterprise services, and a mission data repository allowing automated synchronization with (National Security Agency (NSA) databases. This Engineering Change Proposal (ECP) will back-fit force-level SSEE Increment F(V)1/2 systems as well as integrating the shore component with CLASSIC REACH. NTDN Network & Information Technology (IT) infrastructure (afloat & shore) that will be connected to the Automated Digital Network System (ADNS) Increment 3 Routers, Switch, Tac Lane, Wide Area Network (WAN) Optimizer, & Server, Cross Domain Solutions (CDS) appliance between NTDN and SCI-Networks, Certification and Accreditation of SSEE FoS on peer-intranet NSA enclave afloat. In addition, an NTDN shore component will be deployed to support data flow to/from appropriate NSA data bases. Bladecenter replacement kits address obsolescence and resolve cybersecurity posturing while workstation upgrades place necessary technology updates to maximized operator performance. The Next Generation Chassis modifications provide enhanced data processing and greater exposure to existing system services while meeting constricting size, weight, power, and cooling requirements.		
[P3A / 1U017 SSEE Increment F (All Variants) Ship]: The SSEE Increment F program (All Variants) is an incremental acquisition, Commercial Off-The-Shelf/Government Off-The-Shelf (COTS/GOTS) program designed as the building block to improve the Information Warfare (IW) exploitation / Information Operations (IO) / non-kinetic and subsequent tactical cryptologic capability across Navy surface combatant platforms. SSEE Increment F (All Variants) provides the afloat IW / cryptologist with IO / non-kinetic capabilities and subsequent threat identification and analysis of Communications Intelligence as well as queuing of radio direction finding assets. Equipment includes receivers, Radio Frequency management systems, recorders, audio distribution systems, computers, antennas and ancillary hardware. The system is upgraded incrementally as improvements are developed. SSEE Increment F (All Variants) employs the Maritime Cryptologic Strategy for the 21st century concept of a single core architecture that is easily modernized and scaled in capability. The system design permits the rapid insertion of new and emerging Pre-Planned Product Improvement (P3I) to address the evolving threat. The system utilizes generic processor technology to counteract obsolescence issues with digital signal processing /field programmable gate array technologies and provide software receivers for ease of modification to deal with known and projected threat Signals of Interest (SOI). Automated signal acquisition and integrated radio direction finding are incorporated into the SSEE Increment F(V)1/2 system. SSEE Increment F (All Variants) also includes a small form factor variant, SSEE Increment F(V)7/8 Tactical Cryptologic System (TCS) to meet IW / IO / non-kinetic and subsequent tactical cryptologic capability onboard Arleigh Burke Class Destroyers (DDG) Flight I platforms and as a replacement for select SSEE Increment E variants and older signals intelligence systems.		
SSEE Increment F (V)7/8 (TCS) is a scalable, modular variant of SSEE Increment F(V)1/2 that allows configuration to meet platform mission requirements. SSEE Increment F (V)7/8 (TCS) leverages SSEE Increment F(V)1/2 common software, training, and logistics. SSEE Increment F (V)7/8 (TCS) consists of infrastructure (Topside Antennas) which will be permanently installed on 41 Unit Level ships. The Below Deck Core system includes a modular component to all Mission Tailorable upgrades to increase capabilities. The modularity and scalability of SSEE Increment F (V)7/8 (TCS) is delivered using Engineering Change Proposal (ECP). The Next Generation Chassis modifications provide enhanced data processing and greater exposure to existing system services while meeting constricting size, weight, power, and cooling requirements.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment		P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit
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		
[P3A - 2 / 1U018/1U019 SSEE Modifications]: SSEE Modifications is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into SSEE systems. This capability provides simultaneous detection, collection, processing, IO and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today. It includes the Graywing subsystem which is an advanced common data link system that will be integrated into SSEE systems. It is a critical component of "Ballistic Missile Defense, Executive Committee, Anti-Submarine Warfare, Chief of Naval Operations, Executive Board IO Countermeasure Red Flash" initiative (details held at a higher classification level). [P3A - 3 / 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)]: Engineering Change Proposal (ECP)/Obsolescence procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and end-of-life (EOL) equipment for the Ship's Signal Exploitation Equipment (SSEE) Increment F program (All Variants). ECP incorporates P3I for the acquisition and localization of the latest Signals of Interest (SOI) and Information Operations (IO). ECP maintains and improves upon SSEE Increment F's (All Variants) capability and relevance within a rapidly evolving threat environment. ECP equipment will be used to enable SSEE Increment F(V)7/8 (TCS) to meet its scalable and modular capacity.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment				2360 / Shipboard IW Exploit						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Shipboard IW Exploit	P-5a			- / 492.512	- / 49.770	- / 30.138	- / 32.337	- / 0.000	- / 32.337
P-3a	1 / 1U017 SSEE Increment F (All Variants) Ship (TBD)				- / 439.174	- / 94.295	- / 110.462	- / 115.692	- / 0.000	- / 115.692
P-3a	2 / 1U018/1U019 SSEE Modifications (Upgrade)				- / 39.347	- / 15.308	- / 39.491	- / 63.240	- / 0.000	- / 63.240
P-3a	3 / 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants) (Upgrade)				- / 28.840	- / 9.648	- / 6.916	- / 9.614	- / 0.000	- / 9.614
P-40	Total Gross/Weapon System Cost				- / 999.873	- / 169.021	- / 187.007	- / 220.883	- / 0.000	- / 220.883
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-5	1 / Shipboard IW Exploit	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / 1U017 SSEE Increment F (All Variants) Ship (TBD)				- / 107.190	- / 62.277	- / 17.484	- / 0.530	Continuing	Continuing
P-3a	2 / 1U018/1U019 SSEE Modifications (Upgrade)				- / 75.087	- / 72.255	- / 77.940	- / 81.089	Continuing	Continuing
P-3a	3 / 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants) (Upgrade)				- / 3.408	- / 3.338	- / 0.378	- / 0.000	- / 0.000	- / 62.142
P-40	Total Gross/Weapon System Cost				- / 225.348	- / 263.170	- / 288.949	- / 299.719	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 2019 funding request was reduced by (\$2.519) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

The FY19 funding request was reduced by \$2.722M to account for the availability of prior year execution balances.

Transfer of \$4.637 million from OPN to RDTEN for Integrated Communications and Data System (ICADS) Increment II. Details held at a higher classification.

The Shipboard IW budget supports SSEE (Ship's Signal Exploitation Equipment) Increment F(V)1/2 and SSEE Increment F(V)7/8 (Tactical Cryptologic System (TCS)), Anti-Access Area Denial (A2AD), Integrated Communications and Data System (ICADS) (AN/URC-148(V)), Afloat Cyber efforts, and Navy Tactical Data Network (NTDN).

SSEE Increment F(V)7/8 (TCS) is a scalable, modular variant of SSEE Increment F(V)1/2 that allows configuration to meet platform mission requirements. SSEE Increment F(V)7/8 (TCS) leverages SSEE Increment F(V)1/2 common software, training, and logistics. SSEE Increment F(V)7/8 (TCS) consists of infrastructure (Topside Antennas) which will be permanently installed on 41 Unit Level ships. The Below Deck Core system includes a modular component for mission adaptable upgrades for increased capabilities. The modularity and scalability of SSEE Increment F(V)7/8 (TCS) is delivered using Engineering Change Proposal (ECP).

Anti-Access Area Denial (A2AD) funding will procure Anti-Access Area Denial (A2AD) capabilities for the Ship's Signal Exploitation Equipment (SSEE) Increment F(V)1/2, Spectral(SSEE Increment G) and SSEE Modifications systems. A2AD capabilities integrated into the SSEE Systems will enable maritime power projection in enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state)

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment	P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit	
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		
use of the radio frequency spectrum, improving the Fleet's ability to communicate and operate therein. These systems will be deployed supporting Assured Command and Control, Battlespace Awareness, and Integrated Fires. ICADS ((AN/URC-148(V)) is a Navy directed mission critical system providing advanced simulation capabilities and limited back-up communications for Naval platforms. The two Increments provide scalable capability dependent on host platform requirements. Specific program details held at a higher classification. Afloat Cyber provides for the ability to continue and extend the Fleet's afloat cyber operations for the SSEE Family of Systems and includes procurement of Commercial off the Shelf hardware solutions (further details are held at a higher classification level and can be provided upon request). TCS has been broken out from SSEE Increment F(V)1/2 to better identify the individual costs for each system. Procurements are tied to ship availabilities balanced against the 12 month production lead time.		
PROCUREMENT DATA: FY19 funding will procure: (10) Red Falcon Antennas (5) SSEE Increment F(V)1/2 (8) SSEE Increment F(V)7/8 Tactical Cryptologic System (TCS) Below Deck, Core Systems and Infrastructures (9) SSEE Modifications Systems (1) IW Training Equipment (12) Blade Replacement Kits (5) SSEE Increment F(V)1/2 In-line Blade Kits (9) SSEE Increment F(V)1/2 ECP Next Generation Chassis (8) SSEE Increment F(V)1/2 Processing Upgrade Workstations (4) SSEE Increment F(V)1/2 Inmarsat Antennas (6) SSEE Increment F(V)7/8 (TCS) ECP IO Equipment Modules (1) SSEE Increment F(V)7/8 (TCS) SSC-W ECP Modules (6) SSEE Increment F(V)7/8 (TCS) SSC-W Upgrade ECP Modules (6) SSEE Increment F(V)7/8 (TCS) SSC-S ECP Modules (6) SSEE Increment F(V)7/8 (TCS) Red Falcon ECP Modules (2) SSEE Increment F(V)7/8 (TCS) Medusa ECP Modules (4) SSEE Increment F(V)7/8 (TCS) Next Generation Chassis (4) SSEE Increment F(V)1/2 NTDN/Classic Reach Systems (1) ICADS Increment I ECP Kit The following represents the increase from FY18 to FY19: (1) Additional SSEE Modifications Systems, (2) Additional SSEE Increment F(V)7/8 (TCS) systems (2) Additional SSEE Increment F(V)7/8 (TCS) installs (3) Additional SSEE Modifications Ship installs (4) Additional SSEE Increment F(V)1/2 Blade Replacement Kits (4) SSEE Increment F(V)1/2 Inmarsat Antennas (9) SSEE Increment F(V)1/2 ECP Next Generation Chassis (2) Additional SSEE Increment F(V)7/8 (TCS) ECP Information Operations (IO) Equipment Systems (6) SSEE Increment F(V)7/8 (TCS) ECP SSC-W Upgrades		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment		P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit		
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				
(4) SSEE Increment F(V)7/8 (TCS) Next Generation Chassis (4) SSEE Increment F(V)1/2 NTDN/Classic Reach Systems (1) ICADS Increment I ECP Kit				
Unit Price Cost for SSEE Increment F(V)1/2, (V)7/8 and SSEE Modifications have been updated to account for current procurement plan.				
Procurement UPCs for SSEE Increment F (all variants) and SSEE Modifications are based on contracted quantity discounts; SSEE OPN procurements are awarded with SSEE SCN, FMS and Coast Guard System procurements to achieve the best value for the government.				
Increase in unit procurement cost due to reduction in quantity procured between FY18 and FY19. The FY19 SSEE Increment F(V)1/2 Procurement contract award will include a total of 6 systems (5 OPN and 1 SCN) resulting in a UPC of \$8.153M. The FY18 SSEE Increment F(V)1/2 Procurement contract award includes a total of 7 systems (6 OPN, 1 SCN) resulting in a UPC of \$7.888M.				

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit									Item Number / Title [DODIC]: 1 / Shipboard IW Exploit							
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:							
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)				492.512			49.770		30.138		32.337		0.000		32.337					
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)				492.512			49.770		30.138		32.337		0.000		32.337					
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-					
Total Obligation Authority (\$ in Millions)				492.512			49.770		30.138		32.337		0.000		32.337					
(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 Thousands)				-			-		-		-		-		-					
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total				
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)		
Hardware - Hardware - 1U017 - SSEE Increment F(V)1/2 Shore Procurement Cost																				
Recurring Cost																				
1.1.1) SSEE Increment F (V)1/2 Shore Procurement (Prior Years)	4,976.000	9	44.784	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
<i>Subtotal: Recurring Cost</i>	-	-	<i>44.784</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>		
Subtotal: Hardware - Hardware - 1U017 - SSEE Increment F(V)1/2 Shore Procurement Cost	-	-	<i>44.784</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>		
Hardware - 1U013 SSEE Increment E ECP Cost																				
Recurring Cost																				
2.1.1) SSEE Inc E ECPs (Prior Years) ⁽¹⁾	1,626.693	189	307.445	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
2.1.2) Red Falcon Antennas ^(†)	-	-	0.000	80.000	10	0.800	81.000	10	0.810	82.000	10	0.820	-	-	0.000	82.000	10	0.820		
2.1.3) XP Eradication/ SLEP ^(†)	-	-	0.000	150.000	17	2.550	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
<i>Subtotal: Recurring Cost</i>	-	-	<i>307.445</i>	-	-	<i>3.350</i>	-	-	<i>0.810</i>	-	-	<i>0.820</i>	-	-	<i>0.000</i>	-	-	<i>0.820</i>		
Subtotal: Hardware - 1U013 SSEE Increment E ECP Cost	-	-	<i>307.445</i>	-	-	<i>3.350</i>	-	-	<i>0.810</i>	-	-	<i>0.820</i>	-	-	<i>0.000</i>	-	-	<i>0.820</i>		
Hardware - 1U019 SSEE Modifications Shore Cost																				
Recurring Cost																				

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit									Item Number / Title [DODIC]: 1 / Shipboard IW Exploit													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
4.1.1) SSEE Modifications - LBTF Paragon/Graywing (Shore) ^(†)	5,227.000	6	31.362	6,118.000	1	6.118	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Recurring Cost</i>	-	-	31.362	-	-	6.118	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Hardware - 1U019 SSEE Modifications Shore Cost</i>	-	-	31.362	-	-	6.118	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
Hardware - 1U020 SSEE Modifications Engineering Change Proposal - Ship Cost																										
Recurring Cost																										
5.1.2) SSEE Modifications ECP Dish Feed Training Site Infrastructure - Shore ^(†)	-	-	0.000	-	-	0.000	449.000	4	1.796	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	1.796	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Hardware - 1U020 SSEE Modifications Engineering Change Proposal - Ship Cost</i>	-	-	0.000	-	-	0.000	-	-	1.796	-	-	0.000	-	-	0.000	-	-	0.000								
Hardware - 1U029 Information Warfare (IW) Training Equipment Cost																										
Recurring Cost																										
6.1.1) Information Warfare (IW) Training Equipment ^(†)	918.000	16	14.688	1,895.000	1	1.895	1,927.000	1	1.927	1,959.000	1	1.959	-	-	0.000	1,959.000	1	1.959								
<i>Subtotal: Recurring Cost</i>	-	-	14.688	-	-	1.895	-	-	1.927	-	-	1.959	-	-	0.000	-	-	1.959								
<i>Subtotal: Hardware - 1U029 Information Warfare (IW) Training Equipment Cost</i>	-	-	14.688	-	-	1.895	-	-	1.927	-	-	1.959	-	-	0.000	-	-	1.959								
Hardware - 1U060 ICADS Cost																										
Recurring Cost																										
7.1.1) ICADS Increment I ECP Kit ^(†) (2)	-	-	0.000	-	-	0.000	-	-	0.000	4,310.000	1	4.310	-	-	0.000	4,310.000	1	4.310								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	4.310	-	-	0.000	-	-	4.310								
<i>Subtotal: Hardware - 1U060 ICADS Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	4.310	-	-	0.000	-	-	4.310								
Hardware - 1U014 SSEE Increment F (All Variants) ECP Cost																										
Recurring Cost																										

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5					P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Item Number / Title [DODIC]: 1 / Shipboard IW Exploit												
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:												
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																									
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total									
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)							
8.1.1) SSEE Increment F (All Variants) ECP Prior Years ⁽³⁾	1,294.286	7	9.060	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000							
8.1.3) SSEE Increment F (V)1/2 In-line Blade Kits ^(†)	-	-	0.000	666.000	6	3.996	677.333	6	4.064	689.000	5	3.445	-	-	0.000	689.000	5	3.445							
8.1.4) SSEE Increment F (V)1/2 ECP - Blade Replacement "Delta" Kit ^(†)	-	-	0.000	292.000	12	3.504	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000							
8.1.5) SSEE Increment F (V)1/2 ECP - Next Generation Chassis ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	470.000	9	4.230	-	-	0.000	470.000	9	4.230							
8.1.6) SSEE Increment F (V)1/2 ECP - Processing Upgrades Workstations ^(†)	-	-	0.000	-	-	0.000	25.000	8	0.200	25.375	8	0.203	-	-	0.000	25.375	8	0.203							
8.1.7) SSEE Increment F (V)1/2 ECP - Inmarsat Antenna ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	142.000	4	0.568	-	-	0.000	142.000	4	0.568							
8.1.8) SSEE Increment F (V)1/2 ECP - Fury Data Right ^(†)	-	-	0.000	-	-	0.000	1,047.000	1	1.047	-	-	0.000	-	-	0.000	-	-	0.000							
8.1.9) SSEE Increment F (V)1/2 ECP - Windows 10 Replacement Kit ^(†)	-	-	0.000	2,550.000	1	2.550	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000							
8.1.10) SSEE Increment F (V)1/2 ECP - Common Core/Bottoms-Up Implementation ^(†)	-	-	0.000	3,060.000	1	3.060	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000							
8.1.11) SSEE Increment F (V)1/2 ECP - Cloud Environment ^(†)	-	-	0.000	1,836.000	1	1.836	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000							

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5					P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Item Number / Title [DODIC]: 1 / Shipboard IW Exploit															
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:															
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																												
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total												
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)										
8.1.12) SSEE Increment F(V)1/2 ECP - Training Device ^(†)	-	-	0.000	-	-	0.000	1,500.000	3	4.500	-	-	0.000	-	-	0.000	-	-	0.000										
8.1.13) SSEE Increment F(V)1/2 ECP - Recorders ^(†)	-	-	0.244	127.000	6	0.762	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
8.1.14) SSEE Increment F(V)7/8 (TCS) ECP - RFCU Kits ^(†)	-	-	2.712	678.000	11	7.458	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
8.1.15) SSEE Increment F(V)7/8 (TCS) ECP IO Equipment Modules ^(†)	688.000	4	2.752	700.000	5	3.500	712.000	4	2.848	724.000	6	4.344	-	-	0.000	724.000	6	4.344										
8.1.16) SSEE Increment F(V)7/8 (TCS) SSC-W ECP Modules ^(†)	-	-	0.000	542.000	5	2.710	551.167	6	3.307	561.000	1	0.561	-	-	0.000	561.000	1	0.561										
8.1.17) SSEE Increment F(V)7/8 (TCS) SSC-W Upgrade ECP Modules ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	152.000	6	0.912	-	-	0.000	152.000	6	0.912										
8.1.18) SSEE Increment F(V)7/8 (TCS) SSC-S ECP Modules ^(†)	-	-	0.000	296.000	5	1.480	301.000	6	1.806	306.167	6	1.837	-	-	0.000	306.167	6	1.837										
8.1.19) SSEE Increment F(V)7/8 (TCS) Red Falcon ECP Modules ^(†)	219.000	4	0.876	223.000	5	1.115	226.833	6	1.361	230.667	6	1.384	-	-	0.000	230.667	6	1.384										
8.1.20) SSEE Increment F(V)7/8 (TCS) Medusa ECP Modules ^(†)	280.000	2	0.560	284.800	5	1.424	289.667	6	1.738	295.000	2	0.590	-	-	0.000	295.000	2	0.590										
8.1.21) SSEE Increment F(V)7/8 (TCS) Next Generation Chassis ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	470.000	4	1.880	-	-	0.000	470.000	4	1.880										
8.1.23) SSEE Increment F(V)1/2	-	-	0.000	-	-	0.000	-	-	0.000	481.000	4	1.924	-	-	0.000	481.000	4	1.924										

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Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5					P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Item Number / Title [DODIC]: 1 / Shipboard IW Exploit															
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:															
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																												
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total												
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)										
NTDN/Classic Reach Systems ^(†)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
<i>Subtotal: Recurring Cost</i>	-	-	16.204	-	-	33.395	-	-	20.871	-	-	21.878	-	-	0.000	-	-	21.878										
<i>Subtotal: Hardware - 1U014 SSEE Increment F (All Variants) ECP Cost</i>	-	-	16.204	-	-	33.395	-	-	20.871	-	-	21.878	-	-	0.000	-	-	21.878										
Support - 1U555 Production Support Cost																												
9.1) Production Support (Prior Years) ⁽⁴⁾	-	-	5.926	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
9.2) SSEE Inc E and SSEE Inc E ECP Production Support	-	-	1.402	-	-	0.201	-	-	0.115	-	-	0.129	-	-	0.000	-	-	0.129										
9.5) ICADS Production Support	-	-	0.000	-	-	0.000	-	-	0.153	-	-	0.259	-	-	0.000	-	-	0.259										
9.6) SSEE Inc F (All Var) & SSEE Inc F (All Var) ECPs - Production Support	-	-	2.069	-	-	2.359	-	-	1.576	-	-	1.907	-	-	0.000	-	-	1.907										
<i>Subtotal: Support - 1U555 Production Support Cost</i>	-	-	9.397	-	-	2.560	-	-	1.844	-	-	2.295	-	-	0.000	-	-	2.295										
Support - 1U776 / 1U777 Installation Cost																												
10.1) Install/DSA (Prior Years) ⁽⁵⁾	-	-	64.417	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.2) DRT DSA	-	-	0.863	-	-	0.252	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.3) DRT Blades Install	-	-	3.094	-	-	1.452	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.4) Medusa DSA	-	-	0.042	-	-	0.020	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.5) Medusa Install	-	-	0.216	-	-	0.108	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.6) Red Falcon DSA	-	-	0.000	-	-	0.110	-	-	0.200	-	-	0.220	-	-	0.000	-	-	0.220										
10.7) Red Falcon Install	-	-	0.000	-	-	0.000	-	-	0.330	-	-	0.340	-	-	0.000	-	-	0.340										
10.8) XP Eradication/ SLEP Install	-	-	0.000	-	-	0.510	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000										
10.13) SSEE Modifications LBTF Paragon/Graywing Install	-	-	0.000	-	-	0.000	-	-	2.360	-	-	0.000	-	-	0.000	-	-	0.000										
10.17) SSEE Increment F(V)1/2 ECP - Next Generation Chassis - DSA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.137	-	-	0.000	-	-	0.137										
10.18) SSEE Increment F(V)1/2 Processing	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.040	-	-	0.000	-	-	0.040										

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Item Number / Title [DODIC]: 1 / Shipboard IW Exploit											
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:											
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																							
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total							
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)					
Upgrade Workstations - Install																							
10.20) SSEE Increment F(V1/2 Immarsat Antennas - DSA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.194	-	-	0.000	-	-	0.194					
10.22) SSEE Increment F(V7/8 (TCS) Next Generation Chassis - DSA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.062	-	-	0.000	-	-	0.062					
10.26) SSEE Increment F(V1/2 NTDN/Classic Reach Systems - DSA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.082	-	-	0.000	-	-	0.082					
<i>Subtotal: Support - 1U776 / 1U777 Installation Cost</i>	-	-	68.632	-	-	2.452	-	-	2.890	-	-	1.075	-	-	0.000	-	-	1.075					
Gross/Weapon System Cost	-	-	492.512	-	-	49.770	-	-	30.138	-	-	32.337	-	-	0.000	-	-	32.337					

Remarks:

[Hardware] Engineering Change Proposal (ECP)/Obsolescence procures Commercial Off-The-Shelf/Non-Developmental Item (NDI) equipment to replace obsolete and end-of-life (EOL) equipment for the Ship's Signal Exploitation Equipment (SSEE) MODS program. ECP incorporates Pre-Planned Product Improvements (P3I) for the acquisition and localization of the latest Signals of Interest (SOI) and Information Operations (IO). ECP maintains and improves upon SSEE MODS capability and relevance within a rapidly evolving threat environment.

(†) indicates the presence of a P-5a

Footnotes:

- (1) SSEE Inc E ECP prior year Procurements (includes DRT and Medusa)
- (2) Upgrades provide necessary hardware improvements to Integrated Communications and Data System (ICADS) Increment I system performance in alignment with Fleet requirements. The Engineering Changes modernize the original prototype system hardware and software components to improve the accuracy and modification of simulation capabilities. ICADS was previously funded under BLI 2188.
- (3) SSEE Increment F (All Variants) ECP prior year Procurements (includes CUB Replacement and LBTF Refresh Kits)
- (4) Prior year Production Support (Includes SSEE Increment F (V)1/2 Shore, SSEE Increment E ECP, and SSEE Modifications ECP Production Support Costs).
- (5) Prior year Install/DSA Costs (includes SSEE Modifications Shore, SSEE Increment F(V)1/2 Shore and SSEE Increment E ECP Install/DSA Costs).

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit					Item Number / Title [DODIC]: 1 / Shipboard IW Exploit				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.2) Red Falcon Antennas		2017	SSC PAC / San Diego	WR	San Diego, CA	Dec 2016	Jul 2017	10	80.000	Y		
2.1.2) Red Falcon Antennas		2018	SSC PAC / San Diego	WR	San Diego, CA	Jan 2018	Aug 2018	10	81.000	N		
2.1.2) Red Falcon Antennas		2019	SSC PAC / San Diego	WR	San Diego, CA	Jan 2019	Aug 2019	10	82.000	N		
2.1.3) XP Eradication/SLEP		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	May 2017	Nov 2017	17	150.000	Y		
4.1.1) SSEE Modifications - LBTF Paragon/Graywing (Shore)		2017	Argon ST / Arlington, VA	C / FFP	San Diego, CA	Sep 2017	Sep 2018	1	6,118.000	N		
5.1.2) SSEE Modifications ECP Dish Feed Training Site Infrastructure - Shore		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	4	449.000	N		
6.1.1) Information Warfare (IW) Training Equipment		2017	SSC PAC / San Diego, CA	WR	San Diego, CA	Nov 2016	Aug 2017	1	1,895.000	Y		
6.1.1) Information Warfare (IW) Training Equipment		2018	SSC PAC / San Diego, CA	WR	San Diego, CA	Nov 2017	Aug 2018	1	1,927.000	Y		
6.1.1) Information Warfare (IW) Training Equipment		2019	SSC PAC / San Diego, CA	WR	San Diego, CA	Nov 2018	Aug 2019	1	1,959.000	N		
7.1.1) ICADS Increment I ECP Kit		2019	TBD / TBD	C / TBD	San Diego, CA	Jan 2019	Jan 2020	1	4,310.000	N		
8.1.3) SSEE Increment F (V)1/2 In-line Blade Kits		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	6	666.000	N		
8.1.3) SSEE Increment F (V)1/2 In-line Blade Kits		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	6	677.333	N		
8.1.3) SSEE Increment F (V)1/2 In-line Blade Kits		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	5	689.000	N		
8.1.4) SSEE Increment F (V)1/2 ECP - Blade Replacement "Delta" Kit		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	12	292.000	Y		
8.1.5) SSEE Increment F (V)1/2 ECP - Next Generation Chassis		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	9	470.000	N		
8.1.6) SSEE Increment F (V)1/2 ECP - Processing Upgrades Workstations		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	8	25.000	N		
8.1.6) SSEE Increment F (V)1/2 ECP - Processing Upgrades Workstations		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	8	25.375	N		
8.1.7) SSEE Increment F (V)1/2 ECP - Inmarsat Antenna		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	4	142.000	N		
8.1.8) SSEE Increment F (V)1/2 ECP - Fury Data Right		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2018	1	1,047.000	N		
8.1.9) SSEE Increment F (V)1/2 ECP - Windows 10 Replacement Kit		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	1	2,550.000	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit					Item Number / Title [DODIC]: 1 / Shipboard IW Exploit				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
8.1.10) SSEE Increment F (V)1/2 ECP - Common Core/Bottoms-Up Implementation		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	1	3,060.000	Y		
8.1.11) SSEE Increment F (V)1/2 ECP - Cloud Environment		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	1	1,836.000	Y		
8.1.12) SSEE Increment F (V)1/2 ECP - Training Device		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	3	1,500.000	N		
8.1.13) SSEE Increment F (V)1/2 ECP - Recorders		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	6	127.000	Y		
8.1.14) SSEE Increment F (V)7/8 (TCS) ECP - RFCU Kits		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Aug 2017	Aug 2018	11	678.000	Y		
8.1.15) SSEE Increment F(V)7/8 (TCS) ECP IO Equipment Modules		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	5	700.000	Y		
8.1.15) SSEE Increment F(V)7/8 (TCS) ECP IO Equipment Modules		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	4	712.000	N		
8.1.15) SSEE Increment F(V)7/8 (TCS) ECP IO Equipment Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	6	724.000	N		
8.1.16) SSEE Increment F(V)7/8 (TCS) SSC-W ECP Modules		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	5	542.000	Y		
8.1.16) SSEE Increment F(V)7/8 (TCS) SSC-W ECP Modules		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	6	551.167	N		
8.1.16) SSEE Increment F(V)7/8 (TCS) SSC-W ECP Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	1	561.000	N		
8.1.17) SSEE Increment F(V)7/8 (TCS) SSC-W Upgrade ECP Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	6	152.000	N		
8.1.18) SSEE Increment F(V)7/8 (TCS) SSC-S ECP Modules		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	5	296.000	Y		
8.1.18) SSEE Increment F(V)7/8 (TCS) SSC-S ECP Modules		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	6	301.000	N		
8.1.18) SSEE Increment F(V)7/8 (TCS) SSC-S ECP Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	6	306.167	N		
8.1.19) SSEE Increment F(V)7/8 (TCS) Red Falcon ECP Modules		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	5	223.000	Y		
8.1.19) SSEE Increment F(V)7/8 (TCS) Red Falcon ECP Modules		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	6	226.833	N		
8.1.19) SSEE Increment F(V)7/8 (TCS) Red Falcon ECP Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	6	230.667	N		
8.1.20) SSEE Increment F(V)7/8 (TCS) Medusa ECP Modules		2017	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Mar 2017	Mar 2018	5	284.800	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit					Item Number / Title [DODIC]: 1 / Shipboard IW Exploit				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
8.1.20) SSEE Increment F(V)7/8 (TCS) Medusa ECP Modules		2018	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2018	Jan 2019	6	289.667	N		
8.1.20) SSEE Increment F(V)7/8 (TCS) Medusa ECP Modules		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Feb 2019	Feb 2020	2	295.000	N		
8.1.21) SSEE Increment F(V)7/8 (TCS) Next Generation Chassis		2019	ARGON / Fairfax, VA	C / FFP	San Diego, CA	Jan 2019	Jan 2020	4	470.000	N		
8.1.23) SSEE Increment F(V)1/2 NTDN/Classic Reach Systems		2019	VARIOUS / TBD	C / TBD	San Diego, CA	Feb 2019	Feb 2020	4	481.000	N		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit					Modification Number / Title: 1 / 1U017 SSEE Increment F (All Variants) Ship				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	439.174	94.295	110.462	115.692	0.000	115.692	107.190	62.277	17.484	0.530	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	439.174	94.295	110.462	115.692	0.000	115.692	107.190	62.277	17.484	0.530	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	439.174	94.295	110.462	115.692	0.000	115.692	107.190	62.277	17.484	0.530	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Ship Signal Exploitation Equipment (SSEE) Inc F (All Variants) Program will provide strike groups with Information Operation (IO) / non-kinetic capabilities and the subsequent ability to exploit Signals Of Interest (SOI) by providing a state-of-the-art system which detects, acquires, and collects data on any potential threat.

[SSEE Increment F(V)1/2 Systems (Ship)] Unit Price Cost for SSEE Increment F(V)1/2, (V)7/8 and SSEE Modifications have been updated to account for current procurement plan.

Procurement UPCs for SSEE Increment F (all variants) and SSEE Modifications are based on contracted quantity discounts; SSEE OPN procurements are awarded with SSEE SCN, FMS and Coast Guard System procurements to achieve the best value for the government.

The FY19 SSEE Increment F(V)1/2 Procurement contract award includes a total of 6 systems (5 OPN and 1 SCN) resulting in a UPC of \$8.153M. The FY18 SSEE Increment F(V)1/2 Procurement contract award includes a total of 7 systems (6 OPN,1 SCN) resulting in a UPC of \$7.888M.

[SSEE Increment F(V)7/8 (TCS) Below Deck and Core] SSEE Increment F(V)7/8 Tactical Cryptologic System (TCS) is a scalable, modular variant of SSEE Increment F that allows configuration to meet platform mission requirements. SSEE Increment F(V)7/8 (TCS) leverages SSEE Increment F common software, training, and logistics. SSEE Increment F(V)7/8 (TCS) consists of infrastructure (Topside Antennas) which are permanently installed on 41 Unit Level ships. The Below Deck Core system includes a modular component to all Mission Tailorable upgrades to increase capabilities. The modularity and scalability of SSEE Increment F(V)7/8 (TCS) is delivered using Engineering Change Proposal (ECP). The Next Generation Chassis modifications provide enhanced data processing and greater exposure to existing system services while meeting constraining size, weight, power, and cooling requirements.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit						Modification Number / Title: 1 / 1U017 SSEE Increment F (All Variants) Ship			
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: 0304785N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: 1U017 SSEE Increment F (All Variants) Ship												
B Kits												
Recurring												
1.1.1) SSEE Increment F(V)1/2 Systems (Ship) - NonOrganic ⁽⁶⁾	40 / 303.094	6 / 43.812	6 / 47.328	5 / 40.765	- / -	5 / 40.765	5 / 43.970	- / -	- / -	- / -	- / -	62 / 478.969
1.1.2) SSEE Increment F(V)7/8 (TCS) Below Deck and Core - Organic	4 / 14.060	5 / 18.295	5 / 18.606	8 / 30.276	- / -	8 / 30.276	6 / 23.093	7 / 27.400	- / -	- / -	- / -	35 / 131.730
1.1.3) SSEE Increment F(V)7/8 (TCS) Infrastructure - NonOrganic ⁽⁷⁾	5 / 5.170	5 / 2.750	5 / 2.797	8 / 4.552	- / -	8 / 4.552	6 / 3.471	7 / 4.119	- / -	- / -	- / -	36 / 22.859
1.1.4) SSEE Increment F(V)7/8 (TCS) Shore - Below Deck and Core - Organic	- / -	1 / 3.659	1 / 3.721	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.380
1.1.5) SSEE Increment F(V)7/8 (TCS) Shore Infrastructure - NonOrganic	3 / 13.588	1 / 0.550	1 / 0.559	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 14.697
Subtotal: Recurring	- / 335.912	- / 69.066	- / 73.011	- / 75.593	- / -	- / 75.593	- / 70.534	- / 31.519	- / -	- / -	- / 0.000	- / 655.635
Subtotal: 1U017 SSEE Increment F (All Variants) Ship	52 / 335.912	18 / 69.066	18 / 73.011	21 / 75.593	- / -	21 / 75.593	17 / 70.534	14 / 31.519	- / -	- / -	- / -	140 / 655.635
Subtotal: Procurement, All Modification Items	- / 335.912	- / 69.066	- / 73.011	- / 75.593	- / -	- / 75.593	- / 70.534	- / 31.519	- / -	- / -	- / 0.000	- / 655.635
Support (All Modification Items)												
2.1) Production Support (Ship) Inc F & TCS	- / 21.001	- / 4.144	- / 4.381	- / 4.536	- / 0.000	- / 4.536	- / 3.879	- / 2.982	- / 1.149	- / 0.530	Continuing	Continuing
2.2) DSA (Ship)	- / 16.417	- / 4.847	- / 5.986	- / 5.982	- / 0.000	- / 5.982	- / 5.249	- / 4.060	- / 1.104	- / 0.000	Continuing	Continuing
Subtotal: Support	- / 37.418	- / 8.991	- / 10.367	- / 10.518	- / -	- / 10.518	- / 9.128	- / 7.042	- / 2.253	- / 0.530	Continuing	Continuing
Installation												
Modification Item 1 of 1: 1U017 SSEE Increment F (All Variants) Ship	- / 65.844	- / 16.238	- / 27.084	- / 29.581	- / 0.000	- / 29.581	- / 27.528	- / 23.716	- / 15.231	- / 0.000	- / 0.000	- / 205.222
Subtotal: Installation	- / 65.844	- / 16.238	- / 27.084	- / 29.581	- / -	- / 29.581	- / 27.528	- / 23.716	- / 15.231	- / -	- / 0.000	- / 205.222
Total												
Total Cost (Procurement + Support + Installation)	439.174	94.295	110.462	115.692	0.000	115.692	107.190	62.277	17.484	0.530	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit										Modification Number / Title: 1 / 1U017 SSEE Increment F (All Variants) Ship																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: 1U017 SSEE Increment F (All Variants) Ship																																		
Manufacturer Information																																		
Manufacturer Name: ARGON - SSEE INC F							Manufacturer Location: Fairfax, VA																											
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 12																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Mar 2017		Jan 2018		Jan 2019																													
Delivery Dates	Mar 2018		Jan 2019		Jan 2020																													
Installation Information																																		
Method of Implementation: Ship:: Installation Name: SSEE Increment F(V)1/2 Systems (Ship)																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																			
Prior Years			32 / 64.944	7 / 14.238	1 / 2.069	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 81.251																			
FY 2017			- / -	- / -	6 / 12.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 12.411																			
FY 2018			- / -	- / -	- / -	6 / 12.624	0 / 0.000	6 / 12.624	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 12.624																			
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.698	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.698																			
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.879	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.879																			
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total			32 / 64.944	7 / 14.238	7 / 14.480	6 / 12.624	0 / 0.000	6 / 12.624	5 / 10.698	5 / 10.879	- / -	- / -	- / -	0 / 0.000	62 / 127.863																			
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
	Q1	Q2	Q3	Q4	Q1	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	2	2	3	2	-	-	3	2	2	-	3	3	-	-	3	2	-	-	2	3	-	-	-	-	-	-	62						
Out	27	3	2	2	3	2	-	-	3	2	2	-	3	3	-	-	3	2	-	-	2	3	-	-	-	-	-	62						

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit									Modification Number / Title: 1 / 1U017 SSEE Increment F (All Variants) Ship																		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																		
Modification Item 1 of 1: 1U017 SSEE Increment F (All Variants) Ship																															
Installation Information																															
Method of Implementation: IMO:: Installation Name: SSEE INC F Ship (Includes TCS Infrastructure)																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.000	4 / 8.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.136																
FY 2017				- / -	- / -	2 / 4.068	3 / 6.205	0 / 0.000	3 / 6.205	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.273																
FY 2018				- / -	- / -	- / -	5 / 10.345	0 / 0.000	5 / 10.345	- / -	- / -	- / -	- / -	0 / 0.000	5 / 10.345																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	8 / 16.830	- / -	- / -	- / -	0 / 0.000	8 / 16.830																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	6 / 12.837	- / -	- / -	- / -	0 / 0.000	6 / 12.837																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	7 / 15.231	- / -	- / -	- / -	0 / 0.000	7 / 15.231																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total				- / -	1 / 2.000	6 / 12.204	8 / 16.550	0 / 0.000	8 / 16.550	8 / 16.830	6 / 12.837	7 / 15.231	- / -	0 / 0.000	36 / 75.652																
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	-	-	-	4	2	-	1	4	3	-	-	4	4	-	-	3	3	-	-	3	4	-	-	-	-	36	
Out	-	-	-	1	-	-	-	-	4	2	-	1	4	3	-	-	4	4	-	-	3	3	-	-	3	4	-	-	-	-	36
Method of Implementation: IMO:: Installation Name: SSEE Increment F(V)7/8 (TCS) Shore Infrastructure																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.900										
FY 2017				- / -	- / -	1 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.400										
FY 2018				- / -	- / -	- / -	1 / 0.407	0 / 0.000	1 / 0.407	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.407										
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Modification Number / Title: 1 / 1U017 SSEE Increment F (All Variants) Ship																			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
Modification Item 1 of 1: 1U017 SSEE Increment F (All Variants) Ship																															
Installation Information																															
Method of Implementation: IMO:: Installation Name: SSEE Increment F(V)7/8 (TCS) Shore Infrastructure																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				3 / 0.900	- / -	1 / 0.400	1 / 0.407	0 / 0.000	1 / 0.407	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.707																
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5						
Out	3	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	5						
Method of Implementation (Organic): SSEE Increment F(V)7/8 (TCS) Below Deck and Core - Not Installed												Installation Quantity: 35																			
Method of Implementation (Organic): SSEE Increment F(V)7/8 (TCS) Shore - Below Deck and Core - Not Installed												Installation Quantity: 2																			
Footnotes:																															
(6) The FY19 SSEE Increment F(V)1/2 Procurement contract award includes a total of 6 systems (5 OPN and 1 SCN) resulting in a UPC of \$8.153M. The FY18 SSEE Increment F(V)1/2 Procurement contract award includes a total of 7 systems (6 OPN,1 SCN) resulting in a UPC of \$7.888M.																															
(7) Tactical Cryptologic System (TCS) Infrastructure procurements are comprised of the antenna infrastructure and core hardware components. TCS Infrastructure is permanently installed on (41) Unit Level platforms. The Unit Level platforms pull from the TCS Below Deck and Core system rotatable pool when deploying.																															

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Exhibit P-3a, Individual Modification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit							Modification Number / Title: 2 / 1U018/1U019 SSEE Modifications	

ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	39.347	15.308	39.491	63.240	0.000	63.240	75.087	72.255	77.940	81.089	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	39.347	15.308	39.491	63.240	0.000	63.240	75.087	72.255	77.940	81.089	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	39.347	15.308	39.491	63.240	0.000	63.240	75.087	72.255	77.940	81.089	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SSEE Modifications is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ship Signal Exploitation Equipment (SSEE) systems. This capability provides simultaneous detection, collection, processing, Information Operations and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today. It includes the Graywing subsystem which is an advanced common data link system that will be integrated into SSEE Increment E and Increment F systems. It is a critical component of "Ballistic Missile Defense, Executive Committee, Anti-Submarine Warfare, Chief of Naval Operations, Executive Board Information Operation (IO) Countermeasure Red Flash" (details held at a higher classification level).

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit							Modification Number / Title: 2 / 1U018/1U019 SSEE Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Various			Modification Type: Upgrade					Related RDT&E PEs: 0304785N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: 1U018/1U019 SSEE Modifications													
B Kits													
Recurring													
1.1.1) SSEE Mods Prior Years - NonOrganic ⁽⁸⁾	3 / 10.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.928
1.1.2) Graywing - NonOrganic	3 / 16.611	2 / 12.236	6 / 33.150	9 / 48.645	- / -	9 / 48.645	10 / 54.960	9 / 50.305	10 / 56.845	10 / 57.811	Continuing	Continuing	
Subtotal: Recurring	- / 27.539	- / 12.236	- / 33.150	- / 48.645	- / -	- / 48.645	- / 54.960	- / 50.305	- / 56.845	- / 57.811	Continuing	Continuing	
Subtotal: 1U018/1U019 SSEE Modifications	6 / 27.539	2 / 12.236	6 / 33.150	9 / 48.645	- / -	9 / 48.645	10 / 54.960	9 / 50.305	10 / 56.845	10 / 57.811	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 27.539	- / 12.236	- / 33.150	- / 48.645	- / -	- / 48.645	- / 54.960	- / 50.305	- / 56.845	- / 57.811	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 6.066	- / 1.101	- / 1.987	- / 2.873	- / -	- / 2.873	- / 2.900	- / 2.867	- / 3.277	- / 3.353	Continuing	Continuing	
2.2) DSA	- / 1.877	- / 0.425	- / 1.210	- / 2.128	- / -	- / 2.128	- / 2.593	- / 2.546	- / 2.682	- / 2.821	Continuing	Continuing	
Subtotal: Support	- / 7.943	- / 1.526	- / 3.197	- / 5.001	- / -	- / 5.001	- / 5.493	- / 5.413	- / 5.959	- / 6.174	Continuing	Continuing	
Installation													
Modification Item 1 of 1: 1U018/1U019 SSEE Modifications	- / 3.865	- / 1.546	- / 3.144	- / 9.594	- / 0.000	- / 9.594	- / 14.634	- / 16.537	- / 15.136	- / 17.104	Continuing	Continuing	
Subtotal: Installation	- / 3.865	- / 1.546	- / 3.144	- / 9.594	- / -	- / 9.594	- / 14.634	- / 16.537	- / 15.136	- / 17.104	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	39.347	15.308	39.491	63.240	0.000	63.240	75.087	72.255	77.940	81.089	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit								Modification Number / Title: 2 / 1U018/1U019 SSEE Modifications																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: 1U018/1U019 SSEE Modifications																														
Manufacturer Information																														
Manufacturer Name: ARGON - Graywing - SHIP ⁽⁹⁾								Manufacturer Location: Fairfax, VA																						
Administrative Leadtime (in Months): 3								Production Leadtime (in Months): 12																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Sep 2017	May 2018	Jan 2019																											
Delivery Dates	Sep 2018	May 2019	Jan 2020																											
Installation Information																														
Method of Implementation: IMO:: Installation Name: Paragon-Graywing																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.825																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			3 / 0.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.825																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						
Out	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3						
Method of Implementation: Ship:: Installation Name: Graywing																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.040	1 / 1.546	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 4.586						

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5				P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit									Modification Number / Title: 2 / 1U018/1U019 SSEE Modifications																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: 1U018/1U019 SSEE Modifications</i>																																
Installation Information																																
Method of Implementation: Ship:: Installation Name: Graywing																																
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)													
FY 2017				- / -	- / -	2 / 3.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.144																
FY 2018				- / -	- / -	- / -	6 / 9.594	0 / 0.000	6 / 9.594	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 9.594																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	9 / 14.634	- / -	- / -	- / -	- / -	0 / 0.000	9 / 14.634																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	10 / 16.537	- / -	- / -	- / -	- / -	0 / 0.000	10 / 16.537																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	9 / 15.136	- / -	- / -	- / -	- / -	0 / 0.000	9 / 15.136																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 17.104	- / -	- / -	- / -	0 / 0.000	10 / 17.104																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total				2 / 3.040	1 / 1.546	2 / 3.144	6 / 9.594	0 / 0.000	6 / 9.594	9 / 14.634	10 / 16.537	9 / 15.136	10 / 17.104	Continuing	Continuing																	
Installation Schedule																																
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot		
	Q1	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	-	-	2	-	-	3	3	-	-	5	4	-	-	5	5	-	-	4	5	-	-	5	5	10	59		
Out	-	2	-	-	-	-	-	1	-	-	2	-	-	3	3	-	-	5	4	-	-	5	5	-	-	4	5	-	-	5	15	59

Footnotes:

(8) SSEE Mods prior year procurements (Includes Paragon subsystem and LRIP Retrofit Kit).

(9) Contract award dates do not impact install schedule

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	28.840	9.648	6.916	9.614	0.000	9.614	3.408	3.338	0.378	0.000	0.000	62.142
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	28.840	9.648	6.916	9.614	0.000	9.614	3.408	3.338	0.378	0.000	0.000	62.142
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	28.840	9.648	6.916	9.614	0.000	9.614	3.408	3.338	0.378	0.000	0.000	62.142
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Engineering Change Proposal (ECP)/Obsolescence procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and end-of-life (EOL) equipment for the Ship's Signal Exploitation Equipment (SSEE) Increment F (All Variants) program. ECP incorporates Pre-Planned Product Improvements (P3I) for the acquisition and localization of the latest Signals of Interest (SOI) and Information Operations (IO). ECP maintains and improves upon SSEE Increment F's (All Variants) capability and relevance within a rapidly evolving threat environment. ECP equipment will be used to enable SSEE Increment F(V)7/8 (TCS) to meet its scalable and modular capacity.												
[Blade Replacement Kits] Procurement of Blade Replacement Kits to address IBM/Lenovo server replacement (Lenovo servers are being sold to foreign owners). These kits are able to support system Technical Refresh, Windows 10 operating system compliance and replace obsolete parts.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit						Modification Number / Title: 3 / 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: SSEE Inc F			Modification Type: Upgrade					Related RDT&E PEs: 0304785N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)</i>												
B Kits												
Recurring												
1.1.1) SSEE Increment F (All Variants) ECP Prior Years - NonOrganic ⁽¹⁰⁾	14 / 9.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 9.789
1.1.2) Blade Replacement Kits - NonOrganic	20 / 13.384	12 / 7.992	8 / 5.419	12 / 8.268	- / -	12 / 8.268	3 / 2.102	4 / 2.850	- / -	- / -	- / -	59 / 40.015
<i>Subtotal: Recurring</i>	- / 23.173	- / 7.992	- / 5.419	- / 8.268	- / -	- / 8.268	- / 2.102	- / 2.850	- / -	- / -	- / -	- / 0.000
<i>Subtotal: 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)</i>	34 / 23.173	12 / 7.992	8 / 5.419	12 / 8.268	- / -	12 / 8.268	3 / 2.102	4 / 2.850	- / -	- / -	- / -	73 / 49.804
<i>Subtotal: Procurement, All Modification Items</i>	- / 23.173	- / 7.992	- / 5.419	- / 8.268	- / -	- / 8.268	- / 2.102	- / 2.850	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Prior Year Support and DSA Costs ⁽¹¹⁾	- / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.420
2.2) DSA	- / 1.954	- / 0.804	- / 0.631	- / 0.759	- / -	- / 0.759	- / 0.410	- / 0.260	- / 0.069	- / -	- / -	- / 4.887
<i>Subtotal: Support</i>	- / 2.374	- / 0.804	- / 0.631	- / 0.759	- / -	- / 0.759	- / 0.410	- / 0.260	- / 0.069	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)</i>	- / 3.293	- / 0.852	- / 0.866	- / 0.587	- / 0.000	- / 0.587	- / 0.896	- / 0.228	- / 0.309	- / 0.000	- / 0.000	- / 7.031
<i>Subtotal: Installation</i>	- / 3.293	- / 0.852	- / 0.866	- / 0.587	- / -	- / 0.587	- / 0.896	- / 0.228	- / 0.309	- / -	- / 0.000	- / 7.031
Total												
Total Cost (Procurement + Support + Installation)	28.840	9.648	6.916	9.614	0.000	9.614	3.408	3.338	0.378	0.000	0.000	62.142

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit					Modification Number / Title: 3 / 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)								
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:								
Modification Item 1 of 1: 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)																
Manufacturer Information																
Manufacturer Name: ARGON - SSEE INC F ECP				Manufacturer Location: Fairfax, VA												
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 12												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	Aug 2017	Jan 2018	Jan 2019													
Delivery Dates	Aug 2018	Jan 2019	Jan 2020													
Manufacturer Name: SSC LANT - INMARSAT				Manufacturer Location: Charleston, SC												
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 12												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates			Jan 2019													
Delivery Dates			Jan 2020													
Manufacturer Name: TBD - NTDN (Large Deck Platforms and Classic Reach)				Manufacturer Location: TBD												
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 12												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates			Jan 2019													
Delivery Dates			Jan 2020													
Installation Information																
Method of Implementation: Ship:: Installation Name: SSEE Increment F (All Variants) ECP Prior Years																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2,733	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 2,733				
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
Total	14 / 2,733	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 2,733				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5												P-1 Line Item Number / Title: 2360 / Shipboard IW Exploit																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1: 1U014 Engineering Change Proposal (ECP) SSEE Increment F (All Variants)</i>																														
Installation Information																														
Method of Implementation: Ship:: Installation Name: SSEE Increment F (All Variants) ECP Prior Years																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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					
Out	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14					
Method of Implementation: IMO:: Installation Name: ECP INC F																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)					
Prior Years				8 / 0.560	12 / 0.852	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 1.412						
FY 2017				- / -	- / -	12 / 0.866	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.866						
FY 2018				- / -	- / -	- / -	8 / 0.587	0 / 0.000	8 / 0.587	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.587						
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.896	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.896						
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.228	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.228						
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.309	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.309						
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
Total				8 / 0.560	12 / 0.852	12 / 0.866	8 / 0.587	0 / 0.000	8 / 0.587	12 / 0.896	3 / 0.228	4 / 0.309	- / -	- / -	- / -	- / -	0 / 0.000	59 / 4.298												
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	3	3	3	3	4	4	4	-	-	4	4	-	4	4	-	2	1	-	-	2	2	-	-	59				
Out	4	2	2	3	3	3	3	4	4	4	-	-	4	4	-	4	4	-	2	1	-	-	2	2	-	-	59			
Footnotes:																														
(10) SSEE Increment F (all variants) ECP Prior Year procurements (includes LRIP to FRP Back fit Kit and Red Falcon Upgrade Kits).																														
(11) Prior year Production support and DSA costs for SSEE Increment F (all variants) ECP's.																														

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment					2361 / Automatic Identification System (AIS)										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	4.658	0.764	0.510	4.028	0.000	4.028	5.380	4.270	3.622	2.616	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	4.658	0.764	0.510	4.028	0.000	4.028	5.380	4.270	3.622	2.616	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	4.658	0.764	0.510	4.028	0.000	4.028	5.380	4.270	3.622	2.616	Continuing	Continuing			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	-	0.010	0.005	-	0.005	0.007	-	-	-	-	0.022			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
1U030: Automatic Identification System (AIS) is required for safety of navigation for all surface ships and submarines. AIS is a maritime Very High Frequency (VHF) communication system, which allows ships to exchange navigation, ship identification, and cargo information machine-to-machine via VHF transponder. The AIS capability provides Navy ships with the ability to rapidly identify and track commercial shipping, which significantly increases the Navy's ability to distinguish between normal and suspicious merchant ships headed towards United States and allied ports around the globe. AIS provides critical track data to the Common Operational Picture (COP) on surface ships, AN/BYG-1 Combat System on submarines, Global Command and Control System-Maritime (GCCS-M) on Force level ships, and Global Command and Control System-Joint (GCCS-J) at Fleet Maritime Operations Center (MOC)s for publishing AIS data to the Maritime Domain Awareness (MDA) Data Sharing Community of Interest. The AIS submarine configuration provides an interface to the AN/BYG-1 Combat System and Encrypted AIS capability that is currently not available on other AIS variants. This capability dramatically improves the Combatant Commanders' situational awareness and MDA data sharing capabilities in support of regional engagement, and tracking efforts against potential maritime terrorism threats.															
Funds will procure and install AIS systems for Navy ships, submarines and shore sites consisting of a combination of modified Commercial Off-The-Shelf (COTS) and government/commercial software, such as omni-directional VHF, Global Positioning System antennas, AIS transponders, displays and associated cables, servers, power supplies, laptop computers, junction boxes, switches and radio frequency couplers. Without this configuration of AIS, Navy submarines will not be able to see encrypted AIS track data and will increase the risk of collisions.															
[P40A / Combat Workstation - Procurement]: The combat workstation is a ruggedized Panasonic Toughbook (CF-54) that provides AIS message data for mission planning.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 5: Reconnaissance Equipment				2361 / Automatic Identification System (AIS)						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-40a	1U030 Automatic Identification System (AIS)	P-5a			- / 4.658	- / 0.764	- / 0.510	- / 4.028	- / -	- / 4.028
P-40	Total Gross/Weapon System Cost				- / 4.658	- / 0.764	- / 0.510	- / 4.028	- / 0.000	- / 4.028

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The Navy increased the AIS program budget to begin design/integration efforts to field the AIS capability on Nuclear Command, Control, and Communications (NC3) mission capable Ohio class (SSBN) submarines. The need for AIS system is especially important for SSBN submarines, which have limited maneuverability during strategic patrol. The AIS Submarine configuration provides situational awareness (to include encrypted AIS message traffic from US Coast Guard vessels) to the SSBN Commanding Officer during time constrained ascents to communications depth, thereby significantly reducing the risk of a close-aboard contact situation which has occurred in the past, impacting the already limited resource of these SSBN submarines.

Additional funding is to implement United States Fleet Forces Command (USFFC) Comprehensive review recommendations for adding an AIS Workstation in Combat Information Center (CIC) on Surface Ships. An AIS Workstation in CIC will allow AIS data to be correlated with information from other sources such as RADAR in CIC resulting in improved situation awareness and mission planning capability. Non-recurring cost associated with network and shipboard certification requirements. Updating the AIS architecture to integrate an additional AIS Workstation into the Combat Information Center (CIC) will include Non-Recurring Engineering (NRE) costs associated with the Ship Modernization process such as Engineering Change and Ship Change documentation, Interactive Electronic Technical Manual (IETM) updates, etc. There are 26 Ship Class drawings that need to be updated to detail where and how the new laptop will be installed in CIC, to include how it will be mounted and interface definitions for network, power, etc. The new laptop is an added interface to the AIS architecture that requires End to End Integration testing and AI SIT network validation testing and an updated ATO.

The FY19 funds provide for the procurement of five AIS submarine systems and forty-four Combat Workstations and associated Design Services Allocation; integration testing to support AIS installations on SSBN class submarines and installation funding for two submarines. The AIS Cyber hardening effort begins in FY19. Since this modernization effort is required on all platforms, it requires ship class drawings for 26 different classes of ships. The Cyber Ship Alteration (SHIPALT) effort in FY19 is non-recurring.

In FY19 funding was realigned from OPN BLI 2361 AIS to OMN 1C1C (Combat Communications and Electronic Warfare) to properly fund integration and sustainment of a cyber hardening capability for AIS.

AIS procurement unit cost has increased from FY18 to FY19 due to material cost increases. The material cost of the nickel connector components of the AIS system increased from \$10k to \$20k. The only other material alternative that meets EMC/EMI requirements are Stainless Steel connectors at a much higher cost.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5						P-1 Line Item Number / Title: 2361 / Automatic Identification System (AIS)								Aggregated Items Title: 1U030 Automatic Identification System (AIS)						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
1) 1U030 Automatic Identification Systems (AIS)																				
1.1) AIS - Procurement ^{(1)(t)}	A		64.267	15	0.964	80.000	1	0.080	80.000	2	0.160	90.000	5	0.450	-	-	-	90.000	5	0.450
1.2) Engineering Change Proposal ⁽²⁾	A		-	-	-	-	-	0.162	-	-	0.161	-	-	0.551	-	-	-	-	-	0.551
1.4) Combat Workstation - Procurement ^(t)	A		-	-	-	-	-	-	-	-	-	4.803	44	0.211	-	-	-	4.803	44	0.211
Subtotal: 1) 1U030 Automatic Identification Systems (AIS)			-	-	0.964	-	-	0.242	-	-	0.321	-	-	1.212	-	-	-	-	-	1.212
2) Installations																				
2.1) AIS - Installation ⁽³⁾	A		-	-	2.750	-	-	-	-	-	0.150	-	-	0.406	-	-	-	-	-	0.406
Subtotal: 2) Installations			-	-	2.750	-	-	-	-	-	0.150	-	-	0.406	-	-	-	-	-	0.406
3) Support																				
3.1) Production Support	A		-	-	0.694	-	-	0.016	-	-	0.019	-	-	0.019	-	-	-	-	-	0.019
3.2) AIS - DSA	A		-	-	0.250	-	-	0.506	-	-	0.020	-	-	0.115	-	-	-	-	-	0.115
3.4) Seawolf SHIPALT Update (R5) ⁽⁴⁾	A		-	-	-	-	-	-	-	-	-	-	-	0.143	-	-	-	-	-	0.143
3.5) Cyber & CR SHIPALT (Non-recurring) ⁽⁵⁾	A		-	-	-	-	-	-	-	-	-	-	-	2.133	-	-	-	-	-	2.133
Subtotal: 3) Support			-	-	0.944	-	-	0.522	-	-	0.039	-	-	2.410	-	-	-	-	-	2.410
Total			-	-	4.658	-	-	0.764	-	-	0.510	-	-	4.028	-	-	-	-	-	4.028

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

(t) indicates the presence of a P-5a

Footnotes:

(1) FY19 funding supports the procurement of one SEAWOLF submarine and four submarine class systems for Ship, Submersible, Ballistic, Nuclear (SSBN)submarines. AIS procurement unit cost has increased from FY18 to FY19 due to material cost increases. The delta in per unit installations costs is driven by the switch in procurements from AIS (V)3 system installed on Los Angeles Class submarines to the AIS (V)9 system that is required for installation on Ohio Class submarines. The higher cost of the AIS (V)9 system is largely due to a recent 100% cost increase in price for the nickel connectors that are required to meet submarine EMI/EMC requirements. The only other material alternative that meets EMI/EMI requirements are Stainless Steel connectors at a much higher cost.

(2) In FY19, AIS will be updating the architecture to integrate an additional AIS Workstation into the Combat Information Center (CIC) will include Non-Recurring Engineering (NRE) costs associated with the Ship Modernization process such as Engineering Change and Ship Change documentation, Interactive Electronic Technical Manual (IETM) updates, etc. The new laptop is an added interface to the AIS architecture that requires End to End Integration testing and AI SIT network validation testing and an updated ATO.

(3) Design Services Allocation (DSA) and Installation costs vary depending on the submarine class and hull being installed on and the location of the installation.

(4) Prior to the first Seawolf class install in FY20, the Ship Alteration (SHIPALT) 4515 drawings will be modified in FY19 to reflect the changes to the SAAB R5 transponder and their modifications that have been incorporated into the AIS system since the SHIPALT drawings were drafted in 2011.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5	P-1 Line Item Number / Title: 2361 / Automatic Identification System (AIS)	Aggregated Items Title: 1U030 Automatic Identification System (AIS)
(5) The AIS Cyber hardening effort begins in FY19. Since this modernization effort is required on all platforms, it requires ship class drawings for 26 different classes of ships. The class drawings will also be updated to include detail where and how the new laptop will be installed in Combat Information Center (CIC), to include how it will be mounted and interface definitions for network, power, etc. The Cyber and CIC Ship Alteration (SHIPALT) effort in FY19 is non-recurring.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 5			P-1 Line Item Number / Title: 2361 / Automatic Identification System (AIS)					Aggregated Items: 1U030 Automatic Identification System (AIS)				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) 1U030 Automatic Identification Systems (AIS)												
1.1) AIS - Procurement ⁽¹⁾		2017	SRC / Atlanta, GA	C / FFP	SSC Atlantic	Nov 2016	Sep 2017	1	80.000	Y		
1.1) AIS - Procurement ⁽¹⁾		2018	SRC / Atlanta, GA	C / FFP	SSC Atlantic	Nov 2017	Sep 2018	2	80.000	Y		
1.1) AIS - Procurement ⁽¹⁾		2019	SRC / Atlanta, GA	C / FFP	SSC Atlantic	Nov 2018	Sep 2019	5	90.000	Y		
1.4) Combat Workstation - Procurement		2019	Panasonic Corporation / Newark, NJ	C / FFP	** NO PCO **	Nov 2018	May 2019	44	4.803	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					2606 / Cooperative Engagement Capability										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0607658N, 0603658N					Other Related Program Elements: N/A							
Line Item MDAP/MAIS Code: N/A															
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	815.776	17.965	23.892	44.173	0.000	44.173	32.132	31.827	32.419	33.127	31.641	1,062.952			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	815.776	17.965	23.892	44.173	0.000	44.173	32.132	31.827	32.419	33.127	31.641	1,062.952			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	815.776	17.965	23.892	44.173	0.000	44.173	32.132	31.827	32.419	33.127	31.641	1,062.952			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	1.078	1.492	0.831	-	0.831	2.153	0.920	0.789	0.576	Continuing	Continuing			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY 2019 funding request was reduced by \$.193 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.															
Cooperative Engagement Capability (CEC) significantly improves Battle Force Anti-Air Warfare (AAW) capability by coordinating all Battle Force AAW sensors into a single, real-time, composite track picture capable of fire control quality. CEC distributes sensor data from each ship and aircraft, or cooperating unit (CU), to all other CUs in the battle force through a real-time, line of sight, high data rate sensor and engagement data distribution network. CEC is highly resistant to jamming and provides accurate gridlocking between CUs. Each CU independently employs high capacity, parallel processing and advanced algorithms to combine all distributed sensor data into a fire control quality track picture which is the same for all CUs. CEC data is presented as a superset of the best AAW sensor capabilities from each CU, all of which are integrated into a single input to each CU's combat weapons system. CEC significantly improves our Battle Force defense in depth, including both local area and ship defense capabilities against current and future AAW threats. Moreover, CEC provides critical connectivity and integration of over-land air defense systems capable of countering emerging air threats, including land attack cruise missiles, in a complex littoral environment.															
CEC consists of the Data Distribution System (DDS), the Cooperative Engagement Processor (CEP), and Combat System modifications. The DDS encodes and distributes ownership sensor and engagement data and is a high capacity, jam resistant, directive system providing a precision gridlocking and high throughput of data. The CEP is a high capacity distributed processor that is able to process force levels of data in near real-time. This data is passed to the ship's combat system as high quality data for which the ship can cue its onboard sensors or use the data to engage targets without actually tracking them. The Navy has begun implementation of a Pre-Planned Product Improvement (P3I) approach to modify the current equipment to meet reduced size, weight, cost, power and cooling objectives. This P3I approach also supports continuity for interoperability improvements and program protection, as well as supporting open architecture initiatives and comms independence. P3I will provide hardware which complies with Category 3 Open Architecture Core Environment (OACE) standards with rehosted existing software, which will be fielded fleet-wide to allow affordable replacement of obsolete computing system components and eliminate dependencies on "closed" equipment, operating systems, and middleware.															
A family of antennas approach will be used to satisfy CEC requirements with lower life cycle costs (procurement, installation, and maintenance) and reduced weight (on mast and below deck). These antennas enable future capability as well as providing a solution extensible to additional platforms. A competitive contract for Common Array Block (CAB) antenna development and production was awarded late FY13. CEC is planned for shipboard installations at various Naval and commercial shipyards aboard CG/CG Mod, DDG/DDG Mod, CV/CVN, LPD, LHD, DDG 1000, and LHA ship classes during scheduled ship availability periods and at land based test sites (LBTS).															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment		P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0607658N, 0603658N	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
[P40A / UC002 - AN/UYQ-70 DISPLAY]: This is a sunk cost to fund the procurement of the AN/UYQ-70 display system for use and integration with the CEC system.		
[P40A / UC004 - ECP/KIT PROCUREMENT]: These funds are for the procurement and installation of Engineering Change Proposals (ECPs)(AN/USG-2 to AN/USG-2B upgrades/AN/USG-2A to AN/USG-2B upgrades) Field Change Kits to address CEC parts obsolescence associated with interfacing systems on multiple platforms.		
[P40A / UC005 - NON-RECURRING DEPOT COST]: This is a sunk cost to establish a depot for the CEC system.		
[P40A / UC006 - VISUAL INTERACTIVE SIMULATED TRAINING APPLICATION (VISTA) TRAINING]: This is a sunk cost to fund VISTA training related to the CEC system.		
[P40A / UC008 - SUPPLY SUPPORT]: This is a sunk cost for Supply Support for the CEC system.		
[P40A / UC011 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)]: Funds are for the procurement of Signal Data Processors (SDP) backfits at Land Based Test Sites (LBTSs). There are no installation costs associated with these procurements because the installations will be performed by employees at the LBTSs.		
[P40A / UC013 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2)]: Funds are for the procurement of AN/USG-2B hardware conversion kits for the CEC AN/USG-2 system configuration.		
[P40A / AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2)]: FY 19 - Added procurement quantity of 5 units for Mode 5 IFF Acceleration		
[P40A / UC014 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2A)]: Funds are for the procurement of AN/USG-2B hardware conversion kits for the AN/USG-2A CEC system configuration.		
[P40A / UC015 - AN/USG-2B HARDWARE CONVERSION KITS (LBTS)]: Funds are for the procurement of AN/USG-2B hardware conversion kits for CEC Land Based Test Sites.		
[P40A / UC830 - PRODUCTION ENGR. SUPPORT]: These funds are for production engineering support for CEC systems.		
[P40A / UCCA1 - CONGRESSIONAL ADD]: These are Congressional add funds.		
[P3A / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)]: These funds are for the procurement of CEC to backfit CG, DDG, CV/CVN, and LHD ship classes, as well as Land Based Test Sites (LBTSs).		
[P3A - 2 / UC003 - PAAA BACKFIT KITS]: These funds are for the procurement of Planar Antenna Array Assembly (PAAA) backfit kits.		
[P3A - 3 / UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)]: Funds are for the procurement of Signal Data Processors (SDP) backfits.		
[P3A - 4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)]: Funds are for the procurement of Signal Data Processors (SDP) backfits for AN/USG-2A equipment.		
[P3A - 5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD]: Funds are for the procurement of Common Array Block (CAB) antennas for shipboard AN/USG-2B systems.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				2606 / Cooperative Engagement Capability					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0607658N, 0603658N				Other Related Program Elements: N/A		
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	COOPERATIVE ENGAGEMENT CAPABILITY	P-5a			- / 274.421	- / 8.261	- / 11.235	- / 12.998	- / -
P-3a	1 / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B) (SGAAW)				- / 442.477	- / 0.182	- / 7.472	- / 10.966	- / 0.000
P-3a	2 / UC003 - PAAA BACKFIT KITS (SGAAW)				- / 57.795	- / 2.644	- / 1.508	- / 2.355	- / 0.000
P-3a	3 / UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2) (SGAAW)				- / 24.183	- / 3.839	- / 3.285	- / 8.081	- / 0.000
P-3a	4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A) (SGAAW)				- / 13.500	- / 1.217	- / 0.392	- / 0.421	- / 0.000
P-3a	5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD (SGAAW)				- / 3.400	- / 1.822	- / 0.000	- / 9.352	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 815.776	- / 17.965	- / 23.892	- / 44.173	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-40a	COOPERATIVE ENGAGEMENT CAPABILITY	P-5a			- / -	- / -	- / -	- / -	- / -
P-3a	1 / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B) (SGAAW)				- / 2.047	- / 3.800	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / UC003 - PAAA BACKFIT KITS (SGAAW)				- / 1.211	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2) (SGAAW)				- / 2.666	- / 2.317	- / 1.533	- / 0.000	- / 0.000
P-3a	4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A) (SGAAW)				- / 0.804	- / 0.384	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD (SGAAW)				- / 13.226	- / 18.120	- / 21.656	- / 21.739	- / 58.359
P-40	Total Gross/Weapon System Cost				- / 32.132	- / 31.827	- / 32.419	- / 33.127	- / 31.641
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: Funds are to procure hardware and provide associated support for the CEC system. Requirements are driven by planned procurements of CEC for LHD 2-6, Planar Antenna Array Assembly (PAAA) antennas, and Signal Data Processor (SDP) backfit kits. Increase to FY 18 requirements are to procure hardware in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes as well as Land Based Test Sites (LBTS). Funding increase to support additional FY 19 requirements to accelerate procurement and installation of hardware required for Mode 5 Identification Friend/Foe (IFF) capability to the Fleet by 2020.									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7							P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability							Aggregated Items Title: COOPERATIVE ENGAGEMENT CAPABILITY						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) UC002 - AN/UYQ-70 DISPLAY	A		-	-	21.493	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 1) UC002 - AN/UYQ-70 DISPLAY			-	-	21.493	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2) UC004 - ECP/KIT PROCUREMENT ⁽¹⁾	A		-	-	100.542	-	-	2.993	-	-	3.279	-	-	3.503	-	-	-	-	-	3.503
Subtotal: 2) UC004 - ECP/KIT PROCUREMENT			-	-	100.542	-	-	2.993	-	-	3.279	-	-	3.503	-	-	-	-	-	3.503
3) UC005 - NON-RECURRING DEPOT COST	A		-	-	4.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) UC005 - NON-RECURRING DEPOT COST			-	-	4.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4) UC006 - VISUAL INTERACTIVE SIMULATED TRAINING APPLICATION (VISTA) TRAINING	A		-	-	0.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) UC006 - VISUAL INTERACTIVE SIMULATED TRAINING APPLICATION (VISTA) TRAINING			-	-	0.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5) UC008 - SUPPLY SUPPORT	A		-	-	6.094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) UC008 - SUPPLY SUPPORT			-	-	6.094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6) UC011 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)	A		405,846.15	13	5.276	227,154.00	2	0.454	231,697.00	5	1.158	236,331.00	1	0.236	-	-	-	236,331.00	1	0.236
Subtotal: 6) UC011 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)			-	-	5.276	-	-	0.454	-	-	1.158	-	-	0.236	-	-	-	-	-	0.236
7) UC013 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2)	A		349,722.22	18	6.295	383,833.33	1	0.384	391,600.00	3	1.175	399,545.00	9	3.596	-	-	-	399,545.00	9	3.596

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7						P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability									Aggregated Items Title: COOPERATIVE ENGAGEMENT CAPABILITY					
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
CONVERSION KITS (AN/USG-2) ^{(3)(†)}																				
<i>Subtotal: 7) UC013 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2)</i>			-	-	6.295	-	-	0.384	-	-	1.175	-	-	3.596	-	-	-	-	-	3.596
8) UC014 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2A)																				
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A) ^(†)	A		267,727.27	11	2.945	293,000.00	1	0.293	299,000.00	1	0.299	304,837.00	1	0.305	-	-	-	304,837.00	1	0.305
<i>Subtotal: 8) UC014 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2A)</i>			-	-	2.945	-	-	0.293	-	-	0.299	-	-	0.305	-	-	-	-	-	0.305
9) UC015 - AN/USG-2B HARDWARE CONVERSION KITS (LBTS) ⁽⁴⁾																				
9.1) AN/USG-2B HARDWARE CONVERSION KITS (LBTS) ^(†)	A		367,200.00	5	1.836	386,509.00	2	0.773	394,300.00	5	1.972	402,124.00	1	0.402	-	-	-	402,124.00	1	0.402
<i>Subtotal: 9) UC015 - AN/USG-2B HARDWARE CONVERSION KITS (LBTS)</i>			-	-	1.836	-	-	0.773	-	-	1.972	-	-	0.402	-	-	-	-	-	0.402
10) UC830 - PRODUCTION ENGR. SUPPORT ⁽⁵⁾																				
10.1) PRODUCTION ENGR. SUPPORT ⁽⁶⁾	A		-	-	87.201	-	-	3.364	-	-	3.352	-	-	4.956	-	-	-	-	-	4.956
<i>Subtotal: 10) UC830 - PRODUCTION ENGR. SUPPORT</i>			-	-	87.201	-	-	3.364	-	-	3.352	-	-	4.956	-	-	-	-	-	4.956
11) UCCA1 - CONGRESSIONAL ADD																				
11.1) CONGRESSIONAL ADD	A		-	-	23.249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 11) UCCA1 - CONGRESSIONAL ADD</i>			-	-	23.249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12) UC6IN - NON-FMP INSTALLATION																				
12.1) NON-FMP INSTALLATION	A		-	-	14.290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 12) UC6IN - NON-FMP INSTALLATION</i>			-	-	14.290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total			-	-	274.421	-	-	8.261	-	-	11.235	-	-	12.998	-	-	-	-	-	12.998

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

(†) indicates the presence of a P-5a

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability	Aggregated Items Title: COOPERATIVE ENGAGEMENT CAPABILITY
Footnotes:		
(1) These funds are for the procurement and installation of Engineering Change Proposals (ECPs)(AN/USG-2 to AN/USG-2B upgrades/AN/USG-2A to AN/USG-2B upgrades) Field Change Kits to address CEC parts obsolescence associated with interfacing systems on multiple platforms.		
(2) Increased funding in FY 19 to account for CAB ECP planning costs. Increased funding in FY 23 to address CAB and SDP-S obsolescence.		
(3) FY 19 - Added procurement quantity of 5 units for Mode 5 IFF Acceleration		
(4) FY 18 requirements are for the procurement of additional AN/USG-2B hardware conversion kits for CEC Land Based Test Sites in order for hardware to current reflect Fleet configurations.		
(5) These funds are for production engineering support for CEC systems.		
(6) Increased funding in FY 19 to account for additional CAB production engineering planning costs. Increased funding in FY 22-23 to account for CAB and SDP-S hardware improvement initiatives.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability					Aggregated Items: COOPERATIVE ENGAGEMENT CAPABILITY				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
6) UC011 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)												
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2011	Sechan Electronics, Inc. / Lititz, PA	C / IDIQ	Washington, DC	Dec 2011	Jun 2013	5	450,000.00	Y		Dec 2010
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2012	Sechan Electronics, Inc. / Lititz, PA	SS / IDIQ	Washington, DC	Dec 2012	Jun 2014	3	669,000.00	Y		
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2014	Sechan Electronics, Inc. / Lititz, PA	SS / IDIQ	Washington, DC	May 2014	Nov 2015	3	194,094.00	Y		
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2015	Sechan Electronics, Inc. / Lititz, PA	SS / IDIQ	Washington, DC	May 2015	Nov 2016	2	218,500.00	Y		
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2017 ⁽⁷⁾	TBD / TBD	C / IDIQ	Washington, DC	May 2017	Nov 2018	2	227,154.00	Y		Aug 2016
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2018	TBD / TBD	SS / IDIQ	Washington, DC	May 2018	Nov 2019	5	231,697.00	Y		
6.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (LBTS)		2019	TBD / TBD	C / TBD	** NO PCO **	Oct 2018	Oct 2019	1	236,331.00	N		
7) UC013 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2)												
7.1) AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2) (3)		2014 ⁽⁸⁾	Raytheon / St. Petersburg, FL	SS / FFP	Washington, DC	Apr 2014	Jun 2015	8	361,750.00	Y		
7.1) AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2) (3)		2015 ⁽⁹⁾	DRS Technologies / Johnstown, PA	C / FFP	Washington, DC	Aug 2015	Oct 2016	8	369,000.00	Y		
7.1) AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2) (3)		2016 ⁽¹⁰⁾	DRS Technologies / Johnstown, PA	SS / FFP	Washington, DC	Jul 2016	Sep 2017	2	224,500.00	Y		
7.1) AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2) (3)		2017 ⁽¹¹⁾	DRS Technologies / Johnstown, PA	SS / FFP	Washington, DC	Mar 2017	May 2018	1	383,833.33	Y		
7.1) AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2) (3)		2018 ⁽¹²⁾	DRS Technologies / Johnstown, PA	SS / FFP	Washington, DC	Mar 2018	May 2019	3	391,600.00	Y		
8) UC014 - AN/USG-2B HARDWARE CONVERSION KITS (AN/USG-2A)												

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability					Aggregated Items: COOPERATIVE ENGAGEMENT CAPABILITY					
Item Number / Title [DODIC]	O C O	FY	Contractor and Location		Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A)		2014 ⁽¹³⁾	Raytheon / St. Petersburg, FL		SS / FFP	Washington, DC	Apr 2014	Jun 2015	7	276,060.00	Y		
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A)		2015 ⁽¹⁴⁾	DRS Technologies / Johnstown, PA		C / FFP	Washington, DC	Aug 2015	Oct 2016	3	281,666.67	Y		
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A)		2016 ⁽¹⁵⁾	DRS Technologies / Johnstown, PA		SS / FFP	Washington, DC	Jul 2016	Sep 2017	1	168,000.00	Y		
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A)		2017 ⁽¹⁶⁾	DRS Technologies / Johnstown, PA		SS / FFP	Washington, DC	Mar 2017	May 2018	1	293,000.00	Y		
8.1) AN/USG-2B HARDWARE CONVERSION KIT (AN/USG-2A)		2018 ⁽¹⁷⁾	DRS Technologies / Johnstown, PA		SS / FFP	Washington, DC	Mar 2018	May 2019	1	299,000.00	Y		
9) UC015 - AN/USG-2B HARDWARE CONVERSION KITS (LBTS)													
9.1) AN/USG-2B HARDWARE CONVERSION KITS (LBTS)		2014 ⁽¹⁸⁾	Raytheon / St. Petersburg, FL		SS / FFP	Washington, DC	Apr 2014	Jun 2015	3	364,410.00	Y		
9.1) AN/USG-2B HARDWARE CONVERSION KITS (LBTS)		2015 ⁽¹⁹⁾	DRS Technologies / Johnstown, PA		C / FFP	Washington, DC	Aug 2015	Oct 2016	2	371,500.00	Y		
9.1) AN/USG-2B HARDWARE CONVERSION KITS (LBTS)		2017	DRS Technologies / Johnstown, PA		SS / FFP	Washington, DC	Mar 2017	May 2018	2	386,509.00	Y		
9.1) AN/USG-2B HARDWARE CONVERSION KITS (LBTS)		2018	DRS Technologies / Johnstown, PA		SS / FFP	Washington, DC	Mar 2018	May 2019	5	394,300.00	Y		
Footnotes:													
(7) This will be a competitively awarded contract 3Q FY17 with options in FY18.													
(8) The last option year under the current CEC Production contract was FY14. Two additional option years have been added to the contract for FY15 and FY16.													
(9) Procurement of this equipment transitioned to a new Production contract starting in FY15.													
(10) 2016 - Option Year 1 of DRS Production Contract													
(11) 2017- Option Year 2 of DRS Production Contract													
(12) 2018- Option Year 3 of DRS Production Contract													
(13) The last option year under the current CEC Production contract was FY14. Two additional option years have been added to the contract for FY15 and FY16.													
(14) Procurement of this equipment transitioned to a new Production contract starting in FY15.													
(15) 2016 - Option Year 1 of DRS Production Contract													
(16) 2017 - Option Year 2 of DRS Production Contract													
(17) 2018 - Option Year 3 of DRS Production Contract													
(18) The last option year under the current CEC Production contract was FY14. Two additional option years have been added to the contract for FY15 and FY16.													
(19) Procurement of this equipment transitioned to a new Production contract starting in FY15.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability								Modification Number / Title: 1 / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	442.477	0.182	7.472	10.966	0.000	10.966	2.047	3.800	0.000	0.000	0.000	466.944
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	442.477	0.182	7.472	10.966	0.000	10.966	2.047	3.800	0.000	0.000	0.000	466.944
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	442.477	0.182	7.472	10.966	0.000	10.966	2.047	3.800	0.000	0.000	0.000	466.944
(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: Strike Group Anti-Air Warfare (AAW) Improvement. These funds are for the procurement of CEC to backfit CG, DDG, CV/CVN, and LHD ship classes, as well as various Land Based Test Sites (LBTSs). [COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)] Increases in cost to the USG-2B system from FY 16 to FY 18 is attributed to procuring a new type of hardware - a Common Block Array (CAB) Antenna vice PAAA antenna for LHD class ships in FY 18.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability						Modification Number / Title: 1 / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: UC001 COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (CETPS) (AN/USG-2/2A/2B)			Modification Type: SGAAW				Related RDT&E PEs: 0603755N, 0603658N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)												
B Kits												
Recurring												
1.1.1) COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B) - NonOrganic ⁽²⁰⁾		49 / 367.975	- / -	1 / 5.276	2 / 10.784	- / -	2 / 10.784	- / -	- / -	- / -	- / -	52 / 384.035
<i>Subtotal: Recurring</i>		- / 367.975	- / -	- / 5.276	- / 10.784	- / -	- / 10.784	- / -	- / -	- / -	- / -	- / 0.000 - / 384.035
<i>Subtotal: UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)</i>		49 / 367.975	- / -	1 / 5.276	2 / 10.784	- / -	2 / 10.784	- / -	- / -	- / -	- / -	52 / 384.035
<i>Subtotal: Procurement, All Modification Items</i>		- / 367.975	- / -	- / 5.276	- / 10.784	- / -	- / 10.784	- / -	- / -	- / -	- / -	- / 0.000 - / 384.035
Installation												
Modification Item 1 of 1: UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)		- / 74.502	- / 0.182	- / 2.196	- / 0.182	- / 0.000	- / 0.182	- / 2.047	- / 3.800	- / 0.000	- / 0.000	- / 0.000 - / 82.909
<i>Subtotal: Installation</i>		- / 74.502	- / 0.182	- / 2.196	- / 0.182	- / -	- / 0.182	- / 2.047	- / 3.800	- / -	- / -	- / 0.000 - / 82.909
Total												
Total Cost (Procurement + Support + Installation)		442.477	0.182	7.472	10.966	0.000	10.966	2.047	3.800	0.000	0.000	0.000 466.944

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability									Modification Number / Title: 1 / UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																
Modification Item 1 of 1: UC001 - COOPERATIVE ENGAGEMENT TRANSMISSION PROCESSING SET (USG-2/2A/2B)																													
Manufacturer Information																													
Manufacturer Name: DRS Technologies							Manufacturer Location: Johnstown, PA																						
Administrative Leadtime (<i>in Months</i>): 1							Production Leadtime (<i>in Months</i>): 18																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																						
Contract Dates		Mar 2018	Mar 2019																										
Delivery Dates		Sep 2019	Sep 2020																										
Installation Information																													
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: COOPERATIVE ENGAGEMENT TRANSMISSION PROCESS																													
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 74.502	0 / 0.182	1 / 2.196	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	49 / 76.880													
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	0 / 0.182	0 / 0.000	0 / 0.182	1 / 2.047	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.229													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.800	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.800													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			48 / 74.502	0 / 0.182	1 / 2.196	0 / 0.182	0 / 0.000	0 / 0.182	1 / 2.047	2 / 3.800	- / -	- / -	- / -	- / -	0 / 0.000	52 / 82.909													
Installation Schedule																													
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4									
In	48	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	52					
Out	48	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	52					
Footnotes:																													
(20) Funds in FY 17 are required for installation planning activities in preparation for installation in FY 18. Funds in FY 19 are required for installation planning activities in preparation for installation in FY 20. Increased installation funding in FY 18 to account for increases in installation costs due to new contract firm fixed price cost structure.																													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability					Modification Number / Title: 2 / UC003 - PAAA BACKFIT KITS				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	57.795	2.644	1.508	2.355	0.000	2.355	1.211	0.000	0.000	0.000	0.000	65.513	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	57.795	2.644	1.508	2.355	0.000	2.355	1.211	0.000	0.000	0.000	0.000	65.513	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	57.795	2.644	1.508	2.355	0.000	2.355	1.211	0.000	0.000	0.000	0.000	65.513	
(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:

Strike Group Anti-Air Warfare (AAW) Improvement. The PAAA Backfit Kit procurements will be replaced with Common Array Block (CAB) - Shipboard Antenna procurements commencing in FY16. PAAA Backfit Kits are installed on CG, DDG, CVN, LPD, and LHD ship classes

[PAAA BACKFIT KITS] The 2 PAAA antennas being procured in FY15 and 1 PAAA being procured in FY16 will replace 3 older SBAA antennas currently in the Fleet. These SBAs are very expensive to maintain and some of the parts are becoming obsolete. PAAA Backfit Kits are installed on CG, DDG, CVN, LPD, and LHD ship classes

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability						Modification Number / Title: 2 / UC003 - PAAA BACKFIT KITS			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: UC003 PAAA BACKFIT KITS			Modification Type: SGAAW				Related RDT&E PEs: 0603755N, 0603658N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: UC003 - PAAA BACKFIT KITS</i>												
B Kits												
Non-Recurring												
1.1.1) PAAA BACKFIT KITS - NonOrganic (21)		13 / 43.312	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 43.312
<i>Subtotal: Non-Recurring</i>		- / 43.312	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: UC003 - PAAA BACKFIT KITS</i>		13 / 43.312	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 43.312
<i>Subtotal: Procurement, All Modification Items</i>		- / 43.312	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: UC003 - PAAA BACKFIT KITS</i>		- / 14.483	- / 2.644	- / 1.508	- / 2.355	- / 0.000	- / 2.355	- / 1.211	- / 0.000	- / 0.000	- / 0.000	- / 22.201
<i>Subtotal: Installation</i>		- / 14.483	- / 2.644	- / 1.508	- / 2.355	- / -	- / 2.355	- / 1.211	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		57.795	2.644	1.508	2.355	0.000	2.355	1.211	0.000	0.000	0.000	65.513

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability								Modification Number / Title: 2 / UC003 - PAAA BACKFIT KITS																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: UC003 - PAAA BACKFIT KITS																														
Manufacturer Information																														
Manufacturer Name: RAYTHEON ⁽²²⁾						Manufacturer Location: ST. PETERSBURG, FL																								
Administrative Leadtime (in Months): 1						Production Leadtime (in Months): 18																								
Dates	FY 2017	FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: PAAA BACKFIT KITS																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 14.483	1 / 2.644	1 / 1.508	1 / 2.355	0 / 0.000	1 / 2.355	1 / 1.211	- / -	- / -	- / -	- / -	0 / 0.000	13 / 22.201																	
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total	9 / 14.483	1 / 2.644	1 / 1.508	1 / 2.355	0 / 0.000	1 / 2.355	1 / 1.211	- / -	- / -	- / -	- / -	0 / 0.000	13 / 22.201																	
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	13					
Out	9	-	-	-	1	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	13					

Footnotes:

(21) Increased installation funding in FY 19 to account for increases in installation costs due to new contract firm fixed price cost structure.

(22) PAAA Backfit Kits are partial systems. The last option year under the current CEC Production contract is FY 2016.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	24.183	3.839	3.285	8.081	0.000	8.081	2.666	2.317	1.533	0.000	0.000	45.904
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	24.183	3.839	3.285	8.081	0.000	8.081	2.666	2.317	1.533	0.000	0.000	45.904
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	24.183	3.839	3.285	8.081	0.000	8.081	2.666	2.317	1.533	0.000	0.000	45.904
(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: Strike Group Anti-Air Warfare (AAW) Improvement. Funds are for the procurement of Signal Data Processors (SDP) backfits in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes [SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2)] Prior Year and FY12 includes funding to procure AN/USG-2B hardware conversion kits. A new cost code (UC013) was created and the funding for the hardware conversion kits has been realigned to this cost code for FY13-18.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: UC009 SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2)			Modification Type: SGAAW				Related RDT&E PEs: 0603755N, 0603658N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)</i>												
B Kits												
Recurring												
1.1.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2) - NonOrganic ⁽²³⁾	29 / 12.266	1 / 0.227	3 / 0.695	9 / 2.127	- / -	9 / 2.127	3 / 0.723	- / -	- / -	- / -	- / -	45 / 16.038
<i>Subtotal: Recurring</i>	<i>- / 12.266</i>	<i>- / 0.227</i>	<i>- / 0.695</i>	<i>- / 2.127</i>	<i>- / -</i>	<i>- / 2.127</i>	<i>- / 0.723</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>	<i>- / 16.038</i>
<i>Subtotal: UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)</i>	<i>29 / 12.266</i>	<i>1 / 0.227</i>	<i>3 / 0.695</i>	<i>9 / 2.127</i>	<i>- / -</i>	<i>9 / 2.127</i>	<i>3 / 0.723</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>45 / 16.038</i>
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 12.266</i>	<i>- / 0.227</i>	<i>- / 0.695</i>	<i>- / 2.127</i>	<i>- / -</i>	<i>- / 2.127</i>	<i>- / 0.723</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>	<i>- / 16.038</i>
Installation												
<i>Modification Item 1 of 1: UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)</i>												
<i>Subtotal: Installation</i>	<i>- / 11.917</i>	<i>- / 3.612</i>	<i>- / 2.590</i>	<i>- / 5.954</i>	<i>- / 0.000</i>	<i>- / 5.954</i>	<i>- / 1.943</i>	<i>- / 2.317</i>	<i>- / 1.533</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 29.866</i>
Total												
Total Cost (Procurement + Support + Installation)	24.183	3.839	3.285	8.081	0.000	8.081	2.666	2.317	1.533	0.000	0.000	45.904

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability					Modification Number / Title: 3 / UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)												
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:												
Modification Item 1 of 1: UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)																				
Manufacturer Information																				
Manufacturer Name: Sechan Electronics, Inc. (24)					Manufacturer Location: Lititz, PA															
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates																				
Delivery Dates																				
Manufacturer Name: TBD (25)					Manufacturer Location: TBD															
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	May 2017	May 2018	May 2019	May 2020																
Delivery Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021																
Installation Information																				
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/US																				
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 11.917	6 / 3.612	4 / 2.590	3 / 1.533	0 / 0.000	3 / 1.533	- / -	- / -	- / -	- / -	0 / 0.000	29 / 19.652								
FY 2017	- / -	- / -	- / -	1 / 0.511	0 / 0.000	1 / 0.511	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.511								
FY 2018	- / -	- / -	- / -	0 / 0.410	0 / 0.000	0 / 0.410	3 / 1.533	- / -	- / -	- / -	0 / 0.000	3 / 1.943								
FY 2019	- / -	- / -	- / -	5 / 3.500	0 / 0.000	5 / 3.500	0 / 0.410	4 / 2.044	- / -	- / -	0 / 0.000	9 / 5.954								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.273	3 / 1.533	- / -	0 / 0.000	3 / 1.806								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
Total	16 / 11.917	6 / 3.612	4 / 2.590	9 / 5.954	0 / 0.000	9 / 5.954	3 / 1.943	4 / 2.317	3 / 1.533	- / -	0 / 0.000	45 / 29.866								

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7									P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability									Modification Number / Title: 3 / UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)												
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:																					
Modification Item 1 of 1: UC009 - SIGNAL DATA PROCESSOR (SDP) BACKFITS (AN/USG-2)																														
Installation Information																														
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/US																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	3	1	2	-	-	4	-	-	2	-	1	6	-	1	1	1	1	-	2	1	-	1	1	1	-	-	-	45	
Out	16	3	1	2	-	-	4	-	-	2	-	1	6	-	1	1	1	1	-	2	1	-	1	1	1	-	-	-	45	

Footnotes:

- (23) A new cost code (UC013) was created and the funding for the hardware conversion kits has been realigned to this cost code for FY13-18. Funds are for the procurement of Signal Data Processors (SDP) backfits in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes. FY 19 - Added procurement and installation quantity of 5 units for Mode 5 IFF Acceleration. Increased installation costs in FY 19 as a result of higher shipyard costs due to Firm Fixed Priced Contract cost structure.
- (24) The last option year under the current SDP-S Production contract is FY16. Planning to award a competitive follow-on contract in FY17.
- (25) A competitive follow-on contract action is in process with an expected award date of 3Q FY2017.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability						Modification Number / Title: 4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)		-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		13.500	1.217	0.392	0.421	0.000	0.421	0.804	0.384	0.000	0.000	0.000	16.718
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		13.500	1.217	0.392	0.421	0.000	0.421	0.804	0.384	0.000	0.000	0.000	16.718
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		13.500	1.217	0.392	0.421	0.000	0.421	0.804	0.384	0.000	0.000	0.000	16.718
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)		-	-	-	-	-	-	-	-	-	-	-	-
Description: Strike Group Anti-Air Warfare (AAW) Improvement. Funds are for the procurement of Signal Data Processors (SDP) backfits for AN/USG-2A equipment in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability							Modification Number / Title: 4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: UC010 SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)			Modification Type: SGAAW				Related RDT&E PEs: 0603755N, 0603658N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)</i>												
B Kits												
Recurring												
1.1.1) SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A) - NonOrganic ⁽²⁶⁾	21 / 7.496	1 / 0.227	1 / 0.232	1 / 0.236	- / -	1 / 0.236	2 / 0.482	- / -	- / -	- / -	- / -	26 / 8.673
<i>Subtotal: Recurring</i>	- / 7.496	- / 0.227	- / 0.232	- / 0.236	- / -	- / 0.236	- / 0.482	- / -	- / -	- / -	- / 0.000	- / 8.673
<i>Subtotal: UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)</i>	21 / 7.496	1 / 0.227	1 / 0.232	1 / 0.236	- / -	1 / 0.236	2 / 0.482	- / -	- / -	- / -	- / -	26 / 8.673
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.496	- / 0.227	- / 0.232	- / 0.236	- / -	- / 0.236	- / 0.482	- / -	- / -	- / -	- / 0.000	- / 8.673
Installation												
<i>Modification Item 1 of 1: UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)</i>												
<i>Subtotal: Installation</i>	- / 6.004	- / 0.990	- / 0.160	- / 0.185	- / 0.000	- / 0.185	- / 0.322	- / 0.384	- / 0.000	- / 0.000	- / 0.000	- / 8.045
Total												
Total Cost (Procurement + Support + Installation)	13.500	1.217	0.392	0.421	0.000	0.421	0.804	0.384	0.000	0.000	0.000	16.718

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability					Modification Number / Title: 4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)												
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:												
Modification Item 1 of 1: UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)																				
Manufacturer Information																				
Manufacturer Name: Sechan Electronics, Inc. (27)					Manufacturer Location: Lititz, PA															
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18															
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates																				
Delivery Dates																				
Manufacturer Name: TBD (28)					Manufacturer Location: TBD															
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 18															
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates	May 2017	May 2018	May 2019		May 2020															
Delivery Dates	Nov 2018	Nov 2019	Nov 2020		Nov 2021															
Installation Information																				
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/US																				
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 6.004	5 / 0.805	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 6.809								
FY 2017	- / -	0 / 0.185	0 / 0.160	1 / 0.000	0 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.345								
FY 2018	- / -	- / -	- / -	1 / 0.161	0 / 0.000	1 / 0.161	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.161								
FY 2019	- / -	- / -	- / -	0 / 0.024	0 / 0.000	0 / 0.024	1 / 0.161	- / -	- / -	- / -	0 / 0.000	1 / 0.185								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.161	2 / 0.384	- / -	- / -	0 / 0.000	2 / 0.545								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
Total	16 / 6.004	5 / 0.990	0 / 0.160	2 / 0.185	0 / 0.000	2 / 0.185	1 / 0.322	2 / 0.384	- / -	- / -	0 / 0.000	26 / 8.045								

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Exhibit P-3a, Individual Modification: PB 2019 Navy																				Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7												P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability												Modification Number / Title: 4 / UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																												
Modification Item 1 of 1: UC010 - SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/USG-2A)																																								
Installation Information																																								
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: SIGNAL DATA PROCESSORS (SDP) BACKFITS (AN/US																																								
Installation Schedule																																								
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot										
	Q1	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	1	2	-	2	-	-	-	1	-	-	1	-	-	-	1	-	-	-	2	-	-	-	-	-	26														
Out	16	1	2	-	2	-	-	-	1	-	-	1	-	-	-	1	-	-	-	2	-	-	-	-	-	26														

Footnotes:

- (26) Funds are for the procurement of Signal Data Processors (SDP) backfits for AN/USG-2A equipment in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes. First Delivery from Competitively awarded May 2017 contract will be November 2018.
- (27) The last option year under the current SDP-S Production contract is FY16. Planning to award a competitive follow-on contract in FY17.
- (28) A competitive follow-on contract action is in process with an expected award date of 3Q FY2017.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability						Modification Number / Title: 5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3.400	1.822	0.000	9.352	0.000	9.352	13.226	18.120	21.656	21.739	58.359	147.674
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3.400	1.822	0.000	9.352	0.000	9.352	13.226	18.120	21.656	21.739	58.359	147.674
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3.400	1.822	0.000	9.352	0.000	9.352	13.226	18.120	21.656	21.739	58.359	147.674
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Strike Group Anti-Air Warfare (AAW) Improvement. Funds are for the procurement of Common Array Block (CAB) antennas for shipboard AN/USG-2B systems in alignment with Fleet Modernization Procurement and Installation Plan for CEC Backfit to CG, DDG, CVN, and LHD ship classes,												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability						Modification Number / Title: 5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: UC012 COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD			Modification Type: SGAAW						Related RDT&E PEs: 0603755N, 0603658N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD</i>													
B Kits													
Recurring													
1.1.1) COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD - NonOrganic ⁽²⁹⁾		2 / 3.400	- / -	- / -	4 / 9.352	- / -	4 / 9.352	5 / 12.040	5 / 12.400	6 / 15.321	6 / 15.404	14 / 27.786	42 / 95.703
<i>Subtotal: Recurring</i>		- / 3.400	- / -	- / -	- / 9.352	- / -	- / 9.352	- / 12.040	- / 12.400	- / 15.321	- / 15.404	- / 27.786	- / 95.703
<i>Subtotal: UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD</i>		2 / 3.400	- / -	- / -	4 / 9.352	- / -	4 / 9.352	5 / 12.040	5 / 12.400	6 / 15.321	6 / 15.404	14 / 27.786	42 / 95.703
<i>Subtotal: Procurement, All Modification Items</i>		- / 3.400	- / -	- / -	- / 9.352	- / -	- / 9.352	- / 12.040	- / 12.400	- / 15.321	- / 15.404	- / 27.786	- / 95.703
Installation													
<i>Modification Item 1 of 1: UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD</i>		- / 0.000	- / 1.822	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.186	- / 5.720	- / 6.335	- / 6.335	- / 30.573	- / 51.971
<i>Subtotal: Installation</i>		- / 0.000	- / 1.822	- / -	- / -	- / -	- / -	- / 1.186	- / 5.720	- / 6.335	- / 6.335	- / 30.573	- / 51.971
Total													
Total Cost (Procurement + Support + Installation)		3.400	1.822	0.000	9.352	0.000	9.352	13.226	18.120	21.656	21.739	58.359	147.674

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2606 / Cooperative Engagement Capability								Modification Number / Title: 5 / UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: UC012 - COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD																														
Manufacturer Information																														
Manufacturer Name: RAYTHEON				Manufacturer Location: ST. PETERSBURG, FL																										
Administrative Leadtime (<i>in Months</i>): 18				Production Leadtime (<i>in Months</i>): 18																										
Dates		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																
Contract Dates						Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022																
Delivery Dates						Jun 2020		Jun 2021		Jun 2022		Jun 2023		Jun 2024																
Installation Information																														
Method of Implementation: ALTERATION INSTALLATION TEAM (AIT):: Installation Name: COMMON ARRAY BLOCK (CAB) ANTENNA - SHIPBOARD																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.822									
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.186	4 / 3.644	- / -	- / -	- / -	- / -	0 / 0.000	4 / 4.830									
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.076	5 / 4.555	- / -	- / -	- / -	- / -	0 / 0.000	5 / 6.631									
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.780	5 / 4.555	0 / 0.000	5 / 6.335	0 / 0.000	5 / 6.335	0 / 0.000	5 / 6.335									
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.780	6 / 5.630	6 / 7.410									
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 6.335	6 / 6.335									
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 18.608	14 / 18.608									
Total			- / -	2 / 1.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.186	4 / 5.720	5 / 6.335	5 / 6.335	26 / 30.573	42 / 51.971											
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	2	2	1	-	2	2	1	-	26	42		
Out	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	2	-	2	2	1	-	2	2	1	-	26	42		

Footnotes:

(29) The unit price of the CAB increased by approximately \$400K from the PB-16 budget starting in FY17. This increase is driven by the requirement to procure 1 new Environmental Control System Controller (ECSC) for each CAB that is procured. Removed Procurements in FY 17 and Installation costs for FY 18 and FY 19 due to congressional mark in FY 17 (4.069M)

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)												
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	620.586	12.336	10.741	10.991	0.000	10.991	14.571	14.779	16.317	17.896	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	620.586	12.336	10.741	10.991	0.000	10.991	14.571	14.779	16.317	17.896	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	620.586	12.336	10.741	10.991	0.000	10.991	14.571	14.779	16.317	17.896	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	0.122	0.204	0.128	-	0.128	0.373	0.304	0.230	0.233	Continuing	Continuing					
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
The Naval Tactical Command Support System (NTCSS) is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the full range of responsive tactical support Automated Data Processing (ADP) hardware and software in support of the management of information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft. NTCSS is to provide an efficient management of afloat tactical support data, through the use of standardized hardware and software, to meet the mission support information management requirements for force sustainment.																	
NTCSS incorporates the functionality of the Shipboard Non-Tactical ADP Program (SNAP) systems, the Naval Aviation Logistics Command Management Information System (NALCOMIS), and the Maintenance Resource Management System (MRMS).																	
SNAP is an automated information system that supports organizational level maintenance, supply, financial and administrative functions on afloat units, at Marine Aviation Logistics Squadrons (MALS) and at associated shore activities. SNAP improves equipment supportability and maintainability and thus readiness through: improvement in the accuracy of maintenance, supply, financial and related support data maintained and reported by the ship; and acceleration of management report preparation and data transmission. The scope of SNAP includes approximately 300 sites.																	
NALCOMIS is an automated, real time, interactive, management information system that provides a modern management tool for day-to-day management of aircraft maintenance at the organizational and intermediate levels. NALCOMIS automates management of the aviation repairables inventory, providing nose-to-tail tracking through the repair and operations cycles. The scope of NALCOMIS includes 66 aviation intermediate maintenance activities located afloat (CVN/LHA/LHD/MALS), at Naval Air Stations (NAS), and approximately 326 Navy and Marine Squadrons.																	
MRMS is an automated information system that supports ship intermediate maintenance management of the Atlantic and Pacific Fleets. MRMS supports Type Commands, Group Commanders, Area Coordinators, Readiness Support Groups, Submarine Squadrons, Ship Repair Facilities, and various Intermediate Maintenance Activities, both afloat and ashore, for budgeting, planning, production and analysis of ship maintenance. MRMS improves ship readiness through improved maintenance and ship repair management, information resource management, and maintenance data processing. The scope of MRMS includes approximately 16 shipboard and 65 shore based intermediate and maintenance and planning activities.																	
DY005, Ship Set Equipment Upgrades procures afloat ruggedized, commercial-off-the-shelf (COTS) computing equipment, which includes servers to support the NTCSS application and database, personal computers (PCs) that will interface with the servers for maintenance and supply transactions, and printers to display output. COTS software, which includes the operating system, comes loaded on the servers and PCs.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment		P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)
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		
DY006, MALS/Shore Equipment Upgrades procures ashore ruggedized, COTS computing equipment, which includes servers to support the NTCSS application and database, PCs that will interface with the servers for maintenance and supply transactions, and printers to display output. COTS software, which includes the operating system, comes loaded on the servers and PCs.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:											
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				2611 / Naval Tact Cmd Supt Sys (NTCSS)											
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 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)										
P-5	1 / Naval Tactical Command Support System Ship Set Equipment Upgrades (DY005)	P-5a			- / 306.019	- / 2.197	- / 3.359	- / 4.593	- / 0.000	- / 4.593	- / 0.000	- / 4.593	- / 4.593		
P-3a	1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006) (TBD)				- / 314.567	- / 10.139	- / 7.382	- / 6.398	- / 0.000	- / 6.398	- / 0.000	- / 6.398	- / 6.398		
P-40	Total Gross/Weapon System Cost				- / 620.586	- / 12.336	- / 10.741	- / 10.991	- / 0.000	- / 10.991	- / 0.000	- / 10.991	- / 10.991		
Exhibits Schedule				FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total	
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)										
P-5	1 / Naval Tactical Command Support System Ship Set Equipment Upgrades (DY005)	P-5a			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
P-3a	1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006) (TBD)				- / 10.837	- / 12.537	- / 14.476	- / 16.442	Continuing	Continuing	Continuing	Continuing	Continuing	Continuing	
P-40	Total Gross/Weapon System Cost				- / 14.571	- / 14.779	- / 16.317	- / 17.896	Continuing	Continuing	Continuing	Continuing	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:

Funding for FY19 procures: 1) NTCSS system upgrades for ships; 2) NTCSS system upgrades for Naval Air Stations (NAS), Squadrons, Shore Support Facilities, Fleet Training Centers, Marine Aviation Logistics Squadrons (MALS), Navy Expeditionary Combat Command sites, Special Warfare units, and Commander Naval Surface Forces; and 3) necessary production engineering and installation support.

NTCSS-Optimized software will continue to be fielded at program-of-record (POR) afloat and ashore sites. Ship set and MALS/Shore equipment upgrades continue; hardware and software upgrades required for obsolescence avoidance.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)										Item Number / Title [DODIC]: 1 / Naval Tactical Command Support System Ship Set Equipment Upgrades (DY005)								
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total							
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-							
Gross/Weapon System Cost (\$ in Millions)				306.019		2.197		3.359		4.593		0.000		4.593							
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-							
Net Procurement (P-1) (\$ in Millions)				306.019		2.197		3.359		4.593		0.000		4.593							
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-							
Total Obligation Authority (\$ in Millions)				306.019		2.197		3.359		4.593		0.000		4.593							
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares (\$ in Millions)				-		-		-		-		-		-							
Gross/Weapon System Unit Cost (\$ in Thousands)				-		-		-		-		-		-							
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total					
	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)			
Flyaway - Ship Set Equipment Upgrades (DY005) Cost																					
Recurring Cost																					
1.1.1) Equipment(†) (1)	223.572	697	155.830	48.609	23	1.118	37.008	50	1.850	35.301	70	2.471	-	-	0.000	35.301	70	2.471			
<i>Subtotal: Recurring Cost</i>	-	-	155.830	-	-	1.118	-	-	1.850	-	-	2.471	-	-	0.000	-	-	2.471			
<i>Subtotal: Flyaway - Ship Set Equipment Upgrades (DY005) Cost</i>	-	-	155.830	-	-	1.118	-	-	1.850	-	-	2.471	-	-	0.000	-	-	2.471			
Flyaway - Afloat Installations FMP (DY777) Cost																					
Recurring Cost																					
2.1.1) Afloat Installation	-	-	131.101	-	-	0.947	-	-	1.270	-	-	1.800	-	-	0.000	-	-	1.800			
2.1.2) DSA	-	-	5.334	-	-	0.065	-	-	0.128	-	-	0.175	-	-	0.000	-	-	0.175			
<i>Subtotal: Recurring Cost</i>	-	-	136.435	-	-	1.012	-	-	1.398	-	-	1.975	-	-	0.000	-	-	1.975			
<i>Subtotal: Flyaway - Afloat Installations FMP (DY777) Cost</i>	-	-	136.435	-	-	1.012	-	-	1.398	-	-	1.975	-	-	0.000	-	-	1.975			
Flyaway - Support Cost (DY555) Cost																					
Recurring Cost																					
3.1.1) Production Support	-	-	13.754	-	-	0.067	-	-	0.111	-	-	0.147	-	-	0.000	-	-	0.147			
<i>Subtotal: Recurring Cost</i>	-	-	13.754	-	-	0.067	-	-	0.111	-	-	0.147	-	-	0.000	-	-	0.147			

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)									Item Number / Title [DODIC]: 1 / Naval Tactical Command Support System Ship Set Equipment Upgrades (DY005)												
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:												
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																									
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total									
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)							
<i>Subtotal: Flyaway - Support Cost (DY555) Cost</i>	-	-	13.754	-	-	0.067	-	-	0.111	-	-	0.147	-	-	0.000	-	-	0.147							
Gross/Weapon System Cost	-	-	306.019	-	-	2.197	-	-	3.359	-	-	4.593	-	-	0.000	-	-	4.593							

Remarks:

Provides ADP system upgrades and NTCSS-Optimized software to Battle Group and unit level ships.

Application subsystems include financial/inventory management, organizational and surface maintenance management, and administrative information systems support. NTCSS procurements will also provide ship capabilities for displaying and storing Computer-aided Acquisition and Logistics Support (CALS) initiative information (digitized engineering drawings, automated technical manuals, etc.).

(†) indicates the presence of a P-5a

Footnotes:

(1) Quantity changes from year to year are driven by fact-of-life changes to ship maintenance availability schedules. The average unit cost fluctuation is primarily attributed to variance in system configuration requirements for each NTCSS platform type. For example, a NTCSS DDG hardware suite consists of 1 server, 16 desktop workstations and 7 printers while a NTCSS SSBN hardware suite consists of 2 servers, 12 desktop workstations, 20 laptop workstations and 10 printers. The average procurement cost (hardware, software, integration, and engineering support) for a unit level ship (DDG/CV/LSD) is approximately \$50K while the average procurement cost for a submarine (SSBN) is approximately \$70K. FY18 will procure: 5 CG, 4 CVN, 25 DDG, 1 LCC, 1 LHA, 1 LPD, 1 LSD, 4 MCM, 4 SSBN and 4 SSN hull types. FY19, by comparison, will procure: 7 CG, 5 CVN, 30 DDG, 1 LCC, 6 LHD, 3 LPD, 3 LSD, 3 MCM, 5 SSBN and 7 SSN hull types.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)					Item Number / Title [DODIC]: 1 / Naval Tactical Command Support System Ship Set Equipment Upgrades (DY005)			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Equipment		2017	Spawar Systems Center Atlantic / Charleston, SC	WR	Charleston, SC	Nov 2016	Jan 2017	23	48.609	Y		Oct 2016
1.1.1) Equipment		2018	Spawar Systems Center Atlantic / Charleston, SC	WR	Charleston, SC	Nov 2017	Jan 2018	50	37.008	Y		Oct 2017
1.1.1) Equipment		2019	Spawar Systems Center Atlantic / Charleston, SC	WR	Charleston, SC	Nov 2018	Jan 2019	70	35.301	Y		Oct 2018

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)						Modification Number / Title: 1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)		-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		314.567	10.139	7.382	6.398	0.000	6.398	10.837	12.537	14.476	16.442	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		314.567	10.139	7.382	6.398	0.000	6.398	10.837	12.537	14.476	16.442	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		314.567	10.139	7.382	6.398	0.000	6.398	10.837	12.537	14.476	16.442	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)		-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)		-	-	-	-	-	-	-	-	-	-	-	-
Description: Application subsystems include/financial/inventory management, organizational and surface maintenance management, and administrative information systems support. NTCSS procurements will also provide ship/shore capabilities for displaying and storing Computer-aided Acquisition and Logistics Support (CALS) initiative information (digitized engineering drawings, automated technical manuals, etc.).													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)						Modification Number / Title: 1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Provides ADP system upgrades and NTCSS-Optimized software to Battle Group and unit level ships.			Modification Type: TBD						Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)													
B Kits													
Recurring													
1.1.1) Equipment - NonOrganic ⁽²⁾		1,341 / 196.396	55 / 5.570	58 / 4.098	49 / 3.717	- / -	49 / 3.717	51 / 6.453	65 / 7.370	94 / 8.096	94 / 9.367	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 196.396	- / 5.570	- / 4.098	- / 3.717	- / -	- / 3.717	- / 6.453	- / 7.370	- / 8.096	- / 9.367	Continuing	Continuing
<i>Subtotal: 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)</i>		1,341 / 196.396	55 / 5.570	58 / 4.098	49 / 3.717	- / -	49 / 3.717	51 / 6.453	65 / 7.370	94 / 8.096	94 / 9.367	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 196.396	- / 5.570	- / 4.098	- / 3.717	- / -	- / 3.717	- / 6.453	- / 7.370	- / 8.096	- / 9.367	Continuing	Continuing
Support (All Modification Items)													
2.1) Production Support		- / 13.398	- / 0.310	- / 0.245	- / 0.222	- / 0.000	- / 0.222	- / 0.387	- / 0.442	- / 0.484	- / 0.562	Continuing	Continuing
2.2) DSA		- / 2.981	- / 0.060	- / 0.053	- / 0.060	- / 0.000	- / 0.060	- / 0.060	- / 0.105	- / 0.135	- / 0.135	Continuing	Continuing
<i>Subtotal: Support</i>		- / 16.379	- / 0.370	- / 0.298	- / 0.282	- / -	- / 0.282	- / 0.447	- / 0.547	- / 0.619	- / 0.697	Continuing	Continuing
Installation													
Modification Item 1 of 1: 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)		- / 101.792	- / 4.199	- / 2.986	- / 2.399	- / 0.000	- / 2.399	- / 3.937	- / 4.620	- / 5.761	- / 6.378	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 101.792	- / 4.199	- / 2.986	- / 2.399	- / -	- / 2.399	- / 3.937	- / 4.620	- / 5.761	- / 6.378	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		314.567	10.139	7.382	6.398	0.000	6.398	10.837	12.537	14.476	16.442	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)								Modification Number / Title: 1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)																			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)</i>																															
Manufacturer Information																															
Manufacturer Name: Spawar Systems Center Atlantic								Manufacturer Location: Charleston, SC																							
Administrative Leadtime (in Months): 1								Production Leadtime (in Months): 2																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Nov 2016	Nov 2017	Nov 2018																												
Delivery Dates	Jan 2017	Jan 2018	Jan 2019																												
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: Equipment																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
Prior Years			1,341 / 101.792	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1,341 / 101.792																	
FY 2017			- / -	55 / 4.199	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	55 / 4.199																	
FY 2018			- / -	- / -	58 / 2.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	58 / 2.986																	
FY 2019			- / -	- / -	- / -	49 / 2.399	0 / 0.000	49 / 2.399	- / -	- / -	- / -	- / -	0 / 0.000	49 / 2.399																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	51 / 3.937	- / -	- / -	- / -	0 / 0.000	51 / 3.937																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	65 / 4.620	- / -	- / -	- / -	0 / 0.000	65 / 4.620																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	94 / 5.761	- / -	- / -	- / -	0 / 0.000	94 / 5.761																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	94 / 6.378	- / -	- / -	- / -	0 / 0.000	94 / 6.378																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			1,341 / 101.792	55 / 4.199	58 / 2.986	49 / 2.399	0 / 0.000	49 / 2.399	51 / 3.937	65 / 4.620	94 / 5.761	94 / 6.378	Continuing	Continuing																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	1,341	-	18	18	19	-	19	19	20	-	16	16	17	-	17	17	17	-	21	22	22	-	31	31	32	-	31	31	32	Cont.	Cont.
Out	1,341	-	18	18	19	-	19	19	20	-	16	16	17	-	17	17	17	-	21	22	22	-	31	31	32	-	31	31	32	Cont.	Cont.

Footnotes:

(2) Quantity changes from year to year are driven by fact-of-life changes to ashore site availability schedules. The variance in unit cost between fiscal years is attributed to the composition of ashore site configurations that NTCSS will be procuring and installing in any given fiscal year. For example, a NTCSS Navy Aviation Squadron (OMA) hardware suite consists of 4 laptop servers, 4 detachment systems

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2611 / Naval Tact Cmd Supt Sys (NTCSS)	Modification Number / Title: 1 / 2611 Naval Tactical Command Support System MALS/Shore Equipment Upgrades (DY006)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(for deployment) and 2 squadron printers. The Marine Aviation Logistics Squadron (MALS) ashore sites utilize an NTCSS Virtual Environment (VE) configuration, which allows for the consolidation of multiple systems under a single procurement and installation. A NTCSS MALS hardware suite consists of an IMA rack, 6 laptop servers, 110 laptop workstations, 15 detachment systems (for deployment), 35 IMA printers and 49 squadron printers. The average procurement cost (hardware, software, integration, and engineering support) for an OMA ashore site is approximately \$50K while the average procurement cost for a MALS ashore site is approximately \$650K. FY18 will procure 5 Naval Air Stations, 2 MALS, 31 OMA, 18 SPECWAR and 2 Training/Support sites. FY19, by comparison, will procure 4 Naval Air Stations, 2 MALS, 41 OMA, and 2 Training/Support sites.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)							
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: 0205604N					
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	40.458	24.395	38.016	34.526	0.000	34.526	46.962	66.132	75.873	58.942	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	40.458	24.395	38.016	34.526	0.000	34.526	46.962	66.132	75.873	58.942	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	40.458	24.395	38.016	34.526	0.000	34.526	46.962	66.132	75.873	58.942	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.824	5.647	1.669	-	1.669	1.768	1.192	0.611	0.040	Continuing	Continuing
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Advanced Tactical Data Link Systems (ATDLS) funds the Time Division Multiple Access family of Link 16 terminals including the Multifunctional Information Distribution System - Low Volume Terminal, Multifunctional Information Distribution System - Joint Tactical Radio System, Joint Tactical Information Distribution System (JTIDS) and the Tactical Digital Information Link - Joint (TADIL-J) message standard databases resident in the Command & Control Processor (C2P)/ Common Data Link Management System (CDLMS). ATDLS also funds the Command and Control Processor (C2P) Technology Refresh, Next Generation (NG) C2P (NGC2P) upgrades to meet LHD combat system upgrades, Link-22 capability upgrades, Link 16 terminal upgrades and replacements, Link 16 antenna replacements, Link Monitoring Management Tool, and other ATDLS integration.												
Command and Control Processor (C2P) Technology Refresh Full Systems Ship/Shore (DR003): C2P computer processing boards are obsolete and have antiquated software code with no industrial base support. Technology refresh is required for C2P software modernization.												
Command and Control Processor (C2P) Amphibious Assault Ship (LHD) Upgrades (DR003): Changes to LHD combat systems starting in FY13 will require NGC2P/CDLMS upgrades in order to maintain critical data link functions including simultaneous processing of Link 11, Link 16 and Joint Range Extension (JRE).												
Link 16 Upgrade Kits Ship/Shore (DR012): U.S. Navy surface ships Link 16 JTIDS terminals and Multifunctional Information Distribution System on Ship (MOS) terminals not replaced by MOS Mod by 2025 will be implemented with Frequency Remapping (FR) and Crypto Modernization (CM) mandated upgrades. The product improvement will bring the Link 16 terminals in compliance with the Department of Defense / Department of Transportation Memorandum of Agreement (31DEC02) and updated National Security Agency approved cryptographic algorithms.												
Link 16 MOS Modernization (MOS MOD) Replacement Ship/Shore (DR012): All US Navy ships with legacy MOS and JTIDS terminals will have Link 16 terminals replaced with modernized MOS terminals to address legacy Link 16 terminal obsolescence and enable the implementation for future enhancements brought by the MIDS Joint Tactical Radio System (MIDS-J) terminals. MOS Mod units will transition to the use of MIDS-J Current Multi-Netting (CMN) terminal vice MIDS Core terminals.												
Link 16 Antenna Replacement (DR012): Existing obsolete dedicated Link 16 shipboard antenna will be replaced.												
Link 16 MOS Terminal Controller Central Processing Unit (TC CPU Update): TC CPU update is required to address obsolescence issue in the TC CPU as well as provide mandated transition to Windows 10 operating system. Will be fielded on all MOS equipped ships.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment		P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205604N
Line Item MDAP/MAIS Code: N/A		
Link Monitoring Management Tool (LMMT) Ship/Shore (DR014): LMMT is required to enable Joint Interface Control Officers (JICOs) to effectively monitor and manage the performance of tactical data link networks. Funds procurement and installation of LMMT hardware on ships and shore sites. The Multifunctional Information Distribution System (MIDS) will also be procured and installed for the CVNs. Advanced Tactical Data Link Systems (ATDLS) Training (DR666): Develop initial end-to-end training curriculum and simulators.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				2614 / Adv Tact Data Link Sys (ATDLS)						
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: 0205604N			
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Adv Tact Data Link Sys (ATDLS)	P-5a			- / 35.137	- / 9.778	- / 10.945	- / 8.596	- / 0.000	- / 8.596
P-3a	1 / Adv Tact Data Link Sys (ATDLS) (TBD)				- / 5.321	- / 14.617	- / 27.071	- / 25.930	- / 0.000	- / 25.930
P-40	Total Gross/Weapon System Cost				- / 40.458	- / 24.395	- / 38.016	- / 34.526	- / 0.000	- / 34.526
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-5	1 / Adv Tact Data Link Sys (ATDLS)	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Adv Tact Data Link Sys (ATDLS) (TBD)				- / 34.827	- / 50.734	- / 54.494	- / 45.253	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 46.962	- / 66.132	- / 75.873	- / 58.942	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 2019 funding request was reduced by (\$1.023) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

Advanced Tactical Data Link Systems (ATDLS) procure command and control equipment for both shipboard and shore units including the Multifunctional Information Distribution System on Ship (MOS) Modernization (MOD) Terminals, Link 16 Network Program Antennas, Command and Control Processor (C2P) hardware and software, and Link Monitoring Management Tool (LMMT) hardware and software to address Air Defense System Integrator (ADSI) obsolesce issues.

FY2019:Budget control decrease from FY2018 to FY2019 due to the conclusion of the ATDLS Training (multi-year effort).

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)										Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary			Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Procurement Quantity (<i>Units in Each</i>)			-			-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)			35.137			9.778		10.945		8.596		0.000		8.596					
Less PY Advance Procurement (\$ in Millions)			-			-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)			35.137			9.778		10.945		8.596		0.000		8.596					
Plus CY Advance Procurement (\$ in Millions)			-			-		-		-		-		-					
Total Obligation Authority (\$ in Millions)			35.137			9.778		10.945		8.596		0.000		8.596					
(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 Thousands)			-			-		-		-		-		-					
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	
Flyaway - Adv Tact Data Link Sys (ATDLS) - DR003 C2P Cost																			
Recurring Cost																			
1.1.1) C2P - Technology Refresh Full System Shore	982.125	8	7.857	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
1.1.2) C2P - LHD Upgrade ^(†) (1)	975.000	1	0.975	1,014.000	1	1.014	1,034.000	1	1.034	481.000	1	0.481	-	-	0.000	481.000	1	0.481	
<i>Subtotal: Recurring Cost</i>	-	-	<i>8.832</i>	-	-	<i>1.014</i>	-	-	<i>1.034</i>	-	-	<i>0.481</i>	-	-	<i>0.000</i>	-	-	<i>0.481</i>	
<i>Subtotal: Flyaway - Adv Tact Data Link Sys (ATDLS) - DR003 C2P Cost</i>	-	-	<i>8.832</i>	-	-	<i>1.014</i>	-	-	<i>1.034</i>	-	-	<i>0.481</i>	-	-	<i>0.000</i>	-	-	<i>0.481</i>	
Flyaway - Adv Tact Data Link Sys (ATDLS) - DR012 LINK 16 Cost																			
Recurring Cost																			
2.1.1) Link 16 - JTIDS CM/FR Ship	251.000	3	0.753	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
2.1.2) Link 16 - MOS CM/FR Ship ^(†)	74.000	2	0.148	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
2.1.3) Link 16 - MOS CM/FR Shore	74.000	1	0.074	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
2.1.4) Link 16 - Upgrade Antenna ^(†)	185.000	5	0.925	185.000	1	0.185	213.000	1	0.213	201.000	11	2.211	-	-	0.000	201.000	11	2.211	
2.1.5) Link 16 - Antennas (ESB-4) ^(†)	-	-	0.000	-	-	0.000	130.000	1	0.130	-	-	0.000	-	-	0.000	-	-	0.000	
2.1.6) Link 16 - MOS TC ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	32.000	23	0.736	-	-	0.000	32.000	23	0.736	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)										Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)														
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:														
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																											
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total											
	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)									
<i>Subtotal: Recurring Cost</i>	-	-	1.900	-	-	0.185	-	-	0.343	-	-	2.947	-	-	0.000	-	-	2.947									
<i>Subtotal: Flyaway - Adv Tact Data Link Sys (ATDLS) - DR012 LINK 16 Cost</i>	-	-	1.900	-	-	0.185	-	-	0.343	-	-	2.947	-	-	0.000	-	-	2.947									
Flyaway - Adv Tact Data Link Sys (ATDLS) - DR014 LINK MONITORING MANAGEMENT TOOL (LMMT) Cost																											
Recurring Cost																											
3.1.1) LMMT - Ship (L Class) ^(†)	-	-	0.000	130.000	10	1.300	133.000	9	1.197	135.000	1	0.135	-	-	0.000	135.000	1	0.135									
3.1.2) LMMT - Shore ^(†)	151.000	15	2.265	93.000	18	1.674	95.000	4	0.380	101.000	1	0.101	-	-	0.000	101.000	1	0.101									
<i>Subtotal: Recurring Cost</i>	-	-	2.265	-	-	2.974	-	-	1.577	-	-	0.236	-	-	0.000	-	-	0.236									
<i>Subtotal: Flyaway - Adv Tact Data Link Sys (ATDLS) - DR014 LINK MONITORING MANAGEMENT TOOL (LMMT) Cost</i>	-	-	2.265	-	-	2.974	-	-	1.577	-	-	0.236	-	-	0.000	-	-	0.236									
Flyaway - INSTALLATION - DR776 NON-FMP Cost																											
Recurring Cost																											
4.1.1) C2P - Technology Refresh Full System Shore Install	-	-	2.730	-	-	0.546	-	-	1.310	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.2) C2P - Technology Refresh Full System Shore Design	-	-	0.803	-	-	0.155	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.3) Link 16 - JTIDS CM/FR Shore Install	-	-	0.000	-	-	0.210	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.4) Link 16 - JTIDS CM/FR Shore Design	-	-	0.241	-	-	0.022	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.5) Link 16 - MOS CM/FR Shore Install	-	-	0.000	-	-	0.042	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.7) Link 16 - MOS MOD Shore Install	-	-	0.000	-	-	0.960	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.8) Link 16 - MOS MOD Shore Design	-	-	0.155	-	-	0.052	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000									
4.1.9) LMMT - Shore Install	-	-	2.565	-	-	1.350	-	-	0.308	-	-	0.079	-	-	0.000	-	-	0.079									
4.1.10) LMMT - Shore Design	-	-	0.645	-	-	0.120	-	-	0.060	-	-	0.051	-	-	0.000	-	-	0.051									
<i>Subtotal: Recurring Cost</i>	-	-	7.139	-	-	3.457	-	-	1.678	-	-	0.130	-	-	0.000	-	-	0.130									

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)									Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																													
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total													
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)											
<i>Subtotal: Flyaway - INSTALLATION - DR776 NON-FMP Cost</i>	-	-	7.139	-	-	3.457	-	-	1.678	-	-	0.130	-	-	0.000	-	-	0.130											
Flyaway - INSTALLATION - DR777 FMP Cost																													
Recurring Cost																													
5.1.1) C2P - LHD Upgrade Install	-	-	0.330	-	-	0.000	-	-	0.655	-	-	0.687	-	-	0.000	-	-	0.687											
5.1.2) C2P - LHD Upgrade Design	-	-	0.499	-	-	0.102	-	-	0.122	-	-	0.159	-	-	0.000	-	-	0.159											
5.1.3) Link 16 - JTIDS CM/FR Ship Install	-	-	0.000	-	-	0.084	-	-	0.086	-	-	0.166	-	-	0.000	-	-	0.166											
5.1.4) Link 16 - JTIDS CM/FR Ship Design	-	-	0.200	-	-	0.048	-	-	0.250	-	-	0.147	-	-	0.000	-	-	0.147											
5.1.5) Link 16 - MOS CM/FR Ship Install	-	-	0.000	-	-	0.084	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000											
5.1.7) Link 16 - Upgrade Antenna Install	-	-	0.779	-	-	0.000	-	-	0.205	-	-	0.220	-	-	0.000	-	-	0.220											
5.1.8) Link 16 - Upgrade Antenna Design	-	-	0.378	-	-	0.026	-	-	0.035	-	-	0.266	-	-	0.000	-	-	0.266											
5.1.10) Link 16 - Antenna (ESB)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.175	-	-	0.000	-	-	0.175											
5.1.11) LMMT - Ship (L Class) Install	-	-	0.000	-	-	0.400	-	-	0.714	-	-	1.818	-	-	0.000	-	-	1.818											
5.1.12) LMMT - Ship (L Class) Design	-	-	0.060	-	-	0.158	-	-	0.169	-	-	0.170	-	-	0.000	-	-	0.170											
<i>Subtotal: Recurring Cost</i>	-	-	2.246	-	-	0.902	-	-	2.236	-	-	3.808	-	-	0.000	-	-	3.808											
<i>Subtotal: Flyaway - INSTALLATION - DR777 FMP Cost</i>	-	-	2.246	-	-	0.902	-	-	2.236	-	-	3.808	-	-	0.000	-	-	3.808											
Flyaway - ATDLS Consolidated Prior Year Requirements Cost																													
Recurring Cost																													
6.1.1) ATDLS - Consolidated Prior Year Requirements	-	-	3.841	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000											
<i>Subtotal: Recurring Cost</i>	-	-	3.841	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000											
<i>Subtotal: Flyaway - ATDLS Consolidated Prior Year Requirements Cost</i>	-	-	3.841	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000											
Support - DR555 PRODUCTION SUPPORT Cost																													

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)								Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)											
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:											
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																							
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
7.1) C2P - Technology Refresh Full System Shore Production Support	-	-	0.373	-	-	0.049	-	-	0.000	-	-	0.000	-	-	0.000								
7.2) C2P - LHD Upgrade Production Support	-	-	0.096	-	-	0.051	-	-	0.052	-	-	0.132	-	-	0.000								
7.3) Link 16 - JTIDS CM/FR Ship Production Support	-	-	0.100	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
7.4) Link 16 - MOS CM/FR Ship Production Support	-	-	0.007	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
7.5) Link 16 - MOS CM/FR Shore Production Support	-	-	0.004	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
7.6) Link 16 - MOS MOD Shore Production Support	-	-	0.074	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
7.7) Link 16 - Upgrade Antenna Production Support	-	-	0.151	-	-	0.007	-	-	0.007	-	-	0.118	-	-	0.000								
7.8) Link 16 MOS TC Production Support	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.475	-	-	0.000								
7.9) LMMT Ship - (L Class) Production Support	-	-	0.000	-	-	0.097	-	-	0.413	-	-	0.220	-	-	0.000								
7.10) LMMT - Shore Production Support	-	-	0.041	-	-	0.042	-	-	0.034	-	-	0.049	-	-	0.000								
<i>Subtotal: Support - DR555 PRODUCTION SUPPORT Cost</i>	-	-	0.846	-	-	0.246	-	-	0.506	-	-	0.994	-	-	0.000								
Support - DR666 ATDLS Training Cost																							
8.1) ATDLS Training	-	-	8.068	-	-	1.000	-	-	3.571	-	-	0.000	-	-	0.000								
<i>Subtotal: Support - DR666 ATDLS Training Cost</i>	-	-	8.068	-	-	1.000	-	-	3.571	-	-	0.000	-	-	0.000								
Gross/Weapon System Cost	-	-	35.137	-	-	9.778	-	-	10.945	-	-	8.596	-	-	0.000								
Remarks: BLI 2614 procures data link components (e.g. circuit cards, routers, antennas, shock mounts, etc.) to replace obsolete ones. There is integration and testing of these components lasting 6-9 months, which causes procurements to be installed in the following fiscal year.																							
(†) indicates the presence of a P-5a																							

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)	Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Footnotes:

(1) Change in unit cost from FY18 to FY19 reflects updated cost estimate for production contract awarding in FY19.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)					Item Number / Title [DODIC]: 1 / Adv Tact Data Link Sys (ATDLS)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) C2P - LHD Upgrade		2017	IDIQ/MAC/FFP / San Diego	C / FFP	SPAWAR	Feb 2017	Jul 2017	1	1,014.000	Y		Mar 2016
1.1.2) C2P - LHD Upgrade		2018	SSC PAC / San Diego, CA	WR	SPAWAR	Jun 2018	Jun 2019	1	1,034.000	Y		Sep 2017
1.1.2) C2P - LHD Upgrade		2019	IDIQ/MAC/FFP / TBD	C / TBD	SPAWAR	Feb 2019	Feb 2020	1	481.000	Y		Jan 2018
2.1.2) Link 16 - MOS CM/FR Ship		2016	Data Link Solutions / Cedar Rapids, IA	C / FFP	SPAWAR	Jun 2016	Dec 2016	2	74.000	Y		
2.1.4) Link 16 - Upgrade Antenna		2017	SPAWAR Pacific / San Diego	WR	SPAWAR	Jan 2017	Oct 2017	1	185.000	Y		Jun 2014
2.1.4) Link 16 - Upgrade Antenna		2018	SPAWAR Pacific / San Diego	WR	SPAWAR	Jan 2018	Oct 2018	1	213.000	Y		Jun 2014
2.1.4) Link 16 - Upgrade Antenna		2019	SPAWAR Pacific / San Diego	WR	SPAWAR	Jan 2019	Oct 2019	11	201.000	Y		Jun 2014
2.1.5) Link 16 - Antennas (ESB-4)		2018	Naval Surface Warfare Center Dahlgren / Dahlgren, Va	WR	Dahlgren	May 2018	Feb 2019	1	130.000	Y		
2.1.6) Link 16 - MOS TC		2019	TBD / TBD	C / TBD	SPAWAR	Jun 2019	Dec 2019	23	32.000	Y		Mar 2018
3.1.1) LMMT - Ship (L Class)		2017	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Jun 2017	Sep 2017	10	130.000	Y		Apr 2017
3.1.1) LMMT - Ship (L Class)		2018	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Nov 2017	Feb 2018	9	133.000	Y		Oct 2017
3.1.1) LMMT - Ship (L Class)		2019	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Nov 2018	Feb 2019	1	135.000	Y		Oct 2017
3.1.2) LMMT - Shore		2017	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Jun 2017	Sep 2017	18	93.000	Y		Apr 2017
3.1.2) LMMT - Shore		2018	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Nov 2017	Feb 2018	4	95.000	Y		Apr 2017
3.1.2) LMMT - Shore		2019	Venesco / Chantilly / Virginia	C / FFP	SPAWAR	Nov 2018	Feb 2019	1	101.000	Y		Apr 2017

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)					Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	5.321	14.617	27.071	25.930	0.000	25.930	34.827	50.734	54.494	45.253	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	5.321	14.617	27.071	25.930	0.000	25.930	34.827	50.734	54.494	45.253	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	5.321	14.617	27.071	25.930	0.000	25.930	34.827	50.734	54.494	45.253	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Command and Control Processor (C2P) Technology Refresh Full Systems Ship: C2P computer processing boards are obsolete and have antiquated software code with no industrial base support. Technology refresh is required for C2P software modernization. Additionally, C2P configuration is not shock qualified. Full Systems upgrades are required to achieve 901D shock certification.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)						Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)				
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: 0205604N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> Adv Tact Data Link Sys (ATDLS)													
B Kits													
Recurring													
1.1.1) Link 16 - MOS MOD Ship - NonOrganic		- / -	3 / 2.469	- / -	1 / 0.760	- / -	1 / 0.760	14 / 10.640	38 / 28.120	30 / 22.200	22 / 10.450	- / -	108 / 74.639
1.1.2) C2P - Technology Refresh Full System Ship - NonOrganic ⁽²⁾		5 / 4.970	4 / 4.056	15 / 15.510	8 / 7.648	- / -	8 / 7.648	10 / 9.760	3 / 2.988	3 / 3.051	10 / 10.370	- / -	58 / 58.353
1.1.3) LMMT - Ship (CVN) - NonOrganic ⁽³⁾		- / -	6 / 4.818	4 / 3.224	1 / 0.623	- / -	1 / 0.623	- / -	- / -	2 / 1.246	3 / 1.869	- / -	16 / 11.780
<i>Subtotal: Recurring</i>		- / 4.970	- / 11.343	- / 18.734	- / 9.031	- / -	- / 9.031	- / 20.400	- / 31.108	- / 26.497	- / 22.689	- / 0.000	- / 144.772
<i>Subtotal: Adv Tact Data Link Sys (ATDLS)</i>		5 / 4.970	13 / 11.343	19 / 18.734	10 / 9.031	- / -	10 / 9.031	24 / 20.400	41 / 31.108	35 / 26.497	35 / 22.689	- / -	182 / 144.772
<i>Subtotal: Procurement, All Modification Items</i>		- / 4.970	- / 11.343	- / 18.734	- / 9.031	- / -	- / 9.031	- / 20.400	- / 31.108	- / 26.497	- / 22.689	- / 0.000	- / 144.772
Support (All Modification Items)													
2.1) Link 16 - MOS MOD Ship DSA		- / 0.000	- / 0.059	- / 0.220	- / 0.990	- / 0.000	- / 0.990	- / 3.945	- / 1.032	- / 0.450	- / 0.250	- / -	- / 6.946
2.2) Link 16 - MOS MOD Ship Production Support		- / 0.000	- / 0.054	- / 0.000	- / 0.570	- / 0.000	- / 0.570	- / 0.543	- / 0.260	- / 0.235	- / 0.240	- / -	- / 1.902
2.3) C2P - Technology Refresh Full System Ship DSA		- / 0.102	- / 0.137	- / 0.754	- / 0.756	- / 0.000	- / 0.756	- / 1.750	- / 0.949	- / 0.527	- / 0.275	- / -	- / 5.250
2.4) C2P - Techonology Refresh Full System Ship Production Support		- / 0.249	- / 0.036	- / 0.521	- / 0.550	- / 0.000	- / 0.550	- / 0.523	- / 0.487	- / 0.497	- / 0.100	- / -	- / 2.963
2.5) LMMT - Ship (CVN) Production Support		- / 0.000	- / 0.117	- / 0.450	- / 0.344	- / 0.000	- / 0.344	- / 0.050	- / 0.000	- / 0.055	- / 0.061	- / -	- / 1.077
2.6) LMMT - Ship (CVN) DSA		- / 0.000	- / 0.141	- / 0.097	- / 0.051	- / 0.000	- / 0.051	- / 0.078	- / 0.078	- / 0.062	- / 0.065	- / -	- / 0.572
<i>Subtotal: Support</i>		- / 0.351	- / 0.544	- / 2.042	- / 3.261	- / -	- / 3.261	- / 6.889	- / 2.806	- / 1.826	- / 0.991	- / 0.000	- / 18.710
Installation													
<i>Modification Item 1 of 1:</i> Adv Tact Data Link Sys (ATDLS)		- / 0.000	- / 2.730	- / 6.295	- / 13.638	- / 0.000	- / 13.638	- / 7.538	- / 16.820	- / 26.171	- / 21.573	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 0.000	- / 2.730	- / 6.295	- / 13.638	- / -	- / 13.638	- / 7.538	- / 16.820	- / 26.171	- / 21.573	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		5.321	14.617	27.071	25.930	0.000	25.930	34.827	50.734	54.494	45.253	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy				Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7		P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)				Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)			
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: Adv Tact Data Link Sys (ATDLS)</i>				MDAP/MAIS Code:					
Manufacturer Information									
Manufacturer Name: Data Link Solutions				Manufacturer Location: Cedar Rapids, Indiana					
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates	Jun 2017		Feb 2019						
Delivery Dates	Jun 2018		Feb 2020						
Manufacturer Name: TBD				Manufacturer Location: TBD					
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates			Feb 2019						
Delivery Dates			Feb 2020						
Manufacturer Name: General Dynamics				Manufacturer Location: San Diego, CA					
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates	Dec 2016								
Delivery Dates	Dec 2017								
Manufacturer Name: SSC PAC				Manufacturer Location: San Diego, CA					
Administrative Leadtime (<i>in Months</i>): 8				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates		Jun 2018							
Delivery Dates		Jun 2019							
Manufacturer Name: Venesco Chantilly				Manufacturer Location: Virginia					
Administrative Leadtime (<i>in Months</i>): 8				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates	Jun 2017	Jun 2018	Jun 2019						
Delivery Dates	Sep 2017	Jun 2019	Jun 2020						

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)								Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)																						
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																						
<i>Modification Item 1 of 1: Adv Tact Data Link Sys (ATDLS)</i>																																		
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: Link 16 - MOS MOD Ship																																		
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	3 / 1.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.035																			
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.625	- / -	- / -	- / -	0 / 0.000	1 / 0.625																			
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	14 / 8.750	- / -	- / -	- / -	0 / 0.000	14 / 8.750																			
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 23.750	- / -	- / -	0 / 0.000	38 / 23.750																			
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 18.750	Continuing	Continuing																					
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																					
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
Total				- / -	- / -	3 / 1.035	- / -	- / -	- / -	1 / 0.625	14 / 8.750	38 / 23.750	30 / 18.750	Continuing	Continuing																			
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	1	-	-	-	7	7	-	-	19	19	-	-	15	15	Cont.	Cont.				
Out	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	1	-	-	-	7	7	-	-	19	19	-	-	15	15	Cont.	Cont.
Method of Implementation: [none specified]:: Installation Name: C2P - Technology Refresh Full System Ship																																		
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.730																	
FY 2017				- / -	- / -	4 / 2.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.620																	
FY 2018				- / -	- / -	- / -	15 / 11.850	0 / 0.000	15 / 11.850	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 11.850																	
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 6.456	- / -	- / -	- / -	- / -	0 / 0.000	8 / 6.456																	
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 8.070	- / -	- / -	- / -	- / -	0 / 0.000	10 / 8.070																	
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.421	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.421																	
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.421																	
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.421																	
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)									Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
Modification Item 1 of 1: Adv Tact Data Link Sys (ATDLS)																																
Installation Information																																
Method of Implementation: [none specified]: Installation Name: C2P - Technology Refresh Full System Ship																																
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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				- / -	5 / 2.730	4 / 2.620	15 / 11.850	0 / 0.000	15 / 11.850	8 / 6.456	10 / 8.070	3 / 2.421	3 / 2.421	Continuing	Continuing																	
Installation Schedule																																
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot		
	Q1	Q2	Q3	Q4	Q1	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	4	1	-	3	-	-	6	9	-	2	2	4	-	-	4	6	-	-	1	2	-	-	2	1	Cont.	Cont.	
Out	-	-	-	-	1	-	5	-	-	3	-	-	6	9	-	2	2	4	-	-	4	6	-	-	1	2	-	-	2	2	Cont.	Cont.
Method of Implementation: [none specified]: Installation Name: LMMT - Ship (CVN)																																
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	6 / 2.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 2.640													
FY 2018				- / -	- / -	- / -	4 / 1.788	0 / 0.000	4 / 1.788	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.788													
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.457	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.457													
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.402	0 / 0.000													
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing													
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total				- / -	- / -	6 / 2.640	4 / 1.788	0 / 0.000	4 / 1.788	1 / 0.457	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.402	Continuing													
Installation Schedule																																
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot		
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	4	-	-	1	-	-	-	-	-	-	-	-	2	-	Cont.	Cont.						
Out	-	-	-	-	-	-	-	-	6	-	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-	2	2	Cont.	Cont.			

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2614 / Adv Tact Data Link Sys (ATDLS)	Modification Number / Title: 1 / Adv Tact Data Link Sys (ATDLS)		
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:			
Footnotes:				
(2) Change in unit cost from FY18 to FY19 reflects updated cost estimate for production contract awarding in FY19. (3) FY17 and FY18 LMMT ship procurements required additional equipment that was not needed in FY19 and out, therefore reducing the unit cost.				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					2618 / Navy Command and Control System (NCCS)										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	39.246	4.556	4.512	3.769	0.000	3.769	3.415	3.571	3.660	3.739	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	39.246	4.556	4.512	3.769	0.000	3.769	3.415	3.571	3.660	3.739	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	39.246	4.556	4.512	3.769	0.000	3.769	3.415	3.571	3.660	3.739	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.029	0.150	0.102	-	0.102	0.053	0.056	-	-	-	0.390			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
Funding includes Global Command and Control System-Maritime (GCCS-M), the Navy fielded portions of GCCS-Joint, and Joint Automated Deep Operations Coordination System (JADOCS). GCCS-M is further delineated by Afloat and Ashore.															
GCCS-M is the Maritime implementation of the United States (U.S.) Global Command and Control System (GCCS). It provides Maritime Commanders at all echelons of command with a single, integrated, scalable Command, Control, Communication, Computers and Intelligence (C4I) system that fuses, correlates, filters, maintains and displays location, and attribute information on friendly, hostile and neutral land, sea and air forces. It takes this information and integrates it with available intelligence and environmental information to support commander decision making. It operates in near real-time, constantly updating unit positions and other situational awareness data. GCCS-M also records data in appropriate databases and maintains a history of changes to those records. System operators use the data to construct relevant tactical pictures using maps, charts, topography overlays, oceanographic overlays, meteorological overlays, imagery and all-source intelligence information coordinated into a Common Operational Picture (COP) that can be shared locally and with other sites. GCCS-M is not a weapon system, but receives data from, and interfaces with Navy integrated weapons systems. Navy Commanders review and evaluate the general tactical situation, plan actions and operations, direct forces, synchronize tactical movements, and integrate force maneuver with firepower. GCCS-M operates on General Service (GENSER) Secret networks in a variety of environments and supports joint, coalition and allied forces. GCCS-M is implemented Afloat and at Ashore fixed command centers. Increment 1 includes all GCCS-M software versions 4.0 and earlier. Increment 2 is GCCS-M 4.1.															
[P5 / FA010 GCCS-M Afloat]: GCCS-M Afloat provides Command and Control capability to Force Level Ships (e.g., CVN Carriers, LCC Command Ships, LHA and LHD Amphibious Ships), Unit Level Ships (e.g., CG Cruisers, DDG Destroyers, MCM Mine Countermeasure Ships, LPD and LSD Amphibious Ships, FF/LCS Littoral Combat Ships, PC Coastal Patrol Ships), Submarines (e.g., SSN/SSBN/SSGN Submarines), the Software Support Activity (SSA), and the In-Service Engineering Activity (ISEA).															
[P5 / FA020 GCCS-M Ashore]: GCCS-M Ashore provides evolutionary systems and ancillary equipment upgrades to support Fleet Commanders, Force Anti-Submarine Warfare Commanders, Submarine Operating Authorities, Aegis Ashore Missile Defense Systems, and Technical Training Equipment Sites worldwide. GCCS-M Ashore provides systems that receive, process, display, maintain and/or assess unit characteristics, employment scheduling, material condition, combat readiness, war fighting capabilities, and positional information of own, allied, and hostile forces. GCCS-M Ashore provides the tools necessary for fleet and Shore based Commanders to execute plans, transmit tasking, and provide tactical information to subordinate forces.															
[P5 / FA040 GCCS (Joint) Support Equipment]: Global Command and Control System- Joint (GCCS-J) is a Department of Defense (DoD) Program of Record managed by the Defense Information Systems Agency (DISA) GCCS-J Program Management Office (PMO). The GCCS-J system requirements, software release schedule, and system fielding plan are determined by the DISA GCCS-J PMO in coordination															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment		P-1 Line Item Number / Title: 2618 / Navy Command and Control System (NCCS)
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		
with the Joint Staff. GCCS-J supports the Joint Staff and Combatant Commanders by providing Command, Control, Communication, Computers and Intelligence (C4I) data processing capabilities, including status of forces and support requirements for use in national security decision making, force preparation and operational planning and execution. Global Command and Control System- Joint (GCCS-J) provides support for Fleet Communications Center interfacing with deployed units and other fixed Fleet and Joint Command Centers.		
[P5 / FA060 Joint Automated Deep Operations Coordination System (JADOCS)]: Provide funding for the fielding of JADOCS software on new installation hardware. JADOCS is required to provide the capability to coordinate joint targeting and mission assignment for time sensitive targets and other rapid-response missions across Functional Component Commanders, Joint and Combined Force Commanders, Geographic Combatant Commanders, and Special Operations Commanders.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				2618 / Navy Command and Control System (NCCS)					
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / Navy Command and Control System (NCCS)	P-5a			- / 39.246	- / 4.556	- / 4.512	- / 3.769	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 39.246	- / 4.556	- / 4.512	- / 3.769	- / 0.000
*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 2019 budget procures and installs Global Command and Control System - Joint (GCCS-J) Ashore workstations, servers, Local Area Network (LAN) hardware and software, communications equipment, and Joint Automated Deep Operations Coordination System (JADOCS), and Global Command and Control System - Maritime (GCCS-M) software, to include Windows XP eradication efforts on GCCS-M afloat platforms.									

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2618 / Navy Command and Control System (NCCS)										Item Number / Title [DODIC]: 1 / Navy Command and Control System (NCCS)						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				39.246			4.556		4.512		3.769		0.000		3.769				
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				39.246			4.556		4.512		3.769		0.000		3.769				
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				39.246			4.556		4.512		3.769		0.000		3.769				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)				-			0.029		0.150		0.102		-		0.102				
Gross/Weapon System Unit Cost (\$ in Thousands)				-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	
Flyaway - FA010 GCCS-M Afloat Cost																			
Recurring Cost																			
1.1.1) GCCS-M Increment 1 Afloat ^(t)	48.913	103	5.038	1.000	1	0.001	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.2) GCCS-M Increment 2 Afloat ^(t)	39.763	76	3.022	1.607	56	0.090	2.938	48	0.141	4.026	39	0.157	-	-	-	4.026	39	0.157	
<i>Subtotal: Recurring Cost</i>	-	-	8.060	-	-	0.091	-	-	0.141	-	-	0.157	-	-	-	-	-	0.157	
<i>Subtotal: Flyaway - FA010 GCCS-M Afloat Cost</i>	-	-	8.060	-	-	0.091	-	-	0.141	-	-	0.157	-	-	-	-	-	0.157	
Flyaway - FA020 GCCS-M Ashore Cost																			
Recurring Cost																			
2.1.1) GCCS-M Increment 2 Ashore ^(t)	1,070.000	2	2.140	-	-	-	1.000	1	0.001	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	2.140	-	-	-	-	-	0.001	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Flyaway - FA020 GCCS-M Ashore Cost</i>	-	-	2.140	-	-	-	-	-	0.001	-	-	-	-	-	-	-	-	-	
Flyaway - FA040 GCCS (Joint) Support Equipment Cost																			
Recurring Cost																			
3.1.1) GCCS (Joint) Support Equipment ^(t)	165.943	35	5.808	100.333	6	0.602	106.833	6	0.641	87.167	6	0.523	-	-	-	87.167	6	0.523	
<i>Subtotal: Recurring Cost</i>	-	-	5.808	-	-	0.602	-	-	0.641	-	-	0.523	-	-	-	-	-	0.523	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2618 / Navy Command and Control System (NCCS)									Item Number / Title [DODIC]: 1 / Navy Command and Control System (NCCS)													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
<i>Subtotal: Flyaway - FA040 GCCS (Joint) Support Equipment Cost</i>	-	-	5.808	-	-	0.602	-	-	0.641	-	-	0.523	-	-	-	-	-	0.523								
Flyaway - FA060 Joint Automated Deep Operations Coordination System (JADOCS) Cost																										
Recurring Cost																										
4.1.1) JADOCS ^(†)	8.792	24	0.211	13.000	3	0.039	13.260	5	0.066	13.200	5	0.066	-	-	-	13.200	5	0.066								
<i>Subtotal: Recurring Cost</i>	-	-	0.211	-	-	0.039	-	-	0.066	-	-	0.066	-	-	-	-	-	0.066								
<i>Subtotal: Flyaway - FA060 Joint Automated Deep Operations Coordination System (JADOCS) Cost</i>	-	-	0.211	-	-	0.039	-	-	0.066	-	-	0.066	-	-	-	-	-	0.066								
Flyaway - ASHORE INSTALLATIONS - FA776 Non FMP Cost																										
Recurring Cost																										
5.1.1) GCCS-M Increment 2 Ashore Installation and Pre-Installation Design	-	-	0.881	-	-	-	-	-	0.065	-	-	-	-	-	-	-	-									
5.1.2) GCCS (Joint) Support Equipment	-	-	3.167	-	-	0.419	-	-	0.430	-	-	0.450	-	-	-	-	-	0.450								
5.1.3) GCCS-J Pre-Installation Design	-	-	0.869	-	-	0.175	-	-	0.194	-	-	0.180	-	-	-	-	-	0.180								
<i>Subtotal: Recurring Cost</i>	-	-	4.917	-	-	0.594	-	-	0.689	-	-	0.630	-	-	-	-	-	0.630								
<i>Subtotal: Flyaway - ASHORE INSTALLATIONS - FA776 Non FMP Cost</i>	-	-	4.917	-	-	0.594	-	-	0.689	-	-	0.630	-	-	-	-	-	0.630								
Flyaway - AFLOAT INSTALLATIONS - FA777 FMP Cost																										
Recurring Cost																										
6.1.1) GCCS-M Increment 1 Afloat	-	-	8.348	-	-	0.055	-	-	-	-	-	-	-	-	-	-	-									
6.1.2) GCCS-M Increment 2 Afloat	-	-	8.385	-	-	3.130	-	-	2.922	-	-	2.345	-	-	-	-	-	2.345								
6.1.3) JADOCS	-	-	0.310	-	-	0.030	-	-	0.029	-	-	0.030	-	-	-	-	-	0.030								
<i>Subtotal: Recurring Cost</i>	-	-	17.043	-	-	3.215	-	-	2.951	-	-	2.375	-	-	-	-	-	2.375								
<i>Subtotal: Flyaway - AFLOAT INSTALLATIONS - FA777 FMP Cost</i>	-	-	17.043	-	-	3.215	-	-	2.951	-	-	2.375	-	-	-	-	-	2.375								
Flyaway - Consolidated Prior Year Requirements Cost																										
Recurring Cost																										

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2618 / Navy Command and Control System (NCCS)										Item Number / Title [DODIC]: 1 / Navy Command and Control System (NCCS)														
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:														
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																											
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total											
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)									
7.1.1) Consolidated Prior Year Requirements ⁽¹⁾	-	-	0.896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Recurring Cost</i>	-	-	0.896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<i>Subtotal: Flyaway - Consolidated Prior Year Requirements Cost</i>	-	-	0.896	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
Support - FA555 Production Support Cost																											
8.1) GCCS (Joint) Production Engineering Support	-	-	0.171	-	-	0.015	-	-	0.023	-	-	0.018	-	-	-	-	-	0.018									
<i>Subtotal: Support - FA555 Production Support Cost</i>	-	-	0.171	-	-	0.015	-	-	0.023	-	-	0.018	-	-	-	-	-	0.018									
Gross/Weapon System Cost	-	-	39.246	-	-	4.556	-	-	4.512	-	-	3.769	-	-	-	0.000	-	3.769									
Remarks:																											
- Global Command and Control System - Maritime (GCCS-M) Afloat install quantities also include refresh units.																											
- For GCCS-M software-only installations, Other Procurement, Navy (OPN) is the appropriate fund source when the GCCS-M installation is an incidental cost to the Common Computing Environment (CCE)/ Consolidated Afloat Networks and Enterprise Services (CANES) hardware installation.																											
- GCCS-M unit costs are based on the average cost of all the platforms or sites installed within a given fiscal year. Unit cost variances are due to the diverse types of upgrade requirements per platform or site.																											
- GCCS-M Increment 1 can deliver a software / hardware solution or a software-only solution.																											
- GCCS-M Increment 2 Afloat is the final version of GCCS-M.																											
- Global Command and Control System - Joint (GCCS-J) quantities represent the number of complete unit upgrades to existing systems. The cost to upgrade each unit varies based on the number of servers, computers, and monitors and the equipment configurations. The different unit sizes and configurations result in varying unit costs.																											
(†) indicates the presence of a P-5a																											
Footnotes:																											
(1) Consolidated prior year requirements include GCCS-M Increment 2 Ashore Training Curriculum (FA666), GCCS-M Increment 2 Ashore Production Support (FA555), JADOCs Ashore Installations (FA776).																											

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2618 / Navy Command and Control System (NCCS)					Item Number / Title [DODIC]: 1 / Navy Command and Control System (NCCS)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) GCCS-M Increment 1 Afloat		2017	SSC Atlantic/Pacific / SPAWAR	WR	SPAWAR	Nov 2016	Jan 2017	1	1.000	Y		
1.1.2) GCCS-M Increment 2 Afloat		2017	SSC Atlantic/Pacific ⁽²⁾ / SPAWAR	WR	SPAWAR	Nov 2016	Jan 2017	56	1.607	Y		
1.1.2) GCCS-M Increment 2 Afloat		2018	SSC Atlantic/Pacific ⁽²⁾ / SPAWAR	WR	SPAWAR	Nov 2017	Jan 2018	48	2.938	Y		
1.1.2) GCCS-M Increment 2 Afloat		2019	SSC Atlantic/Pacific ⁽²⁾ / SPAWAR	WR	SPAWAR	Nov 2018	Jan 2019	39	4.026	Y		
2.1.1) GCCS-M Increment 2 Ashore		2018	SSC Atlantic/Pacific / SPAWAR	WR	SPAWAR	Nov 2017	Jan 2018	1	1.000	Y		
3.1.1) GCCS (Joint) Support Equipment		2017	SSC Atlantic/SPAWAR / SPAWAR	WR	SPAWAR	Jan 2017	Apr 2017	6	100.333	Y		
3.1.1) GCCS (Joint) Support Equipment		2018	SSC Atlantic/SPAWAR / SPAWAR	WR	SPAWAR	Jan 2018	Apr 2018	6	106.833	Y		
3.1.1) GCCS (Joint) Support Equipment		2019	SSC Atlantic/SPAWAR / SPAWAR	WR	SPAWAR	Jan 2019	Apr 2019	6	87.167	Y		
4.1.1) JADOCs		2017	SSC Pacific / San Diego, CA	WR	SPAWAR	Nov 2016	Jan 2017	3	13.000	Y		
4.1.1) JADOCs		2018	SSC Pacific / San Diego, CA	WR	SPAWAR	Nov 2017	Jan 2018	5	13.260	Y		
4.1.1) JADOCs		2019	SSC Pacific / San Diego, CA	WR	SPAWAR	Nov 2018	Jan 2019	5	13.200	Y		

Footnotes:

⁽²⁾ For GCCS-M Increment 1 Afloat, Increment 2 Afloat, and Increment 2 Ashore: Space and Naval Warfare Systems Command Systems Center (SPAWARSYSCEN), Pacific and Atlantic are procuring, integrating and installation agents. There are multiple hardware and software contracts awarded under each of these cost elements.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement												
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: 0603502N					Other Related Program Elements: N/A									
Line Item MDAP/MAIS Code: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	535.327	26.764	31.531	35.709	0.000	35.709	55.949	51.338	34.007	16.753	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	535.327	26.764	31.531	35.709	0.000	35.709	55.949	51.338	34.007	16.753	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	535.327	26.764	31.531	35.709	0.000	35.709	55.949	51.338	34.007	16.753	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	0.830	1.202	-	-	-	-	-	-	-	-	-	2.032				
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	-				
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	-				
Description:																	
Provide systems, subsystems, and engineering change kits for minehunting, navigation, and tactical display operations by the surface Mine Countermeasure (MCM) force. Engineering change kits improve reliability and maintainability and correct deficiencies to allow equipment to perform in accordance with operational requirements.																	
HME Ship Systems support software integration and hardware upgrades to legacy MCM ships and software tech refresh for the Integrated Ship Control System (ISCS) on MCM Class Ships forward deployed to ensure MCM mine hunting and minesweeping capability whereas legacy sustainment is not feasible and would result in delays and obsolescence.																	
This program also supports ship change upgrades computer workstations, replaces network switches, and replaces the operating system.																	
The MCM Combat System Upgrades program consists of a series of incremental upgrades to the current combat system via Engineering Change Kits. The upgrades improve reliability and maintainability and correct deficiencies to allow the equipment to perform in accordance with operational requirements. This includes supportability and obsolescence Upgrade Engineering Changes of the MCM-1 Class Ship combat systems to resolve issues with the AN/SLQ-48 Mine Neutralization System, installation of Mine Environmental Decision Aids Library (MEDAL) Expeditionary Systems, and improved SSQ-94 System Trainer to MCM Ships' and integrating the SQQ-32 High Frequency Wide Band (HFWB) and SSN-2 PINS upgrade and resolves obsolescence issues.																	
The Knifefish Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) program procures Unmanned Undersea Vehicles to support clandestine mine detection capability against volume and bottom mines including buried mine detection. The Knifefish system is composed of two UUVs, batteries, launch and handling system, and other support equipment.																	
Magnetic Silencing Facility Upgrades supports hardware, auxiliary systems and support in association with the upgrade of the current aging CONUS and Outside Continental United States (OCONUS) Magnetic Silencing Facilities so the calibration of the new Open-Loop Magnetic Systems or Advanced Degaussing System ships and submarines can be accomplished for worldwide operation. The upgrade will also ensure that the ships/submarines will be able to meet OPNAV 8950.2G signature requirements and will be less susceptible to Electro-Magnetic threat systems.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement						
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: 0603502N				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / HME SHIP SYSTEMS				- / 62.927	- / 6.162	- / 2.375	- / 2.132	- / 0.000	- / 2.132
P-5	2 / MINE COUNTERMEASURES				- / 200.936	- / 7.159	- / 8.328	- / 2.759	- / 0.000	- / 2.759
P-5	3 / UNMANNED SYSTEMS [UNMAN]	P-5a, P-21			- / 0.000	- / 0.000	- / 3.010	- / 19.296	- / 0.000	- / 19.296
P-5	4 / OTHER SYSTEMS [OTHER]				- / 271.464	- / 13.443	- / 17.818	- / 11.522	- / 0.000	- / 11.522
P-40	Total Gross/Weapon System Cost				- / 535.327	- / 26.764	- / 31.531	- / 35.709	- / 0.000	- / 35.709

*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 2019 funding request was reduced by \$3.9 million to account for the availability of prior year execution balances.

FY 2019 funds the baseline program in order to outfit the current MCM Fleet with Navy's latest technology to combat Mine Warfare Countermeasures around the world. This includes the continued upgrades of SLQ-48 Mine Neutralization systems and the UISS trainers. Additionally, to meet the increased operational demand, funding will go towards the installation of the MEDAL EA Mine Warfare Planning upgrades. The increase in FY 2019 from FY 2018 is attributed to the initial procurement of Knifefish and ancillary equipment.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 1 / HME SHIP SYSTEMS					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				62.927			6.162		2.375		2.132		0.000		2.132			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				62.927			6.162		2.375		2.132		0.000		2.132			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				62.927			6.162		2.375		2.132		0.000		2.132			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - LV081 - BOW THRUSTER IMPROVEMENT Cost																		
Recurring Cost																		
1.1.1) BOW THRUSTER IMPROVEMENT	-	-	3.958	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	3.958	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - LV081 - BOW THRUSTER IMPROVEMENT Cost</i>	-	-	3.958	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - LV082 - AFT DECK EQUIPMENT UPGRADE Cost																		
Recurring Cost																		
2.1.1) AFT DECK EQUIPMENT UPGRADE	-	-	39.303	-	-	3.582	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	39.303	-	-	3.582	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - LV082 - AFT DECK EQUIPMENT UPGRADE Cost</i>	-	-	39.303	-	-	3.582	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - LV084 - 400HZ Cost																		
Non Recurring Cost																		
3.1.1) 400HZ	-	-	3.994	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	3.994	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - LV084 - 400HZ Cost</i>	-	-	3.994	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement									Item Number / Title [DODIC]: 1 / HME SHIP SYSTEMS													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
Software - LV073 - MCM/MHC INTEGRATED SHIP CONTROL SYSTEM Cost																										
Recurring Cost																										
4.1.1) SOFTWARE INTEGRATION	-	-	15.672	-	-	2.580	-	-	2.375	-	-	2.132	-	-	0.000	-	-	2.132								
<i>Subtotal: Recurring Cost</i>	-	-	15.672	-	-	2.580	-	-	2.375	-	-	2.132	-	-	0.000	-	-	2.132								
<i>Subtotal: Software - LV073 - MCM/MHC INTEGRATED SHIP CONTROL SYSTEM Cost</i>	-	-	15.672	-	-	2.580	-	-	2.375	-	-	2.132	-	-	0.000	-	-	2.132								
Gross/Weapon System Cost	-	-	62.927	-	-	6.162	-	-	2.375	-	-	2.132	-	-	0.000	-	-	2.132								

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 2 / MINE COUNTERMEASURES					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				200.936			7.159		8.328		2.759		0.000		2.759			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				200.936			7.159		8.328		2.759		0.000		2.759			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				200.936			7.159		8.328		2.759		0.000		2.759			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - LV075 - MCM COMBAT SYSTEMS Cost																		
Recurring Cost																		
1.1.1) SSQ-94 Trainer	-	-	0.993	-	-	1.012	-	-	0.993	-	-	0.398	-	-	0.000	-	-	0.398
1.1.2) MCM Combat Systems (MEDAL)	-	-	159.529	-	-	2.358	-	-	3.585	-	-	0.961	-	-	0.000	-	-	0.961
1.1.3) Obsolescence Upgrades (SLO-Q48)	-	-	2.491	-	-	2.758	-	-	3.750	-	-	1.400	-	-	0.000	-	-	1.400
<i>Subtotal: Recurring Cost</i>	-	-	163.013	-	-	6.128	-	-	8.328	-	-	2.759	-	-	0.000	-	-	2.759
<i>Subtotal: Hardware - LV075 - MCM COMBAT SYSTEMS Cost</i>	-	-	163.013	-	-	6.128	-	-	8.328	-	-	2.759	-	-	0.000	-	-	2.759
Hardware - LV078 - AN/SQQ-30(V)4 HFWB Cost																		
Recurring Cost																		
2.1.1) AN/SQQ-32(V)4 HFWB Integration	3,213.000	10	32.130	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) H/W and S/W ECP	-	-	2.142	-	-	1.031	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	34.272	-	-	1.031	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - LV078 - AN/SQQ-30(V)4 HFWB Cost</i>	-	-	34.272	-	-	1.031	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - PNMC - Mine Countermeasures Map System Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement								Item Number / Title [DODIC]: 2 / MINE COUNTERMEASURES											
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:											
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																							
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total							
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)					
3.1.1) Mine Countermeasures Map System	-	-	3.651	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000					
<i>Subtotal: Recurring Cost</i>	-	-	3.651	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000					
<i>Subtotal: Hardware - PNMC - Mine Countermeasures Map System Cost</i>	-	-	3.651	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000					
Gross/Weapon System Cost	-	-	200.936	-	-	7.159	-	-	8.328	-	-	2.759	-	-	0.000	-	-	2.759					

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				0.000			0.000		3.010		19.296		0.000		19.296			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				0.000			0.000		3.010		19.296		0.000		19.296			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				0.000			0.000		3.010		19.296		0.000		19.296			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - LV079 - SMCM UUV W/LFBB (Knifefish) Cost																		
Recurring Cost																		
1.1.1) SMCM UUV (Knifefish) ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	13,135.000	1	13.135	-	-	0.000	13,135.000	1	13.135
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>13.135</i>	-	-	<i>0.000</i>	-	-	<i>13.135</i>
Non Recurring Cost																		
1.2.1) Ancillary Equipment	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.795	-	-	0.000	-	-	2.795
1.2.2) Production Engineering - Knifefish	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.473	-	-	0.000	-	-	1.473
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>4.268</i>	-	-	<i>0.000</i>	-	-	<i>4.268</i>
<i>Subtotal: Hardware - LV079 - SMCM UUV W/LFBB (Knifefish) Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>17.403</i>	-	-	<i>0.000</i>	-	-	<i>17.403</i>
Hardware - LV080 - UNMANNED INFLUENCE SWEEP SYSTEM (UISS) Trainers Cost																		
Recurring Cost																		
2.1.1) UISS Training Equipment ^(†)	-	-	0.000	-	-	0.000	1,505.000	2	3.010	946.500	2	1.893	-	-	0.000	946.500	2	1.893
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>3.010</i>	-	-	<i>1.893</i>	-	-	<i>0.000</i>	-	-	<i>1.893</i>
<i>Subtotal: Hardware - LV080 - UNMANNED INFLUENCE SWEEP SYSTEM (UISS) Trainers Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>3.010</i>	-	-	<i>1.893</i>	-	-	<i>0.000</i>	-	-	<i>1.893</i>

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement									Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	-	-	3.010	-	-	19.296	-	-	0.000	-	-	19.296								

Remarks:

[Hardware] Unmanned Influence Sweep System (UISS) (LV080): This line item procures the training systems to support the UISS operational units procured for the Littoral Combat Ship (LCS) Mission Modules and Vessels of Opportunity (VOO). UISS consists of an Unmanned Surface Vehicle, power supply, control unit, winch, acoustic generator, magnetic tow cable, and a deploy and retrieve subsystem. UISS will provide long endurance and wide area magnetic and acoustic mine sweep capability onboard the LCS class of ships ships, from ashore, and from VOOs.

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement					Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) SMCM UUV (Knifefish) ^(†)		2019	General Dynamics MS / Mcleansville, NC	C / CPIF	NAVSEA	Nov 2018	May 2020	1	13,135.000	N		
2.1.1) UISS Training Equipment		2018	Textron / Hunt Valley, MD	C / FPIF	NAVSEA	Aug 2018	Feb 2020	2	1,505.000	N		
2.1.1) UISS Training Equipment		2019	Textron / Hunt Valley, MD	C / FPIF	NAVSEA	Dec 2018	Jun 2020	2	946.500	N		

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7										P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]																			
Cost Elements (Units in Each)					Fiscal Year 2018															Fiscal Year 2019																			
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019										B A L A N C E													
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P										
1.1.1) SMCM UUV (Knifefish)						1	2019	NAVY	1	0	1																											1	
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P										

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7										P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]																			
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021																				
O C R O #	M F R Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	FY	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	B A L A N C E								
1.1.1) SMCM UUV (Knifefish)																																				0			
1 2019 NAVY 1 0 1 - - - - - 1																																			0				
O C T																																							

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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement					Item Number / Title [DODIC]: 3 / UNMANNED SYSTEMS [UNMAN]				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	General Dynamics MS - Mcleansville, NC	2	4	10	3	3	18	21	0	3	15	18

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement										Item Number / Title [DODIC]: 4 / OTHER SYSTEMS [OTHER]					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				271.464			13.443		17.818		11.522		0.000		11.522			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				271.464			13.443		17.818		11.522		0.000		11.522			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				271.464			13.443		17.818		11.522		0.000		11.522			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - LV083 - AIMS Cost																		
Non Recurring Cost																		
1.1.1) AIMS	-	-	9.574	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	9.574	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - LV083 - AIMS Cost</i>	-	-	9.574	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - LV085 - MAGNETIC SILENCING FACILITY UPGRADES Cost																		
Recurring Cost																		
2.1.1) MSF PEARL HARBOR TREATMENT UPGRADE	11,244.000	1	11.244	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) MSF NORFOLK TREATMENT UPGRADE	-	-	14.457	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) MSF MEASUREMENT SYSTEM UPGRADE	81,743.000	1	81.743	-	-	13.443	-	-	17.818	-	-	11.522	-	-	0.000	-	-	11.522
2.1.4) MAGNETIC SILENCING FACILITY UPGRADES	-	-	5.652	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	113.096	-	-	13.443	-	-	17.818	-	-	11.522	-	-	0.000	-	-	11.522
<i>Subtotal: Hardware - LV085 - MAGNETIC SILENCING FACILITY UPGRADES Cost</i>	-	-	113.096	-	-	13.443	-	-	17.818	-	-	11.522	-	-	0.000	-	-	11.522

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2622 / Minesweeping System Replacement									Item Number / Title [DODIC]: 4 / OTHER SYSTEMS [OTHER]													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
Hardware - LVCA1 - SEA BOTTOM MAPPING Cost																										
Non Recurring Cost																										
3.1.1) SEA BOTTOM MAPPING	-	-	1.711	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Non Recurring Cost</i>	-	-	1.711	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Hardware - LVCA1 - SEA BOTTOM MAPPING Cost</i>	-	-	1.711	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
Support - Prior Years Cumulative Funding Cost																										
4.1) Production Engineering	-	-	39.030	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
4.3) Prior Years Cumulative Funding	-	-	108.053	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Support - Prior Years Cumulative Funding Cost</i>	-	-	147.083	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
Gross/Weapon System Cost	-	-	271.464	-	-	13.443	-	-	17.818	-	-	11.522	-	-	0.000	-	-	11.522								

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					2624 / Shallow Water MCM										
ID Code (A=Service Ready, B=Not Service Ready): B			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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	48.473	8.875	8.796	8.616	0.000	8.616	8.730	5.595	5.703	5.811	-	100.599			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	48.473	8.875	8.796	8.616	0.000	8.616	8.730	5.595	5.703	5.811	-	100.599			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	48.473	8.875	8.796	8.616	0.000	8.616	8.730	5.595	5.703	5.811	-	100.599			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)															
Initial Spares (\$ in Millions)	-	0.523	0.073	-	-	-	-	-	-	-	-	0.596			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY 2019 funding request was reduced by \$0.047 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.															
This program provides a combination of US Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land/sea mines, obstacles in the beach zone and surf zone approaches to amphibious assault areas. It is a system of systems (Countermine/Counter Obstacle, Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T), Navigation/Virtual Marking/Integration, C4I/Data Fusion) that provides a full assault breaching capability. This program is an essential element to the Marine Corps Ship To Objective Maneuver Concept of Operations.															
This procurement line supports the COBRA program of record, delivering COBRA systems to Navy helicopter wings to provide initial proficiency training to Navy aircrews. COBRA systems are also procured under BLI 1601 LCS Mission Modules. The 1601 COBRA systems provide the deployable combat capability to LCS mission packages.															
[P5 / SW004: COASTAL BATTLEFIELD RECONNAISSANCE AND ANALYSIS (COBRA): The mission of the AN/DVS-1 COBRA is to conduct unmanned aerial tactical reconnaissance in the littoral battlespace for detection and localization of minefields and obstacles in the surf zone and beach zone prior to an amphibious assault. The COBRA Airborne Payload will be carried on the MQ-8B Fire Scout. This allows operators and other personnel to remain at a safe distance from the mine and obstacle belts and enemy direct and indirect fire. COBRA will be embarked in the Littoral Combat Ship (LCS) as part of the Mine Countermeasures Mission Package (MP).]															
COBRA provides the (ISR/T) part of the Assault Breaching System of systems. One system consists of two Airborne Mine Counter Measures (AMCM) Payloads and one Post Mission Analysis Station. Block I introduces a daytime, surface laid minefield and obstacle detection capability for the Beach Zone. Block II adds a surfzone and night (darkness) detection capability. COBRA will be a modular payload architecture of, and integrated with, the MQ-8B Fire Scout VTUAV and will serve as a "detect" sensor within the LCS Mine Warfare mission package as part of amphibious assault breaching.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				P-1 Line Item Number / Title: 2624 / Shallow Water MCM						
ID Code (A=Service Ready, B=Not Service Ready): B		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 2017	FY 2018	FY 2019 Base			
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-5	1 / Shallow Water Mine CM Ship	P-5a, P-21			- / 48.473	- / 8.875	- / 8.796	- / 8.616	- / 0.000	- / 8.616
P-40	Total Gross/Weapon System Cost				- / 48.473	- / 8.875	- / 8.796	- / 8.616	- / 0.000	- / 8.616

*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 2019 funding supports the baseline program which will procure one COBRA system to be integrated on the MQ-8B FIRESCOUT. These systems provide the fleet with the required training assets to certify the pilots and crew to operate and maintain these systems before being deployed on the LCS.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2624 / Shallow Water MCM										Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)				48.473		8.875		8.796		8.616		0.000		8.616					
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)				48.473		8.875		8.796		8.616		0.000		8.616					
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Total Obligation Authority (\$ in Millions)				48.473		8.875		8.796		8.616		0.000		8.616					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)				-		0.523		0.073		-		-		-					
Gross/Weapon System Unit Cost (\$ in Dollars)				-		-		-		-		-		-					
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Hardware - SW003: LANDING CRAFT UTILITY (LCU) NAVIGATION UPGRADE Cost																			
Recurring Cost																			
1.1.1) LCU NAVIGATION UPDATES	-	-	1.479	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Recurring Cost</i>	-	-	1.479	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: Hardware - SW003: LANDING CRAFT UTILITY (LCU) NAVIGATION UPGRADE Cost	-	-	1.479	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hardware - SW004: COASTAL BATTLEFIELD RECONNAISSANCE AND ANALYSIS (COBRA) Cost																			
Recurring Cost																			
2.1.1) SW0041 COBRA BLOCK 1(t)	15,826K	1	15.826	8,500K	1	8.500	8,550K	1	8.550	8,550K	1	8.550	-	-	-	8,550K	1	8.550	
2.1.2) SW00411 COBRA BLOCK 1 SPARES, TRAINING	-	-	2.034	-	-	0.130	-	-	-	-	-	-	-	-	-	-	-		
2.1.3) SW00411 COBRA BLOCK 1 MOD UPDATES	-	-	19.456	-	-	0.245	-	-	0.246	-	-	0.066	-	-	-	-	-	0.066	
<i>Subtotal: Recurring Cost</i>	-	-	37.316	-	-	8.875	-	-	8.796	-	-	8.616	-	-	-	-	-	8.616	
Subtotal: Hardware - SW004: COASTAL BATTLEFIELD RECONNAISSANCE AND ANALYSIS (COBRA) Cost	-	-	37.316	-	-	8.875	-	-	8.796	-	-	8.616	-	-	-	-	-	8.616	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2624 / Shallow Water MCM									Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																													
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total													
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)											
Hardware - SW005: AMPHIBIOUS ASSAULT VEHICLE NAVIGATION UPGRADE Cost																													
Recurring Cost																													
3.1.1) AMPHIBIOUS ASSAULT VEHICLE NAVIGATION UPGRADE	-	-	6.359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Recurring Cost</i>	-	-	6.359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Hardware - SW005: AMPHIBIOUS ASSAULT VEHICLE NAVIGATION UPGRADE Cost</i>	-	-	6.359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Hardware - SW061: LANDING CRAFT AIR CUSHION (LCAC) AUTOPILOT UPGRADE Cost																													
Recurring Cost																													
4.1.1) LCAC AUTOPILOT UPDATES	-	-	2.286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Recurring Cost</i>	-	-	2.286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Hardware - SW061: LANDING CRAFT AIR CUSHION (LCAC) AUTOPILOT UPGRADE Cost</i>	-	-	2.286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Support - SW830: PRODUCTION ENGINEERING Cost																													
5.1) PRODUCTION ENGINEERING	-	-	1.033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Support - SW830: PRODUCTION ENGINEERING Cost</i>	-	-	1.033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Gross/Weapon System Cost	-	-	48.473	-	-	8.875	-	-	8.796	-	-	8.616	-	-	0.000	-	-	8.616											

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2624 / Shallow Water MCM					Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) SW0041 COBRA BLOCK 1 ^(†)		2017	ARETE / TUCSON, AZ	C / FFP	NSWC PC	May 2017	May 2019	1	8,500K	Y		
2.1.1) SW0041 COBRA BLOCK 1 ^(†)		2018	ARETE / TUCSON, AZ	C / FFP	NSWC PC	Mar 2018	Mar 2020	1	8,550K	Y		
2.1.1) SW0041 COBRA BLOCK 1 ^(†)		2019	ARETE / TUCSON, AZ	C / FFP	NSWC PC	Mar 2019	Mar 2021	1	8,550K	Y		

(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7																				Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship											
Cost Elements (Units in Each)										Fiscal Year 2017										Fiscal Year 2018											
O C R O #	M F Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		
2.1.1) SW0041 COBRA BLOCK 1																															
Prior Years Deliveries: 1																															
1	2017	NAVY	1	0	1																										1
1	2018	NAVY	1	0	1																										1
1	2019	NAVY	1	0	1																										1

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Exhibit P-21, Production Schedule: PB 2019 Navy

Date: February 2018

Appropriation / Budget Activity / Budget Sub Activity:
1810N / 02 / 7

P-1 Line Item Number / Title:
2624 / Shallow Water MCM

Item Number / Title [DODIC]:
1 / Shallow Water Mine CM Ship

Cost Elements (Units in Each)						Fiscal Year 2019												Fiscal Year 2020												Balance					
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												Balance				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
2.1.1) SW0041 COBRA BLOCK 1																																			
Prior Years Deliveries: 1																																			
1	2017	NAVY	1	0	1	-	-	-	-	-	-	-	-	1																0					
1	2018	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
1	2019	NAVY	1	0	1																										-				
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

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Exhibit P-21, Production Schedule: PB 2019 Navy																			Date: February 2018																																																																																																																																																																																																																																																																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7																			Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship																																																																																																																																																																																																																																																																						
Cost Elements (Units in Each)																			Fiscal Year 2021																																																																																																																																																																																																																																																																						
<table border="1"> <thead> <tr> <th rowspan="2">O C R O #</th> <th rowspan="2">M F Y</th> <th rowspan="2">SERVICE</th> <th rowspan="2">PROC QTY</th> <th rowspan="2">ACCEPT PRIOR TO 1 OCT 2020</th> <th rowspan="2">BAL DUE AS OF 1 OCT</th> <th colspan="12">Calendar Year 2021</th> <th colspan="12">Calendar Year 2022</th> </tr> <tr> <th>O C T</th> <th>N O V</th> <th>D E C</th> <th>J A N</th> <th>F E B</th> <th>M A R</th> <th>A P R</th> <th>M A Y</th> <th>J U N</th> <th>J U L</th> <th>A U G</th> <th>S E P</th> <th>O C T</th> <th>N O V</th> <th>D E C</th> <th>J A N</th> <th>F E B</th> <th>M A R</th> <th>A P R</th> <th>M A Y</th> <th>J U N</th> <th>J U L</th> <th>A U G</th> <th>S E P</th> </tr> </thead> <tbody> <tr> <td colspan="19">2.1.1) SW0041 COBRA BLOCK 1</td><td colspan="12"></td></tr> <tr> <td colspan="19">Prior Years Deliveries: 1</td><td colspan="12"></td></tr> <tr> <td>1</td><td>2017</td><td>NAVY</td><td>1</td><td>1</td><td>0</td><td colspan="12"></td><td colspan="12"></td><td>0</td></tr> <tr> <td>1</td><td>2018</td><td>NAVY</td><td>1</td><td>1</td><td>0</td><td colspan="12"></td><td colspan="12"></td><td>0</td></tr> <tr> <td>1</td><td>2019</td><td>NAVY</td><td>1</td><td>0</td><td>1</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>1</td><td colspan="12"></td><td colspan="12"></td><td>0</td></tr> <tr> <td colspan="19"></td><td colspan="12"></td><td colspan="2"></td></tr> </tbody> </table>																			O C R O #	M F Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	2.1.1) SW0041 COBRA BLOCK 1																															Prior Years Deliveries: 1																															1	2017	NAVY	1	1	0																									0	1	2018	NAVY	1	1	0																									0	1	2019	NAVY	1	0	1	-	-	-	-	-	-	1																									0																																															
O C R O #	M F Y	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022																																																																																																																																																																																																																																																																							
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																																																																																																																																																																																																																																																												
2.1.1) SW0041 COBRA BLOCK 1																																																																																																																																																																																																																																																																																									
Prior Years Deliveries: 1																																																																																																																																																																																																																																																																																									
1	2017	NAVY	1	1	0																									0																																																																																																																																																																																																																																																											
1	2018	NAVY	1	1	0																									0																																																																																																																																																																																																																																																											
1	2019	NAVY	1	0	1	-	-	-	-	-	-	1																									0																																																																																																																																																																																																																																																				

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Exhibit P-21, Production Schedule: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2624 / Shallow Water MCM						Item Number / Title [DODIC]: 1 / Shallow Water Mine CM Ship			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	ARETE - TUCSON, AZ	2	6	12	0	0	24	24	0	0	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					2657 / NAVSTAR GPS Receivers (Space)												
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	204.461	7.102	15.923	10.703	0.000	10.703	32.733	33.815	30.060	23.037	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	204.461	7.102	15.923	10.703	0.000	10.703	32.733	33.815	30.060	23.037	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	204.461	7.102	15.923	10.703	0.000	10.703	32.733	33.815	30.060	23.037	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	0.062	0.061	0.149	-	0.149	0.269	0.233	0.159	0.145	Continuing	Continuing					
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
The FY 2019 funding request was reduced by \$4.331 million to account for the availability of prior year execution balances.																	
NAVSTAR Global Positioning System (NAVSTAR GPS) provides assured and protected navigation solutions to Warfighters through supported, affordable, and integrated systems, and is the primary source of positioning, navigation and timing information for the DoD.																	
[P3A / (1R0013) Navigation Warfare (NAVMAR): NAVWAR ensures that U. S. military forces maintain access to the GPS in an electronically challenging battle space, delivers the capability to deny adversaries access to and use of GPS during military operations, and serves to preserve the peaceful use of GPS. Navy GPS Enhanced User Equipment (UE) Operational Requirements Document directs that future UE will incorporate an increased anti-jam capability. NAVWAR counters the threat by increasing resistance to intentional or unintentional interference. Sea NAVWAR Strategy comprises of 2 program increments, the first increment (near term) is to install GPS anti-jam antenna system (GAS-1) on surface platforms. The second increment (long term) is to install Advanced Digital Antenna Production (ADAP) antennas on surface platforms. The ADAP antenna improves upon GAS-1 performance by providing simultaneous dual frequency nulling, and built in test ability. Procurement and installation of anti-jam GPS antennas and modernized user equipment is required to ensure the continuation of GPS signals from space in a hostile jamming environment. The Sea NAVWAR program will equip selected ships with anti-jam GPS antennas to ensure the continued availability of GPS to support surface combat operations and provide reliable GPS and other positioning, navigation and timing data to ship-board Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), Combat, and Weapons Systems.																	
[P3A - 2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS): The GPS-based PNT Service (GPNTS) system is the primary PNT system for the Navy to ensure reliable PNT capability and interoperability insertion in GPS receivers and associated Command, Control, Computers, Communications and Intelligence (C4I) and combat systems in a denied environment. GPNTS provides precise PNT data required for combat, weapons, command, control, communications, navigation, and other systems, as well as providing the time synchronization critical to the network environments. GPNTS backfits current PNT/GPS systems and forward fit new platforms. GPNTS will host the Air Force GPS Directorate-developed Military GPS User Equipment (MGUE) card, allowing access to the new more accurate and secure GPS Military-Code (M-Code) signal. GPNTS provides more robust and secure GPS/PNT capabilities than is currently in the Fleet. The system provides the capability to migrate non-real time GPS data toward a Common Computing Environment (CCE) and provide a path for the integration of advanced navigation systems and sensors.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)				
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO
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)
P-5	1 / NAVSTAR GPS Receivers (Space)				- / 156.416	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / (1R0013) Navigation Warfare (NAVWAR) (Upgrade)				- / 48.045	- / 3.372	- / 6.213	- / 2.563
P-3a	2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS (Ship Alt)				- / 0.000	- / 3.730	- / 9.710	- / 8.140
P-40	Total Gross/Weapon System Cost				- / 204.461	- / 7.102	- / 15.923	- / 10.703
Exhibits Schedule			FY 2020		FY 2021	FY 2022	FY 2023	To Complete
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)
P-5	1 / NAVSTAR GPS Receivers (Space)				- / -	- / -	- / -	- / -
P-3a	1 / (1R0013) Navigation Warfare (NAVWAR) (Upgrade)				- / 6.083	- / 3.220	- / 3.337	- / 1.360
P-3a	2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS (Ship Alt)				- / 26.650	- / 30.595	- / 26.723	- / 21.677
P-40	Total Gross/Weapon System Cost				- / 32.733	- / 33.815	- / 30.060	- / 23.037

*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:

Navigation Warfare (NAVWAR) - Sea NAVWAR will procure and field dual Advanced Digital Antenna Production (ADAP) Fiber Optic Antenna Link (FOAL) antennas in FY19.

GPS-based Positioning Navigation and Timing (PNT) Service (GPNTS) program will procure and field Low Rate Initial Production (LRIP) units in FY19.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)										Item Number / Title [DODIC]: 1 / NAVSTAR GPS Receivers (Space)					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				156.416		0.000		0.000		0.000		0.000		0.000				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				156.416		0.000		0.000		0.000		0.000		0.000				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				156.416		0.000		0.000		0.000		0.000		0.000				
(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 Thousands)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Consolidated Prior Year Requirements Cost																		
Recurring Cost																		
1.1.1) Consolidated Prior Year Requirements	124.833	1,253	156.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	156.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Consolidated Prior Year Requirements Cost</i>	-	-	156.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	156.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Remarks:																		
[Flyaway] The quantities and amounts included within the Consolidated Prior Year Requirements are inclusive of PU 1R009 Navigation Sensor System Interface (NAVSSI) FMP, PU 1R011 Navigation Sensor System Interface (NAVSSI) Retrofit, PU 1R018 Defense Advance GPS Receiver (DAGR), PU 1R777 DSA and Installation for NAVSSI FMP and NAVSSI Retrofit and PU 1R555 NAVSSI FMP Production Support and NAVSSI Retrofit Production Support.																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)						Modification Number / Title: 1 / (1R0013) Navigation Warfare (NAVWAR)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	48.045	3.372	6.213	2.563	0.000	2.563	6.083	3.220	3.337	1.360	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	48.045	3.372	6.213	2.563	0.000	2.563	6.083	3.220	3.337	1.360	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	48.045	3.372	6.213	2.563	0.000	2.563	6.083	3.220	3.337	1.360	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
Procurement and installation of anti-jam (AJ) Global Positioning System (GPS) user equipment and prevention equipment is required to ensure the continued utility of GPS signals from space in a hostile jamming environment. The Sea Navigation Warfare (NAVWAR) program will equip selected ships with anti-jam GPS antennas to ensure the continued availability of GPS to support surface combat operations and provide reliable GPS and other navigation sensor data to ship-board Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance(C4ISR), Combat, and Weapons Systems.													
Sea NAVWAR will procure and field dual Advanced Digital Antenna Production (ADAP) Fiber Optic Antenna Link (FOAL) antennas in FY19.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)										Modification Number / Title: 1 / (1R0013) Navigation Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore Stations, Ships			Modification Type: Upgrade										Related RDT&E PEs: 0604777N
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: (1R0013) Navigation Warfare (NAVWAR)</i>													
B Kits													
Recurring													
1.1.1) NAVWAR (GAS1, ADAP) - NonOrganic ⁽¹⁾	401 / 29.025	- / -	12 / 5.184	2 / 0.876	- / -	2 / 0.876	12 / 5.327	3 / 1.356	6 / 2.760	1 / 0.465	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 29.025	- / -	- / 5.184	- / 0.876	- / -	- / 0.876	- / 5.327	- / 1.356	- / 2.760	- / 0.465	Continuing	Continuing	
<i>Subtotal: (1R0013) Navigation Warfare (NAVWAR)</i>	401 / 29.025	- / -	12 / 5.184	2 / 0.876	- / -	2 / 0.876	12 / 5.327	3 / 1.356	6 / 2.760	1 / 0.465	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 29.025	- / -	- / 5.184	- / 0.876	- / -	- / 0.876	- / 5.327	- / 1.356	- / 2.760	- / 0.465	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 2.945	- / 0.000	- / 0.259	- / 0.039	- / 0.000	- / 0.039	- / 0.266	- / 0.068	- / 0.106	- / 0.021	- / -	- / 3.704	
2.2) DSA - FMP	- / 6.388	- / 0.252	- / 0.380	- / 0.088	- / 0.000	- / 0.088	- / 0.230	- / 0.176	- / 0.066	- / 0.064	- / -	- / 17.644	
<i>Subtotal: Support</i>	- / 9.333	- / 0.252	- / 0.639	- / 0.127	- / -	- / 0.127	- / 0.496	- / 0.244	- / 0.172	- / 0.085	- / 0.000	- / 11.348	
Installation													
<i>Modification Item 1 of 1: (1R0013) Navigation Warfare (NAVWAR)</i>	- / 9.687	- / 3.120	- / 0.390	- / 1.560	- / 0.000	- / 1.560	- / 0.260	- / 1.620	- / 0.405	- / 0.810	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 9.687	- / 3.120	- / 0.390	- / 1.560	- / -	- / 1.560	- / 0.260	- / 1.620	- / 0.405	- / 0.810	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	48.045	3.372	6.213	2.563	0.000	2.563	6.083	3.220	3.337	1.360	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7				P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)										Modification Number / Title: 1 / (1R0013) Navigation Warfare (NAVWAR)																	
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																	
Modification Item 1 of 1: (1R0013) Navigation Warfare (NAVWAR)																															
Manufacturer Information																															
Manufacturer Name: RAYTHEON SYSTEMS LTD							Manufacturer Location: HARLOW-UNITED KINGDOM																								
Administrative Leadtime (in Months): 4							Production Leadtime (in Months): 9																								
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates			May 2018		Feb 2019																										
Delivery Dates			Feb 2019		Nov 2019																										
Installation Information																															
Method of Implementation: Tiger Team:: Installation Name: NAVWAR Inc 1 - GAS1, Inc 2 - ADAP																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)												
Prior Years			374 / 9.687	24 / 3.120	3 / 0.390	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	401 / 13.197																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	12 / 1.560	0 / 0.000	12 / 1.560	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.560																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.260	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.260																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.620	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.620																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.405	- / -	- / -	Continuing	Continuing																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.810	0 / 0.000	6 / 0.810																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.270	1 / 0.270																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -																
Total			374 / 9.687	24 / 3.120	3 / 0.390	12 / 1.560	0 / 0.000	12 / 1.560	2 / 0.260	12 / 1.620	3 / 0.405	6 / 0.810	Continuing	Continuing																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	374	5	3	4	9	3	2	1	-	-	-	2	10	-	-	1	1	-	2	4	6	-	-	2	1	-	-	3	3	1	437
Out	368	6	5	3	4	9	3	2	1	-	-	-	2	10	-	-	1	1	-	2	4	6	-	-	2	1	-	-	3	4	437
Footnotes:																															
(1) 1)Advanced Digital Antenna Production (ADAP) consists of two hardware configurations; single ADAP and Dual ADAP Fiber Optic Antenna Link (FOAL), which drives the variation in average unit price each fiscal year. 2)A single ADAP shipset consists of one single ADAP antenna and is installed on smaller surface platforms. A single ADAP may range in cost from \$135K to \$145K depending on the Economic Order Quantity Pricing and International exchange rates relevant at time of contract award. 3)A Dual ADAP FOAL shipset consists of two ADAP antennas, two FOAL drawers, & two component kits and are																															

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)	Modification Number / Title: 1 / (1R0013) Navigation Warfare (NAVWAR)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
installed on large surface platforms. An ADAP FOAL may range in cost from \$407K to \$465K depending on Economic Order Quantity Pricing and International exchange rates relevant at time of contract award. The components kits are procured on two separate Indefinite Delivery Indefinite Quantity (IDIQ) contracts competed annually and integrated with the ADAP by SPAWAR Systems Center, Pacific. 4)Delay in delivery of prior year procured units is due to certification issue of sub-vendor, for component of the ADAP antenna. Certification received and deliveries are on schedule and aligned with current installation plan. 5)1-2 months of integration upon receipt of ADAP Antennas.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)

ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	3.730	9.710	8.140	0.000	8.140	26.650	30.595	26.723	21.677	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	3.730	9.710	8.140	0.000	8.140	26.650	30.595	26.723	21.677	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	3.730	9.710	8.140	0.000	8.140	26.650	30.595	26.723	21.677	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The GPS-based PNT Service (GPNTS) system is the primary PNT system for the Navy to ensure reliable PNT capability and interoperability insertion in GPS receivers and associated Command, Control, Computers, Communications and Intelligence (C4I) and combat systems in a denied environment. GPNTS provides precise PNT data required for many combat, weapons, command, control, communications, navigation, and other systems, as well as providing the time synchronization critical to the network environments. GPNTS backfits current PNT/GPS systems as well as serve as a forward fit for new platforms. GPNTS will host the GPS Directorate-developed MGUE card, allowing access to the new more accurate and secure GPS Military-Code (M-Code) signal. GPNTS provides more robust and secure GPS/PNT capabilities than is currently in the Fleet. The system provides the capability to migrate non-real time GPS data toward a Common Computing Environment (CCE) and provide a path for the integration of advanced navigation systems and sensors.

GPNTS program will procure and field Low Rate Initial Production (LRIP) units in FY19.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)						Modification Number / Title: 2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Shore Stations, Ships			Modification Type: Ship Alt				Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)</i>												
B Kits												
Recurring												
1.1.1) GPNTS (Configuration B) - Ship - NonOrganic ⁽²⁾	- / -	- / -	4 / 2.343	5 / 2.940	- / -	5 / 2.940	32 / 18.880	12 / 7.104	25 / 14.850	6 / 3.576	Continuing	Continuing
1.1.2) GPNTS (Shore) - NonOrganic ⁽³⁾	- / -	6 / 3.480	4 / 2.344	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 5.824
Subtotal: Recurring	- / 0.000	- / 3.480	- / 4.687	- / 2.940	- / -	- / 2.940	- / 18.880	- / 7.104	- / 14.850	- / 3.576	Continuing	Continuing
Subtotal: (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)	- / -	6 / 3.480	8 / 4.687	5 / 2.940	- / -	5 / 2.940	32 / 18.880	12 / 7.104	25 / 14.850	6 / 3.576	Continuing	Continuing
Subtotal: Procurement, All Modification Items	- / 0.000	- / 3.480	- / 4.687	- / 2.940	- / -	- / 2.940	- / 18.880	- / 7.104	- / 14.850	- / 3.576	Continuing	Continuing
Support (All Modification Items)												
2.1) Production Support	- / -	- / 0.174	- / 0.235	- / 0.130	- / -	- / 0.130	- / 0.944	- / 0.355	- / 0.743	- / 0.179	- / -	- / 2.760
2.2) DSA - FMP ⁽⁴⁾	- / -	- / 0.076	- / 1.188	- / 0.270	- / -	- / 0.270	- / 3.426	- / 1.312	- / 2.910	- / 0.722	- / -	- / 9.904
Subtotal: Support	- / 0.000	- / 0.250	- / 1.423	- / 0.400	- / -	- / 0.400	- / 4.370	- / 1.667	- / 3.653	- / 0.901	- / 0.000	- / 12.664
Installation												
<i>Modification Item 1 of 1: (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)</i>	- / 0.000	- / 0.000	- / 3.600	- / 4.800	- / 0.000	- / 4.800	- / 3.400	- / 21.824	- / 8.220	- / 17.200	- / 8.900	- / 67.944
Subtotal: Installation	- / 0.000	- / -	- / 3.600	- / 4.800	- / -	- / 4.800	- / 3.400	- / 21.824	- / 8.220	- / 17.200	- / 8.900	- / 67.944
Total												
Total Cost (Procurement + Support + Installation)	0.000	3.730	9.710	8.140	0.000	8.140	26.650	30.595	26.723	21.677	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)						Modification Number / Title: 2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)												
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Modification Item 1 of 1: (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)																					
Manufacturer Information																					
Manufacturer Name: TBD ⁽⁵⁾					Manufacturer Location: TBD																
Administrative Leadtime (<i>in Months</i>): 3					Production Leadtime (<i>in Months</i>): 10																
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	Jan 2018	Jan 2018																			
Delivery Dates	Nov 2018	Nov 2018																			
Manufacturer Name: TBD ⁽⁶⁾					Manufacturer Location: TBD																
Administrative Leadtime (<i>in Months</i>): 4					Production Leadtime (<i>in Months</i>): 9																
Dates	FY 2017	FY 2018	FY 2019		FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates		Jan 2018	Feb 2019																		
Delivery Dates		Nov 2018	Nov 2019																		
Installation Information																					
Method of Implementation: Tiger Team:: Installation Name: GPNTS - Config B																					
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	4 / 2.400	0 / 0.000	4 / 2.400	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.400									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	5 / 3.400	- / -	- / -	- / -	0 / 0.000	5 / 3.400									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 21.824	- / -	- / -	0 / 0.000	32 / 21.824									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 8.220	- / -	- / -	0 / 0.000	12 / 8.220									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 17.200	- / -	0 / 4.760	25 / 21.960									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 4.140	6 / 4.140										
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -										
Total	- / -	- / -	- / -	4 / 2.400	0 / 0.000	4 / 2.400	5 / 3.400	32 / 21.824	12 / 8.220	25 / 17.200	6 / 8.900	84 / 61.944									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7												P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)												Modification Number / Title: 2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)																		
Installation Information												Method of Implementation: Tiger Team:: Installation Name: GPNTS - Config B																		
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	7	10	15	-	8	3	1	-	6	10	9	6	84
Out	-	-	-	-	-	-	-	-	-	-	2	2	-	3	2	-	-	7	10	15	-	8	3	1	-	6	10	15	84	
Method of Implementation: Tiger Team:: Installation Name: GPNTS - Shore																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total					
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	-	-	-	-	-	-	-	6 / 3.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 / 0.000	6 / 3.600				
FY 2018	-	-	-	-	-	-	-	-	4 / 2.400	-	0 / 0.000	-	4 / 2.400	-	-	-	-	-	-	-	-	-	-	-	0 / 0.000	4 / 2.400				
FY 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FY 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FY 2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FY 2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
FY 2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
To Complete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total	-	-	-	-	-	-	-	6 / 3.600	-	4 / 2.400	-	0 / 0.000	-	4 / 2.400	-	-	-	-	-	-	-	-	-	0 / 0.000	10 / 6.000					
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10			
Out	-	-	-	-	-	-	-	-	1	5	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	10			

Footnotes:

(2) Anticipated unit cost for each procured Ship set is a Dual Redundant System consisting of two Racks and two Anti-Jam Antennas.

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2657 / NAVSTAR GPS Receivers (Space)	Modification Number / Title: 2 / (1R019) Global Positioning System (GPS) - based Positioning, Navigation, & Timing Service (GPNTS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(3) Shore units are required for IOT&E and will be fielded as operational installations.		
(4) DSA estimates are based off of a percentage of the total installation, with 75% of costs being required the year prior for all pre-installation design work and 25% required the year of the actual installation. The FY18 to FY19 DSA cost variance is due to ship platform type being installed and configuration setup of the installation.		
(5) Shore: IDIQ Contract Type		
(6) Ship: IDIQ Contract Type		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment					2666 / American Forces Radio and TV Service (AFRTS)										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	33.350	4.577	2.730	2.626	0.000	2.626	2.679	2.729	2.666	2.721	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	33.350	4.577	2.730	2.626	0.000	2.626	2.679	2.729	2.666	2.721	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	33.350	4.577	2.730	2.626	0.000	2.626	2.679	2.729	2.666	2.721	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
K0001: American Forces Radio and Television Service (AFRTS) Program - AFRTS shipboard systems provide command information to deployed Sailors and Marines and allow for the distribution of AFRTS programming in order to provide situational awareness for forward deployed commanders with real-time news and information. The systems also provide programming to Sailors and Marines at sea worldwide as a Navy Quality of Life (QOL) initiative, staying in compliance with the Chief of Naval Operations (CNO) Shipboard Habitability Program. These systems contribute significantly to the habitability of Navy ships by providing and distributing news, command information, training, and entertainment programming using the latest technology available. These systems improve morale, combat effectiveness and retention rates of deployed personnel. All AFRTS systems use Commercial-Off-the-Shelf (COTS) equipment. Fleet Support Detachments (FSDs) are the installing agents for these systems. Each component replacement is made based on ship availability, condition of system, and is coordinated through the Type Commanders (TYCOMs).															
[P5 / Site CCTV - Digital/300]: K0001 - Shipboard Information, Training and Entertainment (SITE) Closed Circuit Television (CCTV) - Digital/300 - Digital/300 is the next generation of the SITE 2000/300. This system is a digitally-based replacement for the 2000/300 playback. Each system is comprised of Commercial Off-The-Shelf (COTS) components that take three to twelve months to procure. Each component upgrade/replacement is made based on ship availability, by the Fleet Support Detachments (FSDs) as the installing/replacement agents and condition of the system.															
[P5 / Site CCTV - Digital/400]: Shipboard Information, Training and Entertainment (SITE) Closed Circuit Television (CCTV) - Digital/400 - is the next generation of the SITE 2000/400. This system is a digitally-based replacement for the 2000/400 playback. Requires manpower of one dedicated technician and operator. Each system is comprised of Commercial Off-The-Shelf (COTS) components that take three to twelve months to procure. Each component upgrade/replacement is made based on ship availability, by the Fleet Support Detachments (FSDs) as the installing/replacement agents and condition of the system.															
[P5 / Site CCTV - Digital/501]: Digital/500 - is the next generation of the Shipboard Information, Training and Entertainment (SITE) 2000/500. This system is a digitally-based replacement for the 2000/500 playback. Requires manpower of two dedicated technicians and three operators. Each system is comprised of Commercial Off-The-Shelf (COTS) components that take three to twelve months to procure. Each component upgrade/replacement is made based on ship availability, by the Fleet Support Detachments (FSDs) as the installing/repair agents and condition of the system.															
[P5 / Circuit 27TV Upgrade]: Circuit 27TV Upgrade - Upgrade to 14TV head end only that will allow the onboard Shipboard Information, Training and Entertainment (SITE) system to distribute Television Direct To Sailors (TV-DTS), AFRTS, and pier-side cable commercial programming. Each component upgrade/replacement is made based on ship availability by the Fleet Support Detachments (FSDs) as the installing/replacement agents and the condition of the system.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment		P-1 Line Item Number / Title: 2666 / American Forces Radio and TV Service (AFRTS)		
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				
[P5 / Shipboard Broadcast System (SBS): K0001-Shipboard Broadcast System (SBS): The SBS system replaces the Shipboard Information, Training and Entertainment (SITE) 300/400/501 systems with an Internet Protocol (IP) video system. It collects and converts video content from several sources: Navy Motion Picture Services (NMPS) programming via encrypted DVDs (nDVD), Video Server, and shipboard surveillance cameras; and distributes the signals via Circuit 30 in Standard or High Definition. Each system is comprised of Commercial Off-The-Shelf (COTS) equipment that takes six to twelve months to procure. Each system upgrade is done based on ship availability by the Fleet Support Detachments (FSDs) as the installing/replacing agent and condition of the system.				
[P5 / K0830 - Production Engineering]: Supports review and approval of any production contract technical documentation or the separate development of this documentation to include: signal flow diagrams, Preventive Maintenance Services (PMS), production drawings, provisioning technical documentation (PTD), Integrated Logistic Support (ILS), Program Support Data (PSD), Allowance Parts List (APL's), and engineering in support of final design reviews.				
[P5 / K0INS - Non-FMP Installation]: Supports the installation of Shipboard Information, Training and Entertainment (SITE), TV-DTS (TV-Direct to Sailor) system onboard Navy ships. Installations are performed by Defense Media Activity Agency (DMAA) Fleet Support Detachments (FSDs) and are based on Type Commander (TYCOM) nominations.				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				P-1 Line Item Number / Title: 2666 / American Forces Radio and TV Service (AFRTS)						
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 2017	FY 2018	FY 2019 Base			
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-5	1 / American Forces Radio and TV Service (AFRTS)	P-5a			- / 33.350	- / 4.577	- / 2.730	- / 2.626	- / 0.000	- / 2.626
P-40	Total Gross/Weapon System Cost				- / 33.350	- / 4.577	- / 2.730	- / 2.626	- / 0.000	- / 2.626

*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.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2666 / American Forces Radio and TV Service (AFRTS)										Item Number / Title [DODIC]: 1 / American Forces Radio and TV Service (AFRTS)						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				33.350			4.577		2.730		2.626		0.000		2.626				
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				33.350			4.577		2.730		2.626		0.000		2.626				
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				33.350			4.577		2.730		2.626		0.000		2.626				
(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)				-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	
Hardware Cost																			
Recurring Cost																			
1.1.1) Site CCTV - Digital/300 ^(†)	80,714.29	28	2.260	95,000.00	5	0.475	95,000.00	2	0.190	10,000.00	2	0.020	-	-	-	10,000.00	2	0.020	
1.1.2) Site CCTV - Digital/400 ^(†)	56,600.00	25	1.415	100,000.00	3	0.300	100,000.00	2	0.200	10,000.00	3	0.030	-	-	-	10,000.00	3	0.030	
1.1.3) Site CCTV - Digital/501 ^(†)	110,600.00	5	0.553	115,000.00	1	0.115	120,000.00	1	0.120	10,000.00	2	0.020	-	-	-	10,000.00	2	0.020	
1.1.4) Circuit 27TV Upgrade ^(†)	20,541.67	24	0.493	22,000.00	6	0.132	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.5) Shipboard Broadcast System (SBS) ^(†)	-	-	-	-	-	-	-	-	-	302,666.00	1	0.303	-	-	-	302,666.00	1	0.303	
<i>Subtotal: Recurring Cost</i>	-	-	4.721	-	-	1.022	-	-	0.510	-	-	0.373	-	-	-	-	-	0.373	
<i>Subtotal: Hardware Cost</i>	-	-	4.721	-	-	1.022	-	-	0.510	-	-	0.373	-	-	-	-	-	0.373	
Support Cost																			
2.1) K0830 - Production Engineering	-	-	25.129	-	-	3.359	-	-	2.024	-	-	2.054	-	-	-	-	-	2.054	
2.2) K0INS - Non-FMP Installation	-	-	3.500	-	-	0.196	-	-	0.196	-	-	0.199	-	-	-	-	-	0.199	
<i>Subtotal: Support Cost</i>	-	-	28.629	-	-	3.555	-	-	2.220	-	-	2.253	-	-	-	-	-	2.253	
Gross/Weapon System Cost	-	-	33.350	-	-	4.577	-	-	2.730	-	-	2.626	-	-	0.000	-	-	2.626	

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7	P-1 Line Item Number / Title: 2666 / American Forces Radio and TV Service (AFRTS)	Item Number / Title [DODIC]: 1 / American Forces Radio and TV Service (AFRTS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Remarks: [Hardware] Costs for FY16, FY17 & FY18 CE 1.1.2, 1.1.3, 1.1.4 reflect full unit costs for SITE CCTV. Those units complete the fielding of the SITE 300(U), 400(U) and 501(U) digital systems throughout all applicable ship classes in FY18. FY19 and out procurements are in support of hardware components to maintain the SITE system due known obsolescence issues. CE 1.1.5 shows the follow-on system to SITE CCTV, called SBS (Shipboard Broadcasting System). It uses IP technology, the new industry standard, and will be introduced starting in FY18 as aging SITE systems reach end of life.		
[Hardware/Recurring]		

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2666 / American Forces Radio and TV Service (AFRTS)					Item Number / Title [DODIC]: 1 / American Forces Radio and TV Service (AFRTS)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Site CCTV - Digital/300		2012	Various / Various	MIPR	T-ASA	Jun 2012	Dec 2012	2	5,000.00	Y		
1.1.1) Site CCTV - Digital/300		2013	Various / Various	MIPR	T-ASA	May 2013	Nov 2013	7	85,000.00	Y		
1.1.1) Site CCTV - Digital/300		2014	Various / Various	MIPR	T-ASA	Jun 2014	Dec 2014	11	85,000.00	Y		
1.1.1) Site CCTV - Digital/300		2015	Various / Various	MIPR	T-ASA	Mar 2015	Sep 2015	4	90,000.00	Y		
1.1.1) Site CCTV - Digital/300		2016	Various / Various	MIPR	T-ASA	Jan 2016	Jul 2016	4	90,000.00	Y		
1.1.1) Site CCTV - Digital/300		2017	Various / Various	MIPR	T-ASA	Dec 2016	Jun 2017	5	95,000.00	Y		
1.1.1) Site CCTV - Digital/300		2018	Various / Various	MIPR	T-ASA	Feb 2018	Aug 2018	2	95,000.00	Y		
1.1.1) Site CCTV - Digital/300		2019	Various / Various	MIPR	T-ASA	Dec 2018	Jun 2019	2	10,000.00	Y		
1.1.2) Site CCTV - Digital/400		2012	Various / Various	MIPR	T-ASA	Jun 2012	Dec 2012	10	5,000.00	Y		
1.1.2) Site CCTV - Digital/400		2013	Various / Various	MIPR	T-ASA	May 2013	Nov 2013	3	90,000.00	Y		
1.1.2) Site CCTV - Digital/400		2014	Various / Various	MIPR	T-ASA	Jun 2014	Dec 2014	6	90,000.00	Y		
1.1.2) Site CCTV - Digital/400		2015	Various / Various	MIPR	T-ASA	Mar 2015	Sep 2015	3	90,000.00	Y		
1.1.2) Site CCTV - Digital/400		2016	Various / Various	MIPR	T-ASA	Jan 2016	Jul 2016	3	95,000.00	Y		
1.1.2) Site CCTV - Digital/400		2017	Various / Various	MIPR	T-ASA	Dec 2016	Jun 2017	3	100,000.00	Y		
1.1.2) Site CCTV - Digital/400		2018	Various / Various	MIPR	T-ASA	Feb 2018	Aug 2018	2	100,000.00	Y		
1.1.2) Site CCTV - Digital/400		2019	Various / Various	MIPR	T-ASA	Dec 2018	Jun 2019	3	10,000.00	Y		
1.1.3) Site CCTV - Digital/501		2012	Various / Various	MIPR	T-ASA	Jun 2012	Dec 2012	1	110,000.00	Y		
1.1.3) Site CCTV - Digital/501		2013	Various / Various	MIPR	T-ASA	May 2013	Nov 2013	1	103,000.00	Y		
1.1.3) Site CCTV - Digital/501		2014	Various / Various	MIPR	T-ASA	Jun 2014	Dec 2014	1	110,000.00	Y		
1.1.3) Site CCTV - Digital/501		2015	Various / Various	MIPR	T-ASA	Mar 2015	Sep 2015	1	115,000.00	Y		
1.1.3) Site CCTV - Digital/501		2016	Various / Various	MIPR	T-ASA	Jan 2016	Jul 2016	1	115,000.00	Y		
1.1.3) Site CCTV - Digital/501		2017	Various / Various	MIPR	T-ASA	Dec 2016	Jun 2017	1	115,000.00	Y		
1.1.3) Site CCTV - Digital/501		2018	Various / Various	MIPR	T-ASA	Feb 2018	Aug 2018	1	120,000.00	Y		
1.1.3) Site CCTV - Digital/501		2019	Various / Various	MIPR	T-ASA	Dec 2018	Jun 2019	2	10,000.00	Y		
1.1.4) Circuit 27TV Upgrade		2013	Various / Various	MIPR	T-ASA	May 2013	Nov 2013	7	20,000.00	Y		
1.1.4) Circuit 27TV Upgrade		2014	Various / Various	MIPR	T-ASA	Jun 2014	Dec 2014	8	20,000.00	Y		
1.1.4) Circuit 27TV Upgrade		2015	Various / Various	MIPR	T-ASA	Mar 2015	Sep 2015	5	21,000.00	Y		
1.1.4) Circuit 27TV Upgrade		2016	Various / Various	MIPR	T-ASA	Jan 2016	Jul 2016	4	22,000.00	Y		
1.1.4) Circuit 27TV Upgrade		2017	Various / Various	MIPR	T-ASA	Dec 2016	Jun 2017	6	22,000.00	Y		
1.1.5) Shipboard Broadcast System (SBS)		2019	VARIOIUS / VARIOUS	MIPR	T-ASA	Dec 2018	Jun 2019	1	302,666.00	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment										P-1 Line Item Number / Title: 2676 / Strategic Platform Support Equip		
ID Code (A=Service Ready, B=Not Service Ready): A										Program Elements for Code B Items: N/A		
Line Item MDAP/MAIS Code: N/A										Other Related Program Elements: N/A		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	37.683	8.972	6.889	9.467	0.000	9.467	7.973	8.018	4.980	6.241	-	90.223
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	37.683	8.972	6.889	9.467	0.000	9.467	7.973	8.018	4.980	6.241	-	90.223
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	37.683	8.972	6.889	9.467	0.000	9.467	7.973	8.018	4.980	6.241	-	90.223
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	1.224	1.641	0.861	-	0.861	0.965	1.029	0.985	0.917	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding in this P-1 line provides Non-Propulsion Electronics equipment that will be installed aboard TRIDENT Class submarines as part of the Obsolete Equipment Replacement (OER) Program. OER Program is the replacement of existing hardware/software that, though functional, has become operationally obsolete, is no longer in production or supportable with spare parts, or has a high failure rate making them no longer cost effective to maintain. OER hardware/software changes are expected to provide significant cost savings via reduced maintenance costs and use Commercial-Off-The-Shelf (COTS) technology wherever possible as long as all technical requirements are met. This funding line includes performance of the required fully integrated system level testing and certification of changes to the TRIDENT Combat systems prior to installation of the changes on the ship. Integrated testing and certification provides assurance that when the changes are installed in the ship, the TRIDENT Combat system will operate as designed, allowing the ships to maintain their operational schedules and mission capabilities. [P40A / CCS Revision Engineering Cert/Test]: This program develops upgrades to legacy systems to maintain required interface connectivity to other Program Acquisition Resource Manager (PARM)-managed subsystems in response to PARMs modernizations, or to address obsolescence, or where mandated requirement changes (example Cyber security) drive changes to hardware or software.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 7: Other Ship Electronic Equipment				2676 / Strategic Platform Support Equip						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-40a	Strategic Platform Support Equip	P-5a			- / 37.683	- / 8.972	- / 6.889	- / 9.467	- / -	- / 9.467
P-40	Total Gross/Weapon System Cost				- / 37.683	- / 8.972	- / 6.889	- / 9.467	- / 0.000	- / 9.467

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The FY 2019 funding request was reduced by \$0.031 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

The increased funding in FY19 is the result of synchronizing the SSBN Legacy CCS Modernization program with the approved conjunctive SWFTS fielding plan. This provides funding for one additional install and one additional procurement in FY19.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7					P-1 Line Item Number / Title: 2676 / Strategic Platform Support Equip									Aggregated Items Title: Strategic Platform Support Equip						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) P1221 Strategic Platform Support Equip NPES																				
1.1) Common Platform Engineering ^(†)	A		1,755K	5	8.776	938,000.00	1	0.938	939,000.00	1	0.939	957,000.00	1	0.957	-	-	-	957,000.00	1	0.957
1.2) CCS Revision Engineering Cert/Test (1)	A		-	-	14.141	-	-	2.307	-	-	2.402	-	-	2.311	-	-	-	-	-	2.311
1.3) SSBN Legacy CCS Modernization (2)	A		-	-	14.766	-	-	5.727	-	-	3.548	-	-	6.199	-	-	-	-	-	6.199
Subtotal: 1) P1221 Strategic Platform Support Equip NPES			-	-	37.683	-	-	8.972	-	-	6.889	-	-	9.467	-	-	-	-	-	9.467
Total			-	-	37.683	-	-	8.972	-	-	6.889	-	-	9.467	-	-	-	-	-	9.467
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
(†) indicates the presence of a P-5a																				
Footnotes:																				
(1) CCS Revision Engineering Cert/Test: This funding is required for software upgrades to the SSBN Ship Control System to meet data stream (heading/speed/depth) redundancy requirements driven by the Non-Propulsion Electrical Systems (NPES) network architecture changes being fielded by SSBN modernization (Submarine Warfare Federated Tactical System (SWFTS) Technical Insertion (TI)-16/18 sonar/fire control modernization).																				
(2) SSBN Legacy CCS Modernization: This program is critical to maintaining OHIO Class SSBN operational to the end of service life and delivery of COLUMBIA Class SSBN replacements. The program resolves Data Processing Subsystem (DPS) obsolescence issues and conjunctively supports the upgrade of the SSBN legacy CCS to the Submarine Warfare Federated Tactical Systems (SWFTS) architecture common with the SSN/SSGN classes. Collectively, the DPS and SWFTS upgrades modify Fire Control, SONAR, Voyage Management System (VMS), RADAR, Tactical Navigation, and Periscopes, and collaterally impact Ship Control, Monitoring Subsystem, and interfaces to ship sensors such as speed, depth, and Extremely High Frequency Satellite Communication navigation data. The DPS upgrade includes replacing all UYK-43 computers, DPS workstation, TRIDENT Signal Data Converters (TSDC), and the UGC-143 with a modified Electronic Control Display Unit (ECDU). The ECDU is common equipment on VA Class and planned for the COLUMBIA Class. The ECDU requires hardware and software development to interface to the Strategic Weapon System (SWS) Navigation and maintain critical Ship to SWS interface requirements. The ECDU and all the associated CCS architecture modifications are required to be installed conjunctively with SWFTS. Continued operation of the SSBN strategic mission will require the implementation of the ECDU upgrade along with the SWFTS upgrade.																				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 7			P-1 Line Item Number / Title: 2676 / Strategic Platform Support Equip						Aggregated Items: Strategic Platform Support Equip			
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) P1221 Strategic Platform Support Equip NPES												
1.1) Common Platform Engineering		2016	NUWC NPT / NEWPORT, RI	WR	NAVSEA	Apr 2016	Aug 2016	1	923,000.00	Y		
1.1) Common Platform Engineering		2017	NUWC NPT / NEWPORT, RI	WR	NAVSEA	Apr 2017	Aug 2017	1	938,000.00	Y		
1.1) Common Platform Engineering		2018	NUWC NPT / NEWPORT, RI	WR	NAVSEA	Apr 2018	Aug 2018	1	939,000.00	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment										P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment			
ID Code (A=Service Ready, B=Not Service Ready): B				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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	0.000	68.392	71.882	70.849	0.000	70.849	72.548	75.054	78.428	80.471	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	0.000	68.392	71.882	70.849	0.000	70.849	72.548	75.054	78.428	80.471	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	0.000	68.392	71.882	70.849	0.000	70.849	72.548	75.054	78.428	80.471	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	4.825	9.157	3.223	-	3.223	2.650	2.733	2.870	2.094	Continuing	Continuing	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: MATCALS													
Marine Air Traffic Control and Landing Systems (MATCALS) provides for continuous, all-weather, radar/non-radar approach, departure, enroute, and tower air traffic control services to aircraft. Marine ATC provides initial, transition and sustained air traffic support for the Joint and Marine Air Ground Task Force air operations in any environment. MATCALS satisfies the operational requirements set forth by Specific Operational Requirements 34-22 of 12 Jul 1973; Remote Landing Site Tower (RLST) Operational Requirements Document (ORD) 341-88-93 of 25 Jul 1997; and Air Traffic Navigation Integration and Coordination System ORD 05-002 of 03 Dec 1992. MATCALS, with other Marine Air Command and Control Systems (MACCS) and federal agencies, provides the ability to project air combat power without regard to weather. Air Traffic Control (ATC) automation reduces air traffic controllers' traffic handling and management time, allowing more time for mission response and task accomplishment. It supports a required increase in aircraft sortie rates and contributes to extended time on target. The system provides for integration of ATC into the total MACCS. To provide this capability, MATCALS consists of 6 primary subsystems: (1) Air Traffic Navigation Integration and Coordination system (ATNAVICS) AN/TPX-31(V); (2) Tactical Terminal Communication System (TTCS) AN/TSQ-263; (3) Expeditionary Control Tower AN/TSQ-120C; (4) RLST AN/TSQ-216; (5)Tactical Air Navigation (TACAN) AN/TRN-44; (6) the Man-Portable TACAN AN/TRN-47(V)1, and various ancillary equipment. The ATNAVICS Air Surveillance Radar (ASR) Range Extension is funded to meet requirements identified in the ATC Initial Capabilities Document ICD (ICD), MROC DM 75-7007, MACC Operational Advisory Group. The gaps identified require sustainment of legacy sensor capability until such time as ATNAVICS PrePlanned Product Improvement initiatives enhance system capability to support main air base traffic density and airspace. Additionally, the positive control enabled by increased ASR range reduces separation enabling increased sortie rates. This program works with the Marine ATC Working Group identifying the requirements to implement the P3I and evolutionary product improvements as required for G/ATOR system, ATNAVICS, Expeditionary ATC Towers, and Navigational Aids that support Marine Air Traffic Control Detachments. G/ATOR is multi-role, ground-based, expeditionary radar that replaces five legacy radar systems for the Marine Air Ground Task Force. It satisfies the Marine Air Command and Control System and the Ground Counter Fire/ Counter Battery capabilities.													
NASMOD The Joint DoD/Federal Aviation Administration (FAA) National Airspace System (NAS) Modernization (MOD) program upgrades the DoD ATC systems at approach control facilities in concert with the FAA's upgrade of the National ATC System. These funds will procure ATC systems for the Navy/Marine ATC facilities. The Air Force is the DoD lead activity for the Joint Acquisition Program. The Joint Program Office is located at Hanscom AFB, MA. The NAS Mod program received a full rate production decision on 7 June 2005 and is in the production and deployment phase following Milestone C.													
FLEET ATC SYSTEMS													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment		P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
NAVAIR provides shore based ATC terminal facilities with equipment that is required in joint efforts to efficiently and safely monitor and direct military and commercial air traffic in national and international air space. Many of these systems are required to interface through automated means with the FAA. Additionally, NAVAIR has material support responsibility for Special Instrumentation Systems, and Ancillary Equipment used at Navy and Marine Corps Aviation Shore activities in the continental United States and overseas.		
Engineering Change Proposal (ECP)/Operational Capability Improvement Request (OCIR) modernization (MR069) - The ECP/OCIR program provides for the procurement and/or modification of critically needed communications, radar, displays, data processors, and other electronic systems/equipment at Navy/Marine Corps ATC facilities worldwide. ECP/OCIR procurements replace and modernize costly-to-maintain systems and equipment in order to increase ATC efficiency and safety, and reduce total ownership costs.		
UHF/VHF Antenna Upgrade (MR404) - This program procures and installs antenna, antenna towers, and antenna cables		
Communications Systems Upgrade Program (MR408) - This program procures and installs advanced commercial state-of-the-art ATC voice switching equipment.		
UHF/VHF Transceiver Replacement Program (MR440) - This program modernizes aging Navy and Marine Corps UHF/VHF Transceivers that are the central core of all ATC emergency and Fleet Area Control & Surveillance Facility (FACSFAC) communications.		
Emergency Communication System (ECS) Upgrade Program (MR445) - This program modernizes obsolete and unsupportable ECS equipment. Voice Switches, Recorders, Reproducers, Uninterruptable Power Supplies, and Built-In Test Equipment will be replaced with modern, supportable components.		
Air Field Lighting Control System (AFLCS) (MR510) - This program modernizes obsolete and unsupportable AFLCS equipment which will be replaced with modern, supportable components. Funding for this effort was realigned to the Terminal Automation System (TAS) CB070 beginning in FY18. The TAS provides the functionality and meets the requirements of the airfield lighting control as prescribed in the NASMOD ORD III Airfield Automation Annex A dated 16MAR05.		
Operational Communication System (OCS)/Emergency Communication System (ECS) Air Traffic Control (ATC) Recorder replacement program (MR520), through participation in the FAA ATC recorder replacement program will replace aging and obsolete ATC OCS and ECS ATC recorders with state of the art ATC recording/reproducing technology.		
Fiber Optic Communications Intersite System (FOCIS) Upgrade Program (MR530) - FOCIS is required for Precision Approach Radar (PAR) operations and for ATC voice communications at Naval and Marine Corps ATC facilities. This program modernizes obsolete and unsupportable FOCIS equipment with modern supportable components.		
LANDING SYSTEMS Landing Systems budget provides funding to modernize and ensure the reliability of Precision Approach Radars (PAR), Tactical Air Navigation (TACAN) systems, Instrument Landing Systems (ILS), and other air navigation aids used by the Navy and Marine Corps. PAR Commercial-off-the-shelf (AN/FPN-68A) Upgrade replaces obsolete PAR systems (AN/FPN-63) continuing fleet shore based Precision Approach capability. Additionally PAR (AN/FPN-63) ECPs are required to sustain the existing systems until replacement. Those ECPs include but are not limited to the Modulator Board Upgrade, the Antenna Upgrade, the Configuration Upgrade, the Turntable Upgrade, the Fiber Optic Inter-site System (FOIS), and the Angle Voltage Generator (AVG) Upgrade. TACAN Ship/Shore Upgrade ECPs update old technology and extend the service life of the TACAN. The TACAN sustainment consists of the Antenna Upgrade ECP for the OE-273 antenna (nomenclature for the new antenna TBD) and the Beacon/RSCU Upgrade ECP of the AN/URN-25 which will make the upgraded Beacon an AN/URN-32. Instrument Landing Systems (nomenclature TBD) will provide the Navy and Marine Corps with a self-contained Precision Landing capability at selected Air Stations, to meet fleet requirements for safe aircraft recovery of aircraft equipped with ILS capability.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy

Date: February 2018

Appropriation / Budget Activity / Budget Sub Activity:

1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment

P-1 Line Item Number / Title:

2820 / Ashore ATC Equipment

ID Code (A=Service Ready, B=Not Service Ready): B

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / MATCALS				- / 0.000	- / 2,332	- / 2,740	- / 3,023	- / 0.000
P-5	2 / Fleet Air Traffic Control Systems				- / 0.000	- / 8,292	- / 6,933	- / 7,709	- / 0.000
P-5	3 / Landing Systems				- / 0.000	- / 0.351	- / 4,114	- / 4,297	- / 0.000
P-3a	1 / AN/TPN-31A ATNAVICS ASR Range Extension (MJ455) (Modification)				- / 0.000	- / 4,069	- / 2,426	- / 2,397	- / 0.000
P-3a	2 / Optimized Organizational Maintenance Activity (OOMA) (MJ460) (Added Capability)				- / 0.000	- / 1,687	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / MJ465 AMTAC (Modification)				- / 0.000	- / 7,356	- / 4,400	- / 0.000	- / 0.000
P-3a	4 / CB010 - DoD Advanced Automation System (DAAS) (Added Capability)				- / 0.000	- / 4,841	- / 4,082	- / 2,680	- / 0.000
P-3a	5 / CB030 Digital Airport Surveillance Radar (DASR) (Added Capability)				- / 0.000	- / 0.400	- / 0.400	- / 0.939	- / 0.000
P-3a	6 / CB040 Tower Automation System (TAS) (Added Capability)				- / 0.000	- / 0.200	- / 0.200	- / 1,682	- / 0.000
P-3a	7 / CB050 STARS TECH Refresh Upgrade (AIT)				- / 0.000	- / 11,360	- / 14,262	- / 11,539	- / 0.000
P-3a	8 / CB070 TAS Tech Refresh (Added Capability)				- / 0.000	- / 4,055	- / 2,517	- / 4,158	- / 0.000
P-3a	9 / CB080 NAS Voice System (NVS) (Added Capability)				- / 0.000	- / 6,350	- / 7,508	- / 6,589	- / 0.000
P-3a	10 / CB090 - DAAS Tech Refresh Upgrade II (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	11 / CB100 TAS Tech Refresh Upgrade II (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.400	- / 0.000
P-3a	12 / X1036 AN/FPN-63 PAR TECH REFRESH (Reliability)				- / 0.000	- / 9,847	- / 8,471	- / 9,422	- / 0.000
P-3a	13 / X1037 ILS Upgrade (TBD)				- / 0.000	- / 1,901	- / 4,752	- / 6,438	- / 0.000
P-3a	14 / X1043 TACAN Antenna Upgrade (Modernization)				- / 0.000	- / 5,351	- / 9,077	- / 9,576	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 68,392	- / 71,882	- / 70,849	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-5	1 / MATCALS				- / -	- / -	- / -	- / -	- / -
P-5	2 / Fleet Air Traffic Control Systems				- / -	- / -	- / -	- / -	- / -
P-5	3 / Landing Systems				- / -	- / -	- / -	- / -	- / -
P-3a	1 / AN/TPN-31A ATNAVICS ASR Range Extension (MJ455) (Modification)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 8,892
P-3a	2 / Optimized Organizational Maintenance Activity (OOMA) (MJ460) (Added Capability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,687
P-3a	3 / MJ465 AMTAC (Modification)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 20,283
P-3a	4 / CB010 - DoD Advanced Automation System (DAAS) (Added Capability)				- / 0.822	- / 0.227	- / 0.234	- / 0.329	Continuing

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: N/A				Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: N/A											
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023				
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) / (\$ M)						
P-3a	5 / CB030 Digital Airport Surveillance Radar (DASR) (Added Capability)				- / 0.915	- / 0.220	- / 0.256	- / 0.351	- / 0.000	- / 3.481	
P-3a	6 / CB040 Tower Automation System (TAS) (Added Capability)				- / 0.536	- / 0.400	- / 0.429	- / 0.437	Continuing	Continuing	
P-3a	7 / CB050 STARS TECH Refresh Upgrade (AIT)				- / 2.682	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 39.843	
P-3a	8 / CB070 TAS Tech Refresh (Added Capability)				- / 4.716	- / 1.667	- / 0.000	- / 0.000	- / 0.000	- / 17.113	
P-3a	9 / CB080 NAS Voice System (NVS) (Added Capability)				- / 14.431	- / 23.326	- / 22.661	- / 16.121	Continuing	Continuing	
P-3a	10 / CB090 - DAAS Tech Refresh Upgrade II (TBD)				- / 0.000	- / 0.552	- / 3.440	- / 9.054	Continuing	Continuing	
P-3a	11 / CB100 TAS Tech Refresh Upgrade II (TBD)				- / 2.197	- / 2.780	- / 2.815	- / 2.856	Continuing	Continuing	
P-3a	12 / X1036 AN/FPN-63 PAR TECH REFRESH (Reliability)				- / 10.042	- / 10.154	- / 9.618	- / 9.709	Continuing	Continuing	
P-3a	13 / X1037 ILS Upgrade (TBD)				- / 6.492	- / 6.421	- / 8.981	- / 9.508	Continuing	Continuing	
P-3a	14 / X1043 TACAN Antenna Upgrade (Modernization)				- / 9.622	- / 10.011	- / 9.477	- / 9.633	Continuing	Continuing	
P-40	Total Gross/Weapon System Cost				- / 72.548	- / 75.054	- / 78.428	- / 80.471	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: MATCALS FY2019 provides funding to procure Maintainability/Reliability Improvements and 1 ATNAVICS Range Extension.											
NASMOD The Federal Aviation Administration (FAA) began the Next Generation Air Transportation System initiative in FY2008. A major component of this capability is Automatic Dependent Surveillance Broadcast, which will provide aircraft position information to augment ground-based radar. Existing DoD Air Traffic Control (ATC) facilities interface with FAA's facilities, therefore the military must maintain interoperability and retain vital special-use airspace for combat readiness training. The DoD Advanced Automation System (DAAS) must be upgraded to meet this requirement. FY2019 provides funding to procure 6 STARS Tech Refresh Upgrades, 18 TAS Tech Refresh, 497 NAS Voice System Radios, various Engineering Change Proposals (ECPs) and associated Support											
FLEET ATC SYSTEMS The basis for the FY2019 budget request is to continue modernizing aging Navy and Marine Corps ATC facilities and equipment in order to safely monitor and direct military and commercial air traffic in national and international air space. This equipment must continue to interface through automated means with the FAA. FY2019 provides funding to procure 2 UHF/VHF Antenna Upgrades, 5 ECS Upgrades, 13 OCS/ECS ATC Recorder upgrades, various ECPs/OCIRs and associated support.											
LANDING SYSTEMS FY2019 provides funding to procure: 3 PAR Tech Refresh COTs, 2 ILS Upgrades, 24 TACAN Antenna Upgrades, and 14 TACAN Beacon Upgrades.											

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment												Item Number / Title [DODIC]: 1 / MATCALS			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:						
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				0.000		2.332		2.740		3.023		0.000		3.023				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				0.000		2.332		2.740		3.023		0.000		3.023				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				0.000		2.332		2.740		3.023		0.000		3.023				
(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)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - ECP / ECO Cost																		
Recurring Cost																		
1.1.1) MAINT / RELIABILITY IMPROVEMENT (MJ427) ⁽¹⁾	-	-	0.000	-	-	2.234	-	-	2.216	-	-	2.421	-	-	0.000	-	-	2.421
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>2.234</i>	-	-	<i>2.216</i>	-	-	<i>2.421</i>	-	-	<i>0.000</i>	-	-	<i>2.421</i>
<i>Subtotal: Hardware - ECP / ECO Cost</i>	-	-	<i>0.000</i>	-	-	<i>2.234</i>	-	-	<i>2.216</i>	-	-	<i>2.421</i>	-	-	<i>0.000</i>	-	-	<i>2.421</i>
Support - MISCELLANEOUS SUPPORT Cost																		
5.2) Install (MJ900) ⁽²⁾	-	-	0.000	-	-	0.098	-	-	0.524	-	-	0.602	-	-	0.000	-	-	0.602
<i>Subtotal: Support - MISCELLANEOUS SUPPORT Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.098</i>	-	-	<i>0.524</i>	-	-	<i>0.602</i>	-	-	<i>0.000</i>	-	-	<i>0.602</i>
Gross/Weapon System Cost	-	-	0.000	-	-	2.332	-	-	2.740	-	-	3.023	-	-	0.000	-	-	3.023

Footnotes:

(1) The FY19 MRI ECP increase is due to reduced reliability requiring higher ECP costs to maintain reliability in the older systems.

(2) The FY19 install cost increase is due to overseas travel and increased complexity in the install work.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Item Number / Title [DODIC]: 2 / Fleet Air Traffic Control Systems					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				0.000			8.292		6.933		7.709		0.000		7.709			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				0.000			8.292		6.933		7.709		0.000		7.709			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				0.000			8.292		6.933		7.709		0.000		7.709			
(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)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - Fleet ATC - Hardware Cost																		
Recurring Cost																		
1.1.1) MR069 ECP/OCIR ⁽³⁾	-	-	0.000	75,000.00	1	0.075	465,000.00	1	0.465	121,000.00	3	0.363	-	-	0.000	121,000.00	3	0.363
1.1.2) MR404 UHF/VHF Antenna Upgrade ⁽⁴⁾	-	-	0.000	-	-	0.000	-	-	0.000	750,000.00	2	1.500	-	-	0.000	750,000.00	2	1.500
1.1.3) MR408 COMM System Upgrade	-	-	0.000	500,000.00	2	1.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) MR440 UHF/VHF Transceiver Replacement ⁽⁵⁾	-	-	0.000	43,700.00	60	2.622	45,000.00	21	0.945	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) MR445 Emergency Communication System (ECS) Upgrade ⁽⁶⁾	-	-	0.000	431,200.00	5	2.156	460,000.00	5	2.300	469,000.00	5	2.345	-	-	0.000	469,000.00	5	2.345
1.1.7) MR520 OCS/ECS ATC Recorder Upgrade ⁽⁷⁾	-	-	0.000	-	-	0.000	50,000.00	3	0.150	50,923.00	13	0.662	-	-	0.000	50,923.00	13	0.662
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>5.853</i>	-	-	<i>3.860</i>	-	-	<i>4.870</i>	-	-	<i>0.000</i>	-	-	<i>4.870</i>
<i>Subtotal: Hardware - Fleet ATC - Hardware Cost</i>	-	-	<i>0.000</i>	-	-	<i>5.853</i>	-	-	<i>3.860</i>	-	-	<i>4.870</i>	-	-	<i>0.000</i>	-	-	<i>4.870</i>
Support - Other Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment									Item Number / Title [DODIC]: 2 / Fleet Air Traffic Control Systems													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$)	Qty (<i>Each</i>)	Total Cost (\$ M)								
2.1) Fleet ATC Integrated Logistics Support (MR800)	-	-	0.000	-	-	0.180	-	-	0.183	-	-	0.254	-	-	0.000	-	-	0.254								
2.2) Fleet ATC Production Engineering (MR830)	-	-	0.000	-	-	0.346	-	-	0.588	-	-	0.778	-	-	0.000	-	-	0.778								
2.3) Fleet ATC Installs	-	-	0.000	-	-	1.913	-	-	2.302	-	-	1.807	-	-	0.000	-	-	1.807								
<i>Subtotal: Support - Other Cost</i>	-	-	0.000	-	-	2.439	-	-	3.073	-	-	2.839	-	-	0.000	-	-	2.839								
Gross/Weapon System Cost	-	-	0.000	-	-	8.292	-	-	6.933	-	-	7.709	-	-	0.000	-	-	7.709								

Footnotes:

(3) MR069: This program provides for the procurement and or modification of critically needed communications, radar, displays, data processors and other electronic systems / equipment at Navy / Marine Corps Air Traffic Control facilities worldwide. Due to the variety of the Air Traffic Control systems involved and the scope of these validated requirements, costs can vary significantly between fiscal years. The unit cost for an individual OCIR can range from \$1,500 to \$500,000 so the unit cost is an average of all OCIRs procured in that year and as such will fluctuate from year to year.

(4) MR404: UHF/VHF Antenna Upgrade - UHF/VHF antennas enable ground to air communications between air traffic controllers and aircraft pilots. New antenna and antenna cables are required to replace existing aged and deteriorated antennas and cables. For dependable ground to air communications, replacement of the antennas and cables is imperative. Inventory objective is 76.

(5) MR440: Inventory objective is 330.

(6) MR445: Inventory objective is 45.

(7) MR520: The Operational Communication System (OCS) and Emergency Communication System (ECS) Air Traffic Control (ATC) recorder upgrade through participation in the Federal Aviation Administration (FAA) ATC recorder replacement program will replace aging and obsolete ATC OCS and ECS ATC recorders with state of the art ATC recording/reproducing technology. FY2019 represents a new FAA recorder. The size of the recorders will vary significantly. The ECS recorder will have 10 channels and the OCS recorders will vary between 32 and 260 channels. FY18 to FY19 increase is due to a Ramp-up of the installation team to consistently replace 13 systems per year.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Item Number / Title [DODIC]: 3 / Landing Systems								
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total							
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-							
Gross/Weapon System Cost (\$ in Millions)				0.000		0.351		4.114		4.297		0.000		4.297							
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-							
Net Procurement (P-1) (\$ in Millions)				0.000		0.351		4.114		4.297		0.000		4.297							
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-							
Total Obligation Authority (\$ in Millions)				0.000		0.351		4.114		4.297		0.000		4.297							
(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)				-		-		-		-		-		-							
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total					
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
Hardware - Landing Systems - TACAN Beacon Cost																					
Recurring Cost																					
1.1.1) X1042 - TACAN BEACON UPGRADE (8)	-	-	0.000	-	-	0.000	217,000.00	14	3.038	220,857.00	14	3.092	-	-	0.000	220,857.00	14	3.092			
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>3.038</i>	-	-	<i>3.092</i>	-	-	<i>0.000</i>	-	-	<i>3.092</i>			
<i>Subtotal: Hardware - Landing Systems - TACAN Beacon Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>3.038</i>	-	-	<i>3.092</i>	-	-	<i>0.000</i>	-	-	<i>3.092</i>			
Support - Other Cost																					
2.1) X1800 - Landing Systems Integrated Logistics Support	-	-	0.000	-	-	0.000	-	-	0.033	-	-	0.033	-	-	0.000	-	-	0.033			
2.2) X1830 - Landing Systems Production Engineering	-	-	0.000	-	-	0.000	-	-	0.419	-	-	0.418	-	-	0.000	-	-	0.418			
2.4) X1900 - Landing System Installs (9)	-	-	0.000	-	-	0.351	-	-	0.624	-	-	0.754	-	-	0.000	-	-	0.754			
<i>Subtotal: Support - Other Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.351</i>	-	-	<i>1.076</i>	-	-	<i>1.205</i>	-	-	<i>0.000</i>	-	-	<i>1.205</i>			
Gross/Weapon System Cost	-	-	0.000	-	-	0.351	-	-	4.114	-	-	4.297	-	-	0.000	-	-	4.297			
Footnotes:																					
(8) X1042: Inventory objective is 206.																					

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment	Item Number / Title [DODIC]: 3 / Landing Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
(9) The FY19 increase is due to TACAN Beacon installs at OCONUS which have higher costs, requiring additional travel and Shipyard cost.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 1 / AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	4.069	2.426	2.397	0.000	2.397	0.000	0.000	0.000	0.000	0.000	8.892
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	4.069	2.426	2.397	0.000	2.397	0.000	0.000	0.000	0.000	0.000	8.892
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	4.069	2.426	2.397	0.000	2.397	0.000	0.000	0.000	0.000	0.000	8.892
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Air Traffic Navigation Integration and Coordination System (ATNAVICS) Air Surveillance Radar (ASR) Range Extension is funded to meet requirements identified in the Air Traffic Control (ATC) Initial Capabilities Document, Marine Requirements Oversight Committee Decision Memorandum 75-7007, Marine Aviation Command and Control Operational Advisory Group and Headquarters Marine Corps APX-25 Requirement Clarification letter dated 05 Jan 2010. The gaps identified require sustainment of legacy sensor capability until such time as ATNAVICS PrePlanned Product Improvement initiatives enhance system capability to support main air base traffic density and airspace. Additionally, the positive control enabled by increased ASR range reduces separation enabling increased sortie rates. The End Item Kits for the ATNAVICS ASR Range Extension that are being procured consist of: ASR transmitter, environmental control unit/power generator, Radio Frequency transmission line, ASR receiver/exciter and signal data processors and required software code modifications to system Lowest Repairable Units.												
Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2815.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 1 / AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: MATCALS			Modification Type: Modification					Related RDT&E PEs: 0604504N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)</i>												
B Kits												
Non-Recurring												
1.1.1) EQUIPMENT - NonOrganic ⁽¹⁰⁾	- / -	2 / 2.400	1 / 1.224	1 / 1.200	- / -	1 / 1.200	- / -	- / -	- / -	- / -	- / -	4 / 4.824
<i>Subtotal: Non-Recurring</i>	- / 0.000	- / 2.400	- / 1.224	- / 1.200	- / -	- / 1.200	- / -	- / -	- / -	- / -	- / 0.000	- / 4.824
<i>Subtotal: AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)</i>	- / -	2 / 2.400	1 / 1.224	1 / 1.200	- / -	1 / 1.200	- / -	- / -	- / -	- / -	- / -	4 / 4.824
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 2.400	- / 1.224	- / 1.200	- / -	- / 1.200	- / -	- / -	- / -	- / -	- / 0.000	- / 4.824
Support (All Modification Items)												
2.1) Integrated Logistics Support	- / 0.000	- / 0.117	- / 0.138	- / 0.138	- / 0.000	- / 0.138	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.393
2.2) Production Engineering	- / 0.000	- / 0.560	- / 0.564	- / 0.559	- / 0.000	- / 0.559	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.683
<i>Subtotal: Support</i>	- / 0.000	- / 0.677	- / 0.702	- / 0.697	- / -	- / 0.697	- / -	- / -	- / -	- / -	- / 0.000	- / 2.076
Installation												
<i>Modification Item 1 of 1: AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)</i>	- / 0.000	- / 0.992	- / 0.500	- / 0.500	- / 0.000	- / 0.500	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.992
<i>Subtotal: Installation</i>	- / 0.000	- / 0.992	- / 0.500	- / 0.500	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / 0.000	- / 1.992
Total												
Total Cost (Procurement + Support + Installation)	0.000	4.069	2.426	2.397	0.000	2.397	0.000	0.000	0.000	0.000	0.000	8.892

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 1 / AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)																							
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																							
Modification Item 1 of 1: AN/TPN-31A ATNAVICS ASR Range Extension (MJ455)																																					
Manufacturer Information																																					
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																														
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 6																														
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																								
Contract Dates	Dec 2016		Dec 2017		Dec 2018																																
Delivery Dates	Jun 2017		Jun 2018		Jun 2019																																
Installation Information																																					
Method of Implementation: AIT:: Installation Name: EQUIPMENT																																					
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total											
				Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total 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 2017				- / -		2 / 0.992		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		2 / 0.992											
FY 2018				- / -		- / -		1 / 0.500		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		1 / 0.500											
FY 2019				- / -		- / -		- / -		1 / 0.500		0 / 0.000		1 / 0.500		- / -		- / -		- / -		- / -		0 / 0.000		1 / 0.500											
FY 2020				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -											
FY 2021				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -											
FY 2022				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -											
FY 2023				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -											
To Complete				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -											
Total				- / -		2 / 0.992		1 / 0.500		1 / 0.500		0 / 0.000		1 / 0.500		- / -		- / -		- / -		- / -		- / -		0 / 0.000		4 / 1.992									
Installation Schedule																																					
PYS		FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC							
		Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4						
Out	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4						
Footnotes:																																					
(10) The ASR Range Extension is in response to the HQMC APX-25 Requirement Clarification letter dated 05 Jan 2010. Inventory objective is 15. 11 procurements and 11 installs are funded under BLI 2815.																																					

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 2 / Optimized Organizational Maintenance Activity (OOMA) (MJ460)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.687
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.687
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.687
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Optimized Organizational Maintenance Activity System is an automated management information system that provides Navy and Marine Corps aviation organizational maintenance units with timely and accurate information to aid managers in their daily management of assigned aircraft and equipment. Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2815.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 2 / Optimized Organizational Maintenance Activity (OOMA) (MJ460)			
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:	
Models of Systems Affected: NAS/MCAS			Modification Type: Added Capability						Related RDT&E PEs: 0604504N			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: Optimized Organizational Maintenance Activity (OOMA) (MJ460)</i>												
B Kits												
Recurring												
1.1.1) Equipment - NonOrganic ⁽¹¹⁾	10 / 0.000	4 / 0.639	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.639
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / 0.639</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>
<i>Subtotal: Optimized Organizational Maintenance Activity (OOMA) (MJ460)</i>	<i>10 / 0.000</i>	<i>4 / 0.639</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>14 / 0.639</i>
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / 0.639</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>
Support (All Modification Items)												
2.1) Integrated Logistics Support	- / -	- / 0.242	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.242
2.2) Production Engineering	- / -	- / 0.374	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.374
2.3) Acceptance Testing	- / -	- / 0.061	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.061
<i>Subtotal: Support</i>	<i>- / 0.000</i>	<i>- / 0.677</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>
Installation												
<i>Modification Item 1 of 1:</i> Optimized Organizational Maintenance Activity (OOMA) (MJ460)	<i>- / 0.000</i>	<i>- / 0.371</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.000</i>	<i>- / 0.371</i>
<i>Subtotal: Installation</i>	<i>- / 0.000</i>	<i>- / 0.371</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 0.000</i>
Total												
Total Cost (Procurement + Support + Installation)	0.000	1.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.687

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment									Modification Number / Title: 2 / Optimized Organizational Maintenance Activity (OOMA) (MJ460)																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
<i>Modification Item 1 of 1: Optimized Organizational Maintenance Activity (OOMA) (MJ460)</i>																														
Manufacturer Information																														
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																							
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 7																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Dec 2016																													
Delivery Dates	Jul 2017																													
Installation Information																														
Method of Implementation: Installation Team:: Installation Name: Equipment																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 0.265																
FY 2017			- / -	4 / 0.106	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.106																
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			- / -	14 / 0.371	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 0.371															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14					
Out	-	-	-	5	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14					
Footnotes:																														
(11) PMW-150 is the government agency that owns and delivers Optimized Organizational Maintenance Activity (OOMA). Inventory objective is 24. 20 procurements and 10 installs are funded under BLI 2815.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 3 / MJ465 AMTAC	

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	7.356	4.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.283	32.039
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	7.356	4.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.283	32.039
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	7.356	4.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.283	32.039
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/TRN-47(V)2 Airfield Mobile TACAN (AMTAC) is a new start in FY 2017. It is a one for one replacement for the aging/obsolete AN/TRN-44A TACAN. The AN/TRN-47(V)2 AMTAC is a High Mobility Multipurpose Wheeled Vehicle (HMMWV) transportable, rapid set-up/tear-down, dual channel navigation aid, which provides TACAN-equipped aircraft with range, bearing, and non-precision approach capability.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 3 / MJ465 AMTAC			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: MATCALS			Modification Type: Modification				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: MJ465 AMTAC</i>												
B Kits												
Recurring												
2.1.1) Equipment - NonOrganic	- / -	4 / 5.527	2 / 3.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 15.407	12 / 24.134
<i>Subtotal: Recurring</i>	- / 0.000	- / 5.527	- / 3.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.407	- / 24.134
<i>Subtotal: MJ465 AMTAC</i>	- / -	4 / 5.527	2 / 3.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 15.407	12 / 24.134
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 5.527	- / 3.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.407	- / 24.134
Support (All Modification Items)												
3.1) Integrated Logistics Support	- / -	- / 0.330	- / 0.314	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.290	- / 1.934
3.2) Production Engineering	- / -	- / 0.874	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.615	- / 4.056
<i>Subtotal: Support</i>	- / 0.000	- / 1.204	- / 0.881	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.905	- / 5.990
Installation												
<i>Modification Item 1 of 1: MJ465 AMTAC</i>	- / 0.000	- / 0.625	- / 0.319	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.971	- / 1.915
<i>Subtotal: Installation</i>	- / 0.000	- / 0.625	- / 0.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.971	- / 1.915
Total												
Total Cost (Procurement + Support + Installation)	0.000	7.356	4.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.283	32.039

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9															P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment															
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: MJ465 AMTAC																														
Manufacturer Information																														
Manufacturer Name: TBD								Manufacturer Location: TBD																						
Administrative Leadtime (<i>in Months</i>): 2								Production Leadtime (<i>in Months</i>): 8																						
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Nov 2016		Nov 2017																											
Delivery Dates	Jul 2017		Jul 2018																											
Installation Information																														
Method of Implementation: Installation Team:: Installation Name: Equipment																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	4 / 0.625	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.625								
FY 2018			- / -	- / -	2 / 0.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.319								
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete			- / -	- / -	4 / 0.625	2 / 0.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.971	6 / 0.971									
Total			- / -	- / -	4 / 0.625	2 / 0.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.971	12 / 1.915									
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	12				
Out	-	-	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	12				

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Exhibit P-3a, Individual Modification: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 4 / CB010 - DoD Advanced Automation System (DAAS)			
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	4.841	4.082	2.680	0.000	2.680	0.822	0.227	0.234	0.329	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	4.841	4.082	2.680	0.000	2.680	0.822	0.227	0.234	0.329	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	4.841	4.082	2.680	0.000	2.680	0.822	0.227	0.234	0.329	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The DoD Advanced Automation System (DAAS) is being developed as part of a joint DoD/Federal Aviation Administration (FAA) program to modernize and standardize Air Traffic Control (ATC) equipment in the National Airspace System. The systems are installed in Navy ATC facilities to replace aging, obsolete equipment and comply with joint DoD/FAA modernization program agreements. DAAS provides for processors and displays for tower and approach controls. Inventory objective of 47.												
Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2840.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 4 / CB010 - DoD Advanced Automation System (DAAS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: NAS			Modification Type: Added Capability					Related RDT&E PEs: 0604504N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CB010 - DoD Advanced Automation System (DAAS)													
B Kits													
Recurring													
2.1.1) End Item - NonOrganic ⁽¹²⁾	1 / 0.000	2 / 1.816	1 / 0.935	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.751
2.1.2) ECP/OCIR - Organic ⁽¹³⁾	- / -	- / 0.500	- / 0.450	- / 1.350	- / -	- / 1.350	- / 0.822	- / 0.227	- / 0.234	- / 0.329	Continuing	Continuing	
Subtotal: Recurring	- / 0.000	- / 2.316	- / 1.385	- / 1.350	- / -	- / 1.350	- / 0.822	- / 0.227	- / 0.234	- / 0.329	Continuing	Continuing	
Subtotal: CB010 - DoD Advanced Automation System (DAAS)	1 / 0.000	2 / 2.316	1 / 1.385	- / 1.350	- / -	- / 1.350	- / 0.822	- / 0.227	- / 0.234	- / 0.329	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 0.000	- / 2.316	- / 1.385	- / 1.350	- / -	- / 1.350	- / 0.822	- / 0.227	- / 0.234	- / 0.329	Continuing	Continuing	
Support (All Modification Items)													
3.1) Integrated Logistics Support	- / -	- / 0.102	- / 0.097	- / 0.050	- / -	- / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.249
3.2) Production Engineering	- / -	- / 0.611	- / 0.523	- / 0.422	- / -	- / 0.422	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.556
Subtotal: Support	- / 0.000	- / 0.713	- / 0.620	- / 0.472	- / -	- / 0.472	- / -	- / -	- / -	- / -	- / 0.000	- / 1.805	
Installation													
Modification Item 1 of 1: CB010 - DoD Advanced Automation System (DAAS)	- / 0.000	- / 1.812	- / 2.077	- / 0.858	- / 0.000	- / 0.858	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.747
Subtotal: Installation	- / 0.000	- / 1.812	- / 2.077	- / 0.858	- / -	- / 0.858	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 4.747
Total													
Total Cost (Procurement + Support + Installation)	0.000	4.841	4.082	2.680	0.000	2.680	0.822	0.227	0.234	0.329	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 4 / CB010 - DoD Advanced Automation System (DAAS)																
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																
Modification Item 1 of 1: CB010 - DoD Advanced Automation System (DAAS)																														
Manufacturer Information																														
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																							
Administrative Leadtime (<i>in Months</i>): 6							Production Leadtime (<i>in Months</i>): 12																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Mar 2017		Mar 2018																											
Delivery Dates	Mar 2018		Mar 2019																											
Installation Information																														
Method of Implementation: AIT:: Installation Name: End Item																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.043	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.043															
FY 2017			- / -	0 / 0.769	2 / 1.477	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.246															
FY 2018			- / -	- / -	0 / 0.600	1 / 0.858	0 / 0.000	1 / 0.858	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.458															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			- / -	1 / 1.812	2 / 2.077	1 / 0.858	0 / 0.000	1 / 0.858	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 4.747															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4					
Footnotes:																														
(12) DAAS - Advanced Planning (AP) costs for Installation occur 1 year prior to actual install and show as quantity zero. These upgrades are required to maintain radar connectivity with the FAA in order to preserve Fleet capability to sequence and separate aircraft in assigned airspace within the National Airspace System.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment	Modification Number / Title: 4 / CB010 - DoD Advanced Automation System (DAAS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(13) ECP costs are based on site unique software configurations through the rest of the FYDP. Cost increases FY19 -21 are caused by requirement to upgrade the DAAS operating system which no longer has vendor support and upgrade the DAAS from legacy point to point analog interface capability to flexible Internet Protocol (IP) addressable interfaces. Upgrades are driven by the FAA's Surveillance Interface Modernization (SIM) program. These upgrades are required to maintain radar connectivity with the FAA in order to preserve Fleet capability to sequence and separate aircraft in assigned airspace within the National Airspace System.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 5 / CB030 Digital Airport Surveillance Radar (DASR)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.400	0.400	0.939	0.000	0.939	0.915	0.220	0.256	0.351	0.000	3.481
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.400	0.400	0.939	0.000	0.939	0.915	0.220	0.256	0.351	0.000	3.481
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.400	0.400	0.939	0.000	0.939	0.915	0.220	0.256	0.351	0.000	3.481
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The DASR was developed as part of a joint DoD/ FAA program to modernize and standardize ATC equipment in the National Airspace System. The DASR has enabled Navy ATC facilities to replace aging, obsolete approach control radars and comply with joint DoD/FAA modernization program agreements. Inventory objective of 29 DASR. 29 were procured and installed prior to FY2017 were funded under BLI 2840. The FAA DASR technical refreshment has not progressed as planned and has been reorganized into multiple Engineering Change Proposals (ECPs) to mitigate obsolescence effective FY2017. An ECP line has been added to the budget starting in FY2017 to address these upgrades.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 5 / CB030 Digital Airport Surveillance Radar (DASR)				
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: NAS			Modification Type: Added Capability						Related RDT&E PEs: 0604504N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> CB030 Digital Airport Surveillance Radar (DASR)													
B Kits													
Recurring													
1.1.2) ECP/OCIR - Organic ⁽¹⁴⁾		- / -	- / 0.400	- / 0.400	- / 0.939	- / -	- / 0.939	- / 0.915	- / 0.220	- / 0.256	- / 0.351	- / -	- / 3.481
<i>Subtotal: Recurring</i>		- / 0.000	- / 0.400	- / 0.400	- / 0.939	- / -	- / 0.939	- / 0.915	- / 0.220	- / 0.256	- / 0.351	- / 0.000	- / 3.481
<i>Subtotal: CB030 Digital Airport Surveillance Radar (DASR)</i>		- / -	- / 0.400	- / 0.400	- / 0.939	- / -	- / 0.939	- / 0.915	- / 0.220	- / 0.256	- / 0.351	- / -	- / 3.481
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 0.400	- / 0.400	- / 0.939	- / -	- / 0.939	- / 0.915	- / 0.220	- / 0.256	- / 0.351	- / 0.000	- / 3.481
Installation													
<i>Subtotal: Installation</i>		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.400	0.400	0.939	0.000	0.939	0.915	0.220	0.256	0.351	0.000	0.000	3.481

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Exhibit P-3a, Individual Modification: PB 2019 Navy				Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9		P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment				Modification Number / Title: 5 / CB030 Digital Airport Surveillance Radar (DASR)			
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1:</i> CB030 Digital Airport Surveillance Radar (DASR)				MDAP/MAIS Code:					
Manufacturer Information									
Manufacturer Name: MOOG				Manufacturer Location: Salt Lake City, UT					
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates									
Delivery Dates									
Manufacturer Name: Raytheon				Manufacturer Location: Marlborough, MA					
Administrative Leadtime (<i>in Months</i>): 6				Production Leadtime (<i>in Months</i>): 12					
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Contract Dates									
Delivery Dates									

Footnotes:

(¹⁴) The Digital Airport Surveillance Radar (DASR) ECP/OCIR upgrades are required to maintain radar connectivity with the FAA in order to preserve Fleet capability to sequence and separate aircraft in assigned airspace within the National Airspace System. The increase from FY18-19 is driven by the FAA's Surveillance Interface Modernization (SIM) program, which begins in FY19. The Digital Airport Surveillance Radar (DASR) will be upgraded from legacy point to point analog interface capability to flexible Internet Protocol (IP) addressable interfaces. This is scheduled to be a two year effort.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 6 / CB040 Tower Automation System (TAS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.200	0.200	1.682	0.000	1.682	0.536	0.400	0.429	0.437	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.200	0.200	1.682	0.000	1.682	0.536	0.400	0.429	0.437	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.200	0.200	1.682	0.000	1.682	0.536	0.400	0.429	0.437	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The TAS was developed as part of a joint DoD/ FAA program to modernize and standardize ATC equipment in the National Airspace System. The TAS has enabled Navy ATC facilities to replace aging, obsolete equipment and comply with joint DoD/FAA modernization program agreements. Inventory objective of 57 TAS.												
This effort includes Engineering Change Proposal (ECP) efforts directly related to the TAS Tech Refresh efforts detailed in cost element CB070 of this budget. The ECP introduces new capability into a common workstation that eliminates a separate visual communications alert indicator. The nature of that consolidation creates an interdependency with CB070; which addresses severe obsolescence issues that render the current workstation configuration unsupportable. Both software and hardware for these two cost elements overlap and require concurrent efforts. Delay or interruption to either CB040 and/or CB070 causes a break in fleet capability and negatively impacts both flight safety and operator workload.												
Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2840.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 6 / CB040 Tower Automation System (TAS)				
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: NAS			Modification Type: Added Capability						Related RDT&E PEs: 0604504N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: CB040 Tower Automation System (TAS)</i>													
B Kits													
Recurring													
1.1.1) ECP/OCIR - Organic ⁽¹⁵⁾	- / -	- / 0.200	- / 0.200	- / 1.682	- / -	- / 1.682	- / 0.536	- / 0.400	- / 0.429	- / 0.437	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.200	- / 0.200	- / 1.682	- / -	- / 1.682	- / 0.536	- / 0.400	- / 0.429	- / 0.437	Continuing	Continuing	
<i>Subtotal: CB040 Tower Automation System (TAS)</i>	- / -	- / 0.200	- / 0.200	- / 1.682	- / -	- / 1.682	- / 0.536	- / 0.400	- / 0.429	- / 0.437	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.200	- / 0.200	- / 1.682	- / -	- / 1.682	- / 0.536	- / 0.400	- / 0.429	- / 0.437	Continuing	Continuing	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.200	0.200	1.682	0.000	1.682	0.536	0.400	0.429	0.437	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy				Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9		P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment		Modification Number / Title: 6 / CB040 Tower Automation System (TAS)			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:					
Modification Item 1 of 1: CB040 Tower Automation System (TAS)							
Manufacturer Information							
Manufacturer Name: Spawar Systems Center Atlantic			Manufacturer Location: Charleston, SC				
Administrative Leadtime (<i>in Months</i>): 6			Production Leadtime (<i>in Months</i>): 12				
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Footnotes:

(15) Support costs are included in the ECP/OCIR lines. Airfield Lighting Control System (AFLCS) realigned to the Terminal Automation System from MR510 of this budget beginning in FY18. The cost increase from \$200K in FY18 to \$1,682K in FY19 is due to the significant ECP efforts beginning in FY19 to upgrade all Windows based operating systems in Air Traffic Control Towers to Windows 10 in order to meet DoD's Information Assurance / Cyber security requirements.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 7 / CB050 STARS TECH Refresh Upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	11.360	14.262	11.539	0.000	11.539	2.682	0.000	0.000	0.000	0.000	39.843
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	11.360	14.262	11.539	0.000	11.539	2.682	0.000	0.000	0.000	0.000	39.843
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	11.360	14.262	11.539	0.000	11.539	2.682	0.000	0.000	0.000	0.000	39.843
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Standard Terminal Automation Replacement System (STARS) is a joint (DoD) and Department of Transportation FAA program to modernize terminal air traffic control automation systems. The STARS contract was awarded by the FAA on September 16, 1996, and ends September 30, 2017. The FAA anticipates the award of a contract for system maintenance, system technical refresh, and system enhancements through fiscal year 2019. The FAA began the Next Generation Air Transportation System initiative in FY2008. A major component of this capability is Automatic Dependent Surveillance Broadcast, which will provide aircraft position information in place of ground-based radar. The DoD version of STARS DAAS must be upgraded to meet this requirement. Inventory objective is 38. Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2840.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 7 / CB050 STARS TECH Refresh Upgrade
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: NAS			Modification Type: AIT										Related RDT&E PEs: 0604504N
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CB050 STARS TECH Refresh Upgrade													
B Kits													
Recurring													
2.1.1) End Item - NonOrganic ⁽¹⁶⁾		4 / 0.000	7 / 9.385	8 / 11.081	6 / 8.119	- / -	6 / 8.119	- / -	- / -	- / -	- / -	- / -	25 / 28.585
Subtotal: Recurring		- / 0.000	- / 9.385	- / 11.081	- / 8.119	- / -	- / 8.119	- / -	- / -	- / -	- / -	- / -	- / 0.000 / 28.585
Subtotal: CB050 STARS TECH Refresh Upgrade		4 / 0.000	7 / 9.385	8 / 11.081	6 / 8.119	- / -	6 / 8.119	- / -	- / -	- / -	- / -	- / -	25 / 28.585
Subtotal: Procurement, All Modification Items		- / 0.000	- / 9.385	- / 11.081	- / 8.119	- / -	- / 8.119	- / -	- / -	- / -	- / -	- / -	- / 0.000 / 28.585
Support (All Modification Items)													
3.1) Integrated Logistics Support		- / -	- / 0.150	- / 0.150	- / 0.150	- / -	- / 0.150	- / 0.153	- / -	- / -	- / -	- / -	- / 0.603
3.2) Production Engineering		- / -	- / 0.451	- / 0.579	- / 0.547	- / -	- / 0.547	- / 0.549	- / -	- / -	- / -	- / -	- / 12.126
Subtotal: Support		- / 0.000	- / 0.601	- / 0.729	- / 0.697	- / -	- / 0.697	- / 0.702	- / -	- / -	- / -	- / -	- / 0.000 / 2.729
Installation													
Modification Item 1 of 1: CB050 STARS TECH Refresh Upgrade		- / 0.000	- / 1.374	- / 2.452	- / 2.723	- / 0.000	- / 2.723	- / 1.980	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 8.529
Subtotal: Installation		- / 0.000	- / 1.374	- / 2.452	- / 2.723	- / -	- / 2.723	- / 1.980	- / -	- / -	- / -	- / -	- / 0.000 / 8.529
Total													
Total Cost (Procurement + Support + Installation)		0.000	11.360	14.262	11.539	0.000	11.539	2.682	0.000	0.000	0.000	0.000	39.843

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment								Modification Number / Title: 7 / CB050 STARS TECH Refresh Upgrade																					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																					
Modification Item 1 of 1: CB050 STARS TECH Refresh Upgrade																																	
Manufacturer Information																																	
Manufacturer Name: Raytheon				Manufacturer Location: Marlborough, MA																													
Administrative Leadtime (<i>in Months</i>): 6				Production Leadtime (<i>in Months</i>): 12																													
Dates		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates		Mar 2017		Mar 2018		Mar 2019																											
Delivery Dates		Mar 2018		Mar 2019		Mar 2020																											
Installation Information																																	
Method of Implementation: AIT:: Installation Name: End Item																																	
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total								
			Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)									
Prior Years			-	/	-	4	/	1.374	-	/	-	4	/	1.374	-	/	-	/	-	/	-	/	0	/	0.000	4	/	1.374					
FY 2017			-	/	-	7	/	2.452	-	/	-	7	/	2.452	-	/	-	/	-	/	-	/	-	/	0	/	0.000	7	/	2.452			
FY 2018			-	/	-	8	/	2.723	0	/	0.000	8	/	2.723	-	/	-	/	-	/	-	/	-	/	0	/	0.000	8	/	2.723			
FY 2019			-	/	-	6	/	1.980	-	/	-	6	/	1.980	-	/	-	/	-	/	-	/	-	/	0	/	0.000	6	/	1.980			
FY 2020			-	/	-	7	/	2.723	-	/	-	7	/	2.723	-	/	-	/	-	/	-	/	-	/	-	/	0	/	0.000	7	/	2.723	
FY 2021			-	/	-	8	/	2.723	-	/	-	8	/	2.723	-	/	-	/	-	/	-	/	-	/	-	/	0	/	0.000	8	/	2.723	
FY 2022			-	/	-	9	/	3.000	-	/	-	9	/	3.000	-	/	-	/	-	/	-	/	-	/	-	/	0	/	0.000	9	/	3.000	
FY 2023			-	/	-	10	/	3.273	-	/	-	10	/	3.273	-	/	-	/	-	/	-	/	-	/	-	/	0	/	0.000	10	/	3.273	
To Complete			-	/	-	10	/	3.273	-	/	-	10	/	3.273	-	/	-	/	-	/	-	/	-	/	-	/	0	/	0.000	10	/	3.273	
Total			-	/	-	4	/	1.374	7	/	2.452	8	/	2.723	0	/	0.000	8	/	2.723	6	/	1.980	-	/	-	/	0	/	0.000	25	/	8.529
Installation Schedule																																	
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot			
	Q1	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	3	-	-	3	3	2	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	25			
Out	-	-	-	2	2	-	-	4	3	-	-	4	4	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	25			

Footnotes:

(16) This effort was previously funded in BLI 2840. Support cost fluctuations are due to variations in Naval Air Station / Fleet Area Control and Surveillance Facility requirements, and Marine Corps Air Station mission requirements. (3) Installation costs fluctuate based on location of installation and the tailoring of systems to meet Naval Air Station / Fleet Area Control and Surveillance Facility requirements, and Marine Corps Air Station mission requirements. Decrease in inventory objective due to incorrect system count. 8 remote tower configuration were inadvertently counted as full STARS Tech Refresh systems and not as

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment	Modification Number / Title: 7 / CB050 STARS TECH Refresh Upgrade
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
part of the parent facility STARS Tech Refresh System. Remote towers will be procured as part of the parent facility. Additionally, NAS Willow Grove and NAS Brunswick were included in the inventory objective. NAS Willow Grove and NAS Brunswick were disestablished in 2011 as part of Base Realignment and Closure (BRAC).		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 8 / CB070 TAS Tech Refresh		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	4.055	2.517	4.158	0.000	4.158	4.716	1.667	0.000	0.000	0.000	17.113
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	4.055	2.517	4.158	0.000	4.158	4.716	1.667	0.000	0.000	0.000	17.113
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	4.055	2.517	4.158	0.000	4.158	4.716	1.667	0.000	0.000	0.000	17.113
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Tower Automation Systems have been fielded since 2001 and are experiencing obsolescence and Information Assurance (IA) issues. These upgrades will address these obsolescence and IA issues as well as maintain compatibility with the FAA's Next Generation (NextGen) Air Transportation System initiatives. Additionally, these upgrades will enhance system performance to provide Common Access Card utilization, multi-source weather reporting and Tactical Air Control Navigation (TACAN) control. In order to achieve the modernization of the National Air Space (NAS) envisioned by NextGen, the FAA is developing a Terminal Flight Data Management (TFDM) platform that integrates flight data systems and decision support tools. The TFDM program is an integrated approach to maximize the efficient collection, distribution, and update of data and improve access to information necessary for the safe and efficient control of air traffic. The TAS will be upgraded to be consistent with the FAA TFDM.

This effort includes TAS Tech Refresh efforts directly related to the Engineering Change Proposal (ECP) efforts detailed in cost element CB040 of this budget. The ECP introduces new capability into a common workstation that eliminates a separate visual communications (VISCOM) alert indicator. The nature of that consolidation creates an interdependency with CB040; which addresses severe obsolescence issues that render the current workstation configuration unsupportable. Both software and hardware for these two cost elements overlap and require concurrent efforts. Delay or interruption to either CB040 and/or CB070 causes a break in fleet capability and negatively impacts both flight safety and operator workload.

Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2840.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 8 / CB070 TAS Tech Refresh			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: NAS			Modification Type: Added Capability				Related RDT&E PEs: 0604504N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: CB070 TAS Tech Refresh</i>												
B Kits												
Recurring												
2.1.1) End Item - NonOrganic ⁽¹⁷⁾	16 / 0.000	10 / 1.594	5 / 0.780	18 / 2.862	- / -	18 / 2.862	7 / 1.127	- / -	- / -	- / -	- / -	56 / 6.363
<i>Subtotal: Recurring</i>	- / 0.000	- / 1.594	- / 0.780	- / 2.862	- / -	- / 2.862	- / 1.127	- / -	- / -	- / -	- / 0.000	- / 6.363
<i>Subtotal: CB070 TAS Tech Refresh</i>	16 / 0.000	10 / 1.594	5 / 0.780	18 / 2.862	- / -	18 / 2.862	7 / 1.127	- / -	- / -	- / -	- / -	56 / 6.363
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 1.594	- / 0.780	- / 2.862	- / -	- / 2.862	- / 1.127	- / -	- / -	- / -	- / 0.000	- / 6.363
Support (All Modification Items)												
3.1) Integrated Logistics Support ⁽¹⁸⁾	- / -	- / 0.149	- / 0.124	- / 0.105	- / -	- / 0.105	- / 0.105	- / 0.106	- / -	- / -	- / -	- / 0.589
3.2) Production Engineering	- / -	- / 0.373	- / 0.413	- / 0.251	- / -	- / 0.251	- / 0.249	- / 0.248	- / -	- / -	- / -	- / 1.534
<i>Subtotal: Support</i>	- / 0.000	- / 0.522	- / 0.537	- / 0.356	- / -	- / 0.356	- / 0.354	- / 0.354	- / -	- / -	- / 0.000	- / 2.123
Installation												
<i>Modification Item 1 of 1: CB070 TAS Tech Refresh</i>	- / 0.000	- / 1.939	- / 1.200	- / 0.940	- / 0.000	- / 0.940	- / 3.235	- / 1.313	- / 0.000	- / 0.000	- / 0.000	- / 8.627
<i>Subtotal: Installation</i>	- / 0.000	- / 1.939	- / 1.200	- / 0.940	- / -	- / 0.940	- / 3.235	- / 1.313	- / -	- / -	- / 0.000	- / 8.627
Total												
Total Cost (Procurement + Support + Installation)	0.000	4.055	2.517	4.158	0.000	4.158	4.716	1.667	0.000	0.000	0.000	17.113

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 8 / CB070 TAS Tech Refresh																
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: CB070 TAS Tech Refresh																														
Manufacturer Information																														
Manufacturer Name: Pen-Tech								Manufacturer Location: Charleston, SC																						
Administrative Leadtime (<i>in Months</i>): 6								Production Leadtime (<i>in Months</i>): 12																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Mar 2017	Mar 2018	Mar 2019																											
Delivery Dates	Mar 2018	Mar 2019	Mar 2020																											
Installation Information																														
Method of Implementation: AIT:: Installation Name: End Item																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.939	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	16 / 1.939																
FY 2017			- / -	- / -	10 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.200																
FY 2018			- / -	- / -	- / -	5 / 0.940	0 / 0.000	5 / 0.940	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.940																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	18 / 3.235	- / -	- / -	- / -	0 / 0.000	18 / 3.235																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.313	- / -	- / -	- / -	0 / 0.000	7 / 1.313																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			- / -	16 / 1.939	10 / 1.200	5 / 0.940	0 / 0.000	5 / 0.940	18 / 3.235	7 / 1.313	- / -	- / -	0 / 0.000	56 / 8.627																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	5	5	-	2	3	-	9	9	-	-	4	3	-	-	-	-	-	-	56					
Out	-	-	-	8	8	-	-	5	5	-	-	2	3	-	-	9	9	-	-	4	3	-	-	-	56					
Footnotes:																														
(17) Inventory objective is 63. 23 procurements and 7 installations were funded prior to FY2017 and are funded on BLI 2840. Installation of FY2016 End Item procurements (qty 16) will be funded with FY2017 funding. Increase in inventory objective due to addition of 5 outlying fields of parent facilities not included in initial inventory objective that require the TAS Tech Refresh. Inventory objective is 63. Installation cost fluctuation are due to variations in Nava Air Station / Fleet Area Control and Surveillance Facility, and Marine Corps Air Station Mission requirements.																														
(18) Support cost fluctuations are due to variations in Naval Air Station / Fleet Area Control and Surveillance Facility requirements, and Marine Corps Air Station mission requirements.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment								Modification Number / Title: 9 / CB080 NAS Voice System (NVS)	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	6.350	7.508	6.589	0.000	6.589	14.431	23.326	22.661	16.121	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	6.350	7.508	6.589	0.000	6.589	14.431	23.326	22.661	16.121	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	6.350	7.508	6.589	0.000	6.589	14.431	23.326	22.661	16.121	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FAA NAS Voice System(NVS) was a new start in FY 2015 and a forward-looking program to replace national airspace system (NAS) voice switches and radios with a new technology system capable of supporting future requirements for the NextGen. Many of these switches are experiencing increasing obsolescence and failures and are in need of replacement. They are not capable of supporting flexible reallocation of access to communications resources, and lack security needed for a network-based communications infrastructure, which is a key concept in modernization of the NAS. The NVS program will provide a key transitional element in the air traffic control voice communications infrastructure as it moves toward realizing the FAAs NextGen vision and a more operationally efficient and economic NAS.

Radios: There are 75 sites which will receive a total of 4,498 radios. The sites to receive radios include FACSFACs remote sites at Naval and Marine Corps Air Stations. The number of radios per site varies due to operational requirements and the number of aircraft serviced.

Voice Switches: There are two specific types of Voice Switches being procured: Operational Communication System (OCS) and Emergency Control System (ECS): 56 OCS Voice Switches, 42 ECS Voice Switches.

42 Sites will receive both an OCS Voice Switch and an ECS Voice Switch, 14 sites will receive only an OCS voice switch. While FACSFAC remote sites are equipped with radios, they are not equipped with Voice Switches.

Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2840.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 9 / CB080 NAS Voice System (NVS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: NAS			Modification Type: Added Capability					Related RDT&E PEs: 0604504N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CB080 NAS Voice System (NVS)													
B Kits													
Recurring													
2.1.2) End Item: Radios - NonOrganic ⁽¹⁹⁾	334 / 0.000	592 / 5.173	618 / 5.509	497 / 4.519	- / -	497 / 4.519	574 / 5.314	669 / 6.543	650 / 6.500	291 / 3.201	291 / 2.910	4,516 / 39.669	
2.1.3) End Item: OCS Voice Switch - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.671	6 / 9.120	3 / 4.584	3 / 4.675	41 / 68.552	56 / 91.602	
2.1.4) End Item: ECS Voice Switch - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.200	5 / 2.040	3 / 1.221	3 / 1.245	28 / 11.623	42 / 17.329	
Subtotal: Recurring	- / 0.000	- / 5.173	- / 5.509	- / 4.519	- / -	- / 4.519	- / 11.185	- / 17.703	- / 12.305	- / 9.121	- / 83.085	- / 148.600	
Subtotal: CB080 NAS Voice System (NVS)	334 / 0.000	592 / 5.173	618 / 5.509	497 / 4.519	- / -	497 / 4.519	580 / 11.185	680 / 17.703	656 / 12.305	297 / 9.121	360 / 83.085	4,614 / 148.600	
Subtotal: Procurement, All Modification Items	- / 0.000	- / 5.173	- / 5.509	- / 4.519	- / -	- / 4.519	- / 11.185	- / 17.703	- / 12.305	- / 9.121	- / 83.085	- / 148.600	
Support (All Modification Items)													
3.1) Integrated Logistics Support	- / -	- / 0.180	- / 0.220	- / 0.200	- / -	- / 0.200	- / 0.260	- / 0.200	- / 0.220	- / 0.220	Continuing	Continuing	
3.2) Production Engineering	- / -	- / 0.310	- / 0.443	- / 0.447	- / -	- / 0.447	- / 0.469	- / 0.452	- / 0.470	- / 0.470	Continuing	Continuing	
Subtotal: Support	- / 0.000	- / 0.490	- / 0.663	- / 0.647	- / -	- / 0.647	- / 0.729	- / 0.652	- / 0.690	- / 0.690	Continuing	Continuing	
Installation													
Modification Item 1 of 1: CB080 NAS Voice System (NVS)	- / 0.000	- / 0.687	- / 1.336	- / 1.423	- / 0.000	- / 1.423	- / 2.517	- / 4.971	- / 9.666	- / 6.310	- / 48.364	- / 75.274	
Subtotal: Installation	- / 0.000	- / 0.687	- / 1.336	- / 1.423	- / -	- / 1.423	- / 2.517	- / 4.971	- / 9.666	- / 6.310	- / 48.364	- / 75.274	
Total													
Total Cost (Procurement + Support + Installation)	0.000	6.350	7.508	6.589	0.000	6.589	14.431	23.326	22.661	16.121	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment									Modification Number / Title: 9 / CB080 NAS Voice System (NVS)																		
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: CB080 NAS Voice System (NVS)													MDAP/MAIS Code:																		
Manufacturer Information																															
Manufacturer Name: General Dynamics							Manufacturer Location: Scottsdale, Arizona																								
Administrative Leadtime (<i>in Months</i>): 6							Production Leadtime (<i>in Months</i>): 12																								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Mar 2017	Mar 2018	Mar 2019																												
Delivery Dates	Mar 2018	Mar 2019	Mar 2020																												
Installation Information																															
Method of Implementation: AIT: Installation Name: End Item:: Installation Name: End Item: Radios																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.687	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	334 / 0.687																	
FY 2017			- / -	- / -	592 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	592 / 0.959																	
FY 2018			- / -	- / -	0 / 0.377	618 / 1.023	0 / 0.000	618 / 1.023	- / -	- / -	- / -	- / -	0 / 0.000	618 / 1.400																	
FY 2019			- / -	- / -	- / -	0 / 0.400	0 / 0.000	0 / 0.400	497 / 0.759	- / -	- / -	- / -	0 / 0.000	497 / 1.159																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.408	574 / 0.962	- / -	- / -	0 / 0.000	574 / 1.370																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.416	669 / 1.606	- / -	- / -	0 / 0.000	669 / 2.022																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.423	650 / 1.606	- / -	0 / 0.000	650 / 2.029																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.520	291 / 1.606	- / -	291 / 2.126																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	291 / 0.728	291 / 0.728																	
Total			- / -	334 / 0.687	592 / 1.336	618 / 1.423	0 / 0.000	618 / 1.423	497 / 1.167	574 / 1.378	669 / 2.029	650 / 2.126	582 / 2.334	4,516 / 12.480																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	-	-	112	111	111	-	198	197	197	-	206	206	206	-	167	166	164	-	192	192	190	-	223	223	223	-	222	223	205	582	4,516
Out	-	-	-	167	167	-	-	297	295	-	-	309	309	-	-	250	247	-	-	292	282	-	-	334	335	-	-	334	316	582	4,516
Method of Implementation: AIT: Installation Name: End Item:: Installation Name: End Item: OCS Voice Switch																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Prior Years				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -		

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment								Modification Number / Title: 9 / CB080 NAS Voice System (NVS)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: CB080 NAS Voice System (NVS)																														
Installation Information																														
Method of Implementation: AIT: Installation Name: End Item:: Installation Name: End Item: OCS Voice Switch																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.750	3 / 0.861	- / -	- / -	0 / 0.000	3 / 1.611															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.300	6 / 5.352	- / -	0 / 0.000	6 / 6.652																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.750	3 / 2.250	0 / 0.000	3 / 3.000																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.750	3 / 2.723	3 / 3.473																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 37.269	41 / 37.269																
Total				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.750	3 / 2.161	6 / 6.102	3 / 3.000	44 / 39.992	56 / 52.005															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	1	1	1	44	56			
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	2	4	-	1	1	1	44	56			
Method of Implementation: AIT: Installation Name: End Item:: Installation Name: End Item: ECS Voice Switch																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.600	3 / 0.552	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.152												
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.880	5 / 0.935	- / -	- / -	- / -	- / -	0 / 0.000	5 / 1.815												
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.600	3 / 0.572	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.172											
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.612	3 / 0.584	3 / 1.196											
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 5.454	28 / 5.454												
Total				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.600	3 / 1.432	- / -	- / -	- / -	- / -	31 / 6.038	42 / 10.789											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment											Modification Number / Title: 9 / CB080 NAS Voice System (NVS)															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
<i>Modification Item 1 of 1:</i> CB080 NAS Voice System (NVS)																																						
Installation Information																																						
Method of Implementation: AIT: Installation Name: End Item:: Installation Name: End Item: ECS Voice Switch																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	2	-	-	1	1	1	31	42									
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	2	2	-	1	1	1	31	42									

Footnotes:

(19) End Item costs are based on current FAA contract pricing. Inventory objective is 4,516. Advanced Planning (AP) costs for installation occur 1 year prior to actual install and show as quantity zero

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 10 / CB090 - DAAS Tech Refresh Upgrade II			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.552	3.440	9.054	Continuing	Continuing
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	0.552	3.440	9.054	Continuing	Continuing
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	0.552	3.440	9.054	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Standard Terminal Automation Replacement System (STARS) is a joint (DoD) and Department of Transportation Federal Aviation Administration (FAA) program to modernize terminal air traffic control systems. The DoD version of STARS, DoD Advanced Automation System (DAAS), must be upgraded to ensure continued compliance with FAA NextGen requirements in order to continue participation in the National Airspace System (NAS). Currently fielded STARS COTS equipment/software are experiencing obsolescence and information assurance (IA) issues. The DAAS Tech Refresh Upgrades will address these obsolescence and IA issues as well as maintain compatibility with the FAA's Next Generation (NextGen) Air Transportation System initiatives. Inventory objective is 40.												
The DAAS Tech Refresh Upgrade II efforts will implement Engineering Change Proposals (ECPs) defined under cost element CB010 (DoD Advanced Automation System (DAAS)) of this budget. The nature of this consolidation creates an interdependency between CB010 and CB090 that addresses obsolescence and IA issues that render the current hardware and software unsupportable. Both hardware and software for these two cost elements overlap requiring concurrent efforts. Delay or interruption to either CB010 and /or CB090 causes a break in fleet capability and negatively impacts both safety of flight and Air Traffic Controller workload. CB090 is a follow-on to CB050 (STARS Tech Refresh Upgrade) which will complete procurements in FY20.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 10 / CB090 - DAAS Tech Refresh Upgrade II		
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: CB090 - DAAS Tech Refresh Upgrade II</i>												
B Kits												
Recurring												
2.1.1) End Item - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.710	4 / 5.340	34 / 46.070	40 / 54.120
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.710	- / 5.340	- / 46.070	- / 54.120
<i>Subtotal: CB090 - DAAS Tech Refresh Upgrade II</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.710	4 / 5.340	34 / 46.070	40 / 54.120
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.710	- / 5.340	- / 46.070	- / 54.120
Installation												
<i>Modification Item 1 of 1: CB090 - DAAS Tech Refresh Upgrade II</i>												
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.552	3.440	9.054	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 10 / CB090 - DAAS Tech Refresh Upgrade II												
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Modification Item 1 of 1: CB090 - DAAS Tech Refresh Upgrade II																					
Manufacturer Information																					
Manufacturer Name: TBD					Manufacturer Location: TBD																
Administrative Leadtime (in Months): 0					Production Leadtime (in Months): 0																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates																					
Delivery Dates																					
Manufacturer Name: TBD					Manufacturer Location: TBD																
Administrative Leadtime (in Months): 0					Production Leadtime (in Months): 0																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023														
Contract Dates																					
Delivery Dates																					
Installation Information																					
Method of Implementation: [none specified]:: Installation Name: End Item																					
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.970	0 / 0.000	2 / 2.970									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 6.058	4 / 6.058									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 54.529	34 / 54.529									
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.970	38 / 60.587									
												40 / 63.557									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment											Modification Number / Title: 10 / CB090 - DAAS Tech Refresh Upgrade II															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: CB090 - DAAS Tech Refresh Upgrade II																																						
Installation Information																																						
Method of Implementation: [none specified]:: Installation Name: End Item																																						
Installation Schedule																																						
	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot							
		Q1	Q2	Q3	Q4	Q1	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	-	38	40											
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	38	40											

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 11 / CB100 TAS Tech Refresh Upgrade II		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.400	0.000	0.400	2.197	2.780	2.815	2.856	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	0.400	0.000	0.400	2.197	2.780	2.815	2.856	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	0.400	0.000	0.400	2.197	2.780	2.815	2.856	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AN/FYC-22 Visual Information Display System (VIDS) is the Navy developed/owned system that meets the NAS Mod Tower Automation System (TAS) requirements. The Tower Automation System (TAS) COTS equipment is suffering from obsolescence and Information Assurance (IA) issues. The TAS Tech Refresh Upgrades will address these obsolescence and IA issues as well as maintain compatibility with the FAAs Next Generation (NextGen) Air Transportation System initiatives. In order to achieve the modernization of the National Airspace System envisioned by NextGen, the FAA is developing a Terminal Flight Data Management (TFDM) platform that integrates flight data systems and decision tools. The TFDM program is an integrated approach to maximize the efficient collection, distribution, and update of data and improve access to information necessary for the safe and efficient control of air traffic. The TAS will be upgraded to be consistent with the FAA TFDM. The inventory objective is 56.

The TAS Tech Refresh Upgrade II efforts will implement Engineering Change Proposals (ECPs) defined under cost element CB040 (Tower Automation System (TAS)) of this budget. The nature of this consolidation creates an interdependency between CB040 and CB100 that addresses obsolescence and IA issues that render the current hardware and software unsupportable. Both hardware and software for these two cost elements overlap requiring concurrent efforts. Delay or interruption to either CB040 and /or CB100 causes a break in fleet capability and negatively impacts both safety of flight and Air Traffic Controller workload. CB100 is a follow-on to CB070 (TAS Tech Refresh) which will complete procurements in FY20

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 11 / CB100 TAS Tech Refresh Upgrade II			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: CB100 TAS Tech Refresh Upgrade II</i>													
B Kits													
Recurring													
2.1.1) End Item - NonOrganic		- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.590	5 / 1.570	5 / 1.620	5 / 1.650	36 / 12.118	56 / 18.548
Subtotal: Recurring		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.590	- / 1.570	- / 1.620	- / 1.650	- / 12.118	- / 18.548
Subtotal: CB100 TAS Tech Refresh Upgrade II		- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.590	5 / 1.570	5 / 1.620	5 / 1.650	36 / 12.118	56 / 18.548
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.590	- / 1.570	- / 1.620	- / 1.650	- / 12.118	- / 18.548
Support (All Modification Items)													
3.2) Production Engineering		- / -	- / -	- / -	- / 0.400	- / -	- / 0.400	- / 0.456	- / 0.459	- / 0.434	- / 0.442	Continuing	Continuing
Subtotal: Support		- / 0.000	- / -	- / -	- / 0.400	- / -	- / 0.400	- / 0.456	- / 0.459	- / 0.434	- / 0.442	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: CB100 TAS Tech Refresh Upgrade II</i>		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.600	- / 0.610	- / 0.610	- / 0.610	- / 5.795	- / 7.615
Subtotal: Installation		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.600	- / 0.610	- / 0.610	- / 0.610	- / 5.795	- / 7.615
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	0.400	0.000	0.400	2.197	2.780	2.815	2.856	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9							P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 11 / CB100 TAS Tech Refresh Upgrade II																
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: CB100 TAS Tech Refresh Upgrade II														MDAP/MAIS Code:																
Manufacturer Information																														
Manufacturer Name: TBD							Manufacturer Location: TBD																							
Administrative Leadtime (in Months): 0							Production Leadtime (in Months): 0																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]: Installation Name: End Item																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.600	- / -	- / -	- / -	0 / 0.000	5 / 0.600	- / -	- / -								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.610	- / -	- / -	0 / 0.000	5 / 0.610	- / -	- / -	- / -								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.610	- / -	- / -	0 / 0.610	5 / 1.220	- / -	- / -	- / -								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.632	5 / 0.632	- / -	- / -								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 4.553	36 / 4.553	- / -	- / -								
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.600	5 / 0.610	5 / 0.610	41 / 5.795	56 / 7.615	- / -	- / -	- / -								
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	41	56			
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	2	2	1	-	2	2	1	41	56			

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 12 / X1036 AN/FPN-63 PAR TECH REFRESH			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	9.847	8.471	9.422	0.000	9.422	10.042	10.154	9.618	9.709	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	9.847	8.471	9.422	0.000	9.422	10.042	10.154	9.618	9.709	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	9.847	8.471	9.422	0.000	9.422	10.042	10.154	9.618	9.709	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: This Engineering Change Proposal (ECP) constitutes Block 2 and 3 of the Service Life Extension Program for the AN/FPN-63. It will extend the service life to at least 2025 by replacing obsolete receiver/transmitter assemblies, radar video processors, and controller displays with state-of-the-art assemblies/displays. This upgrade will also correct numerous human factors issues. This ECP will be accomplished on 36 deployed AN/FPN-63 Precision Approach Radar (PAR) Systems.												
Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2846.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 12 / X1036 AN/FPN-63 PAR TECH REFRESH	
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:				
Models of Systems Affected: Shore Sites			Modification Type: Reliability				Related RDT&E PEs:							
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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														
<i>Modification Item 1 of 1: X1036 AN/FPN-63 PAR TECH REFRESH</i>														
B Kits														
Recurring														
1.1.1) X1036 - PAR Tech Refresh - NonOrganic ⁽²⁰⁾		5 / 0.000	2 / 4.269	2 / 4.642	3 / 6.247	- / -	3 / 6.247	3 / 6.341	3 / 6.483	3 / 6.630	3 / 6.749	16 / 33.496	40 / 74.857	
<i>Subtotal: Recurring</i>		- / 0.000	- / 4.269	- / 4.642	- / 6.247	- / -	- / 6.247	- / 6.341	- / 6.483	- / 6.630	- / 6.749	- / 33.496	- / 74.857	
<i>Subtotal: X1036 AN/FPN-63 PAR TECH REFRESH</i>		5 / 0.000	2 / 4.269	2 / 4.642	3 / 6.247	- / -	3 / 6.247	3 / 6.341	3 / 6.483	3 / 6.630	3 / 6.749	16 / 33.496	40 / 74.857	
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 4.269	- / 4.642	- / 6.247	- / -	- / 6.247	- / 6.341	- / 6.483	- / 6.630	- / 6.749	- / 33.496	- / 74.857	
Support (All Modification Items)														
2.1) Integrated Logistics Support		- / -	- / 0.405	- / 0.411	- / 0.411	- / -	- / 0.411	- / 0.400	- / 0.400	- / 0.150	- / 0.075	Continuing	Continuing	
2.2) Production Engineering ⁽²¹⁾		- / -	- / 1.690	- / 1.722	- / 1.038	- / -	- / 1.038	- / 0.677	- / 0.599	- / 0.118	- / 0.118	Continuing	Continuing	
2.3) Quality Assurance		- / -	- / 0.030	- / 0.030	- / 0.030	- / -	- / 0.030	- / 0.035	- / 0.035	- / 0.035	- / 0.035	Continuing	Continuing	
<i>Subtotal: Support</i>		- / 0.000	- / 2.125	- / 2.163	- / 1.479	- / -	- / 1.479	- / 1.112	- / 1.034	- / 0.303	- / 0.228	Continuing	Continuing	
Installation														
<i>Modification Item 1 of 1: X1036 AN/FPN-63 PAR TECH REFRESH</i>		- / 0.000	- / 3.453	- / 1.666	- / 1.696	- / 0.000	- / 1.696	- / 2.589	- / 2.637	- / 2.685	- / 2.732	- / 12.683	- / 30.141	
<i>Subtotal: Installation</i>		- / 0.000	- / 3.453	- / 1.666	- / 1.696	- / -	- / 1.696	- / 2.589	- / 2.637	- / 2.685	- / 2.732	- / 12.683	- / 30.141	
Total														
Total Cost (Procurement + Support + Installation)		0.000	9.847	8.471	9.422	0.000	9.422	10.042	10.154	9.618	9.709	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment									Modification Number / Title: 12 / X1036 AN/FPN-63 PAR TECH REFRESH																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: X1036 AN/FPN-63 PAR TECH REFRESH</i>																																
Manufacturer Information																																
Manufacturer Name: MOOG							Manufacturer Location: Salt Lake City, UT																									
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 13																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Dec 2016		Dec 2017		Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022																			
Delivery Dates	Jan 2018		Jan 2019		Jan 2020		Jan 2021		Jan 2022		Jan 2023		Jan 2024																			
Installation Information																																
Method of Implementation: Alteration Installation Team:: Installation Name: X1036 - PAR Tech Refresh																																
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.453	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 3.453																
FY 2017				- / -	- / -	2 / 1.666	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.666																
FY 2018				- / -	- / -	- / -	2 / 1.696	0 / 0.000	2 / 1.696	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.696																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.589	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.589																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.637	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.637																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.685	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.685																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 2.732																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.108	3 / 2.108																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 10.575	16 / 10.575																
Total				- / -	5 / 3.453	2 / 1.666	2 / 1.696	0 / 0.000	2 / 1.696	3 / 2.589	3 / 2.637	3 / 2.685	3 / 2.732	19 / 12.683	40 / 30.141																	
Installation Schedule																																
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		FY 2023		TC												
	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	1	-	1	1	1	-	1	1	1	-	1	19	40									
Out	-	-	-	2	3	-	1	1	-	1	1	-	1	1	1	-	1	1	1	-	1	1	40									
Footnotes:																																
(20) The decrease in unit cost between FY18 and FY19 is due to the procurement of 50% more items in FY19 than FY18, thus providing a quantity discount in FY19.																																
(21) Production Engineering increase in FY19 is due to increased engineering work required to extend the operability and safety of the old AN/FPN-63 systems																																

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment					Modification Number / Title: 13 / X1037 ILS Upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.901	4.752	6.438	0.000	6.438	6.492	6.421	8.981	9.508	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.901	4.752	6.438	0.000	6.438	6.492	6.421	8.981	9.508	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.901	4.752	6.438	0.000	6.438	6.492	6.421	8.981	9.508	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Instrument Landing System (nomenclature TBD contract award) is an automated self-contained system providing precision approach to the air station runways for ILS equipped aircraft, thus reducing manpower required for ground personnel.
 Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2846.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 13 / X1037 ILS Upgrade			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: X1037 ILS Upgrade</i>												
B Kits												
Recurring												
1.1.1) ILS Upgrades - NonOrganic ⁽²²⁾		- / -	1 / 0.392	2 / 0.737	2 / 0.750	- / -	2 / 0.750	2 / 0.750	3 / 1.128	3 / 1.134	3 / 1.237	Continuing
<i>Subtotal: Recurring</i>		- / 0.000	- / 0.392	- / 0.737	- / 0.750	- / -	- / 0.750	- / 0.750	- / 1.128	- / 1.134	- / 1.237	Continuing
<i>Subtotal: X1037 ILS Upgrade</i>		- / -	1 / 0.392	2 / 0.737	2 / 0.750	- / -	2 / 0.750	2 / 0.750	3 / 1.128	3 / 1.134	3 / 1.237	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 0.392	- / 0.737	- / 0.750	- / -	- / 0.750	- / 0.750	- / 1.128	- / 1.134	- / 1.237	Continuing
Support (All Modification Items)												
2.1) Logistics		- / -	- / 0.424	- / 0.411	- / 0.399	- / -	- / 0.399	- / 0.350	- / 0.250	- / 0.248	- / 0.247	Continuing
2.2) Production Engineering		- / -	- / 1.049	- / 1.072	- / 0.517	- / -	- / 0.517	- / 0.392	- / 0.200	- / 0.200	- / 0.100	Continuing
2.4) Quality Assurance		- / -	- / 0.036	- / 0.037	- / 0.038	- / -	- / 0.038	- / 0.039	- / 0.039	- / 0.039	- / 0.040	Continuing
<i>Subtotal: Support</i>		- / 0.000	- / 1.509	- / 1.520	- / 0.954	- / -	- / 0.954	- / 0.781	- / 0.489	- / 0.487	- / 0.387	Continuing
Installation												
<i>Modification Item 1 of 1: X1037 ILS Upgrade</i>		- / 0.000	- / 0.000	- / 2.495	- / 4.734	- / 0.000	- / 4.734	- / 4.961	- / 4.804	- / 7.360	- / 7.884	- / 8.110
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 2.495	- / 4.734	- / -	- / 4.734	- / 4.961	- / 4.804	- / 7.360	- / 7.884	- / 8.110
Total												
Total Cost (Procurement + Support + Installation)		0.000	1.901	4.752	6.438	0.000	6.438	6.492	6.421	8.981	9.508	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment										Modification Number / Title: 13 / X1037 ILS Upgrade												
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:											
<i>Modification Item 1 of 1: X1037 ILS Upgrade</i>																										
Manufacturer Information																										
Manufacturer Name: Selex ES								Manufacturer Location: Overland Park, KS																		
Administrative Leadtime (<i>in Months</i>): 3								Production Leadtime (<i>in Months</i>): 13																		
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																			
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																			
Delivery Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024																			
Installation Information																										
Method of Implementation: [none specified]: Installation Name: ILS Upgrades																										
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	1 / 2.495	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 2.495										
FY 2018			- / -	- / -	- / -	2 / 4.734	0 / 0.000	2 / 4.734	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.734										
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.961	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.961										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.804	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.804										
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.360	- / -	- / -	- / -	0 / 0.000	3 / 7.360										
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.884	- / -	- / -	0 / 0.000	3 / 7.884										
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 8.110	- / -	3 / 8.110	3 / 8.110										
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
Total			- / -	- / -	1 / 2.495	2 / 4.734	0 / 0.000	2 / 4.734	2 / 4.961	2 / 4.804	3 / 7.360	3 / 7.884	3 / 8.110	16 / 40.348												
Installation Schedule																										
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot		
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	-	-	1	1	1	1	1	1	1	3	16
Out	-	-	-	-	-	1	-	-	-	-	2	-	-	1	1	-	-	1	1	1	1	1	1	1	3	16

Footnotes:

(22) Inventory objective is 31. FY17 has been updated for actuals. Each site (airfield, air station, etc.) will have an independent installation cost base on existing site configurations.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment						Modification Number / Title: 14 / X1043 TACAN Antenna Upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	5.351	9.077	9.576	0.000	9.576	9.622	10.011	9.477	9.633	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	5.351	9.077	9.576	0.000	9.576	9.622	10.011	9.477	9.633	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	5.351	9.077	9.576	0.000	9.576	9.622	10.011	9.477	9.633	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The TACAN Antenna Upgrade program will provide ships and shore installations with a new antenna for TACAN systems. Justification: TACAN is a dated systems with multiple obsolete parts. Modernization of the TACAN antenna is required to reduce maintenance and improve life span in order to meet needs of the Fleet, and provide a stand-alone recovery system for small combatants of the JPALS program restructure.												
Procurements, installations and associated support costs for this effort prior to FY2017 were funded under BLI 2846.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment							Modification Number / Title: 14 / X1043 TACAN Antenna Upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore Sites			Modification Type: Modernization					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: X1043 TACAN Antenna Upgrade</i>													
B Kits													
Recurring													
1.1.1) TACAN Antenna Upgrade - NonOrganic ⁽²³⁾		- / -	11 / 2.532	24 / 5.690	24 / 5.232	- / -	24 / 5.232	24 / 5.238	24 / 5.501	24 / 5.592	24 / 5.712	110 / 45.393	265 / 80.890
<i>Subtotal: Recurring</i>		- / 0.000	- / 2.532	- / 5.690	- / 5.232	- / -	- / 5.232	- / 5.238	- / 5.501	- / 5.592	- / 5.712	- / 45.393	- / 80.890
<i>Subtotal: X1043 TACAN Antenna Upgrade</i>		- / -	11 / 2.532	24 / 5.690	24 / 5.232	- / -	24 / 5.232	24 / 5.238	24 / 5.501	24 / 5.592	24 / 5.712	110 / 45.393	265 / 80.890
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 2.532	- / 5.690	- / 5.232	- / -	- / 5.232	- / 5.238	- / 5.501	- / 5.592	- / 5.712	- / 45.393	- / 80.890
Support (All Modification Items)													
2.1) Logistics		- / -	- / 1.931	- / 1.095	- / 0.561	- / -	- / 0.561	- / 0.555	- / 0.540	- / 0.299	- / 0.275	Continuing	Continuing
2.2) Production Engineering		- / -	- / 0.815	- / 0.785	- / 0.514	- / -	- / 0.514	- / 0.523	- / 0.618	- / 0.162	- / 0.150	Continuing	Continuing
2.3) Quality Assurance		- / -	- / 0.073	- / 0.064	- / 0.053	- / -	- / 0.053	- / 0.042	- / 0.040	- / 0.040	- / 0.040	Continuing	Continuing
<i>Subtotal: Support</i>		- / 0.000	- / 2.819	- / 1.944	- / 1.128	- / -	- / 1.128	- / 1.120	- / 1.198	- / 0.501	- / 0.465	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: X1043 TACAN Antenna Upgrade</i>		- / 0.000	- / 0.000	- / 1.443	- / 3.216	- / 0.000	- / 3.216	- / 3.264	- / 3.312	- / 3.384	- / 3.456	- / 34.778	- / 52.853
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 1.443	- / 3.216	- / -	- / 3.216	- / 3.264	- / 3.312	- / 3.384	- / 3.456	- / 34.778	- / 52.853
Total													
Total Cost (Procurement + Support + Installation)		0.000	5.351	9.077	9.576	0.000	9.576	9.622	10.011	9.477	9.633	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2820 / Ashore ATC Equipment												Modification Number / Title: 14 / X1043 TACAN Antenna Upgrade							
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:								
Modification Item 1 of 1: X1043 TACAN Antenna Upgrade																							
Manufacturer Information																							
Manufacturer Name: MOOG										Manufacturer Location: Salt Lake City, UT													
Administrative Leadtime (<i>in Months</i>): 3										Production Leadtime (<i>in Months</i>): 13													
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																
Delivery Dates	Jan 2018	Jan 2019	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023																
Installation Information																							
Method of Implementation: AIT Installation:: Installation Name: TACAN Antenna Upgrade																							
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total									
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	11 / 1.443	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.443					
FY 2018			- / -	- / -	- / -	24 / 3.216	0 / 0.000	24 / 3.216	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.216					
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.264	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.264					
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.312	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.312					
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.384	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.384					
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.456	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.456					
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000	- / -	- / -	- / -	21 / 4.706	24 / 4.706					
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	134 / 30.072	134 / 30.072					
Total			- / -	- / -	11 / 1.443	24 / 3.216	0 / 0.000	24 / 3.216	24 / 3.264	24 / 3.312	24 / 3.384	24 / 3.456	27 / 3.456	155 / 34.778	289 / 52.853								
Installation Schedule																							
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022						
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	-	-	-	-	-	5	4	2	-	6	6	6	6	6	6	6	6	6	6	6	6	155	289
Out	-	-	-	-	-	5	4	2	-	6	6	6	6	6	6	6	6	6	6	6	6	155	289
Footnotes:																							
(23) Inventory objective is 265. FY18 install 4 Test Beds and 1 shipboard installation. The decrease in unit cost between FY18 and FY19 (and beyond) is due to the program's ability to procure a mixture of new and refurbished antennas beginning in FY19. The refurbished antennas will cost less than the new antennas, thus decreasing the overall average unit cost of 24 systems/year. The exact number of new/ refurbished systems each year will not be known until the contract option is exercised for any given year.																							

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment					2830 / Afloat ATC 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: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	0.000	29.411	44.611	47.890	0.000	47.890	49.265	51.918	52.012	53.103	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	0.000	29.411	44.611	47.890	0.000	47.890	49.265	51.918	52.012	53.103	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	0.000	29.411	44.611	47.890	0.000	47.890	49.265	51.918	52.012	53.103	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	1.458	0.606	0.546	-	0.546	0.513	0.068	0.263	1.028	Continuing	Continuing					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
Efforts for Shipboard Air Traffic Control (SATC) and Automatic Carrier Landing System (ACLS) were previously funded under BLIs OPN 2831 and OPN 2832, respectively. Beginning in FY 2017, this consolidated line item (OPN 2830, Afloat ATC Equipment) continues efforts previously executed under OPN 2831 and OPN 2832 and is not considered a new start.																	
DESCRIPTION:																	
Shipboard Air Traffic Control (SATC):																	
SATC systems are responsible for safe and expeditious control of air traffic within 50 Nautical Miles of a ship. SATC systems include the air traffic surveillance radar (ASR), AN/SPN43 and the air traffic control processing and display system, AN/TPX-42A(V), which has three major configurations: AN/TPX-42A(V)14/15/16. v14 and v16 configurations comprise of Carrier Air Traffic Control Center - Direct Altitude and Identity Readout (CATCC-DAIR), Amphibious Air Traffic Control Center - Direct Altitude and Identity Readout (AATCC-DAIR); both (V)14 and (V)16 DAIR systems use AN/SPN-43 and Identification Friend or Foe (IFF) inputs to track and control aircraft. The third configuration, AN/TPX-42A(V)15 interfaces with next generation multipurpose radars and IFF to perform the same mission. Obsolescence problems are being addressed through various upgrades in a phased approach. The major upgrades include a series of AN/TPX-42A(V) modification kits requiring various combinations of OL-541 processor rehost, track processor upgrade, OD-220 console, audio/video recorder, flat panel display, embedded trainer, and other components to bring the AN/TPX-42A(V)14 system to AN/TPX-42A(V)16 configuration and eventually to the Air Traffic Control Multifunction Console configuration. The ASR capability provided by the AN/SPN-43 radar system is required for NIMITZ Class CVNs and LHA/LHD class ships until the capability is replaced by the AN/SPN-50 Shipboard Air Traffic Radar. Obsolescence problems are being addressed through various upgrades in a phased approach until replaced.																	
Automatic Carrier Landing System (ACLS):																	
ACLS program comprises three legacy systems (AN/SPN-46, AN/SPN-41, and AN/SPN-35C) that provide the primary and secondary precision electronic guidance for landing suitably equipped aircraft under all weather conditions on CVNs, LHA/LHD class ships, and selected Naval Air Stations. Many of the components in the system have been in service for more than twenty years. This program funds maintainability, reliability, modernization and supportability improvements to existing equipment components that can no longer be maintained, procured or supported, as well as items providing upgraded operational capability. Life Cycle Extension (LCE) sustainment efforts for ACLS systems will be completed to address obsolescence and supportability issues, leverage Commercial Off-The-Shelf (COTS) technology, address cyber-security updates and requirements, and support external system interface requirements. The LCE efforts by system are planned to be conducted in blocks, to address the most critical obsolescence, supportability, and emergent requirements first and to group remaining improvements into logical block upgrade packages that minimize multiple, duplicative repair efforts and reduce costs while delivering hardware in a time phased approach to meet ship maintenance availability schedules.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment		P-1 Line Item Number / Title: 2830 / Afloat ATC 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: N/A		
AN/SPN-46 Precision Approach Landing System (PALS) provides aircraft position information to the Final Control Workstation in Carrier Air Traffic Control Center (CATCC), and provides the pilot with the capability of selecting a fully automatic, instrument landing, or talk down approach. This system is certified to provide the carrier with an all-weather flight operational capability. Initial Operational Capability (IOC) of the AN/SPN-46 was in 1985, and the system has exceeded its design life. There are significant obsolescence issues. AN/SPN-46 Block IV upgrade is designed to correct known obsolescence issues in the antenna pedestal, 50KW Ka band modulator/transmitter, and various Circuit Card Assemblies (CCAs). If this effort is not accomplished, replacement parts will not be available to support the system, thereby, negatively affecting Operational Availability (Ao) and safety of flight on the aircraft carrier.		
AN/SPN-41 Transmitting set provides all weather instrument approach guidance from the ship to the aircraft equipped with AN/ARA-63 Receiver Group. It is a secondary precision electronic landing system and safety of flight back up to provide azimuth and elevation alignment information to suitably equipped aircraft aboard CVN and LHA/LHD class ships. Initial Operational Capability (IOC) of the AN/SPN-41 was in 1970 and the system has exceeded its design life. AN/SPN-41 LCE upgrades include the Transmitter, Coder, Electronics Drawer, and Radome hardware to ensure continued operational availability of and extended the service life of the AN/SPN-41, and is the Joint Precision Approach and Landing System (JPALS) back-up system.		
AN/SPN-35C is the Precision Approach Radar aboard LHA/LHD class ships and is used for Mode III aircraft recovery which ensures the safe approach and landing of AV-8B and various helicopters during adverse weather and night conditions. Initial Operational Capability (IOC) of the AN/SPN-35C was in 2004. The AN/SPN-35C Block I upgrade includes replacement of common failure items, obsolete components, and analog system components, including the Radar Processor Controller (RPC), the Main Input/Output Processor (MIOP), and replace obsolete Control-Indicator Displays to ensure continued operational availability of and extended the service life of the AN/SPN-35C.		
Procurement, installations and associated support costs with these efforts prior to FY2017 were funded under BLI 2832.		
Installing Agent: Shipyards and Alteration Installation Teams. When installation to be made: Selected Restricted Availability (SRA) / Restricted Availability (RAV). Ships or facilities to receive the equipment: CVNs, LHA/LHD class ships, Software Support Activity (NAWCAD, St Inigoes, MD) and various selected shore and training sites.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment				P-1 Line Item Number / Title: 2830 / Afloat ATC 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: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-3a	1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060) (Modernization)				- / 0.000	- / 8.485	- / 8.657	- / 8.593	- / 0.000	- / 8.593
P-3a	2 / ACLS MOD KITS SUMMARY PN408 (Modernization)				- / 0.000	- / 7.028	- / 12.064	- / 11.108	- / 0.000	- / 11.108
P-3a	3 / AN/SPN-46 (V)3 Radar Set Group PN413 (Reliability)				- / 0.000	- / 6.219	- / 7.086	- / 3.384	- / 0.000	- / 3.384
P-3a	4 / AN/SPN-41 Transmitter MOD (LCE) PN416 (Modernization)				- / 0.000	- / 1.101	- / 0.499	- / 0.019	- / 0.000	- / 0.019
P-3a	5 / AN/SPN-41 Coder Monitor (LCE) PN417 (Modernization)				- / 0.000	- / 1.023	- / 0.981	- / 0.614	- / 0.000	- / 0.614
P-3a	6 / AN/SPN-41 Electronic Drawer Assembly (LCE) PN418 (Modernization)				- / 0.000	- / 2.534	- / 1.392	- / 1.581	- / 0.000	- / 1.581
P-3a	7 / AN/SPN-41 Radome Hardware Upgrade (LCE) PN419 (Modernization)				- / 0.000	- / 1.692	- / 0.121	- / 0.000	- / 0.000	- / 0.000
P-3a	8 / AN/SPN-46 Block IV (PN420) (TBD)				- / 0.000	- / 1.329	- / 13.811	- / 21.116	- / 0.000	- / 21.116
P-3a	9 / AN/SPN-35 Block I (PN421) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 1.475	- / 0.000	- / 1.475
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 29.411	- / 44.611	- / 47.890	- / 0.000	- / 47.890
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-3a	1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060) (Modernization)				- / 8.560	- / 8.587	- / 8.738	- / 8.921	Continuing	Continuing
P-3a	2 / ACLS MOD KITS SUMMARY PN408 (Modernization)				- / 11.195	- / 19.257	- / 18.210	- / 22.092	Continuing	Continuing
P-3a	3 / AN/SPN-46 (V)3 Radar Set Group PN413 (Reliability)				- / 0.791	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 17.480
P-3a	4 / AN/SPN-41 Transmitter MOD (LCE) PN416 (Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.619
P-3a	5 / AN/SPN-41 Coder Monitor (LCE) PN417 (Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.618
P-3a	6 / AN/SPN-41 Electronic Drawer Assembly (LCE) PN418 (Modernization)				- / 0.800	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.307
P-3a	7 / AN/SPN-41 Radome Hardware Upgrade (LCE) PN419 (Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.813
P-3a	8 / AN/SPN-46 Block IV (PN420) (TBD)				- / 22.630	- / 14.602	- / 14.384	- / 10.307	Continuing	Continuing
P-3a	9 / AN/SPN-35 Block I (PN421) (TBD)				- / 5.289	- / 9.472	- / 10.680	- / 11.783	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 49.265	- / 51.918	- / 52.012	- / 53.103	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:

FY 2019 funds baseline programs to provide Automatic Carrier Landing System (ACLS) and Shipboard Air Traffic Control (SATC) systems.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total						
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-						
Gross/Weapon System Cost (\$ in Millions)	0.000	8.485	8.657	8.593	0.000	8.593	8.560	8.587	8.738	8.921	Continuing	Continuing						
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Net Procurement (P-1) (\$ in Millions)	0.000	8.485	8.657	8.593	0.000	8.593	8.560	8.587	8.738	8.921	Continuing	Continuing						
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Total Obligation Authority (\$ in Millions)	0.000	8.485	8.657	8.593	0.000	8.593	8.560	8.587	8.738	8.921	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 equipment and installation costs on this P-3a are for individual modification programs that do not exceed \$5 million in either budget or \$10 million in three years. This exhibit summarizes procurement and installation for Cost Codes MP052, MP054, MP055, MP056, MP057, MP058, MP059, and MP060. Line item Engineering Changes to Correct Deficiencies captures unanticipated emergent engineering changes.																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: CVNs, LHA/LHD class ships			Modification Type: Modernization				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)													
B Kits													
Recurring													
1.1.4) (MP054)TPX-42 UPG, FC4 (Recorders) - NonOrganic ⁽¹⁾	6 / 0.000	6 / 0.306	2 / 0.104	6 / 0.318	- / -	6 / 0.318	5 / 0.275	- / -	- / -	- / -	- / -	- / -	25 / 1.003
1.1.5) (MP055) TPX-42 UPG, FC5 - NonOrganic ⁽²⁾	3 / 0.000	3 / 1.470	2 / 0.998	2 / 1.003	- / -	2 / 1.003	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.471
1.1.6) (MP056) TPX-42 Embedded Trainer - NonOrganic ⁽³⁾	6 / 0.000	6 / 0.536	2 / 0.140	1 / 0.071	- / -	1 / 0.071	2 / 0.148	- / -	- / -	- / -	- / -	- / -	17 / 0.895
1.1.7) (MP057) TPX-42 Embedded Trainer Final Control - NonOrganic ⁽⁴⁾	- / -	- / -	- / -	7 / 0.410	- / -	7 / 0.410	6 / 0.268	5 / 0.278	7 / 0.398	- / -	- / -	- / -	25 / 1.354
1.1.8) (MP058) TPX-42 Multi-Function Console - NonOrganic ⁽⁵⁾	- / -	- / -	2 / 2.444	1 / 1.223	- / -	1 / 1.223	1 / 1.247	1 / 1.700	1 / 1.734	1 / 1.769	18 / 21.986	25 / 32.103	
1.1.9) (MP059) TPX-42 ECP Upgrades - NonOrganic ⁽⁶⁾	4 / 0.000	2 / 0.651	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.651
1.1.18) (MP052) SPN-43 ECP Upgrade - NonOrganic ⁽⁷⁾	6 / 0.000	4 / 0.952	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.952
1.1.19) (MP060) SPN-43 Transmitter/Receiver Upgrade - NonOrganic ⁽⁸⁾	- / -	- / -	1 / 2.496	1 / 2.550	- / -	1 / 2.550	1 / 2.601	1 / 2.652	1 / 2.707	1 / 2.761	19 / 47.500	25 / 63.267	
Subtotal: Recurring	- / 0.000	- / 3.915	- / 6.182	- / 5.575	- / -	- / 5.575	- / 4.539	- / 4.630	- / 4.839	- / 4.530	- / 69.486	- / 103.696	
Subtotal: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)	25 / 0.000	21 / 3.915	9 / 6.182	18 / 5.575	- / -	18 / 5.575	15 / 4.539	7 / 4.630	9 / 4.839	2 / 4.530	37 / 69.486	143 / 103.696	
Subtotal: Procurement, All Modification Items	- / 0.000	- / 3.915	- / 6.182	- / 5.575	- / -	- / 5.575	- / 4.539	- / 4.630	- / 4.839	- / 4.530	- / 69.486	- / 103.696	
Support (All Modification Items)													
2.1) Engineering Changes to Correct Deficiencies	- / -	- / 0.352	- / 0.366	- / 0.380	- / -	- / 0.380	- / 0.355	- / 0.366	- / 0.373	- / 0.380	Continuing	Continuing	
2.2) Integrated Logistics Support	- / -	- / 0.281	- / 0.305	- / 0.315	- / -	- / 0.315	- / 0.324	- / 0.340	- / 0.333	- / 0.339	Continuing	Continuing	
2.3) Production Engineering	- / -	- / 0.270	- / 0.295	- / 0.304	- / -	- / 0.304	- / 0.311	- / 0.300	- / 0.310	- / 0.316	Continuing	Continuing	
2.4) Quality Assurance	- / -	- / 0.050	- / 0.055	- / 0.060	- / -	- / 0.060	- / 0.065	- / 0.070	- / 0.075	- / 0.076	Continuing	Continuing	
Subtotal: Support	- / 0.000	- / 0.953	- / 1.021	- / 1.059	- / -	- / 1.059	- / 1.055	- / 1.076	- / 1.091	- / 1.111	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: CVNs, LHA/LHD class ships			Modification Type: Modernization										
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)		- / 0.000	- / 3.617	- / 1.454	- / 1.959	- / 0.000	- / 1.959	- / 2.966	- / 2.881	- / 2.808	- / 3.280	- / 32.028	- / 50.993
<i>Subtotal: Installation</i>		- / 0.000	- / 3.617	- / 1.454	- / 1.959	- / -	- / 1.959	- / 2.966	- / 2.881	- / 2.808	- / 3.280	- / 32.028	- / 50.993
Total													
Total Cost (Procurement + Support + Installation)		0.000	8.485	8.657	8.593	0.000	8.593	8.560	8.587	8.738	8.921	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																														
Manufacturer Information																														
Manufacturer Name: NAWCAD						Manufacturer Location: Patuxent River, MD																								
Administrative Leadtime (<i>in Months</i>): 7						Production Leadtime (<i>in Months</i>): 6																								
Dates	FY 2017	FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates	Apr 2017	Apr 2018		Apr 2019																										
Delivery Dates	Oct 2017	Oct 2018		Oct 2019																										
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: (MP054)TPX-42 UPG, FC4 (Recorders)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.300																
FY 2017	- / -	- / -	6 / 0.317	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.317																
FY 2018	- / -	- / -	- / -	2 / 0.115	0 / 0.000	2 / 0.115	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.115																
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.675	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.675																
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.574	- / -	- / -	- / -	- / -	0 / 0.000	5 / 0.574																
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total	- / -	6 / 0.300	6 / 0.317	2 / 0.115	0 / 0.000	2 / 0.115	6 / 0.675	5 / 0.574	- / -	- / -	- / -	- / -	0 / 0.000	25 / 1.981																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	1	-	-	-	-	-	-	25				
Out	-	2	2	2	-	2	2	2	-	-	2	-	2	2	2	-	2	2	1	-	-	-	-	-	-	25				

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: (MP055) TPX-42 UPG, FC5																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.274															
FY 2017				- / -	- / -	3 / 0.289	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.289															
FY 2018				- / -	- / -	- / -	2 / 0.182	0 / 0.000	2 / 0.182	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.182															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.187	- / -	- / -	- / -	0 / 0.000	2 / 0.187															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				- / -	3 / 0.274	3 / 0.289	2 / 0.182	0 / 0.000	2 / 0.182	2 / 0.187	- / -	- / -	- / -	0 / 0.000	10 / 0.932															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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				
Method of Implementation: [none specified]:: Installation Name: (MP056) TPX-42 Embedded Trainer																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.845	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.845														
FY 2017				- / -	- / -	6 / 0.848	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.848													
FY 2018				- / -	- / -	- / -	2 / 0.281	0 / 0.000	2 / 0.281	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.281													
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.192	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.192													
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.385	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.385													
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:															
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																											
Installation Information																											
Method of Implementation: [none specified]:: Installation Name: (MP056) TPX-42 Embedded Trainer																											
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)										
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total				- / -	6 / 0.845	6 / 0.848	2 / 0.281	0 / 0.000	2 / 0.281	1 / 0.192	2 / 0.385	- / -	- / -	0 / 0.000	17 / 2.551												
Installation Schedule																											
	PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot			
		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	-	-	1	1	-	-	1	1	-	-	-	-	-	17					
Out	-	2	2	2	-	2	2	2	-	-	1	1	-	-	1	1	-	-	-	-	-	17					
Method of Implementation: [none specified]:: Installation Name: (MP057) TPX-42 Embedded Trainer Final Control																											
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.378	- / -	- / -	- / -	- / -	0 / 0.000	7 / 0.378										
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.328	- / -	- / -	- / -	0 / 0.000	6 / 0.328											
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.713	- / -	- / -	0 / 0.000	5 / 0.713												
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.135	0 / 0.000	7 / 1.135														
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
Total				- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.378	6 / 0.328	5 / 0.713	7 / 1.135	0 / 0.000	25 / 2.554											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																				Date: February 2018										
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																														
Installation Information												Method of Implementation: [none specified]:: Installation Name: (MP057) TPX-42 Embedded Trainer Final Control																		
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	2	-	2	2	2	-	1	2	2	-	2	2	3	-	25		
Out	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	2	2	2	-	1	2	2	-	2	2	3	-	25		
Method of Implementation: AIT:: Installation Name: (MP058) TPX-42 Multi-Function Console																														
Installation Cost						Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total			
						Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2018						- / -	- / -	- / -	- / -	2 / 0.881	0 / 0.000	2 / 0.881	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.881						
FY 2019						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.017	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.017						
FY 2020						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.075	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.075						
FY 2021						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.578	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.578						
FY 2022						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.618	0 / 0.000	1 / 1.618					
FY 2023						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.772	1 / 1.772						
To Complete						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 19.579	18 / 19.579						
Total						- / -	- / -	- / -	- / -	2 / 0.881	0 / 0.000	2 / 0.881	1 / 1.017	1 / 1.075	1 / 1.578	1 / 1.618	19 / 21.351	25 / 27.520												
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	19	25			
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	1	-	-	-	1	-	-	19	25			

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: (MP059) TPX-42 ECP Upgrades																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.760	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.760																
FY 2017			- / -	2 / 0.380	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.380																
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			- / -	6 / 1.140	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.140																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6						
Out	-	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6						
Method of Implementation: [none specified]:: Installation Name: (MP052) SPN-43 ECP Upgrade																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.705	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.705																
FY 2017			- / -	4 / 0.353	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.353																
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:															
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																											
Installation Information																											
Method of Implementation: [none specified]:: Installation Name: (MP052) SPN-43 ECP Upgrade																											
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)										
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total				- / -	10 / 1.058	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.058												
Installation Schedule																											
	PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot			
		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						
Method of Implementation: [none specified]:: Installation Name: (MP060) SPN-43 Transmitter/Receiver Upgrade																											
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2018				- / -	- / -	- / -	1 / 0.500	0 / 0.000	1 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.500										
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.517	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.517										
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.519	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.519										
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.517	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.517										
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.527	- / -	- / -	- / -	0 / 0.000	1 / 0.527										
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.537	- / -	- / -	1 / 0.537											
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 10.140	19 / 10.140												
Total				- / -	- / -	- / -	1 / 0.500	0 / 0.000	1 / 0.500	1 / 0.517	1 / 0.519	1 / 0.517	1 / 0.527	20 / 10.677	25 / 13.257												

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Exhibit P-3a, Individual Modification: PB 2019 Navy																				Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment												Modification Number / Title: 1 / SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																												
Modification Item 1 of 1: SATC Modernization Kit Summary (MP052, MP054, MP055, MP056, MP057, MP058, MP059, MP060)																																								
Installation Information																																								
Method of Implementation: [none specified]:: Installation Name: (MP060) SPN-43 Transmitter/Receiver Upgrade																																								
Installation Schedule																																								
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot										
	Q1	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	-	20	25													
Out	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	20	25													

Footnotes:

- (1) MP054 TPX-42 UPG, FC4: Inventory Objective is 25. 4 procurements and 4 installations were funded prior to FY17 and are reflected in BLI 2831.
- (2) MP055 TPX-42 UPG, FC5 Inventory objective is 10. 14 procurements and 14 installations were funded prior to FY17 and are reflected in BLI 2831.
- (3) MP056 TPX-42 Embedded Trainer: Inventory Objective is 17. 8 procurements and 8 installations were funded prior to FY17 and are reflected in BLI 2831.
- (4) MP057 TPX-42 Embedded Trainer Final Control: Inventory Objective is 25.
- (5) MP058 TPX-42 Multi-Function Console: Inventory Objective is 25. The Multi-Function Console (MFC) provides a common human interface for all ATC workstations that includes complete upgrades of software and hardware to support new radar sensors that will reduce operational costs and improve reliability. This item is currently in development and is reflected in the RDT&E Budget (PE 0604504N Air Control/Project Unit 0993). FY2018 will be the first procurement and the government will own the software. Many of the other items in this P-3a are Engineering Change Proposals to resolve obsolescence issues. One system consists of OD/220 controller consoles, OL/541 racks and MT7326 power distribution racks. The OL/541 and MT7326 are common between CVNs and LHD/LHAs, OD/220s however vary between the type of ship, there are 5 OD/220s on CVNs and 8 OD/220s on LHA/Ds. The increased cost in FY21 is due to it being the first year the system is being procured for an LHA/D.
- (6) MP059 TPX-42 ECP Upgrades: Inventory Objective is 6. 4 procurements and 4 installations were funded prior to FY17 and are reflected in BLI 2831.
- (7) MP052 SPN-43 ECP Upgrades: Inventory Objective is 10. 9 procurements and 9 installations were funded prior to FY17 and are reflected in BLI 2831.
- (8) MP060 SPN-43 Transmitter / Receiver Upgrade: Inventory Objective is 25. This cost element provides a major engineering upgrade of hardware and software to the AN/SPN-43 transmitter/receiver that will ensure safe and expeditious shipboard approach, departure, and marshal control to support fleet operations. This is the first such upgrade in over 2 decades. There are no manufacturers of compatible parts for the transmitter/receiver any longer. This upgrade addresses all major obsolescence issues. This item is currently in development and is reflected in the RDT&E Budget (PE 0604504N Air Control/Project Unit 0993). FY2018 will be the first procurement.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 2 / ACLS MOD KITS SUMMARY PN408			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	7.028	12.064	11.108	0.000	11.108	11.195	19.257	18.210	22.092	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	7.028	12.064	11.108	0.000	11.108	11.195	19.257	18.210	22.092	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	7.028	12.064	11.108	0.000	11.108	11.195	19.257	18.210	22.092	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 equipment and installation costs on this P-3a are for individual modification programs for AN/SPN-35/41/46 systems. Funding has also been provided for upgrades addressing broadened cyber-security requirements to remain compliant with software cyber-security directives and Information Assurance mandates. Line item "Engineering Changes to Correct Deficiencies" captures anticipated emergent engineering changes. PMA213 configuration control board approves inventory objectives. Contract and Delivery dates are various.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment							Modification Number / Title: 2 / ACLS MOD KITS SUMMARY PN408			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: CVNs, LHA/LHD class ship, and selected shore sites			Modification Type: Modernization					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: ACLS MOD KITS SUMMARY PN408													
B Kits													
Non-Recurring													
1.1.1) AN/SPN-46 TS-4176 - NonOrganic	4 / 0.000	4 / 0.800	1 / 0.200	3 / 0.600	- / -	3 / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.600
1.1.3) AN/SPN-46 COTS Refresh - NonOrganic ⁽⁹⁾	- / -	2 / 0.510	20 / 5.000	10 / 2.370	- / -	10 / 2.370	6 / 1.446	6 / 1.470	6 / 1.500	6 / 1.524	- / -	- / -	56 / 13.820
1.1.4) AN/SPN-46 Obsolescence - NonOrganic	- / -	4 / 0.876	- / -	10 / 2.964	- / -	10 / 2.964	2 / 0.604	4 / 1.228	- / -	- / -	- / -	- / -	20 / 5.672
1.1.14) AN/SPN-35 Receiver Transmitter Mod - NonOrganic	2 / 0.000	2 / 0.056	1 / 0.028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.084
1.1.16) AN/SPN-46 Unit 16 Power Supply - NonOrganic	- / -	- / -	- / -	3 / 0.552	- / -	3 / 0.552	3 / 0.561	4 / 0.764	3 / 0.582	3 / 0.585	- / -	- / -	16 / 3.044
Subtotal: Non-Recurring	- / 0.000	- / 2.242	- / 5.228	- / 6.486	- / -	- / 6.486	- / 2.611	- / 3.462	- / 2.082	- / 2.109	- / 0.000	- / 24.220	
Subtotal: ACLS MOD KITS SUMMARY PN408	6 / 0.000	12 / 2.242	22 / 5.228	26 / 6.486	- / -	26 / 6.486	11 / 2.611	14 / 3.462	9 / 2.082	9 / 2.109	- / -	109 / 24.220	
Subtotal: Procurement, All Modification Items	- / 0.000	- / 2.242	- / 5.228	- / 6.486	- / -	- / 6.486	- / 2.611	- / 3.462	- / 2.082	- / 2.109	- / 0.000	- / 24.220	
Support (All Modification Items)													
2.1) Engineering Changes to Correct Deficiencies ECO SPN-46	- / -	- / 0.400	- / 0.469	- / 0.274	- / -	- / 0.274	- / 1.129	- / 7.702	- / 3.366	- / 4.995	Continuing	Continuing	
2.2) Engineering Changes to Correct Deficiencies ECO SPN-35/41	- / -	- / 0.589	- / 1.127	- / 0.588	- / -	- / 0.588	- / 1.581	- / 1.947	- / 2.849	- / 5.212	Continuing	Continuing	
2.3) Integrated Logistics Support	- / -	- / 0.457	- / 0.780	- / 0.446	- / -	- / 0.446	- / 0.459	- / 0.473	- / 0.482	- / 0.482	Continuing	Continuing	
2.4) Production Engineering ⁽¹⁰⁾	- / -	- / 2.247	- / 3.518	- / 1.836	- / -	- / 1.836	- / 2.654	- / 3.613	- / 7.259	- / 8.289	Continuing	Continuing	
2.5) Quality Assurance	- / -	- / 0.102	- / -	- / 0.106	- / -	- / 0.106	- / 0.109	- / 0.109	- / 0.111	- / 0.111	Continuing	Continuing	
2.6) Acceptance, Test and Evaluation	- / -	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Subtotal: Support	- / 0.000	- / 3.825	- / 5.894	- / 3.250	- / -	- / 3.250	- / 5.932	- / 13.844	- / 14.067	- / 19.089	Continuing	Continuing	
Installation													
Modification Item 1 of 1: ACLS MOD KITS SUMMARY PN408	- / 0.000	- / 0.961	- / 0.942	- / 1.372	- / 0.000	- / 1.372	- / 2.652	- / 1.951	- / 2.061	- / 0.894	- / 0.991	- / 11.824	
Subtotal: Installation	- / 0.000	- / 0.961	- / 0.942	- / 1.372	- / -	- / 1.372	- / 2.652	- / 1.951	- / 2.061	- / 0.894	- / 0.991	- / 11.824	
Total													
Total Cost (Procurement + Support + Installation)	0.000	7.028	12.064	11.108	0.000	11.108	11.195	19.257	18.210	22.092	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9															Modification Number / Title: 2 / ACLS MOD KITS SUMMARY PN408																
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: ACLS MOD KITS SUMMARY PN408</i>															MDAP/MAIS Code:																
Manufacturer Information																															
Manufacturer Name: NAWCAD															Manufacturer Location: Patuxent River, MD																
Administrative Leadtime (<i>in Months</i>): 3															Production Leadtime (<i>in Months</i>): 12																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																								
Delivery Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023																								
Installation Information																															
Method of Implementation: AIT (Alteration Installation Team):: Installation Name: ACLS Mod Kits																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.961	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.961															
FY 2017			- / -	- / -	12 / 0.942	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 0.942															
FY 2018			- / -	- / -	- / -	22 / 1.372	0 / 0.000	22 / 1.372	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 1.372															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	26 / 2.652	- / -	- / -	- / -	- / -	- / -	0 / 0.000	26 / 2.652															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 1.951	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.951															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.061	- / -	- / -	- / -	0 / 0.000	14 / 2.061															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.894	- / -	- / -	0 / 0.000	9 / 0.894															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.991	- / -	9 / 0.991	9 / 0.991															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			- / -	6 / 0.961	12 / 0.942	22 / 1.372	0 / 0.000	22 / 1.372	26 / 2.652	11 / 1.951	14 / 2.061	9 / 0.894	9 / 0.991	109 / 11.824																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	-	6	6	-	-	10	12	-	1	14	10	1	1	5	5	-	1	7	6	-	1	5	3	-	9	109
Out	-	-	4	2	-	-	6	6	-	-	10	12	-	1	14	10	1	1	5	5	-	1	7	6	-	1	5	3	-	9	109
Footnotes:																															
(9) The variance in kit costs from year to year is due to the makeup of the different equipment being installed each year, the different hull types receiving modifications, and the different Design Services Allocation (DSA) and install costs from different locations depending on where modifications are performed.																															
(10) Several SPN-46 subassemblies are rapidly becoming unsustainable due primarily to component obsolescence. Increased production engineering will be required in support of future, approved ECP efforts to mitigate these issues and keep the SPN-46 viable to support Warfighter ACLS operations.																															

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 3 / AN/SPN-46 (V)3 Radar Set Group PN413
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	0.000	6.219	7.086	3.384	0.000	3.384	0.791	0.000	0.000	0.000	0.000	17.480	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	0.000	6.219	7.086	3.384	0.000	3.384	0.791	0.000	0.000	0.000	0.000	17.480	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	0.000	6.219	7.086	3.384	0.000	3.384	0.791	0.000	0.000	0.000	0.000	17.480	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: The equipment and installation costs on this P-3a are for individual modifications as part of the AN/SPN-46 Life Cycle Extension program. The current AN/SPN-46 receiver houses both Ka and X-band components that are densely packaged and RF components that are obsolete technology and are no longer manufactured. The Radar Set Group re-packages the RF components using more modern and smaller components making the unit able to be supported and maintained. The inventory objective for this item is 13, of which 11 are OPN-funded and 2 SCN-funded.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: CVNs and selected shore sites			Modification Type: Reliability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: AN/SPN-46 (V)3 Radar Set Group PN413</i>												
B Kits												
Recurring												
2.1.1) AN/SPN-46 (V)3 Radar Set Group PN413 - NonOrganic ⁽¹¹⁾	3 / 0.000	2 / 2.641	2 / 2.695	1 / 1.372	- / -	1 / 1.372	- / -	- / -	- / -	- / -	- / -	8 / 6.708
<i>Subtotal: Recurring</i>	- / 0.000	- / 2.641	- / 2.695	- / 1.372	- / -	- / 1.372	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: AN/SPN-46 (V)3 Radar Set Group PN413</i>	3 / 0.000	2 / 2.641	2 / 2.695	1 / 1.372	- / -	1 / 1.372	- / -	- / -	- / -	- / -	- / -	8 / 6.708
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 2.641	- / 2.695	- / 1.372	- / -	- / 1.372	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
3.1) Integrated Logistic Support	- / -	- / 0.063	- / 0.047	- / 0.048	- / -	- / 0.048	- / -	- / -	- / -	- / -	- / -	- / 0.158
3.2) Production Engineering	- / -	- / 1.502	- / 1.871	- / 0.385	- / -	- / 0.385	- / -	- / -	- / -	- / -	- / -	- / 3.758
3.3) Acceptance Test & Evaluation	- / -	- / 0.214	- / 0.208	- / 0.025	- / -	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / 0.447
<i>Subtotal: Support</i>	- / 0.000	- / 1.779	- / 2.126	- / 0.458	- / -	- / 0.458	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: AN/SPN-46 (V)3 Radar Set Group PN413</i>	- / 0.000	- / 1.799	- / 2.265	- / 1.554	- / 0.000	- / 1.554	- / 0.791	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.409
<i>Subtotal: Installation</i>	- / 0.000	- / 1.799	- / 2.265	- / 1.554	- / -	- / 1.554	- / 0.791	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	0.000	6.219	7.086	3.384	0.000	3.384	0.791	0.000	0.000	0.000	0.000	17.480

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 3 / AN/SPN-46 (V)3 Radar Set Group PN413																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: AN/SPN-46 (V)3 Radar Set Group PN413																																	
Manufacturer Information																																	
Manufacturer Name: NAWCAD							Manufacturer Location: Patuxent River, MD																										
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Dec 2016		Dec 2017		Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022		Dec 2023																		
Delivery Dates	Dec 2017		Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022		Dec 2023																				
Installation Information																																	
Method of Implementation: Alteration Installation Team (AIT):: Installation Name: AN/SPN-46 (V)3 Radar Set Group PN413																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.799	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.799																	
FY 2017			- / -	- / -	2 / 2.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.265																	
FY 2018			- / -	- / -	- / -	2 / 1.554	0 / 0.000	2 / 1.554	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.554																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.791	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.791																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total			- / -	3 / 1.799	2 / 2.265	2 / 1.554	0 / 0.000	2 / 1.554	1 / 0.791	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 6.409																	
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot											
	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	-	1	1	-	-	-	-	-	-	-	-	-	-	8											
Out	-	-	1	2	-	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	8											
Footnotes:																																	
(11) Inventory objective is 13, of which 11 are OPN-funded and 2 SCN-funded. Note - The auxiliary hardware required varies slightly depending on what past modifications have already been incorporated into the old chassis being upgraded to the new RSG. 6 of the 11 OPN funded were procured prior to FY2017 under BLI 2832 and 3 of those 6 were installed prior to FY2017 under BLI 2832.																																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 4 / AN/SPN-41 Transmitter MOD (LCE) PN416			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.101	0.499	0.019	0.000	0.019	0.000	0.000	0.000	0.000	0.000	1.619
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.101	0.499	0.019	0.000	0.019	0.000	0.000	0.000	0.000	0.000	1.619
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.101	0.499	0.019	0.000	0.019	0.000	0.000	0.000	0.000	0.000	1.619
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AN/SPN-41 Transmitter MOD (LCE) PN416. The equipment and installation costs on this P-3a are for individual modification programs though it must be installed in conjunction with ECP SPN41-030 and SPN41-034 in order to be fully functional as part of the AN/SPN-41 Life Cycle Extension (LCE) program. The existing transmitter is an older technology two-channel Silicon Controlled Rectifier (SCR) line type modulator that is experiencing maintainability and obsolescence issues. The transmitter is the number one maintenance cost driver and system performance degrader. This change will improve logistic supportability and system maintainability. Line Repairable Units (LRUs) Circuit Card Assemblies (CCAs) and Built-In Test (BIT) capabilities will be incorporated in the transmitter thus reducing cost for shipboard repairs and maintenance.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: CVNs, LHA/LHD class ships, and selected shore sites			Modification Type: Modernization				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: AN/SPN-41 Transmitter MOD (LCE) PN416</i>												
B Kits												
Recurring												
2.1.1) AN/SPN-41 Transmitter Replacement (LCE) - NonOrganic ⁽¹²⁾	1 / 0.000	4 / 0.903	1 / 0.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.158
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.903	- / 0.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: AN/SPN-41 Transmitter MOD (LCE) PN416</i>	1 / 0.000	4 / 0.903	1 / 0.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.158
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.903	- / 0.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
3.1) Integrated Logistics	- / -	- / 0.031	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.061
3.2) Production Engineering	- / -	- / 0.142	- / 0.138	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.280
<i>Subtotal: Support</i>	- / 0.000	- / 0.173	- / 0.168	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.341
Installation												
<i>Modification Item 1 of 1: AN/SPN-41 Transmitter MOD (LCE) PN416</i>	- / 0.000	- / 0.025	- / 0.076	- / 0.019	- / 0.000	- / 0.019	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.120
<i>Subtotal: Installation</i>	- / 0.000	- / 0.025	- / 0.076	- / 0.019	- / -	- / 0.019	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	0.000	1.101	0.499	0.019	0.000	0.019	0.000	0.000	0.000	0.000	0.000	1.619

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									Modification Number / Title: 4 / AN/SPN-41 Transmitter MOD (LCE) PN416																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
Modification Item 1 of 1: AN/SPN-41 Transmitter MOD (LCE) PN416																																
Manufacturer Information																																
Manufacturer Name: NAWCAD							Manufacturer Location: Webster Field, St. Inigoes, MD																									
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Dec 2016		Dec 2017																													
Delivery Dates	Dec 2017		Dec 2018																													
Installation Information																																
Method of Implementation: Alteration Installation Team:: Installation Name: AN/SPN-41 Transmitter Replacement (LCE)																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.025																	
FY 2017			- / -	- / -	4 / 0.076	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.076																	
FY 2018			- / -	- / -	- / -	1 / 0.019	0 / 0.000	1 / 0.019	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.019																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			- / -	1 / 0.025	4 / 0.076	1 / 0.019	0 / 0.000	1 / 0.019	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.120																	
Installation Schedule																																
PYS				FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot						
	Q1	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	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6							
Out	-	-	1	-	-	-	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6							
Footnotes:																																
(12) AN/SPN-41 Transmitter MOD (LCE) inventory objective is 19. 14 procurements and 13 installations were funded through FY2016 on BLI 2832.																																

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 5 / AN/SPN-41 Coder Monitor (LCE) PN417			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.023	0.981	0.614	0.000	0.614	0.000	0.000	0.000	0.000	0.000	2.618
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.023	0.981	0.614	0.000	0.614	0.000	0.000	0.000	0.000	0.000	2.618
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.023	0.981	0.614	0.000	0.614	0.000	0.000	0.000	0.000	0.000	2.618
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AN/SPN-41 Coder Monitor (LCE) PN417. The equipment and installation costs on this P-3a are for individual modification programs though it must be installed in conjunction with ECP SPN41-030 and SPN41-031 in order to be fully functional as part of the AN/SPN-41/41A Life Cycle Extension program. This change will provide upgrades to AN/SPN-41/41A to improve Operational Availability (Ao) by addressing numerous part obsolescence issues germane to the current aging system. The change will also provide digital interfaces with other shipboard systems including the Joint Precision Approach Landing System (JPALS), and extend the service life of the AN/SPN-41/41A.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 5 / AN/SPN-41 Coder Monitor (LCE) PN417
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: CVNs, LHA/LHD class ships, and selected shore sites			Modification Type: Modernization						Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SPN-41 Coder Monitor (LCE) PN417</i>													
B Kits													
Recurring													
2.1.1) AN/SPN-41 Coder Monitor (LCE) - NonOrganic (13)	1 / 0.000	1 / 0.207	1 / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.414
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.207	- / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.414
<i>Subtotal: AN/SPN-41 Coder Monitor (LCE) PN417</i>	1 / 0.000	1 / 0.207	1 / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.414
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.207	- / 0.207	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.414
Support (All Modification Items)													
3.1) Integrated Logistic Support	- / -	- / 0.047	- / 0.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.079
3.2) Production Engineering	- / -	- / 0.177	- / 0.140	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.317
<i>Subtotal: Support</i>	- / 0.000	- / 0.224	- / 0.172	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.396
Installation													
<i>Modification Item 1 of 1: AN/SPN-41 Coder Monitor (LCE) PN417</i>	- / 0.000	- / 0.592	- / 0.602	- / 0.614	- / 0.000	- / 0.614	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.808
<i>Subtotal: Installation</i>	- / 0.000	- / 0.592	- / 0.602	- / 0.614	- / -	- / 0.614	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.808
Total													
Total Cost (Procurement + Support + Installation)	0.000	1.023	0.981	0.614	0.000	0.614	0.000	0.000	0.000	0.000	0.000	0.000	2.618

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									Modification Number / Title: 5 / AN/SPN-41 Coder Monitor (LCE) PN417																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: AN/SPN-41 Coder Monitor (LCE) PN417																														
Manufacturer Information																														
Manufacturer Name: NAWCAD							Manufacturer Location: St. Inigoes, MD																							
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 12																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017																												
Delivery Dates	Dec 2017	Dec 2018																												
Installation Information																														
Method of Implementation: Alteration Installation Team AIT:: Installation Name: AN/SPN-41 Coder Monitor (LCE)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.592																
FY 2017			- / -	- / -	1 / 0.602	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.602																
FY 2018			- / -	- / -	- / -	1 / 0.614	0 / 0.000	1 / 0.614	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.614																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			- / -	1 / 0.592	1 / 0.602	1 / 0.614	0 / 0.000	1 / 0.614	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.808															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3					
Out	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3					
Footnotes:																														
(13) AN/SPN-41 Coder Monitor (LCE) inventory objective is 22 of which 20 procurements and 19 installations were funded through FY2016 on BLI 2832.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 6 / AN/SPN-41 Electronic Drawer Assembly (LCE) PN418			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	2.534	1.392	1.581	0.000	1.581	0.800	0.000	0.000	0.000	0.000	6.307
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	2.534	1.392	1.581	0.000	1.581	0.800	0.000	0.000	0.000	0.000	6.307
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	2.534	1.392	1.581	0.000	1.581	0.800	0.000	0.000	0.000	0.000	6.307
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AN/SPN-41 Electronic Drawer Assembly (LCE) PN418. The equipment and installation costs on this P-3a are for individual modification programs though it must be installed in conjunction with ECP SPN41-031 and SPN41-034 in order to be fully functional as part of the AN/SPN-41 Life Cycle Extension program. This change replaces obsolete analog interfaces with required digital interfaces to connect with other shipboard systems including the Joint Precision Approach Landing System (JPALS).												

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 6 / AN/SPN-41 Electronic Drawer Assembly (LCE) PN418
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: CVNs, LHA/LHD class ships, and selected shore sites			Modification Type: Modernization						Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SPN-41 Electronic Drawer Assembly (LCE) PN418</i>													
B Kits													
Recurring													
2.1.1) AN/SPN-41 Electronic Drawer Assembly (LCE) - NonOrganic ⁽¹⁴⁾		2 / 0.000	4 / 1.712	- / -	2 / 1.289	- / -	2 / 1.289	- / -	- / -	- / -	- / -	- / -	8 / 3.001
<i>Subtotal: Recurring</i>		- / 0.000	- / 1.712	- / -	- / 1.289	- / -	- / 1.289	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: AN/SPN-41 Electronic Drawer Assembly (LCE) PN418</i>		2 / 0.000	4 / 1.712	- / -	2 / 1.289	- / -	2 / 1.289	- / -	- / -	- / -	- / -	- / -	8 / 3.001
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / 1.712	- / -	- / 1.289	- / -	- / 1.289	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)													
3.1) Integrated Logistics		- / -	- / 0.086	- / -	- / 0.086	- / -	- / 0.086	- / -	- / -	- / -	- / -	- / -	- / 0.172
3.2) Production Engineering		- / -	- / 0.388	- / -	- / 0.206	- / -	- / 0.206	- / -	- / -	- / -	- / -	- / -	- / 0.594
<i>Subtotal: Support</i>		- / 0.000	- / 0.474	- / -	- / 0.292	- / -	- / 0.292	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation													
<i>Modification Item 1 of 1: AN/SPN-41 Electronic Drawer Assembly (LCE) PN418</i>		- / 0.000	- / 0.348	- / 1.392	- / 0.000	- / 0.000	- / 0.000	- / 0.800	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.540
<i>Subtotal: Installation</i>		- / 0.000	- / 0.348	- / 1.392	- / -	- / -	- / -	- / 0.800	- / -	- / -	- / -	- / -	- / 0.000
Total													
Total Cost (Procurement + Support + Installation)		0.000	2.534	1.392	1.581	0.000	1.581	0.800	0.000	0.000	0.000	0.000	6.307

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									Modification Number / Title: 6 / AN/SPN-41 Electronic Drawer Assembly (LCE) PN418																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
Modification Item 1 of 1: AN/SPN-41 Electronic Drawer Assembly (LCE) PN418																																
Manufacturer Information																																
Manufacturer Name: NAWCAD							Manufacturer Location: Webster Field, St. Inigoes, MD																									
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Dec 2016				Jan 2019																											
Delivery Dates	Dec 2017				Dec 2019																											
Installation Information																																
Method of Implementation: Alteration Installation Team AIT:: Installation Name: AN/SPN-41 Electronic Drawer Assembly (LCE)																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.348																
FY 2017			- / -	- / -	4 / 1.392	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.392																
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.800	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.800																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			- / -	2 / 0.348	4 / 1.392	- / -	- / -	- / -	- / -	2 / 0.800	- / -	- / -	- / -	- / -	0 / 0.000	8 / 2.540																
Installation Schedule																																
PYS				FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot						
	Q1	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	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	8						
Out	-	-	-	2	-	-	-	4	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	8						
Footnotes:																																
(14) AN/SPN-41 Electronic Drawer Assembly (LCE) inventory objective is (20) with 14 procurements and 12 installations occurring in PY - FY16 are funded in BLI 2832. Inventory objective changed from 19 to 20 due to one of the original EDA units that was used, as intended, for initial system testing (including shock and vibe). When completed this type testing usually results in a unit that is damaged beyond acceptable repair. It should not have been counted as an End Item for installation in the Fleet once testing was completed.																																

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment								Modification Number / Title: 7 / AN/SPN-41 Radome Hardware Upgrade (LCE) PN419	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.692	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.813
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.692	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.813
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.692	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.813
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AN/SPN-41 Radome Hardware Upgrade (LCE) PN419. The equipment and installation costs on this P-3a are for individual modification programs. This is part of the AN/SPN-41 Life Cycle Extension program. This change will improve overall AN/SPN-41/41A Operational Availability (Ao) by addressing extreme environmental issues currently being experienced by the systems in the field. This change increases overall thermal resistance while decreasing solar absorptivity thereby reducing the ambient operating temperature for the equipment inside the radome, prolonging component life and reducing failure rates.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment										Modification Number / Title: 7 / AN/SPN-41 Radome Hardware Upgrade (LCE) PN419
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: CVNs, LHA/LHD class ships, and selected shore sites			Modification Type: Modernization						Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: AN/SPN-41 Radome Hardware Upgrade (LCE) PN419</i>													
B Kits													
Recurring													
2.1.1) AN/SPN-41 Radome Hardware Upgrade - NonOrganic ⁽¹⁵⁾	3 / 0.000	3 / 1.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.260
<i>Subtotal: Recurring</i>	- / 0.000	- / 1.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: AN/SPN-41 Radome Hardware Upgrade (LCE) PN419</i>	3 / 0.000	3 / 1.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.260
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 1.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)													
3.1) Production Engineering	- / -	- / 0.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.278
3.2) Logistics	- / -	- / 0.034	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.034
<i>Subtotal: Support</i>	- / 0.000	- / 0.312	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation													
<i>Modification Item 1 of 1: AN/SPN-41 Radome Hardware Upgrade (LCE) PN419</i>	- / 0.000	- / 0.120	- / 0.121	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.241
<i>Subtotal: Installation</i>	- / 0.000	- / 0.120	- / 0.121	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total													
Total Cost (Procurement + Support + Installation)	0.000	1.692	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.813

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment									Modification Number / Title: 7 / AN/SPN-41 Radome Hardware Upgrade (LCE) PN419																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: AN/SPN-41 Radome Hardware Upgrade (LCE) PN419</i>																																
Manufacturer Information																																
Manufacturer Name: NAWCAD							Manufacturer Location: St. Inigoes, MD																									
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 12																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Dec 2016		Dec 2017																													
Delivery Dates	Dec 2017		Dec 2018																													
Installation Information																																
Method of Implementation: Alteration Installation Team AIT:: Installation Name: AN/SPN-41 Radome Hardware Upgrade																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.120																
FY 2017			- / -	- / -	3 / 0.121	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.121																
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			- / -	3 / 0.120	3 / 0.121	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.241																
Installation Schedule																																
PYS				FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	Tot						
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6						
Out	-	-	1	2	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6							
Footnotes:																																
(15) AN/SPN-41 Radome Hardware Upgrade inventory objective is 18. 15 procurements and 12 installations were funded through FY2016 on BLI 2832. The inventory objective increased from 17 to 18 due to one of the original Radomes that was used, as intended, for initial system testing (including shock and vibe). When completed this type testing usually results in a unit that is damaged beyond acceptable repair. It should not have been counted as an End Item for installation in the Fleet once testing was completed.																																

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 8 / AN/SPN-46 Block IV (PN420)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	1.329	13.811	21.116	0.000	21.116	22.630	14.602	14.384	10.307	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	1.329	13.811	21.116	0.000	21.116	22.630	14.602	14.384	10.307	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	1.329	13.811	21.116	0.000	21.116	22.630	14.602	14.384	10.307	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 AN/SPN-46 Block IV Precision Approach Landing System (PALS) Block IV upgrade is designed to correct known obsolescence issues in the antenna pedestal, 50KW Ka band modulator/transmitter, and various Circuit Card Assemblies (CCAs). This effort is designed to extend the supportability of the AN/SPN-46 beyond its current design life that has been exceeded. If this effort is not accomplished, replacement parts will not be available to support the fielded AN/SPN-46 systems, thereby, negatively affecting Operational Availability (Ao) and safety of flight on the aircraft carrier. Each BLK IV will be comprised of the upgraded ACIO CCA, 2500 CCA, Transmitter, and Pedestal.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 8 / AN/SPN-46 Block IV (PN420)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: CVNs and selected shore sites			Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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/SPN-46 Block IV (PN420)												
B Kits												
Recurring												
1.1.1) AN/SPN-46 Block IV - NonOrganic	- / -	- / -	2 / 8.058	4 / 16.600	- / -	4 / 16.600	4 / 16.982	2 / 8.819	2 / 9.825	1 / 5.001	1 / 5.091	16 / 70.376
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 8.058	- / 16.600	- / -	- / 16.600	- / 16.982	- / 8.819	- / 9.825	- / 5.001	- / 5.091	- / 70.376
<i>Subtotal: AN/SPN-46 Block IV (PN420)</i>	- / -	- / -	2 / 8.058	4 / 16.600	- / -	4 / 16.600	4 / 16.982	2 / 8.819	2 / 9.825	1 / 5.001	1 / 5.091	16 / 70.376
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 8.058	- / 16.600	- / -	- / 16.600	- / 16.982	- / 8.819	- / 9.825	- / 5.001	- / 5.091	- / 70.376
Support (All Modification Items)												
2.1) Integrated Logistics Support	- / -	- / 0.514	- / 2.000	- / 1.150	- / -	- / 1.150	- / 1.102	- / 1.211	- / 1.336	- / 1.576	Continuing	Continuing
2.2) Production Engineering	- / -	- / 0.815	- / 3.503	- / 2.010	- / -	- / 2.010	- / 2.047	- / 1.946	- / 1.769	- / 1.999	Continuing	Continuing
2.3) Quality Assurance	- / -	- / -	- / 0.250	- / 0.255	- / -	- / 0.255	- / 0.260	- / 0.265	- / 0.270	- / 0.142	Continuing	Continuing
<i>Subtotal: Support</i>	- / 0.000	- / 1.329	- / 5.753	- / 3.415	- / -	- / 3.415	- / 3.409	- / 3.422	- / 3.375	- / 3.717	Continuing	Continuing
Installation												
Modification Item 1 of 1: AN/SPN-46 Block IV (PN420)	- / 0.000	- / 0.000	- / 0.000	- / 1.101	- / 0.000	- / 1.101	- / 2.239	- / 2.361	- / 1.184	- / 1.205	- / 1.214	- / 9.304
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / 1.101	- / -	- / 1.101	- / 2.239	- / 2.361	- / 1.184	- / 1.205	- / 1.214	- / 9.304
Total												
Total Cost (Procurement + Support + Installation)	0.000	1.329	13.811	21.116	0.000	21.116	22.630	14.602	14.384	10.307	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment												Modification Number / Title: 8 / AN/SPN-46 Block IV (PN420)														
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: AN/SPN-46 Block IV (PN420)																														
Manufacturer Information																														
Manufacturer Name: Sierra Nevada Corporation										Manufacturer Location: Sierra, Nevada																				
Administrative Leadtime (in Months): 4										Production Leadtime (in Months): 12																				
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates		Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023																							
Delivery Dates		Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024																							
Installation Information																														
Method of Implementation: Method:: Installation Name: Installation Group Name																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2018			- / -	- / -	- / -	2 / 1.101	0 / 0.000	2 / 1.101	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.101														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.239	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.239														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.361	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.361														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.184	- / -	- / -	- / -	0 / 0.000	2 / 1.184														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.205	- / -	- / -	0 / 0.000	2 / 1.205														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.604	- / -	1 / 0.604	1 / 0.604														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.610	1 / 0.610														
Total			- / -	- / -	- / -	2 / 1.101	0 / 0.000	2 / 1.101	4 / 2.239	4 / 2.361	2 / 1.184	2 / 1.205	2 / 1.214	16 / 9.304																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	2	2	-	-	1	1	-	-	2	16				
Out	-	-	-	-	-	-	-	-	1	1	-	-	2	2	-	-	2	2	-	-	1	1	-	-	2	16				

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 9 / AN/SPN-35 Block I (PN421)			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	1.475	0.000	1.475	5.289	9.472	10.680	11.783	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	1.475	0.000	1.475	5.289	9.472	10.680	11.783	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	1.475	0.000	1.475	5.289	9.472	10.680	11.783	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification upgrades the AN/SPN-35C to Block 1. AN/SPN-35C is the Precision Approach Radar aboard LHA/LHD class ships and is used for Mode III aircraft recovery which ensures the safe approach and landing of fixed-wing aircraft and various helicopters during adverse weather & night conditions. The AN/SPN-35C Block I upgrade includes replacement of common failure items, obsolete components, and analog system components. Block I will ensure the availability of, and extend the service life of the AN/SPN-35. The inventory objective for this item is 16. PMA-213 configuration control board approves inventory objectives.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment						Modification Number / Title: 9 / AN/SPN-35 Block I (PN421)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: LHA/LHD class ships			Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: AN/SPN-35 Block I (PN421)</i>												
B Kits												
Recurring												
2.1.1) AN/SPN-35 Block I - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.600	3 / 5.562	3 / 5.662	3 / 5.764	5 / 9.780	16 / 30.368
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 3.600	- / 5.562	- / 5.662	- / 5.764	- / 9.780	- / 30.368
<i>Subtotal: AN/SPN-35 Block I (PN421)</i>	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.600	3 / 5.562	3 / 5.662	3 / 5.764	5 / 9.780	16 / 30.368
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 3.600	- / 5.562	- / 5.662	- / 5.764	- / 9.780	- / 30.368
Support (All Modification Items)												
3.1) Integrated Logistics ⁽¹⁶⁾	- / -	- / -	- / -	- / 0.450	- / -	- / 0.450	- / 0.506	- / 0.389	- / 0.382	- / 0.375	Continuing	Continuing
3.2) Production Engineering ⁽¹⁷⁾	- / -	- / -	- / -	- / 1.025	- / -	- / 1.025	- / 1.158	- / 1.892	- / 2.182	- / 3.143	Continuing	Continuing
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / 1.475	- / -	- / 1.475	- / 1.664	- / 2.281	- / 2.564	- / 3.518	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: AN/SPN-35 Block I (PN421)</i>	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.564	- / 2.388	- / 2.433	- / 6.680	- / 13.065
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.564	- / 2.388	- / 2.433	- / 6.680	- / 13.065
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	1.475	0.000	1.475	5.289	9.472	10.680	11.783	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2830 / Afloat ATC Equipment												Modification Number / Title: 9 / AN/SPN-35 Block I (PN421)																				
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																					
Modification Item 1 of 1: AN/SPN-35 Block I (PN421)																																				
Manufacturer Information																																				
Manufacturer Name: NAWCAD										Manufacturer Location: St. Inigoes, MD																										
Administrative Leadtime (<i>in Months</i>): 3										Production Leadtime (<i>in Months</i>): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																							
Contract Dates							Dec 2019		Dec 2020		Dec 2021		Dec 2022																							
Delivery Dates							Dec 2020		Dec 2021		Dec 2022		Dec 2023																							
Installation Information																																				
Method of Implementation: Alteration Installation Team AIT:: Installation Name: AN/SPN-35 Block I																																				
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total											
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21.564	- / -	- / -	- / -	0 / 0.000	21.564	- / -	0 / 0.000	31.2388											
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31.2388	- / -	- / -	- / -	0 / 0.000	31.2388	- / -	0 / 0.000	31.2433											
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31.2433	- / -	- / -	- / -	0 / 0.000	31.2433	- / -	0 / 0.000	31.2477											
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21.564	31.2388	31.2433	8 / 6.680	514.203	16 / 13.065	8 / 1.6	8 / 1.6												
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21.564	31.2388	31.2433	8 / 6.680	514.203	16 / 13.065	8 / 1.6	8 / 1.6	8 / 1.6											
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21.564	31.2388	31.2433	8 / 6.680	514.203	16 / 13.065	8 / 1.6	8 / 1.6	8 / 1.6											
Installation Schedule																																				
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023		TC	Tot								
	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	1	1	1	1	8	16									
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	1	1	1	8	16									
Footnotes:																																				
(16) ILS costs beginning in FY19 include identifying projected system installation requirements, modification adjustments, preparation for integration planning, and drawing support efforts. Preparing for the receipt, integration, and installation of future, identified equipment often requires significant planning.																																				
(17) Production engineering costs beginning in FY19 include identifying projected system installation requirements, modification adjustments, preparation for integration planning, and drawing support efforts. Preparing for the receipt, integration, and installation of future, identified equipment often requires significant planning.																																				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment										P-1 Line Item Number / Title: 2851 / ID Systems			
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A						Other Related Program Elements: 0604777N			
Line Item MDAP/MAIS Code: N/A													
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	298.229	22.177	21.239	26.163	0.000	26.163	26.139	25.463	49.655	57.497	348.665	875.227	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	298.229	22.177	21.239	26.163	0.000	26.163	26.139	25.463	49.655	57.497	348.665	875.227	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	298.229	22.177	21.239	26.163	0.000	26.163	26.139	25.463	49.655	57.497	348.665	875.227	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	0.076	0.146	-	-	-	-	-	-	-	-	0.222	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: The Identification Systems program funds procurements, installations, and certifications for the following Mark XII / Mark XIIIA systems: AN/UPX-37, AN/UPX-41, and AN/UPX-45 Digital Interrogators (DIs), AN/APX-118 and AN/APX-123 Common Digital Transponders (CXP), AN/UPX-29 Interrogator System (comprised of Interrogator Set AN/UPX-24, OE-120() / UPX Antenna Group, and Mark XII or Mark XIIIA equipment), AN/UPX-46 Interrogator System (comprised of CP-2819/UPX Processor and Mark XIIIA equipment), Identification Friend or Foe (IFF) support equipment, AN/UPX-34A Radar Track Discriminator System (RTDS), and AN/URN-25 Ship Tactical Air Navigation (TACAN). TACAN moves out of BLI 2851 to BLI 2820 in FY 2019. The OE-120() / UPX Antenna is a new start in FY 2019. The Air Traffic Control Radio Beacon System, IFF, Mark XII/XIIIA System (AIMS) is a DoD directed tri-service program designed to provide a universal air traffic control radar beacon system compatible with the National Airspace System program. It provides a secure identification system for military use on all combatant ships, selected auxiliaries, patrol craft, and selected Coast Guard ships by allowing all friendly forces to identify each other and neutral forces. The Mark XII/XIIIA system supports several missions such as anti-air warfare, aerial bombardment, and naval attack. The OE-120() / UPX antenna is a new start in FY 2019. The antenna radiates Identification Friend or Foe (IFF) encoded radio frequency (RF) challenge pulses into space and receives the resultant IFF encoded RF transponder replies from space. Current surface ship OE-120() / UPX antenna systems will receive upgrade kits to improve system R&M. The upgrade kits will use open architecture and current technology that allows for continued production and future growth. Inventory Objective of 61 is derived from the Naval Data Environment database, the Ships & Aircraft Supplemental Data Table, and procurement plans and schedules. An Engineering Change Proposal has been awarded using RDT&E (PU 0676) funds for the Original Equipment Manufacturer to deliver an Engineering Design Model for shipboard test and evaluation in fiscal year 2018.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment				2851 / ID Systems						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0604777N			
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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 XII/ Mark XIIA Common Digital Transponder (MT032) (Reliability)				- / 57.473	- / 1.209	- / 1.218	- / 0.966	- / 0.000	- / 0.966
P-3a	2 / AN/UPX 24 (V) Mode S (MT035) (Capability Improvement)				- / 31.858	- / 5.059	- / 6.025	- / 6.287	- / 0.000	- / 6.287
P-3a	3 / Mark XII Mode 5 (MT037) (Capability Improvement)				- / 150.279	- / 12.884	- / 10.554	- / 8.173	- / 0.000	- / 8.173
P-3a	4 / TACAN System Upgrade (MT038) (Reliability)				- / 26.176	- / 1.127	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	5 / Mode S Digital Interrogator (MT040) (Capability Improvement)				- / 32.443	- / 1.898	- / 3.442	- / 5.345	- / 0.000	- / 5.345
P-3a	6 / OE-120/UPX Antenna (MT041) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 5.392	- / 0.000	- / 5.392
P-3a	7 / UPX-29/UPX29A/UPX-46 Processor System (MT042) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8 / Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	9 / AN/UPX-36 (MT044) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 298.229	- / 22.177	- / 21.239	- / 26.163	- / 0.000	- / 26.163
Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	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 XII/ Mark XIIA Common Digital Transponder (MT032) (Reliability)				- / 0.433	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 61.299
P-3a	2 / AN/UPX 24 (V) Mode S (MT035) (Capability Improvement)				- / 6.916	- / 7.985	- / 8.424	- / 10.952	- / 26.244	- / 109.750
P-3a	3 / Mark XII Mode 5 (MT037) (Capability Improvement)				- / 2.682	- / 0.594	- / 0.890	- / 0.618	- / 2.808	- / 189.482
P-3a	4 / TACAN System Upgrade (MT038) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 27.303
P-3a	5 / Mode S Digital Interrogator (MT040) (Capability Improvement)				- / 5.349	- / 5.938	- / 7.618	- / 6.493	- / 23.204	- / 91.730
P-3a	6 / OE-120/UPX Antenna (MT041) (Reliability)				- / 10.759	- / 10.946	- / 14.740	- / 15.408	- / 193.022	- / 250.267
P-3a	7 / UPX-29/UPX29A/UPX-46 Processor System (MT042) (Reliability)				- / 0.000	- / 0.000	- / 17.983	- / 12.380	- / 53.574	- / 83.937
P-3a	8 / Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 3.082	- / 15.420	- / 18.502
P-3a	9 / AN/UPX-36 (MT044) (Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 8.564	- / 34.393	- / 42.957
P-40	Total Gross/Weapon System Cost				- / 26.139	- / 25.463	- / 49.655	- / 57.497	- / 348.665	- / 875.227

*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 purpose of the AN/UPX-37 and AN/UPX-41(C) Digital Interrogators (DI) and AN/APX-118 and AN/APX-123 Common Digital Transponder (CXP) program is to replace 20-25 year old hardware and software with reliability and maintenance enhancements through the use of Commercial Off The Shelf / Non Developmental Item COTS/NDI form/fit/function improvements. Incorporation of the Mark XIIA (Mode 5) capability occurred in FY08 and changes nomenclatures from AN/UPX-37 and AN/APX-118(V) to AN/UPX-41(C) and AN/APX-123(V), respectively. Incorporation of the Mark XIIA (Mode S) capability into the AN/UPX-41(C) DI is currently ongoing and will change the DI nomenclature from AN/UPX-41(C) to AN/UPX-45(C).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment		P-1 Line Item Number / Title: 2851 / ID Systems
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604777N
Line Item MDAP/MAIS Code: N/A		
AN/UPX-24(V) Field Changes will provide hardware updates to accommodate Mode 5 and Mode S functionality in fielded systems. AN/UPX-24(V) Mode S upgrades will provide improved shipboard combat identification by increasing the probability of identification of commercial and neutral aircraft. The AN/UPX-29(V) Interrogator System is deployed on high capability, state of the art surface platforms that require IFF operational performance beyond that provided by a standard Mark XII system for combat identification. Mark XIIIA Mode 5 and Mode S provide improved secure cooperative combat identification throughout IFF. Mode 5 and Mode S are product improvements designed to be installed through engineering changes to digital Mark XII interrogators and transponders including AN/APX-118/123(V), AN/UPX-37/41(C), and AN/UPX-24(V).		
Tactical Air Navigation (TACAN) Beacon Upgrade funds a replacement of 1970s technology and eliminates pending parts obsolescence. TACAN moves out of BLI 2851 to BLI 2820 in FY19.		
AN/UPX-46 field changes will provide hardware updates to IFF Interrogator Systems fielded on LCS 1 and LCS 2 ship class variants, and LSD 41 and LSD 49 ship classes. The hardware updates will reduce unique IFF Interrogator Systems by installing common hardware configurations with Mark XIIIA capability.		
AN/UPX-34A Radar Track Discriminator System (RTDS) field changes will provide hardware and software upgrades to fielded systems that will increase system performance and incorporate "other service" target libraries into the system's target database. The RTDS is a Non-Cooperative Target Recognition (NCTR) system.		
The FY 2019 funding request was reduced by \$0.151 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems								Modification Number / Title: 1 / Mark XII/ Mark XIIA Common Digital Transponder (MT032)	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	57.473	1.209	1.218	0.966	0.000	0.966	0.433	0.000	0.000	0.000	0.000	61.299
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	57.473	1.209	1.218	0.966	0.000	0.966	0.433	0.000	0.000	0.000	0.000	61.299
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	57.473	1.209	1.218	0.966	0.000	0.966	0.433	0.000	0.000	0.000	0.000	61.299
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Current Mark XII transponder systems no longer meet operational reliability and maintainability (R&M) requirements due to use beyond their intended life cycle and they suffer a high cost of ownership due to parts obsolescence. Current surface ship Mark XII transponders will be replaced to continue incremental digital and R&M upgrades to the Mark XII IFF system. The common digital transponder uses an open architecture that allows for future growth, including Mode 5 (AN/APX-123(V)) and Mode S which was incorporated into the production line beginning with the FY 2005 procurement. Inventory Objective of 375 is derived from the Naval Data Environment (NDE) database, the Ships & Aircraft Supplemental Data Table (SASDT) and ship/submarine Ship Program Manager (SPM) procurement plans and schedules. Incorporation of the Mark XIIA (Mode 5) capability occurred in FY08 and changed the nomenclature from AN/APX-118(V) to AN/APX-123(V). LRIP AN/APX-123(V) units were installed and operated in legacy-only modes until successful completion of the Mode 5 OPEVAL (MT037) and Full Rate Production decision. Full Rate Production was approved July 2012.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems										Modification Number / Title: 1 / Mark XII/ Mark XIIA Common Digital Transponder (MT032)
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/APX-118/AN/APX-123(V)			Modification Type: Reliability						Related RDT&E PEs: 0604777N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Mark XII/ Mark XIIA Common Digital Transponder (MT032)</i>													
B Kits													
Recurring													
1.1.1) Equipment - NonOrganic ⁽¹⁾		357 / 19.937	5 / 0.132	8 / 0.154	5 / 0.104	- / -	5 / 0.104	- / -	- / -	- / -	- / -	- / -	375 / 20.327
<i>Subtotal: Recurring</i>		- / 19.937	- / 0.132	- / 0.154	- / 0.104	- / -	- / 0.104	- / -	- / -	- / -	- / -	- / 0.000	- / 20.327
<i>Subtotal: Mark XII/ Mark XIIA Common Digital Transponder (MT032)</i>		357 / 19.937	5 / 0.132	8 / 0.154	5 / 0.104	- / -	5 / 0.104	- / -	- / -	- / -	- / -	- / -	375 / 20.327
<i>Subtotal: Procurement, All Modification Items</i>		- / 19.937	- / 0.132	- / 0.154	- / 0.104	- / -	- / 0.104	- / -	- / -	- / -	- / -	- / 0.000	- / 20.327
Support (All Modification Items)													
2.1) ILS		- / 2.887	- / 0.073	- / 0.030	- / 0.013	- / -	- / 0.013	- / 0.005	- / -	- / -	- / -	- / -	- / 3.008
2.2) PE ⁽²⁾		- / 15.039	- / 0.778	- / 0.456	- / 0.627	- / -	- / 0.627	- / 0.284	- / -	- / -	- / -	- / -	- / 17.184
2.3) Product Improvement		- / 4.632	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.632
2.4) Acceptance, Test & Evaluation		- / 2.761	- / -	- / 0.045	- / 0.020	- / -	- / 0.020	- / 0.008	- / -	- / -	- / -	- / -	- / 2.834
2.5) Depot		- / 0.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.010
2.6) Initial Training		- / 0.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.822
<i>Subtotal: Support</i>		- / 26.151	- / 0.851	- / 0.531	- / 0.660	- / -	- / 0.660	- / 0.297	- / -	- / -	- / -	- / 0.000	- / 28.490
Installation													
<i>Modification Item 1 of 1: Mark XII/ Mark XIIA Common Digital Transponder (MT032)</i>		- / 11.385	- / 0.226	- / 0.533	- / 0.202	- / 0.000	- / 0.202	- / 0.136	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 12.482
<i>Subtotal: Installation</i>		- / 11.385	- / 0.226	- / 0.533	- / 0.202	- / -	- / 0.202	- / 0.136	- / -	- / -	- / -	- / 0.000	- / 12.482
Total													
Total Cost (Procurement + Support + Installation)		57.473	1.209	1.218	0.966	0.000	0.966	0.433	0.000	0.000	0.000	0.000	61.299

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems										Modification Number / Title: 1 / Mark XII/ Mark XIIA Common Digital Transponder (MT032)																									
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																									
Modification Item 1 of 1: Mark XII/ Mark XIIA Common Digital Transponder (MT032)																																							
Manufacturer Information																																							
Manufacturer Name: BAE Systems LP							Manufacturer Location: Greenlawn, NY																																
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 6																																
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																										
Contract Dates	Dec 2016		Dec 2017		Dec 2018																																		
Delivery Dates	Jun 2017		Jun 2018		Jun 2019																																		
Installation Information																																							
Method of Implementation: [none specified]:: Installation Name: Equipment																																							
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total													
				Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)													
Prior Years				348 / 11.385		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		348 / 11.385													
FY 2017				- / -		5 / 0.226		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		5 / 0.226													
FY 2018				- / -		- / -		8 / 0.533		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000		8 / 0.533													
FY 2019				- / -		- / -		- / -		3 / 0.202		0 / 0.000		3 / 0.202		2 / 0.136		- / -		- / -		- / -		0 / 0.000		5 / 0.338													
FY 2020				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -													
FY 2021				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -													
FY 2022				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -													
FY 2023				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -													
To Complete				- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -													
Total				348 / 11.385		5 / 0.226		8 / 0.533		3 / 0.202		0 / 0.000		3 / 0.202		2 / 0.136		- / -		- / -		- / -		- / -		0 / 0.000		366 / 12.482											
Installation Schedule																																							
PYS		FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC									
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4										
In	348	-	-	3	2	-	3	3	2	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	366								
Out	348	-	-	3	2	-	3	3	2	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	366									
Footnotes:																																							
(1) Due to prioritization of this modification, procurement of B-kits was accelerated in order to more quickly outfit the fleet and obtain economies of scale in pricing. As a result, the quantities reflected in FY16-19 are for the ancillary hardware kits required to be provided with the previously purchased B-kits in the year the installations take place. Ancillary hardware procurements only require a 6 month production lead time. Current inventory objective is 375, which includes 9 additional units purchased in the prior years to provide to the Mode 5 program contractor as GFE. These units will not be installed.																																							

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2851 / ID Systems	Modification Number / Title: 1 / Mark XII/ Mark XIIA Common Digital Transponder (MT032)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(2) Class and Baselines of ships are a significant contributor to the amount required for Production Engineering (PE) to accomplish the IFF capability.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 2 / AN/UPX 24 (V) Mode S (MT035)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ <i>in Millions</i>)	31.858	5.059	6.025	6.287	0.000	6.287	6.916	7.985	8.424	10.952	26.244	109.750
Less PY Advance Procurement (\$ <i>in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ <i>in Millions</i>)	31.858	5.059	6.025	6.287	0.000	6.287	6.916	7.985	8.424	10.952	26.244	109.750
Plus CY Advance Procurement (\$ <i>in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ <i>in Millions</i>)	31.858	5.059	6.025	6.287	0.000	6.287	6.916	7.985	8.424	10.952	26.244	109.750
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ <i>in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ <i>in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Incorporation of a Mode S capability in the AN/UPX-24(V) to include an interface with a ship's Combat Systems. Inventory Objective of 123 is derived from the Naval Data Environment database, the Ships & Aircraft Supplemental Data Table and ship/submarine Ship Program Manager procurement plans and schedules.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems							Modification Number / Title: 2 / AN/UPX 24 (V) Mode S (MT035)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/UPX-24(V)			Modification Type: Capability Improvement					Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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/UPX 24 (V) Mode S (MT035)													
B Kits													
Non-Recurring													
1.1.1) Equipment - NonOrganic ⁽³⁾		14 / 1.431	4 / 0.431	4 / 0.686	8 / 1.426	- / -	8 / 1.426	8 / 1.427	18 / 3.276	16 / 2.970	25 / 4.731	26 / 6.088	123 / 22.466
<i>Subtotal: Non-Recurring</i>		- / 1.431	- / 0.431	- / 0.686	- / 1.426	- / -	- / 1.426	- / 1.427	- / 3.276	- / 2.970	- / 4.731	- / 6.088	- / 22.466
<i>Subtotal: AN/UPX 24 (V) Mode S (MT035)</i>		14 / 1.431	4 / 0.431	4 / 0.686	8 / 1.426	- / -	8 / 1.426	8 / 1.427	18 / 3.276	16 / 2.970	25 / 4.731	26 / 6.088	123 / 22.466
<i>Subtotal: Procurement, All Modification Items</i>		- / 1.431	- / 0.431	- / 0.686	- / 1.426	- / -	- / 1.426	- / 1.427	- / 3.276	- / 2.970	- / 4.731	- / 6.088	- / 22.466
Support (All Modification Items)													
2.1) ILS		- / 2.569	- / 0.128	- / 0.518	- / 0.617	- / -	- / 0.617	- / 0.618	- / 0.797	- / 0.786	- / 1.006	- / 2.888	- / 9.927
2.2) PE ⁽⁴⁾		- / 6.987	- / 0.916	- / 1.837	- / 2.059	- / -	- / 2.059	- / 2.569	- / 3.021	- / 3.141	- / 3.632	- / 11.914	- / 36.076
2.3) Product Improvement ⁽⁵⁾		- / 18.948	- / 3.493	- / 2.739	- / 1.919	- / -	- / 1.919	- / 1.677	- / 0.200	- / -	- / -	- / -	- / 28.976
2.4) Acceptance, Test & Evaluation		- / 1.215	- / -	- / 0.020	- / 0.040	- / -	- / 0.040	- / 0.041	- / 0.042	- / 0.091	- / 0.092	- / 0.316	- / 1.857
2.5) Depot		- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.046
2.6) Initial Training		- / 0.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.274
<i>Subtotal: Support</i>		- / 30.039	- / 4.537	- / 5.114	- / 4.635	- / -	- / 4.635	- / 4.905	- / 4.060	- / 4.018	- / 4.730	- / 15.118	- / 77.156
Installation													
Modification Item 1 of 1: AN/UPX 24 (V) Mode S (MT035)		- / 0.388	- / 0.091	- / 0.225	- / 0.226	- / 0.000	- / 0.226	- / 0.584	- / 0.649	- / 1.436	- / 1.491	- / 5.038	- / 10.128
<i>Subtotal: Installation</i>		- / 0.388	- / 0.091	- / 0.225	- / 0.226	- / -	- / 0.226	- / 0.584	- / 0.649	- / 1.436	- / 1.491	- / 5.038	- / 10.128
Total													
Total Cost (Procurement + Support + Installation)		31.858	5.059	6.025	6.287	0.000	6.287	6.916	7.985	8.424	10.952	26.244	109.750

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9															Modification Number / Title: 2 / AN/UPX 24 (V) Mode S (MT035)															
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: AN/UPX 24 (V) Mode S (MT035)</i>															MDAP/MAIS Code:															
Manufacturer Information																														
Manufacturer Name: NAWCAD 4.11.2.1															Manufacturer Location: St. Inigoes, MD															
Administrative Leadtime (<i>in Months</i>): 3															Production Leadtime (<i>in Months</i>): 12															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																							
Delivery Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023																							
Installation Information																														
Method of Implementation: AIT:: Installation Name: Equipment																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.388	3 / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.106	1 / 0.050	14 / 0.635															
FY 2017			- / -	- / -	4 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.225															
FY 2018			- / -	- / -	- / -	4 / 0.226	0 / 0.000	4 / 0.226	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.226															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.584	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.584															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.649	- / -	- / -	- / -	0 / 0.000	8 / 0.649															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 1.436	- / -	- / -	0 / 0.000	18 / 1.436															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.385	- / -	0 / 0.000	16 / 1.385															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 1.750	25 / 1.750	25 / 1.750															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.238	26 / 3.238	26 / 3.238															
Total			8 / 0.388	3 / 0.091	4 / 0.225	4 / 0.226	0 / 0.000	4 / 0.226	8 / 0.584	8 / 0.649	18 / 1.436	18 / 1.491	52 / 5.038	123 / 10.128																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	1	1	1	1	1	1	1	1	2	2	2	2	2	2	5	5	5	3	6	4	4	52	123			
Out	8	-	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	5	5	5	3	6	4	4	52	123			
Footnotes:																														
(3) Increase procurements and installs based on shift in ship availabilities and to meet PEO IWS and Aegis Modernization schedules. Current Inventory Objective is 123. FY18 and out install costs have increased as several of the installs are no longer Mode 5 concurrent. This is due to earlier than anticipated Mode 5 fielding. At the time of those Mode 5 installs, Mode S kits were not yet available.																														
(4) Production Engineering fluctuates throughout the FYDP as the program transitions from less complex installs on small number of ship classes with limited combat system configurations some years to installs on multiple ship classes with various additional combat system configurations other years.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2851 / ID Systems
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
(5) PI for the FYDP is in support of fleet modernization engineering change proposal (ECP) that supports the improvements in space, weight and power (SWAP), network hardening, and cyber security.	

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Exhibit P-3a, Individual Modification: PB 2019 Navy							Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems					Modification Number / Title: 3 / Mark XII Mode 5 (MT037)			

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	150.279	12.884	10.554	8.173	0.000	8.173	2.682	0.594	0.890	0.618	2.808	189.482
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	150.279	12.884	10.554	8.173	0.000	8.173	2.682	0.594	0.890	0.618	2.808	189.482
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	150.279	12.884	10.554	8.173	0.000	8.173	2.682	0.594	0.890	0.618	2.808	189.482

(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:

Mark XIA Mode 5 provides improved secure cooperative combat identification throughout Identification Friend or Foe (IFF). Mode 5 is a product improvement which is designed to be installed via engineering changes to digital MarkXII interrogators and transponders including, AN/APX-118/123(V) Common Digital Transponder (CXP), AN/UPX-37/41/45 Digital Interrogator (DI), and AN/UPX-24(V). Procurements will include Cryptography, Long Lead Items, Low-Rate Initial Production (LRIP) Units, Full Rate Production units, Support/Test Equipment, and associated hardware and software changes for Fleet Modernization Plan (FMP) and non-FMP installations. Mode 5 is designed to be installed in all Navy ships which are currently Mode 4 IFF capable. Milestone C and LRIP was approved in July 2006 and Full Rate Production was approved in July 2012. In March 2007, Joint Requirements Oversight Council Memorandum (JROCM 047-07) endorsed a Mode 5 Joint Full Operational Capability in FY2020.

Procurement and installs differ by 108 units due to Naval Special Warfare Forces, which will be installing their own units.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 3 / Mark XII Mode 5 (MT037)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/APX-118/123(V), AN/UPX-37/41(C), AN/UPX-24(V)			Modification Type: Capability Improvement					Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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 XII Mode 5 (MT037)													
B Kits													
Non-Recurring													
1.1.1) Equipment - Organic	- / 3.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.775
1.1.2) Mode 5 CXP Systems/Kits - NonOrganic ⁽⁶⁾	339 / 14.320	41 / 0.059	47 / 0.311	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	427 / 14.690
1.1.3) Mode 5 UPX-24(V) Kits - NonOrganic	80 / 7.003	30 / 0.967	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 7.970
1.1.4) Mode 5 DI Systems/ Kits - NonOrganic ⁽⁷⁾	293 / 11.970	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	293 / 11.970
Subtotal: Non-Recurring	- / 37.068	- / 1.026	- / 0.311	- / -	- / -	- / -	- / -	- / -	- / 38.405				
Subtotal: Mark XII Mode 5 (MT037)	712 / 37.068	71 / 1.026	47 / 0.311	- / -	- / -	- / -	- / -	- / -	830 / 38.405				
Subtotal: Procurement, All Modification Items	- / 37.068	- / 1.026	- / 0.311	- / -	- / -	- / -	- / -	- / -	- / 0.000				
Support (All Modification Items)													
2.1) Support Equipment	- / 9.559	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.559
2.2) ILS ⁽⁸⁾	- / 7.195	- / 0.354	- / 0.413	- / 0.350	- / -	- / 0.350	- / 0.160	- / 0.058	- / 0.070	- / 0.061	- / 0.259	- / -	- / 8.920
2.3) PE ⁽⁹⁾	- / 46.462	- / 4.330	- / 4.115	- / 4.304	- / -	- / 4.304	- / 1.618	- / 0.536	- / 0.604	- / 0.557	- / 2.315	- / -	- / 64.841
2.4) Product Improvement	- / 12.712	- / 0.652	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.364
2.5) Acceptance, Test & Evaluation ⁽¹⁰⁾	- / 5.856	- / 0.322	- / 0.252	- / 0.385	- / -	- / 0.385	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.815
2.6) Initial Training	- / 0.517	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.517
Subtotal: Support	- / 82.301	- / 5.658	- / 4.780	- / 5.039	- / -	- / 5.039	- / 1.778	- / 0.594	- / 0.674	- / 0.618	- / 2.574	- / -	- / 104.016
Installation													
Modification Item 1 of 1: Mark XII Mode 5 (MT037)	- / 30.910	- / 6.200	- / 5.463	- / 3.134	- / 0.000	- / 3.134	- / 0.904	- / 0.000	- / 0.216	- / 0.000	- / 0.234	- / -	- / 47.061
Subtotal: Installation	- / 30.910	- / 6.200	- / 5.463	- / 3.134	- / -	- / 3.134	- / 0.904	- / -	- / 0.216	- / -	- / 0.234	- / -	- / 47.061
Total													
Total Cost (Procurement + Support + Installation)	150.279	12.884	10.554	8.173	0.000	8.173	2.682	0.594	0.890	0.618	2.808	189.482	

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems								Modification Number / Title: 3 / Mark XII Mode 5 (MT037)																		
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: Mark XII Mode 5 (MT037)</i>												MDAP/MAIS Code:																		
Manufacturer Information																														
Manufacturer Name: BAE Systems LP ⁽¹¹⁾						Manufacturer Location: Greenlawn, NY																								
Administrative Leadtime (<i>in Months</i>): 3						Production Leadtime (<i>in Months</i>): 24																								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017																												
Delivery Dates	Dec 2018	Dec 2019																												
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Mode 5 CXP Systems/Kits																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)												
Prior Years			230 / 9.857	1 / 0.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	231 / 9.917																
FY 2017			- / -	40 / 2.316	1 / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	41 / 2.366																
FY 2018			- / -	- / -	25 / 1.187	16 / 1.320	0 / 0.000	16 / 1.320	4 / 0.093	- / -	1 / 0.206	- / -	1 / 0.100	47 / 2.906																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			230 / 9.857	41 / 2.376	26 / 1.237	16 / 1.320	0 / 0.000	16 / 1.320	4 / 0.093	- / -	1 / 0.206	- / -	1 / 0.100	319 / 15.189																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	230	10	10	10	11	7	6	6	7	4	4	4	4	1	1	1	1	-	-	-	1	-	-	-	-	1	319			
Out	230	10	10	10	11	7	6	6	7	4	4	4	4	1	1	1	1	-	-	-	1	-	-	-	-	1	319			
Method of Implementation: [none specified]:: Installation Name: Mode 5 UPX-24(V) Kits																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.818	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	80 / 4.818								

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems								Modification Number / Title: 3 / Mark XII Mode 5 (MT037)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1: Mark XII Mode 5 (MT037)</i>																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Mode 5 UPX-24(V) Kits																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
FY 2017				- / -	13 / 1.170	13 / 1.183	3 / 1.025	0 / 0.000	3 / 1.025	1 / 0.100	- / -	- / -	- / -	0 / 0.000	30 / 3.478															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				80 / 4.818	13 / 1.170	13 / 1.183	3 / 1.025	0 / 0.000	3 / 1.025	1 / 0.100	- / -	- / -	- / -	0 / 0.000	110 / 8.296															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	80	4	3	3	3	4	3	3	3	3	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	110				
Out	80	4	3	3	3	4	3	3	3	3	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	110				
Method of Implementation: [none specified]:: Installation Name: Mode 5 DI Systems/ Kits																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)													
Prior Years				187 / 16.235	33 / 2.654	45 / 3.043	16 / 0.789	0 / 0.000	16 / 0.789	8 / 0.711	- / -	2 / 0.010	- / -	2 / 0.134	293 / 23.576															
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				187 / 16.235	33 / 2.654	45 / 3.043	16 / 0.789	0 / 0.000	16 / 0.789	8 / 0.711	- / -	2 / 0.010	- / -	2 / 0.134	293 / 23.576															

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2851 / ID Systems																		
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: Mark XII Mode 5 (MT037)</i>												MDAP/MAIS Code:																		
Installation Information												Method of Implementation: [none specified]:: Installation Name: Mode 5 DI Systems/ Kits																		
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	187	9	8	8	8	12	11	11	11	4	4	4	4	2	2	2	2	-	-	-	-	2	-	-	-	-	-	2	293	
Out	187	9	8	8	8	12	11	11	11	4	4	4	4	2	2	2	2	-	-	-	-	2	-	-	-	-	-	2	293	

Footnotes:

- (6) Procurement of Mode 5 has been prioritized to meet the mandate to field the system prior to FY2020. Hardware unit costs include ancillary equipment throughout the FYDP. The number of kits and necessary ancillary hardware required is dependent upon the class of ship; therefore unit costs fluctuate from year to year based on the number of installs planned for the following year(s). Delta between procurements and installations is due to the (procurement only) Naval Special Warfare units. The Support Equipment (SE) line consists of buying USM-719 (Test Sets) and KIV-78 (crypto appliques). Deliveries occur on a sliding basis, beginning 12 months after contract award and completing 24 months. Install of equipment can not occur until receipt of all 3 pieces of equipment have been delivered from manufacturer. Install costs vary from year to year due to ship availability, ship classification and location of the install. Hardware requirements vary based ship classifications. Inventory Objectives are as follows: Mode 5 Common Digital Transponder (CXP) kits is 427, Mode 5 UPX-24(V) Kits is 110, and Mode 5 Digital Interrogator (DI)Kits is 293. Reschedule of ship procurement and installations to meet fleet request for earliest fielding of Mode 5 capability.
- (7) Reschedule of ship procurement and installations to meet fleet request for earliest fielding of Mode 5 capability.
- (8) This cost element is impacted by the amount of documentation and logistics work needed because of the differences between ship classes.
- (9) Fluctuation in Production Engineering (PE) is due to the reschedule of ship procurement and installations to meet fleet request for earliest fielding of Mode 5 capability.
- (10) Acceptance Test & Evaluation (AT&E) costs fluctuate between fiscal years because they are not solely determined by number of procurements. This cost element is impacted by the amount of documentation and logistics work needed because of the differences of complexity between ship classes.
- (11) Production lead time ranges from 12 -24 months. Deliveries from the Original Equipment Manufacturer (OEM) commence 12 months after contract award and conclude 24 months after award (i.e. the delivery date on the P-3a is the date of the first delivery, not the date when all items are delivered); installations then occur within the allotted 12 months from when each kit is delivered. Once delivered, additional efforts are required by the In-Service Engineering Activity to produce ready for issue units from kits, and build and test complete systems with ancillary hardware prior to fleet installs.

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Exhibit P-3a, Individual Modification: PB 2019 Navy							Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems				Modification Number / Title: 4 / TACAN System Upgrade (MT038)

ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	26.176	1.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.303
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	26.176	1.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.303
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	26.176	1.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.303

(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:

Ship Tactical Air Navigation (TACAN) system upgrade. Upgrades will include digital/COTS upgrade to 1970's technology TACAN beacon and reduce parts obsolescence. Inventory Objective of 206 is derived from the Naval Data Environment (NDE) database, the Ships & Aircraft Supplemental Data Table (SASDT), ship/submarine Ship Program Manager (SPM) procurement plans and schedules and JPALS projected FOC.

Funding for procurements, support costs and associated installations for FY 2018 and beyond have been realigned to Ashore ATC Equipment (BLI 2820).

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 4 / TACAN System Upgrade (MT038)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: AN/URN-25			Modification Type: Reliability				Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> TACAN System Upgrade (MT038)												
B Kits												
Non-Recurring												
1.1.1) Equipment - NonOrganic ⁽¹²⁾		77 / 15.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	77 / 15.232
Subtotal: Non-Recurring		- / 15.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: TACAN System Upgrade (MT038)		77 / 15.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	77 / 15.232
Subtotal: Procurement, All Modification Items		- / 15.232	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) ILS		- / 0.926	- / 0.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.958
2.2) PE		- / 6.951	- / 0.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.272
2.3) Acceptance, Test & Evaluation		- / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.100
Subtotal: Support		- / 7.977	- / 0.353	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1:</i> TACAN System Upgrade (MT038)		- / 2.967	- / 0.774	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.741
Subtotal: Installation		- / 2.967	- / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		26.176	1.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.303

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems										Modification Number / Title: 4 / TACAN System Upgrade (MT038)																
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: TACAN System Upgrade (MT038)</i>														MDAP/MAIS Code:																
Manufacturer Information																														
Manufacturer Name: Moog, Inc							Manufacturer Location: Salt Lake City, Utah																							
Administrative Leadtime (<i>in Months</i>): 2							Production Leadtime (<i>in Months</i>): 12																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Nov 2016																													
Delivery Dates	Nov 2017																													
Installation Information																														
Method of Implementation: AIT:: Installation Name: Equipment																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)											
Prior Years			49 / 2.967	14 / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	63 / 3.741															
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			49 / 2.967	14 / 0.774	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	63 / 3.741															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	49	3	3	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63						
Out	49	3	3	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63						
Footnotes:																														
(12) TACAN kit funding in FY2017 was reprioritized to pay for Mode 5 installs in order to meet the mandate to field that system by FY2020. No installations shown in FY18 due to TACAN moving out of BLI 2851 to BLI 2820.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems					Modification Number / Title: 5 / Mode S Digital Interrogator (MT040)				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	32.443	1.898	3.442	5.345	0.000	5.345	5.349	5.938	7.618	6.493	23.204	91.730
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	32.443	1.898	3.442	5.345	0.000	5.345	5.349	5.938	7.618	6.493	23.204	91.730
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	32.443	1.898	3.442	5.345	0.000	5.345	5.349	5.938	7.618	6.493	23.204	91.730
(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:

Adds Mode Select (S) Beacon System commercial aircraft interrogation capability to shipboard IFF Digital Interrogators (DI). Incorporation of a Mode S capability in the AN/UPX-41(C) will result in a nomenclature change to AN/UPX-45(C). In some installations, such as Aircraft Carriers, incorporation of the Mode S capability in the DI will include an interface with a ship's Air Traffic Control System. Mode S provides improved aircraft surveillance and communications necessary to support air traffic control automation in the dense traffic environments. Mode S provides more accurate aircraft positional information and minimizes interference by discrete interrogation of each Mode S transponder-equipped aircraft and improved processing of aircraft replies. In addition, Mode S provides the medium for a digital data link, which can be used to exchange information between aircraft and various air traffic control functions and weather databases. Inventory Objective of 321 is derived from the Naval Data Environment database, the Ships & Aircraft Supplemental Data Table and ship/submarine Ship Program Manager procurement plans and schedules.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems							Modification Number / Title: 5 / Mode S Digital Interrogator (MT040)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/UPX-37/ ANUPX-41(V)			Modification Type: Capability Improvement					Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Mode S Digital Interrogator (MT040)</i>													
B Kits													
Non-Recurring													
1.1.1) Equipment - NonOrganic ⁽¹³⁾	22 / 0.152	- / -	8 / 0.091	28 / 0.325	- / -	28 / 0.325	26 / 0.308	53 / 0.640	40 / 0.493	62 / 0.773	82 / 1.074	321 / 3.856	
<i>Subtotal: Non-Recurring</i>	- / 0.152	- / -	- / 0.091	- / 0.325	- / -	- / 0.325	- / 0.308	- / 0.640	- / 0.493	- / 0.773	- / 1.074	- / 3.856	
<i>Subtotal: Mode S Digital Interrogator (MT040)</i>	22 / 0.152	- / -	8 / 0.091	28 / 0.325	- / -	28 / 0.325	26 / 0.308	53 / 0.640	40 / 0.493	62 / 0.773	82 / 1.074	321 / 3.856	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.152	- / -	- / 0.091	- / 0.325	- / -	- / 0.325	- / 0.308	- / 0.640	- / 0.493	- / 0.773	- / 1.074	- / 3.856	
Support (All Modification Items)													
2.1) Support Equipment	- / 0.688	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.688
2.2) ILS	- / 2.104	- / 0.360	- / 0.471	- / 0.410	- / -	- / 0.410	- / 0.569	- / 0.703	- / 0.707	- / 0.762	- / 3.190	- / 9.276	
2.3) PE ⁽¹⁴⁾	- / 17.534	- / 1.538	- / 2.569	- / 4.084	- / -	- / 4.084	- / 3.556	- / 3.536	- / 4.359	- / 2.787	- / 11.871	- / 51.834	
2.4) Product Improvement	- / 9.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.007
2.5) Acceptance, Test & Evaluation	- / 1.995	- / -	- / 0.086	- / 0.300	- / -	- / 0.300	- / 0.252	- / 0.238	- / 0.458	- / 0.416	- / 1.429	- / 5.174	
2.6) Depot	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.200
2.7) Initial Training	- / 0.423	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.423
<i>Subtotal: Support</i>	- / 31.951	- / 1.898	- / 3.126	- / 4.794	- / -	- / 4.794	- / 4.377	- / 4.477	- / 5.524	- / 3.965	- / 16.490	- / 76.602	
Installation													
<i>Modification Item 1 of 1: Mode S Digital Interrogator (MT040)</i>	- / 0.340	- / 0.000	- / 0.225	- / 0.226	- / 0.000	- / 0.226	- / 0.664	- / 0.821	- / 1.601	- / 1.755	- / 5.640	- / 11.272	
<i>Subtotal: Installation</i>	- / 0.340	- / -	- / 0.225	- / 0.226	- / -	- / 0.226	- / 0.664	- / 0.821	- / 1.601	- / 1.755	- / 5.640	- / 11.272	
Total													
Total Cost (Procurement + Support + Installation)	32.443	1.898	3.442	5.345	0.000	5.345	5.349	5.938	7.618	6.493	23.204	91.730	

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems												Modification Number / Title: 5 / Mode S Digital Interrogator (MT040)										
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: Mode S Digital Interrogator (MT040)</i>															MDAP/MAIS Code:											
Manufacturer Information																										
Manufacturer Name: BAE Systems LP															Manufacturer Location: Greenlawn, NY											
Administrative Leadtime (<i>in Months</i>): 3															Production Leadtime (<i>in Months</i>): 12											
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																			
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022																			
Delivery Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023																			
Installation Information																										
Method of Implementation: AIT:: Installation Name: Equipment																										
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.340	- / -	8 / 0.225	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 0.565										
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2018			- / -	- / -	- / -	8 / 0.226	0 / 0.000	8 / 0.226	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.226										
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 0.664	- / -	- / -	- / -	- / -	0 / 0.000	28 / 0.664										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.821	- / -	- / -	- / -	- / -	0 / 0.000	26 / 0.821										
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	49 / 1.601	- / -	- / -	- / -	- / -	4 / 0.000	53 / 1.601										
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.755	0 / 0.000	40 / 1.755									
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 2.418	62 / 2.418										
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 3.222	82 / 3.222										
Total			14 / 0.340	- / -	8 / 0.225	8 / 0.226	0 / 0.000	8 / 0.226	28 / 0.664	26 / 0.821	49 / 1.601	40 / 1.755	148 / 5.640	321 / 11.272												
Installation Schedule																										
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023						
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot			
In	14	-	-	-	-	2	2	2	2	2	2	2	2	7	7	7	7	13	12	12	12	10	10	10	148	321
Out	14	-	-	-	-	2	2	2	2	2	2	2	2	7	7	7	7	13	12	12	12	10	10	10	148	321
Footnotes:																										
(13) Mode S kit funding in FY2017 was reprioritized to pay for Mode 5 installs in order to meet the mandate to field that system by FY2020. Increase procurements and installs based on shift in ship availabilities and to meet PEO IWS and Aegis Modernization schedules. 8 units being installed in FY18 were procured with PY funds in FY17. FY18 and out install cost have increased as several are no longer Mode 5 concurrent.																										

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2851 / ID Systems	Modification Number / Title: 5 / Mode S Digital Interrogator (MT040)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
(14) Production Engineering fluctuates throughout the FYDP as the program transitions from installs on small number of ship classes with limited combat system configurations some years to installs on multiple ship classes with various additional combat system configurations other years.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 6 / OE-120/UPX Antenna (MT041)			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	5.392	0.000	5.392	10.759	10.946	14.740	15.408	193.022	250.267
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	5.392	0.000	5.392	10.759	10.946	14.740	15.408	193.022	250.267
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	5.392	0.000	5.392	10.759	10.946	14.740	15.408	193.022	250.267
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The OE-120()/UPX antenna is a new start in FY 2019. The antenna radiates Identification Friend or Foe (IFF) encoded radio frequency (RF) challenge pulses into space and receives the resultant IFF encoded RF transponder replies from space. Current surface ship OE-120()/UPX antenna systems will receive upgrade kits to improve system R&M. The upgrade kits will use open architecture and current technology that allows for continued production and future growth. Inventory Objective of 61 is derived from the Naval Data Environment database, the Ships & Aircraft Supplemental Data Table, and procurement plans and schedules. An Engineering Change Proposal has been awarded using RDT&E (PU 0676) funds for the Original Equipment Manufacturer to deliver an Engineering Design Model for shipboard test and evaluation in fiscal year 2018.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 6 / OE-120/UPX Antenna (MT041)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: OE-120() / UPX Antenna Group			Modification Type: Reliability				Related RDT&E PEs: 0604777N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: OE-120/UPX Antenna (MT041)												
B Kits												
Non-Recurring												
1.1.1) Equipment - NonOrganic ⁽¹⁵⁾	- / -	- / -	- / -	1 / 2.078	- / -	1 / 2.078	3 / 6.358	3 / 6.485	4 / 8.820	5 / 11.246	45 / 114.573	61 / 149.560
Subtotal: Non-Recurring	- / 0.000	- / -	- / -	- / 2.078	- / -	- / 2.078	- / 6.358	- / 6.485	- / 8.820	- / 11.246	- / 114.573	- / 149.560
Subtotal: OE-120/UPX Antenna (MT041)	- / -	- / -	- / -	1 / 2.078	- / -	1 / 2.078	3 / 6.358	3 / 6.485	4 / 8.820	5 / 11.246	45 / 114.573	61 / 149.560
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / -	- / 2.078	- / -	- / 2.078	- / 6.358	- / 6.485	- / 8.820	- / 11.246	- / 114.573	- / 149.560
Support (All Modification Items)												
2.1) ILS	- / -	- / -	- / -	- / 0.732	- / -	- / 0.732	- / 0.553	- / 0.564	- / 0.384	- / 0.196	- / 2.959	- / 5.388
2.2) PE	- / -	- / -	- / -	- / 1.483	- / -	- / 1.483	- / 2.677	- / 3.063	- / 2.519	- / 2.495	- / 29.959	- / 42.196
2.4) Acceptance, Test & Evaluation ⁽¹⁶⁾	- / -	- / -	- / -	- / 1.099	- / -	- / 1.099	- / 1.171	- / 0.553	- / 0.630	- / 0.439	- / 9.160	- / 13.052
Subtotal: Support	- / 0.000	- / -	- / -	- / 3.314	- / -	- / 3.314	- / 4.401	- / 4.180	- / 3.533	- / 3.130	- / 42.078	- / 60.636
Installation												
Modification Item 1 of 1: OE-120/UPX Antenna (MT041)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.281	- / 0.992	- / 1.032	- / 18.532	- / 20.837
Subtotal: Installation	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.281	- / 0.992	- / 1.032	- / 18.532	- / 20.837
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	5.392	0.000	5.392	10.759	10.946	14.740	15.408	193.022	250.267

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9															P-1 Line Item Number / Title: 2851 / ID Systems															
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: OE-120/UPX Antenna (MT041)																														
Manufacturer Information																														
Manufacturer Name: TBD										Manufacturer Location: TBD																				
Administrative Leadtime (<i>in Months</i>): 3										Production Leadtime (<i>in Months</i>): 22																				
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Equipment																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.281	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.281										
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.992	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.992										
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.032	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.032										
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.574	4 / 0.574										
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.720	5 / 0.720										
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 17.238	52 / 17.238										
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.281	- / 0.992	- / 1.032	- / 0.574	- / 0.720	61 / 18.532	68 / 20.837										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	54	61	
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	-	-	-	-	3	-	-	54	61

Footnotes:

(15) Commence Naval Modernization Process planning, Ship Change Document (SCD) development and approval in FY18 required for LPD17, LHD1, LHA6, CVN68, CVN78, DDG51, and CG47 ship classes. In FY19 added one (1) Kit to support the school house training, this will be installed in FY21.

(16) Acceptance, Test & Evaluation funding is required to start testing various ship baselines before actual installations can occur in the out years.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 7 / UPX-29/UPX29A/UPX-46 Processor System (MT042)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.983	12.380	53.574	83.937
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	17.983	12.380	53.574	83.937
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	17.983	12.380	53.574	83.937
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Replace or upgrade unique Shipboard IFF Interrogator Systems with common hardware configurations including the CP-2819/UPX processor, AN/APX-123(V) Common Digital Transponder (CXP), and Mark XII A Digital Interrogator (DI) equipment. Unique interrogator systems will not meet Mode 5 requirements per Mark XII A Cooperative IFF Operational Requirements Document 595-61-02 - dated 27 Apr 2001. Inventory Objective is 68.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: UPX-29/UPX29A/ UPX-46 Processor System			Modification Type: Reliability						Related RDT&E PEs: 0604777N			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: UPX-29/UPX29A/UPX-46 Processor System (MT042)</i>												
B Kits												
Non-Recurring												
1.1.1) Mode 5 UPX-46 Systems/Kits - NonOrganic ⁽¹⁷⁾												
1.1.2) Mode 5 CXP Systems/Kits - NonOrganic												
1.1.3) Mode 5 DI Systems/Kits - NonOrganic												
Subtotal: Non-Recurring												
Subtotal: UPX-29/UPX29A/UPX-46 Processor System (MT042)												
Subtotal: Procurement, All Modification Items												
Installation												
<i>Modification Item 1 of 1: UPX-29/UPX29A/UPX-46 Processor System (MT042)</i>												
Subtotal: Installation												
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.983	12.380	53.574	83.937

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems					Modification Number / Title: 7 / UPX-29/UPX29A/UPX-46 Processor System (MT042)								
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:								
Modification Item 1 of 1: UPX-29/UPX29A/UPX-46 Processor System (MT042)																
Manufacturer Information																
Manufacturer Name: NAWCAD				Manufacturer Location: St. Inigoes, MD												
Administrative Leadtime (<i>in Months</i>): 0				Production Leadtime (<i>in Months</i>): 24												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates																
Delivery Dates																
Manufacturer Name: BAE Systems LP				Manufacturer Location: Greenlawn, NY												
Administrative Leadtime (<i>in Months</i>): 0				Production Leadtime (<i>in Months</i>): 24												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates																
Delivery Dates																
Manufacturer Name: BAE Systems				Manufacturer Location: Greenlawn, NY												
Administrative Leadtime (<i>in Months</i>): 0				Production Leadtime (<i>in Months</i>): 24												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates																
Delivery Dates																
Installation Information																
Method of Implementation: AIT:: Installation Name: Mode 5 UPX-46 Systems/Kits																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.578	2 / 0.578	4 / 1.156				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.750	5 / 0.750					
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.450	19 / 3.450					
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.578	26 / 4.778	28 / 5.356				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9												P-1 Line Item Number / Title: 2851 / ID Systems										Modification Number / Title: 7 / UPX-29/UPX29A/UPX-46 Processor System (MT042)								
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: UPX-29/UPX29A/UPX-46 Processor System (MT042)																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: Mode 5 UPX-46 Systems/Kits																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	26	28						
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	26	28						
Method of Implementation: AIT:: Installation Name: Mode 5 CXP Systems/Kits																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)							
Prior Years	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2017	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2018	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2019	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2020	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2021	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/					
FY 2022	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	2 / 0.289	2 / 0.289					
FY 2023	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	3 / 0.315	3 / 0.315					
To Complete	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	15 / 0.870	15 / 0.870					
Total	-	/	-	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	20 / 1.474	20 / 1.474					
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20					

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems										Modification Number / Title: 7 / UPX-29/UPX29A/UPX-46 Processor System (MT042)																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
<i>Modification Item 1 of 1: UPX-29/UPX29A/UPX-46 Processor System (MT042)</i>																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: Mode 5 DI Systems/Kits																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.165	2 / 0.165													
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.209	3 / 0.209													
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.883	15 / 0.883													
Total				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 1.257	20 / 1.257													
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20					

Footnotes:

(17) Will provide the Mode 5 Capability to (3) Ship Classes . The UPX-46 system require a 24 month lead time, and a UPX-46 kit requires a 12 month lead time. Install of equipment can not occur until receipt of all 3 pieces of equipment have been delivered from manufacturer. Install costs vary from year to year due to ship availability, ship classification and location of the install. Hardware requirements vary based on ship classifications. Initial spares are included in overall hardware cost.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 8 / Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.082	15.420	18.502
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	0.000	3.082	15.420	18.502
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	0.000	3.082	15.420	18.502
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AN/UPX-34A Radar Track Discriminator System (RTDS) is installed on CG47 Class Aegis Cruisers and provides high fidelity, long range, Non-Cooperative Target Recognition (NCTR) capability to support the Air-Sea battle by providing timely tactical engagement decisions by Aegis action officers. Upgrades to the system will reduce Rules of Engagement (ROE) concerns, incorporate "other services" target libraries into the RTDS database, and increase the system's range performance. These enhancements are critical to the Aegis Cruiser's primary Anti-Air warfare (AAW) role. These enhancements also provide critical capability to accurately identify and discern civilian versus military aircraft. Inventory objective 11.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Radar Track Discriminator System (RTDS) AN/UPX-34A			Modification Type: Reliability						Related RDT&E PEs:			
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)</i>												
B Kits												
Non-Recurring												
1.1.1) AN/UPX-34A Kit - NonOrganic												
Subtotal: Non-Recurring												
Subtotal: Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)												
Subtotal: Procurement, All Modification Items												
Installation												
<i>Modification Item 1 of 1: Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)</i>												
Subtotal: Installation												
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.082	15.420	18.502

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems												Modification Number / Title: 8 / Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)														
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1: Radar Track Discriminator System (RTDS) AN/UPX-34A (MT043)</i>																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: AN/UPX-34A Kit																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.704	2 / 0.704									
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 3.168	9 / 3.168										
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 3.872	11 / 3.872										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11					

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 9 / AN/UPX-36 (MT044)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.564	34.393	42.957
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	0.000	8.564	34.393	42.957
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	0.000	8.564	34.393	42.957
(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:

Replace or upgrade unique Shipboard IFF Interrogator Systems with common hardware configurations including the CP-2819/UPX processor and Mark XII A Digital Interrogator (DI) equipment. Unique AN/UPX-36 interrogator systems currently installed on LSD 41 and LSD 49 ship classes will not meet Mode 5 requirements per Mark XII A Cooperative IFF Operational Requirements Document 595-61-02 - dated 27 Apr 2001. Inventory Objective is 12.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2851 / ID Systems						Modification Number / Title: 9 / AN/UPX-36 (MT044)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: AN/UPX-36			Modification Type: Reliability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: AN/UPX-36 (MT044)</i>												
B Kits												
Non-Recurring												
1.1.1) AN/UPX-36A Kit - NonOrganic		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.724	9 / 11.984	12 / 15.708
Subtotal: Non-Recurring		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.724	- / 11.984	- / 15.708
Subtotal: AN/UPX-36 (MT044)		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.724	9 / 11.984	12 / 15.708
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.724	- / 11.984	- / 15.708
Installation												
<i>Modification Item 1 of 1: AN/UPX-36 (MT044)</i>		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.698	- / 3.698
Subtotal: Installation		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.698	- / 3.698
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.564	34.393	42.957

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2851 / ID Systems									Modification Number / Title: 9 / AN/UPX-36 (MT044)																		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																		
Modification Item 1 of 1: AN/UPX-36 (MT044)																															
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: AN/UPX-36A Kit																															
Installation Cost			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total												
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.927	3 / 0.927														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 2.771	9 / 2.771														
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.698	12 / 3.698														
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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						
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12						

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment										P-1 Line Item Number / Title: 2867 / Joint Precision Approach and Landing System(JPALS)		
ID Code (A=Service Ready, B=Not Service Ready): B										Program Elements for Code B Items: 0603860N		
Line Item MDAP/MAIS Code: 238										Other Related Program Elements: N/A		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	16	16
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	4.137	-	4.137	4.589	3.545	3.568	3.642	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Joint Precision Approach and Landing System (JPALS) is the primary precision approach and landing system for CVN and LHA/D ships to support aircraft without SPN-46 ACLS capability including F-35B, F-35C, MQ-25 and future platforms. JPALS ship systems are required to provide CVN and LHA/D ships a primary precision approach capability during night and instrument flight conditions, including coupled approach capability to a hover transition point for LHA/D ships, and coupled approach to the deck (auto-land) capability aboard CVN ships. JPALS also provides the over-the-air inertial alignment capability for CVN and LHA/D ships to support aircraft platforms without Link-4A capability, including F-35, MQ-25 and future platforms. JPALS MS B occurred July 2016 and MS C is scheduled for second quarter 2019.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment				2867 / Joint Precision Approach and Landing System(JPALS)					
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: 0603860N				Other Related Program Elements: N/A		
Line Item MDAP/MAIS Code: 238									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-3a	1 / CR001 AN/USN-3 (V) (Modernization)				- / 0.000	- / 0.000	- / 0.000	- / 38.094	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	- / 38.094	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-3a	1 / CR001 AN/USN-3 (V) (Modernization)				- / 62.391	- / 66.226	- / 10.277	- / 10.496	- / 183.207
P-40	Total Gross/Weapon System Cost				- / 62.391	- / 66.226	- / 10.277	- / 10.496	16 / 183.207
*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: Note: Line item 2867 Joint Precision Approach and Landing System (JPALS) is a new start P-1 line item within the Other Procurement, Navy appropriation account. FY19 funds the procurement of 3 JPALS Systems and other support necessary to field the JPALS ship systems onboard CVN and LHA/D ships that are required to provide the primary precision approach, landing, on-deck inertial alignment, surveillance, and auto-land capability for F-35B/C and all future low observable manned and unmanned platforms.									

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Exhibit P-3a, Individual Modification: PB 2019 Navy							Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2867 / Joint Precision Approach and Landing System(JPALS)				Modification Number / Title: 1 / CR001 AN/USN-3 (V)

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207	370.691
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

JPALS ship systems are required to provide CVN and LH ships a primary precision approach capability during night and instrument flight conditions, including coupled approach capability to a hover transition point for LHA/D ships, and coupled approach to the deck (auto-land) capability aboard CVN ships. JPALS also provides the over-the-air inertial alignment capability for CVN and LHA/D ships to support aircraft platforms without Link-4A capability, including F-35, MQ-25 and future platforms. Procurements will start third quarter FY19 after completion of MS C.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2867 / Joint Precision Approach and Landing System(JPALS)						Modification Number / Title: 1 / CR001 AN/USN-3 (V)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: CVN, L-class ships.			Modification Type: Modernization				Related RDT&E PEs: 0603860N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: CR001 AN/USN-3 (V)</i>												
B Kits												
Recurring												
1.1.1) AN/USN-3 (V) - NonOrganic ⁽¹⁾		- / -	- / -	- / -	3 / 30.295	- / -	3 / 30.295	3 / 30.922	3 / 31.319	- / -	- / -	8 / 88.949
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / -	- / 30.295	- / -	- / 30.295	- / 30.922	- / 31.319	- / -	- / -	- / 88.949
Non-Recurring												
1.2.1) Conversion Kit (Modernization) - Organic ⁽²⁾		- / -	- / -	- / -	- / -	- / -	- / -	- / 2.500	- / 5.200	- / -	- / -	- / 7.700
<i>Subtotal: Non-Recurring</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.500	- / 5.200	- / -	- / -	- / 0.000
<i>Subtotal: CR001 AN/USN-3 (V)</i>		- / -	- / -	- / -	3 / 30.295	- / -	3 / 30.295	3 / 33.422	3 / 36.519	- / -	- / -	8 / 88.949
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / -	- / 30.295	- / -	- / 30.295	- / 33.422	- / 36.519	- / -	- / -	- / 88.949
Support (All Modification Items)												
2.1) Integrated Logistics Support ⁽³⁾		- / -	- / -	- / -	- / 1.180	- / -	- / 1.180	- / 2.547	- / 2.599	- / -	- / -	- / 7.511
2.2) Production Engineering ⁽⁴⁾		- / -	- / -	- / -	- / 6.619	- / -	- / 6.619	- / 19.689	- / 19.987	- / 2.756	- / 10.496	- / 64.612
<i>Subtotal: Support</i>		- / 0.000	- / -	- / -	- / 7.799	- / -	- / 7.799	- / 22.236	- / 22.586	- / 2.756	- / 10.496	- / 72.123
Installation												
<i>Modification Item 1 of 1: CR001 AN/USN-3 (V)</i>		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.733	- / 7.121	- / 7.521	- / 0.000	- / 22.135
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 6.733	- / 7.121	- / 7.521	- / -	- / 22.135
Total												
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	38.094	0.000	38.094	62.391	66.226	10.277	10.496	183.207

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9															Modification Number / Title: 1 / CR001 AN/USN-3 (V)									
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: CR001 AN/USN-3 (V)															MDAP/MAIS Code:									
Manufacturer Information																								
Manufacturer Name: TBD															Manufacturer Location: TBD									
Administrative Leadtime (<i>in Months</i>): 6															Production Leadtime (<i>in Months</i>): 12									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																	
Contract Dates			Apr 2019	Apr 2020	Apr 2021																			
Delivery Dates			Apr 2020	Apr 2021	Apr 2022																			
Installation Information																								
Method of Implementation: TBD:: Installation Name: FMP																								
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total										
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																		
Prior Years			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.733	- / -	- / -	- / -	- / -	0 / 0.000	3 / 6.733								
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.121	- / -	- / -	- / -	- / -	0 / 0.000	3 / 7.121								
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 7.521	- / -	- / -	- / -	- / -	0 / 0.000	3 / 7.521								
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -						
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 22.135	8 / 22.135							
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 22.135	8 / 22.135	17 / 43.510							
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 6.733	3 / 7.121	3 / 7.521	- / -	- / -	8 / 22.135	8 / 22.135								
Installation Schedule																								
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			TC	
		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	-	-	-	-	8	17
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	1	2	-	-	-	-	8	17
Footnotes:																								
(1) Procurement of Low Rate Initial Production (LRIP) JPALS ship systems begins in FY19 following MS C to support the US Navy Master Aviation Plan and US Navy ship availability schedules.																								
(2) FY2020 funds 1 JPALS EDM conversion kit. FY2021 funds 2 JPALS EDM conversion kits.																								
(3) Most of the program ILS efforts in FY19 are initial production costs (PCA, FCA), with the exception of minimal support to new contract efforts in the last quarter after contract award. In FY20, major production ILS efforts begin to include: IETM validation/verification, support to initial delivery of sparing and training packages, and production phase ILS planning.																								

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9	P-1 Line Item Number / Title: 2867 / Joint Precision Approach and Landing System(JPALS)
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
(4) FY19 only accounts for 1 quarter of production, the contract is expected to be awarding 3QFY19. FY20 is the first full year of production which will require full support to include: SW support of production required changes, systems integration lab support for system checkout and production integration into Aircraft platforms, Engineering support of the production effort, contract start up activities, productions start up support activities, first article check outs.	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment										P-1 Line Item Number / Title: 2876 / Naval Mission Planning 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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	235.822	13.910	14.526	11.966	0.000	11.966	11.983	20.630	18.365	18.741	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	235.822	13.910	14.526	11.966	0.000	11.966	11.983	20.630	18.365	18.741	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	235.822	13.910	14.526	11.966	0.000	11.966	11.983	20.630	18.365	18.741	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	0.368	2.683	0.317	-	0.317	0.160	0.097	0.404	-	-	4.029	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
This line item provides funding to procure Joint Mission Planning System (JMPS) workstations, Software/Production Engineering Support and Integrated Logistics Support (ILS). JMPS is the designated automated mission planning system for Naval Aviation, supporting over 40 Type/Model/Series (T/M/S), U.S. Navy and Marine Corps aircraft and expeditionary forces. Future manned JMPS platforms include: P-8, C/KC-130J, and CH-53K. JMPS enables weapon system employment by providing the information and decision aids needed to rapidly plan aircraft, weapon or sensor missions, load mission data into aircraft and weapons, conduct mission rehearsal and post mission analysis. JMPS consists of two types of workstations - Maritime (JMPS-M) and Expeditionary (JMPS-E). JMPS-M is the primary product within the Naval Mission Planning System (NavMPS) family of systems, which include Electronic Kneeboard (EKB) and Common Munitions Built In Test Reprogramming Equipment (CMBRE). The Navy's modern aircraft need data loaded from JMPS-M to fly their missions. As aircraft and weapons become increasingly advanced, they will require increased access, quantity, processing analysis and fidelity of data to support mission planning, mission execution and mission analysis. These data requirements will require additional advanced processors and greater amounts of continuous memory. JMPS-M flight planning seats refer to the computer workstations that employ the JMPS framework software. JMPS-E is a scalable, tailorabile and collaborative web-based mission planning and execution monitoring tool for Amphibious Squadron Staffs embarked with each Amphibious Ready Group (ARG) and Expeditionary Strike Group (ESG). CMBRE provides USN/USMC forces the critical capability to perform built in test and programming/reprogramming of various weapons. Program cost is not directly related to FY hardware quantity; software is a cost factor independent of FY hardware quantity and cost. Funding profile accounts for required four year workstation refresh cycle to preclude aging/obsolete hardware and reduce failure rates, procure supporting emerging technology such as EKB, and next generation CMBRE starting in FY20 to support advanced operational capabilities and address system obsolescence/cyber-security requirements/mission readiness requirements and support memory requirements for required JMPS planning capabilities.													
Prior to FY17, the EKB was funded in BLI 4268.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 9: Aviation Electronic Equipment				2876 / Naval Mission Planning 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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Naval Mission Planning Systems	P-5a			- / 235.822	- / 13.910	- / 14.526	- / 11.966	- / 0.000	- / 11.966
P-40	Total Gross/Weapon System Cost				- / 235.822	- / 13.910	- / 14.526	- / 11.966	- / 0.000	- / 11.966

*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:

Items to be funded in this line include:

Workstation Components - JMPS-M and JMPS-E procure tactical computer hardware through a non-developmental item acquisition strategy. Tactical computer equipment is used to plan and analyze expeditionary missions and aircraft routes under various mission configurations and operational threat environments. Primary outputs are tasking orders, courses of action (COAs), Route Plans, Munitions / Weapons Plans, and Navigation and mission essential data loads for mission execution. New workstations consist of aircraft unique data transfer devices and interfaces, Memory Data Loader Receptacles (MDLR) Small Computer Standard Interface (SCSI) (MDLR-S), Electronic Kneeboard (EKB), Common Munitions Bit Reprogramming Equipment (CMBRE), Ogden Data Device Ethernet Crypto (ODD-EC), Data Storage Unit Receptacle SCSI (DSUR-S), network hubs, printers, fleet training school workstations, JMPS Application Central Access Library (JACAL), training assets, and other peripheral devices for USN/ USNR/USMC/USMCR missions. Next generation CMBRE OPN efforts begin in FY21. JMPS Authority to Operate (ATO) requires compliance with Naval Network Warfare Command (NNWC)-issued Information Assurance (IA) mandates and Communications Tasking Orders (CTOs).

Software/Production Engineering Support - The NavMPS program produces software releases via an evolutionary development process. These releases contain enhancements based on fleet inputs and technology challenges. They also contain changes required to retain compatibility with supported platforms, associated weapons, and threat and imagery databases providing input to NavMPS. Software releases are independent of hardware buys. This cost element includes production support services, engineering support services, independent verification and validation test and acceptance, site activation, IA compliance and quality assurance efforts.

Integrated Logistics Support - The NavMPS program conducts site surveys, prepares site installation drawings and provides on-site engineering and logistics evaluations for installations and delivery systems to ensure compliance with the specified configuration. This includes the production and delivery of technical documentation and training materials such as OPNOTES, installation instructions and user manuals required during the fielding of NavMPS products. ILS is a cost factor independent of FY hardware quantity and cost.

FY19 provides funding to procure seven hundred fifty (750) JMPS-M flight planning seats, five (5) JMPS-E workstations, Electronic Kneeboards (EKB), training assets, and other JMPS support equipment; continues the release of software enhancements based on fleet inputs, emerging technologies, cybersecurity mandates and associated logistics support. FY19 laptop procurement supports the FA-18, EA-18G, P-3 and V-22 platforms. This hardware is required to field critical electronic attack mission planning capabilities and support cyber security mandates which ensures air superiority and projected military force in contested areas. Updated hardware is required to continue to meet JMPS operational "Time-To-Plan" requirements for complex platforms which include F/A-18 (all variants) and EA-18G. Additionally, funding provides for database systems with storage space capable of storing National Geospatial-Intelligence Agency (NGA) world-wide map data with associated network hardware. This will provide the Fleet with the required storage for map data, Digital Terrain Elevation Data (DTED) and imagery necessary to plan missions.

The FY 2019 funding request was reduced by \$0.042M to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2876 / Naval Mission Planning Systems										Item Number / Title [DODIC]: 1 / Naval Mission Planning Systems					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				235.822			13.910		14.526		11.966		0.000		11.966			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				235.822			13.910		14.526		11.966		0.000		11.966			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				235.822			13.910		14.526		11.966		0.000		11.966			
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-			0.368		2.683		0.317		-		0.317			
Gross/Weapon System Unit Cost (\$ in Dollars)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - JMPS Hardware Cost																		
Recurring Cost																		
1.1.1) S7403 JMPS-M FLIGHT PLANNING SEAT ⁽¹⁾	4,622.70	10,424	48.187	3,047.25	750	2.285	3,210.00	750	2.408	3,210.00	750	2.408	-	-	-	3,210.00	750	2.408
1.1.2) S7408 JMPS-E EXPEDITIONARY WARFARE ⁽²⁾	5,090.52	232	1.181	3,047.25	5	0.015	3,210.00	5	0.016	3,210.00	5	0.016	-	-	-	3,210.00	5	0.016
1.1.3) S7850 JMPS-M Support Equipment ⁽³⁾	-	-	11.386	-	-	3.135	-	-	5.141	-	-	2.611	-	-	-	-	-	2.611
1.1.4) S7851 JMPS-E Support Equipment ⁽⁴⁾	-	-	0.064	-	-	0.021	-	-	0.022	-	-	0.023	-	-	-	-	-	0.023
<i>Subtotal: Recurring Cost</i>	-	-	60.818	-	-	5.456	-	-	7.587	-	-	5.058	-	-	-	-	-	5.058
<i>Subtotal: Hardware - JMPS Hardware Cost</i>	-	-	60.818	-	-	5.456	-	-	7.587	-	-	5.058	-	-	-	-	-	5.058
Support Cost																		
2.1) S7820 Other Costs	-	-	152.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.2) S7830 Software/Production Engineering Support ⁽⁵⁾	-	-	16.948	-	-	6.449	-	-	4.966	-	-	4.951	-	-	-	-	-	4.951
2.3) S7800 Integrated Logistics Support ⁽⁶⁾	-	-	6.041	-	-	2.005	-	-	1.973	-	-	1.957	-	-	-	-	-	1.957
<i>Subtotal: Support Cost</i>	-	-	175.004	-	-	8.454	-	-	6.939	-	-	6.908	-	-	-	-	-	6.908

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9				P-1 Line Item Number / Title: 2876 / Naval Mission Planning Systems									Item Number / Title [DODIC]: 1 / Naval Mission Planning Systems													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)								
Gross/Weapon System Cost	-	-	235.822	-	-	13.910	-	-	14.526	-	-	11.966	-	-	0.000	-	-	11.966								

(†) indicates the presence of a P-5a

Footnotes:

(1) FY19 unit cost and total cost only reflect JMPS-M laptop procurement. Quantities reflect JMPS-M laptop procurement. Quantities adjusted to meet Fleet demand and number of Mission Planning Environments/aircraft supported (over 40 T/M/S in FY19). JMPS laptop quantities are currently based on Fleet demand which is validated by CNAF. FY18-23 laptop unit costs are based on current FY16/FY17 laptop model (GETAC X400), plus inflation and additional costs due to additional data storage, multiple communication ports for data transfer and peripheral requirements. The laptop candidates are determined by Fleet requirements and COTS/Military spec software/hardware compatibility. The Flight Planning Seats are on a two year procurement cycle. Contract was awarded February 2016 establishing the FY 16/17 laptop unit cost.

(2) FY19 unit cost and total cost only reflect JMPS-E laptop procurement. Quantities reflect JMPS-E laptop procurement. Quantities adjusted to meet Fleet demand. FY18-23 laptop unit costs are based on FY16/FY17 laptop model (GETAC X400), plus inflation and additional costs due to additional data storage, multiple communication ports for data transfer and peripheral requirements. The laptop candidates are determined by Fleet requirements and COTS/Military spec software/hardware compatibility. The Flight Planning Seats are on a two year procurement cycle. Contract was awarded February 2016 establishing the FY 16/17 laptop unit cost.

(3) Support Equipment includes storage devices, network hubs, printers, initial fleet training school workstations, Advanced Data Loader Receptacles, Electronic Kneeboards (EKB), Common Munitions Bit Reprogramming Equipment (CMBRE) prior to FY21, training assets, and other peripheral devices for USN/USNR/USMC/USMCR missions. Support Equipment adjusted to meet Fleet demand and number of Mission Planning Environments/aircraft supported (over 40 T/M/S in FY19). FY18 increase due to OCO funding to support the Common Munitions Bit and Reprogramming Equipment (CMBRE) upgrade and replacement units that support fleet operations.

(4) FY19 cost growth above inflation is caused by rounding. Support Equipment includes storage devices, network hubs, printers, and other peripheral devices for USN/USNR/USMC/USMCR missions.

(5) Software/Production Engineering Supports over 40 T/M/S, Mission Planning Environments/aircraft, and supports cyber security mandates.

(6) Integrated Logistics Support provides JMPS technical documentation, training materials and installation instructions that are compliant with cyber security mandates and Communications Tasking Orders (CTOs) for newly deployed platforms.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 9			P-1 Line Item Number / Title: 2876 / Naval Mission Planning Systems					Item Number / Title [DODIC]: 1 / Naval Mission Planning Systems				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) S7403 JMPS-M FLIGHT PLANNING SEAT		2017 ⁽⁷⁾	OSI Federal Technologies / Aldie, VA	C / FFP	NAWCAD, Lakehurst	Feb 2017	Mar 2017	750	3,047.25	Y		Oct 2015
1.1.1) S7403 JMPS-M FLIGHT PLANNING SEAT		2018 ⁽⁸⁾	TBD / TBD	C / FFP	TBD	Feb 2018	Mar 2018	750	3,210.00	Y		Oct 2017
1.1.1) S7403 JMPS-M FLIGHT PLANNING SEAT		2019 ⁽⁹⁾	TBD / TBD	C / FFP	TBD	Feb 2019	Mar 2019	750	3,210.00	Y		Oct 2017
1.1.2) S7408 JMPS-E EXPEDITIONARY WARFARE		2017 ⁽¹⁰⁾	OSI Federal Technologies / Aldie, VA	C / FFP	NAWCAD, Lakehurst	Feb 2017	Mar 2017	5	3,047.25	Y		Oct 2015
1.1.2) S7408 JMPS-E EXPEDITIONARY WARFARE		2018 ⁽¹¹⁾	TBD / TBD	C / FFP	TBD	Feb 2018	Mar 2018	5	3,210.00	Y		Oct 2017
1.1.2) S7408 JMPS-E EXPEDITIONARY WARFARE		2019 ⁽¹²⁾	TBD / TBD	C / FFP	TBD	Feb 2019	Mar 2019	5	3,210.00	Y		Oct 2017

Footnotes:

(7) JMPS laptops are procured every two years where pricing and fleet requirements are evaluated to ensure JMPS laptops meet fleet requirements while remaining cost effective.

(8) The FY18/19 JMPS laptop effort is a competitive 2nd Qtr. FY18 award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. This contract consists of a base year (FY18) and option year that will affect the current budget year. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

(9) The FY18/19 JMPS laptop effort is a competitive 2nd Qtr. FY18 award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. This contract consists of a base year (FY18) and option year that will affect the current budget year. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

(10) JMPS laptops are procured every two years where pricing and fleet requirements are evaluated to ensure JMPS laptops meet fleet requirements while remaining cost effective.

(11) The FY18/19 JMPS laptop effort is a competitive 2nd Qtr. FY18 award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. This contract consists of a base year (FY18) and option year that will affect the current budget year. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

(12) The FY18/19 JMPS laptop effort is a competitive 2nd Qtr. FY18 award therefore the performing activity and location are currently TBD to support a competitive contracting strategy. This contract consists of a base year (FY18) and option year that will affect the current budget year. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					2906 / Tactical/Mobile C4I Systems										
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A					Other Related Program Elements: 0604231N							
Line Item MDAP/MAIS Code: N/A															
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	86.819	23.908	40.325	42.010	0.000	42.010	28.020	29.660	29.952	30.555	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	86.819	23.908	40.325	42.010	0.000	42.010	28.020	29.660	29.952	30.555	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	86.819	23.908	40.325	42.010	0.000	42.010	28.020	29.660	29.952	30.555	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.333	2.189	1.625	-	1.625	1.511	0.584	1.465	0.889	Continuing	Continuing			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
Commencing in FY17, OPN line item 2246 (PE 0204271N) was consolidated with OPN line item 2906 to align TacMobile C4I procurements with TacMobile MPRF P-8A Aircraft Support Systems procurements. Additionally in FY17, Deployable Joint Command and Control (DJC2) funding from line item 2804 was realigned to line item 2906 as part of the Budget Line Item Consolidation effort.															
Tactical/Mobile (TacMobile) C4I Systems: The Tactical Mobile program provides evolutionary systems and equipment upgrades to support the Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct and control the tactical operations of Maritime Patrol and Reconnaissance Aircraft (MPRA) and other assigned units within their respective area of responsibility. Looking ahead, TacMobile provides critical reach-back capabilities between the Maritime Patrol and Reconnaissance Aircraft, primarily the P-8A/Poseidon, and MQ-4C/Triton, and the Maritime Intelligence Surveillance and Reconnaissance Enterprise. These operations include littoral, open ocean, and over land long-dwell surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, anti-submarine warfare, mining, search and rescue, indications and warnings, and special operations. The missions are supported by the fixed-site Tactical Operations Centers (TOCs) and Mobile Tactical Operations Centers (MTOCs). Each TacMobile unit is a system-of-systems. TOCs provide sensor and tactical data communications systems; mission planning/mission support, sensor analysis capabilities; avionics and weapons system interfaces, media devices and data handling capabilities, at fixed-site locations. MTOC is a scalable, mobile version of the TOC for contingency operations and for support of MPRA operations from remote forward operating base airfields.															
7 TOCs: 6 operational systems (located at Jacksonville Florida, Sigonella Italy, Kaneohe Bay Hawaii, Whidbey Island Washington, Kadena Japan, and Bahrain), and 1 laboratory system (the "TacMobile Systems Integration Lab" (TMSIL), collocated at SSC Atlantic detachment Patuxent River Maryland with PMA-290's P-8A "Pax River Systems Integration Lab" (PAXSIL)).															
15 MTOCs: 9 operational systems (5 systems home ported at NAS Jacksonville Florida and 4 systems NAS Whidbey Island Washington), 1 laboratory system (an aircraft integration lab located at Navy Detachment Dallas), 1 C4I engineering and maintenance support system (located at the In Service Engineering Activity (ISEA), SSC Atlantic), 1 C4I mobile systems schoolhouse (located at the Center for Naval Air Technical Training (CNATT) Jacksonville Florida), 1 system undergoing production and 2 systems planned for procurement in FY19, to meet current operational configuration/requirements (SSC Atlantic), and 1 legacy system awaiting End-to-End refresh/recapitalization to meet current operational configuration/requirements (SSC Atlantic).															
The TacMobile program uses an evolutionary development strategy consisting of incremental upgrades to meet new and emergent Fleet requirements, while retaining current capabilities. Increments are planned and resourced to support the MPRF Family of Systems aircraft: P-8A Poseidon aircraft and its upgrades; Advanced Airborne Sensor (AAS); and MQ-4C Triton.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604231N
Line Item MDAP/MAIS Code: N/A		
T4050 will fund TacMobile Command, Control, Computer, Communications and Intelligence (C4I), network, and reach back communications systems modernization. Additionally, the line item funds TacMobile interfaces with P-8A (including Advanced Airborne Sensor (AAS)) and MQ-4C aircraft systems and sensors, and tactical communications modernization. Together these separate capabilities are combined to provide the TOCs and MTOCs with an Integrated Warfighting Capability to support Maritime Patrol P-8A operation requirements and pace aircraft modernization requirements.		
TacMobile C4I/P-8A modernization are synchronized to provide Technical Refreshes and incremental capability upgrades which provide the underlying C4I Infrastructure components and aircraft support capabilities components that ride on the C4I infrastructure. There are five major TacMobile components comprised of currently twenty three distinct subsystems that are developed in synchronization to work together, and are therefore fielded together. New or modernized aircraft interfaces are built specifically to integrate into the new or modernized C4I infrastructure. They operate together as an overarching system of systems.		
JH500. Deployable Joint Command and Control (DJC2) provides a self-contained, standardized, rapidly deployable, modular, scalable, and reconfigurable joint command and control (C2) capability to designated Geographic Combatant Commands (GCCs). DJC2 is the materiel solution to Defense Planning Guidance that called for the development of standing Joint Task Forces (JTF) with a deployable C2 capability. DJC2 will ensure that Joint Force Commanders (JFC) are equipped as well as trained and organized to carry out their C2 responsibilities. DJC2 provides GCCs and JFCs a mission critical, integrated family of systems with which to plan, control, coordinate, execute and assess operations. It is designed to deploy rapidly, set up within hours and quickly provide necessary C2 mission and collaboration functionality across the full spectrum of JTF operations. The DJC2 has also been deployed in support of Humanitarian Assistance and Disaster Relief (HA/DR) efforts. The capability is intended for all levels of conflict and will be reconfigurable to meet specific GCC and JTF mission requirements. This capability is interoperable with higher and adjacent echelons of command (to include coalition allies) as well as with supporting elements to include joint forces.		
DJC2 sites are as follows: 6 DJC2 core systems garrisoned at USSOUTHCOM Tampa, Florida (1), USEUCOM Stuttgart, Germany (1), AFRICOM (SETAF) Vicenza, Italy (1), USPACOM Camp Smith, Hawaii (1), Marine Expeditionary Force (III MEF) Camp Hansen, Japan (1), and NAVFUR-NAVAF, JFC Naples, Italy (1).		
Note that DJC2 is not a follow-on or replacement system for the Global Command and Control System-Joint (GCCS-J); rather, DJC2 employs a suite of applications, ensuring interoperability with the worldwide-installed base of GCCS-J.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2906 / Tactical/Mobile C4I Systems					
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: 0604231N		
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Tactical/Mobile (TacMobile) C4I Systems	P-5a			- / 54.400	- / 1.414	- / 2.973	- / 2.275	- / -
P-3a	1 / Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh (Tech Refresh)				- / 11.977	- / 0.281	- / 5.765	- / 0.300	- / 0.000
P-3a	2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1 (Upgrade)				- / 20.442	- / 22.213	- / 23.687	- / 12.688	- / 0.000
P-3a	3 / Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System (Tactical/Mobile (TacMobile) C4I Systems - End to End MTOC System)				- / 0.000	- / 0.000	- / 7.900	- / 0.000	- / 0.000
P-3a	4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System (Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System)				- / 0.000	- / 0.000	- / 0.000	- / 11.000	- / 0.000
P-3a	5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2 (Tech Refresh 2.1.2)				- / 0.000	- / 0.000	- / 0.000	- / 15.747	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 86.819	- / 23.908	- / 40.325	- / 42.010	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-40a	Tactical/Mobile (TacMobile) C4I Systems	P-5a			- / -	- / -	- / -	- / -	- / -
P-3a	1 / Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh (Tech Refresh)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1 (Upgrade)				- / 4.912	- / 0.480	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System (Tactical/Mobile (TacMobile) C4I Systems - End to End MTOC System)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.900
P-3a	4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System (Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System)				- / 0.600	- / 0.000	- / 0.000	- / 0.000	- / 11.600
P-3a	5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2 (Tech Refresh 2.1.2)				- / 11.858	- / 17.191	- / 2.500	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 28.020	- / 29.660	- / 29.952	- / 30.555	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The FY 2019 funding request was reduced by (\$0.117) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems		
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604231N		
Line Item MDAP/MAIS Code: N/A				
FY19 procures two additional MTOC C4I gear sets for Mobile Tactical Operations Center Manning/Training/Equipping efforts in support of increased worldwide Maritime Patrol and Reconnaissance Force operations. Nine currently operational MTOCS were procured back in the mid-1990's to support P-3 operations. As the P-8A aircraft replaced the P-3, and operations increased worldwide, it was realized that additional MTOCS are required in order to effectively conduct multi-site P-8A surveillance operations to counter/monitor growing threats. FY18 OCO funding procured the 10th MTOC C4I gear set. FY19 funding is for the eleventh and twelfth procurements which completes the Inventory Objective for MTOC gear sets and adequately supports P-8A surveillance efforts ensuring unfettered access of Sea-Lines of Communication and freedom of navigation for the United States and her Allies. FY19 also procures Technical Refresh of TacMobile TOC and MTOC C4I and aircraft interfaces. Specifically TR 2.1.1 continues procurement of Advanced Airborne Sensor (AAS) interface kits, and procures Joint Tactical Radio System (JTRS) receiver transmitters to address Link16 obsolescence; TR 2.1.2 procures Global Broadcast System (GBS) Refresh, Super High Frequency (SHF) Refresh, Ultra High Frequency (UHF)/Very High Frequency (VHF) Refresh, MT32 Voice Switch Display Refresh and Network Architecture Modernization. FY19 Installs Technical Refresh Items procured and produced in FY18 to maintain interoperability, address cyber security, and extend service life of fielded systems.				
FY19 funding procures DJC2 system enhancements including Global Broadcast System (GBS) communication updates for six sites. Additionally, DJC2 will field Next Generation Enclave (NGE) compute and storage resource at three sites and Environmental Control Unit (ECU) at one site due to existing GBS, NGE, and ECU units at those sites going end of life.				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems									Aggregated Items Title: Tactical/Mobile (TacMobile) C4I Systems						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)
1) T4050 Tactical/Mobile																				
1.1) Consolidated Prior Year Requirements ⁽¹⁾	A		807.328	67	54.091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) T4050 Tactical/Mobile</i>			-	-	54.091	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3) Support																				
3.1) Shore Pre-Installation and Design	A		-	-	0.309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) Support</i>			-	-	0.309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4) JH500 DJC2 Increment I System Enhancements																				
4.1) DJC2 Increment I System Enhancements ^{(2)(†)}	A		-	-	-	235.631	6	1.414	495.500	6	2.973	379.167	6	2.275	-	-	-	379.167	6	2.275
<i>Subtotal: 4) JH500 DJC2 Increment I System Enhancements</i>			-	-	0.000	-	-	1.414	-	-	2.973	-	-	2.275	-	-	-	-	2.275	
Total			-	-	54.400	-	-	1.414	-	-	2.973	-	-	2.275	-	-	-	-	2.275	

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

(†) indicates the presence of a P-5a

Footnotes:

(1) Prior year only requirements include TOC/MTOC 2.0.1 & 2.1, TACAMO, Installs 2.0.1 & 2.1

(2) Quantities listed represent DJC2 core system sites. Unit costs vary due to the number or level of core system enhancements performed at each site from year to year. FY19 funding procures DJC2 system enhancements for six sites, focusing on delivering Next Generation Enclave (NGE) compute and storage resource, Global Broadcast System (GBS) communication and Environmental Control Units (ECUs). FY19 funds also includes delivering NGE enhancements with the addition of Command and Control in a Communications Denied Environment (C2CDE) equipment. These enhancements reduce DJC2 size, weight, and power requirements and also enhances DJC2 cyber security posture.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems					Aggregated Items: Tactical/Mobile (TacMobile) C4I Systems				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
4) JH500 DJC2 Increment I System Enhancements												
4.1) DJC2 Increment I System Enhancements (2)		2017	SPAWAR / San Diego	C / FFP	Panama City, FL	Apr 2017	Jun 2017	6	235.631	Y		
4.1) DJC2 Increment I System Enhancements (2)		2018	SPAWAR / San Diego	C / FFP	Panama City, FL	Apr 2018	Jun 2018	6	495.500	Y		
4.1) DJC2 Increment I System Enhancements (2)		2019	SPAWAR / San Diego	C / FFP	Panama City, FL	Apr 2019	Jun 2019	6	379.167	Y		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 1 / Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	11.977	0.281	5.765	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	18.323
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	11.977	0.281	5.765	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	18.323
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	11.977	0.281	5.765	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	18.323
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides overarching technical modernization and technical refresh to fielded TacMobile systems.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 1 / Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Various			Modification Type: Tech Refresh				Related RDT&E PEs: 0604231N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh</i>												
B Kits												
Recurring												
1.1.1) TOC - NonOrganic	2 / 1.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.284
1.1.2) MTOC - NonOrganic (3)	8 / 7.483	- / -	3 / 5.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 13.248
1.1.3) FY2013 OCO Funding (JMAST Tech Refresh) - NonOrganic	- / 2.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.025
<i>Subtotal: Recurring</i>	- / 10.792	- / -	- / 5.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.557
<i>Subtotal: Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh</i>	10 / 10.792	- / -	3 / 5.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 16.557
<i>Subtotal: Procurement, All Modification Items</i>	- / 10.792	- / -	- / 5.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.557
Installation												
<i>Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh</i>												
<i>Subtotal: Installation</i>	- / 1.185	- / 0.281	- / 0.000	- / 0.300	- / 0.000	- / 0.300	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.766
Total												
Total Cost (Procurement + Support + Installation)	11.977	0.281	5.765	0.300	0.000	0.300	0.000	0.000	0.000	0.000	0.000	18.323

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems								Modification Number / Title: 1 / Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems- Tech Refresh																														
Manufacturer Information																														
Manufacturer Name: SSC LANT								Manufacturer Location: Charleston, SC																						
Administrative Leadtime (in Months): 2								Production Leadtime (in Months): 9																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017																												
Delivery Dates	Sep 2017	Sep 2018																												
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: TacMobile C4I Systems Tech Refresh																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.185	1 / 0.281	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.466																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	3 / 0.300	0 / 0.000	3 / 0.300	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.300																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			9 / 1.185	1 / 0.281	- / -	3 / 0.300	0 / 0.000	3 / 0.300	- / -	- / -	- / -	- / -	0 / 0.000	13 / 1.766																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13					
Out	9	-	1	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13					
Footnotes:																														
(3) 1. Quantities represent separate Command & Control & Intelligence (C2I), Communications, Aircraft Interface, and Mobility/Facility component system upgrades of TacMobile systems. 2. TacMobile Tech Refresh consists of refreshing 5 major components (made up of 23 individual subsystems) that range in cost from \$850K to \$2,500K. 3. FY17 installs include 1 unit procured in FY16 in BLI 2906 and 2 units procured in FY16 BLI 2246 due to line item consolidation.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	20.442	22.213	23.687	12.688	0.000	12.688	4.912	0.480	0.000	0.000	0.000	84.422
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	20.442	22.213	23.687	12.688	0.000	12.688	4.912	0.480	0.000	0.000	0.000	84.422
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	20.442	22.213	23.687	12.688	0.000	12.688	4.912	0.480	0.000	0.000	0.000	84.422
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides technical modernization and technical refresh to fielded TacMobile Command and Control, Networking, and Communications systems necessary to support P-8A Poseidon Increment 2 and MQ-4C Triton Unmanned Aerial System (UAS) at their initial Operating Capability (IOC)												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Inc 2.1			Modification Type: Upgrade					Related RDT&E PEs: 0604231N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1												
B Kits												
Recurring												
1.1.1) TOC - NonOrganic ⁽⁴⁾	10 / 7.349	9 / 6.189	9 / 6.704	6 / 4.379	- / -	6 / 4.379	- / -	- / -	- / -	- / -	- / -	34 / 24.621
1.1.2) MTOC - NonOrganic ⁽⁵⁾	16 / 11.570	15 / 12.501	13 / 13.355	5 / 5.499	- / -	5 / 5.499	3 / 3.385	- / -	- / -	- / -	- / -	52 / 46.310
Subtotal: Recurring	- / 18.919	- / 18.690	- / 20.059	- / 9.878	- / -	- / 9.878	- / 3.385	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1	26 / 18.919	24 / 18.690	22 / 20.059	11 / 9.878	- / -	11 / 9.878	3 / 3.385	- / -	- / -	- / -	- / -	86 / 70.931
Subtotal: Procurement, All Modification Items	- / 18.919	- / 18.690	- / 20.059	- / 9.878	- / -	- / 9.878	- / 3.385	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Shore Pre-Installation Design	- / 0.321	- / 0.400	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.121
Subtotal: Support	- / 0.321	- / 0.400	- / 0.400	- / -	- / -	- / -	- / -	- / 0.000				
Installation												
Modification Item 1 of 1: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1	- / 1.202	- / 3.123	- / 3.228	- / 2.810	- / 0.000	- / 2.810	- / 1.527	- / 0.480	- / 0.000	- / 0.000	- / 0.000	- / 12.370
Subtotal: Installation	- / 1.202	- / 3.123	- / 3.228	- / 2.810	- / -	- / 2.810	- / 1.527	- / 0.480	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	20.442	22.213	23.687	12.688	0.000	12.688	4.912	0.480	0.000	0.000	0.000	84.422

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems									Modification Number / Title: 2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
Modification Item 1 of 1: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1																																
Manufacturer Information																																
Manufacturer Name: SSC LANT							Manufacturer Location: Charleston, SC																									
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 7																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Jan 2017		Jan 2018		Jan 2019																											
Delivery Dates	Jul 2017		Aug 2018		Aug 2019																											
Installation Information																																
Method of Implementation: [none specified]:: Installation Name: TacMobile C4I Systems Technical Refresh 2.1.1																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.202	23 / 3.123	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	35 / 4.325																
FY 2017			- / -	- / -	24 / 3.228	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	24 / 3.228																
FY 2018			- / -	- / -	- / -	22 / 2.810	0 / 0.000	22 / 2.810	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 2.810																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	11 / 1.527	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.527																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.480	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.480																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			12 / 1.202	23 / 3.123	24 / 3.228	22 / 2.810	0 / 0.000	22 / 2.810	11 / 1.527	3 / 0.480	- / -	- / -	- / -	- / -	0 / 0.000	95 / 12.370																
Installation Schedule																																
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021		FY 2022				FY 2023		TC	Tot						
	Q1	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	-	8	8	7	-	8	8	8	-	7	7	8	-	6	5	-	-	3	-	-	-	-	-	-	-	95					
Out	12	-	8	8	7	-	8	8	8	-	7	7	8	-	6	5	-	-	3	-	-	-	-	-	-	-	95					
Footnotes:																																
(4) For Tactical Operations Center: 1. Quantities represent separate Command & Control & Intelligence (C2I), Communications, Aircraft Interface, and Mobility/Facility component system upgrades of TacMobile systems. 2. FY17 installs include 14 units procured in FY16 in BLI 2906 and 9 units procured in FY16 in BLI 2246. There is a 4-month integration period at SSC Lant after receipt of production items.																																

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems	Modification Number / Title: 2 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.1
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(5) For Mobile Tactical Operations Center: 1. Quantities represent separate Command & Control & Intelligence (C2I), Communications, Aircraft Interface, and Mobility/Facility component system upgrades of TacMobile systems. 2. TacMobile Tech Refresh 2.1.1 consists of refreshing 5 major components (made up of 14 individual subsystems) that range in cost from \$500K to \$1,350K. The Tech Refresh hardware composition is dependent upon the requirements of the site at the time of refresh. As an example, FY17 primarily procured High Frequency (HF) Communications equipment, FY18 added interface kits for Advanced Airborne Sensor (AAS) in addition to HF Communications, and FY19 will continue procurement of the AAS interface kits, and procure Joint Tactical Radio System (JTRS) receiver/transmitters to address line-of-sight Data Link (Link-16) obsolescence. 3. FY17 installs include components procured by PE 0204271N 2246 in FY16.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 3 / Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	7.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.900
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	7.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.900
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	7.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.900
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Overseas Contingency Operation (OCO) funding Increase in FY18 procures an MTOC C4I gear set, and two US Battlefield Information Collection and Exploitation Systems (BICES), to support increased operations with Allied Forces. Global Force Management policies have increased for P-8A aircraft operations in EUCOM. This additional funding provides ability to conduct multi-site P-8A surveillance operations in USEUCOM Area of Responsibility to counter/monitor growing threats. The P-8A surveillance program ensures unfettered access of Sea-Lines of Communication and freedom of navigation for the United States and her Allies. Funding maximizes communications (C4I) and interoperability with Allied forces.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 3 / Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: MTOC			Modification Type: Tactical/Mobile (TacMobile) C4I Systems - End to End MTOC System					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1:</i> Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System												
B Kits												
Recurring												
1.1.1) OCO MTOC System - NonOrganic		- / -	- / -	1 / 7.603	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.603
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / 7.603	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000 / 7.603
<i>Subtotal: Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System</i>		- / -	- / -	1 / 7.603	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.603
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / 7.603	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000 / 7.603
Installation												
<i>Modification Item 1 of 1:</i> Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System		- / 0.000	- / 0.000	- / 0.297	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.297
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 0.297	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000 / 0.297
Total												
Total Cost (Procurement + Support + Installation)		0.000	0.000	7.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.900

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems								Modification Number / Title: 3 / Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems - OCO MTOC System																														
Manufacturer Information																														
Manufacturer Name: SSC LANT				Manufacturer Location: Charleston, SC																										
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 7																										
Dates		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																
Contract Dates				Jan 2018																										
Delivery Dates				Aug 2018																										
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: OCO MTOC System																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)						
Prior Years			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2018			- / -	- / -	- / -	1 / 0.297	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.297									
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.297									
Total			- / -	- / -	- / -	1 / 0.297	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	11.000	0.000	11.000	0.600	0.000	0.000	0.000	0.000	11.600
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	11.000	0.000	11.000	0.600	0.000	0.000	0.000	0.000	11.600
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	11.000	0.000	11.000	0.600	0.000	0.000	0.000	0.000	11.600
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding procures MTOC C4I gear sets to support increased operations with Allied Forces. Global Force Management policies have increased requirements for P-8 operations Worldwide. This funding provides ability to conduct multi-site P-8A surveillance operations to counter/monitor growing threats. The P-8A surveillance program ensures unfettered access of Sea Lines of Communication and freedom of navigation for the United States and her Allies. Funding maximizes communications (C4I) and inter-operability with Allied forces.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: MTOC			Modification Type: Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System</i>												
B Kits												
Recurring												
1.1.1) TIO MTOC System - NonOrganic ⁽⁶⁾												
Subtotal: Recurring												
Subtotal: Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System												
Subtotal: Procurement, All Modification Items												
Installation												
<i>Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System</i>												
Subtotal: Installation												
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	11.000	0.000	11.000	0.600	0.000	0.000	0.000	0.000	11.600

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems									Modification Number / Title: 4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System																														
Manufacturer Information																														
Manufacturer Name: SSC LANT							Manufacturer Location: Charleston, SC																							
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 7																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates					Jan 2019																									
Delivery Dates					Aug 2019																									
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: TacMobile C4I Systems TIO MTOC																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.600	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.600														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.600	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.600														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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:																														
(6) Funding Increase in FY19 procures two additional MTOC C4I gear sets for Mobile Tactical Operations Center Manning/Training/Equipping efforts in support of increased worldwide Maritime Patrol and Reconnaissance Force operations. Nine currently operational MTOCS were procured back in the mid-1990's to support P-3 operations. As the P-8A aircraft replaced the P-3, and operations increased worldwide, it was realized that additional MTOCS are required in order to effectively conduct multi-site P-8A surveillance operations to counter/monitor growing threats. FY18 OCO funding procured the 10th																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems	Modification Number / Title: 4 / Tactical/Mobile (TacMobile) C4I Systems - TIO MTOC System
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
MTOC C4I gear set. FY19 funding is for the eleventh and twelfth procurements which completes the Inventory Objective for MTOC gear sets and adequately supports P-8A surveillance efforts ensuring unfettered access of Sea-Lines of Communication and freedom of navigation for the United States and her Allies. FY19 procurement requirement to achieve TIO does not include United States Battlefield Information Collection and Exploitation Systems nor Expeditionary Facilities Equipment, which are not required to meet this requirement.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	15.747	0.000	15.747	11.858	17.191	2.500	0.000	0.000	47.296
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	15.747	0.000	15.747	11.858	17.191	2.500	0.000	0.000	47.296
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	15.747	0.000	15.747	11.858	17.191	2.500	0.000	0.000	47.296
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Technical Refresh of Command and Control, Networking and Communications systems necessary to maintain support Maritime Patrol Family of Systems aircraft operations. Includes: Network modernization to maintain Cyber Security posture; Communications refresh and modernization; Sensor analysis, mission planning, and in-flight mission support capabilities, avionics and weapons system interfaces modernization necessary to support P-8A Operations												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems						Modification Number / Title: 5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Various			Modification Type: Tech Refresh 2.1.2				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2												
B Kits												
Recurring												
1.1.1) TOC - NonOrganic ⁽⁷⁾	- / -	- / -	- / -	2 / 4.382	- / -	2 / 4.382	2 / 4.388	2 / 4.387	- / -	- / -	- / -	6 / 13.157
1.1.2) MTOC - NonOrganic ⁽⁸⁾	- / -	- / -	- / -	5 / 10.665	- / -	5 / 10.665	2 / 4.271	5 / 10.676	- / -	- / -	- / -	12 / 25.612
Subtotal: Recurring	- / 0.000	- / -	- / -	- / 15.047	- / -	- / 15.047	- / 8.659	- / 15.063	- / -	- / -	- / 0.000	- / 38.769
Subtotal: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2	- / -	- / -	- / -	7 / 15.047	- / -	7 / 15.047	4 / 8.659	7 / 15.063	- / -	- / -	- / -	18 / 38.769
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / -	- / 15.047	- / -	- / 15.047	- / 8.659	- / 15.063	- / -	- / -	- / 0.000	- / 38.769
Support (All Modification Items)												
2.1) Shore Pre-Installation Design ⁽⁹⁾	- / -	- / -	- / -	- / 0.700	- / -	- / 0.700	- / 0.700	- / 0.700	- / -	- / -	- / -	- / 2.100
Subtotal: Support	- / 0.000	- / -	- / -	- / 0.700	- / -	- / 0.700	- / 0.700	- / 0.700	- / -	- / -	- / 0.000	- / 2.100
Installation												
Modification Item 1 of 1: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.499	- / 1.428	- / 2.500	- / 0.000	- / 0.000	- / 6.427
Subtotal: Installation	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.499	- / 1.428	- / 2.500	- / -	- / 0.000	- / 6.427
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	15.747	0.000	15.747	11.858	17.191	2.500	0.000	0.000	47.296

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems								Modification Number / Title: 5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2																														
Manufacturer Information																														
Manufacturer Name: SSC LANT				Manufacturer Location: Charleston, SC																										
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 7																										
Dates		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																
Contract Dates						Jan 2019																								
Delivery Dates						Aug 2019																								
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: TacMobile C4I Systems Technical Refresh 2.1.2																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Total Cost (\$ M)						
Prior Years			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.499	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 2.499								
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.428	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.428								
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.500	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 2.500								
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.499	4 / 1.428	7 / 2.500	- / -	- / -	0 / 0.000	18 / 6.427									
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	1	-	3	2	2	-	-	-	-	18			
Out	-	-	-	-	-	-	-	-	-	-	-	2	3	2	-	1	2	1	-	2	3	2	-	-	-	-	18			

Footnotes:

(7) TacMobile quantities represent number of sites. Each site is comprised of up to 23 subsystems. Unit and installation costs vary based upon the specific subsystems technically refreshed from year to year. There is a 4-month integration period at SSC Lant after receipt of production items.

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2906 / Tactical/Mobile C4I Systems	Modification Number / Title: 5 / Tactical Mobile (TacMobile) C4I Systems - Tech Refresh 2.1.2
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(8) TacMobile quantities represent number of sites. Each site is comprised of up to 23 subsystems. Unit and installation costs vary based upon the specific subsystems technically refreshed from year to year. There is a 4-month integration period at SSC Lant after receipt of production items.		
(9) Unit and installation costs vary based upon the specific subsystems technically refreshed from year to year.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)							
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: 0305208N					
Line Item MDAP/MAIS Code: 000												
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	239.446	23.610	20.182	12.896	0.000	12.896	20.733	20.876	14.895	25.692	234.735	613.065
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	239.446	23.610	20.182	12.896	0.000	12.896	20.733	20.876	14.895	25.692	234.735	613.065
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	239.446	23.610	20.182	12.896	0.000	12.896	20.733	20.876	14.895	25.692	234.735	613.065
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.403	0.511	0.157	-	0.157	0.154	0.731	0.464	-	-	2.420
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Distributed Common Ground System - Navy (DCGS-N) is the Navy's portion of the Under Secretary of Defense, Intelligence (USD (I)) DCGS Family of Systems (FoS). The Department of Defense (DoD) has defined a DCGS architecture that will be compatible and interoperable across all of the Services' Intelligence, Surveillance and Reconnaissance (ISR) systems and operations. DCGS accesses and ingests data from spaceborne, airborne, subsurface, and surface ISR collection assets, intelligence databases and intelligence producers. This collected data is shared across a Joint enterprise using the DCGS Integration Backbone (DIB) and in time, the Defense Intelligence Information Enterprise (DI2E) to enhance access and sharing of ISR information across Joint forces through the use of common enterprise standards and services. DCGS FoS supports Joint Task Force (JTF)-level and below combat operations with critical intelligence for battle management and information dominance across the full spectrum of operations, including peace, conflict, war, and Overseas Contingency Operations (OCO). DCGS is a cooperative effort between the services, agencies, and DoD to provide systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms. DCGS-N core components include the analyst workstation from the Global Command and Control System (GCCS) - Integrated Imagery and Intelligence (I3), Generic Area Limitation Environment (GALE) Signals Intelligence (SIGINT), Common Geo-positioning Services (CGS), Image Product Library (IPL) or Information Store (iSTORE), Modernized Integrated Database (MIDB), Joint Concentrator Architecture (JCA) and Track Management Services (TMS).												
The DCGS-N system represents the integration of 1) The processing and exploitation of tactical and Imagery Intelligence (IMINT) and SIGINT; 2) Precision target geopositioning, mensuration, and imagery dissemination capabilities; 3) Selected national IMINT requirements and processing capabilities from the National Geospatial-Intelligence Agency (NGA); and 4) Sharing of Intelligence, Surveillance, Reconnaissance and Targeting (ISR&T) and Command and Control information via DIB, DI2E, and Net-Centric Enterprise Services (NCES) standards with a wide range of customers (e.g., Global Command and Control System - Maritime (GCCS-M), Joint Mission Planning System (JMPS), and many others).												
The DCGS-N Enterprise Node (DEN), which incorporates current DIB standards and DI2E policy, facilitates interoperability and data sharing among the DCGS FoS. DCGS-N ensures compliance with the DoD DCGS network architecture.												
The Navy is establishing an ISR Enterprise way ahead that will emphasize a reach back strategy to provide intelligence products to support deployed ship and shore operations. The Navy will also migrate to a Service Oriented Architecture (SOA) that requires the integration and testing of a Maritime ISR Enterprise capabilities, migration of ISR applications to a SOA environment, and integration to leverage a Common Computing Environment (CCE) and the Intelligence Community Information Technology Enterprise (IC ITE). DCGS-N will also become the focal point for migration of Maritime Domain Awareness (MDA) fusion and analysis Maritime Fusion & Analysis (MFAS) tool applications for the Navy. Additionally, Intelligence Surveillance and Reconnaissance (ISR) funding supports development and integration efforts to fuse Intelligence, Surveillance, Reconnaissance and Targeting (ISR&T) data collected, exploited and disseminated by ISR systems with other intelligence data and automatically provide to shipboard combat systems												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305208N
Line Item MDAP/MAIS Code: 000		
to support kinetic and non-kinetic fires and more effective exploitation of the electromagnetic spectrum. ISR systems will play key roles in enabling the national-to-tactical integration necessary for an integrated maritime targeting capability in support of kinetic and non-kinetic fires.		
Distributed Common Ground System-Navy (DCGS-N) Increment 2 addresses a critical shortfall in Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) capability and capacity to support operational, tactical planning, and execution across the full range of joint military operations. Existing TCPED shortfalls will be exacerbated by planned Navy, Joint, and Allied fielding of new ISR platforms. Currently fielded systems provide localized processing capabilities that will be overwhelmed in future years without a significant change in the way the Navy processes, exploits and disseminates intelligence data. DCGS-N Increment 2 will deliver all source fusion and analytical capabilities; provide Maritime Domain Awareness (MDA) capabilities and integrate TCPED capabilities to improve the use and analysis of sensor and platform data. DCGS-N Increment 2 will be based on an enterprise solution to share this information across commands, services, and agencies to promote shared situational awareness. DCGS-N Increment 2 consists of multiple releases. The first release provides an enhanced Navy Intelligence, Surveillance and Reconnaissance (ISR) enterprise that converges and builds on the DCGS-N Increment 1 and MDA Enterprise Nodes; leverages the Defense Intelligence Information Enterprise (DI2E); is compliant with the Common Computing Environment (CCE) and the Community Information Technology Enterprise (CITE); federates ISR and TCPED workflow and production improving throughout the automation; exploits new and evolving unmanned systems sensor data; provides Multi-Intelligence (Multi-INT) cross-queuing and modular tools. The second release enhances afloat ISR capabilities by providing a set of software centric tools providing Multi-INT fusion and analysis, behavior prediction and intelligent knowledge management designed to operate in disconnected or denied communications environment. Follow-on releases will be developed based on Fleet requirements.		
Intelligence Carry-On Program (ICOP) is a suite of multi-source intelligence and analytical capabilities which includes an integrated Three-Dimensional (3-D) operational picture displaying intelligence and other data sources to provide a richer and more complete picture of the battle space on Unit Level platforms. The system supports a full motion video capability that receives, processes, exploits, and disseminates organic and non-organic data as well as the ability to process and correlate Electronic Intelligence (ELINT) and external Communications Intelligence (COMINT Externals). It integrates mature Commercial Off-the-Shelf (COTS) and Government Off-the-Shelf (GOTS) applications with shared storage and communication paths to reach back to the DCGS-N Enterprise Node (DEN), and it provides data sharing to the Maritime Operations Centers (MOC) and national ISR systems, making tactical users a part of the larger ISR enterprise.		
ICOP is subset to DCGS-N capabilities for Unit Level platforms. DCGS-N only fields on Force Level platforms. There are currently Unit Level platforms identified to receive permanent ICOP Partial or Full Foundation Kit installations. ICOP Foundation Kits include all cabling and mounting plate foundations for antennas and ICOP workstations. The Unit Level platforms will pull from a ICOP workstation or ICOP workstation and Communications Module 3s (CM3s) System rotatable pool based on deployment. ICOP fielding strategy requires both partial foundation kit and ICOP workstations without CM3s or ICOP workstations, (2) CM3s and full foundation kits based on fleet prioritization. Unit level platforms include cruisers (CG), destroyers (DDG), and amphibious transport docks (LPD-17) platforms. Crypto Modifications (Mods) were added to the CM3 production unit end item in FY16 to meet the new mandate for Type 1 Encryption transmission of sensor data.		
DCGS-N Increment 1 Product Improvement includes DCGS-N Fleet Introductory Training and training equipment, DCGS-N hardware and software technical refresh, ancillary equipment and upgrades to extend service life and provide the fleet imagery intelligence capability. Equipment support includes the assembly and integration associated with the product improvements or modification.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2914 / Distributed Common Ground System-Navy (DCGS-N)					
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: 0305208N		
Line Item MDAP/MAIS Code: 000									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / ICOP	P-5a			- / 30.625	- / 12.000	- / 6.392	- / 0.000	- / 0.000
P-5	2 / 2914 Distributed Common Ground System - Navy (DCGS-N) Prior Years				- / 133.167	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / PRODUCT IMPROVEMENT Afloat (Tech Refresh/Upgrade)				- / 65.235	- / 4.309	- / 8.415	- / 10.054	- / 0.000
P-3a	2 / PRODUCT IMPROVEMENT Ashore (Tech Refresh/Upgrades)				- / 10.419	- / 7.301	- / 5.375	- / 2.662	- / 0.000
P-3a	3 / DCGS-N INCREMENT 2 Afloat (New Model)				- / 0.000	- / 0.000	- / 0.000	- / 0.180	- / 0.000
P-3a	4 / DCGS-N INCREMENT 2 Ashore (New Model)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 239.446	- / 23.610	- / 20.182	- / 12.896	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-5	1 / ICOP	P-5a			- / -	- / -	- / -	- / -	- / -
P-5	2 / 2914 Distributed Common Ground System - Navy (DCGS-N) Prior Years				- / -	- / -	- / -	- / -	- / -
P-3a	1 / PRODUCT IMPROVEMENT Afloat (Tech Refresh/Upgrade)				- / 8.744	- / 0.306	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / PRODUCT IMPROVEMENT Ashore (Tech Refresh/Upgrades)				- / 0.940	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / DCGS-N INCREMENT 2 Afloat (New Model)				- / 7.929	- / 10.309	- / 13.952	- / 13.359	- / 232.167
P-3a	4 / DCGS-N INCREMENT 2 Ashore (New Model)				- / 3.120	- / 10.261	- / 0.943	- / 12.333	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 20.733	- / 20.876	- / 14.895	- / 25.692	- / 234.735
*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: DCGS-N Increment 1 planned procurements in FY19 include (10) DCGS-N Increment 1 technical refreshes that consist of (1) 2-rack Ashore technical refreshes, (7) 2-rack Afloat technical refreshes, (1) End-of-Life Afloat Hardware Upgrade and (1) End-of-Life Ashore Hardware Upgrades. These DCGS-N installations will replace the currently fielded legacy systems and leverage the Navy's Common Computing Environment (CCE) as applicable as well as provide upgrades to extend service life.									

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)										Item Number / Title [DODIC]: 1 / ICOP					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				30.625			12.000		6.392		0.000		0.000		0.000			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				30.625			12.000		6.392		0.000		0.000		0.000			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				30.625			12.000		6.392		0.000		0.000		0.000			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (<i>Each</i>)	Total Cost (\$ M)
Hardware - ICOP Cost																		
Recurring Cost																		
1.1.1) ICOP Foundation Kit Procurement ^(†)	31.923	52	1.660	27.000	30	0.810	55.000	7	0.385	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) ICOP System Procurement ^(†)	223.115	61	13.610	490.000	8	3.920	490.000	4	1.960	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) CM3 Set Procurements ^(†)	-	-	0.000	-	-	0.000	440.000	3	1.320	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	15.270	-	-	4.730	-	-	3.665	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - ICOP Cost</i>	-	-	15.270	-	-	4.730	-	-	3.665	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - INSTALLATIONS Cost																		
Recurring Cost																		
2.1.1) ICOP Foundation Kit Installation Afloat	-	-	11.090	-	-	6.243	-	-	2.174	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	11.090	-	-	6.243	-	-	2.174	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - INSTALLATIONS Cost</i>	-	-	11.090	-	-	6.243	-	-	2.174	-	-	0.000	-	-	0.000	-	-	0.000
Support Cost																		
3.1) ICOP Foundation Kit Production Support	-	-	0.134	-	-	0.052	-	-	0.025	-	-	0.000	-	-	0.000	-	-	0.000
3.2) ICOP System Production Support	-	-	0.885	-	-	0.255	-	-	0.213	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)									Item Number / Title [DODIC]: 1 / ICOP													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
3.3) ICOP Foundation Kit DSA	-	-	3.246	-	-	0.720	-	-	0.315	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Support Cost</i>	-	-	4.265	-	-	1.027	-	-	0.553	-	-	0.000	-	-	0.000	-	-	0.000								
Gross/Weapon System Cost	-	-	30.625	-	-	12.000	-	-	6.392	-	-	0.000	-	-	0.000	-	-	0.000								

Remarks:

Intelligence Carry-On Program (ICOP) is a suite of multi-source intelligence and analytical capabilities which includes an integrated Three-Dimensional (3-D) operational picture displaying intelligence and other data sources to provide a richer and more complete picture of the battle space on Unit Level platforms. The system supports a full motion video capability that receives, processes, exploits, and disseminates organic and non-organic data as well as the ability to process and correlate Electronic Intelligence (ELINT) and external Communications Intelligence (COMINT Externals). It integrates a menu of mature Commercial Off-the-Shelf (COTS) and Government Off-the-Shelf (GOTS) applications with shared storage and communication paths to reach back to the DCGS-N Enterprise Node (DEN), and to provide data sharing to the Maritime Operations Centers (MOC) and national Intelligence, Surveillance and Reconnaissance (ISR) systems, making tactical users a part of the larger ISR enterprise.

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)					Item Number / Title [DODIC]: 1 / ICOP				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) ICOP Foundation Kit Procurement	✓	2017	BAE Systems / San Diego, CA	C / FFP	San Diego	Jun 2017	Jul 2017	30	27.000	Y		
1.1.1) ICOP Foundation Kit Procurement	✓	2018	BAE Systems / San Diego, CA	C / FFP	San Diego	Oct 2017	Nov 2017	7	55.000	Y		
1.1.2) ICOP System Procurement	✓	2017	BAE Systems / San Diego, CA	C / FFP	San Diego	Jun 2017	Sep 2017	8	490.000	Y		
1.1.2) ICOP System Procurement	✓	2018	BAE Systems / San Diego, CA	C / FFP	San Diego	Oct 2017	Jan 2018	4	490.000	Y		
1.1.3) CM3 Set Procurements	✓	2018	BAE Systems / San Diego, CA	C / FFP	San Diego	Oct 2017	Jan 2018	3	440.000	Y		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)													Item Number / Title [DODIC]: 2 / 2914 Distributed Common Ground System - Navy (DCGS-N) Prior Years		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				133.167			0.000		0.000		0.000		0.000		0.000			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				133.167			0.000		0.000		0.000		0.000		0.000			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				133.167			0.000		0.000		0.000		0.000		0.000			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - 2914 DCGS-N Prior Year Cost																		
Recurring Cost																		
1.1.1) JSIPS-N Product Improvement Prior Years	1,764.000	23	40.572	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) DCGS-N Increment 1 Initial FRP Systems Prior Years	3,086.500	30	92.595	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	133.167	-	-	0.000	-	-	0.000									
<i>Subtotal: Hardware - 2914 DCGS-N Prior Year Cost</i>	-	-	133.167	-	-	0.000	-	-	0.000									
Gross/Weapon System Cost	-	-	133.167	-	-	0.000	-	-	0.000									

Remarks:

Includes prior year funding for 2914 Distributed Common Ground System - Navy (DCGS-N) to include Joint Services Imagery Processing System - Navy (JSIPS-N) and Distributed Common Ground System - Navy (DCGS-N) Increment 1 Ashore and Afloat initial Full Rate Production (FRP) Systems. Includes both procurement and installation cost. P3As are no longer shown because funding is prior year only.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)					Modification Number / Title: 1 / PRODUCT IMPROVEMENT Afloat				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	65.235	4.309	8.415	10.054	0.000	10.054	8.744	0.306	0.000	0.000	0.000	97.063	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	65.235	4.309	8.415	10.054	0.000	10.054	8.744	0.306	0.000	0.000	0.000	97.063	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	65.235	4.309	8.415	10.054	0.000	10.054	8.744	0.306	0.000	0.000	0.000	97.063	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	

Description:

Tech Refresh/Upgrade integration procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and unsupportable equipment for the Distributed Common Ground System-Navy (DCGS-N) program for the processing and exploitation of tactical and Imagery Intelligence (IMINT) and Signal Intelligence (SIGINT); Precision target geopositioning, mensuration, and imagery dissemination capabilities; Selected national IMINT requirements and processing capabilities from the National Geospatial-Intelligence Agency (NGA); Sharing of Intelligence, Surveillance, Reconnaissance and Targeting (ISRT) and Command and Control (C2) information via DCGS Integrated Backbone (DIB) and Net-Centric Enterprise Services (NCES) standards. Specifically, this funds tech refresh/upgrades/Engineering Change Proposals (ECPs) to its subsystems to provide access and ingest data from space borne, airborne, subsurface, and surface ISR collection assets, intelligence databases and intelligence producers.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)						Modification Number / Title: 1 / PRODUCT IMPROVEMENT Afloat			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Ship			Modification Type: Tech Refresh/Upgrade				Related RDT&E PEs: 0305208N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: PRODUCT IMPROVEMENT Afloat												
B Kits												
Recurring												
1.1.1) DCGS-N Tech Refresh/Upgrade - NonOrganic ⁽¹⁾		20 / 23.935	5 / 2.632	6 / 4.031	8 / 6.224	- / -	8 / 6.224	4 / 2.400	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>		- / 23.935	- / 2.632	- / 4.031	- / 6.224	- / -	- / 6.224	- / 2.400	- / -	- / -	- / -	- / 0.000
<i>Subtotal: PRODUCT IMPROVEMENT Afloat</i>		20 / 23.935	5 / 2.632	6 / 4.031	8 / 6.224	- / -	8 / 6.224	4 / 2.400	- / -	- / -	- / -	43 / 39.222
<i>Subtotal: Procurement, All Modification Items</i>		- / 23.935	- / 2.632	- / 4.031	- / 6.224	- / -	- / 6.224	- / 2.400	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Equipment Support		- / 4.774	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.774
2.2) Production Support		- / 3.027	- / 0.171	- / 0.256	- / 0.404	- / 0.000	- / 0.404	- / 0.156	- / 0.000	- / 0.000	- / 0.000	- / 4.014
2.3) DSA		- / 3.346	- / 0.306	- / 0.378	- / 0.576	- / 0.000	- / 0.576	- / 0.238	- / 0.006	- / 0.000	- / 0.000	- / 4.850
<i>Subtotal: Support</i>		- / 11.147	- / 0.477	- / 0.634	- / 0.980	- / -	- / 0.980	- / 0.394	- / 0.006	- / -	- / -	- / 0.000
Installation												
Modification Item 1 of 1: PRODUCT IMPROVEMENT Afloat		- / 30.153	- / 1.200	- / 3.750	- / 2.850	- / 0.000	- / 2.850	- / 5.950	- / 0.300	- / 0.000	- / 0.000	- / 44.203
<i>Subtotal: Installation</i>		- / 30.153	- / 1.200	- / 3.750	- / 2.850	- / -	- / 2.850	- / 5.950	- / 0.300	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		65.235	4.309	8.415	10.054	0.000	10.054	8.744	0.306	0.000	0.000	97.063

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10															Modification Number / Title: 1 / PRODUCT IMPROVEMENT Afloat															
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: PRODUCT IMPROVEMENT Afloat																														
Manufacturer Information																														
Manufacturer Name: BAE										Manufacturer Location: SAN DIEGO, CA																				
Administrative Leadtime (<i>in Months</i>): 2										Production Leadtime (<i>in Months</i>): 6																				
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017	Dec 2018																											
Delivery Dates	Jun 2017	Jun 2018	Jun 2019																											
Installation Information																														
Method of Implementation: Method:: Installation Name: Product Improvement Afloat DCGS-N																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 30.153	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 30.153															
FY 2017			- / -	4 / 1.200	1 / 0.950	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 2.150															
FY 2018			- / -	- / -	5 / 2.800	1 / 0.950	0 / 0.000	1 / 0.950	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 3.750															
FY 2019			- / -	- / -	- / -	2 / 1.900	0 / 0.000	2 / 1.900	6 / 5.050	- / -	- / -	- / -	- / -	0 / 0.000	8 / 6.950															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.900	1 / 0.300	- / -	- / -	- / -	0 / 0.000	4 / 1.200															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total			20 / 30.153	4 / 1.200	6 / 3.750	3 / 2.850	0 / 0.000	3 / 2.850	9 / 5.950	1 / 0.300	- / -	- / -	- / -	0 / 0.000	43 / 44.203															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	2	-	2	1	1	1	2	2	1	1	-	2	2	4	2	1	1	-	-	-	-	-	-	43					
Out	18	2	-	2	1	1	1	2	2	1	1	-	2	2	4	2	1	1	-	-	-	-	-	-	43					
Footnotes:																														
(1) The FY19 increase in Product Improvement Afloat procurement unit cost is attributed to the variation in the Inc 1 technical refresh buy between FY18 and FY19. In FY18, (6) DCGS-N Inc 1 Tech Refreshes consist of (1) 1-rack Afloat tech refresh; (2) 2-rack Afloat tech refresh, and (3) End-of-Life Afloat Hardware Upgrades. In FY19, (8) DCGS-N Inc 1 Tech Refreshes consist of (7) 2-rack Afloat tech refresh and (1) End-Of-Life Afloat Hardware Upgrade. Procurement costs range from \$450K (for End-of-Life Afloat Hardware Upgrade) to \$870K (for 2-rack Afloat tech refresh). So procuring more 2-rack Afloat tech refresh drives the average unit cost higher in FY19. The FY19 increase in Product Improvement Afloat installation unit cost is attributed to a multitude of factors. First, the (6) FY18 DCGS-N Inc 1 technical refresh																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)	Modification Number / Title: 1 / PRODUCT IMPROVEMENT Afloat
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
installations consist of (2) 1-rack Afloat tech refresh, (1) 2-rack Afloat tech refresh, and (3) End-of-Life Afloat Hardware Upgrades. The (3) FY19 DCGS-N Inc 1 technical refresh installations consist of (3) 2-rack Afloat tech refresh. Installation costs range from \$300K (for End-of-Life Afloat Hardware Upgrade) to \$950K (for 2-rack Afloat tech refresh). Second, the DCGS-N Inc 1 Block 1 and 2 unit costs represent an average cost based on 3 Rack, 2 Rack, 1 Rack, and End-of-Life Hardware Upgrade configurations dependent on specific platform (CVN, LHD, LCC, LHA), network, infrastructure versions, and alignment with the Navy's Network Infrastructure CCE. In addition, unit costs continue to be updated based on actuals costs, locality and availability of platforms, and specific integration tasking associated with external dependent systems (e.g. Global Command and Control System - Maritime (GCCS-M), Radiant Mercury (RM), and others).		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)					Modification Number / Title: 2 / PRODUCT IMPROVEMENT Ashore					
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-		
Gross/Weapon System Cost (\$ in Millions)	10.419	7.301	5.375	2.662	0.000	2.662	0.940	0.000	0.000	0.000	0.000	26.697		
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Net Procurement (P-1) (\$ in Millions)	10.419	7.301	5.375	2.662	0.000	2.662	0.940	0.000	0.000	0.000	0.000	26.697		
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Total Obligation Authority (\$ in Millions)	10.419	7.301	5.375	2.662	0.000	2.662	0.940	0.000	0.000	0.000	0.000	26.697		
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-		

Description:

Tech Refresh/Upgrade integration procures Commercial Off-The-Shelf/Non-Developmental Item (COTS/NDI) equipment to replace obsolete and unsupportable equipment for the DCGS-N program to include the processing and exploitation of tactical and Imagery Intelligence (IMINT) and Signal Intelligence (SIGINT); Precision target geopositioning, mensuration, and imagery dissemination capabilities; Selected national IMINT requirements and processing capabilities from the National Geospatial-Intelligence Agency (NGA); Sharing of Intelligence, Surveillance, Reconnaissance and Targeting (ISRT) and Command and Control (C2) information via DCGS Integrated Backbone (DIB) and Net-Centric Enterprise Services (NCES) standards. Specifically, this funds tech refresh/upgrades/Engineering Change Proposals (ECPs) to its subsystems to provide access and ingest data from space borne, airborne, subsurface, and surface ISR collection assets, intelligence databases and intelligence producers.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)						Modification Number / Title: 2 / PRODUCT IMPROVEMENT Ashore			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Shore			Modification Type: Tech Refresh/Upgrades				Related RDT&E PEs: 0305208N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: PRODUCT IMPROVEMENT Ashore												
B Kits												
Recurring												
1.1.1) DCGS-N Tech Refresh/Upgrade - NonOrganic ⁽²⁾		7 / 6.001	4 / 4.132	4 / 3.122	2 / 1.537	- / -	2 / 1.537	1 / 0.600	- / -	- / -	- / -	18 / 15.392
<i>Subtotal: Recurring</i>		- / 6.001	- / 4.132	- / 3.122	- / 1.537	- / -	- / 1.537	- / 0.600	- / -	- / -	- / -	- / 0.000 - / 15.392
<i>Subtotal: PRODUCT IMPROVEMENT Ashore</i>		7 / 6.001	4 / 4.132	4 / 3.122	2 / 1.537	- / -	2 / 1.537	1 / 0.600	- / -	- / -	- / -	18 / 15.392
<i>Subtotal: Procurement, All Modification Items</i>		- / 6.001	- / 4.132	- / 3.122	- / 1.537	- / -	- / 1.537	- / 0.600	- / -	- / -	- / -	- / 0.000 - / 15.392
Support (All Modification Items)												
2.1) Production Support		- / 0.388	- / 0.269	- / 0.203	- / 0.100	- / -	- / 0.100	- / 0.040	- / -	- / -	- / -	- / 1.000
<i>Subtotal: Support</i>		- / 0.388	- / 0.269	- / 0.203	- / 0.100	- / -	- / 0.100	- / 0.040	- / -	- / -	- / -	- / 0.000 - / 1.000
Installation												
Modification Item 1 of 1: PRODUCT IMPROVEMENT Ashore		- / 4.030	- / 2.900	- / 2.050	- / 1.025	- / 0.000	- / 1.025	- / 0.300	- / 0.000	- / 0.000	- / 0.000	- / 10.305
<i>Subtotal: Installation</i>		- / 4.030	- / 2.900	- / 2.050	- / 1.025	- / -	- / 1.025	- / 0.300	- / -	- / -	- / -	- / 0.000 - / 10.305
Total												
Total Cost (Procurement + Support + Installation)		10.419	7.301	5.375	2.662	0.000	2.662	0.940	0.000	0.000	0.000	26.697

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10															Modification Number / Title: 2 / PRODUCT IMPROVEMENT Ashore															
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: PRODUCT IMPROVEMENT Ashore																														
Manufacturer Information																														
Manufacturer Name: BAE										Manufacturer Location: SAN DIEGO, CA																				
Administrative Leadtime (<i>in Months</i>): 2										Production Leadtime (<i>in Months</i>): 6																				
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Dec 2016	Dec 2017	Dec 2018																											
Delivery Dates	Jun 2017	Jun 2018	Jun 2019																											
Installation Information																														
Method of Implementation: Method:: Installation Name: Product Improvement Ashore DCGS-N																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 4.030															
FY 2017			- / -	4 / 2.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.900															
FY 2018			- / -	- / -	4 / 2.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2.050															
FY 2019			- / -	- / -	- / -	2 / 1.025	0 / 0.000	2 / 1.025	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.025															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.300	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.300															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total			7 / 4.030	4 / 2.900	4 / 2.050	2 / 1.025	0 / 0.000	2 / 1.025	1 / 0.300	- / -	- / -	- / -	- / -	0 / 0.000	18 / 10.305															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	2	2	-	-	2	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	18						
Out	7	-	-	2	2	-	-	2	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	18						

Footnotes:

(2) DCGS-N Increment 1 planned ashore procurements in FY19 include (2) DCGS-N Increment 1 ashore technical refreshes that consist of (1) 2-rack Ashore technical refreshes and (1) End-of-Life Ashore Hardware Upgrades. These DCGS-N installations will replace the currently fielded legacy systems and leverage the Navy's Common Computing Environment (CCE) as applicable as well as provide upgrades to extend service life. Second, the DCGS-N Inc 1 Block 1 and Block 2 unit costs represent an average cost based on 5 Rack, 3 Rack, 2 Rack, 1 Rack, and End-of-Life Upgrade configurations dependent on specific site, network, infrastructure versions, and alignment with the Navy's Network Infrastructure (Common Computing Environment (CCE)). In addition, unit costs continue to be updated based on actuals

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Exhibit P-3a, Individual Modification: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)
ID Code (A=Service Ready, B=Not Service Ready) : costs, locality and availability of platforms, and specific integration tasking associated with external dependent systems (e.g. Global Command and Control System - Maritime (GCCS-M), Radiant Mercury (RM), and others).	MDAP/MAIS Code:

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)					Modification Number / Title: 3 / DCGS-N INCREMENT 2 Afloat					
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-		
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.180	0.000	0.180	7.929	10.309	13.952	13.359	232.167	277.896		
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	0.180	0.000	0.180	7.929	10.309	13.952	13.359	232.167	277.896		
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	0.180	0.000	0.180	7.929	10.309	13.952	13.359	232.167	277.896		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>														
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-		
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-		

Description:

DCGS-N Increment 2 addresses a critical shortfall in Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) capability and capacity to support operational, tactical planning, and execution across the full range of joint military operations. Existing TCPED shortfalls will be exacerbated by planned Navy, Joint, and Allied fielding of new Intelligence, Surveillance and Reconnaissance (ISR) platforms. Currently fielded systems provide localized processing capabilities that will be overwhelmed in future years without a significant change in the way the Navy processes, exploits and disseminates intelligence data. DCGS-N Increment 2 will deliver all source fusion and analytical capabilities; provide Maritime Domain Awareness (MDA) capabilities; integrate TCPED capabilities to improve the use and analysis of sensor and platform data; based on an enterprise solution to share this information across commands, services, and agencies to promote shared situational awareness.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)										Modification Number / Title: 3 / DCGS-N INCREMENT 2 Afloat
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Ship			Modification Type: New Model					Related RDT&E PEs: 0305208N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: DCGS-N INCREMENT 2 Afloat</i>													
B Kits													
Recurring													
1.1.1) Procurement - NonOrganic		- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.863	7 / 4.600	8 / 4.570	5 / 3.145	- / 82.086	22 / 99.264
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 4.863	- / 4.600	- / 4.570	- / 3.145	- / 82.086	- / 99.264
<i>Subtotal: DCGS-N INCREMENT 2 Afloat</i>		- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.863	7 / 4.600	8 / 4.570	5 / 3.145	- / 82.086	22 / 99.264
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 4.863	- / 4.600	- / 4.570	- / 3.145	- / 82.086	- / 99.264
Support (All Modification Items)													
2.2) DSA		- / -	- / -	- / -	- / 0.180	- / -	- / 0.180	- / 0.450	- / 0.810	- / 1.035	- / 0.810	- / 14.709	- / 17.994
<i>Subtotal: Support</i>		- / 0.000	- / -	- / -	- / 0.180	- / -	- / 0.180	- / 0.450	- / 0.810	- / 1.035	- / 0.810	- / 14.709	- / 17.994
Installation													
<i>Modification Item 1 of 1: DCGS-N INCREMENT 2 Afloat</i>		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.300	- / 4.600	- / 8.050	- / 9.200	- / 130.036	- / 154.186
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.300	- / 4.600	- / 8.050	- / 9.200	- / 130.036	- / 154.186
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	0.180	0.000	0.180	7.929	10.309	13.952	13.359	232.167	277.896

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10								P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)								Modification Number / Title: 3 / DCGS-N INCREMENT 2 Afloat														
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: DCGS-N INCREMENT 2 Afloat																														
Manufacturer Information																														
Manufacturer Name: TBD								Manufacturer Location: N/A																						
Administrative Leadtime (<i>in Months</i>): 0								Production Leadtime (<i>in Months</i>): 0																						
Dates	FY 2017		FY 2018		FY 2019				FY 2020		FY 2021		FY 2022		FY 2023															
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Procurement																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2,300	- / -	- / -	- / -	- / -	- / -	0 / 0,000	2 / 2,300									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4,600	3 / 3,450	- / -	- / -	0 / 0,000	7 / 8,050											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4,600	4 / 4,600	0 / 0,000	8 / 9,200													
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4,600	1 / 130,036	5 / 134,636														
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2,300	4 / 4,600	7 / 8,050	8 / 9,200	1 / 130,036	22 / 154,186												
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	2	1	-	4	-	4	-	1	22				
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	3	1	2	1	-	4	-	4	-	1	22				

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)								Modification Number / Title: 4 / DCGS-N INCREMENT 2 Ashore	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	3.120	10.261	0.943	12.333	0.000	26.657
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	3.120	10.261	0.943	12.333	0.000	26.657
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	0.000	0.000	0.000	3.120	10.261	0.943	12.333	0.000	26.657
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DCGS-N Increment 2 addresses a critical shortfall in Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) capability and capacity to support operational, tactical planning, and execution across the full range of joint military operations. Existing TCPED shortfalls will be exacerbated by planned Navy, Joint, and Allied fielding of new Intelligence, Surveillance and Reconnaissance (ISR) platforms. Currently fielded systems provide localized processing capabilities that will be overwhelmed in future years without a significant change in the way the Navy processes, exploits and disseminates intelligence data. DCGS-N Increment 2 will deliver all source fusion and analytical capabilities; provide Maritime Domain Awareness (MDA) capabilities; integrate Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) capabilities to improve the use and analysis of sensor and platform data; based on an enterprise solution to share this information across commands, services, and agencies to promote shared situational awareness.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)										
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore			Modification Type: New Model				Related RDT&E PEs: 0305208N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: DCGS-N INCREMENT 2 Ashore</i>													
B Kits													
Recurring													
1.1.1) Procurements - NonOrganic		- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.484	6 / 6.677	1 / 0.369	8 / 7.660	- / -	16 / 17.190
Subtotal: Recurring		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.484	- / 6.677	- / 0.369	- / 7.660	- / 0.000	- / 17.190
Subtotal: DCGS-N INCREMENT 2 Ashore		- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.484	6 / 6.677	1 / 0.369	8 / 7.660	- / -	16 / 17.190
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.484	- / 6.677	- / 0.369	- / 7.660	- / 0.000	- / 17.190
Installation													
<i>Modification Item 1 of 1: DCGS-N INCREMENT 2 Ashore</i>		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.475	- / 3.150	- / 0.550	- / 4.175	- / 0.000	- / 8.350
Subtotal: Installation		- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.475	- / 3.150	- / 0.550	- / 4.175	- / 0.000	- / 8.350
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	0.000	0.000	0.000	0.000	3.120	10.261	0.943	12.333	0.000	26.657

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10								P-1 Line Item Number / Title: 2914 / Distributed Common Ground System-Navy (DCGS-N)								Modification Number / Title: 4 / DCGS-N INCREMENT 2 Ashore														
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:															
Modification Item 1 of 1: DCGS-N INCREMENT 2 Ashore																														
Manufacturer Information																														
Manufacturer Name: TBD								Manufacturer Location: N/A																						
Administrative Leadtime (<i>in Months</i>): 0								Production Leadtime (<i>in Months</i>): 0																						
Dates	FY 2017		FY 2018		FY 2019				FY 2020		FY 2021		FY 2022		FY 2023															
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Procurements																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.475									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 3.150									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.550									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 4.175	0 / 0.000									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 4.175	0 / 0.000	16 / 8.350								
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	1	-	-	-	4	4	-	16		
Out	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	3	-	-	1	-	-	-	4	4	-	16		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					P-1 Line Item Number / Title: 2915 / CANES										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0303138N							
Line Item MDAP/MAIS Code: M417															
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	1,344.079	207.730	322.754	423.027	0.000	423.027	428.315	394.533	441.888	414.738	3,306.619	7,283.683			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	1,344.079	207.730	322.754	423.027	0.000	423.027	428.315	394.533	441.888	414.738	3,306.619	7,283.683			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	1,344.079	207.730	322.754	423.027	0.000	423.027	428.315	394.533	441.888	414.738	3,306.619	7,283.683			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	3.023	11.645	7.250	-	7.250	6.782	5.423	2.302	6.015	Continuing	Continuing			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
Consolidated Afloat Networks and Enterprise Services (CANES) is the Navy's Program of Record (POR) to replace and modernize existing afloat networks with the necessary hardware, software and enterprise services infrastructure to enable information warfare from and within the tactical domain. CANES provides complete infrastructure inclusive of hardware, software, processing, storage and end user devices for the Unclassified, Coalition, Secret and Sensitive Compartmented Information (SCI) enclaves to a wide variety of Navy surface combatants, submarines, Maritime Operations Centers, and Aegis Ashore sites. CANES services include application hosting, data transport and storage, system management, cyber security, email, web, chat, collaboration, and voice and video services. CANES is based on the overarching concept of reducing the number of afloat networks and providing enhanced efficiency through a single engineering focus on integrated technical solutions. It allows for streamlined acquisition, contracting, test events, sustainment, and significant lifecycle efficiencies through consolidation of multiple configuration management baselines, logistics, and training efforts into a single unified support structure.															
More than eighty (80) hosted applications and systems inclusive of Command and Control, Intelligence, Surveillance and Reconnaissance, Information Operations, Logistics and Business domains require the CANES infrastructure to operate in the tactical environment. Specific programs, such as Distributed Common Ground System - Navy (DCGS-N), Global Command and Control System - Maritime (GCCS-M), Naval Tactical Command Support System (NTCSS), and Undersea Warfare Decision Support System (USW-DSS), no longer provide their own independent network hardware and now depend on CANES to field, host, and sustain their capabilities. The CANES Application Integration program provides common software governance, testing, processes, and tools to application developers, and evaluates and confirms compatibility between CANES and the hosted applications prior to fielding. CANES also provides a set of capabilities called Agile Core Services (ACS) which brings common network services to allow hosted application developers to focus on the unique capabilities they provide.															
CANES is funded and programmed to develop regular technical updates with an agile and robust hardware and software baseline development cycle necessary to pace rapidly evolving cyber security threats and meet emerging operational demands within the tactical domain. In order to deliver a mission effective, secure and affordable afloat network, CANES implements a Development Operations (DevOps) framework to improve its engineering processes and speed the deployment of new cyber security, application hosting and baseline updates. CANES requires that Automated Digital Network System (ADNS) field prior to or concurrently with CANES due to the architectural reliance between the two programs.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2915 / CANES					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0303138N		
Line Item MDAP/MAIS Code: M417									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / Consolidated Prior Year Requirements				- / 179.317	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / 5F010/5F777 CANES - Afloat Non-MIP (TBD)				- / 1,155.405	- / 207.730	- / 320.600	- / 404.726	- / 0.000
P-3a	2 / 5F010/5F776 CANES - Ashore Non-MIP (TBD)				- / 9.357	- / 0.000	- / 2.154	- / 18.301	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 1,344.079	- / 207.730	- / 322.754	- / 423.027	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-5	1 / Consolidated Prior Year Requirements				- / -	- / -	- / -	- / -	- / -
P-3a	1 / 5F010/5F777 CANES - Afloat Non-MIP (TBD)				- / 404.292	- / 378.547	- / 439.976	- / 406.761	- / 2,768.949
P-3a	2 / 5F010/5F776 CANES - Ashore Non-MIP (TBD)				- / 24.023	- / 15.986	- / 1.912	- / 7.977	- / 112.835
P-40	Total Gross/Weapon System Cost				- / 428.315	- / 394.533	- / 441.888	- / 414.738	- / 3,306.619
*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 FY19 increase in the CANES funding profile optimizes the Chief of Naval Operations (CNO) ship availabilities with the CANES program's capacity and capability to procure and install the product. This ensures CANES is deployed to the Fleet as quickly and effectively as possible to mitigate heightened cyber security threats across Navy tactical networks and supports the DoD direction to remove End of Life (EOL) Windows Operating Systems software from the Fleet as quickly as feasible. Microsoft's end of cyber security support for legacy versions of Windows, as well as networks that rely on obsolete hardware and software, are driving increased sustainment costs, reducing operational availability and creating critical cyber security vulnerability in Navy Tactical Networks. Replacing these legacy networks and modernizing the tactical environment with CANES is the cornerstone for all C4ISR investments. CANES is a mature program with an innovative Multi Award Contract (MAC) in place that has consistently proven capable of delivering on or ahead of schedule. Additionally, it has decreased its installation time and continues to work towards decreasing ship touch time during installations. The MAC ensures enough capacity to execute production and installation growth.									
FY 2019 - CANES funds are for the procurement of (20) Afloat production units (2 Force Level, 9 Unit Level, 9 Subs), (25) Technical Insertion units (7 Force Level, 13 Unit Level, 5 Subs), and (1) Afloat First Article, with integration and associated costs for pre-installation design and the installation of (22) Afloat production units and (9) Technical Insertion units. CANES funds will also be used for the procurement (3) Ashore units and (2) Ashore Technical Insertion units and the installation of (1) Ashore unit and (2) Ashore Technical Insertion units.									
It is important to note that procurement quantities across the FYDP are the same CANES end item products referenced in CANES LI 2925. Installation quantities represent sites receiving CANES as also referenced in LI 2925. The associated dollars in this exhibit represent the non-Intell portions of the CANES enclave.									

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES										Item Number / Title [DODIC]: 1 / Consolidated Prior Year Requirements						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				179.317			0.000		0.000		0.000		0.000		0.000		0.000		
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-		-		
Net Procurement (P-1) (\$ in Millions)				179.317			0.000		0.000		0.000		0.000		0.000		0.000		
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-		-		
Total Obligation Authority (\$ in Millions)				179.317			0.000		0.000		0.000		0.000		0.000		0.000		
(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 Thousands)				-			-		-		-		-		-		-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	
Flyaway - Consolidated Prior Year Requirements Cost																			
Non Recurring Cost																			
1.1.1) Consolidated Prior Year Requirements	-	-	179.317	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
Subtotal: Non Recurring Cost	-	-	179.317	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
Subtotal: Flyaway - Consolidated Prior Year Requirements Cost	-	-	179.317	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
Gross/Weapon System Cost	-	-	179.317	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	
Remarks:																			
Consolidated Prior Year Requirements consists of: 1) CANES European Reassurance Initiative, 2) Operation Rolling Tide, and 3) Automated Digital Network System.																			

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES							Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,155.405	207.730	320.600	404.726	0.000	404.726	404.292	378.547	439.976	406.761	2,768.949	6,486.986	
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,155.405	207.730	320.600	404.726	0.000	404.726	404.292	378.547	439.976	406.761	2,768.949	6,486.986	
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (<i>\$ in Millions</i>)	1,155.405	207.730	320.600	404.726	0.000	404.726	404.292	378.547	439.976	406.761	2,768.949	6,486.986	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: The consolidation of existing Afloat Network program of record designed to provide an agile, responsive Common Computing Environment (CCE) and afloat Core Services (ACS) within and upon which application developers will host Command and Control, Warfare, Intelligence, Logistics, and business and education applications and services. Migration of Non-Classified Enclave (NCE) capabilities into the CANES baseline. CANES is a mature program required to mitigate heightened cyber security threats across Navy tactical networks.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES							Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Consolidated Afloat Networks & Enterprise Services (CANES) Non-MIP			Modification Type: TBD					Related RDT&E PEs: 0303138N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: 5F010/5F777 CANES - Afloat Non-MIP</i>													
B Kits													
Recurring													
1.1.1) CANES - Afloat 5F010/5F777 (Non-MIP) - NonOrganic ⁽¹⁾	73 / 471.348	13 / 71.958	22 / 137.994	20 / 111.076	- / -	20 / 111.076	17 / 78.448	20 / 90.076	11 / 46.838	9 / 48.120	- / -	185 / 1,055.858	
1.1.2) CANES - Afloat Technical Insertion (Non-MIP) - NonOrganic ⁽²⁾	3 / 11.000	11 / 38.920	8 / 35.925	25 / 82.685	- / -	25 / 82.685	13 / 54.711	27 / 108.003	36 / 153.544	35 / 146.407	403 / 1,346.030	561 / 1,977.225	
1.1.3) CANES - Service Life Extension Program (SLEP) (Non-MIP) - NonOrganic	8 / 8.424	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 8.424	
Subtotal: Recurring	- / 490.772	- / 110.878	- / 173.919	- / 193.761	- / -	- / 193.761	- / 133.159	- / 198.079	- / 200.382	- / 194.527	- / 1,346.030	- / 3,041.507	
Non-Recurring													
1.2.1) CANES - Afloat First Articles (Non-MIP) - Organic ⁽³⁾	10 / 63.527	1 / 8.000	1 / 7.563	1 / 7.499	- / -	1 / 7.499	- / -	- / -	- / -	- / -	- / -	13 / 86.589	
1.2.2) CANES - Non-Recurring Engineering (Non-MIP) - Organic	- / 26.907	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 26.907	
Subtotal: Non-Recurring	- / 90.434	- / 8.000	- / 7.563	- / 7.499	- / -	- / 7.499	- / -	- / -	- / -	- / -	- / 0.000	- / 113.496	
Subtotal: 5F010/5F777 CANES - Afloat Non-MIP	94 / 581.206	25 / 118.878	31 / 181.482	46 / 201.260	- / -	46 / 201.260	30 / 133.159	47 / 198.079	47 / 200.382	44 / 194.527	403 / 1,346.030	767 / 3,155.003	
Subtotal: Procurement, All Modification Items	- / 581.206	- / 118.878	- / 181.482	- / 201.260	- / -	- / 201.260	- / 133.159	- / 198.079	- / 200.382	- / 194.527	- / 1,346.030	- / 3,155.003	
Support (All Modification Items)													
2.1) CANES - Afloat Production Support (Non-MIP)	- / 25.096	- / 5.836	- / 8.920	- / 10.198	- / 0.000	- / 10.198	- / 7.008	- / 10.425	- / 10.546	- / 10.238	- / 70.844	- / 159.111	
2.2) CANES - Afloat Design Service Agent (Non-MIP)	- / 49.811	- / 5.816	- / 12.890	- / 12.934	- / 0.000	- / 12.934	- / 13.480	- / 9.943	- / 12.472	- / 13.740	- / 18.742	- / 149.828	
Subtotal: Support	- / 74.907	- / 11.652	- / 21.810	- / 23.132	- / -	- / 23.132	- / 20.488	- / 20.368	- / 23.018	- / 23.978	- / 89.586	- / 308.939	
Installation													
Modification Item 1 of 1: 5F010/5F777 CANES - Afloat Non-MIP	- / 499.292	- / 77.200	- / 117.308	- / 180.334	- / 0.000	- / 180.334	- / 250.645	- / 160.100	- / 216.576	- / 188.256	- / 1,333.333	- / 3,023.044	
Subtotal: Installation	- / 499.292	- / 77.200	- / 117.308	- / 180.334	- / -	- / 180.334	- / 250.645	- / 160.100	- / 216.576	- / 188.256	- / 1,333.333	- / 3,023.044	
Total													
Total Cost (Procurement + Support + Installation)	1,155.405	207.730	320.600	404.726	0.000	404.726	404.292	378.547	439.976	406.761	2,768.949	6,486.986	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES					Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: 5F010/5F777 CANES - Afloat Non-MIP</i>																							
Manufacturer Information																							
Manufacturer Name: Multiple Vendors ⁽⁴⁾				Manufacturer Location: Various																			
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 6																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Jan 2017	Nov 2017	Nov 2018																				
Delivery Dates	Jul 2017	May 2018	May 2019																				
Manufacturer Name: Multiple Vendors ⁽⁵⁾				Manufacturer Location: Various																			
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 4																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Jan 2017	Nov 2017	Nov 2018																				
Delivery Dates	May 2017	Mar 2018	Mar 2019																				
Installation Information																							
Method of Implementation: [none specified]:: Installation Name: CANES - Afloat 5F010/5F777 (Non-MIP)																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)											
Prior Years	68 / 492.077	5 / 36.371	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	73 / 528.448											
FY 2017	- / -	3 / 19.349	10 / 72.981	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 92.330											
FY 2018	- / -	- / -	- / -	22 / 140.143	0 / 0.000	22 / 140.143	- / -	- / -	- / -	- / -	0 / 0.000	22 / 140.143											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	20 / 128.856	- / -	- / -	- / -	0 / 0.000	20 / 128.856											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 95.433	- / -	- / -	0 / 0.000	17 / 95.433											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 98.614	- / -	0 / 0.000	20 / 98.614											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 49.951	0 / 0.000	11 / 49.951											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 38.293	9 / 38.293											
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
Total	68 / 492.077	8 / 55.720	10 / 72.981	22 / 140.143	0 / 0.000	22 / 140.143	20 / 128.856	17 / 95.433	20 / 98.614	11 / 49.951	9 / 38.293	185 / 1,172.068											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10												P-1 Line Item Number / Title: 2915 / CANES										Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP													
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																							
<i>Modification Item 1 of 1:</i> 5F010/5F777 CANES - Afloat Non-MIP																																			
Installation Information																																			
Method of Implementation: [none specified]:: Installation Name: CANES - Afloat 5F010/5F777 (Non-MIP)																																			
Installation Schedule																																			
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	62	6	2	1	4	2	3	3	3	2	11	5	4	2	10	2	6	3	6	5	3	3	9	5	3	3	2	9	185						
Out	52	8	8	2	1	4	2	3	3	3	2	11	5	4	2	10	2	6	3	6	5	3	3	9	5	3	3	3	11	185					
Method of Implementation: [none specified]:: Installation Name: CANES - Afloat Technical Insertion (Non-MIP)																																			
Installation Cost						Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
						Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 6.736	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 6.736														
FY 2017						- / -	2 / 14.744	9 / 44.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 59.071														
FY 2018						- / -	- / -	- / -	8 / 31.968	0 / 0.000	8 / 31.968	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 31.968														
FY 2019						- / -	- / -	- / -	1 / 8.223	0 / 0.000	1 / 8.223	24 / 95.057	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	25 / 103.280														
FY 2020						- / -	- / -	- / -	- / -	- / -	6 / 26.732	7 / 16.740	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 43.472														
FY 2021						- / -	- / -	- / -	- / -	- / -	10 / 47.927	17 / 66.547	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	27 / 114.474														
FY 2022						- / -	- / -	- / -	- / -	- / -	- / -	13 / 51.415	23 / 92.813	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	36 / 144.228														
FY 2023						- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 45.492	23 / 69.920	- / -	- / -	- / -	- / -	- / -	35 / 115.412															
To Complete						- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	403 / 1,225.120	403 / 1,225.120															
Total						- / -	5 / 21.480	9 / 44.327	9 / 40.191	0 / 0.000	9 / 40.191	30 / 121.789	17 / 64.667	30 / 117.962	35 / 138.305	426 / 1,295.040	561 / 1,843.761																		
Installation Schedule																																			
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot					
	Q1	Q2	Q3	Q4	Q1	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	-	4	2	3	1	3	1	4	7	9	8	6	-	4	3	10	2	12	3	13	2	16	5	12	426	561				
Out	-	-	-	2	-	3	-	4	2	3	1	3	1	4	7	9	8	6	-	4	3	10	2	12	3	13	2	16	5	438	561				

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2915 / CANES								Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1: 5F010/5F777 CANES - Afloat Non-MIP</i>																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: CANES - Service Life Extension Program (SLEP) (Non-MIP)																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 7.215	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 7.215																
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total				8 / 7.215	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 7.215																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						
Method of Implementation (Organic): CANES - Afloat First Articles (Non-MIP) - Not Installed												Installation Quantity: 13																		
Footnotes:																														
(1) - CANES Afloat installations are conducted across several fleet concentration areas supported by six installation Multiple Award Contract (MAC) holders. The SPAWAR Fleet Readiness Directorate (FRD) Installation Organization (FIO) has ensured sufficient Alteration Installation Teams (AIT) resources are available to meet the FY19 - 23 CANES installation plan. - CANES Afloat production units require an additional 4 months after delivery for integration, assembly and testing prior to installation start. Installations do not begin until 10 months after contract award (6 months production lead time (PLT) + 4 months integration). Total lead time, including admin lead time, is 11 months. - The procurement average unit cost fluctuation is due to variance in system configuration requirements for each CANES platform type. Furthermore, because CANES production units and installations are procured through separate multiple award contracts, there are unit cost fluctuations associated with the contracting process. A CANES unit level platform (DDG/CG/LSD) requires a smaller system, supporting fewer users and applications than force level platforms with a greater number of users and applications. For example, a CANES DDG design consists of 18 equipment racks and ~400 workstations, while a CANES CVN system consists of 48 equipment racks and ~3000 workstations. The average procurement cost (hardware, software, integration, and engineering support) for a unit level ship ranges from \$5.2M to \$7.5M, while the average procurement cost for a force level platform ranges from \$11.8M to \$15.6M, and submarine unit procurement costs range from \$2.7M to \$4.6M. These costs include both the MIP and non-MIP components of the CANES units. - Installation cost fluctuations are attributed to and dependent on ship class, variant of predecessor system the hull currently has installed. As an example of variant differences, if a CVN has an ISNS Delta variant installed, a CANES installation is estimated to be \$18.2M. If that same																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2915 / CANES	Modification Number / Title: 1 / 5F010/5F777 CANES - Afloat Non-MIP
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
CVN had a legacy Asynchronous Transfer Mode Local Area Network (ATM LAN) the CANES installation is estimated to be \$22.4M. This cost is driven by a number of issues such as the requirement for new or additional wiring, plugs, configurations changes. - The decrease in production unit cost from FY18 to FY19 is due to a dramatically lower percentage of more expensive Force Level units in FY19 compared to FY18. (2) - CANES technical insertion installations are conducted across several fleet concentration areas supported by six installation Multiple Award Contract (MAC) holders. The SPAWAR Fleet Readiness Directorate (FRD) Installation Organization (FIO) has ensured sufficient Alteration Installation Teams (AIT) resources are available to meet the FY19 - 23 CANES installation plan. - CANES Afloat technical insertion units require an additional 3 months after delivery for operational integration, assembly and testing prior to installation start. Installations do not begin until 7 months after contract award (4 months production lead time (PLT) + 3 months integration). Total lead time, including admin lead time, is 8 months. - The decrease in production unit cost from FY18 to FY19 is due to a dramatically lower percentage of more expensive Force Level units in FY19 compared to FY18. (3) CANES first articles are defined as necessary production design drawings, environmental (shock and vibration) qualifications, logistics and training artifacts as well as a certified tested baseline provided to the government for each platform first of its kind. First articles are separate from production units and must be bought prior to the procurement of the corresponding production units. Procurement Lead Time (PLT) is 8 months for First Articles (DDG,CVN, submarines, etc). All following production articles of the same variant require a PLT of 6 months. CANES First Articles are not installed. Average unit cost fluctuations are attributable to variances in system configuration requirements among platforms. A DDG/CG/LSD (unit level platforms) has fewer users and runs fewer applications than a LHD/CVN/LPD (force level platforms). Force level platforms are larger in scale compared to the unit level ships and represent a super set of users, applications and connected systems. (4) CANES: Full Production Contract has 7 possible vendors on MAC award: Northrop Grumman Systems Corp, BAE Sytems Technology Solutions & Services, General Dynamics C4 Systems, Global Technical Systems, SERCO, Inc, CGI Federal Inc, DRS Laurel Technologies. Contract will be used for both production and tech refresh units (5) CANES: Full Production Contract has 7 possible vendors on MAC award: Northrop Grumman Systems Corp, BAE Sytems Technology Solutions & Services, General Dynamics C4 Systems, Global Technical Systems, SERCO, Inc, CGI Federal Inc, DRS Laurel Technologies. Contract will be used for both production and tech refresh units		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES						Modification Number / Title: 2 / 5F010/5F776 CANES - Ashore Non-MIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	9.357	0.000	2.154	18.301	0.000	18.301	24.023	15.986	1.912	7.977	112.835	192.545
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	9.357	0.000	2.154	18.301	0.000	18.301	24.023	15.986	1.912	7.977	112.835	192.545
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	9.357	0.000	2.154	18.301	0.000	18.301	24.023	15.986	1.912	7.977	112.835	192.545
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The consolidation of existing Ashore Network programs of record designed to provide a single, agile, responsive Common Computing Environment (CCE) hardware and software suite which will host Command and Control, Warfare, Intelligence, Logistics, Business, and Education/Training applications and services for Maritime Operation Centers (MOC), Aegis Ashore (AA), and Technical Training Equipment (TTE) sites. CANES will provide complete Local Area Network (LAN) infrastructure and services inclusive of hardware, software, processing, storage, workstations, and tablets for all basic network services (email, web, chat, collaboration) at these sites.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2915 / CANES										Modification Number / Title: 2 / 5F010/5F776 CANES - Ashore Non-MIP
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Consolidated Afloat Networks & Enterprise Services (CANES) Non-MIP			Modification Type: TBD						Related RDT&E PEs: 0303138N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: 5F010/5F776 CANES - Ashore Non-MIP</i>													
B Kits													
Recurring													
1.1.1) CANES - Ashore 5F010/5F776 (Non-MIP) - NonOrganic ⁽⁶⁾	2 / 3.637	- / -	1 / 1.096	3 / 10.731	- / -	3 / 10.731	5 / 15.972	- / -	- / -	- / -	- / 12.461	11 / 43.897	
1.1.2) CANES - Ashore - Technical Insertion (Non-MIP) - NonOrganic	- / -	- / -	- / -	2 / 2.212	- / -	2 / 2.212	- / -	- / -	1 / 1.104	3 / 4.768	31 / 64.637	37 / 72.721	
<i>Subtotal: Recurring</i>	- / 3.637	- / -	- / 1.096	- / 12.943	- / -	- / 12.943	- / 15.972	- / -	- / 1.104	- / 4.768	- / 77.098	- / 116.618	
Non-Recurring													
1.2.1) CANES - Ashore First Articles (Non-MIP) - Organic ⁽⁷⁾	1 / 3.481	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.481	
<i>Subtotal: Non-Recurring</i>	- / 3.481	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.481
<i>Subtotal: 5F010/5F776 CANES - Ashore Non-MIP</i>	3 / 7.118	- / -	1 / 1.096	5 / 12.943	- / -	5 / 12.943	5 / 15.972	- / -	1 / 1.104	3 / 4.768	31 / 77.098	49 / 120.099	
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.118	- / -	- / 1.096	- / 12.943	- / -	- / 12.943	- / 15.972	- / -	- / 1.104	- / 4.768	- / 77.098	- / 120.099	
Support (All Modification Items)													
2.1) CANES - Ashore Production Support (Non-MIP)	- / 0.129	- / -	- / 0.058	- / 0.681	- / -	- / 0.681	- / 0.841	- / -	- / 0.058	- / 0.251	- / 4.058	- / 6.076	
2.2) CANES - Ashore Design Services Agent (Non-MIP)	- / -	- / -	- / -	- / 0.565	- / -	- / 0.565	- / 1.827	- / 2.043	- / -	- / -	- / -	- / 4.435	
<i>Subtotal: Support</i>	- / 0.129	- / -	- / 0.058	- / 1.246	- / -	- / 1.246	- / 2.668	- / 2.043	- / 0.058	- / 0.251	- / 4.058	- / 10.511	
Installation													
<i>Modification Item 1 of 1: 5F010/5F776 CANES - Ashore Non-MIP</i>	- / 2.110	- / 0.000	- / 1.000	- / 4.112	- / 0.000	- / 4.112	- / 5.383	- / 13.943	- / 0.750	- / 2.958	- / 31.679	- / 61.935	
<i>Subtotal: Installation</i>	- / 2.110	- / -	- / 1.000	- / 4.112	- / -	- / 4.112	- / 5.383	- / 13.943	- / 0.750	- / 2.958	- / 31.679	- / 61.935	
Total													
Total Cost (Procurement + Support + Installation)	9.357	0.000	2.154	18.301	0.000	18.301	24.023	15.986	1.912	7.977	112.835	192.545	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2915 / CANES									Modification Number / Title: 2 / 5F010/5F776 CANES - Ashore Non-MIP																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
Modification Item 1 of 1: 5F010/5F776 CANES - Ashore Non-MIP																																
Manufacturer Information																																
Manufacturer Name: TBD (Competitive Procurement) (8)													Manufacturer Location: TBD (Competitive Procurement)																			
Administrative Leadtime (<i>in Months</i>): 1													Production Leadtime (<i>in Months</i>): 5																			
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates			Feb 2018		Nov 2018																											
Delivery Dates			Jul 2018		Apr 2019																											
Installation Information																																
Method of Implementation: [none specified]:: Installation Name: CANES - Ashore 5F010/5F776 (Non-MIP)																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.110																	
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018			- / -	- / -	1 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.000																	
FY 2019			- / -	- / -	- / -	1 / 2.698	0 / 0.000	1 / 2.698	2 / 5.383	- / -	- / -	- / -	- / -	0 / 0.000	3 / 8.081																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 13.943	- / -	- / -	- / -	0 / 0.000	5 / 13.943																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total			2 / 2.110	- / -	1 / 1.000	1 / 2.698	0 / 0.000	1 / 2.698	2 / 5.383	5 / 13.943	- / -	- / -	- / -	0 / 0.000	11 / 25.134																	
Installation Schedule																																
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		FY 2023		TC											
		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	-	-	-	1	4	-	-	-	-	-	11							
Out	2	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	1	4	-	-	-	-	11							

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2915 / CANES								Modification Number / Title: 2 / 5F010/5F776 CANES - Ashore Non-MIP																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: 5F010/5F776 CANES - Ashore Non-MIP																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: CANES - Ashore - Technical Insertion (Non-MIP)																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019				- / -	- / -	- / -	2 / 1.414	0 / 0.000	2 / 1.414	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.414															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.750	- / -	0 / 0.000	1 / 0.750															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 2.958	0 / 0.000	3 / 2.958																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 31.679	31 / 31.679																
Total				- / -	- / -	- / -	2 / 1.414	0 / 0.000	2 / 1.414	- / -	- / -	1 / 0.750	3 / 2.958	31 / 31.679	37 / 36.801															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	3	31	37			
Out	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	1	-	-	-	34	37			
Method of Implementation (Organic): CANES - Ashore First Articles (Non-MIP) - Not Installed												Installation Quantity: 1																		
Footnotes:																														
(6) -Ashore procurement quantities are detailed as follows: Technical Training Equipment (TTE) - PY (2), FY18 (1), FY19-FY23 (0); Maritime Operation Center (MOC)(including Aegis Ashore) - FY17-FY18 (0); FY19(3), FY20 (5), FY21 (0). -A MOC is a fully operational system configuration. A TTE configuration is a subset of a MOC configuration. This scale difference accounts for the fluctuation in per unit costs across fiscal years commensurate with the procurement quantities outlined in above note. -TTE has no associated DSA requirements.																														
(7) Production Lead Time is 8 months for First Articles. First Articles are defined as necessary production design drawings, environmental (shock and vibration) qualifications, logistics and training artifacts as well as a certified tested baseline provided to the government for each platform first of its kind. All following articles of the same variant require a Production Lead Time of 5 months for Ashore units and 6 months for afloat units. Total Ashore lead time, including 1 month Admin lead time and 4 months for integration, assembly and testing, is 10 months. Ashore production lead times require one month less than Afloat due to minimized shock and vibration requirements for shore facilities. CANES First Articles are not installed. First Article average unit cost fluctuations are attributable to variances in system configuration requirements among shore sites. A shore training unit (TTE) has fewer users and runs fewer applications than a shore Maritime Operations Center (MOC). MOCs are larger in scale compared to the shore training sites and represent a super set of users, applications and connected systems.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2915 / CANES	Modification Number / Title: 2 / 5F010/5F776 CANES - Ashore Non-MIP
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(8) FY2019 Contractor and location will be competed.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					P-1 Line Item Number / Title: 2920 / RADIAC												
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: 0708017N					Other Related Program Elements: 0603542N, 0702856N									
Line Item MDAP/MAIS Code: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	53.882	8.092	10.718	8.175	0.000	8.175	8.269	8.344	8.524	8.693	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	53.882	8.092	10.718	8.175	0.000	8.175	8.269	8.344	8.524	8.693	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	53.882	8.092	10.718	8.175	0.000	8.175	8.269	8.344	8.524	8.693	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
The FY 2019 funding request was reduced by \$.015 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.																	
The Radiation Detection, Indication and Computation (RADIAC) Program is responsible for providing radiation monitoring instruments that detect and measure ionizing radiation. These instruments are used on all Navy, Coast Guard and Military Sealift Command vessels, and at every Navy shore installation, in order to ensure the safety of personnel, continuity of operations in radiological or nuclear contingencies, and protection of the environment.																	
[P40A / M2100 - Survey Meters]: M2100. Radiation survey meters, required by 10 CFR 20 and the Navy's mission, are used to detect, measure and monitor radiation levels in support of operations involving radioactive materials. Navy operations associated with radioactive materials include operation of nuclear reactors, maintenance on radioactive systems or components, testing of components for structural integrity (X-ray), research, and medical diagnostics and treatment. Additionally, radiation survey meters are used to search for, locate and intercept radioactive material, and in responding to casualties involving radioactive materials. Where radiation survey meters are used to support operations involving radioactive material, they provide real-time information used to control personnel radiation exposure and to identify and control the spread of radioactivity. When used to search for radioactive material, they provide an extremely reliable method of identifying radioactive material while minimizing the risk to personnel conducting these operations.																	
[P40A / Radiological Detection System]: M2100, Radiological Detection System (RDS): This is a basic RADIAC instrument used in Consequence Management and Occupational Safety and Health applications by all ships (U.S. Navy, U.S. Coast Guard and Military Sealift Command) and shore commands. It is used to survey for radioactive surface contamination pursuant to nuclear plant operations or nuclear plant maintenance; following medical procedures involving radioactive isotopes; or casualties and events that release radioactivity into the environment such as after a nuclear reactor accident or the use of weapons involving nuclear devices or radioactivity. It is also used to perform surveys for various types of radiation in order to monitor environmental conditions in areas and spaces immediately adjacent to where radioactive material is stored or used during routine operations; where nuclear plant operations occur; and where radioisotopes are used for maintenance, such as during industrial radiography operations.																	
The RDS consists of a control unit and a suite of probes that survey for different types of radioactivity (Alpha, Beta, Gamma, Neutron). The control unit is necessary for all applications but the four probes are used for different situations. That means the control unit will have the highest procurement objective and the four probes will be bought in varying quantities. The probes will be configured as a separate unit of issue and provided to customers dependent upon the intended end use.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment	P-1 Line Item Number / Title: 2920 / RADIAC	
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0708017N	Other Related Program Elements: 0603542N, 0702856N
Line Item MDAP/MAIS Code: N/A		
This instrument will replace the Navy's 30-year old IM-265/PDQ Multi-Function RADIAC control unit and its ancillary probes, of which there are several thousand control units and probes in the inventory. The procurement will be phased over multiple years. The RDS is being developed by the Joint Project Manager, Radiological & Nuclear Defense in order that the Army, Navy, Marine Corps and Air Force will have a Joint instrument that will enable interoperability and surge support of assets from all the components to forward deployed units.		
[P40A / M2100 NWCF Contract Service Fee]: M2100 NWCF Contract Service Fee: The PCO for hardware acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code hardware acquisitions.		
[P40A / M2200 - Dosimetry]: M2200. Dosimetry consists of radiation sensitive materials that are used for detecting and measuring an individual's exposure to ionizing radiation and to aid in minimizing this exposure. Dosimetry is required to be worn by personnel who work with sources of radioactivity or by personnel responding to casualties involving radioactivity. Most dosimeters are small devices that are worn on the belt, on a lanyard around the neck or attached to a shirt. Some dosimeters provide direct readout enabling the wearer to monitor and control radiation exposure. Other types of dosimeters must be removed from the wearer to be evaluated in special dosimeter readers that extract the recorded radiation exposure value from the dosimeter. Radiation exposure measured by dosimetry is recorded in individual medical records when formal tracking of the radiation exposure is required.		
In accordance with 10 CFR 20, dosimetry is required to be worn by personnel who work with sources of radioactivity. In the Navy this includes personnel in the Nuclear Propulsion, Nuclear Weapons, and Medical and Radiological Affairs Support programs. In these programs radiation exposure is measured by dosimetry and recorded in individual medical records for tracking purposes. Dosimetry is also worn by personnel responding to casualties involving radioactivity to control their exposure within acceptable levels.		
[P40A / DT-702 Card]: M2200, DT-702 Card: The DT-702 Thermoluminescent Dosimeter (TLD) is a small metal card, a little smaller and thinner than a domino, that contains four circular slots containing different elements that are sensitive to various types of radioactivity. The card is placed in a plastic holder so it is protected and able to be worn by personnel on a lanyard or on their clothing. It is issued to sailors and civilians who are occupationally exposed to radiation. This includes Navy programs such as Nuclear Propulsion, Explosive Ordnance Disposal, Nuclear Weapons, Industrial Radiography and Medical. The DT-702 provides primary dosimetry, whereby dosage accumulated on this card can be entered into the respective person's permanent medical files. The processes associated with the DT-702 also are compliant with 10 CFR 20 by being approved by the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by the National Institute of Standards & Technology (NIST). The cards are issued to individuals and tracked by serial numbers. The cards are periodically turned in (and another card is issued so there is no coverage gap) to have the dose extracted by an 8800 Reader. The process by which the cards are read include several heating cycles that eventually make the receptor elements unusable, so the life of a TLD is finite -- about 100 reads -- and then they have to be replaced. Cards are procured approximately every two to three years in order to achieve economic order quantity. Under the current contract the most cost effective price is achieved at no fewer than 20,000 units.		
[P40A / DT-702 Card Holder]: M2200, DT-702 Card Holder: A plastic case into which the DT-702 card is placed for the card's protection and so it can be worn on a lanyard or on a belt. It has four circular windows made of specific materials of various thickness to allow the proper filtration of radiation to the dosimeter elements under each of the windows.		
[P40A / Extremity Dosimeter]: M2200, Extremity Dosimeter: An extremity dosimeter is used to measure concentrated exposure to the hands when a radiation worker is reaching into a glove box or medical personnel are performing fluoroscopy tasks. This item is composed of three inexpensive pieces: 1) a plastic ring (\$2) to wear on a finger; 2) a dosimeter (\$36) that measures exposure; and 3) a cap that secures the dosimeter to the ring. The cap is made to a specific thickness depending on the type of radiation the dosimeter is intended to measure (\$3). These items will be procured in quantities of 3,000 each. An average unit cost for the three items is used and all 9,000 components are shown on this one Cost Element.		
[P40A / Battlefield Dosimeter]: M2200, Battlefield Dosimeter: A dosimeter designed for use during nuclear or radiological events involving high energy gamma and neutron irradiation. An "event" can be a nuclear reactor accident, such as the Fukushima disaster in 2011, or an attack on, e.g., a Carrier Strike Group using a nuclear or radiological (dirty bomb) weapon. The concept of operations for such a dosimeter is that it is issued at MOP (Military Operational Posture) III to allow the commander to manage the exposure received by members of recovery teams who would be deployed in order to maintain continuity of operations. It is also used to perform triage on casualties, allowing medical personnel to most effectively allocate their resources.		
[P40A / Battlefield Dosimeter Cases]: M2200, Battlefield Dosimeter Cases: The Battlefield Dosimeter will spend much of its time aboard ships stored in Damage Control Lockers. The instrument will also have to be shipped to and from a RADIAC Calibration Laboratory to undergo periodic calibrations. Because allowances for the instruments on the various ship classes range from 12 on an LCS to 700 each on a CVN, cases configured to hold different quantities (25, 50, 100) will be procured to afford the necessary protection for storage and shipping while maximizing shipboard storage space efficiency.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment	P-1 Line Item Number / Title: 2920 / RADIAC	
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0708017N	Other Related Program Elements: 0603542N, 0702856N
Line Item MDAP/MAIS Code: N/A		
<p>With the final delivery order executed on 29 September 2017, 118 cases in two size configurations were ordered using budgeted FY17 funds.</p> <p>[P40A / Battlefield Dosimeter Data & Training]: M2200, Battlefield Dosimeter Data & Training: The Technical Data Package includes the Technical Manual, Technical Repair Standard, Standard Calibration Procedure, Product Drawings, Electronic Magnetic Interference & Prompt Nuclear Test Report. These documents are needed to maintain, repair and calibrate the IM-276A/PD. The test report will provide the needed objective quality evidence showing compliance) prior to delivery of the dosimeters.</p> <p>The Data Acquisition System/Calibration Software includes the hardware and calibration software used to calibrate, configure, assign, reset and re-zero the IM-276A/PD. This software will then be submitted for NMCI certification and DADMS approval and pushed to the calibration laboratories.</p> <p>Training will be conducted at a Navy RADIAC Calibration Laboratory for technicians who are responsible for the maintenance and repair of equipment. Training will include a review of the repairable parts and step-by-step instruction on how to perform the standard calibration procedure the technicians will employ to keep the equipment adjusted to specified tolerances.</p> <p>[P40A / Electronic Personal Dosimeter]: M2200, Electronic Personal Dosimeter (EPD): An electronic dosimeter that includes a real-time digital display of radiation dose being received. These so-called secondary dosimeters are normally used in conjunction with the DT-702 primary dosimeter in order to provide the wearer with real-time radiation dose information and alarm features that aid workers in controlling their radiation exposure. The DT-702 (Cost Element 2.1) is the Navy's approved dosimeter to record dose of record in each individual's medical record, but it is a "passive" device; i.e., it does not immediately display the dose being received. Instead, the dose is stored on the card on four different elements. It must be turned in and read by a machine (the 8800 Reader), a process that takes weeks, and therefore does not indicate if the wearer is in imminent danger.</p> <p>[P40A / M2200 NWCF Contract Service Fee]: M2200 NWCF Contract Service Fee: The PCO for hardware acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code hardware acquisitions.</p> <p>[P40A / M2400 - Other RADIAC]: M2400. Other RADIAC. The RADIAC Program fields 70 different families of instruments, consisting of a total of almost 43,000 instruments and 400,000 dosimeters. Those families that fall into similar functionality have been grouped here into the M2100, M2200, M2500 and M2600 Cost Codes. The M2400 Cost Code consists of instruments that have specialized functions that only they perform, and therefore would require an unmanageable and meaningless number of additional Cost Codes if each were addressed individually. In the context of the family metaphor used here, these instruments are no less important but are orphans in the sense there are not many of similar functionality with which they could be grouped.</p> <p>This Cost Code also supports replenishment of Ready for Issue (RFI) stocks when instruments in any Cost Code fall below stock levels sufficient to meet quarterly demand. This Cost Element (Spares) is a Continuing element that varies year-to-year based on emergent requirements and the quantity and unit cost of the item(s) being replenished.</p> <p>[P40A / Spares]: M2400, Spares: Purchase of additional quantities of existing models of RADIACs to replenish or supplement stocks of spare items due to minor increases in program allowances, inventory losses, or due to items being beyond economical repair.</p> <p>[P40A / M2400 NWCF Contract Service Fee]: M2400 NWCF Contract Service Fee: The PCO for hardware acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code hardware acquisitions.</p> <p>[P40A / M2500 - Air Sampling Systems]: M2500. Monitoring for airborne radioactivity is done to detect leaks from nuclear reactors or associated systems to ensure that radioactivity is not inadvertently released to the environment from these operations. Additionally, monitoring for airborne radioactivity is performed during maintenance on radioactive components or during events that might cause radioactivity to be released to the air. Monitoring for airborne radioactivity is normally done by drawing air across filter paper to collect airborne radioactive particles. This filter paper is then evaluated by radiation detectors and the concentration of airborne radioactivity is calculated. The types of airborne radioactivity monitoring systems include fixed systems and portable systems.</p>		

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Line Item MDAP/MAIS Code: N/A		
Fixed systems sample air from pre-determined locations and normally include built-in radiation detectors for determining the airborne radioactivity concentration. Portable systems can be used to sample air at any desired location, but normally require the use of separate radiation detection instruments to measure the radioactive particles deposited on the filter paper to determine the airborne radioactivity concentration.		
[P40A / Air Particle Detector (APD) Ship Frames]: M2500, Air Particle Detector (APD), Ship, Frames: Government Furnished Material (GFM) to be provided to the manufacturer of the APD Ship (IM-272/WDQ). This material consists of the housing and specific internal components from the IM-239/WDQ. The housings and identified internal components from the IM-239/WDQ will be prepared in the depot level maintenance facility for the APD and provided to the manufacturer of the IM-272/WDQ. Use of these housings and components reduces the overall cost of the IM-272/WDQ and avoids the cost of a ship alteration by ensuring the IM-272/WDQ will have the same shipboard footprint as the IM-239/WDQ.		
[P40A / APD Ship]: M2500, Air Particle Detector, Ship: Airborne radioactivity monitoring system that is required for use on CVNs and all submarines. This system (IM-272/WDQ) is a replacement for the existing IM-239/WDQ used on all Navy nuclear ships. The IM-272/WDQ incorporates significant technology enhancements that will reduce spurious false alarms and reduce operator maintenance.		
[P40A / APD Ship Engineering Change Proposal]: M2500, APD Ship Engineering Change Proposal (ECP): Naval Reactors has directed an ECP be designed and incorporated that will reduce noise and vibration for the IM-272/WDQ in order to meet (classified) specifications for the COLUMBIA class submarines.		
[P40A / APD Ship Provisioning]: M2500, APD Ship Provisioning: The contractor shall host a provisioning conference at which the equipment will be broken down to Source, Maintenance and Recoverability (SM&R) codes and where maintenance philosophies will be established for each part for the acoustic upgrade model.		
[P40A / APD Ship Data]: M2500, Air Particle Detector, Ship Data: This data includes a one-time cost for Technical Manuals in FY18 for the acoustic model. Subsequent years include the Technical Repair Standard, drawings, and production reports with every delivery order.		
[P40A / APD Ship Initial Spare Parts]: M2500, Air Particle Detector, Ship, Initial Spare Parts: In FY17 procure initial spare parts to support fielding. In FY19, procure two Flow Meter Test Sets. In FY21, procure parts kits to upgrade 10 of the initial 40 units procured in FY14 to the new acoustic standard directed by Naval Reactors.		
[P40A / APD Ship Upgrade Kit]: M2500, APD Ship Upgrade Kit: The Navy procured the first lot of IM-272 APDs in FY14. Subsequent to that delivery order an Engineering Change Proposal was directed by Naval Reactors in order to accommodate more stringent acoustic specifications for the COLOMBIA class submarines. Ten of the IM-272 will be retrofitted with new parts to upgrade them to the IM-272A model.		
[P40A / APD Ship Training]: M2500, APD Ship Training: The vendor will provide maintenance and repair training for Navy technicians at two Government sites. One site will be at the IM-272's depot level maintenance facility at PSNSY&IMF, and the other at the RADIAC Calibration Laboratory that provides fleet support for the equipment. The sessions will be professionally filmed for distribution to the fleet to assist ships' force sailors to learn how to perform trouble shooting and basic maintenance.		
[P40A / APD Shore]: M2500, Air Particle Detector (APD) Shore: This system is a replacement for the existing IM-239/WDQ designed for ships that is also currently used in radiological maintenance facilities ashore. The APD Shore incorporates significant technology enhancements that will reduce spurious false alarms and reduce operator maintenance, and since it does not need to be hardened for shipboard use, it will be cheaper to procure and maintain than the new IM-272/WDQ units (Cost Element 4.2) being procured for ships.		
[P40A / Air Particle Sampler]: M2500, Air Particle Sampler: Portable airborne radioactivity sampling system. Used during radiological work or during radiological casualties to draw air across a filter paper to collect radioactive particles. The filter paper is then evaluated using separately provided radiation detectors to determine the concentration of airborne radioactivity.		
[P40A / Tritium Monitor]: M2500, Tritium Monitor: The AN/PDR-73 Tritium Monitor is used at nuclear weapons storage facilities and research laboratories to sample the air for the presence of tritium, which is a toxic radiation hazard if inhaled. The current instrument is 30 years old and cannot be repaired due to obsolete components. At the current loss rate due to normal wear and tear there will be insufficient assets to meet operational requirements, so a replacement must be procured.		

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Line Item MDAP/MAIS Code: N/A		
[P40A / Tritium Monitor Testing, Data, Parts & Training]: M2500, Tritium Monitor Initial Spare Parts Testing, Data & Training: In FY17 procure Electro Magnetic Interference testing, Technical Manuals, and Technical Repair Standard. In FY19 procure initial spare parts to support fielding and factory training of RADIAC Calibration Laboratory Electronic Technicians and program engineers.		
[P40A / M2500 NWCF Contract Service Fee]: M2500 NWCF Contract Service Fee: The PCO for hardware acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code hardware acquisitions.		
[P40A / M2600 - Laboratory Test Equipment]: M2600. This Cost Code supports specialized equipment usually found in laboratories, hospitals and test facilities. This kind of equipment is distinct enough to warrant separating it for management purposes from the M2400 Cost Code.		
[P40A / Calibrators]: M2600, Calibrators: Calibrators are the basic tool used to calibrate all Navy radiological detection equipment. They consist of a high energy radiological source (Cs-137) in a shielded container that is located in a specially constructed room, or "range." A technician places the instrument to be calibrated at a specific calibration point in the range and remotely operates the calibrator by raising the source out of its container so that the radiological source becomes exposed and it irradiates the instrument. The instrument's response to the radiation is measured so that it can be calibrated to specific tolerances. The current suite of AN/UDM-1B calibrators is over 30 years old, and the natural decay of the strength of the radioactive source over time restricts calibration effectiveness by limiting the scale of calibration points below American National Standards Institute (ANSI) requirements that are followed in accordance with Navy policy. Also, due to the age of the calibrators, there are several parts no longer supported by the manufacturer, and a malfunctioning calibrator (e.g., where the source gets stuck in the exposed position) poses a very high safety risk.		
[P40A / Calibrator Initial Spare Parts & Training]: M2600, Calibrator Initial Spare Parts & Training: Initial spare parts and vendor training at each of the seven RADIAC Calibration Laboratories where the equipment will be installed.		
[P40A / M2600 NWCF Contract Service Fee]: M2600 NWCF Contract Service Fee: The PCO for hardware acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code hardware acquisitions.		
[P40A / M2830 - Support - Production Engineering]: M2830, Production Engineering: Labor cost of the government and contractor personnel who prepare the acquisitions.		
[P40A / Production Engineering Carderock]: M2830, Production Engineering: Labor cost of the government Engineers, Health Physicists, Scientists and others who prepare the acquisitions.		
[P40A / Production Engineering ISEA]: M2830, Production Engineering In Service Engineering Agent (ISEA): Labor cost of the contractor Engineers, Logisticians, Technical Writer, Program Analyst, and Systems Analysts who help prepare the acquisitions.		
A new contract was awarded in FY17 with a new alignment of engineering and logistical support that resulted in a spike in FY17 to address work backlog and a slightly higher annual outlay thereafter than previously budgeted in order to sustain requirements at an acceptable level.		
[P40A / M2830 NWCF Contract Service Fee]: M2830 NWCF Contract Service Fee: The PCO for acquisitions is a Navy Working Capital Fund activity that charges a set fee for each contract award and modification. The applicable fee for a given year is applied to the total value of the Cost Code services acquisition.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				P-1 Line Item Number / Title: 2920 / RADIAC					
ID Code (A=Service Ready, B=Not Service Ready): B		Program Elements for Code B Items: 0708017N			Other Related Program Elements: 0603542N, 0702856N				
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	RADIAC	P-5a			- / 53.882	- / 8.092	- / 10.718	- / 8.175	- / -
P-40	Total Gross/Weapon System Cost				- / 53.882	- / 8.092	- / 10.718	- / 8.175	- / 0.000
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: Title 10 of the Code of Federal Regulations, Part 20 (10 CFR 20) requires RADIAC instruments be used to ensure the safety of personnel who work with or who are exposed to radioactive materials in their work. Additionally, the Navy's mission requires personnel and ships to have the ability to operate in radiological environments and the ability to identify and interdict radiological Weapons of Mass Destruction (WMD). Navy programs that require RADIAC instruments for Occupational Safety & Health (OSH) reasons under the provisions of 10 CFR 20 include Naval Nuclear Propulsion, Nuclear Weapons, Medical, and Radiological Affairs Support. Non-OSH programs include Radiological Defense, Consequence Management, Training, Technical (RADIAC calibration, shielding evaluation, research) and Radiological Search (maritime interdiction to locate or intercept WMD).									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2920 / RADIAC									Aggregated Items Title: RADIAC						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2) M2200 - Dosimetry																				
2.1) DT-702 Card ^(†)	A		26.60	145,000	3.857	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.2) DT-702 Card Holder ^(†)	A		18.34	35,000	0.642	-	-	-	20.00	25,000	0.500	-	-	-	-	-	-	-	-	
2.3) Extremity Dosimeter ^(†)	A		11.75	12,000	0.141	13.66	9,000	0.123	-	-	-	-	-	-	-	-	-	-	-	
2.4) Battlefield Dosimeter ^{(1)(t)}	A		174.02	29,434	5.122	227.00	2,266	0.514	232.00	10,275	2.384	236.00	9,175	2.165	-	-	-	236.00	9,175	2.165
2.5) Battlefield Dosimeter Cases ^{(2)(t)}	A		415.00	200	0.083	405.17	118	0.048	413.00	165	0.068	421.00	150	0.063	-	-	-	421.00	150	0.063
2.6) Battlefield Dosimeter Data & Training	A		-	-	-	-	-	-	-	0.190	-	-	-	-	-	-	-	-	-	
2.7) Electronic Personal Dosimeter ^{(3)(t)}	A		258.72	16,338	4.227	463.00	2,000	0.926	-	-	-	-	-	-	-	-	-	-	-	
2.8) M2200 NWCF Contract Service Fee	A		-	-	0.285	-	-	0.080	-	-	0.344	-	-	0.133	-	-	-	-	0.133	
Subtotal: 2) M2200 - Dosimetry	-	-	14.357	-	-	1.691	-	-	3.486	-	-	2.361	-	-	-	-	-	-	2.361	
3) M2400 - Other RADIAC																				
3.1) Spares	A		-	-	6.891	-	-	0.244	-	-	0.096	-	-	0.100	-	-	-	-	0.100	
3.2) M2400 NWCF Contract Service Fee ⁽⁴⁾	A		-	-	0.173	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	
Subtotal: 3) M2400 - Other RADIAC	-	-	7.064	-	-	0.244	-	-	0.099	-	-	0.100	-	-	-	-	-	-	0.100	
4) M2500 - Air Sampling Systems																				
4.1) Air Particle Detector (APD) Ship Frames ^{(5)(t)}	A		6,745.00	200	1.349	-	-	0.042	11,840.00	50	0.592	7,362.00	60	0.442	-	-	-	7,362.00	60	0.442
4.2) APD Ship ^{(6)(t)}	A		42,975.00	40	1.719	58,499.00	30	1.755	59,669.00	40	2.387	60,862.00	35	2.130	-	-	-	60,862.00	35	2.130
4.3) APD Ship Engineering Change Proposal	A		-	-	0.198	-	-	0.584	-	-	-	-	-	-	-	-	-	-	-	
4.4) APD Ship Provisioning	A		-	-	0.334	-	-	-	-	-	0.040	-	-	-	-	-	-	-	-	
4.5) APD Ship Data ⁽⁷⁾	A		-	-	1.396	-	-	0.164	-	-	0.600	-	-	0.135	-	-	-	-	0.135	
4.6) APD Ship Initial Spare Parts ^(†)	A		-	-	0.097	-	-	0.783	-	-	-	125,000.00	2	0.250	-	-	-	125,000.00	2	0.250
4.7) APD Ship Upgrade Kit ^(†)	A		-	-	-	-	-	-	-	20,000.00	10	0.200	-	-	-	-	-	-	-	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2920 / RADIAC									Aggregated Items Title: RADIAC						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.8) APD Ship Training	A		-	-	-	-	-	-	-	-	-	-	-	0.100	-	-	-	-	-	0.100
4.9) APD Shore ^(†)	A		17,400.00	110	1.914	17,610.00	20	0.352	-	-	-	-	-	-	-	-	-	-	-	-
4.10) Air Particle Sampler ^(†)	A		1,232.14	280	0.345	1,307.00	200	0.261	1,320.48	367	0.485	1,319.59	367	0.484	-	-	-	1,319.59	367	0.484
4.11) Tritium Monitor (8) ^(†)	A		-	-	-	19,500.00	50	0.975	13,447.00	100	1.345	17,894.00	50	0.895	-	-	-	17,894.00	50	0.895
4.12) Tritium Monitor Testing, Data, Parts & Training	A		-	-	-	-	-	0.038	-	-	-	-	-	0.180	-	-	-	-	-	0.180
4.13) M2500 NWCF Contract Service Fee	A		-	-	0.312	-	-	0.252	-	-	0.613	-	-	0.215	-	-	-	-	-	0.215
<i>Subtotal: 4) M2500 - Air Sampling Systems</i>			-	-	7.664	-	-	5.206	-	-	6.262	-	-	4.831	-	-	-	-	-	4.831
5) M2600 - Laboratory Test Equipment																				
5.3) M2600 NWCF Contract Service Fee	A		-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-
<i>Subtotal: 5) M2600 - Laboratory Test Equipment</i>			-	-	0.000	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-
6) M2830 - Support - Production Engineering																				
6.1) Production Engineering Carderock	A		-	-	14.300	-	-	0.531	-	-	0.541	-	-	0.551	-	-	-	-	-	0.551
6.2) Production Engineering ISEA	A		-	-	10.462	-	-	0.420	-	-	0.325	-	-	0.332	-	-	-	-	-	0.332
6.3) M2830 NWCF Contract Service Fee (9)	A		-	-	0.035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 6) M2830 - Support - Production Engineering</i>			-	-	24.797	-	-	0.951	-	-	0.866	-	-	0.883	-	-	-	-	-	0.883
Total			-	-	53.882	-	-	8.092	-	-	10.718	-	-	8.175	-	-	-	-	-	8.175

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

(†) indicates the presence of a P-5a

Footnotes:

(1) M2200, Battlefield Dosimeter (BD): Subsequent to the Fukushima Daiichi nuclear plant incident in 2011, a capability gap was identified wherein ships in the deployed Battle Group were exposed to the lower levels of radiation normally associated with occupational radiological workers. This hampered the continuity of operations because the existing BD is designed to record and display exposure beginning only at 10 rem (roentgen equivalent in man), a level associated with the detonation of a nuclear weapon. This is a specification vestige of the Cold War. The millirem, which is one thousandth of a rem, is used to measure dosages encountered in daily life, such as the amount of radiation received from medical X-rays, long airplane flights, background sources, and the lower levels of radiation normally associated with occupational radiological work, during which workers are exposed on a continuous basis and why their exposures are closely monitored and recorded. To fill the gap, specifications were added to the new BD for a device that could provide real-time feedback of dose received at occupational levels. This procurement has been beset by technical delays due to manufacturing defects. In June 2016, the manufacturer self-identified that their manufacturing process of Direct Ion Storage chambers was defective and producing only 30% yield of functionally acceptable detectors. At that rate, they could not be profitable nor meet the contractual delivery schedule. In July 2016, a Navy team of engineers and health physicists visited manufacturing sites to ascertain if the production and quality assurance processes could be improved

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2920 / RADIAC	Aggregated Items Title: RADIAC
sufficiently enough to meet technical specifications and the delivery schedule. Based on the team's observations, a contract modification with a revised delivery schedule and considerations was granted, but the delay prevented award of the delivery order and obligation of FY15 and FY16 funding as had been scheduled. Subsequent Navy acceptance testing and exposure testing at White Sands Missile Range of low rate initial production units delivered from September 2016 through November 2016 identified non-compliance with several technical specifications. After extensive consultations between the manufacturer and the Navy team, Navy findings were incorporated into the design. Deliveries received thereafter through March 2017 have demonstrated the dosimeter now meets all specifications and the manufacturer will be able to ramp up production and meet the delivery schedule for the procurement objective. A follow-on sole source contract is scheduled for award in September 2017. On 5 July 2017 updated pricing for the new award was provided by the manufacturer and has been applied in the P40A effective with FY15 through FY17 available funding. On 29 September 2017 the final delivery order on the initial contract was executed, using budgeted funds from FY15, FY16 and FY17.		
(2) M2200, Battlefield Dosimeter Cases. The unit price of the cases will vary with their size. Since all three configurations are consolidated into one Cost Element and will be purchased in varying quantities in each year, the Total Cost year-to-year will not necessarily conform to inflation indices.		
(3) M2200, Electronic Personal Dosimeter (EPD): The vendor of the Navy's current EPD has extended its production from the previously announced FY17 to FY22. The manufacturer will set aside 5,000 units for the Navy to procure if they are required, which at the present time is not deemed necessary. But due to the high failure rate of fielded units it may become necessary to procure some of these additional units in future years in order to sustain an inventory that meets operational requirements. In FY23 a new EPD will begin to be procured (in open competition; not necessarily from the same vendor) and an initial 100 units will be procured to provide enough instruments to validate software and logistical requirements. There are currently approximately 30,000 EPDs in the Navy inventory, so procurement of the new model will continue as the older model becomes unsupportable and is gradually phased out. The unit pricing in FY23 uses the pricing of the current model in FY17 as the baseline.		
(4) M2400 NWCF Contract Service Fee: In years when serial numbered equipment is purchased through Naval Supply Systems Command, there is no associated contract service fee.		
(5) M2500, Air Particle Detector, Ship, Frames: No GFM will be prepared in FY 2017 because no production units were ordered in 2016. However, there was an emergent requirement in FY17 to fund changes to GFM already refurbished. The new design to accommodate COLOMBIA class requirements dictated the need to remove and replace several parts in the already completed GFM. The FY17 refurbishment gap will keep the existing supply of Ready for Issue IM-239/WDQ at levels sufficient to meet demand (IM-239/WDQ supply the cabinets and components that become the GFM). When work resumes in FY 2018 the cost will increase by \$250 per unit above inflation because of the units the contractor has already received, they have reported a failure rate of one internal component of 40%. This is significant enough to warrant its replacement in every piece of GFM they have received or will receive in the future. Also in FY18, 90 of the frames that were previously converted need to have additional work done to remove some components. These 90 units were refurbished prior to completion of the final design of the IM-272/WDQ and some components are no longer required. The unit cost for the refurbishment of the 50 scheduled units does not change; the FY18 unit cost now reflects the additional \$230K needed for the work on the previously refurbished 90 units.		
(6) M2500, Air Particle Detector, Ship: The final delivery order on the current contract was placed in June 2017 with increased, updated pricing. The price was increased due to the acoustic modifications ordered by Naval Reactors for the COLUMBIA class submarines. The modifications driving the unit cost increase included making the pressure vessel out of a different material, installing acoustic tiles in the upper pressure vessel, installing a new muffler, and providing factory testing of the units to meet the new acoustic standard. A new contract for the remaining units will be competed on a build to print basis and is scheduled for award in late FY18. Pricing for FY18 units and beyond is notional and based on the pricing of the June 2017 delivery order. On 11 July 2017 in a meeting with Naval Reactors, they disclosed that the original plan to not place the IM-272/WDQ on any of the NIMITZ class carriers has to be modified and the three oldest CVNs will now require these units. This is due to the legal proscription from performing ship alterations on ships within a specified period from their decommissioning. This has increased the procurement objective from 310 units to 338 (30 of the units procured in FY14 have been diverted from U.S. use to a Foreign Military Sales case for the United Kingdom).		
(7) M2500, Air Particle Detector, Ship Data: In FY18 due to the new contract for the modified version of the unit with the acoustic upgrade, there will be a one-time extra cost for new Technical Manuals.		
(8) Initial unit cost in FY17 included testing of First Articles. The unit cost in FY19 for procuring the same number of units (50) does not include a testing requirement. Unit cost in FY18 is based on step ladder pricing for buying 100 units instead of 50.		
(9) With the transfer of services contract management from NAVSEA headquarters to the Warfare Centers effective in FY17, the Service Cost Center (SCC) fee is now being assessed by the Warfare Center in a lump sum, payable in OMN, as opposed to the previous practice of paying per the value of each contract modification in the same appropriation as the funding being added to the contract. Therefore the costs previously associated with OPN funding modifications for the SCC fee have been zeroed out in the FYDP.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2920 / RADIAC					Aggregated Items: RADIAC				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) M2200 - Dosimetry												
2.1) DT-702 Card		2016	Thermo Fisher Scientific / Franklin, MA	SS / IDIQ	NSWC Carderock	Mar 2016	Jun 2016	30,000	46.71	Y		May 2014
2.2) DT-702 Card Holder		2018	Thermo Fisher Scientific / Oakwood Village, OH	SS / IDIQ	NSWC Carderock	Mar 2018	Jun 2018	25,000	20.00	Y		Feb 2018
2.3) Extremity Dosimeter		2017	Thermo Fisher Scientific / Oakwood Village, OH	SS / IDDQ	NSWC Carderock	Mar 2017	Jun 2017	9,000	13.66	Y		Feb 2017
2.4) Battlefield Dosimeter ⁽¹⁾		2014	Radiation Safety & Control Services / Stratham, NH	C / IDDQ	NSWC Carderock	Sep 2015	Jun 2016	20,000	149.00	Y		Dec 2012
2.4) Battlefield Dosimeter ⁽¹⁾		2015	Radiation Safety & Control Services / Stratham, NH	C / IDDQ	NSWC Carderock	Sep 2017	Mar 2018	4,044	227.00	Y		Oct 2016
2.4) Battlefield Dosimeter ⁽¹⁾		2016	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2017	Mar 2018	5,390	227.00	Y		Jun 2017
2.4) Battlefield Dosimeter ⁽¹⁾		2017	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2017	Mar 2018	2,266	227.00	Y		Jun 2017
2.4) Battlefield Dosimeter ⁽¹⁾		2018	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2018	Mar 2019	10,275	232.00	Y		Jun 2017
2.4) Battlefield Dosimeter ⁽¹⁾		2019	Radiation Safety & Control Services / Stratham, NH	C / TBD	NSWC Carderock	Mar 2019	Sep 2019	9,175	236.00	Y		Jun 2017
2.5) Battlefield Dosimeter Cases ⁽²⁾		2015	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2017	Mar 2018	200	417.00	Y		Oct 2016
2.5) Battlefield Dosimeter Cases ⁽²⁾		2017	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2017	Mar 2018	118	405.17	Y		Jun 2017
2.5) Battlefield Dosimeter Cases ⁽²⁾		2018	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Sep 2018	Mar 2019	165	413.00	Y		Jun 2017
2.5) Battlefield Dosimeter Cases ⁽²⁾		2019	Radiation Safety & Control Services / Stratham, NH	SS / FFP	NSWC Carderock	Mar 2019	Sep 2019	150	421.00	Y		Jun 2017
2.7) Electronic Personal Dosimeter ⁽³⁾		2016	Thermo Fisher Scientific / Franklin, MA	SS / IDDQ	NSWC Carderock	Jun 2016	Sep 2016	150	441.00	Y		Jul 2013
2.7) Electronic Personal Dosimeter ⁽³⁾		2017	Thermo Fisher Scientific / Franklin, MA	SS / IDIQ	NSWC Carderock	Mar 2017	Jun 2017	2,000	463.00	Y		Jul 2013
4) M2500 - Air Sampling Systems												
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2013	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Nov 2012	Feb 2013	50	5,580.00	Y		
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2014	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Nov 2013	Feb 2014	50	6,280.00	Y		
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2015	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Oct 2014	Jan 2015	50	6,580.00	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2920 / RADIAC					Aggregated Items: RADIAC				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2016	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Oct 2015	Jan 2016	50	6,700.00	Y		
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2018	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Oct 2017	Jan 2018	50	11,840.00	Y		
4.1) Air Particle Detector (APD) Ship Frames ⁽⁵⁾		2019	Puget Sound NSY / Bremerton, WA	WR	** NO PCO **	Oct 2018	Jan 2019	60	7,362.00	Y		
4.2) APD Ship ⁽⁶⁾		2014	Leidos / San Diego, CA	C / FFP	NSWC Carderock	Sep 2014	Jul 2015	40	42,975.00	Y		Feb 2011
4.2) APD Ship ⁽⁶⁾		2017	Leidos / San Diego, CA	C / FFP	NSWC Carderock	Jun 2017	Apr 2018	30	58,499.00	Y		Feb 2011
4.2) APD Ship ⁽⁶⁾		2018	TBD / UNKNOWN	C / FFP	NSWC Carderock	Sep 2018	Jul 2019	40	59,669.00	Y		Nov 2017
4.2) APD Ship ⁽⁶⁾		2019	TBD / UNKNOWN	C / FFP	NSWC Carderock	Apr 2019	Apr 2019	35	60,862.00	Y		Nov 2017
4.6) APD Ship Initial Spare Parts		2019	TBD / New MFG - Loc	C / TBD	NSWC Carderock	Mar 2019	Sep 2019	2	125,000.00	Y		Sep 2018
4.7) APD Ship Upgrade Kit		2018	TBD / UNKNOWN	C / CPFF	NSWC Carderock	Sep 2018	Apr 2019	10	20,000.00	Y		Nov 2017
4.9) APD Shore		2014	Canberra Industries / Meriden, CT	C / FFP	NSWC Carderock	Mar 2015	Sep 2015	60	17,400.00	Y		Oct 2012
4.9) APD Shore		2017	Canberra Industries / Meriden, CT	C / FFP	NSWC Carderock	May 2017	Nov 2017	20	17,610.00	Y		Oct 2012
4.10) Air Particle Sampler		2015	Spectral Labs, Inc. / San Diego, CA	C / FFP	NSWC Carderock	Jul 2015	Jun 2016	200	1,227.43	Y		Jun 2014
4.10) Air Particle Sampler		2016	Spectral Labs, Inc. / San Diego, CA	C / FFP	NSWC Carderock	Jul 2016	Jun 2017	80	1,248.34	Y		Jun 2014
4.10) Air Particle Sampler		2017	Spectral Labs, Inc. / San Diego, CA	C / FFP	NSWC Carderock	Jul 2017	Jun 2018	200	1,307.00	Y		Jun 2014
4.10) Air Particle Sampler		2018	Spectral Labs, Inc. / San Diego, CA	C / FFP	NSWC Carderock	Jul 2018	Jun 2019	367	1,320.48	Y		Jun 2014
4.10) Air Particle Sampler		2019	Spectral Labs, Inc. / San Diego, CA	C / FFP	NSWC Carderock	Jul 2019	Jun 2020	367	1,319.59	Y		Jun 2014
4.11) Tritium Monitor ⁽⁸⁾		2017	TBD / TBD	C / FFP	NSWC Carderock	Sep 2017	Mar 2018	50	19,500.00	Y		Aug 2016
4.11) Tritium Monitor ⁽⁸⁾		2018	TBD / TBD	C / FFP	NSWC Carderock	Mar 2018	Sep 2018	100	13,447.00	Y		Aug 2016
4.11) Tritium Monitor ⁽⁸⁾		2019	TBD / TBD	C / TBD	NSWC Carderock	Mar 2019	Sep 2019	50	17,894.00	Y		Aug 2016

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment						P-1 Line Item Number / Title: 2925 / CANES Intell											
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A						Other Related Program Elements: 0303138N								
Line Item MDAP/MAIS Code: M417																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	283.715	35.313	48.028	54.465	0.000	54.465	54.528	47.749	52.764	50.129	528.165	1,154.856					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	283.715	35.313	48.028	54.465	0.000	54.465	54.528	47.749	52.764	50.129	528.165	1,154.856					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	283.715	35.313	48.028	54.465	0.000	54.465	54.528	47.749	52.764	50.129	528.165	1,154.856					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	-	0.896	0.896	-	0.896	0.917	0.843	0.711	0.616	Continuing	Continuing					
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
Consolidated Afloat Networks and Enterprise Services (CANES) is the Navy's Program of Record (POR) to replace and modernize existing afloat networks with the necessary hardware, software and enterprise services infrastructure to enable information warfare from and within the tactical domain. CANES provides complete infrastructure inclusive of hardware, software, processing, storage and end user devices for the Unclassified, Coalition, Secret and Sensitive Compartmented Information (SCI) enclaves to a wide variety of Navy surface combatants, submarines, Maritime Operations Centers, and Aegis Ashore sites. CANES services include application hosting, data transport and storage, system management, cyber security, email, web, chat, collaboration, and voice and video services. CANES is based on the overarching concept of reducing the number of afloat networks and providing enhanced efficiency through a single engineering focus on integrated technical solutions. It allows for streamlined acquisition, contracting, test events, sustainment, and significant lifecycle efficiencies through consolidation of multiple configuration management baselines, logistics, and training efforts into a single unified support structure.																	
More than eighty (80) hosted applications and systems inclusive of Command and Control, Intelligence, Surveillance and Reconnaissance, Information Operations, Logistics and Business domains require the CANES infrastructure to operate in the tactical environment. Specific programs, such as Distributed Common Ground System - Navy (DCGS-N), Global Command and Control System - Maritime (GCCS-M), Naval Tactical Command Support System (NTCSS), and Undersea Warfare Decision Support System (USW-DSS), no longer provide their own independent network hardware and now depend on CANES to field, host, and sustain their capabilities. The CANES Application Integration program provides common software governance, testing, processes, and tools to application developers, and evaluates and confirms compatibility between CANES and the hosted applications prior to fielding. CANES also provides a set of capabilities called Agile Core Services (ACS) which brings common network services to allow hosted application developers to focus on the unique capabilities they provide.																	
CANES is funded and programmed to develop regular technical updates with an agile and robust hardware and software baseline development cycle necessary to pace rapidly evolving cyber security threats and meet emerging operational demands within the tactical domain. In order to deliver a mission effective, secure and affordable afloat network, CANES implements a Development Operations (DevOps) framework to improve its engineering processes and speed the deployment of new cyber security, application hosting and baseline updates. CANES requires that Automated Digital Network System (ADNS) field prior to or concurrently with CANES due to the architectural reliance between the two programs.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				P-1 Line Item Number / Title: 2925 / CANES Intell					
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0303138N				
Line Item MDAP/MAIS Code: M417									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / CANES Intell				- / 1.050	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / CANES-Afloat 5G010/5G777 MIP (TBD)				- / 278.451	- / 35.313	- / 47.579	- / 51.509	- / 0.000
P-3a	2 / CANES - Ashore 5G010/5G776 MIP (TBD)				- / 4.214	- / 0.000	- / 0.449	- / 2.956	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 283.715	- / 35.313	- / 48.028	- / 54.465	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-5	1 / CANES Intell				- / -	- / -	- / -	- / -	- / -
P-3a	1 / CANES-Afloat 5G010/5G777 MIP (TBD)				- / 51.018	- / 45.908	- / 52.404	- / 48.853	- / 453.084
P-3a	2 / CANES - Ashore 5G010/5G776 MIP (TBD)				- / 3.510	- / 1.841	- / 0.360	- / 1.276	- / 15.980
P-40	Total Gross/Weapon System Cost				- / 54.528	- / 47.749	- / 52.764	- / 50.129	- / 528.165

*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 FY19 increase in the CANES funding profile optimizes the Chief of Naval Operations (CNO) ship availabilities with the CANES program's capacity and capability to procure and install the product. This ensures CANES is deployed to the Fleet as quickly and effectively as possible to mitigate heightened cyber security threats across Navy tactical networks and supports the DoD direction to remove End of Life (EOL) Windows Operating Systems software from the Fleet as quickly as feasible. Microsoft's end of cyber security support for legacy versions of Windows, as well as networks that rely on obsolete hardware and software, are driving increased sustainment costs, reducing operational availability and creating critical cyber security vulnerability in Navy Tactical Networks. Replacing these legacy networks and modernizing the tactical environment with CANES is the cornerstone for all C4ISR investments. CANES is a mature program with an innovative Multi Award Contract (MAC) in place that has consistently proven capable of delivering on or ahead of schedule. Additionally, it has decreased its installation time and continues to work towards decreasing ship touch time during installations. The MAC ensures capacity for production and installation growth.

FY 2019 - CANES funds are for the procurement of (20) Afloat production units (2 Force Level, 9 Unit Level, 9 Subs), (25) Technical Insertion units (7 Force Level, 13 Unit Level, 5 Subs), and (1) Afloat First Article, with integration and associated costs for pre-installation design and the installation of (22) Afloat production units and (9) Technical Insertion units. CANES funds will also be used for the procurement (3) Ashore units and (2) Ashore Technical Insertion units and the installation of (1) Ashore unit and (2) Ashore Technical Insertion units.

It is important to note that procurement quantities across the FYDP are the same CANES end item products referenced in CANES LI 2915. Installation quantities represent sites receiving CANES as also referenced in LI 2915. The associated dollars in this exhibit represent the Intell portions of the CANES enclave.

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell												Item Number / Title [DODIC]: 1 / CANES Intell			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:						
Resource Summary				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				1.050		0.000		0.000		0.000		0.000		0.000				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				1.050		0.000		0.000		0.000		0.000		0.000				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				1.050		0.000		0.000		0.000		0.000		0.000				
(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 Thousands)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Non Recurring Cost																		
1.1.1) Consolidated Prior Year Requirements ⁽¹⁾	-	-	1.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	1.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware Cost</i>	-	-	1.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	1.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Footnotes:

(1) Consolidated Prior Year requirements consists of Cooperative Maritime Forces Pacific (CMFP).

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell								Modification Number / Title: 1 / CANES-Afloat 5G010/5G777 MIP	
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	278.451	35.313	47.579	51.509	0.000	51.509	51.018	45.908	52.404	48.853	453.084	1,064.119
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	278.451	35.313	47.579	51.509	0.000	51.509	51.018	45.908	52.404	48.853	453.084	1,064.119
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	278.451	35.313	47.579	51.509	0.000	51.509	51.018	45.908	52.404	48.853	453.084	1,064.119
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The consolidation of existing Afloat Network programs of record designed to provide an agile, responsive Common Computing Environment (CCE) and Afloat Core Services (ACS) within and upon which application developers will host Command and Control, Warfare, Intelligence, Logistics, and business and education applications and services. Migration of Non-Classified Enclave (NCE) capabilities into the CANES baseline.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell							Modification Number / Title: 1 / CANES-Afloat 5G010/5G777 MIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Consolidated Afloat Networks & Enterprise Services (CANES) MIP			Modification Type: TBD					Related RDT&E PEs: 0303238N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CANES-Afloat 5G010/5G777 MIP													
B Kits													
Recurring													
1.1.1) CANES - Afloat Production Units - MIP - NonOrganic ⁽²⁾	73 / 138.206	13 / 13.102	22 / 22.191	20 / 14.144	- / -	20 / 14.144	17 / 10.019	20 / 10.317	11 / 6.256	9 / 6.487	- / -	185 / 220.722	
1.1.2) CANES Afloat Technical Insertion - MIP - NonOrganic ⁽³⁾	3 / 1.000	11 / 7.197	8 / 5.602	25 / 11.885	- / -	25 / 11.885	13 / 8.074	27 / 14.257	36 / 20.826	35 / 19.522	403 / 226.667	561 / 315.030	
Subtotal: Recurring	- / 139.206	- / 20.299	- / 27.793	- / 26.029	- / -	- / 26.029	- / 18.093	- / 24.574	- / 27.082	- / 26.009	- / 226.667	- / 535.752	
Non-Recurring													
1.2.1) CANES - Afloat First Articles - MIP - Organic ⁽⁴⁾	10 / 34.509	1 / 1.118	1 / 0.618	1 / 0.625	- / -	1 / 0.625	- / -	- / -	- / -	- / -	- / -	13 / 36.870	
1.2.2) CANES-Non-Recurring Engineering (MIP) - Organic	- / 4.732	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.732	
Subtotal: Non-Recurring	- / 39.241	- / 1.118	- / 0.618	- / 0.625	- / -	- / 0.625	- / -	- / -	- / -	- / -	- / 0.000	- / 41.602	
Subtotal: CANES-Afloat 5G010/5G777 MIP	86 / 178.447	25 / 21.417	31 / 28.411	46 / 26.654	- / -	46 / 26.654	30 / 18.093	47 / 24.574	47 / 27.082	44 / 26.009	403 / 226.667	759 / 577.354	
Subtotal: Procurement, All Modification Items	- / 178.447	- / 21.417	- / 28.411	- / 26.654	- / -	- / 26.654	- / 18.093	- / 24.574	- / 27.082	- / 26.009	- / 226.667	- / 577.354	
Support (All Modification Items)													
2.1) CANES - Afloat Production Support (MIP)	- / 7.238	- / 1.065	- / 1.428	- / 1.370	- / 0.000	- / 1.370	- / 0.952	- / 1.293	- / 1.425	- / 1.369	- / 11.930	- / 28.070	
2.2) CANES - Afloat Design Service Agent (MIP)	- / 11.341	- / 1.863	- / 1.876	- / 1.735	- / 0.000	- / 1.735	- / 1.812	- / 1.107	- / 1.257	- / 1.644	- / 2.708	- / 25.343	
Subtotal: Support	- / 18.579	- / 2.928	- / 3.304	- / 3.105	- / -	- / 3.105	- / 2.764	- / 2.400	- / 2.682	- / 3.013	- / 14.638	- / 53.413	
Installation													
Modification Item 1 of 1: CANES-Afloat 5G010/5G777 MIP	- / 81.425	- / 10.968	- / 15.864	- / 21.750	- / 0.000	- / 21.750	- / 30.161	- / 18.934	- / 22.640	- / 19.831	- / 211.779	- / 433.352	
Subtotal: Installation	- / 81.425	- / 10.968	- / 15.864	- / 21.750	- / -	- / 21.750	- / 30.161	- / 18.934	- / 22.640	- / 19.831	- / 211.779	- / 433.352	
Total													
Total Cost (Procurement + Support + Installation)	278.451	35.313	47.579	51.509	0.000	51.509	51.018	45.908	52.404	48.853	453.084	1,064.119	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell					Modification Number / Title: 1 / CANES-Afloat 5G010/5G777 MIP								
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: CANES-Afloat 5G010/5G777 MIP</i>								MDAP/MAIS Code:								
Manufacturer Information																
Manufacturer Name: Multiple Vendors ⁽⁵⁾				Manufacturer Location: Various												
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 6												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	Jan 2017	Nov 2017	Nov 2018													
Delivery Dates	Jul 2017	May 2018	May 2019													
Manufacturer Name: Multiple Vendors ⁽⁶⁾				Manufacturer Location: Various												
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 4												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	Jan 2017	Nov 2017	Nov 2018													
Delivery Dates	May 2017	Mar 2018	Mar 2019													
Installation Information																
Method of Implementation: [none specified]:: Installation Name: CANES - Afloat Production Units - MIP																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)				
Prior Years	68 / 81.425	5 / 5.468	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	73 / 86.893				
FY 2017	- / -	3 / 2.910	10 / 10.919	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	13 / 13.829				
FY 2018	- / -	- / -	- / -	22 / 18.016	0 / 0.000	22 / 18.016	- / -	- / -	- / -	- / -	0 / 0.000	22 / 18.016				
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	20 / 16.593	- / -	- / -	- / -	0 / 0.000	20 / 16.593				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 11.867	- / -	- / -	0 / 0.000	17 / 11.867				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 11.259	- / -	0 / 0.000	20 / 11.259				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 6.394	0 / 0.000	11 / 6.394				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 6.149	9 / 6.149				
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
Total	68 / 81.425	8 / 8.378	10 / 10.919	22 / 18.016	0 / 0.000	22 / 18.016	20 / 16.593	17 / 11.867	20 / 11.259	11 / 6.394	9 / 6.149	185 / 171.000				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10								P-1 Line Item Number / Title: 2925 / CANES Intell												Modification Number / Title: 1 / CANES-Afloat 5G010/5G777 MIP																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																								
Modification Item 1 of 1: CANES-Afloat 5G010/5G777 MIP																																				
Installation Information																																				
Method of Implementation: [none specified]: Installation Name: CANES - Afloat Production Units - MIP																																				
Installation Schedule																																				
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
In	62	6	2	1	4	2	3	3	3	2	11	5	4	2	10	2	6	3	6	5	3	3	9	5	3	3	3	2	9	185						
Out	52	8	8	2	1	4	2	3	3	3	2	11	5	4	2	10	2	6	3	6	5	3	3	9	5	3	3	3	11	185						
Method of Implementation: [none specified]: Installation Name: CANES Afloat Technical Insertion - MIP																																				
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total										
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)									
Prior Years	-	/	-	3	/	0.816	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	0	/	0.000	3	/	0.816						
FY 2017	-	/	-	2	/	1.774	9	/	4.945	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	0	/	0.000	11	/	6.719					
FY 2018	-	/	-	-	/	-	-	/	-	8	/	2.970	0	/	0.000	8	/	2.970	-	/	-	/	-	-	/	-	-	0	/	0.000	8	/	2.970			
FY 2019	-	/	-	-	/	-	-	/	-	1	/	0.764	0	/	0.000	1	/	0.764	24	/	10.590	-	/	-	/	-	-	0	/	0.000	25	/	11.354			
FY 2020	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	6	/	2.978	7	/	1.830	-	/	-	-	-	0	/	0.000	13	/	4.808		
FY 2021	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	10	/	5.237	17	/	6.422	-	/	-	-	-	0	/	0.000	27	/	11.659	
FY 2022	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	13	/	4.959	23	/	9.018	-	/	-	-	-	0	/	0.000	36	/	13.977	
FY 2023	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	12	/	4.419	23	/	11.102	-	/	-	-	-	403	/	194.528	403	/	194.528
To Complete	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	/	-	-	1	/	-	-	-	-	-	-	-	-	403	/	194.528	403	/	194.528	
Total	-	/	-	5	/	2.590	9	/	4.945	9	/	3.734	0	/	0.000	9	/	3.734	30	/	13.568	17	/	7.067	30	/	11.381	35	/	13.437	426	/	205.630	561	/	262.352
Installation Schedule																																				
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot						
	Q1	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	-	4	2	3	1	3	1	4	7	9	8	6	-	4	3	10	2	12	3	13	2	16	5	12	426	561					
Out	-	-	-	2	-	3	-	4	2	3	1	3	1	4	7	9	8	6	-	4	3	10	2	12	3	13	2	16	5	12	438	561				
Method of Implementation (Organic): CANES - Afloat First Articles - MIP - Not Installed												Installation Quantity: 13																								
Footnotes:																																				

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2925 / CANES Intell	Modification Number / Title: 1 / CANES-Afloat 5G010/5G777 MIP
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(2) -CANES installations are conducted across several fleet concentration areas supported by six installation Multiple Award Contract (MAC) holders. The SPAWAR Fleet Readiness Directorate (FRD) Installation Organization (FIO) has ensured sufficient Alteration Installation Teams (AIT) resources are available to meet the FY19 - 23 CANES installation plan. -CANES Afloat production units require an additional 4 months after delivery for integration, assembly and testing prior to installation start. Installations do not begin until 10 months after contract award (6 months production lead time (PLT) + 4 months integration). Total lead time, including admin lead time, is 11 months. -The procurement average unit cost fluctuation is due to variance in system configuration requirements for each CANES platform type. Furthermore, because CANES production units and installations are procured through separate multiple award contracts, there are unit cost fluctuations associated with the contracting process. A CANES unit level platform (DDG/CG/LSD) requires a smaller system, supporting fewer users and applications than force level platforms with a greater number of users and applications. For example, a CANES DDG design consists of 18 equipment racks and ~400 workstations, while a CANES CVN system consists of 48 equipment racks and ~3000 workstations. The average procurement cost (hardware, software, integration, and engineering support) for a unit level ship ranges from \$5.2M to \$7.5M, while the average procurement cost for a force level platform ranges from \$11.8M to \$15.6M, and submarine unit procurement costs range from \$2.7M to \$4.6M. These costs include both the MIP and non-MIP components of the CANES units. -Installation cost fluctuations are attributed to and dependent on ship class, variant of predecessor system the hull currently has installed. As an example of variant differences, if a CVN has an ISNS Delta variant installed, a CANES installation is estimated to be \$18.2M. If that same CVN had a legacy Asynchronous Transfer Mode Local Area Network (ATM LAN) the CANES installation is estimated to be \$22.4M. This cost is driven by a number of issues such as the requirement for new or additional wiring, plugs, configurations changes - The decrease in production unit cost from FY18 to FY19 is due to a dramatically lower percentage of more expensive Force Level units in FY19 compared to FY18.		
(3) - CANES technical insertion installations are conducted across several fleet concentration areas supported by six installation Multiple Award Contract (MAC) holders. The SPAWAR Fleet Readiness Directorate (FRD) Installation Organization (FIO) has ensured sufficient Alteration Installation Teams (AIT) resources are available to meet the FY19 - 23 CANES installation plan. - CANES Afloat technical insertion units require an additional 3 months after delivery for operational integration, assembly and testing prior to installation start. Installations do not begin until 7 months after contract award (4 months production lead time (PLT) + 3 months integration). Total lead time, including admin lead time, is 8 months. The decrease in production unit cost from FY18 to FY19 is due to a dramatically lower percentage of more expensive Force Level units in FY19 compared to FY18.		
(4) First articles are defined as necessary production design drawings, environmental (shock and vibration) qualifications, logistics and training artifacts as well as a certified tested baseline provided to the government for each platform first of its kind. First articles are separate from production units and must be bought prior to the procurement of the corresponding production units. Procurement Lead Time (PLT) is 8 months for First Articles (DDG,CVN, submarines, etc). All following production articles of the same variant require a PLT of 6 months. CANES First Articles are not installed. Average unit cost fluctuations are attributable to variances in system configuration requirements among platforms. A DDG/CG/LSD (unit level platforms) has fewer users and runs fewer applications than a LHD/CVN/LPD (force level platforms). Force level platforms are larger in scale compared to the unit level ships and represent a super set of users, applications and connected systems. The FY15 and FY17 units are Unit Level procurements. The FY16 procurement is a force level system.		
(5) CANES: Full Production Contract has 7 possible vendors on MAC award: Northrop Grumman Systems Corp, BAE Systems Technology Solutions & Services, General Dynamics C4 Systems, Global Technical Systems, SERCO, Inc, CGI Federal Inc, DRS Laurel Technologies. This contract will be used for both production and tech refresh units.		
(6) CANES: Full Production Contract has 7 possible vendors on MAC award: Northrop Grumman Systems Corp, BAE Systems Technology Solutions & Services, General Dynamics C4 Systems, Global Technical Systems, SERCO, Inc, CGI Federal Inc, DRS Laurel Technologies. This contract will be used for both production and tech refresh units.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell						Modification Number / Title: 2 / CANES - Ashore 5G010/5G776 MIP			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	4.214	0.000	0.449	2.956	0.000	2.956	3.510	1.841	0.360	1.276	15.980	30.586
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	4.214	0.000	0.449	2.956	0.000	2.956	3.510	1.841	0.360	1.276	15.980	30.586
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	4.214	0.000	0.449	2.956	0.000	2.956	3.510	1.841	0.360	1.276	15.980	30.586
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The consolidation of existing Ashore Network programs of record designed to provide a single, agile, responsive Common Computing Environment (CCE) hardware and software suite which will host Command and Control, Warfare, Intelligence, Logistics, Business, and Education/Training applications and services for Maritime Operation Centers (MOC), Aegis Ashore (AA), and Technical Training Equipment (TTE) sites. CANES will provide complete Local Area Network (LAN) infrastructure and services inclusive of hardware, software, processing, storage, workstations, and tablets for all basic network services (email, web, chat, collaboration) at these sites.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2925 / CANES Intell							Modification Number / Title: 2 / CANES - Ashore 5G010/5G776 MIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Consolidated Afloat Networks & Enterprise Services (CANES) MIP			Modification Type: TBD					Related RDT&E PEs: 0303238N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CANES - Ashore 5G010/5G776 MIP													
B Kits													
Recurring													
1.1.1) CANES-Ashore Production Units MIP - NonOrganic ⁽⁷⁾	2 / 0.497	- / -	1 / 0.332	3 / 1.707	- / -	3 / 1.707	5 / 2.495	- / -	- / -	- / -	- / -	- / -	11 / 5.031
1.1.2) CANES - Ashore Technical Insertion - MIP - NonOrganic	- / -	- / -	- / -	2 / 0.542	- / -	2 / 0.542	- / -	- / -	1 / 0.270	3 / 0.933	31 / 11.019	37 / 12.764	
Subtotal: Recurring	- / 0.497	- / -	- / 0.332	- / 2.249	- / -	- / 2.249	- / 2.495	- / -	- / 0.270	- / 0.933	- / 11.019	- / 17.795	
Non-Recurring													
1.2.1) CANES - Ashore First Articles - MIP - Organic ⁽⁸⁾	1 / 3.264	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.264
Subtotal: Non-Recurring	- / 3.264	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: CANES - Ashore 5G010/5G776 MIP	3 / 3.761	- / -	1 / 0.332	5 / 2.249	- / -	5 / 2.249	5 / 2.495	- / -	1 / 0.270	3 / 0.933	31 / 11.019	49 / 21.059	
Subtotal: Procurement, All Modification Items	- / 3.761	- / -	- / 0.332	- / 2.249	- / -	- / 2.249	- / 2.495	- / -	- / 0.270	- / 0.933	- / 11.019	- / 21.059	
Support (All Modification Items)													
2.1) CANES - Ashore Production Support (MIP)	- / 0.026	- / -	- / 0.017	- / 0.118	- / -	- / 0.118	- / 0.131	- / -	- / 0.014	- / 0.049	- / 0.580	- / 0.935	
2.2) CANES - Ashore Design Service Agent (MIP)	- / -	- / -	- / -	- / 0.098	- / -	- / 0.098	- / 0.080	- / 0.152	- / -	- / -	- / -	- / -	- / 0.330
Subtotal: Support	- / 0.026	- / -	- / 0.017	- / 0.216	- / -	- / 0.216	- / 0.211	- / 0.152	- / 0.014	- / 0.049	- / 0.580	- / 1.265	
Installation													
Modification Item 1 of 1: CANES - Ashore 5G010/5G776 MIP	- / 0.427	- / 0.000	- / 0.100	- / 0.491	- / 0.000	- / 0.491	- / 0.804	- / 1.689	- / 0.076	- / 0.294	- / 4.381	- / 8.262	
Subtotal: Installation	- / 0.427	- / -	- / 0.100	- / 0.491	- / -	- / 0.491	- / 0.804	- / 1.689	- / 0.076	- / 0.294	- / 4.381	- / 8.262	
Total													
Total Cost (Procurement + Support + Installation)	4.214	0.000	0.449	2.956	0.000	2.956	3.510	1.841	0.360	1.276	15.980	30.586	

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2925 / CANES Intell								Modification Number / Title: 2 / CANES - Ashore 5G010/5G776 MIP																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: CANES - Ashore 5G010/5G776 MIP																														
Manufacturer Information																														
Manufacturer Name: TBD (Competitive Procurement) (9)								Manufacturer Location: TBD (Competitive Procurement)																						
Administrative Leadtime (in Months): 1								Production Leadtime (in Months): 5																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates		Feb 2018	Nov 2018																											
Delivery Dates		Jul 2018	Apr 2019																											
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: CANES-Ashore Production Units MIP																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.427	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.427																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	1 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.100																
FY 2019			- / -	- / -	- / -	1 / 0.347	0 / 0.000	1 / 0.347	2 / 0.804	- / -	- / -	- / -	0 / 0.000	3 / 1.151																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.689	- / -	- / -	- / -	0 / 0.000	5 / 1.689																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			2 / 0.427	- / -	1 / 0.100	1 / 0.347	0 / 0.000	1 / 0.347	2 / 0.804	5 / 1.689	- / -	- / -	0 / 0.000	11 / 3.367																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	1	4	-	-	-	-	-	-	-	11				
Out	2	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	1	4	-	-	-	-	-	-	11				
Method of Implementation: [none specified]:: Installation Name: CANES - Ashore Technical Insertion - MIP																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)				
Prior Years				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2925 / CANES Intell								Modification Number / Title: 2 / CANES - Ashore 5G010/5G776 MIP																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: CANES - Ashore 5G010/5G776 MIP																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: CANES - Ashore Technical Insertion - MIP																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)															
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	2 / 0.144	0 / 0.000	2 / 0.144	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.144															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.076	- / -	0 / 0.000	1 / 0.076																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.294	0 / 0.000	3 / 0.294																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 4.381	31 / 4.381																		
Total			- / -	- / -	- / -	2 / 0.144	0 / 0.000	2 / 0.144	- / -	- / -	1 / 0.076	3 / 0.294	31 / 4.381	37 / 4.895																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	3	31	37				
Out	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	34	37				
Method of Implementation (Organic): CANES - Ashore First Articles - MIP - Not Installed												Installation Quantity: 1																		
Footnotes:																														
(7) Ashore procurement quantities are detailed as follows: Technical Training Equipment (TTE) - PY (2), FY18 (1), FY19-FY23 (0); Maritime Operation Center (MOC)(including Aegis Ashore) - FY17-FY18 (0); FY19(3), FY20 (5), FY21 (0). - A MOC is a fully operational system configuration. A TTE configuration is a subset of a MOC configuration. This scale difference accounts for the fluctuation in per unit costs across fiscal years commensurate with the procurement quantities outlined in above note. -TTE has no associated DSA requirements.																														
(8) Production Lead Time is 8 months for First Articles. First Articles are defined as necessary production design drawings, environmental (shock and vibration) qualifications, logistics and training artifacts as well as a certified tested baseline provided to the government for each platform first of its kind. All following articles of the same variant require a Production Lead Time of 5 months for Ashore units and 6 months for afloat units. Total Ashore lead time, including 1 month Admin lead time and 4 months for integration, assembly and testing, is 10 months. Ashore production lead times require one month less than Afloat due to minimized shock and vibration requirements for shore facilities. CANES First Articles are not installed. First Article average unit cost fluctuations are attributable to variances in system configuration requirements among shore sites. A shore training unit (TTE) has fewer users and runs fewer applications than a shore Maritime Operations Center (MOC). MOCs are larger in scale compared to the shore training sites and represent a super set of users, applications and connected systems.																														
(9) FY2019 Contractor and location will be competed.																														

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment										P-1 Line Item Number / Title: 2940 / Gen Purp Elec Test Equip (GPETE)			
ID Code (A=Service Ready, B=Not Service Ready): A										Program Elements for Code B Items: N/A			
Line Item MDAP/MAIS Code: N/A													
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	13,370.529	6.428	6.861	5.985	0.000	5.985	7.759	7.680	7.374	7.522	37.068	13,457.206	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	13,370.529	6.428	6.861	5.985	0.000	5.985	7.759	7.680	7.374	7.522	37.068	13,457.206	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	13,370.529	6.428	6.861	5.985	0.000	5.985	7.759	7.680	7.374	7.522	37.068	13,457.206	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: This program provides for the initial procurement and distribution of General Purpose Electronic Test Equipment (GPETE). GPETE funding is provided to execute a detailed, multi-year sustainment and modernization plan for intermediate and organizational maintenance activities. GPETE is the equipment employed to ensure the accuracy of installation, alignment, and maintenance (preventative and routine) of all navy weapons systems ashore and afloat. The GPETE procured must meet rigid technical requirements, be cost effective and satisfy valid deficiencies in authorized allowance. Within the TMDE program, GPETE is classified under 4 functional groups: Fiber Optics (M6000), Signal Generators (M6001), Oscilloscopes & Meters (M6002), and Passive/Ancillary/Mechanical (M6004). The program also breaks out a fifth cost code (M6003) for non-equipment (i.e. labor) tasks including engineering, procurement and integrated logistics support. The TMDE program procures Commercial-off-the-Shelf (COTS; i.e. non-government manufactured test equipment that is available to the general public) GPETE to address the maintenance requirements across shipboard/shore- based activities and programs. Approximately 80% of the annual test equipment requirements are procured through the DOD Supply System, or MILSTRIP, process. When the program procures through MILSTRIP, DLA or NAVSUP WSS fills the requisition. The remaining 20% of procurements are Simplified Acquisition Purchase (SAP) contracts or purchase card (P-card) buys. SAP and P-card requisitions are utilized only for obsolete test equipment that is no longer available for procurement through MILSTRIP. Any variance in unit costs and quantity across fiscal years is attributable to the diversity and varying complexity of the Commercial-off-the-Shelf GPETE to be procured from year to year to address the maintenance requirements across shipboard/shore- based activities and programs. A portion of the cost growth from FY to FY within the cost codes can be attributed to an average industry cost growth of approximately 2%. Any average unit cost code growth beyond this 2% would be the result of planned procurements of larger quantities of more complex/capable GPETE and/or modernization to more complex/capable GPETE, which tend to be more expensive. The Navy's inventory of GPETE is approaching obsolescence and requires modernization to avoid deterioration in the accuracy of our weapons systems. Many models are no longer in production, so replacement equipment must be purchased from newer model inventory, some of which have a greater unit cost. Failure to maintain accurate test equipment will cause our weapons systems to perform below expectations. The impacts would range from premature mechanical failures due to incorrectly installed mechanical components, to radar and missile operational inaccuracies due to improperly set components. A defined, multi-year modernization plan for test equipment is in place. Not modernizing/procuring test equipment will drastically impact the overall health of the Navy and cause a major break in the Fleet readiness kill chain.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				P-1 Line Item Number / Title: 2940 / Gen Purp Elec Test Equip (GPETE)					
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Gen Purp Elec Test Equip (GPETE)	P-5a			- / 13,370.529	- / 6.428	- / 6.861	- / 5.985	- / -
P-40	Total Gross/Weapon System Cost				- / 13,370.529	- / 6.428	- / 6.861	- / 5.985	- / 0.000
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									

Justification:

The FY 2019 funding request was reduced by \$1.152 million to account for the availability of prior year execution balances.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2940 / Gen Purp Elec Test Equip (GPETE)									Aggregated Items Title: Gen Purp Elec Test Equip (GPETE)						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) M6000 FIBER OPTICS																				
1.1) FIBER OPTICS AND DATA COMM ^(†)	A		12,442.71	192	2.389	6,517.00	35	0.228	6,594.59	37	0.244	6,625.00	32	0.212	-	-	-	6,625.00	32	0.212
<i>Subtotal: 1) M6000 FIBER OPTICS</i>			-	-	2.389	-	-	0.228	-	-	0.244	-	-	0.212	-	-	-	-	0.212	
2) M6001 SIGNAL GENERATORS																				
2.1) SIGNAL GENERATORS & ANALYZERS ^(†)	A		11,564.14	686	7.933	9,547.95	73	0.697	12,400.00	60	0.744	12,461.54	52	0.648	-	-	-	12,461.54	52	0.648
<i>Subtotal: 2) M6001 SIGNAL GENERATORS</i>			-	-	7.933	-	-	0.697	-	-	0.744	-	-	0.648	-	-	-	-	0.648	
3) M6002 OSCILLSCPS, METERS																				
3.1) OSCILLSCPS, METERS&COUNTERS ^(†)	A		4,252.28	4,162	17.698	3,125.37	1,005	3.141	3,383.45	991	3.353	3,382.38	865	2.926	-	-	-	3,382.38	865	2.926
<i>Subtotal: 3) M6002 OSCILLSCPS, METERS</i>			-	-	17.698	-	-	3.141	-	-	3.353	-	-	2.926	-	-	-	-	2.926	
4) M6003 PROC ENGR AND DOCUMENTATION																				
4.1) PROC ENG AND DOCUMENTATION	A		-	-	8.096	-	-	0.743	-	-	0.792	-	-	0.691	-	-	-	-	0.691	
<i>Subtotal: 4) M6003 PROC ENGR AND DOCUMENTATION</i>			-	-	8.096	-	-	0.743	-	-	0.792	-	-	0.691	-	-	-	-	0.691	
5) M6004 PASSIVE ANCILLARY AND MECHANICAL																				
5.1) PASSIVE ANCILLARY AND MECHANICAL ^(†)	A		4,328K	3,081	13,334.413	1,547.80	1,046	1.619	1,674.42	1,032	1.728	1,674.08	901	1.508	-	-	-	1,674.08	901	1.508
<i>Subtotal: 5) M6004 PASSIVE ANCILLARY AND MECHANICAL</i>			-	-	13,334.413	-	-	1.619	-	-	1.728	-	-	1.508	-	-	-	-	1.508	
Total			-	-	13,370.529	-	-	6.428	-	-	6.861	-	-	5.985	-	-	-	-	5.985	

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

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2940 / Gen Purp Elec Test Equip (GPETE)					Aggregated Items: Gen Purp Elec Test Equip (GPETE)				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) M6000 FIBER OPTICS												
1.1) FIBER OPTICS AND DATA COMM		2012	NSWC / CHINA LAKE	WR	SEAL BEACH	Nov 2011	Mar 2012	30	10,000.00	Y		
1.1) FIBER OPTICS AND DATA COMM		2013	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2012	Mar 2013	29	10,000.00	Y		
1.1) FIBER OPTICS AND DATA COMM		2014	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2013	Mar 2014	34	6,882.35	Y		
1.1) FIBER OPTICS AND DATA COMM		2015	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2014	Mar 2015	34	6,561.24	Y		
1.1) FIBER OPTICS AND DATA COMM		2016	NSWC / CHINA LAKE	WR	CHINA LAKE	Feb 2016	Jun 2016	35	7,061.46	Y		
1.1) FIBER OPTICS AND DATA COMM		2017	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2016	Mar 2017	35	6,517.00	Y		
1.1) FIBER OPTICS AND DATA COMM		2018	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2017	Mar 2018	37	6,594.59	Y		
1.1) FIBER OPTICS AND DATA COMM		2019	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2018	Mar 2019	32	6,625.00	Y		
2) M6001 SIGNAL GENERATORS												
2.1) SIGNAL GENERATORS & ANALYZERS		2012	NSWC / CHINA LAKE	WR	SEAL BEACH	Nov 2011	Mar 2012	186	16,000.00	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2013	NSWC / CHINA LAKE	WR	CHINA LAKE	Dec 2012	Apr 2013	171	16,000.00	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2014	NSWC / CHINA LAKE	WR	CHINA LAKE	Dec 2013	Apr 2014	72	10,166.67	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2015	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2014	Mar 2015	71	9,594.16	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2016	NSWC / CHINA LAKE	WR	CHINA LAKE	Feb 2016	Jun 2016	71	10,629.31	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2017	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2016	Mar 2017	73	9,547.95	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2018	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2017	Mar 2018	60	12,400.00	Y		
2.1) SIGNAL GENERATORS & ANALYZERS		2019	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2018	Mar 2019	52	12,461.54	Y		
3) M6002 OSCILLSCPS, METERS												
3.1) OSCILLSCPS, METERS&COUNTERS		2012	NSWC / CHINA LAKE	WR	SEAL BEACH	Nov 2011	Mar 2012	545	4,000.00	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2013	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2012	Mar 2013	501	4,000.00	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2940 / Gen Purp Elec Test Equip (GPETE)					Aggregated Items: Gen Purp Elec Test Equip (GPETE)				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1) OSCILLSCPS, METERS&COUNTERS		2014	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2013	Mar 2014	851	3,235.02	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2015	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2014	Mar 2015	846	3,630.01	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2016	NSWC / CHINA LAKE	WR	CHINA LAKE	Feb 2016	Jun 2016	846	4,021.67	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2017	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2016	Mar 2017	1,005	3,125.37	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2018	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2017	Mar 2018	991	3,383.45	Y		
3.1) OSCILLSCPS, METERS&COUNTERS		2019	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2018	Mar 2019	865	3,382.38	Y		
5) M6004 PASSIVE ANCILLARY AND MECHANICAL												
5.1) PASSIVE ANCILLARY AND MECHANICAL		2014	NSWC / CHINA LAKE	WR	SEAL BEACH	Nov 2013	Mar 2014	1,029	12,955.30	Y		
5.1) PASSIVE ANCILLARY AND MECHANICAL		2015	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2014	Mar 2015	1,026	1,542.83	Y		
5.1) PASSIVE ANCILLARY AND MECHANICAL		2016	NSWC / CHINA LAKE	WR	CHINA LAKE	Feb 2016	Oct 2016	1,026	1,709.29	Y		
5.1) PASSIVE ANCILLARY AND MECHANICAL		2017	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2016	Jul 2017	1,046	1,547.80	Y		
5.1) PASSIVE ANCILLARY AND MECHANICAL		2018	NSWC / CHINA LAKE	WR	CHINA LAKE	Nov 2017	Mar 2018	1,032	1,674.42	Y		
5.1) PASSIVE ANCILLARY AND MECHANICAL		2019	NSWC / CHINA LAKE	WR	** NO PCO **	Nov 2018	Mar 2019	901	1,674.08	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment										P-1 Line Item Number / Title: 2950 / Network Tactical Common Data Link (CDL)			
ID Code (A=Service Ready, B=Not Service Ready): A										Program Elements for Code B Items: 0205604N			
Line Item MDAP/MAIS Code: N/A													
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	0.290	0.000	8.081	5.413	0.000	5.413	5.282	0.000	20.048	20.458	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	0.290	0.000	8.081	5.413	0.000	5.413	5.282	0.000	20.048	20.458	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	0.290	0.000	8.081	5.413	0.000	5.413	5.282	0.000	20.048	20.458	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: Communications Data Link System Technical Refresh (CDLS TR) provides fielding link management computer upgrades to meet Fleet Windows 10 Operating System IA requirements, a second 360 degree data link, as well as the inclusion of digital distribution of Intelligence Surveillance and Reconnaissance (ISR), Full Motion Video (FMV), and Anti-Submarine Warfare (ASW) data in both Cypher Text (CT) and Plain Text (PT) to Automated Digital Network System (ADNS) for shipboard dissemination to support Anti-Access/Area Denial (A2AD). CDLS TR supports various Common Data Link (CDL) air platforms including MH-60R, MQ-4 Triton, MQ-8B/C Fire Scout, P-3, P-8, and MQ-25 Stingray, to include command and control of the aircraft during flight operations. The CDLS TR upgrade includes a Flight Deck Checkout test link between aircraft on the deck through CDLS to end-user prior to flight operations to ensure end-to-end connectivity of organic assets prior to missions.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2950 / Network Tactical Common Data Link (CDL)					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0205604N				Other Related Program Elements: N/A		
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Network Tactical Common Data Link (CDL)				- / 0.290	- / -	- / -	- / -	- / -
P-3a	1 / CDLS Tech Refresh (TBD)				- / 0.000	- / 0.000	- / 8.081	- / 5.413	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 0.290	- / 0.000	- / 8.081	- / 5.413	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-40a	Network Tactical Common Data Link (CDL)				- / -	- / -	- / -	- / -	- / -
P-3a	1 / CDLS Tech Refresh (TBD)				- / 5.282	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 5.282	- / 0.000	- / 20.048	- / 20.458	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

FY19 Funding supports procurement and installation of 3 Communication Data Link System (CDLS) Technical Refresh (TR) systems for CVN platforms. Due to increased fleet Common Data Link (CDL) operations and obsolescence issues, a technical refresh is required to extend the life of the system beyond its intended design. CDLS TR addresses whole system reliability, sub-component obsolescence, and emerging Anti-Access/Area Denial (A2AD) Fleet requirements that are significantly degrading Fleet readiness, including Operational Availability (Ao), and system supportability. CDLS TR also provides IA/Cyber security upgrades to Windows 10 OS.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy															Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10						P-1 Line Item Number / Title: 2950 / Network Tactical Common Data Link (CDL)									Aggregated Items Title: Network Tactical Common Data Link (CDL)					
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) Network Tactical Common Data Link (CDL)																				
1) LINK-16 Antennas	A		145,000.00	2	0.290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 1) Network Tactical Common Data Link (CDL)</i>			-	-	0.290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	0.290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2950 / Network Tactical Common Data Link (CDL)						Modification Number / Title: 1 / CDLS Tech Refresh									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total						
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-						
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	8.081	5.413	0.000	5.413	5.282	0.000	0.000	0.000	0.000	18.776						
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	8.081	5.413	0.000	5.413	5.282	0.000	0.000	0.000	0.000	18.776						
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Total Obligation Authority (\$ in Millions)	0.000	0.000	8.081	5.413	0.000	5.413	5.282	0.000	0.000	0.000	0.000	18.776						
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-						
Description: Communications Data Link System Technical Refresh (CDLS TR) provides fielding link management computer upgrades to meet Fleet Windows 10 Operating System IA requirements, a second 360 degree data link, as well as the inclusion of digital distribution of Intelligence Surveillance and Reconnaissance (ISR), Full Motion Video (FMV), and Anti-Submarine Warfare (ASW) data in both Cypher Text (CT) and Plain Text (PT) to Automated Digital Network System (ADNS) for shipboard dissemination to support Anti-Access/Area Denial (A2AD). CDLS TR supports various Common Data Link (CDL) air platforms including MH-60R, MQ-4 Triton, MQ-8B/C Fire Scout, P-3, P-8, and MQ-25 Stingray, to include command and control of the aircraft during flight operations. The CDLS TR upgrade includes a Flight Deck Checkout test link between aircraft on the deck through CDLS to end-user prior to flight operations to ensure end-to-end connectivity of organic assets prior to missions.																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2950 / Network Tactical Common Data Link (CDL)						Modification Number / Title: 1 / CDLS Tech Refresh				
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:				
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CDLS Tech Refresh													
A Kits													
Recurring													
1.1.1) CDLS TR Procurement - NonOrganic		- / -	- / -	4 / 5.114	3 / 3.836	- / -	3 / 3.836	3 / 3.836	- / -	- / -	- / -	- / -	10 / 12.786
Subtotal: Recurring		- / 0.000	- / -	- / 5.114	- / 3.836	- / -	- / 3.836	- / 3.836	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: CDLS Tech Refresh		- / -	- / -	4 / 5.114	3 / 3.836	- / -	3 / 3.836	3 / 3.836	- / -	- / -	- / -	- / -	10 / 12.786
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / 5.114	- / 3.836	- / -	- / 3.836	- / 3.836	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)													
2.1) CDLS TR DSA ⁽¹⁾		- / -	- / -	- / 0.280	- / 0.030	- / -	- / 0.030	- / 0.015	- / -	- / -	- / -	- / -	- / 0.325
2.2) CDLS TR Production Support		- / -	- / -	- / 0.287	- / 0.099	- / -	- / 0.099	- / 0.004	- / -	- / -	- / -	- / -	- / 0.390
Subtotal: Support		- / 0.000	- / -	- / 0.567	- / 0.129	- / -	- / 0.129	- / 0.019	- / -	- / -	- / -	- / -	- / 0.000
Installation													
Modification Item 1 of 1: CDLS Tech Refresh		- / 0.000	- / 0.000	- / 2.400	- / 1.448	- / 0.000	- / 1.448	- / 1.427	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.275
Subtotal: Installation		- / 0.000	- / -	- / 2.400	- / 1.448	- / -	- / 1.448	- / 1.427	- / -	- / -	- / -	- / -	- / 5.275
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	8.081	5.413	0.000	5.413	5.282	0.000	0.000	0.000	0.000	18.776

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10								P-1 Line Item Number / Title: 2950 / Network Tactical Common Data Link (CDL)							Modification Number / Title: 1 / CDLS Tech Refresh															
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:																						
Modification Item 1 of 1: CDLS Tech Refresh																														
Manufacturer Information																														
Manufacturer Name: CUBIC								Manufacturer Location: California																						
Administrative Leadtime (<i>in Months</i>): 3								Production Leadtime (<i>in Months</i>): 3																						
Dates	FY 2017		FY 2018		FY 2019				FY 2020		FY 2021		FY 2022		FY 2023															
Contract Dates			Jan 2018		Jan 2019																									
Delivery Dates			Apr 2018		Apr 2019																									
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: CDLS TR Procurement																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	4 / 2,400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 2,400									
FY 2019	- / -	- / -	- / -	- / -	3 / 1,448	0 / 0.000	3 / 1,448	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1,448									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1,427	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1,427									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete	- / -	- / -	- / -	- / -	4 / 2,400	3 / 1,448	0 / 0.000	3 / 1,448	3 / 1,427	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 5,275									
Total	- / -	- / -	- / -	4 / 2,400	3 / 1,448	0 / 0.000	3 / 1,448	3 / 1,427	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 5,275									
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	1	2	-	-	-	-	-	-	-	-	10					
Out	-	-	-	-	-	-	-	-	2	2	-	-	1	2	-	-	1	2	-	-	-	-	-	-	10					

Footnotes:

(1) Production and DSA costs were reduced as the program plans to leverage top side studies and ship installation drawings (SDIs) created for FY18 for similarly configured CVN platforms. The higher FY18 installation cost is attributed to first of class install for CDLS TR; FY19 and out cost reflect anticipated learning curve going forward.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					P-1 Line Item Number / Title: 2960 / Integ Combat System Test Facility								
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	35.546	8.376	5.019	6.251	0.000	6.251	6.167	5.981	6.135	6.276	-	79.751	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	35.546	8.376	5.019	6.251	0.000	6.251	6.167	5.981	6.135	6.276	-	79.751	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	35.546	8.376	5.019	6.251	0.000	6.251	6.167	5.981	6.135	6.276	-	79.751	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	0.195	0.250	0.150	-	0.150	0.171	0.184	0.162	0.221	Continuing	Continuing	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
The FY 2019 funding request was reduced by \$.033 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.													
This program supports various Navy Land Based Test Sites (LBTS) required to support integration and interoperability testing. Sites include, but are not limited to: Naval Surface Warfare Center (NSWC) Dahlgren, Surface Combat System Center (SCSC) Wallops Island, and NSWC Dam Neck.													
The United States Navy has a requirement to fully test and certify computer programs for maturity, Interoperability and Integration (I&I) prior to delivery to the Fleet. Commander, U.S. Fleet Forces Command (CFFC) provided specific direction to develop a unified modernization process and certify all combat system baselines for integration and interoperability as an integral step in the CNO Optimized Fleet Response Plan (O-FRP). Various Navy facilities, serving as LBTS, conduct the required testing in support of CVN, DDG, CG, LHD, LHA, LPD17 and LSD class ships. These sites also comprise the Navy's Distributed Integration & Interoperability Assessment Capability (DIiac) (supported through the use of JMETC network) alliance, which performs Interoperability Assessment and Systems Engineering Events (SEEs) for deploying Strike Groups.													
These facilities also provide combat system in-service support to respond to emergent fleet problems. This capability tests and certifies new combat system baseline in a lab based environment, which has significantly reduced the cost of corrective action and shifted the burden of problem discovery away from the operator at sea. It also provides support to the acquisition community to conduct interoperability (shift to the left) testing earlier in the acquisition cycle.													
As existing system experience parts obsolescence issues and tech refresh updates, the LBTS must procure and install existing test beds to accurately replicate the Command, Control, Communication, Computer, Combat System and Intelligence (C5I) configuration that are designed for the fleet. In addition, new combat systems architectures are under development for new ship classes such as LCS, CVN 78, DDG 1000, as well as new Open Architecture (OA) variants of legacy suites. Procurement of production representative systems of these OA combat systems being delivered to operational fleet units is critical to ensure that testing and subsequent certification of both current and newly installed combat systems is in accordance with NAVSEAINST 9410.2 Naval Warfare Systems Certification Policy (NWSCP) and the O-FRP Program.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2960 / Integ Combat System Test Facility
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		
The basic procurement outlined herein is directed at expanding various facilities capability to support Interoperability Integration and Stressful Endurance testing. Procurement requirements are directly tied to the interoperability testing schedule and establish independence between test beds allowing for parallel certification efforts. Procurements are required to build the necessary test beds and for laboratory support equipment. This budget procures lab support equipment that various facilities are able to support the new tactical subsystems that use COTS equipment.		
In addition, the basic program provides for equipment/upgrades for the Navy's Distributed Integration & Interoperability Assessment Capability (DIIAC) needed to conduct interoperability assessment testing. The DIIAC consists of 14 land based sites networked to certify computer programs prior to their delivery to the fleet and provides support to the acquisition community to conduct interoperability and integration (shift to the left) testing earlier in the acquisition cycle. Interoperability Assessment and Stressful Endurance testing is required for all deploying strike groups per the Joint Fleet Instruction.		
[P40A / M8400 - SESEF Electronic Equipment]: The Shipboard Electronic Systems Evaluation Facilities (SESEF) are Navy owned and operated test sites. The SESEF Program mission is to provide electromagnetic system tests and evaluations to afloat and shore commands for upgraded systems, to validate system performance following new construction and overhaul/availability, and to provide real-time assessment of material readiness in an operational environment. Also provided are: system modernization and integration, system and equipment component procurement and software (S/W) upgrades for test systems to include for Tactical Control and Navigation (TACAN), Antenna Radiation Pattern systems (ARP), Information Friend or Foe (IFF), Direction Finder (DF)/Radio Direction Finder (RDF), LINK 11/16, Electronic Warfare/ Electronic Attack (EW/EA) and HF/VHF/UHF communication systems including secure voice. SESEFs have been used effectively to conduct TACAN certifications, support AN/SLQ-32 Electronic Warfare (EW) Planned Maintenance System (PMS), Ship Signals Exploitation Equipment (SSEE) and to detect and isolate shipboard system deficiencies leading to maintenance action to increase ship material readiness at the completion of construction, delivery availabilities, during routine ship operations, and prior to deployment.		
[P40A / M8500 - Interoperability Assessment Equipment]: M8500 - INTEROPERABILITY ASSESSMENT EQUIPMENT KNOWN AS DISTRIBUTED INTEGRATION & INTEROPERABILITY ASSESSMENT CAPABILITY (DIIAC) Procures upgrades to support the 14 sites that comprise the Navy's DIIAC sites. Procures hardware that provides the DIIAC Operations Center (DOC) the ability to support monitoring and execution of events providing data collection and distribution. Funds are also allocated for site upgrades to meet current standards and allow scalability for DIIAC requirements to enable the DIIAC to maintain efficiency and product improvement to interface with other Joint communities using Joint Mission Environment Test Community (JMETC) network. Focused on the force-level impact of new systems and platforms under development, the DIIAC supports testing that ensures NAVSEA/PEOs are delivering mature and interoperable warfare systems at the Platform and Strike Group levels, with NAVSEA providing Strike Force Interoperability Certification and Assessments. This is the only such testing of combat systems and C5I configuration items prior to shipboard delivery for operational use.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				P-1 Line Item Number / Title: 2960 / Integ Combat System Test Facility						
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A						
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base			
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-40a	ICSTF Program				- / 35.546	- / 8.376	- / 5.019	- / 6.251	- / -	- / 6.251
P-40	Total Gross/Weapon System Cost				- / 35.546	- / 8.376	- / 5.019	- / 6.251	- / 0.000	- / 6.251

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

Funding supports procurements and installations for the modernization of the eight operational sites across the AORs to support the surface fleet spectrum requirements. FY17 and follow on funding requirements are to maintain the upgrades conducted in FY16 and the addition of the 8th site in Guam.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2960 / Integ Combat System Test Facility									Aggregated Items Title: ICSTF Program						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
1) M8400 - SESEF Electronic Equipment																				
1.1) SESEF Electronic Equipment ⁽¹⁾	A		-	-	23.796	-	-	4.998	-	-	1.376	-	-	3.027	-	-	-	-	3.027	
<i>Subtotal: 1) M8400 - SESEF Electronic Equipment</i>			-	-	23.796	-	-	4.998	-	-	1.376	-	-	3.027	-	-	-	-	3.027	
2) M8500 - Interoperability Assessment Equipment																				
2.1) Interoperability Assessment Equipment	A		-	-	11.750	-	-	3.378	-	-	3.643	-	-	3.224	-	-	-	-	3.224	
<i>Subtotal: 2) M8500 - Interoperability Assessment Equipment</i>			-	-	11.750	-	-	3.378	-	-	3.643	-	-	3.224	-	-	-	-	3.224	
Total			-	-	35.546	-	-	8.376	-	-	5.019	-	-	6.251	-	-	-	-	6.251	

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

Footnotes:

(1) The SESEF program funding increased in FY16 through the FYDP for site upgrades for procurement and installation of Ship's Signals Exploitation Equipment (SSEE) and Electronic Warfare (EW) Radar and EW Threat Simulation equipment. FY16 also funded the 8th SESEF site in Guam to meet PACFLT emergent threats. These efforts will continue over the next several years in order to continue modernization of the eight operational facilities.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					2970 / EMI Control Instrumentation										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	37.137	3.971	4.188	4.183	0.000	4.183	4.273	4.374	4.444	4.548	-	67.118			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	37.137	3.971	4.188	4.183	0.000	4.183	4.273	4.374	4.444	4.548	-	67.118			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	37.137	3.971	4.188	4.183	0.000	4.183	4.273	4.374	4.444	4.548	-	67.118			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY 2019 funding request was reduced by \$.027 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.															
The EMI Control Instrumentation Program is supported by OPNAV N2N6, OPNAV N95, OPNAV N96, OPNAV N97 and OPNAV N98. The EMI Control Instrumentation Program provides Cradle to Grave Systems Engineering for Mission Assurance by implementing Electromagnetic Compatibility (EMC) hardware solutions, Spectrum Management (SM) software solutions, and by procuring specialized test equipment used in the characterization/quantification of EMI problems aboard US Navy platforms. This ensures equipment, systems, and platforms meet their Operational Mission Requirements and goals within their intended operational Electromagnetic (EM) environment.															
MA004 - EMI (HARDWARE) FIXES: Procurement and installation of Electromagnetic Interference (EMI) Hardware Solutions (i.e. Fixes) will achieve Electromagnetic Compatibility (EMC) among and between shipboard electronic/electric systems and/or equipment. This will be accomplished by determining the optimal EMI fix hardware, evaluating the effectiveness of the EMI solution, then procuring and installing the required hardware with full integrated logistic support (ILS) as part of the system hardware (ECP, OA, FC, etc). The fixes may include various types of radio frequency (RF) filters, limiters, blankers, radar absorbing material (RAM) and shielding methods. MA004 - EMI (Hardware) Fixes is supported by OPNAV N95, OPNAV N96, OPNAV N97 and OPNAV N98.															
MA104 - EMI (SOFTWARE) FIXES: Procurement and installation of EMI Software Fixes for platform/strike group/Area of Operation. These specific spectrum procedures (software application capabilities) and frequency management techniques (software modules) will be used to eliminate and reduce EMI when hardware solutions are unacceptable. Funds will also be used to provide engineering support to the enhancement of spectrum software applications through the procurement of models and other capabilities, including ILS for software tools/utilities/applications that correct/mitigate operational EMI. MA104 - EMI (Software) Fixes are supported by OPNAV N95, OPNAV N96, OPNAV N97 and OPNAV N98.															
MA204 - EMI CONTROL INSTRUMENTATION: EMI Control Instrumentation will procure specialized test equipment used in the characterization and quantification of EMI problems aboard US Navy platforms. In addition, instrumentation will be procured for use in identifying the sources of EMI and determining the extent of EMI so that effective corrective measures can be applied. The instrumentation procured will include automated and special EMI test equipment (e.g., for spectrum analysis, mapping field intensities, etc.). EMI Control Instrumentation can include both hardware and software products that will enhance or streamline data collection efforts, including the ability to provide remote access capability. MA204 - EMI CONTROL INSTRUMENTATION are supported by OPNAV N2N6.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2970 / EMI Control Instrumentation					
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	EMI Control Instrumentation				- / 37.137	- / 3.971	- / 4.188	- / 4.183	- / -
P-40	Total Gross/Weapon System Cost				- / 37.137	- / 3.971	- / 4.188	- / 4.183	- / 0.000
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: MA004 (EMI HDW Fixes), Increased from \$2.547 million in FY18 to \$3.267 million in FY19: OPN Funds are used to procure and install (P/I) EMI Fixes on deploying ships and submarines. The number of EMI Fixes procured (MA004 Hardware Fixes) are dependent on the number of ships/submarines in the fleet and when they deploy. Increases in the MA004 Budget (between FY2018 and FY2019), corresponds to the Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress (December 22, 2017) Congressional Research Service (CRS) Report; the Navy's FY2018-FY2022 five-year shipbuilding plan, as assembled from data in the Navy's FY2018 budget-justification documentation reflect the shipbuilding plans by all ship and submarine types/classes, and shows on average 8 additional platforms per year. EMI Hardware fixes vary in cost; based on complexity, and ship/submarine class/types. The increase in cost for MA004 will cover the projected increase in EMI Fix P/I requirements for the new platforms. MA104 (EMI SFW Fixes), Decreased from \$1.091 million in FY18 to \$0.363 million in FY19: MA104 procures and installs SFW Fixes, i.e. the Afloat Electromagnetic Spectrum Operations Program (AESOP). AESOP is transitioning to a new program called Real-Time Spectrum Operations (RTSO). RTSO is currently in development, therefore the AESOP production aspects are being de-scoped (hence MA104 reductions, starting in FY19).									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2970 / EMI Control Instrumentation									Aggregated Items Title: EMI Control Instrumentation						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) MA004 EMI (HARDWARE) FIXES																				
1.1) MA004 EMI (HARDWARE) FIXES - N96	A		-	-	4.931	-	-	0.787	-	-	0.830	-	-	1.067	-	-	-	-	-	1.067
1.2) MA004 EMI (HARDWARE) FIXES - N95	A		-	-	3.426	-	-	0.547	-	-	0.574	-	-	0.734	-	-	-	-	-	0.734
1.3) MA004 EMI (HARDWARE) FIXES - N97	A		-	-	3.556	-	-	0.566	-	-	0.596	-	-	0.760	-	-	-	-	-	0.760
1.4) MA004 EMI (HARDWARE) FIXES N98	A		-	-	4.588	-	-	0.515	-	-	0.547	-	-	0.706	-	-	-	-	-	0.706
<i>Subtotal: 1) MA004 EMI (HARDWARE) FIXES</i>			-	-	16.501	-	-	2.415	-	-	2.547	-	-	3.267	-	-	-	-	-	3.267
2) MA104 EMI (SOFTWARE) FIXES																				
2.1) MA104 EMI (SOFTWARE) FIXES - N95	A		-	-	3.856	-	-	0.234	-	-	0.246	-	-	0.081	-	-	-	-	-	0.081
2.2) MA104 EMI (SOFTWARE) FIXES - N96	A		-	-	5.719	-	-	0.337	-	-	0.355	-	-	0.119	-	-	-	-	-	0.119
2.3) MA104 EMI (SOFTWARE) FIXES - N97	A		-	-	4.110	-	-	0.242	-	-	0.256	-	-	0.084	-	-	-	-	-	0.084
2.4) MA104 EMI (SOFTWARE) FIXES - N98	A		-	-	5.844	-	-	0.221	-	-	0.234	-	-	0.079	-	-	-	-	-	0.079
<i>Subtotal: 2) MA104 EMI (SOFTWARE) FIXES</i>			-	-	19.529	-	-	1.034	-	-	1.091	-	-	0.363	-	-	-	-	-	0.363
3) MA204 EMI CONTROL INSTRUMENTATION																				
3.1) MA204 EMI CONTROL INSTRUMENTATION - N2N6	A		-	-	1.107	-	-	0.522	-	-	0.550	-	-	0.553	-	-	-	-	-	0.553
<i>Subtotal: 3) MA204 EMI CONTROL INSTRUMENTATION</i>			-	-	1.107	-	-	0.522	-	-	0.550	-	-	0.553	-	-	-	-	-	0.553
Total			-	-	37.137	-	-	3.971	-	-	4.188	-	-	4.183	-	-	-	-	-	4.183
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment					2980 / Items less than \$5 Million										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	24,793.425	47.664	105.292	148.350	0.000	148.350	171.540	205.578	162.820	155.744	536.969	26,327.382			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	24,793.425	47.664	105.292	148.350	0.000	148.350	171.540	205.578	162.820	155.744	536.969	26,327.382			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	24,793.425	47.664	105.292	148.350	0.000	148.350	171.540	205.578	162.820	155.744	536.969	26,327.382			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.598	0.627	0.438	-	0.438	0.487	-	-	-	-	2.150			
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
[P40A / DC004 CALIBRATION STANDARDS]: These funds procure Calibration Standards equipment to execute a detailed, multi-year sustainment and modernization plan for intermediate, organizational and depot level maintenance activities. Calibration Standards equipment is employed to ensure the accuracy of test equipment used to install, align, and maintain all Navy weapons systems ashore and afloat. The Navy's inventory of Calibration Standards equipment is approaching obsolescence and requires modernization to avoid deterioration in accuracy and calibration of weapons systems. Many of the original Calibration Standards equipment is no longer in production, so replacement of the equipment must be purchased from newer model inventory, some of which have a greater unit cost. A defined, complex and multi-year modernization plan for Calibration Standards equipment is in place. The unit cost of the replacement Calibration Standards equipment to be procured, range from \$11K (general purpose power meter) to \$350K (vector network analyzer); whereas the unit cost of older standards procured in prior years ranged from \$18K to \$52K. This change in unit cost is attributable to the diversity and varying complexity of Calibration Standards equipment to be procured and their measurement requirements. Increased funding in FY19 is in response to aging, obsolete Calibration Standards equipment within Depot, Intermediate and Organizational maintenance support activities. NAVSEA has calibration equipment in excess of 25 years of typical "Life-Expectancy". Original Equipment Manufacturers (OEM) do not support a majority of the current legacy equipment in inventory. This in return has impacted calibration facilities to support certain fleet workload and often overflowing to other organic labs that have limited support or pushing to outside OEM/Industry support which has driven support costs up, in return impacting Ship/Sub availabilities. Currently there is a 30% obsolescence challenge that severely impacts weapon system readiness ultimately degrading warfighting capability and deploy-ability. Funding in FY19 and beyond has therefore been increased to stabilize the infrastructure in an effort to maintain a healthy support posture.															
[P40A / DC019 RADAR RESTORATION AN/SPS-67 ANTENNA]: Funding in this line establishes an antenna manufacturing capability at Naval Surface Warfare Center (NSWC) Crane needed to provide additional rotatable pool antennas and associated engineering changes for the AN/SPS-67(V)3 to support the restoration of installed fleet antennas. The current number of available antennas is insufficient to support the fleet population. This has led to antennas operating in the field beyond their periodicity, resulting in decreased detection and tracking capability.															
[P40A / DC020 DUAL BAND RADAR (DBR)]: Funding is required to establish the In-Service Engineering Agent (ISEA), Original Equipment Manufacturer (OEM) production services and support for Configuration Management. Funding also implements the DBR Life Cycle Sustainment Plan (LCSP) and infrastructure, Diminishing Manufacturing Sources and Material Shortages (DMSMS) Plan, associated hardware and software obsolescence mod kits, procurement of Engineering Change Proposals (ECPs), associated logistics products and on-board allowance requirements to enable system operation. Production Support is also required to assist with DBR Combat System Integration and Technical Documentation. Additional limitations will be identified during CVN78/DDG1000 Shipboard Activation, Integration and At-Sea Testing. Additionally, as a result of DBR land based testing at the Wallops Island Engineering Test Center (WIETC) limitations were identified in the Dual Band Radar (DBR) performance that directly impacted CVN 78 and DDG 1000 class readiness. These limitations require ECPs to correct the performance areas of the radar for Air Traffic Control and Integrated Combat Systems (e.g., False Clutter Tracks, Short Range Tracking, General Tracking, Slow Air Tracking, Waveform Scheduling, and code stability). The Prime Contractor and Government Technical Team have documented critical radar issues that require correction via ECPs in FY17-FY23. Funding for these ECP efforts increases starting in FY18 due to the engineering and technical complexity of the change proposals needed to satisfy combat system qualification															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2980 / Items less than \$5 Million
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		
requirements. DBR was reviewed by an Independent Review Team (IRT) chartered by the Under Secretary of Defense (Acquisition, Technology and Logistics) to assess specific CVN 78 systems. The IRT recommended that the Navy establish infrastructure and mechanisms to accelerate the acquisition of spares for DBR and develop a repair capability for DBR parts from the Fleet. DBR Special Test Equipment and Infrastructure funding from FY19 - FY23 provides for (1) test equipment and support for a repair depot for assemblies and subassemblies for DBR components, including Common Array Power System (CAPS), and Common Array Cooling System (CACS); (2) resolution of system obsolescence that will degrade system Ao; and, (3) establishment of product support engineering infrastructure. FY19 procures critical equipment needed to build DBR unique Receiver Exciter (REX) test equipment for acceptance testing of spare REX modules required to sustain DBR systems on CVN 78 and the DDG 1000 Class ships. The DBR program support infrastructure will be improved in FY19 through the development of resolution strategies for outstanding obsolescence issues. The additional DBR sustainment and infrastructure efforts will facilitate the transition of material sparing support of DBR to NAVSUP.		
[P40A / DC021 AN/SPS-67(V)5 MARITIME RADAR PROCESSOR (MRP)]: The Maritime Radar Processor (MRP) was developed to improve the detection of small boats/targets by USN ships. Funding in this line will be used to integrate and field small boat detection software improvements to AN/SPS-67(V)5 Surface Search Radar.		
[P40A / DC022 RADAR RESTORATION MATERIAL]: DC022 - Radar Restoration funding in this line procures components to support radar restoration (AN/SPS-48 Arrays and miscellaneous Antenna Sub-Assemblies) and Engineering Change Proposals (ECPs) to address obsolescence and improve supportability.		
[P3A / DC001 - SPS-73 RADAR]: The AN/SPS-73(V) Radar provides navigation and general surface search radar functionality on all U.S. Navy ships. The AN/SPS-73(V)12 is the Program of Record (POR) Automatic Radar Plotting Aid (ARPA) Navigation Radar for the U.S. Navy. Funding will be utilized for engineering changes which will improve surface combatant's ability to engage fast attack craft/fast in shore attack craft (FAC/FIAC) tracking and periscope detection and discrimination, as well as address cybersecurity shortfalls and Commercial-Off-The-Shelf (COTS) obsolescence of the legacy AN/SPS-73 systems. The AN/SPS-73 Next Generation Surface Search Radar (NGSSR) will update the current AN/SPS-73(V)12 and replace the AN/SPS-67(V) and all commercially provided Navigation Radars fielded in the fleet. NGSSR non-recurring engineering (NRE) is required in FY17-FY20 due to the program direction to mitigate FAC/FIAC and cybersecurity shortfalls, and to capitalize on periscope detection and discrimination capabilities. The FY19 funding increase will complete software development; procure and test NGSSR qualification units; and finalize NGSSR hardware configuration. This will also accelerate initial procurement of NGSSR production units as recommended by the CNO as a result of the October 2017 Commander Fleet Forces Comprehensive Review which was directly related to the McCain and Fitzgerald collisions.		
[P3A - 2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)]: The AN/SPS-48G 3-D Air Surveillance Radar is a follow-on to the existing AN/SPS-48E onboard Aircraft Carriers and large-deck Amphibious ships. AN/SPS-48G was initiated in response to Fleet complaints regarding AN/SPS-48E reliability and supportability. Upgrade of the AN/SPS-48E with the AN/SPS-48G remains a high Fleet priority as it will reduce Operation and Support (O&S) costs and improve Operational Availability. Both factors are cited by the Fleet as unsatisfactory for the AN/SPS-48E. The goal is to replace the AN/SPS-48E as rapidly as possible so the Fleet can realize this cost avoidance. Current efforts include the manufacturing of the AN/SPS-48G upgrade kits with associated production support as well as modifications to the AN/SPS-48G brought about by initial Fleet introduction and Fleet operations. Production lead time is 24 months for the initial unit with subsequent units delivered at two month intervals after initial delivery. Equipment delivery for installation is required thirty days prior to FMP availability start in accordance with Navy Modernization Process Management. Engineering Change Order funding is required to address Fleet recommended modifications/requirements and Information Assurance, Obsolescence, and Diminishing Manufacturing Sources (DMS) issues. Engineering Change Proposal funding is required to initiate incorporation of High Diver Detection and Tracking functionality. This capability was designed and incorporated into the AN/SPS-48E after design of the AN/SPS-48G had been initiated. This change needs to be translated into the different hardware and software architectures of the AN/SPS-48G. FY18 is the last year of AN/SPS-48G procurements.		
[P3A - 3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)]: Provides real-time valunumeric wind profiles, convective weather detection/display, and radar refractivity assessments from AN/SPY-1 radar returns. TEP will be an adjunct processor and display, tapping radar data from weather and refractivity data, with users able to access information through Secret Internet Protocol Router (SIPR). Commercial Off The Shelf (COTS) refresh funding in FY18-FY23 is to address cyber security requirements.		
[P3A - 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS]: DC018 AN/SPY-1 RM&A IMPROVEMENTS - These Reliability, Maintainability, and Availability (RM&A) improvements are intended to reduce cascading failures, mitigate obsolescence issues, and improve reliability in support of Anti-Air Warfare (AAW) and Ballistic Missile Defense (BMD) missions while still providing AN/SPY-1 Radar Total Ownership Cost (TOC) reductions. The improvements include, but are not limited to, installation for Sidewall Capacitor Circuit Protection and 10kW Traveling Wave Tube (TWT) Monitoring Circuits Ordnance Alterations (ORDALTS) for AN/SPY-1; B (V), D, D (V), CG and DDGs. Solid State Switch Assemblies (SSSA) will replace legacy switch tube modulator deck via an ORDALT. Multi-Mission Signal Processor (MMSP) is the signal processor for the AN/SPY-1 radar. MMSP Refresh (MMSP-R) cabinets will be procured to provide production representative configurations for land-based testing and training to support AEGIS ships at AEGIS Training and		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment		P-1 Line Item Number / Title: 2980 / Items less than \$5 Million
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 Readiness Center (ATRC) and Surface Combat System Center (SCSC) Wallops Island. Increased funding in FY18 includes the procurement of two MMSP-R cabinets for Virginia sites, procurement of assets and shock qualification testing of SSSA and SPY-1D(V) Final Power Amplifier (FPA) cabinet required by MILSPEC 901-D.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 10: Other Shore Electronic Equipment				2980 / Items less than \$5 Million						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-40a	Items less than \$5 Million	P-5a			- / 24,416.625	- / 14.556	- / 24.698	- / 52.613	- / -	- / 52.613
P-3a	1 / DC001 - SPS-73 RADAR (TBD)				- / 55.499	- / 3.669	- / 4.027	- / 58.414	- / 0.000	- / 58.414
P-3a	2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR) (TBD)				- / 280.571	- / 9.544	- / 39.017	- / 5.648	- / 0.000	- / 5.648
P-3a	3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP) (TBD)				- / 6.102	- / 1.193	- / 1.299	- / 1.342	- / 0.000	- / 1.342
P-3a	4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS (TBD)				- / 34.628	- / 18.702	- / 36.251	- / 30.333	- / 0.000	- / 30.333
P-40	Total Gross/Weapon System Cost				- / 24,793.425	- / 47.664	- / 105.292	- / 148.350	- / 0.000	- / 148.350
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-40a	Items less than \$5 Million	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / DC001 - SPS-73 RADAR (TBD)				- / 102.056	- / 101.653	- / 102.526	- / 103.163	- / 67.366	- / 598.373
P-3a	2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR) (TBD)				- / 8.772	- / 5.545	- / 1.540	- / 0.000	- / 2.750	- / 353.387
P-3a	3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP) (TBD)				- / 1.275	- / 1.349	- / 1.510	- / 1.489	- / 11.111	- / 26.670
P-3a	4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS (TBD)				- / 23.657	- / 25.293	- / 15.250	- / 15.501	- / 373.398	- / 573.013
P-40	Total Gross/Weapon System Cost				- / 171.540	- / 205.578	- / 162.820	- / 155.744	- / 536.969	- / 26,327.382

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The FY 2019 funding request was reduced by \$0.594 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2980 / Items less than \$5 Million									Aggregated Items Title: Items less than \$5 Million						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
1) DC001 SPS-73 RADAR																				
1.1) TECH REFRESH	A		209,565.89	129	27.034	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: 1) DC001 SPS-73 RADAR</i>			-	-	27.034	-	-	-	-	-	-	-	-	-	-	-	-	-		
2) DC004 CALIBRATION STANDARDS																				
2.1) CALIBRATION STANDARDS (1)(t)	A		32,829K	742	24,359.000	23,891.00	64	1.529	24,291.01	189	4.591	24,133.82	411	9.919	-	-	-	24,133.82	411	9.919
<i>Subtotal: 2) DC004 CALIBRATION STANDARDS</i>			-	-	24,359.000	-	-	1.529	-	-	4.591	-	-	9.919	-	-	-	-	9.919	
3) DC019 RADAR RESTORATION AN/SPS-67 ANTENNA																				
3.1) HARDWARE ^(t)	A		493,000.00	5	2,465	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.2) OTHER	A		-	-	1.716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: 3) DC019 RADAR RESTORATION AN/SPS-67 ANTENNA</i>			-	-	4.181	-	-	-	-	-	-	-	-	-	-	-	-	-		
4) DC020 DUAL BAND RADAR (DBR)																				
4.1) DBR PRODUCTION SUPPORT	A		-	-	3.842	-	-	3.054	-	-	2.843	-	-	2.816	-	-	-	-	2.816	
4.2) DBR ENGINEERING CHANGE PROPOSALS (ECPS)	A		-	-	11.430	-	-	9.321	-	-	12.368	-	-	13.398	-	-	-	-	13.398	
4.3) DBR SPECIAL TEST EQUIPMENT AND INFRASTRUCTURE (2)	A		-	-	-	-	-	-	-	-	-	-	-	21.613	-	-	-	-	21.613	
<i>Subtotal: 4) DC020 DUAL BAND RADAR (DBR)</i>			-	-	15.272	-	-	12.375	-	-	15.211	-	-	37.827	-	-	-	-	37.827	
5) DC021 AN/SPS-67(V)5 MARITIME RADAR PROCESSOR (MRP)																				
5.1) AN/SPS-67(V)5 MARITIME RADAR PROCESSOR	A		-	-	2.922	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: 5) DC021 AN/SPS-67(V)5 MARITIME RADAR PROCESSOR (MRP)</i>			-	-	2.922	-	-	-	-	-	-	-	-	-	-	-	-	-		
6) DC012 AN/SPS-74(V) PERISCOPE DETECTION RADAR																				
6.1) PRODUCTION SUPPORT	A		-	-	2.346	-	-	0.652	-	-	0.696	-	-	0.674	-	-	-	-	0.674	
<i>Subtotal: 6) DC012 AN/SPS-74(V) PERISCOPE DETECTION RADAR</i>			-	-	2.346	-	-	0.652	-	-	0.696	-	-	0.674	-	-	-	-	0.674	
7) RED FALCON (OCO)																				

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10					P-1 Line Item Number / Title: 2980 / Items less than \$5 Million									Aggregated Items Title: Items less than \$5 Million						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
7.1) RED FALCON (OCO)	A		-	-	5.870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 7) RED FALCON (OCO)</i>			-	-	5.870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8) DC022 RADAR RESTORATION MATERIAL ⁽³⁾																				
8.1) 48 ARRAYS ^(†)	A		-	-	-	-	-	-	9,827.78	360	3.538	10,011.11	360	3.604	-	-	-	10,011.11	360	3.604
8.2) ANTENNA SUB-ASSEMBLIES	A		-	-	-	-	-	-	-	-	0.242	-	-	0.246	-	-	-	-	-	0.246
8.3) ENGINEERING CHANGE PROPOSALS (ECPs)	A		-	-	-	-	-	-	-	-	0.420	-	-	0.343	-	-	-	-	-	0.343
<i>Subtotal: 8) DC022 RADAR RESTORATION MATERIAL</i>			-	-	0.000	-	-	-	-	-	4.200	-	-	4.193	-	-	-	-	-	4.193
Total			-	-	24,416.625	-	-	14.556	-	-	24.698	-	-	52.613	-	-	-	-	-	52.613

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

(†) indicates the presence of a P-5a

Footnotes:

(1) DC004 - Calibration Standards equipment unit costs and quantities varies due to the diversity and varying complexity of Calibration Standards equipment being procured from year to year; the requested funding addresses calibration and maintenance operational requirements across shipboard/shore-based activities and programs.

(2) DBR Special Test Equipment and Infrastructure funding from FY19 - FY23 provides for (1) test equipment and support for a repair depot for assemblies and subassemblies for DBR components, including Common Array Power System (CAPS), and Common Array Cooling System (CACS); (2) resolution of system obsolescence issues that will prevent a degradation of system Ao; and, (3) establishment of product support engineering infrastructure. FY19 procures critical equipment needed to build DBR unique Receiver Exciter (REX) test equipment for acceptance testing of spare REX modules required to sustain DBR systems on CVN 78 and the DDG 1000 Class ships. The DBR program support infrastructure will be improved in FY19 through the development of resolution strategies for outstanding obsolescence issues. The additional DBR sustainment and infrastructure efforts will facilitate the transition of material sparing support of DBR to NAVSUP.

(3) DC022 - Radar Restoration funding in this line procures components to support radar restoration (AN/SPS-48 Arrays and miscellaneous Antenna Sub-Assemblies) and Engineering Change Proposals (ECPs) to address obsolescence and improve supportability.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million					Aggregated Items: Items less than \$5 Million				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) DC004 CALIBRATION STANDARDS												
2.1) CALIBRATION STANDARDS (1)		2017	NSWC/CHINA LAKE / CHINA LAKE	WR	CHINA LAKE	Feb 2017	Jun 2017	64	23,891.00	Y		
2.1) CALIBRATION STANDARDS (1)		2018	NSWC/CHINA LAKE / CHINA LAKE	WR	CHINA LAKE	Nov 2017	Mar 2018	189	24,291.01	Y		
2.1) CALIBRATION STANDARDS (1)		2019	NSWC/CHINA LAKE / CHINA LAKE	WR	CHINA LAKE	Nov 2018	Mar 2019	411	24,133.82	N		
3) DC019 RADAR RESTORATION AN/SPS-67 ANTENNA												
3.1) HARDWARE		2016	NSWC CRANE / CRANE, IN	WR	NSWC CRANE	Apr 2016	Apr 2018	1	492,000.00	Y		
8) DC022 RADAR RESTORATION MATERIAL												
8.1) 48 ARRAYS		2018	NSWC CRANE / CRANE, IN	Various	NSWC CRANE	Oct 2017	Oct 2018	360	9,827.78	Y		
8.1) 48 ARRAYS		2019	NSWC CRANE / CRANE, IN	Various	NSWC CRANE	Oct 2018	Oct 2019	360	10,011.11	Y		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million						Modification Number / Title: 1 / DC001 - SPS-73 RADAR			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	55.499	3.669	4.027	58.414	0.000	58.414	102.056	101.653	102.526	103.163	67.366	598.373
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	55.499	3.669	4.027	58.414	0.000	58.414	102.056	101.653	102.526	103.163	67.366	598.373
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	55.499	3.669	4.027	58.414	0.000	58.414	102.056	101.653	102.526	103.163	67.366	598.373
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The AN/SPS-73(V) Radar provides navigation and general surface search radar functionality on all U.S. Navy ships. The AN/SPS-73(V)12 is the Program of Record (POR) Automatic Radar Plotting Aid (ARPA) Navigation Radar for the U.S. Navy. Funding will be utilized for engineering changes which will improve surface combatant's ability to engage fast attack craft/fast in shore attack craft (FAC/FIAC) tracking and periscope detection and discrimination, as well as address cybersecurity shortfalls and Commercial-Off-The-Shelf (COTS) obsolescence of the legacy AN/SPS-73 systems. The AN/SPS-73 Next Generation Surface Search Radar (NGSSR) will update the current AN/SPS-73(V)12 and replace the AN/SPS-67(V) and all commercially provided Navigation Radars fielded in the fleet. NGSSR non-recurring engineering (NRE) is required in FY17-FY20 due to the program direction to mitigate FAC/FIAC and cybersecurity shortfalls, and to capitalize on periscope detection and discrimination capabilities. The FY19 funding increase will complete software development; procure and test NGSSR qualification units; and finalize NGSSR hardware configuration. This will also accelerate initial procurement of NGSSR production units as recommended by the CNO as a result of the October 2017 Commander Fleet Forces Comprehensive Review which was directly related to the McCain and Fitzgerald collisions.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million						Modification Number / Title: 1 / DC001 - SPS-73 RADAR				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/SPS-73			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: DC001 - SPS-73 RADAR</i>													
B Kits													
Recurring													
1.1.1) SPS-73 SYSTEMS - NonOrganic	79 / 18.452	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	79 / 18.452
1.1.2) NEXT GENERATION NON RECURRING ENGINEERING - Organic ⁽⁴⁾	- / 5.632	- / 1.701	- / 2.877	- / 9.419	- / -	- / 9.419	- / 2.351	- / -	- / -	- / -	- / -	- / -	- / 21.980
1.1.3) NEXT GENERATION SURFACE SEARCH RADAR - NonOrganic ⁽⁵⁾	- / -	- / -	- / -	40 / 34.200	- / -	40 / 34.200	40 / 35.226	40 / 36.283	40 / 37.371	40 / 38.492	- / -	- / -	200 / 181.572
1.1.4) NEXT GENERATION SURFACE SEARCH RADAR SHORE SITES - NonOrganic	- / -	- / -	- / -	3 / 3.241	- / -	3 / 3.241	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.241
<i>Subtotal: Recurring</i>	- / 24.084	- / 1.701	- / 2.877	- / 46.860	- / -	- / 46.860	- / 37.577	- / 36.283	- / 37.371	- / 38.492	- / 0.000	- / 0.000	- / 225.245
<i>Subtotal: DC001 - SPS-73 RADAR</i>	79 / 24.084	- / 1.701	- / 2.877	43 / 46.860	- / -	43 / 46.860	40 / 37.577	40 / 36.283	40 / 37.371	40 / 38.492	- / -	- / -	282 / 225.245
<i>Subtotal: Procurement, All Modification Items</i>	- / 24.084	- / 1.701	- / 2.877	- / 46.860	- / -	- / 46.860	- / 37.577	- / 36.283	- / 37.371	- / 38.492	- / 0.000	- / 0.000	- / 225.245
Support (All Modification Items)													
2.1) PRODUCTION SUPPORT ⁽⁶⁾	- / -	- / -	- / -	- / 3.202	- / -	- / 3.202	- / 3.319	- / 3.397	- / 3.499	- / 3.604	- / 1.026	- / 18.047	
2.2) MISCELLANEOUS ECP SUPPORT ⁽⁷⁾	- / 2.233	- / 1.315	- / 1.150	- / 2.110	- / -	- / 2.110	- / 6.475	- / 7.078	- / 6.024	- / 5.957	- / 11.894	- / 44.236	
<i>Subtotal: Support</i>	- / 2.233	- / 1.315	- / 1.150	- / 5.312	- / -	- / 5.312	- / 9.794	- / 10.475	- / 9.523	- / 9.561	- / 12.920	- / 62.283	
Installation													
<i>Modification Item 1 of 1: DC001 - SPS-73 RADAR</i>	- / 29.182	- / 0.653	- / 0.000	- / 6.242	- / 0.000	- / 6.242	- / 54.685	- / 54.895	- / 55.632	- / 55.110	- / 54.446	- / 310.845	
<i>Subtotal: Installation</i>	- / 29.182	- / 0.653	- / -	- / 6.242	- / -	- / 6.242	- / 54.685	- / 54.895	- / 55.632	- / 55.110	- / 54.446	- / 310.845	
Total													
Total Cost (Procurement + Support + Installation)	55.499	3.669	4.027	58.414	0.000	58.414	102.056	101.653	102.526	103.163	67.366	598.373	

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million										Modification Number / Title: 1 / DC001 - SPS-73 RADAR																
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: DC001 - SPS-73 RADAR													MDAP/MAIS Code:																	
Manufacturer Information																														
Manufacturer Name: AN/SPS-73 Next Generation Navigation Radar - TBD							Manufacturer Location: TBD																							
Administrative Leadtime (<i>in Months</i>): 0							Production Leadtime (<i>in Months</i>): 12																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates			Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023																							
Delivery Dates			Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024																							
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: SPS-73 SYSTEMS																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)											
Prior Years			78 / 29.182	1 / 0.653	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	79 / 29.835																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			78 / 29.182	1 / 0.653	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	79 / 29.835																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	78	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79						
Out	78	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79						
Method of Implementation: [none specified]:: Installation Name: NEXT GENERATION SURFACE SEARCH RADAR																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)										
Prior Years			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million								Modification Number / Title: 1 / DC001 - SPS-73 RADAR																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC001 - SPS-73 RADAR																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: NEXT GENERATION SURFACE SEARCH RADAR																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019				- / -	- / -	- / -	0 / 5.402	0 / 0.000	0 / 5.402	40 / 47.504	- / -	- / -	- / -	0 / 0.000	40 / 52.906															
FY 2020				- / -	- / -	- / -	0 / 0.840	0 / 0.000	0 / 0.840	0 / 6.057	40 / 48.410	- / -	- / -	0 / 0.000	40 / 55.307															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.630	0 / 5.505	40 / 51.179	- / -	0 / 0.000	40 / 57.314															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.980	0 / 4.173	40 / 48.452	0 / 0.000	40 / 53.605																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.280	0 / 6.658	40 / 54.446	40 / 61.384																	
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				- / -	- / -	- / -	0 / 6.242	0 / 0.000	0 / 6.242	40 / 54.191	40 / 54.895	40 / 55.632	40 / 55.110	40 / 54.446	200 / 280.516															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	15	20	-	5	15	20	-	5	15	20	40	200					
Out	-	-	-	-	-	-	-	-	-	-	-	-	5	15	20	-	5	15	20	-	5	15	20	40	200					
Method of Implementation: [none specified]:: Installation Name: NEXT GENERATION SURFACE SEARCH RADAR SHORE SITES																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.494	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.494									
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
Total				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.494	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.494									

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10												P-1 Line Item Number / Title: 2980 / Items less than \$5 Million											Modification Number / Title: 1 / DC001 - SPS-73 RADAR							
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: DC001 - SPS-73 RADAR</i>												MDAP/MAIS Code:																		
Installation Information												Method of Implementation: [none specified]:: Installation Name: NEXT GENERATION SURFACE SEARCH RADAR SHORE SITES																		
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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					
Out	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	3					

Footnotes:

(4) Non-Recurring Engineering (NRE) funding is required to accelerate updating the aging and obsolete SPS-73 to the Next Generation Surface Search Radar (NGSSR) configuration which will address Cyber and Electro-magnetic Warfare threats that did not exist at the time of the original SPS-73 design. NRE funds will be utilized for government efforts to finalize NGSSR specifications, including design/cost trade-offs to assess different features that could affect cost/schedule such as dual system installations, track fusion, tactical training, AEGIS and SSDS combat system interfaces, and cyber security. The FY19 funding increase will complete software development; procure and test NGSSR qualification units; and finalize NGSSR hardware configuration. Qualification testing includes navigation radar International Maritime Organization (IMO) and Safety Of Life At Sea (SOLAS) compliance, Periscope Detection and Discrimination (PDD) interface, Combat System Interface validation, Surface Search Radar validation, cyber security, shock, Electromagnetic interference (EMI) and environmental.

(5) These funds will accelerate initial procurement of NGSSR production units as directed by the CNO as a result of the October 2017 Commander Fleet Forces Comprehensive Review; this priority requirement is directly related to the McCain and Fitzgerald collisions.

(6) The increase in Production Support in FY19 and out provides support for the significantly increased production of hardware and hardware components and is composed primarily of Warfare Center Activity support, Software Support Activity (SSA), Integrated Logistics Agent (ILA), Acquisition Engineering Agent (AEA), Technical Design Agent (TDA) and Professional Support Services (PSS). Also includes support for cybersecurity compliance and software certification.

(7) Miscellaneous ECP support is required to address hardware and software obsolescence/availability issues which requires research and investigation by the ISEA to locate, test, and provide suitable substitutes to maintain Fleet Navigation Readiness and Safety of Life at Sea (SOLAS). Miscellaneous ECP funding will continue to be required throughout the outyears until sufficient quantities of NGSSR are fielded, reducing the burden of the legacy systems.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million								Modification Number / Title: 2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)	
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	280.571	9.544	39.017	5.648	0.000	5.648	8.772	5.545	1.540	0.000	2.750	353.387
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	280.571	9.544	39.017	5.648	0.000	5.648	8.772	5.545	1.540	0.000	2.750	353.387
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	280.571	9.544	39.017	5.648	0.000	5.648	8.772	5.545	1.540	0.000	2.750	353.387
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The AN/SPS-48G 3-D Air Surveillance Radar is a follow-on to the existing AN/SPS-48E onboard Aircraft Carriers and large-deck Amphibious ships. AN/SPS-48G was initiated in response to Fleet complaints regarding AN/SPS-48E reliability and supportability. Upgrade of the AN/SPS-48E with the AN/SPS-48G remains a high Fleet priority as it will reduce Operation and Support (O&S) costs and improve Operational Availability. Both factors are cited by the Fleet as unsatisfactory for the AN/SPS-48E. The goal is to replace the AN/SPS-48E as rapidly as possible so the Fleet can realize this cost avoidance. Current efforts include the manufacturing of the AN/SPS-48G upgrade kits with associated production support as well as modifications to the AN/SPS-48G brought about by initial Fleet introduction and Fleet operations. Production lead time is 24 months for the initial unit with subsequent units delivered at two month intervals after initial delivery. Equipment delivery for installation is required thirty days prior to FMP availability start in accordance with Navy Modernization Process Management. Engineering Change Order funding is required to address Fleet recommended modifications/requirements and Information Assurance, Obsolescence, and Diminishing Manufacturing Sources (DMS) issues. Engineering Change Proposal funding is required to initiate incorporation of High Diver Detection and Tracking functionality. This capability was designed and incorporated into the AN/SPS-48E after design of the AN/SPS-48G had been initiated. This change needs to be translated into the different hardware and software architectures of the AN/SPS-48G. FY18 is the last year of AN/SPS-48G procurements. Installation funding for advanced planning (AP) and planning yard design services allocation (DSA) is required up to one year prior to the year of installation. DSA funds are used for Ship Installation Drawings (SIDs), Alteration Installation Team (AIT) contracting fees, and shipchecks. The FY17 \$4M reduction to installation has resulted in movement of LHA-6 to outside the FYDP, LPD-23 to FY22 and LPD-22 to FY21.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million										Modification Number / Title: 2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)	
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:				
Models of Systems Affected: AN/SPS-48G			Modification Type: TBD				Related RDT&E PEs:							
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Financial Plan														
Procurement														
<i>Modification Item 1 of 1: DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)</i>														
B Kits														
Recurring														
1.1.1) AN/SPS-48G HARDWARE - FMP - NonOrganic (8)	21 / 131.237	- / -	4 / 25.372	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 156.609	
1.1.2) EQUIPMENT NONRECURRING - Organic	- / 11.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.191	
1.1.3) ENGINEERING CHANGE PROPOSALS - Organic (9)	- / 15.319	- / 2.921	- / 2.837	- / 0.461	- / -	- / 0.461	- / 0.441	- / -	- / -	- / -	- / -	- / -	- / 21.979	
1.1.4) ENGINEERING CHANGE ORDERS - Organic	- / 53.623	- / 1.845	- / 1.871	- / 0.579	- / -	- / 0.579	- / 0.562	- / -	- / -	- / -	- / -	- / -	- / 58.480	
1.1.5) AN/SPS-48G HARDWARE - NON-FMP - NonOrganic	2 / 12.973	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 12.973	
<i>Subtotal: Recurring</i>	- / 224.343	- / 4.766	- / 30.080	- / 1.040	- / -	- / 1.040	- / 1.003	- / -	- / -	- / -	- / -	- / -	- / 261.232	
<i>Subtotal: DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)</i>	23 / 224.343	- / 4.766	4 / 30.080	- / 1.040	- / -	- / 1.040	- / 1.003	- / -	- / -	- / -	- / -	- / -	27 / 261.232	
<i>Subtotal: Procurement, All Modification Items</i>	- / 224.343	- / 4.766	- / 30.080	- / 1.040	- / -	- / 1.040	- / 1.003	- / -	- / -	- / -	- / -	- / -	- / 0.000	
Support (All Modification Items)														
2.1) PRODUCTION SUPPORT (10)	- / 22.441	- / 1.525	- / 1.037	- / 0.384	- / -	- / 0.384	- / 0.342	- / -	- / -	- / -	- / -	- / -	- / 25.729	
<i>Subtotal: Support</i>	- / 22.441	- / 1.525	- / 1.037	- / 0.384	- / -	- / 0.384	- / 0.342	- / -	- / -	- / -	- / -	- / -	- / 0.000	
Installation														
<i>Modification Item 1 of 1: DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)</i>	- / 33.787	- / 3.253	- / 7.900	- / 4.224	- / 0.000	- / 4.224	- / 7.427	- / 5.545	- / 1.540	- / 0.000	- / 2.750	- / 66.426		
<i>Subtotal: Installation</i>	- / 33.787	- / 3.253	- / 7.900	- / 4.224	- / -	- / 4.224	- / 7.427	- / 5.545	- / 1.540	- / -	- / 2.750	- / 66.426		
Total														
Total Cost (Procurement + Support + Installation)	280.571	9.544	39.017	5.648	0.000	5.648	8.772	5.545	1.540	0.000	2.750	353.387		

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million								Modification Number / Title: 2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)																														
Manufacturer Information																														
Manufacturer Name: Exelis								Manufacturer Location: VAN NUYS, CA																						
Administrative Leadtime (<i>in Months</i>): 0								Production Leadtime (<i>in Months</i>): 24																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates		Mar 2018																												
Delivery Dates		Mar 2020																												
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: AN/SPS-48G HARDWARE - FMP																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 29.421	1 / 3.253	4 / 7.900	1 / 4.224	0 / 0.000	1 / 4.224	3 / 5.577	1 / 1.575	- / -	- / -	- / -	- / -	0 / 0.000	21 / 51.950																
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.850	2 / 3.970	1 / 1.540	- / -	- / -	- / -	1 / 2.750	4 / 10.110																
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total	11 / 29.421	1 / 3.253	4 / 7.900	1 / 4.224	0 / 0.000	1 / 4.224	3 / 7.427	3 / 5.545	1 / 1.540	- / -	- / -	- / -	1 / 2.750	25 / 62.060																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	1	1	-	2	1	-	-	-	1	-	1	2	-	-	-	1	-	-	-	-	1	25				
Out	8	-	-	2	1	-	-	-	1	-	-	-	2	-	1	-	2	-	-	2	-	-	-	1	-	1	25			

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million									Modification Number / Title: 2 / DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: DC009 - AN/SPS-48G RADAR OBSOLESCENCE AND AVAILABILITY RECOVERY (ROAR)																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: AN/SPS-48G HARDWARE - NON-FMP																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.366	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.366																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			2 / 4.366	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.366																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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:

(8) Installation funding for advanced planning (AP) and planning yard Design Services Allocation (DSA) is required up to one year prior to the year of installation. DSA funds are used for Ship Installation Drawings (SIDs), Alteration Installation Team (AIT) contracting fees, and shipchecks. Although on the P-3a it may appear that the unit installation cost has increased significantly in FY17, and from FY18 to FY19, this is misleading due to the combination of installation, AP, and DSA costs into one single figure. Additionally, installations costs vary by ship class. Specifically, in FY17, there is one installation at a cost of \$1.412M, plus \$0.511M in DSA costs and \$1.33M in AP costs. In FY18, there are four installations with a combined cost of \$5.4M (\$1.350M average), plus \$0.6M in AP costs and \$1.9M in DSA costs. In FY19, there is one installation with a cost of \$1.45M, plus \$1.95M in AP costs and \$0.82M in DSA costs.

(9) Engineering Change Proposal funding is primarily to incorporate High Diver Detection and Tracking functionality. This capability was designed and incorporated into the AN/SPS-48E after design of the AN/SPS-48G had been initiated. This change now needs to be translated into the different hardware and software architectures of the AN/SPS-48G.

(10) Production Support provides for Government oversight of production, Government and Original Equipment Manufacturer (OEM) support of production related software and hardware problems, and engineering as well as Integrated Logistics Support (ILS) efforts in support of production and fielding.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million						Modification Number / Title: 3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	6.102	1.193	1.299	1.342	0.000	1.342	1.275	1.349	1.510	1.489	11.111	26.670
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	6.102	1.193	1.299	1.342	0.000	1.342	1.275	1.349	1.510	1.489	11.111	26.670
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	6.102	1.193	1.299	1.342	0.000	1.342	1.275	1.349	1.510	1.489	11.111	26.670
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Provides real-time valunumeric wind profiles, convective weather detection/display, and radar refractivity assessments from AN/SPY-1 radar returns. TEP will be an adjunct processor and display, tapping radar data from weather and refractivity data, with users able to access information through Secret Internet Protocol Router (SIPR). Commercial Off The Shelf (COTS) refresh funding in FY18-FY23 is to address cyber security requirements.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million						Modification Number / Title: 3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: TACTICAL ENVIRONMENTAL PROCESSOR (TEP)			Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)</i>												
B Kits												
Recurring												
1.1.1) DDG HARDWARE - FMP - NonOrganic ⁽¹¹⁾	4 / 1.282	2 / 0.518	2 / 0.556	3 / 0.725	- / -	3 / 0.725	2 / 0.533	2 / 0.551	3 / 0.750	3 / 0.750	15 / 5.076	36 / 10.741
1.1.2) DDG COTS REFRESH - Organic ⁽¹²⁾	- / -	- / 0.100	- / 0.100	- / -	- / -	- / -	- / -	- / 0.106	- / 0.108	- / -	- / 0.438	- / 0.852
1.1.3) TEP SHORE SITES HARDWARE - NonOrganic	3 / 0.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.499
<i>Subtotal: Recurring</i>	- / 1.781	- / 0.618	- / 0.656	- / 0.725	- / -	- / 0.725	- / 0.533	- / 0.657	- / 0.858	- / 0.750	- / 5.514	- / 12.092
<i>Subtotal: DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)</i>	7 / 1.781	2 / 0.618	2 / 0.656	3 / 0.725	- / -	3 / 0.725	2 / 0.533	2 / 0.657	3 / 0.858	3 / 0.750	15 / 5.514	39 / 12.092
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.781	- / 0.618	- / 0.656	- / 0.725	- / -	- / 0.725	- / 0.533	- / 0.657	- / 0.858	- / 0.750	- / 5.514	- / 12.092
Support (All Modification Items)												
2.1) PRODUCTION SUPPORT ⁽¹³⁾	- / 3.837	- / 0.438	- / 0.442	- / 0.392	- / -	- / 0.392	- / 0.425	- / 0.437	- / 0.370	- / 0.385	- / 2.404	- / 9.130
<i>Subtotal: Support</i>	- / 3.837	- / 0.438	- / 0.442	- / 0.392	- / -	- / 0.392	- / 0.425	- / 0.437	- / 0.370	- / 0.385	- / 2.404	- / 9.130
Installation												
<i>Modification Item 1 of 1: DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)</i>	- / 0.484	- / 0.137	- / 0.201	- / 0.225	- / 0.000	- / 0.225	- / 0.317	- / 0.255	- / 0.282	- / 0.354	- / 3.193	- / 5.448
<i>Subtotal: Installation</i>	- / 0.484	- / 0.137	- / 0.201	- / 0.225	- / -	- / 0.225	- / 0.317	- / 0.255	- / 0.282	- / 0.354	- / 3.193	- / 5.448
Total												
Total Cost (Procurement + Support + Installation)	6.102	1.193	1.299	1.342	0.000	1.342	1.275	1.349	1.510	1.489	11.111	26.670

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million										Modification Number / Title: 3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)																																	
Manufacturer Information																																	
Manufacturer Name: BASIC COMMERCE AND INDUSTRIES, INC							Manufacturer Location: MOORESTOWN, NJ																										
Administrative Leadtime (<i>in Months</i>): 0							Production Leadtime (<i>in Months</i>): 11																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Sep 2017		Feb 2018		Dec 2018		Dec 2019		Dec 2020		Dec 2021		Dec 2022																				
Delivery Dates	Aug 2018		Jan 2019		Nov 2019		Nov 2020		Nov 2021		Nov 2022		Nov 2023																				
Installation Information																																	
Method of Implementation: AIT:: Installation Name: DDG HARDWARE - FMP																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.339	1 / 0.102	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.441																	
FY 2017			- / -	0 / 0.035	2 / 0.164	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.199																	
FY 2018			- / -	- / -	0 / 0.037	2 / 0.165	0 / 0.000	2 / 0.165	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.202																	
FY 2019			- / -	- / -	- / -	0 / 0.060	0 / 0.000	0 / 0.060	3 / 0.275	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.335																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.042	2 / 0.212	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.254																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.043	2 / 0.220	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.263																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.336																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.080	3 / 0.304																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 2.889	15 / 2.889																	
Total			3 / 0.339	1 / 0.137	2 / 0.201	2 / 0.225	0 / 0.000	2 / 0.225	3 / 0.317	2 / 0.255	2 / 0.282	2 / 0.354	18 / 3.193	36 / 5.303																			
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot											
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
In	3	-	-	1	-	-	-	2	-	2	-	-	2	-	1	-	2	-	-	-	1	1	-	1	1	18	36						
Out	3	-	-	-	-	-	-	1	-	-	2	-	-	1	1	-	-	2	-	-	-	2	-	-	1	22	36						

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million									Modification Number / Title: 3 / DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: DC015 - TACTICAL ENVIRONMENTAL PROCESSOR (TEP)																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: TEP SHORE SITES HARDWARE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.145																
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total				3 / 0.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.145																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						
Out	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3						

Footnotes:

- (11) The change in TEP unit costs and quantity since PB18 for FY18-19 is due to lower costs based on actual contract pricing. Due to the lower actual contract pricing, the program plans to procure three units at a unit cost of \$241.7K.
- (12) COTS Refresh funding includes replacement of Commercial Off-The-Shelf (COTS) components such as processors, displays, computer operating systems, commercially available software and also addresses emerging cyber security requirements.
- (13) Production support includes engineering services, Integrated Logistics Support (ILS) documentation updates, ORDALT instructions, engineering change proposals, and Diminishing Manufacturing Sources and Material Shortages (DMSMS) analysis.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million					Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	34.628	18.702	36.251	30.333	0.000	30.333	23.657	25.293	15.250	15.501	373.398	573.013
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	34.628	18.702	36.251	30.333	0.000	30.333	23.657	25.293	15.250	15.501	373.398	573.013
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	34.628	18.702	36.251	30.333	0.000	30.333	23.657	25.293	15.250	15.501	373.398	573.013
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

DC018 AN/SPY-1 RM&A IMPROVEMENTS - These Reliability, Maintainability, and Availability (RM&A) improvements are intended to reduce cascading failures, mitigate obsolescence issues, and improve reliability in support of Anti-Air Warfare (AAW) and Ballistic Missile Defense (BMD) missions while still providing AN/SPY-1 Radar Total Ownership Cost (TOC) reductions. The improvements include, but are not limited to, installation for Sidewall Capacitor Circuit Protection and 10kW Traveling Wave Tube (TWT) Monitoring Circuits Ordnance Alterations (ORDALTS) for AN/SPY-1; B (V), D, D (V), CG and DDGs. Solid State Switch Assemblies (SSSA) will replace legacy switch tube modulator deck via an ORDALT. Multi-Mission Signal Processor (MMSP) is the signal processor for the AN/SPY-1 radar. MMSP Refresh (MMSP-R) cabinets will be procured to provide production representative configurations for land-based testing and training to support AEGIS ships at AEGIS Training and Readiness Center (ATRC) and Surface Combat System Center (SCSC) Wallops Island. Increased funding in FY18 includes the procurement of two MMSP-R cabinets for Virginia sites, procurement of assets and shock qualification testing of SSSA and SPY-1D(V) Final Power Amplifier (FPA) cabinet required by MILSPEC 901-D.

Since PB18, procurement and installation of SSSA for DDG ships, shore sites and spares have been adjusted to align with changes to DDG Modernization availability periods in FY19-22.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million										Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/SPY-1 RM&A IMPROVEMENTS			Modification Type: TBD						Related RDT&E PEs: 0604501N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: DC018 - AN/SPY-1 RM&A IMPROVEMENTS													
B Kits													
Recurring													
1.1.1) SIDEWALL AND 10KW TWT DDG HARDWARE - NonOrganic ⁽¹⁴⁾	45 / 5.231	9 / 1.505	4 / 1.100	4 / 1.122	- / -	4 / 1.122	- / -	- / -	- / -	- / -	- / -	- / -	62 / 8.958
1.1.2) PACK UP KITS - Organic	3 / 4.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 4.125
1.1.3) SIDEWALL AND 10KW TWT CG HARDWARE - NonOrganic ⁽¹⁵⁾	10 / 2.621	6 / 1.121	- / -	2 / 0.688	- / -	2 / 0.688	4 / 0.713	- / -	2 / 0.374	- / -	- / -	- / -	24 / 5.517
1.1.4) SIDEWALL AND 10KW TWT SHORE SITE HARDWARE - NonOrganic	8 / 1.172	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.172
1.1.5) SOLID STATE SWITCH ASSEMBLY DDG HARDWARE - NonOrganic	2 / 9.651	1 / 5.993	3 / 13.052	2 / 8.476	- / -	2 / 8.476	3 / 13.301	4 / 17.827	2 / 9.307	2 / 9.373	54 / 261.007	73 / 347.987	
1.1.6) SOLID STATE SWITCH ASSEMBLY SHORE SITE HARDWARE - NonOrganic ⁽¹⁶⁾	1 / 4.108	1 / 4.108	- / -	3 / 12.743	- / -	3 / 12.743	- / -	- / -	- / -	- / -	- / -	- / -	5 / 20.959
1.1.7) SOLID STATE SWITCH ASSEMBLY SPARES - Organic ⁽¹⁷⁾	- / -	9 / 4.621	3 / 1.631	- / -	- / -	- / -	6 / 3.453	- / -	2 / 1.195	- / -	43 / 29.119	63 / 40.019	
1.1.8) SOLID STATE SWITCH ASSEMBLY FINAL POWER AMPLIFIER ENV/QUAL - Organic ⁽¹⁸⁾	- / -	- / -	1 / 3.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.874
1.1.9) MMSP-R SHORE SITE HARDWARE - NonOrganic ⁽¹⁹⁾	- / -	- / -	2 / 13.695	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 13.695
Subtotal: Recurring	- / 26.908	- / 17.348	- / 33.352	- / 23.029	- / -	- / 23.029	- / 17.467	- / 17.827	- / 10.876	- / 9.373	- / 290.126	- / 446.306	
Subtotal: DC018 - AN/SPY-1 RM&A IMPROVEMENTS	69 / 26.908	26 / 17.348	13 / 33.352	11 / 23.029	- / -	11 / 23.029	13 / 17.467	4 / 17.827	6 / 10.876	2 / 9.373	97 / 290.126	241 / 446.306	
Subtotal: Procurement, All Modification Items	- / 26.908	- / 17.348	- / 33.352	- / 23.029	- / -	- / 23.029	- / 17.467	- / 17.827	- / 10.876	- / 9.373	- / 290.126	- / 446.306	
Support (All Modification Items)													
2.1) PRODUCTION SUPPORT ⁽²⁰⁾	- / 3.891	- / 1.354	- / 1.226	- / 0.823	- / -	- / 0.823	- / 0.998	- / 1.180	- / 0.878	- / 1.176	- / 10.388	- / 21.914	
Subtotal: Support	- / 3.891	- / 1.354	- / 1.226	- / 0.823	- / -	- / 0.823	- / 0.998	- / 1.180	- / 0.878	- / 1.176	- / 10.388	- / 21.914	
Installation													
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS	- / 3.829	- / 0.000	- / 1.673	- / 6.481	- / 0.000	- / 6.481	- / 5.192	- / 6.286	- / 3.496	- / 4.952	- / 72.884	- / 104.793	
Subtotal: Installation	- / 3.829	- / -	- / 1.673	- / 6.481	- / -	- / 6.481	- / 5.192	- / 6.286	- / 3.496	- / 4.952	- / 72.884	- / 104.793	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million						Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS			
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:							
Models of Systems Affected: AN/SPY-1 RM&A IMPROVEMENTS			Modification Type: TBD					Related RDT&E PEs: 0604501N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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)	34.628	18.702	36.251	30.333	0.000	30.333	23.657	25.293	15.250	15.501	373.398	573.013

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10			P-1 Line Item Number / Title: 2980 / Items less than \$5 Million					Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS												
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:												
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS																				
Manufacturer Information																				
Manufacturer Name: SOLID STATE SWITCH ASSEMBLY (SSSA) - RAYTHEON					Manufacturer Location: Andover, MA															
Administrative Leadtime (in Months): 0					Production Leadtime (in Months): 18															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	Jun 2017	Jun 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023													
Delivery Dates	Dec 2018	Dec 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024													
Manufacturer Name: SIDEWALL AND 10KW TWT ORDALTs - RAYTHEON					Manufacturer Location: Chesapeake, VA															
Administrative Leadtime (in Months): 0					Production Leadtime (in Months): 12															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	May 2017	Jun 2018	Mar 2019	Mar 2020		Mar 2022														
Delivery Dates	May 2018	Jun 2019	Mar 2020	Mar 2021		Mar 2023														
Manufacturer Name: MMSP-R DIGITAL CABINETS - LOCKHEED MARTIN					Manufacturer Location: Moorestown, NJ															
Administrative Leadtime (in Months): 0					Production Leadtime (in Months): 12															
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates		May 2018																		
Delivery Dates		May 2019																		
Installation Information																				
Method of Implementation: AIT:: Installation Name: SIDEWALL AND 10KW TWT DDG HARDWARE																				
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)								
Prior Years	43 / 2.726	- / -	2 / 0.369	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	45 / 3.095								
FY 2017	- / -	- / -	1 / 0.183	8 / 0.792	0 / 0.000	8 / 0.792	- / -	- / -	- / -	- / -	0 / 0.000	9 / 0.975								
FY 2018	- / -	- / -	- / -	4 / 0.385	0 / 0.000	4 / 0.385	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.385								
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.482	- / -	- / -	0 / 0.000	4 / 0.482								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -								
Total	43 / 2.726	- / -	3 / 0.552	12 / 1.177	0 / 0.000	12 / 1.177	4 / 0.482	- / -	- / -	- / -	0 / 0.000	62 / 4.937								

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10												P-1 Line Item Number / Title: 2980 / Items less than \$5 Million										Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS								
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: SIDEWALL AND 10KW TWT DDG HARDWARE																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	43	-	-	-	-	-	-	3	-	-	8	4	-	-	2	2	-	-	-	-	-	-	-	-	62					
Out	43	-	-	-	-	-	-	3	-	-	8	4	-	-	2	2	-	-	-	-	-	-	-	-	62					
Method of Implementation: AIT:: Installation Name: SIDEWALL AND 10KW TWT CG HARDWARE																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)							
Prior Years	10 / 1.029		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		0 / 0.000	10 / 1.029						
FY 2017	- / -		- / -		- / -		6 / 0.462		0 / 0.000		6 / 0.462		- / -		- / -		- / -		- / -		- / -		0 / 0.000		6 / 0.462					
FY 2018	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2019	- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 0.157		- / -		- / -		- / -		0 / 0.000		2 / 0.157					
FY 2020	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		4 / 0.323		- / -		- / -		0 / 0.000		4 / 0.323					
FY 2021	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2022	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		2 / 0.216		0 / 0.000	2 / 0.216				
FY 2023	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total	10 / 1.029		- / -		- / -		6 / 0.462		0 / 0.000		6 / 0.462		2 / 0.157		4 / 0.323		- / -		2 / 0.216		0 / 0.000		24 / 2.187							
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023					
	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	-	-	-	-	-	-	-	6	-	-	-	-	-	-	2	-	-	-	4	-	-	-	-	2	-	24			
Out	10	-	-	-	-	-	-	-	-	-	-	-	2	-	-	4	-	-	-	2	-	-	-	-	2	-	24			

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million								Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS																														
Installation Information																														
Method of Implementation: AIT:: Installation Name: SIDEWALL AND 10KW TWT SHORE SITE HARDWARE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.074																
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total				8 / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 0.074																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						
Method of Implementation: [none specified]:: Installation Name: SOLID STATE SWITCH ASSEMBLY DDG HARDWARE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.169	0 / 0.000	2 / 2.169	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.169															
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.099	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.099														
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.259	1 / 1.142	- / -	- / -	- / -	0 / 0.000	3 / 3.401														
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.284	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.284														
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.496	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.496														
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4.736	- / -	- / -	- / -	0 / 0.000	4 / 4.736														
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.368	- / -	- / -	2 / 2.368															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.413	- / -	2 / 2.413															

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10				P-1 Line Item Number / Title: 2980 / Items less than \$5 Million								Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: SOLID STATE SWITCH ASSEMBLY DDG HARDWARE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 68.103	54 / 68.103																
Total				- / -	- / -	- / -	2 / 2.169	0 / 0.000	2 / 2.169	3 / 3.358	3 / 3.426	3 / 3.496	4 / 4.736	58 / 72.884	73 / 90.069															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	2	-	-	2	-	1	-	-	2	2	58	73		
Out	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	2	1	-	2	-	1	-	1	-	2	62	73		
Method of Implementation: [none specified]:: Installation Name: SOLID STATE SWITCH ASSEMBLY SHORE SITE HARDWARE																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.121	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.121														
FY 2017				- / -	- / -	- / -	1 / 1.173	0 / 0.000	1 / 1.173	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.173														
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 3.732														
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -												
Total				- / -	- / -	1 / 1.121	1 / 1.173	0 / 0.000	1 / 1.173	1 / 1.195	2 / 2.537	- / -	- / -	- / -	0 / 0.000	5 / 6.026														

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10												P-1 Line Item Number / Title: 2980 / Items less than \$5 Million																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS																														
Installation Information																														
Method of Implementation: [none specified]: Installation Name: SOLID STATE SWITCH ASSEMBLY SHORE SITE HARDWARE																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	5				
Out	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	1	-	-	1	-	-	-	-	-	5				
Method of Implementation: AIT: Installation Name: MMSP-R SHORE SITE HARDWARE																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total					
				Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)					
Prior Years					- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2017					- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2018					- / -	- / -	- / -	- / -	2 / 1.500	0 / 0.000		2 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.500						
FY 2019					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2020					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2021					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2022					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
FY 2023					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
To Complete					- / -	- / -	- / -	- / -	- / -	- / -		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -					
Total					- / -	- / -	- / -	- / -	2 / 1.500	0 / 0.000		2 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.500							
Installation Schedule																							To Complete	Total						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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				
Method of Implementation (Organic): PACK UP KITS												Installation Quantity: 3																		
Method of Implementation (Organic): SOLID STATE SWITCH ASSEMBLY SPARES												Installation Quantity: 63																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 10	P-1 Line Item Number / Title: 2980 / Items less than \$5 Million	Modification Number / Title: 4 / DC018 - AN/SPY-1 RM&A IMPROVEMENTS
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Modification Item 1 of 1: DC018 - AN/SPY-1 RM&A IMPROVEMENTS		
Installation Information		
Method of Implementation (Organic): SOLID STATE SWITCH ASSEMBLY FINAL POWER AMPLIFIER ENV/QUAL		Installation Quantity: 1
Footnotes:		
(14) Sidewall and 10KW ORDALT kit costs vary depending on ship and radar configurations and the mix of 10KW TWT monitoring circuit and Sidewall Capacitor kits.		
(15) The change in unit costs for CG Sidewall Capacitors (SWCs) and Traveling Wave Tubes (TWTs) since PB18 in FY18 is due to realized lower costs based on actual SSSA contract pricing, which allowed accelerated procurement of six CG SWCs/TWTs from FY18 to FY17.		
(16) The change in the SPY-1 Solid State Switch Assembly (SSSA) unit cost and quantity since PB18 for FY17-19 is due to realized lower costs based on actual contract pricing. The program plans to procure 3 SSSA shore sites in FY19 at a unit cost of \$4.2M based on the actual awarded contract pricing.		
(17) SSSA Spares include initial spares and INCOs which are required for installations.		
(18) Funding is required to conduct Environmental/Qualification testing of the SPY-1 transmitter Final Power Amplifier (FPA), with installed components, as required by MILSPEC 901-D. Effort includes procurement or use of equipment (i.e., Final Power Amplifier (FPA) cabinet, High Voltage Power Supply (HVPS), cabling and ancillary equipment), test plans, engineering and test facility to support shock qualification test. Budget basis includes cost estimates of hardware and test equipment required to conduct the test. The cost for the FPA Environmental Qualification was reduced from PB18 due to the use of some existing equipment, instead of procurement of new hardware that was included in the original estimate. Due to cost avoidance from FPA Qualification, this enabled the procurement of two additional DDG SSSAs in FY18 to align with DDG Modernization schedules/availability periods.		
(19) Funding is required to procure MMSP-R equipment for two Virginia shore sites. MMSP-R contains distinct equipment sets and is not comparable to costs of other items of hardware or components.		
(20) Production support includes installation engineering services, Integrated Logistics Support (ILS) documentation updates, ORDALT instructions, engineering change proposals and Diminishing Manufacturing Sources and Material Shortages (DMSMS) analysis.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications					P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms							
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	22.687	9.671	23.695	45.450	0.000	45.450	66.478	71.213	63.190	65.112	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	22.687	9.671	23.695	45.450	0.000	45.450	66.478	71.213	63.190	65.112	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	22.687	9.671	23.695	45.450	0.000	45.450	66.478	71.213	63.190	65.112	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.004	0.567	0.598	-	0.598	0.668	0.152	0.063	0.386	Continuing	Continuing
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding provides for the procurement and installation of Integrated Waveform (IW) and Mobile User Objective System (MUOS) capable Digital Modular Radio (DMR) systems and IW and MUOS capable upgrade kits. DMR with IW and MUOS capable hardware is a four-channel software defined radio that provides satellite communications, Line of Sight (LOS) and High Frequency (HF), Very High Frequency (VHF) and Ultra High Frequency (UHF) communication capability to surface, submarine, and shore facilities. This variant of the DMR, including upgrade kits, provides hardware that is IW/MUOS compatible, and will allow for IW and MUOS software update when the development and integration is complete.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications				P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-3a	1 / (DN 110) DMR IW and MUOS Capable Systems (TBD)				- / 21.006	- / 9.121	- / 9.456	- / 32.154	- / 0.000	- / 32.154
P-3a	2 / (DN 111) DMR IW and MUOS Upgrade Kits (TBD)				- / 1.681	- / 0.550	- / 14.239	- / 13.296	- / 0.000	- / 13.296
P-40	Total Gross/Weapon System Cost				- / 22.687	- / 9.671	- / 23.695	- / 45.450	- / 0.000	- / 45.450
Exhibits Schedule			FY 2020		FY 2021	FY 2022	FY 2023	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)	
P-3a	1 / (DN 110) DMR IW and MUOS Capable Systems (TBD)				- / 51.927	- / 64.154	- / 58.863	- / 64.876	Continuing	Continuing
P-3a	2 / (DN 111) DMR IW and MUOS Upgrade Kits (TBD)				- / 14.551	- / 7.059	- / 4.327	- / 0.236	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 66.478	- / 71.213	- / 63.190	- / 65.112	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 2019 funding request was reduced by \$4.1 million to account for the availability of prior year execution balances.

The Integrated Waveform (IW) and Mobile User Objective System (MUOS) capability is available for integration into the Digital Modular Radio (DMR) hardware in FY19 now that the software development is complete. FY19 funding provides for the procurement of 24 IW/MUOS capable DMR systems and 34 IW/MUOS capable upgrade kits. This procurement quantity increase is to provide delivery of the IW/MUOS capability to the fleet at the earliest opportunity.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms							Modification Number / Title: 1 / (DN 110) DMR IW and MUOS Capable Systems			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	21.006	9.121	9.456	32.154	0.000	32.154	51.927	64.154	58.863	64.876	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	21.006	9.121	9.456	32.154	0.000	32.154	51.927	64.154	58.863	64.876	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	21.006	9.121	9.456	32.154	0.000	32.154	51.927	64.154	58.863	64.876	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
Integrated Waveform (IW) and Mobile User Objective System (MUOS) capable Digital Modular Radio (DMR) Systems. Quantities between radios and kits may change from year to year as a result of ship availabilities and fleet priority.													
[DMR IW and MUOS System Procurement - Afloat] FY 19 is procuring twenty-four (24 QTY) Afloat units of DMR IW & MUOS capable Systems. The ramp up of procurement quantities is to provide delivery of the IW/MUOS capability to the fleet at the earliest opportunity. Annual Unit Cost variances for procurements and installations are driven by system configurations. There are 3 different afloat configurations of DMR IW & MUOS System (2 surface & 1 subsurface) and 5 different afloat configurations of DMR IW & MUOS Upgrade Kit (3 surface & 2 subsurface). Additionally, shore sites do not have a standard configuration and are unique to each individual shore site. For shore, the budget reflects individual radios vice afloat configurations.													
For the DMR IW & MUOS System, the configuration ranges from 1 - 3 DMR radios and requires a unique set of ancillary equipment dependent upon ship class (racks, power amplifiers & antenna upgrades). For example, a CVN requires 3 DMR radios and would need 4 racks to complete installation. When comparing to a small ship such as LCS, which needs only 1 DMR radio and 2 racks to complete installation. One (1) DMR system will range in cost depending on the configuration and Economic Order Quantity Pricing relevant at time of contract award.													
All ancillary equipment is procured via separate contracts that will be subject to re-compete over the next two years. Components are provided to SPAWAR Systems Center (SSC) Pacific for integration, assembly and test which comprises the 24 month lead time.													
In FY19 DMR program plans to procure 24 DMR IW & MUOS capable Systems (8 subsurface and 16 surface). Q1FY20 installations are budgeted in FY20 vice FY19.													
Twenty four (24) month Production Lead Time (PLT) for DMR System delivery due to varying PLT's from multiple sub-component vendors that are then integrated into the final product. Seven (7) month Administrative Lead Time (ALT) for DMR System procurements allows for the identification and receipt of other customer funds in order to take advantage of favorable quantity pricing.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms							Modification Number / Title: 1 / (DN 110) DMR IW and MUOS Capable Systems			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: AN/USC-61(C)			Modification Type: TBD				Related RDT&E PEs: 0604280N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: (DN 110) DMR IW and MUOS Capable Systems													
B Kits													
Recurring													
1.1.1) DMR IW and MUOS System Procurement - Shore - NonOrganic		6 / 6.615	- / -	4 / 3.040	- / -	- / -	- / -	- / -	- / -	4 / 6.238	4 / 6.425	Continuing	Continuing
1.1.2) DMR IW and MUOS System Procurement - Afloat - NonOrganic ⁽¹⁾		12 / 11.430	3 / 4.611	3 / 3.339	24 / 30.036	- / -	24 / 30.036	27 / 43.914	28 / 47.955	18 / 31.408	21 / 36.671	Continuing	Continuing
Subtotal: Recurring		- / 18.045	- / 4.611	- / 6.379	- / 30.036	- / -	- / 30.036	- / 43.914	- / 47.955	- / 37.646	- / 43.096	Continuing	Continuing
Subtotal: (DN 110) DMR IW and MUOS Capable Systems		18 / 18.045	3 / 4.611	7 / 6.379	24 / 30.036	- / -	24 / 30.036	27 / 43.914	28 / 47.955	22 / 37.646	25 / 43.096	Continuing	Continuing
Subtotal: Procurement, All Modification Items		- / 18.045	- / 4.611	- / 6.379	- / 30.036	- / -	- / 30.036	- / 43.914	- / 47.955	- / 37.646	- / 43.096	Continuing	Continuing
Support (All Modification Items)													
2.1) DMR IW and MUOS System Production Support		- / 2.588	- / 0.278	- / 0.348	- / 1.802	- / -	- / 1.802	- / 2.635	- / 2.877	- / 2.259	- / 2.586	Continuing	Continuing
2.2) DMR IW and MUOS System DSA ⁽²⁾		- / 0.373	- / 0.272	- / 0.434	- / 0.316	- / -	- / 0.316	- / 1.732	- / 3.764	- / 4.619	- / 3.765	Continuing	Continuing
Subtotal: Support		- / 2.961	- / 0.550	- / 0.782	- / 2.118	- / -	- / 2.118	- / 4.367	- / 6.641	- / 6.878	- / 6.351	Continuing	Continuing
Installation													
Modification Item 1 of 1: (DN 110) DMR IW and MUOS Capable Systems		- / 0.000	- / 3.960	- / 2.295	- / 0.000	- / 0.000	- / 0.000	- / 3.646	- / 9.558	- / 14.339	- / 15.429	Continuing	Continuing
Subtotal: Installation		- / 0.000	- / 3.960	- / 2.295	- / -	- / -	- / -	- / 3.646	- / 9.558	- / 14.339	- / 15.429	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		21.006	9.121	9.456	32.154	0.000	32.154	51.927	64.154	58.863	64.876	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms										Modification Number / Title: 1 / (DN 110) DMR IW and MUOS Capable Systems																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: (DN 110) DMR IW and MUOS Capable Systems																																		
Manufacturer Information																																		
Manufacturer Name: General Dynamics							Manufacturer Location: Scottsdale, Arizona																											
Administrative Leadtime (in Months): 7							Production Leadtime (in Months): 24																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Dec 2017		May 2018		May 2019																													
Delivery Dates	Dec 2019		May 2020		May 2021																													
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: DMR IW and MUOS System Procurement - Shore																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 1.800																			
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.000	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.000																			
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																			
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing																			
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing																			
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing																			
Total			- / -	6 / 1.800	- / -	- / -	- / -	- / -	4 / 1.000	- / -	- / -	- / -	- / -	- / -	Continuing																			
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	Cont.	Cont.								
Out	-	-	-	-	4	2	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	Cont.	Cont.								

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms									Modification Number / Title: 1 / (DN 110) DMR IW and MUOS Capable Systems																		
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																		
Modification Item 1 of 1: (DN 110) DMR IW and MUOS Capable Systems																															
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: DMR IW and MUOS System Procurement - Afloat																															
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 2.160	6 / 2.295	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 4.455															
FY 2017				- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.500	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.500															
FY 2018				- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.146	- / -	- / -	- / -	- / -	0 / 0.000	3 / 1.146															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	24 / 9.558	- / -	- / -	- / -	- / -	0 / 0.000	24 / 9.558															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	27 / 14.339	- / -	- / -	- / -	- / -	0 / 0.000	27 / 14.339															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 15.429	Continuing	Continuing															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing															
Total				- / -	6 / 2.160	6 / 2.295	- / -	- / -	- / -	6 / 2.646	24 / 9.558	27 / 14.339	28 / 15.429	Continuing	Continuing																
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	2	1	-	-	13	11	-	-	13	14	-	-	11	17	Cont.	Cont.	
Out	-	-	-	-	3	3	-	-	3	3	-	-	-	3	-	2	1	-	-	15	9	-	-	16	11	-	-	13	Cont.	Cont.	

Footnotes:

(1) Unit Cost variances for procurements are driven by afloat system configurations and ancillary equipment (racks, power amplifiers & antenna upgrades), which is dependent upon ship class. There are 3 different afloat configurations of DMR IW & MUOS System (2 surface & 1 subsurface) where each configurations ranges from 1 - 3 DMR radios and a unique set of ancillary equipment.

(2) DSA cost variance is due to the different DSA requirements for multiple shore, surface, and subsurface configurations.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms					Modification Number / Title: 2 / (DN 111) DMR IW and MUOS Upgrade Kits				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1.681	0.550	14.239	13.296	0.000	13.296	14.551	7.059	4.327	0.236	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1.681	0.550	14.239	13.296	0.000	13.296	14.551	7.059	4.327	0.236	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1.681	0.550	14.239	13.296	0.000	13.296	14.551	7.059	4.327	0.236	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Integrated Waveform (IW) and Mobile User Objective System (MUOS) capable Digital Modular Radio (DMR) Upgrade Kits. Quantities between radios and kits may change from year to year as a result of ship availabilities and fleet priority.

[DMR IW and MUOS Upgrade Kits Procurement] FY19 is procuring thirty-four (34 QTY) Afloat units of DMR IW & MUOS capable Upgrade Kits. These procurements will provide delivery of the IW/MUOS capability to the fleet at the earliest opportunity. Annual Unit Cost variances for procurements and installations are driven by system configurations. There are 3 different afloat configurations of DMR IW & MUOS System (2 surface & 1 subsurface) and 5 different afloat configurations of DMR IW & MUOS Upgrade Kit (3 surface & 2 subsurface). Additionally, shore sites do not have a standard configuration and are unique to each individual shore site. For shore, the budget reflects individual radios vice afloat configurations.

For the DMR IW & MUOS Upgrade Kit, the configuration ranges from 1 - 3 DMR upgrade kits and requires a unique set of ancillary equipment dependent upon ship class (racks, power amplifiers & antenna upgrades). One (1) DMR upgrade kit will range in cost depending on the configuration and Economic Order Quantity Pricing relevant at time of contract award.

All ancillary equipment is procured via separate contracts that will be subject to re-compete over the next two years. Components are provided to SPAWAR Systems Center (SSC) Pacific for integration, assembly and test which comprises the 24 month lead time.

In FY19 DMR program plans to procure 34 DMR IW & MUOS capable Upgrade Kits (18 subsurface and 16 surface).

Twenty four (24) month Production Lead Time (PLT) for DMR Upgrade Kit delivery due to varying PLT's from multiple sub-component vendors that are then integrated into the final product. Seven (7) month Administrative Lead Time (ALT) for DMR Upgrade Kit procurements allows for the identification and receipt of other customer funds in order to take advantage of favorable quantity pricing.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms						Modification Number / Title: 2 / (DN 111) DMR IW and MUOS Upgrade Kits			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: AN/USC-61(C)			Modification Type: TBD					Related RDT&E PEs: 0604280N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: (DN 111) DMR IW and MUOS Upgrade Kits</i>												
B Kits												
Recurring												
1.1.1) DMR IW and MUOS Upgrade Kits Procurement - NonOrganic ⁽³⁾	11 / 1.597	- / -	29 / 11.484	34 / 12.060	- / -	34 / 12.060	26 / 9.026	2 / 0.503	2 / 0.432	- / -	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 1.597	- / -	- / 11.484	- / 12.060	- / -	- / 12.060	- / 9.026	- / 0.503	- / 0.432	- / -	Continuing	Continuing
<i>Subtotal: (DN 111) DMR IW and MUOS Upgrade Kits</i>	11 / 1.597	- / -	29 / 11.484	34 / 12.060	- / -	34 / 12.060	26 / 9.026	2 / 0.503	2 / 0.432	- / -	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.597	- / -	- / 11.484	- / 12.060	- / -	- / 12.060	- / 9.026	- / 0.503	- / 0.432	- / -	Continuing	Continuing
Support (All Modification Items)												
2.1) DMR IW and MUOS Upgrade Kits Production Support	- / 0.084	- / -	- / 0.574	- / 0.572	- / -	- / 0.572	- / 0.361	- / 0.030	- / 0.026	- / -	Continuing	Continuing
2.2) DMR IW and MUOS Upgrade Kits DSA	- / -	- / 0.550	- / 0.883	- / 0.664	- / -	- / 0.664	- / 0.944	- / 1.045	- / 0.267	- / 0.022	Continuing	Continuing
<i>Subtotal: Support</i>	- / 0.084	- / 0.550	- / 1.457	- / 1.236	- / -	- / 1.236	- / 1.305	- / 1.075	- / 0.293	- / 0.022	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: (DN 111) DMR IW and MUOS Upgrade Kits</i>	- / 0.000	- / 0.000	- / 1.298	- / 0.000	- / 0.000	- / 0.000	- / 4.220	- / 5.481	- / 3.602	- / 0.214	Continuing	Continuing
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 1.298	- / -	- / -	- / -	- / 4.220	- / 5.481	- / 3.602	- / 0.214	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	1.681	0.550	14.239	13.296	0.000	13.296	14.551	7.059	4.327	0.236	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3010 / Shipboard Tactical Comms										Modification Number / Title: 2 / (DN 111) DMR IW and MUOS Upgrade Kits																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: (DN 111) DMR IW and MUOS Upgrade Kits																																		
Manufacturer Information																																		
Manufacturer Name: General Dynamics							Manufacturer Location: Scottsdale, Arizona																											
Administrative Leadtime (in Months): 7							Production Leadtime (in Months): 24																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Dec 2017		May 2018		May 2019																													
Delivery Dates	Dec 2019		May 2020		May 2021																													
Installation Information																																		
Method of Implementation: Method:: Installation Name: DMR MUOS Upgrade Kits																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.298	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.298																			
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	29 / 4.220	- / -	- / -	- / -	- / -	0 / 0.000	29 / 4.220																			
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 5.481	- / -	- / -	- / -	0 / 0.000	34 / 5.481																			
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.602	- / -	- / -	- / -	0 / 0.000	26 / 3.602																			
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.214	Continuing																			
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing																			
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing																			
Total			- / -	- / -	11 / 1.298	- / -	- / -	- / -	29 / 4.220	34 / 5.481	26 / 3.602	2 / 0.214	Continuing	Continuing																				
Installation Schedule																																		
PYS		FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		FY 2023		TC													
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			Q4											
In	-	-	-	-	-	6	5	-	-	-	-	-	-	10	19	-	16	18	-	-	12	14	-	-	1	1								
Out	-	-	-	-	-	-	-	6	5	-	-	-	-	-	10	19	-	16	18	-	-	12	14	-	-	1	1							
Footnotes:																																		
(3) Unit Cost variances for procurements are driven by afloat upgrade kit configurations and ancillary equipment (racks, power amplifiers & antenna upgrades), which is dependent upon ship class. There are 5 different afloat configurations of DMR IW & MUOS Upgrade Kit (3 surface & 2 subsurface) where configurations range from 1 - 3 DMR upgrade kits and a unique set of ancillary equipment. Individual unit cost is not decreasing but the combination of configurations purchased per year gives the appearance of an average unit cost decrease.																																		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications					P-1 Line Item Number / Title: 3050 / Ship Communications Automation							
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0204163N					
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	506.201	109.191	103.990	105.087	0.000	105.087	106.505	89.351	82.346	84.501	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	506.201	109.191	103.990	105.087	0.000	105.087	106.505	89.351	82.346	84.501	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	506.201	109.191	103.990	105.087	0.000	105.087	106.505	89.351	82.346	84.501	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.023	0.665	1.062	-	1.062	1.077	0.814	0.128	0.607	Continuing	Continuing
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
Ship Communication Automation (52PQ): With the evolution of afloat networks programs migrating into the Consolidated Afloat Networks and Enterprise Services (CANES) program , the Ship Communications Automation budget line will continue to support Automated Digital Network System (ADNS), Legacy Network Operation Rolling Tide (ORT), Command and Control Official Information eXchange (C2OIX) (formerly Tactical Messaging), and Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching) programs.												
Automated Digital Network System (ADNS): ADNS provides routing, switching, baseband, configuration and monitoring capabilities for interconnecting naval and coalition enclaves worldwide. ADNS utilizes Commercial Off the-Shelf/ Government Off-the-Shelf (COTS/GOTS) equipment and network protocols as specified by the joint technical architecture. ADNS Increment (INC) I provides ship to shore Internet Protocol (IP) connectivity, separation of enclaves, reuse of unused enclave bandwidth, and ship to tactical shore IP connectivity. ADNS INC II provides capabilities of network to Satellite Communications, Load Balancing, Radio Frequency (RF) restoral, and Quality of Service (QoS) to include application prioritization, Traffic Management, compression and enhancements designed to maximize use of "effective" available bandwidth for surface, shore, and airborne platforms. ADNS INC III combines all Navy Tactical Voice, secure Communications Interoperability Protocol Inter-Working Function, Video, data requirements into a converged IP data stream, and Assured Command and Control (C2) capabilities. This includes Secure Communication Interoperability- Protocol Interworking Function (SCIP-IWF) for secure telephony over IP. In addition, the INC III architecture will incorporate an IPv4/IPv6 dual stack and a Cipher-Text security architecture to align to the Global Information Grid (GIG) in order to mesh Navy tactical surface, subsurface, airborne platforms, and Aegis Ashore sites into a single IP environment with gateway functions to joint and coalition networks. Technical Insertions are minor upgrades to existing system hardware and software baseline that are required to maximize C4ISR capability and interface functionality between ADNS and applicable programs.												
Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT): ORT is a Navy-wide cyber remediation effort to secure government databases and improve the overall security protocols for Navy computer networks. Specifically, Legacy Network Cyber Resiliency/ORT will fund planned legacy network upgrades and mitigate security vulnerabilities on the highest End of Life (EOL) platforms that are not targeted to be replaced by a CANES system. These upgrades will mitigate known targeted cyber vulnerabilities and include eradication of old Windows Operating Systems, critical EOL firewalls and routers and improved anti-malware solutions. Legacy Network Cyber Resiliency/ORT will improve the networks ability to detect known and unknown vulnerabilities and attacks by upgrading sensor and monitoring technologies and accelerating post-attack containment and recovery.												
Command and Control Official Information eXchange (C2OIX): C2OIX consolidates the Tactical Messaging and Defense Messaging System (DMS) programs and manages the Official Information Exchange (OIX) of organizational record message traffic, providing sustainment support and modernization for all afloat and ashore platforms. The modernization effort within C2OIX for afloat platforms replaces older Naval Modular Automated Communication System (NAVMACS) that lacked adherence to current cyber security requirements. It also automates and increases the speed and efficiency of handling organizational message traffic aboard ships and submarines, as well as replaces ten NAVMACS surface shipboard variants distributed across United States Navy (USN), Military Sealift Command (MSC) and United States												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications		P-1 Line Item Number / Title: 3050 / Ship Communications Automation
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204163N
Line Item MDAP/MAIS Code: N/A		
Coast Guard (USCG) ships with a single shipboard variant. The ashore component of C2OIX Project is the IP-based C2OIX Shore Gateway system. C2OIX will virtualize all Government Official Information Exchange System (GOES) software suites on shore gateway UNCLASSIFIED, SECRET and TOP SECRET message enclaves and provide an integrated Cross Domain Solution (CDS) at the two Naval Computer Telecommunication Area Master Stations (NCTAMS PACIFIC and NCTAMS ATLANTIC). C2OIX shore and afloat will satisfy Navy record messaging requirements and implement products that are developed with an open system architecture.		
Shore Tactical Assured Command and Control (STACC) is the Navy's Program of Record to consolidate and modernize the ashore wide area network services infrastructure supporting afloat forces and shore commands assigned with tactical, operational, and strategic missions. STACC directly supports afloat legacy networks (e.g., ISNS), Consolidated Afloat Networks and Enterprise Services (CANES) and Automated Digital Network System (ADNS) and all associated systems installed on those networks by providing direct interfaces to the Defense Information Systems Network (DISN), thus enabling interoperability within Navy tactical forces and with combatant commands, joint forces, coalition/mission partners, and other Services/Agencies. STACC fields capability at five regions, covering over 40 facilities in both CONUS and OCONUS locations. STACC supports over 410 surface and subsurface platforms. The STACC portfolio includes wide area terrestrial transport services, core network services, network monitoring and management, and is comprised of hardware, software, computing/processing, network, and storage technologies. These services span several security classification levels to include unclassified, secret, Combined Enterprise Regional Information Exchange System - Maritime (CENTRIXS-M), Sensitive Compartmented Information (SCI), and Virtual Secure Enclave (VSE). VSE is a new security enclave designed to support highly contested cyber operations providing proactive network defense.		
The network management service provides users with access to near real time situational awareness of the health and status of the network. STACC enables operators the ability to understand what is and is not normal on the network and provides a pre-emptive cyberspace capability to fight and win in a cyber-denied information environment. The STACC's network monitoring and management system is also a critical and foundational data set provider to the Navy's Cyber Situational Awareness (NCSA) program/system which performs further processing, correlation, and impact assessment. The STACC network core service offerings provide afloat platforms reach back services such as email, chat, Domain Name System (DNS), patching and C2 application hosting services for programs that need to be in a tactical environment. The hosting services include Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) offerings.		
STACC's systems are located in 5 regions: 1)Eastern Pacific supporting Commander Pacific Fleet and Commander Third Fleet (Naval Computer & Telecommunications Area Master Station Pacific (NCTAMS PAC) and Naval Computer & Telecommunications Station San Diego (NCTS San Diego); 2) Western Pacific supporting Commander Seventh Fleet; 3) Indian Ocean supporting Commander Fifth (NCTS BAHRAIN); 4) European supporting Commander Sixth Fleet (NCTS NAPLES); and 5) Atlantic supporting US Fleet Forces Command, Commander Tenth Fleet and Commander Fourth Fleet (NCTAMS LANT); to include Joint and Coalition Partners within each region. STACC systems will also be procured in support of NCTAMS LANT's new integrated Communications Center.		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications				3050 / Ship Communications Automation					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0204163N		
Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / Ship Communications Automation	P-5a			- / 5.500	- / 2.900	- / 2.900	- / 0.000	- / 2.900
P-3a	1 / PQ065 Command and Control Official Information eXchange (C2OIX) (TBD)				- / 126.348	- / 3.551	- / 4.048	- / 0.000	- / 9.323
P-3a	2 / PQ069 Automated Digital Network System (ADNS) - Afloat (TBD)				- / 45.106	- / 41.291	- / 49.436	- / 0.000	- / 63.409
P-3a	3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching) (TBD)				- / 283.073	- / 25.293	- / 37.512	- / 0.000	- / 29.455
P-3a	4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT) (TBD)				- / 46.174	- / 36.156	- / 10.094	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 506.201	- / 109.191	- / 103.990	- / 105.087	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-5	1 / Ship Communications Automation	P-5a			- / -	- / -	- / -	- / -	- / -
P-3a	1 / PQ065 Command and Control Official Information eXchange (C2OIX) (TBD)				- / 8.590	- / 4.399	- / 4.457	- / 4.572	Continuing
P-3a	2 / PQ069 Automated Digital Network System (ADNS) - Afloat (TBD)				- / 61.426	- / 59.995	- / 57.846	- / 59.547	Continuing
P-3a	3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching) (TBD)				- / 31.189	- / 20.857	- / 17.143	- / 17.482	Continuing
P-3a	4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 106.505	- / 89.351	- / 82.346	- / 84.501	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 2019 funding request was reduced by (\$1.644) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

In FY19, ADNS begins integration of Assured Command and Control capabilities to meet fleet requirements as well as fielding at Aegis Ashore sites. In FY19, ADNS funds are for the procurement of (33) INC III Afloat units, (49) INC III Afloat Technical Insertion units, (4) Ashore INC I/INC II units, and (6) Ashore INC III units (to include one Aegis Ashore system), with integration, and associated costs for pre-installation design. In addition, the FY19 ADNS investment will fund installation of (28) INC III Afloat units, (49) INC III Afloat Technical Insertion units, (4) Ashore INC I/INC II units, and (6) Ashore INC III units. The increase in ADNS technical insertion units is driven by the need to field additional ADNS capabilities required by other programs.

FY19 C2OIX will procure(63), install & integrate(37) C2OIX Afloat (NAVMACS) units. Associated costs for pre-installation design to replace old legacy equipment onboard ships and submarines. FY19 and FY20 increase is to modernize NAVMACS components on 72 legacy systems to eliminate a legacy cross domain solution mandated by the DoD Information Security risk management Committee (ISRM). FY19-FY23 Fluctuation in installation costs is due to cost decrease when C2OIX installations are combined with CANES installations.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications		P-1 Line Item Number / Title: 3050 / Ship Communications Automation
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0204163N
Line Item MDAP/MAIS Code: N/A		
FY19 funding for STACC to engineer, integrate, procure, and install hardware and software to: transition legacy serial transport to an IP environment; expand IP services (Unclassified, SECRET, CENTRIXS-M NOC, SCI NOC and VSE ASP) to include application hosting services and expand storage capability; and enhance Network Operations monitoring and management, ORT cyber remediation solutions to detect, deter and mitigate network threats and for Assured Command and Control to support terrestrial communications and routing changes. STACC modernization is required at the five major regions, including the NCTAMS LANT new integrated communications facility (MILCON P-913).		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Item Number / Title [DODIC]: 1 / Ship Communications Automation					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				5.500			2.900		2.900		2.900		0.000		2.900			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				5.500			2.900		2.900		2.900		0.000		2.900			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				5.500			2.900		2.900		2.900		0.000		2.900			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) Automated Digital Network System (ADNS) - Ashore - INC I&II ⁽¹⁾	100.000	4	0.400	100.000	4	0.400	100.000	4	0.400	100.000	4	0.400	-	-	0.000	100.000	4	0.400
1.1.2) Automated Digital Network System (ADNS) - Ashore - INC III ⁽²⁾	425.000	12	5.100	416.667	6	2.500	416.667	6	2.500	416.667	6	2.500	-	-	0.000	416.667	6	2.500
<i>Subtotal: Recurring Cost</i>	-	-	5.500	-	-	2.900	-	-	2.900	-	-	2.900	-	-	0.000	-	-	2.900
<i>Subtotal: Hardware Cost</i>	-	-	5.500	-	-	2.900	-	-	2.900	-	-	2.900	-	-	0.000	-	-	2.900
Gross/Weapon System Cost	-	-	5.500	-	-	2.900	-	-	2.900	-	-	2.900	-	-	0.000	-	-	2.900
Remarks:																		
ADNS Ashore/ Network Operations Center (NOC)																		
(†) indicates the presence of a P-5a																		
Footnotes:																		
(1) Tech refresh is required to field hardware to address End of Life issues at (4) ADNS Network Operation Centers (NOC): NCTS Bahrain, NCTAMS EURCENT, NCTAMS LANT, and NCTAMS PAC sites.																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11	P-1 Line Item Number / Title: 3050 / Ship Communications Automation	Item Number / Title [DODIC]: 1 / Ship Communications Automation
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
(2) - Prior Year Procurement quantity (6) were procured under BLI 2915. The associated installation in FY16 is funded under BLI 3050. -FY17-23 procurement quantities represent minor tech refreshes at 6 sites that include 2 Broadcast Control Authority and 4 NOCs (NCTS Bahrain, NCTAMS EURCENT, NCTAMS LANT, and NCTAMS PAC). - INC III Ashore units require 3 months integration, assembly, testing and shipping after delivery, prior to installation start. Installs do not begin until 10 months after procurement contract award (7 months production lead time + 3 months integration).		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation					Item Number / Title [DODIC]: 1 / Ship Communications Automation				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Automated Digital Network System (ADNS) - Ashore - INC I&II		2017	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2016	Mar 2017	4	100.000	Y		
1.1.1) Automated Digital Network System (ADNS) - Ashore - INC I&II		2018	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2017	Mar 2018	4	100.000	Y		
1.1.1) Automated Digital Network System (ADNS) - Ashore - INC I&II		2019	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2018	Mar 2019	4	100.000	Y		
1.1.2) Automated Digital Network System (ADNS) - Ashore - INC III		2017	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2016	Sep 2017	6	416.667	Y		
1.1.2) Automated Digital Network System (ADNS) - Ashore - INC III		2018	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2017	Sep 2018	6	416.667	Y		
1.1.2) Automated Digital Network System (ADNS) - Ashore - INC III		2019	SSC PAC / San Diego, CA	C / IDIQ	SPAWAR	Nov 2018	Sep 2019	6	416.667	Y		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation						Modification Number / Title: 1 / PQ065 Command and Control Official Information eXchange (C2OIX)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	126.348	3.551	4.048	9.323	0.000	9.323	8.590	4.399	4.457	4.572	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	126.348	3.551	4.048	9.323	0.000	9.323	8.590	4.399	4.457	4.572	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	126.348	3.551	4.048	9.323	0.000	9.323	8.590	4.399	4.457	4.572	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Command and Control Official Information eXchange (C2OIX) (formerly Tactical Messaging): C2OIX consolidates the Tactical Messaging and Defense Messaging System (DMS) programs and manages the Official Information Exchange (OIX) of organizational record message traffic, providing sustainment support and modernization for all afloat and ashore platforms. The modernization effort within C2OIX for afloat platforms replaces older Naval Modular Automated Communication System (NAVMACS) that lacked adherence to current cyber security requirements. It also automates and increases the speed and efficiency of handling organizational message traffic aboard ships and submarines, as well as replaces ten NAVMACS surface shipboard variants distributed across United States Navy (USN), Military Sealift Command (MSC) and United States Coast Guard (USCG) ships with a single shipboard variant. The ashore component of C2OIX Project is the IP-based C2OIX Shore Gateway system. C2OIX will virtualize all Government Official Information Exchange System (GOES) software suites on shore gateway UNCLASSIFIED, SECRET and TOP SECRET message enclaves and provide an integrated Cross Domain Solution (CDS) at the two Naval Computer Telecommunication Area Master Stations (NCTAMS PACIFIC and NCTAMS ATLANTIC). C2OIX shore and afloat will satisfy Navy record messaging requirements and implement products that are developed with an open system architecture.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Modification Number / Title: 1 / PQ065 Command and Control Official Information eXchange (C2OIX)
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Tactical Messaging / C2OIX / NAVMACS			Modification Type: TBD						Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: PQ065 Command and Control Official Information eXchange (C2OIX)</i>													
B Kits													
Recurring													
1.1.1) Consolidated Prior Year Requirements - Organic	237 / 97.338	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	237 / 97.338
1.1.2) C2OIX Equipment (Afloat) - NonOrganic	39 / 8.893	10 / 2.088	11 / 1.958	63 / 4.537	- / -	63 / 4.537	34 / 3.416	10 / 1.789	9 / 1.046	10 / 1.530	Continuing	Continuing	
1.1.3) C2OIX Equipment (Ashore) - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.380	- / -	- / -	2 / 0.380	
<i>Subtotal: Recurring</i>	- / 106.231	- / 2.088	- / 1.958	- / 4.537	- / -	- / 4.537	- / 3.416	- / 1.789	- / 1.426	- / 1.530	Continuing	Continuing	
<i>Subtotal: PQ065 Command and Control Official Information eXchange (C2OIX)</i>	276 / 106.231	10 / 2.088	11 / 1.958	63 / 4.537	- / -	63 / 4.537	34 / 3.416	10 / 1.789	11 / 1.426	10 / 1.530	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 106.231	- / 2.088	- / 1.958	- / 4.537	- / -	- / 4.537	- / 3.416	- / 1.789	- / 1.426	- / 1.530	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 8.548	- / 0.065	- / 0.045	- / 0.193	- / 0.000	- / 0.193	- / 0.197	- / 0.108	- / 0.100	- / 0.101	Continuing	Continuing	
2.2) DSA ⁽³⁾	- / 7.290	- / 0.285	- / 0.545	- / 0.971	- / 0.000	- / 0.971	- / 0.412	- / 0.974	- / 0.238	- / 0.688	Continuing	Continuing	
<i>Subtotal: Support</i>	- / 15.838	- / 0.350	- / 0.590	- / 1.164	- / -	- / 1.164	- / 0.609	- / 1.082	- / 0.338	- / 0.789	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: PQ065 Command and Control Official Information eXchange (C2OIX)</i>	- / 4.279	- / 1.113	- / 1.500	- / 3.622	- / 0.000	- / 3.622	- / 4.565	- / 1.528	- / 2.693	- / 2.253	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 4.279	- / 1.113	- / 1.500	- / 3.622	- / -	- / 3.622	- / 4.565	- / 1.528	- / 2.693	- / 2.253	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	126.348	3.551	4.048	9.323	0.000	9.323	8.590	4.399	4.457	4.572	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Modification Number / Title: 1 / PQ065 Command and Control Official Information eXchange (C2OIX)																						
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																						
Modification Item 1 of 1: PQ065 Command and Control Official Information eXchange (C2OIX)																																				
Manufacturer Information																																				
Manufacturer Name: General Dynamics							Manufacturer Location: Taunton, MA																													
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 1																													
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																							
Contract Dates	Dec 2016		Dec 2017		Dec 2018																															
Delivery Dates	Jan 2017		Jan 2018		Jan 2019																															
Installation Information																																				
Method of Implementation: Method:: Installation Name: Installation of Equipment - C2OIX Afloat																																				
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																						
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																			
Prior Years			39 / 4.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	39 / 4.279																				
FY 2017			- / -	10 / 1.113	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.113																				
FY 2018			- / -	- / -	11 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 1.500																				
FY 2019			- / -	- / -	- / -	37 / 3.622	0 / 0.000	37 / 3.622	26 / 1.978	- / -	- / -	- / -	- / -	- / -	0 / 0.000	63 / 5.600																				
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	34 / 2.587	- / -	- / -	- / -	- / -	- / -	0 / 0.000	34 / 2.587																				
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.528	- / -	- / -	- / -	- / -	0 / 0.000	10 / 1.528																				
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.693	- / -	- / -	- / -	0 / 0.000	11 / 2.693																				
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.253	- / -	- / -	0 / 0.000	10 / 2.253																				
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																				
Total			39 / 4.279	10 / 1.113	11 / 1.500	37 / 3.622	0 / 0.000	37 / 3.622	60 / 4.565	10 / 1.528	11 / 2.693	10 / 2.253	Continuing	Continuing																						
Installation Schedule																																				
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot														
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																
In	38	1	4	1	3	2	3	3	3	2	5	15	17	-	24	19	17	-	3	4	3	-	3	3												
Out	38	1	4	1	3	2	3	3	3	2	5	15	17	-	24	19	17	-	3	4	3	-	3	3												
Method of Implementation (Organic): Consolidated Prior Year Requirements - Not Installed														Installation Quantity: 237																						
Footnotes:																																				

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11	P-1 Line Item Number / Title: 3050 / Ship Communications Automation	Modification Number / Title: 1 / PQ065 Command and Control Official Information eXchange (C2OIX)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(3) C2OIX budgets DSA when installations are not combined with CANES. CANES budgets for DSA costs for combined C2OIX / CANES installations. In FY19 the majority of installations are C2OIX only installations resulting in an increased DSA budget requirement.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation						Modification Number / Title: 2 / PQ069 Automated Digital Network System (ADNS) - Afloat			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	45.106	41.291	49.436	63.409	0.000	63.409	61.426	59.995	57.846	59.547	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	45.106	41.291	49.436	63.409	0.000	63.409	61.426	59.995	57.846	59.547	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	45.106	41.291	49.436	63.409	0.000	63.409	61.426	59.995	57.846	59.547	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
ADNS is the gateway to the tactical Wide Area Network (WAN) afloat for Internet Protocol (IP) network operations, supporting information dissemination and external connectivity. ADNS allows services and applications to interconnect to the Defense Information Systems Network (DISN) ashore via multiple Radio Frequency (RF) resources and pier connectivity.												
[Automated Digital Network System (ADNS) - Afloat- INC III] ADNS is the gateway to tactical Wide Area Network (WAN) afloat for Internet Protocol (IP) network operations, supporting information dissemination and external connectivity. ADNS provides the only Quality and Class of Service (QoS/CoS) routing for Multi-Service Voice, Video, and Data domains across available Radio Frequency (RF) paths.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation						Modification Number / Title: 2 / PQ069 Automated Digital Network System (ADNS) - Afloat			
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: 0204163N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: PQ069 Automated Digital Network System (ADNS) - Afloat</i>												
B Kits												
Recurring												
1.1.1) Automated Digital Network System (ADNS) - Afloat- INC III - NonOrganic ⁽⁴⁾	46 / 26.119	21 / 24.548	28 / 34.983	33 / 39.988	- / -	33 / 39.988	40 / 40.594	35 / 35.736	38 / 38.240	39 / 39.808	Continuing	Continuing
1.1.2) ADNS Tech Insertions - NonOrganic ⁽⁵⁾	12 / 1.750	36 / 4.983	26 / 3.600	49 / 6.911	- / -	49 / 6.911	33 / 4.381	43 / 5.532	17 / 2.362	14 / 1.955	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 27.869	- / 29.531	- / 38.583	- / 46.899	- / -	- / 46.899	- / 44.975	- / 41.268	- / 40.602	- / 41.763	Continuing	Continuing
<i>Subtotal: PQ069 Automated Digital Network System (ADNS) - Afloat</i>	58 / 27.869	57 / 29.531	54 / 38.583	82 / 46.899	- / -	82 / 46.899	73 / 44.975	78 / 41.268	55 / 40.602	53 / 41.763	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 27.869	- / 29.531	- / 38.583	- / 46.899	- / -	- / 46.899	- / 44.975	- / 41.268	- / 40.602	- / 41.763	Continuing	Continuing
Support (All Modification Items)												
2.1) ADNS - Production Support	- / 1.300	- / 1.200	- / 1.474	- / 1.753	- / -	- / 1.753	- / 1.623	- / 1.423	- / 1.590	- / 1.900	Continuing	Continuing
2.2) ADNS - DSA ⁽⁶⁾	- / 1.888	- / 1.668	- / 1.073	- / 2.599	- / -	- / 2.599	- / 2.694	- / 2.991	- / 2.415	- / 2.061	Continuing	Continuing
<i>Subtotal: Support</i>	- / 3.188	- / 2.868	- / 2.547	- / 4.352	- / -	- / 4.352	- / 4.317	- / 4.414	- / 4.005	- / 3.961	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: PQ069 Automated Digital Network System (ADNS) - Afloat</i>	- / 14.049	- / 8.892	- / 8.306	- / 12.158	- / 0.000	- / 12.158	- / 12.134	- / 14.313	- / 13.239	- / 13.823	Continuing	Continuing
<i>Subtotal: Installation</i>	- / 14.049	- / 8.892	- / 8.306	- / 12.158	- / -	- / 12.158	- / 12.134	- / 14.313	- / 13.239	- / 13.823	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	45.106	41.291	49.436	63.409	0.000	63.409	61.426	59.995	57.846	59.547	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation					Modification Number / Title: 2 / PQ069 Automated Digital Network System (ADNS) - Afloat															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
Modification Item 1 of 1: PQ069 Automated Digital Network System (ADNS) - Afloat																							
Manufacturer Information																							
Manufacturer Name: SSC PAC-- San Diego, CA				Manufacturer Location: San Diego, CA																			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 2																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Nov 2016	Dec 2017	Nov 2018																				
Delivery Dates	Jan 2017	Feb 2018	Jan 2019																				
Manufacturer Name: VARIOUS ⁽⁷⁾				Manufacturer Location: VARIOUS																			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 7																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates		Dec 2017	Nov 2018																				
Delivery Dates		Jul 2018	Jun 2019																				
Installation Information																							
Method of Implementation: [none specified]:: Installation Name: Automated Digital Network System (ADNS) - Afloat- INC III																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 13.329	13 / 5.365	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	46 / 18.694											
FY 2017	- / -	3 / 1.367	18 / 6.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 8.131											
FY 2018	- / -	- / -	- / -	28 / 9.080	0 / 0.000	28 / 9.080	- / -	- / -	- / -	- / -	0 / 0.000	28 / 9.080											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	33 / 10.022	- / -	- / -	- / -	0 / 0.000	33 / 10.022											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 11.518	- / -	- / -	0 / 0.000	40 / 11.518											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 12.100	- / -	0 / 0.000	35 / 12.100											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 12.871	0 / 0.000	38 / 12.871											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
Total	33 / 13.329	16 / 6.732	18 / 6.764	28 / 9.080	0 / 0.000	28 / 9.080	33 / 10.022	40 / 11.518	35 / 12.100	38 / 12.871	Continuing	Continuing											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11												P-1 Line Item Number / Title: 3050 / Ship Communications Automation																										
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: PQ069 Automated Digital Network System (ADNS) - Afloat																																						
Installation Information																																						
Method of Implementation: [none specified]:: Installation Name: Automated Digital Network System (ADNS) - Afloat- INC III																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	-	5	1	5	5	7	7	4	3	13	6	6	7	11	7	8	6	11	16	7	9	19	3	4	12	10	9	7	Cont.	Cont.							
Out	33	-	-	5	2	5	4	8	6	8	3	15	6	-	7	12	9	5	6	12	16	6	11	17	4	3	12	10	11	Cont.	Cont.							
Method of Implementation: [none specified]:: Installation Name: ADNS Tech Insertions																																						
Installation Cost					Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total												
					Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)												
Prior Years					12	0.720	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	0	0.000	12	0.720										
FY 2017					-	/	-	36	2.160	-	/	-	/	-	/	-	/	-	/	-	/	-	/	-	/	0	0.000	36	2.160									
FY 2018					-	/	-	-	22	1.542	4	0.251	0	0.000	4	0.251	-	/	-	/	-	/	-	/	-	/	0	0.000	26	1.793								
FY 2019					-	/	-	-	-	1	-	45	2.827	0	0.000	45	2.827	4	0.576	-	/	-	/	-	/	-	/	0	0.000	49	3.403							
FY 2020					-	/	-	-	-	1	-	-	1	-	-	1	-	28	1.536	5	0.325	-	/	-	/	-	/	0	0.000	33	1.861							
FY 2021					-	/	-	-	-	1	-	-	1	-	-	1	-	40	2.470	3	0.201	-	/	-	/	-	/	0	0.000	43	2.671							
FY 2022					-	/	-	-	-	1	-	-	1	-	-	1	-	-	1	-	14	0.938	3	0.204	-	/	0	0.000	17	1.142								
FY 2023					-	/	-	-	-	1	-	-	1	-	-	1	-	-	1	-	-	1	-	14	0.748	0	0.000	14	0.748									
To Complete					-	/	-	-	-	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-	Continuing	Continuing	Continuing	Continuing	Continuing									
Total					12	0.720	36	2.160	22	1.542	49	3.078	0	0.000	49	3.078	32	2.112	45	2.795	17	1.139	17	1.0952	Continuing	Continuing	Continuing	Continuing	Continuing									
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	1	9	9	10	8	10	6	6	4	6	19	20	4	10	10	8	5	12	10	18	3	8	3	3	3	5	5	4	Cont.	Cont.							
Out	9	2	7	12	10	8	7	8	4	7	7	10	18	14	6	14	6	7	11	11	13	8	8	3	3	3	5	5	4	Cont.	Cont.							
Footnotes:																																						
(4) ADNS INC III Afloat procurement cost range: \$.5M - \$1.5M; installation cost range: \$.3M - \$1.0M. Average unit cost fluctuations for procurement and installation are due to varying system configurations required for surface and submarine platforms. INC III units require 3 months integration, assembly, testing and shipping after delivery, prior to installation start. Installs do not begin until 10 months after procurement contract award (7 months production lead time + 3 months integration).																																						

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11	P-1 Line Item Number / Title: 3050 / Ship Communications Automation	Modification Number / Title: 2 / PQ069 Automated Digital Network System (ADNS) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(5) FY19: Technical Insertions (TI) will be fielded to include hardware and software baseline updates to Afloat units required to maximize C4ISR capability and interface functionality between ADNS and applicable Satellite Communications (SATCOM) systems such as Navy Multi-Band Terminal(NMT), Global Broadcast System(GBS) and Battle Force Tactical Network (BFTN). Tech Insertion unit cost includes production engineering/integration requirements associated with the initial fielding of tech insertion capability. TI(s) require (1) month administrative lead time and (2) months production lead time.		
(6) -DSA in FY18 is disproportionately lower compared to the other years due to having a greater proportion of submarines and backfits being installed that year. DSA costs per unit fluctuates based on the type of platform (submarine vs CVN) and the type of system (Backfit vs new install) and can vary between \$15K - \$200K.		
(7) ADNS: Full Production Contract has 4 possible vendors on MAC award: SERCO, Inc, SAIC, DRS Laurel Technologies, and Leidos. Contract will be used for Increment III production units.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation						Modification Number / Title: 3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	283.073	25.293	37.512	29.455	0.000	29.455	31.189	20.857	17.143	17.482	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	283.073	25.293	37.512	29.455	0.000	29.455	31.189	20.857	17.143	17.482	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	283.073	25.293	37.512	29.455	0.000	29.455	31.189	20.857	17.143	17.482	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
Shore Tactical Assured Command and Control (STACC) is the Navy's Program of Record to consolidate and modernize the ashore network infrastructure supporting afloat forces and shore commands assigned with tactical, operational, and strategic missions. STACC directly supports afloat legacy networks (e.g., ISNS), CANES and ADNS and all associated systems installed on those networks by providing direct interfaces to the Defense Information Systems Network (DISN), thus enabling interoperability within Navy tactical forces and with combatant commands, joint forces, coalition/mission partners, and other Services/Agencies. STACC fields capability at five regions, covering over 40 facilities in both CONUS and OCONUS locations, to include Naval Computer and Telecommunications Area Master Stations (NCTAMS), Naval Computer and Telecommunications Stations (NCTS), Maritime Operations Centers (MOCs), Fleet Network Operations Centers, Satellite Gateways, and Broadcast Control Authorities (BCAs). STACC supports over 410 surface and subsurface platforms. The STACC portfolio includes transport services, core network services, and network monitoring and management and is comprised of hardware, software, computing/processing, network, and storage technologies. These services span several security classification levels to include unclassified, secret, Combined Enterprise Regional Information Exchange System - Maritime (CENTRIXS-M), Sensitive Compartmented Information (SCI), and Virtual Secure Enclave (VSE). VSE is a new security enclave designed to support highly contested cyber operations providing proactive network defense.												
The network management service provides users with access to near real time situational awareness of the health and status of the network. STACC enables operators the ability to understand what is and is not normal on the network and provides a pre-emptive cyberspace capability to fight and win in a cyber-denied information environment. The STACC's network monitoring and management system is also a critical and foundational data set provider to the Navy's Cyber Situational Awareness (NCSA) program/system which performs further processing, correlation, and impact assessment. The STACC network core service offerings provide afloat platforms reach back services such as email, chat, Domain Name System (DNS), patching and C2 application hosting services for programs that need to be in a tactical environment. The hosting services include Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) offerings.												
[MILCON P913:Shore Based Enterprise Network Enhancements] Shore Tactical Assured Command and Control (STACC) new suite of systems for the outfitting of the MILCON P-913 NCTAMS LANT new communication facility. The new NCTAMS LANT building will provide a secure, efficient, sustainable and adaptable communications facility to support all telecommunications requirements within the Atlantic Area of Operations.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation							Modification Number / Title: 3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)</i>													
B Kits													
Recurring													
1.1.1) Consolidated Prior Year Requirements - Organic		10 / 35.760	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 35.760
1.1.2) Equipment - Increment II - NonOrganic ⁽⁸⁾		50 / 195.695	5 / 19.980	5 / 30.760	5 / 20.352	- / -	5 / 20.352	5 / 17.587	5 / 13.864	5 / 14.469	5 / 14.717	Continuing	Continuing
1.1.3) MILCON P913:Shore Based Enterprise Network Enhancements - NonOrganic ⁽⁹⁾		- / -	- / -	- / -	1 / 5.985	- / -	1 / 5.985	1 / 5.504	- / -	- / -	- / -	- / -	2 / 11.489
<i>Subtotal: Recurring</i>		- / 231.455	- / 19.980	- / 30.760	- / 26.337	- / -	- / 26.337	- / 23.091	- / 13.864	- / 14.469	- / 14.717	Continuing	Continuing
<i>Subtotal: PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)</i>		60 / 231.455	5 / 19.980	5 / 30.760	6 / 26.337	- / -	6 / 26.337	6 / 23.091	5 / 13.864	5 / 14.469	5 / 14.717	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 231.455	- / 19.980	- / 30.760	- / 26.337	- / -	- / 26.337	- / 23.091	- / 13.864	- / 14.469	- / 14.717	Continuing	Continuing
Support (All Modification Items)													
2.1) Production Support Increment I and II		- / 18.725	- / 1.313	- / 1.500	- / 0.701	- / -	- / 0.701	- / 0.699	- / 0.695	- / 0.704	- / 0.665	Continuing	Continuing
2.2) MILCON P913: Production		- / -	- / -	- / -	- / 0.315	- / -	- / 0.315	- / 0.321	- / 0.328	- / -	- / -	- / -	- / 0.964
<i>Subtotal: Support</i>		- / 18.725	- / 1.313	- / 1.500	- / 0.1016	- / -	- / 0.1016	- / 0.1020	- / 0.1023	- / 0.704	- / 0.665	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)</i>		- / 32.893	- / 4.000	- / 5.252	- / 2.102	- / 0.000	- / 2.102	- / 7.078	- / 5.970	- / 1.970	- / 2.100	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 32.893	- / 4.000	- / 5.252	- / 2.102	- / -	- / 2.102	- / 7.078	- / 5.970	- / 1.970	- / 2.100	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		283.073	25.293	37.512	29.455	0.000	29.455	31.189	20.857	17.143	17.482	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation					Modification Number / Title: 3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)								
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:								
Modification Item 1 of 1: PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)																
Manufacturer Information																
Manufacturer Name: SSC LANT				Manufacturer Location: Charleston, SC												
Administrative Leadtime (<i>in Months</i>): 5				Production Leadtime (<i>in Months</i>): 2												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates	May 2017	Mar 2018	Mar 2019													
Delivery Dates	Jul 2017	May 2018	May 2019													
Manufacturer Name: SSC LANT (MILCON P-913) ⁽¹⁰⁾				Manufacturer Location: Charleston, SC												
Administrative Leadtime (<i>in Months</i>): 5				Production Leadtime (<i>in Months</i>): 5												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates			Mar 2019													
Delivery Dates			Aug 2019													
Installation Information																
Method of Implementation: Method:: Installation Name: PQ070 Shore Tactical Assured Command and Control (STACC)																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)				
Prior Years	50 / 32.893	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	50 / 32.893				
FY 2017	- / -	5 / 4.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 4.000				
FY 2018	- / -	- / -	5 / 5.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 5.252				
FY 2019	- / -	- / -	- / -	5 / 2.102	0 / 0.000	5 / 2.102	1 / 4.300	- / -	- / -	- / -	0 / 0.000	6 / 6.402				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.778	1 / 3.684	- / -	- / -	0 / 0.000	6 / 6.462				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.286	- / -	- / -	0 / 0.000	5 / 2.286				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.970	- / -	0 / 0.000	5 / 1.970				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.100	0 / 0.000	5 / 2.100				
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing				
Total	50 / 32.893	5 / 4.000	5 / 5.252	5 / 2.102	0 / 0.000	5 / 2.102	6 / 7.078	6 / 5.970	5 / 1.970	5 / 2.100	Continuing	Continuing				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																				Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11												P-1 Line Item Number / Title: 3050 / Ship Communications Automation												Modification Number / Title: 3 / PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																												
<i>Modification Item 1 of 1: PQ070 Shore Tactical Assured Command and Control (STACC) (formerly Tactical Switching)</i>																																								
Installation Information																																								
Method of Implementation: Method:: Installation Name: PQ070 Shore Tactical Assured Command and Control (STACC)																																								
Installation Schedule																																								
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot										
	Q1	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	-	-	-	5	-	-	5	-	-	-	5	-	-	-	6	-	-	1	5	-	-	-	5	-	Cont.	Cont.													
Out	50	-	-	-	-	5	-	-	5	-	-	-	5	-	-	-	5	1	-	-	6	-	-	-	5	5	Cont.	Cont.												
Method of Implementation (Organic): Consolidated Prior Year Requirements - Not Installed												Installation Quantity: 10																												
Footnotes:																																								
(8) FY19 STACC decrease from FY18 to FY19 is due to the completion of the procurement and installation of Sensitive Compartmental Information (SCI) Tech Refresh the Pacific Region Network Operational Center (PRNOC) and Unified Atlantic Region Network Center (UARNOC) and the completion of Build 1.0 Tech Refresh and installation for the Indian Ocean Region Network Operations Center (IORNOC) and European Central Region Network Operations Center (ECRNO) Secret and Unclassified networks.//FY19 funding will engineer, integrate, procure, and install hardware and software to: transition legacy serial transport to an IP environment; expand IP services (Unclassified, SECRET, CENTRIXS-M NOC, SCI NOC and VSE ASP) to include application hosting services and expand storage capability; and enhance Network Operations monitoring and management, ORT cyber remediation solutions to detect, deter and mitigate network threats and for Assured Command and Control to support terrestrial communications and routing changes. STACC's Unit and installation cost vary each year depending on what modernization must be done to maintain the cyber resiliency of the network and what site(s) within each region is included in the modernization effort. Factors that relate to the cost include whether or not the modernization addresses increased bandwidth, risk vulnerabilities, and/or increased survivability and reliability.// Increment II quantities represent 5 major shore regions: 1)Eastern Pacific supporting Commander Pacific Fleet and Commander Third Fleet (Naval Computer & Telecommunications Area Master Station Pacific (NCTAMS PAC) and Naval Computer & Telecommunications Station San Diego (NCTS San Diego); 2) Western Pacific supporting Commander Seventh Fleet; 3) Indian Ocean supporting Commander Fifth (NCTS BAHRAIN); 4) European supporting Commander Sixth Fleet (NCTS NAPLES); and 5) Atlantic supporting US Fleet Forces Command, Commander Tenth Fleet and Commander Fourth Fleet (NCTAMS LANT); and Joint and Coalition Partners within each region.																																								
(9) The various STACC systems, which make up the network, will be procured and installed in two phases to align with the P-913 MILCON transition plan.																																								
(10) Manufacturer for MILCON P-913 STACC equipment. Integration efforts required prior to installation FY20 Q3 installation.																																								

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation						Modification Number / Title: 4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	46.174	36.156	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.424
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	46.174	36.156	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.424
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	46.174	36.156	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.424
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT): ORT is a Navy-wide cyber remediation effort to secure government databases and improve the overall security protocols for Navy computer networks. Specifically, Legacy Network Cyber Resiliency/ORT will fund planned legacy network upgrades and mitigate security vulnerabilities on the highest End of Life platforms that are not targeted to be replaced by a Consolidated Afloat Networks & Enterprise Services (CANES) system. These upgrades will mitigate known targeted cyber vulnerabilities and include eradication of old Windows Operating Systems, critical End of Life (EOL) firewalls and routers and improved anti-malware solutions. Legacy Network Cyber Resiliency/ORT will improve the networks ability to detect known and unknown vulnerabilities and attacks by upgrading sensor and monitoring technologies and accelerate post-attack containment and recovery.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Modification Number / Title: 4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)</i>													
B Kits													
Recurring													
1.1.1) Legacy Network Cyber Resiliency/ORT Afloat - Equipment - NonOrganic ⁽¹¹⁾	79 / 31.254	26 / 22.311	11 / 7.290	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	116 / 60.855
1.1.2) Legacy Network Cyber Resiliency/ORT Ashore - Equipment - NonOrganic	2 / 1.885	2 / 3.301	2 / 0.499	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 5.685
<i>Subtotal: Recurring</i>	- / 33.139	- / 25.612	- / 7.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)</i>	81 / 33.139	28 / 25.612	13 / 7.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	122 / 66.540
<i>Subtotal: Procurement, All Modification Items</i>	- / 33.139	- / 25.612	- / 7.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)													
2.1) Legacy Network Cyber Resiliency/ORT - DSA	- / 0.692	- / 0.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.242
<i>Subtotal: Support</i>	- / 0.692	- / 0.550	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation													
<i>Modification Item 1 of 1: PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)</i>	- / 12.343	- / 9.994	- / 2.305	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 24.642
<i>Subtotal: Installation</i>	- / 12.343	- / 9.994	- / 2.305	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total													
Total Cost (Procurement + Support + Installation)	46.174	36.156	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	92.424

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Modification Number / Title: 4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)																				
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																				
Modification Item 1 of 1: PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)																																		
Manufacturer Information																																		
Manufacturer Name: SSC LANT							Manufacturer Location: SSC LANT																											
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 3																											
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																					
Contract Dates	Dec 2016		Dec 2017																															
Delivery Dates	Mar 2017		Mar 2018																															
Installation Information																																		
Method of Implementation: [none specified]:: Installation Name: Legacy Network Cyber Resiliency/ORT Afloat - Equipment																																		
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																				
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 12,243	25 / 6,015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2017			- / -	25 / 3,731	1 / 0.294	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2018			- / -	- / -	11 / 1,751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																				
Total			54 / 12,243	50 / 9,746	12 / 2,045	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000																				
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	26	28	16	25	9	-	1	8	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116							
Out	18	17	31	21	10	7	-	1	6	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116							

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3050 / Ship Communications Automation										Modification Number / Title: 4 / PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: PQ007 Legacy Network Cyber Resiliency/Operation Rolling Tide (ORT)																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Legacy Network Cyber Resiliency/ORT Ashore - Equipment																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.100	1 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.200															
FY 2017				- / -	2 / 0.148	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.148															
FY 2018				- / -	- / -	2 / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.260															
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total				1 / 0.100	3 / 0.248	2 / 0.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.608															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	-	-	-	-	-	-	-	-	-	-	6							
Out	1	-	1	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6						

Footnotes:

(11) Average unit cost fluctuations are attributable to variances in system configuration requirements among platforms. The average procurement unit cost for larger deck unit level platforms range: \$.1M-\$5.7M. Smaller deck unit level platforms range: \$.1M-\$6M. Installation cost fluctuations are attributed to and dependent on class, level of the platform, variant of predecessor system the hull currently has installed, geographic location of the installation, and length of the availability. Installation cost range: \$.1M - \$2.8M.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications					3057 / Communications Items under \$5M										
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0604280N							
Line Item MDAP/MAIS Code: N/A															
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	132.012	10.077	18.577	41.123	0.000	41.123	36.961	27.138	28.060	39.241	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	132.012	10.077	18.577	41.123	0.000	41.123	36.961	27.138	28.060	39.241	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	132.012	10.077	18.577	41.123	0.000	41.123	36.961	27.138	28.060	39.241	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.024	-	-	-	-	-	-	-	-	-	0.024			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
[P5 / NU019 EPLRS-DR/EMUT]: Enhanced Position Location Reporting System - Data Radio (EPLRS-DR)/Enhanced Man-Pack UHF Tactical (EMUT) is a Blue in Support of Green (BISOG) program that provides secure Anti-Jam (AJ), Ultra High Frequency (UHF) (420-450 MHz) and Line of Sight (LOS) data communications in support of amphibious operations at throughputs of up to 54Kbps. EPLRS-DR provides embedded Position Location Information (PLI) between shipboard networks and the shore-based Marine Tactical Data Network (TDN) and the Army Tactical Internet (TI). To meet a National Security Agency (NSA) mandate, KOK13 cryptographic equipment was replaced with KOK23/CKG cryptographic equipment. EPLRs and EMUT efforts will include antenna upgrades. EPLRS-DR will also include Landing Force Iridium infrastructure.															
[P5 / NU239 PORT NSW]: Portable Radio/Naval Special Warfare (PORT NSW) tactical radio: PORT NSW procures hand held and man pack/vehicular radios for NSW. Procurement needed to support Force Protection operations, especially with joint forces. NSW operational elements (SEAL platoons and Combatant Craft Detachments) rely on tactical communications and electronics equipment to accomplish all missions assigned in support of the Joint and Fleet commanders. Navy resourced tactical communications equipment is considered mission essential and will be employed by individual SEAL personnel and NSW combat elements in man pack configurations as well as onboard tactical vehicles and NSW combatant craft in tactical operations centers in fixed mount configurations.															
[P5 / NU295 BFTN]: Battle Force Tactical Network (BFTN): BFTN enables delivery of Internet Protocol (IP) based collaboration services over legacy High Frequency (HF) assets. The intent is to provide an interoperable, low data rate, multi-node, Beyond-Line-of-Sight tactical edge networking capability using existing HF radio infrastructure. Supports Tactical Edge Networking and provides data path backbone for both airborne and afloat forces and supports increased data exchange with Allied Coalition forces. BFTN provides National, Allied, and Coalition maritime units with a medium band IP-based, tactical ship-ship at-sea networking capability, using legacy half-duplex UHF Line-of-Sight. BFTN will provide a bridge between legacy radio systems and future emerging wideband networking technologies.															
[P5 / NU790 Navy Expeditionary C4I]: Navy Expeditionary Command, Control, Communications, Computers, & Intelligence (C4I): Provides procurement and integration for outfitting Table of Allowance (TOA) buy lists within the Expeditionary forces. Ensures common C4I solutions are being coordinated, tracked, procured and integrated across Navy Expeditionary Combat Command (NECC) forces. The increase in funding reflects establishment, approval and funding of NSW service-common Table Of Allowance to begin correcting shortfalls and bring NSW forces into alignment with required outfitting standards in accordance with SOCOM-USN Memorandum of Agreement.															
[P5 / ESB SOF (BSO 24)]: Expeditionary Mobile Base Special Operations Forces (ESB SOF) - The SOF component requires an ESB (a type of boat) to have the capability for planning and conducting Intelligence, Surveillance, and Reconnaissance (ISR) for Boat Assault Force (BAF) and Helicopter Assault Force (HAF) missions. These funds procure and install equipment to support SOF communications, consisting of a radio backbone infrastructure and increasing the bandwidth to support SOF missions. These additional capabilities will be back fitted during ESB 4's Post Shakedown Availability.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 11: Shipboard Communications				P-1 Line Item Number / Title: 3057 / Communications Items under \$5M						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A				Other Related Program Elements: 0604280N				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Communications Items under \$5M	P-5a			- / 132.012	- / 10.077	- / 18.577	- / 41.123	- / 0.000	- / 41.123
P-40	Total Gross/Weapon System Cost				- / 132.012	- / 10.077	- / 18.577	- / 41.123	- / 0.000	- / 41.123

*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 2019 funding request was reduced by (\$0.145) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

NU239 - PORT NSW: The FY19 budget request funds the initial procurement of 372 radios to jump start the procurement and modernization level of effort, and incrementally achieve approved inventory threshold (874 radios) by the end of the FYDP. Thereafter, the focus will be on technical refresh and sustainment of the inventory based on assembly service lifecycle projections. The requirements for the radios is driven by communications requirements and deployment cycles. The total inventory of 874, as derived from the Force Readiness Manual (FRM), establishes the table of allowance requirements for training and operational inventory thresholds. Additionally, FY19 increase is due to equipment required for US Navy Special Forces End Strength Growth.

NU295 / NU777 - Battle Force Tactical Network (BFTN): FY19 OPN funds the procurement of twelve (12) BFTN systems required to meet emerging communications threat environment and engineering changes to strengthen cyber security posture by implementing WIN 10 upgrades on previously fielded systems.

NU019 - EPLRS-DR/EMUT: FY19 funding procures and installs 8 Enhanced Position Location Reporting System - Data Radio (EPLRS-DR)/Enhanced Man-Pack UHF Tactical (EMUT). A complete unit consists of one AN/VRC-114(V)2 radio mount, one RF-5051PS power supply, and associated equipment. The quantity procured in any given year is determined by the Fleet's demand signal and platform availability.

NU385 - FY19 funding is for the procurement and installation of the remaining components to provide Special Operations Forces (SOF) capability on Expeditionary Mobile Base (ESB) 4. These funds will procure one Commercial Broadband Satellite Program (CBSP), one UHF SATCOM antenna, two HF antennas, one UHF/VHF System, two VHF Lo Antenna, two VHF Hi antennas and two UHF antennas.

The cost delta between ESB 3 and ESB 4 are for the refurbished CBSP asset (ESB 3) vs new system (ESB 4) and the difference in labor rates (East Coast vs West Coast) for the Post Shakedown Availability (PSA) Efforts.

NU790 - Navy Expeditionary FY19 funding is for procurement of service-common support communications and Automated Data Processing (ADP) equipment which directly supports forward deployed SEALs. Investment in communications equipment, to include but not limited to, portable hand held devices, man pack radios, ruggedized laptops, and encryption-decryption devices are essential to the readiness and battlefield effectiveness of NSW in winning the current fight against ISIS and other extremist elements. Additionally, it ensures the warfighter is optimally equipped with cutting edge communications equipment for the future fight.

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3057 / Communications Items under \$5M										Item Number / Title [DODIC]: 1 / Communications Items under \$5M							
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:							
Resource Summary			Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total						
Procurement Quantity (<i>Units in Each</i>)			-			-		-		-		-		-						
Gross/Weapon System Cost (\$ in Millions)			132.012			10.077		18.577		41.123		0.000		41.123						
Less PY Advance Procurement (\$ in Millions)			-			-		-		-		-		-						
Net Procurement (P-1) (\$ in Millions)			132.012			10.077		18.577		41.123		0.000		41.123						
Plus CY Advance Procurement (\$ in Millions)			-			-		-		-		-		-						
Total Obligation Authority (\$ in Millions)			132.012			10.077		18.577		41.123		0.000		41.123						
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																				
Initial Spares (\$ in Millions)			-			0.024		-		-		-		-						
Gross/Weapon System Unit Cost (\$ in Thousands)			-			-		-		-		-		-						
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total				
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)		
Hardware - NU019 EPLRS-DR/EMUT Cost																				
Non Recurring Cost																				
1.1.1) EPLRS-DR Procurement ^{(†)(1)}	55.191	47	2.594	135.000	2	0.270	143.125	8	1.145	142.625	8	1.141	-	-	-	142.625	8	1.141		
<i>Subtotal: Non Recurring Cost</i>	-	-	2.594	-	-	0.270	-	-	1.145	-	-	1.141	-	-	-	-	-	1.141		
<i>Subtotal: Hardware - NU019 EPLRS-DR/EMUT Cost</i>	-	-	2.594	-	-	0.270	-	-	1.145	-	-	1.141	-	-	-	-	-	1.141		
Hardware - NU239 PORT NSW Cost																				
Recurring Cost																				
3.1.1) PORT NSW Hand Held Procurement ^{(†)(2)}	15.456	1,283	19.830	15.117	137	2.071	15.725	136	2.139	15.714	266	4.180	-	-	-	15.714	266	4.180		
3.1.2) PORT NSW Man Pack Procurement ^{(†)(3)}	35.336	1,067	37.703	37.350	65	2.428	38.089	61	2.323	38.850	106	4.118	-	-	-	38.850	106	4.118		
<i>Subtotal: Recurring Cost</i>	-	-	57.533	-	-	4.499	-	-	4.462	-	-	8.298	-	-	-	-	-	8.298		
<i>Subtotal: Hardware - NU239 PORT NSW Cost</i>	-	-	57.533	-	-	4.499	-	-	4.462	-	-	8.298	-	-	-	-	-	8.298		
Hardware - NU295 BFTN Cost																				
Recurring Cost																				
4.1.1) BFTN System Procurement ^{(†)(4)}	204.600	20	4.092	238.778	4	0.955	-	-	-	291.000	12	3.492	-	-	-	291.000	12	3.492		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3057 / Communications Items under \$5M									Item Number / Title [DODIC]: 1 / Communications Items under \$5M													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
4.1.2) Engineering Change Orders (5)	-	-	-	-	-	-	-	-	1.078	-	-	1.100	-	-	-	-	-	1.100								
<i>Subtotal: Recurring Cost</i>	-	-	4.092	-	-	0.955	-	-	1.078	-	-	4.592	-	-	-	-	-	4.592								
<i>Subtotal: Hardware - NU295 BFTN Cost</i>	-	-	4.092	-	-	0.955	-	-	1.078	-	-	4.592	-	-	-	-	-	4.592								
Hardware - NU790 Navy Expeditionary C4I Cost																										
Recurring Cost																										
5.1.1) Navy Expeditionary C4I Procurement (6)	265.500	12	3.186	-	-	-	-	-	9.027	-	-	9.783	-	-	-	-	-	9.783								
<i>Subtotal: Recurring Cost</i>	-	-	3.186	-	-	-	-	-	9.027	-	-	9.783	-	-	-	-	-	9.783								
<i>Subtotal: Hardware - NU790 Navy Expeditionary C4I Cost</i>	-	-	3.186	-	-	-	-	-	9.027	-	-	9.783	-	-	-	-	-	9.783								
Hardware - NU385 ESB SOF (BSO 24) Cost																										
Recurring Cost																										
6.1.1) ESB SOF (BSO 24) (7)	-	-	3.329	-	-	0.677	-	-	0.539	-	-	2.790	-	-	-	-	-	2.790								
6.1.2) ESB SOF Install (8)	-	-	4.701	-	-	-	-	-	-	-	-	5.148	-	-	-	-	-	5.148								
<i>Subtotal: Recurring Cost</i>	-	-	8.030	-	-	0.677	-	-	0.539	-	-	7.938	-	-	-	-	-	7.938								
<i>Subtotal: Hardware - NU385 ESB SOF (BSO 24) Cost</i>	-	-	8.030	-	-	0.677	-	-	0.539	-	-	7.938	-	-	-	-	-	7.938								
Support - NU777 Installations FMP Cost																										
7.1) EPLRS-DR FMP	-	-	0.010	-	-	0.734	-	-	1.498	-	-	1.526	-	-	-	-	-	1.526								
7.2) BFTN Installations FMP (9)	-	-	6.284	-	-	2.029	-	-	-	-	-	5.438	-	-	-	-	-	5.438								
<i>Subtotal: Support - NU777 Installations FMP Cost</i>	-	-	6.294	-	-	2.763	-	-	1.498	-	-	6.964	-	-	-	-	-	6.964								
Support - NU777 DSA Cost																										
8.1) EPLRS-DR DSA/ PRE Shore Installation Design	-	-	-	-	-	0.294	-	-	0.556	-	-	0.475	-	-	-	-	-	0.475								
8.2) BFTN DSA (10)	-	-	2.221	-	-	0.339	-	-	-	-	-	1.522	-	-	-	-	-	1.522								
<i>Subtotal: Support - NU777 DSA Cost</i>	-	-	2.221	-	-	0.633	-	-	0.556	-	-	1.997	-	-	-	-	-	1.997								
Support - NU555 Production Support Cost																										
9.1) EPLRS-DR Production Support	-	-	0.290	-	-	0.011	-	-	0.048	-	-	0.052	-	-	-	-	-	0.052								

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11				P-1 Line Item Number / Title: 3057 / Communications Items under \$5M									Item Number / Title [DODIC]: 1 / Communications Items under \$5M																
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																													
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total													
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)											
9.2) PORT NSW Production Support	-	-	3.127	-	-	0.212	-	-	0.224	-	-	0.145	-	-	-	-	-	0.145											
9.4) BFTN Production Support	-	-	1.120	-	-	0.057	-	-	-	-	-	0.213	-	-	-	-	-	0.213											
9.5) Consolidated Prior Year Requirements ⁽¹⁾	-	-	43.525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
<i>Subtotal: Support - NU555 Production Support Cost</i>	-	-	48.062	-	-	0.280	-	-	0.272	-	-	0.410	-	-	-	-	-	0.410											
Gross/Weapon System Cost	-	-	132.012	-	-	10.077	-	-	18.577	-	-	41.123	-	-	-	0.000	-	41.123											

(†) indicates the presence of a P-5a

Footnotes:

- (1) Funding in FY19 includes procurement and installation for Enhanced Position Location reporting System - Data Radio (EPLRS-DR), Enhanced Man-Pack UHF Tactical (EMUT) MUOS antennas, and Landing Force Iridium to meet Marine Embarked Units (MEU) to support HF/UHF communications between the Landing Force Operations Center (LFOC) and Marines ashore to ensure interoperability between the Navy and Marine Corps. The quantity procured and installed (in any given year) is determined by the fleet's demand signal and platform availability and leverages the ISEA to combine installs.
- (2) FY19 Increase due to equipment required for US Navy Special Forces End Strength Growth
- (3) PORT NSW Hand Held and Man Pack radios do not require installation, also FY19 increase due to equipment required for US Navy Special Forces End Strength Growth.
- (4) Funding in FY19 is for the procurement of twelve (12) Battle Force Tactical Network (BFTN) systems required to meet emerging communications threat environment.
- (5) Funding in FY19 for engineering changes required to strengthen cyber security posture by implementing WIN 10 upgrades on previously fielded BFTN systems.
- (6) Quantities are not provided since various communications and Automated Data Processing equipment is being procured. Increase reflects establishment, approval and funding of NSW service-common Table Of Allowance to begin correcting shortfalls and bring NSW forces into alignment with required outfitting standards in accordance with SOCOM-USN Memorandum of Agreement (MOU).
- (7) Quantities are not provided since various equipment is being procured to provide Special Operations Forces (SOF) capability on Expeditionary Mobile Base (ESB) 4. Cost increase is to procure remaining SOF components to include several VHF and UHF antennas to be installed during the boats Post Shakedown Availability.
- (8) The installations costs are being broken out for transparency. The last time an installation occurred was in FY16. In FY 16 the installation cost (for ESB 3) were included in the recurring cost.
- (9) Funding in FY19 is for the installation of twelve (12) BFTN systems required to meet emerging communications threat environment.
- (10) Funding in FY19 is for the procurement and installation of twelve (12) BFTN systems required to meet emerging communications threat environment.
- (11) Consolidated prior years for PORT RAD - Hand Held Procurement, Hydra Procurement, NAVSEA HYDRA Requirement, DAMA IW Procurement, Hydra Installations FMP, HF SAR Installations FMP, and Navy Expeditionary C4I Production Support

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 11			P-1 Line Item Number / Title: 3057 / Communications Items under \$5M					Item Number / Title [DODIC]: 1 / Communications Items under \$5M				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) EPLRS-DR Procurement		2017	Harris Corporation / Rochester, NY	C / FFP	SPAWAR	Dec 2016	May 2017	2	135.000	Y		Jun 2016
1.1.1) EPLRS-DR Procurement		2018	Harris Corporation / Rochester, NY	C / FFP	SPAWAR	Dec 2017	May 2018	8	143.125	Y		Jun 2017
1.1.1) EPLRS-DR Procurement		2019	Harris Corporation / Rochester, NY	C / FFP	SPAWAR	Dec 2018	May 2019	8	142.625	Y		Jun 2018
3.1.1) PORT NSW Hand Held Procurement		2017	Harris Corporation / Rochester, NY	C / FFP	SPAWAR	May 2017	Oct 2017	137	15.117	Y		
3.1.1) PORT NSW Hand Held Procurement		2018	Unknown / Unknown	C / FFP	SPAWAR	Dec 2017	May 2018	136	15.725	Y		
3.1.1) PORT NSW Hand Held Procurement		2019	Unknown / Unknown	C / FFP	SPAWAR	Dec 2018	May 2019	266	15.714	Y		
3.1.2) PORT NSW Man Pack Procurement		2017	Harris Corporation / Rochester, NY	C / FFP	SPAWAR	May 2017	Oct 2017	65	37.350	Y		
3.1.2) PORT NSW Man Pack Procurement		2018	Unknown / Unknown	C / FFP	SPAWAR	Dec 2017	May 2018	61	38.089	Y		
3.1.2) PORT NSW Man Pack Procurement		2019	Unknown / Unknown	C / FFP	SPAWAR	Dec 2018	May 2019	106	38.850	Y		
4.1.1) BFTN System Procurement		2017	Leidos / Reston, VA	C / FFP	SPAWAR	Jun 2017	Oct 2017	4	238.778	Y		Aug 2011
4.1.1) BFTN System Procurement		2019	Unknown / Unknown	TBD	SPAWAR	Jan 2019	May 2019	12	291.000	N		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications					3107 / Submarine Broadcast Support										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	49.339	31.068	44.669	30.897	0.000	30.897	57.239	61.701	61.577	38.656	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	49.339	31.068	44.669	30.897	0.000	30.897	57.239	61.701	61.577	38.656	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	49.339	31.068	44.669	30.897	0.000	30.897	57.239	61.701	61.577	38.656	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.030	0.064	0.121	-	0.121	0.054	0.056	0.055	0.056	Continuing	Continuing			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The Submarine Broadcast program modernizes communication elements which support Navy Nuclear Command, Control, and Communications (NC3) strategic requirements, connecting the President of the United States (POTUS) and senior leadership with the ability to send (NC3) Emergency Action Messages (EAMs) to Ballistic Missile Submarines (SSBN) and tactical National level tasking to deployed Attack Submarines (SSN) and Guided Missile Submarines (SSGN) operating covertly around the globe via the Fixed Submarine Broadcast System (FSBS). This portfolio provides integration, production and installations for shore-to-ship transmit and receive communications systems.															
[P3A / W4010 Legacy NC3 NMHS]: FY14-FY18 Legacy Nuclear Command, Control and Communication Navy Modernized Hybrid Solution (NC3 NMHS): The Legacy NC3 NMHS messaging hardware and software will provide accurate and reliable delivery of time-critical messages for command and control of nuclear forces in a pre-attack environment for force direction, force management, situation monitoring and planning. The NC3 NMHS hardware and software upgrade at all sites will replace Navy Information eXchange Terminal(NIXT) at shore communications stations supporting NC3.															
(P5 / W4010 NC3 NMHS Technical Refresh - FY19-FY23 Nuclear Command, Control and Communication Navy Modernized Hybrid Solution (NC3 NMHS) is the modernization of the Nova Software and NIXT hardware to eliminate obsolesce issues, address cyber security vulnerabilities, and enable Network Defense and Network Monitoring functions.															
[P5 / W4009 Low Band Universal Communications System (LBUCS), Receive]: LBUCS will upgrade receive subsystems of Fixed Submarine Broadcast Systems (FSBS), which are approaching their operational end of life. LBUCS will ensure operational capability through the VLF architecture by providing system life extension and flexibility of submarine broadcast reception to submarines operating in a stealth posture. Unit costs for procurement and installation of LBUCS Receive vary due to unique platform and equipment configurations.															
[P5 / W4011 Submarine Operating Authority (SUBOPAUTH)]: SUBOPAUTH will modernize and standardize the aging command, control and communication (C3) infrastructure and several critical C3 systems at all seven worldwide Broadcast Control Authority (BCA) sites made up of four regional SUBOPAUTH BCA sites and three Take Charge and Move Out (TACAMO) BCA sites. Different equipment is procured and installed each fiscal year and varies by site.															
[P5 / W4012 Take Charge and Move Out (TACAMO)]: TACAMO's primary mission is to receive and retransmit EAMs to United States strategic forces. The TACAMO Ground Communication Program will procure the necessary fixed and mobile communications equipment to support the TACAMO mission each fiscal year. For this reason, different systems will be procured from year to year. In FY18 TACAMO will procure two (2) High Electromagnetic Pulse (HEMP) protected Extremely High Frequency (EHF) mobile shelters. In FY19 TACAMO will procure the first Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT) and fund the associated Non-Recurring Engineering (NRE) efforts.															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications		P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support		
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				
[P3A / W4008 Transmission Equipment]: Transmission Equipment consists of two (2) major systems, Antennas and Transmitters, which are located at ten (10) Broadcast Transmitter Stations (BTS) sites worldwide. Transmission Equipment program modernizes the aging and obsolete equipment of the submarine broadcast transmission systems, which include the high power transmitters and antennas located at the Broadcast Transmitter Station (BTS) sites. Different equipment are procured each year for this effort depending on modernization requirements. In FY18, one (1) Bushing, one (1) Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, one (1) AN/FRT-95 Conversion to AN/FRT-95D, four (4) Network Tech Upgrade Kits, four (4) Solid-State Variable PA Plate Power Supplies, and (1) UV Arc Sensor were procured. In support of the replacement of the damaged Fixed Submarine Broadcast System (FSBS) antenna and transmitter at the NRTF Aguada, PR site, the Tower Lighting Isolation Transformer (TLIT) Base Housing, the AN/FRT-95 Conversion to AN/FRT-95D and the Insulator were procured in FY18 with the FY18 Hurricane Amendment funding. In FY19, one (1) Base Insulator Assembly (BIA), one (1) Bushing, one (1) Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, two (2) Auto-tune Power Amplifiers, two (2) Auto-tune Systems, two (2) Tap Changer Under Load (TCUL) Transformers, and one (1) Transmission Line Impedance Matching Network (TLZN) will be procured.				
[P3A - 2 / W4009 Low Band Universal Communications System (LBUCS) Transmit]: LBUCS Transmit will modernize the low power transmit subsystem hardware, software and waveform components at Broadcast Transmitter Stations (BTS) and Broadcast Control Authority (BCA) sites including the VLF Broadcast Builder, AN/URT-30B Integrated VLF Transmit Terminal (IVTT), IVTT Proxy, the MD-1310, MD-1315, and MD-1316 Modulators, and the North Atlantic Treaty Organization (NATO) Interoperable Submarine Broadcast System (NISBS). Production costs for LBUCS equipment vary due to unique site configurations. Cost and duration for LBUCS Broadcast Control Authority (BCA) installations are greater than Broadcast Transmitter Stations (BTS) due to complexity of the BCA system. Install costs for BCA equipment vary due to unique site configuration and mix of CONUS and OCONUS locations.				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:						
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications				3107 / Submarine Broadcast Support						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Submarine Broadcast Support	P-5a			- / 0.000	- / 4.645	- / 9.410	- / 17.939	- / 0.000	- / 17.939
P-3a	1 / W4008 Transmission Equipment (TBD)				- / 27.350	- / 5.818	- / 24.165	- / 12.391	- / 0.000	- / 12.391
P-3a	2 / W4009 Low Band Universal Communications System (LBUCS) Transmit (TBD)				- / 10.658	- / 10.004	- / 2.613	- / 0.567	- / 0.000	- / 0.567
P-3a	3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS) (TBD)				- / 11.331	- / 10.601	- / 8.481	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 49.339	- / 31.068	- / 44.669	- / 30.897	- / 0.000	- / 30.897
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)	
P-5	1 / Submarine Broadcast Support	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / W4008 Transmission Equipment (TBD)				- / 14.050	- / 14.130	- / 14.935	- / 14.589	- / 2.376	- / 129.804
P-3a	2 / W4009 Low Band Universal Communications System (LBUCS) Transmit (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 23.842
P-3a	3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS) (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 30.413
P-40	Total Gross/Weapon System Cost				- / 57.239	- / 61.701	- / 61.577	- / 38.656	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:

LBUCS Receive: FY19 funding will provide for the procurement and installation of LBUCS Receive shore and submarine units.

LBUCS Transmit: FY19 funding will provide for the installation of LBUCS Transmit units.

Submarine Operating Authority (SUBOPAUTH): FY19 funding will provide for the procurement of the BCA sites; and for the installation of SUBOPAUTH Modernization Unified Computing System (UCS) at seven worldwide Broadcast Control Authority (BCA) sites made up of four regional SUBOPAUTH BCA sites and three Take Charge and Move Out (TACAMO) BCA sites.

Take Charge and Move Out (TACAMO): FY19 funding will provide for the procurement of the first Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT) and associated Non-Recurring Engineering (NRE) efforts to support the Navy's TACAMO mission.

Transmission Equipment: FY19 funding will provide eleven (11) procurements and seven (7) installations at five (5) different Broadcast Transmitter Station (BTS) sites. Procurement and Installation unit costs vary due to procuring and installing different equipment each fiscal year. FY18 procured one (1) Bushing, one (1) Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, one (1) AN/FRT-95 Conversion to AN/FRT-95D, four (4) Network Tech Upgrade Kits, four (4) Solid-State Variable PA Plate Power Supplies, and (1) UV Arc Sensor. \$15.000 million added in FY18 to address the replacement of the Hurricane Maria damaged Fixed Submarine Broadcast System (FSBS) antenna and transmitter at the NRTF Aguada, PR site, the Tower Lighting Isolation Transformer (TLIT) Base Housing, the AN/FRT-95 Conversion to AN/FRT-95D and the Insulator were procured in FY18 with the FY18 Hurricane Amendment funding. FY19 will procure one (1) Base Insulator Assembly (BIA), one (1) Bushing, one (1)

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications		P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support
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		
Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, two (2) Auto-tune Power Amplifiers, two (2) Auto-tune Systems, two (2) Tap Changer Under Load (TCUL) Transformers, and one (1) Transmission Line Impedance Matching Network (TLZN).		
FY19 funding - Nuclear Command, Control and Communication Navy Modernized Hybrid Solution (NC3 NMHS) Technical Refresh: Fielding the NC3 NMHS modernized system at all shore sites.		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support										Item Number / Title [DODIC]: 1 / Submarine Broadcast Support					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				0.000			4.645		9.410		17.939		0.000		17.939			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				0.000			4.645		9.410		17.939		0.000		17.939			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				0.000			4.645		9.410		17.939		0.000		17.939			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - W4009 Low Band Universal Communications System (LBUCS), Receive Cost																		
Recurring Cost																		
1.1.1) W4009 LBUCS Receive ⁽¹⁾	-	-	0.000	-	-	0.000	107.496	17	1.827	86.399	16	1.382	-	-	0.000	86.399	16	1.382
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	1.827	-	-	1.382	-	-	0.000	-	-	1.382
<i>Subtotal: Hardware - W4009 Low Band Universal Communications System (LBUCS), Receive Cost</i>	-	-	0.000	-	-	0.000	-	-	1.827	-	-	1.382	-	-	0.000	-	-	1.382
Hardware - Installations - W4009 Low Band Universal Communications System (LBUCS), Receive Cost																		
Recurring Cost																		
2.1.1) LBUCS Receive Installation Ashore (W4776) ⁽²⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.274	-	-	0.000	-	-	0.274
2.1.2) LBUCS Receive Installation Afloat (W4777) ⁽³⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.129	-	-	0.000	-	-	0.129
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.403	-	-	0.000	-	-	0.403
<i>Subtotal: Hardware - Installations - W4009 Low Band Universal Communications System (LBUCS), Receive Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.403	-	-	0.000	-	-	0.403
Hardware - W4011 Submarine Operating Authority (SUBOPAUTH) Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support									Item Number / Title [DODIC]: 1 / Submarine Broadcast Support													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
3.1.1) Submarine Operating Authority (SUBOPAUTH) ^{(†) (4)}	-	-	0.000	343.750	4	1.375	288.100	9	2.593	633.000	4	2.532	-	-	0.000	633.000	4	2.532								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	1.375	-	-	2.593	-	-	2.532	-	-	0.000	-	-	2.532								
<i>Subtotal: Hardware - W4011 Submarine Operating Authority (SUBOPAUTH) Cost</i>	-	-	0.000	-	-	1.375	-	-	2.593	-	-	2.532	-	-	0.000	-	-	2.532								
Hardware - W4776 Shore Installations - Submarine Operating Authority (SUBOPAUTH) Cost																										
Recurring Cost																										
4.1.1) SUBOPAUTH Shore Installation ⁽⁵⁾	-	-	0.000	-	-	0.000	-	-	1.121	-	-	1.525	-	-	0.000	-	-	1.525								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	1.121	-	-	1.525	-	-	0.000	-	-	1.525								
<i>Subtotal: Hardware - W4776 Shore Installations - Submarine Operating Authority (SUBOPAUTH) Cost</i>	-	-	0.000	-	-	0.000	-	-	1.121	-	-	1.525	-	-	0.000	-	-	1.525								
Hardware - W4012 Take Charge and Move Out (TACAMO) Cost																										
Recurring Cost																										
5.1.1) W4012 Take Charge and Move Out (TACAMO) ^{(†) (6)}	-	-	0.000	1,962.000	1	1.962	1,491.000	2	2.982	3,122.000	1	3.122	-	-	0.000	3,122.000	1	3.122								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	1.962	-	-	2.982	-	-	3.122	-	-	0.000	-	-	3.122								
<i>Subtotal: Hardware - W4012 Take Charge and Move Out (TACAMO) Cost</i>	-	-	0.000	-	-	1.962	-	-	2.982	-	-	3.122	-	-	0.000	-	-	3.122								
Hardware - W4010 - NC3 NMHS Technical Refresh Cost																										
Recurring Cost																										
6.1.1) NC3 NMHS Technical Refresh ^{(†) (7)}	-	-	0.000	-	-	0.000	-	-	0.000	155.538	13	2.022	-	-	0.000	155.538	13	2.022								
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.022	-	-	0.000	-	-	2.022								
<i>Subtotal: Hardware - W4010 - NC3 NMHS Technical Refresh Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.022	-	-	0.000	-	-	2.022								
Hardware - W4776 - NC3 NMHS Technical Refresh Ashore Installation Cost																										
Recurring Cost																										

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Exhibit P-5, Cost Analysis: PB 2019 Navy												Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support								Item Number / Title [DODIC]: 1 / Submarine Broadcast Support											
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:											
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																							
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total							
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)					
7.1.1) NC3 NMHS Technical Refresh Ashore Installation ⁽⁸⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.981	-	-	0.000	-	-	1.981					
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.981	-	-	0.000	-	-	1.981					
<i>Subtotal: Hardware - W4776 - NC3 NMHS Technical Refresh Ashore Installation Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.981	-	-	0.000	-	-	1.981					
Support - Support Cost																							
9.1) LBUCS Receive Production Support	-	-	0.000	-	-	0.000	-	-	0.149	-	-	0.146	-	-	0.000	-	-	0.146					
9.2) LBUCS Receive Economic Change Requests	-	-	0.000	-	-	0.000	-	-	0.300	-	-	0.200	-	-	0.000	-	-	0.200					
9.3) LBUCS Receive DSA	-	-	0.000	-	-	0.000	-	-	0.200	-	-	0.300	-	-	0.000	-	-	0.300					
9.4) SUBOPAUTH Production Support	-	-	0.000	-	-	0.188	-	-	0.238	-	-	0.019	-	-	0.000	-	-	0.019					
9.5) SUBOPAUTH Non Recurring Engineering	-	-	0.000	-	-	1.014	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000					
9.6) TACAMO Production Support	-	-	0.000	-	-	0.106	-	-	0.000	-	-	0.183	-	-	0.000	-	-	0.183					
9.7) TACAMO Non Recurring Engineering ⁽⁹⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	4.000	-	-	0.000	-	-	4.000					
9.9) NC3 NMHS Technical Refresh Production Support	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.124	-	-	0.000	-	-	0.124					
<i>Subtotal: Support - Support Cost</i>	-	-	0.000	-	-	1.308	-	-	0.887	-	-	4.972	-	-	0.000	-	-	4.972					
Gross/Weapon System Cost	-	-	0.000	-	-	4.645	-	-	9.410	-	-	17.939	-	-	0.000	-	-	17.939					

(†) indicates the presence of a P-5a

Footnotes:

(1) Unit costs for Low Band Universal Communications Systems (LBUCS) Receive equipment vary due to economic order quantities and learning curve as well as inflation adjustments. Delays to procurement schedule are associated with system of systems integration delays.

(2) Ashore install costs for LBUCS Receive equipment vary due to unique site and system configurations at a mix of Continental United States (CONUS) and Outside of the Continental United States (OCONUS) locations. For example, OCONUS (Japan, England, Italy, and Hawaii) install costs are higher due to international coordination, travel and shipping.

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12	P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support	Item Number / Title [DODIC]: 1 / Submarine Broadcast Support		
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:			
(3) Afloat install costs for LBUCS Receive equipment vary due to varying platform (five different classes of submarines) and system configurations. For example, an SSBN requires three units installed while an SSN requires one, making the install cost lower on a per-receiver basis for an SSBN due to consolidated labor efforts.				
(4) Submarine Operating Authority (SUBOPAUTH) equipment procurement costs vary due to unique equipment configurations and different equipment being procured each year. FY18 procures nine (9) SOA Modernization Unified Computing Systems (UCS). FY19 will procure remaining two (2) SOA Modernization UCS with an average unit cost of \$306K and two (2) Keyboard Video Mouse (KVM) modernization units, which provide human-machine interface (HMI) and have an average unit cost of \$960K.				
(5) Submarine Operating Authority (SUBOPAUTH) equipment installation costs vary due to unique equipment configurations at each site. FY19 will install SOA modernization UCS.				
(6) Unit cost fluctuates because the Take Charge and Move Out (TACAMO) program procures different systems each fiscal year. In FY18 TACAMO will procure two (2) HEMP protected EHF mobile shelters. In FY19 TACAMO will procure the first Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT) and fund the associated Non-Recurring Engineering (NRE) efforts. Installation costs are not applicable to the EHF mobile shelters or to MAT as these systems are delivered turnkey.				
(7) NC3 NMHS hardware and software upgrades at all sites to enable enterprise Network Monitoring (NETMon), enterprise Computer Network Defense (CND), and Cyber situational awareness tools to correlate cyber threats in the FSBS network and map the best path to deliver EAMs. Quantity represents Various Sites. (4 Hub, 2 Monitor, 7 Spoke)				
(8) Unit cost fluctuation is due to procurement of variable systems to support SW/HW configurations & the addition of Network Monitoring/Computer Network Defense (NETMon/CND) capability requirement to meet cyber security requirements. Quantities represent various sites. (4 Hub, 2 Monitor, 7 Spoke) Installation costs vary due to unique site configurations.				
(9) TACAMO Non-Recurring Engineering (NRE) costs include start up efforts to establish a production capability for the terminals as well as engineering of the HEMP hardened transit cases, HEMP filter selection, component integration, testing, production design data and documentation.				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support					Item Number / Title [DODIC]: 1 / Submarine Broadcast Support				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) W4009 LBUCS Receive		2018	SSC PAC / San Diego, CA	WR	San Diego, CA	May 2018	Sep 2018	17	107.496	Y		
1.1.1) W4009 LBUCS Receive		2019	SSC PAC / San Diego, CA	WR	San Diego, CA	Jun 2019	Oct 2019	16	86.399	Y		
3.1.1) Submarine Operating Authority (SUBOPAUTH)		2017	SSC LANT / Charleston, SC	C / IDIQ	Charleston, SC	Jul 2017	Oct 2017	4	343.750	Y		
3.1.1) Submarine Operating Authority (SUBOPAUTH)		2018	SSC LANT / Charleston, SC	C / IDIQ	Charleston, SC	Mar 2018	Jun 2018	9	288.100	Y		
3.1.1) Submarine Operating Authority (SUBOPAUTH)		2019	SSC LANT / Charleston, SC	C / IDIQ	Charleston, SC	Mar 2019	Jun 2019	4	633.000	Y		
5.1.1) W4012 Take Charge and Move Out (TACAMO)		2017	Gaven Shielding Services / Saxonburg, PA	C / FFP	San Diego, CA	Sep 2017	Sep 2018	1	1,962.000	Y		Jul 2017
5.1.1) W4012 Take Charge and Move Out (TACAMO)		2018	Gaven Shielding Services / Saxonburg, PA	C / CPFF	TBD	Nov 2017	Sep 2018	2	1,491.000	Y		Jul 2017
5.1.1) W4012 Take Charge and Move Out (TACAMO)		2019	Gaven Shielding Services / Saxonburg, PA	C / FFP	TBD	Dec 2018	Oct 2019	1	3,122.000	N	Feb 2018	Apr 2018
6.1.1) NC3 NMHS Technical Refresh		2019	TBD / TBD	C / TBD	TBD	Nov 2018	Nov 2018	13	155.538	N	Mar 2018	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support						Modification Number / Title: 1 / W4008 Transmission Equipment			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	27.350	5.818	24.165	12.391	0.000	12.391	14.050	14.130	14.935	14.589	2.376	129.804
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	27.350	5.818	24.165	12.391	0.000	12.391	14.050	14.130	14.935	14.589	2.376	129.804
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	27.350	5.818	24.165	12.391	0.000	12.391	14.050	14.130	14.935	14.589	2.376	129.804
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Transmission Equipment program modernizes the aging and obsolete equipment of the submarine broadcast transmission systems, which include the high power transmitters and antennas located at the Broadcast Transmitter Station (BTS) sites. Different equipment are procured each year for this effort depending on modernization requirements. In FY18, one (1) Bushing, one (1) Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, one (1) AN/FRT-95 Conversion to AN/FRT-95D, four (4) Network Tech Upgrade Kits, four (4) Solid-State Variable PA Plate Power Supplies, and (1) UV Arc Sensor were procured. In support of the replacement of the damaged Fixed Submarine Broadcast System (FSBS) antenna and transmitter at the NRTF Aguada, PR site, the Tower Lighting Isolation Transformer (TLIT) Base Housing, the AN/FRT-95 Conversion to AN/FRT-95D and the Insulator were procured in FY18 with the FY18 Hurricane Amendment funding. In FY19, one (1) Base Insulator Assembly (BIA), one (1) Bushing, one (1) Insulator, one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing, two (2) Auto-tune Power Amplifiers, two (2) Auto-tune Systems, two (2) Tap Changer Under Load (TCUL) Transformers, and one (1) Transmission Line Impedance Matching Network (TLZN) will be procured.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support							Modification Number / Title: 1 / W4008 Transmission Equipment			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: W4008 Transmission Equipment</i>													
A Kits													
Recurring													
1.1.1) Transmission Equipment - NonOrganic	4 / 10.357	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 10.357
1.1.2) Antennas - NonOrganic ⁽¹⁰⁾	4 / 2.000	5 / 1.272	3 / 5.995	4 / 6.122	- / -	4 / 6.122	11 / 3.276	1 / 0.060	7 / 1.896	1 / 5.025	- / -	- / -	36 / 25.646
1.1.3) Transmitters - NonOrganic ⁽¹¹⁾	3 / 10.200	35 / 1.675	10 / 11.071	7 / 4.202	- / -	7 / 4.202	7 / 5.501	3 / 11.013	12 / 10.183	7 / 5.579	- / -	- / -	84 / 59.424
1.1.4) Antennas - Not Installed - Organic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.567	- / -	- / -	- / -	- / -	- / -	1 / 0.567
<i>Subtotal: Recurring</i>	- / 22.557	- / 2.947	- / 17.066	- / 10.324	- / -	- / 10.324	- / 8.777	- / 11.640	- / 12.079	- / 10.604	- / 0.000	- / 95.994	
<i>Subtotal: W4008 Transmission Equipment</i>	11 / 22.557	40 / 2.947	13 / 17.066	11 / 10.324	- / -	11 / 10.324	18 / 8.777	5 / 11.640	19 / 12.079	8 / 10.604	- / -	- / -	125 / 95.994
<i>Subtotal: Procurement, All Modification Items</i>	- / 22.557	- / 2.947	- / 17.066	- / 10.324	- / -	- / 10.324	- / 8.777	- / 11.640	- / 12.079	- / 10.604	- / 0.000	- / 95.994	
Support (All Modification Items)													
2.1) Production Support	- / 1.383	- / 0.227	- / 1.258	- / 0.654	- / 0.000	- / 0.654	- / 0.632	- / 0.425	- / 0.530	- / 0.517	- / -	- / -	1 / 5.626
<i>Subtotal: Support</i>	- / 1.383	- / 0.227	- / 1.258	- / 0.654	- / -	- / 0.654	- / 0.632	- / 0.425	- / 0.530	- / 0.517	- / 0.000	- / 0.000	- / 5.626
Installation													
<i>Modification Item 1 of 1: W4008 Transmission Equipment</i>	- / 3.410	- / 2.644	- / 5.841	- / 1.413	- / 0.000	- / 1.413	- / 4.641	- / 2.065	- / 2.326	- / 3.468	- / 2.376	- / 28.184	
<i>Subtotal: Installation</i>	- / 3.410	- / 2.644	- / 5.841	- / 1.413	- / -	- / 1.413	- / 4.641	- / 2.065	- / 2.326	- / 3.468	- / 2.376	- / 28.184	
Total													
Total Cost (Procurement + Support + Installation)	27.350	5.818	24.165	12.391	0.000	12.391	14.050	14.130	14.935	14.589	2.376	129.804	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support				Modification Number / Title: 1 / W4008 Transmission Equipment				
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: W4008 Transmission Equipment								MDAP/MAIS Code:				
Manufacturer Information												
Manufacturer Name: SSC PAC (Antennas) ⁽¹²⁾				Manufacturer Location: San Diego, CA								
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 12								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023					
Contract Dates	Mar 2017	Mar 2018	Jan 2019									
Delivery Dates	Jun 2017	Jan 2019	Jan 2020									
Manufacturer Name: SSC LANT (Transmitters)				Manufacturer Location: Charleston, SC								
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 5								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023					
Contract Dates	Jan 2017	Jan 2018	Jan 2019									
Delivery Dates	Jun 2017	Jun 2018	Jun 2019									
Installation Information												
Method of Implementation: Alteration Installation Team::: Installation Name: Transmission Equipment												
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 3.410	3 / 0.887	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 4.297
FY 2017	- / -	18 / 1.757	22 / 1.261	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 3.018
FY 2018	- / -	- / -	8 / 4.580	5 / 0.681	0 / 0.000	5 / 0.681	- / -	- / -	- / -	- / -	0 / 0.000	13 / 5.261
FY 2019	- / -	- / -	- / -	2 / 0.732	0 / 0.000	2 / 0.732	9 / 3.640	- / -	- / -	- / -	0 / 0.000	11 / 4.372
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.001	8 / 1.981	- / -	- / -	0 / 0.000	18 / 2.982
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.084	3 / 1.050	- / -	- / -	0 / 0.000	4 / 1.134
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 1.276	8 / 2.662	0 / 0.000	19 / 3.938
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.806	1 / 2.376	8 / 3.182
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7 / 3.410	21 / 2.644	30 / 5.841	7 / 1.413	0 / 0.000	7 / 1.413	19 / 4.641	9 / 2.065	14 / 2.326	15 / 3.468	1 / 2.376	123 / 28.184

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12								P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support								Modification Number / Title: 1 / W4008 Transmission Equipment															
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: W4008 Transmission Equipment																		MDAP/MAIS Code:													
Installation Information																															
Method of Implementation: Alteration Installation Team:: Installation Name: Transmission Equipment																															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	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	-	-	13	6	1	10	19	-	-	5	5	-	3	1	15	-	1	1	7	-	-	5	9	-	-	8	7	1	124	
Out	7	-	-	-	13	6	1	10	19	-	-	5	5	-	3	1	15	-	1	1	7	-	-	5	9	-	-	8	7	1	124
Method of Implementation (Organic): Antennas - Not Installed																		Installation Quantity: 1													
Footnotes:																															
(10) ANTENNA Transmission Equipment funds modernize the aging and obsolete antenna equipment used in the Submarine Broadcast. Procurement and Installation unit costs vary due to procuring and installing different equipment each fiscal year. FY18 Hurricane Amendment funding is in support of the replacement of damaged Fixed Submarine Broadcast (FSBS) antennas and transmitters equipment at NRTF Aguada, PR site. These replacement efforts are essential to Nuclear Command, Control, and Communication (NC3) readiness, since the primary mission of the FSBS is NC3, providing 24/7 one-way Low Frequency/Very Low Frequency (LF/VLF) transmission of strategic and tactical messages to submarines operating in a stealth posture. FY18 ANTENNA funding procured three (3) equipment items: one (1) Bushing, one (1) Insulator, and one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing utilizing a task order contract which was awarded in January 2018. The Bushing delivers eleven (11) months after contract award. The Bushing will be installed in FY19 due to the assembly requirements prior to installation, weather conditions and operational availability at NCTAMS LANT Cutler, ME. The procurement of one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing and one (1) Insulator will replace the damaged equipment sustained during the Hurricane at the NRTF Aguada, PR site. The TLIT Base Housing delivers five (5) months after contract award, and the Insulator delivers twelve (12) months after contract award. Both TLIT Base Housing and Insulator will be installed in FY19 due to the procurement lead time, shipment requirements, and assembly requirements at the NRTF Aguada, PR site. FY19 ANTENNA funding will procure four (4) equipment items: one (1) Base Insulator Assembly (BIA), one (1) Bushing, one (1) Insulator, and one (1) Tower Lighting Isolation Transformer (TLIT) Base Housing all on one task order of the same contract which is expected to be awarded in January 2019. The TLIT Base Housing will be installed utilizing FY19 funding and are subject to site availabilities. The BIA delivers nine (9) months after contract award and the Insulator delivers twelve (12) months after contract award. Both BIA and Insulator will be installed in FY20 due to the procurement lead time, shipment requirements, weather conditions, and operational availability at NCTAMS LANT Det LaMoure, ND.																															
(11) TRANSMITTERS Transmission Equipment funds modernize the aging and obsolete transmitter components used in the Submarine Broadcast. Procurement and Installation unit costs vary due to procuring and installing different components each fiscal year. FY18 Hurricane Amendment funding is in support of the replacement of damaged Fixed Submarine Broadcast (FSBS) antennas and transmitters equipment at NRTF Aguada, PR site. These replacement efforts are essential to Nuclear Command, Control, and Communication (NC3) readiness, since the primary mission of the FSBS is NC3, providing 24/7 one-way Low Frequency/Very Low Frequency (LF/VLF) transmission of strategic and tactical messages to submarines operating in a stealth posture. FY18 TRANSMITTER funding procured ten (10) components: one (1) AN/FRT-95 Conversion to AN/FRT-95D, four (4) Network Tech Upgrade Kits, four (4) Solid-State Variable Power Amplifier Plate Power Supplies, and one (1) UV Arc Sensor. The procurement of one (1) AN/FRT-95 Conversion to AN/FRT-95D will replace the damaged equipment sustained during the Hurricane at the NRTF Aguada, PR site. The AN/FRT-95 Conversion to AN/FRT-95D delivers twelve (12) months after contract award and will be installed in FY19 due to the procurement lead time, shipment requirements, and assembly requirements at the NRTF Aguada, PR site. The Network Tech Upgrade and UV Arc Sensor will be installed using FY18 funding and are subject to site availabilities. The Solid-State Variable Power Amplifier Plate Power Supplies will be installed in FY19 due to the assembly and shipment requirements prior to the installation. FY19 TRANSMITTER funding will procure seven (7) components: two (2) Auto-tune Power Amplifiers, two (2) Auto-tune Systems, two (2) Tap Changer Under Load (TCUL) Transformers, and one (1) Transmission Line Impedance Matching Network (TLZN). The Auto-tune System and the TLZN will be installed utilizing FY19 funding and are subject to site availabilities. The TCUL will be installed in FY20 due to the assembly and shipment requirements prior to the installation.																															
(12) Antenna equipment (various components) is procured on one contract award in January 2018. Delivery dates vary between nine (9) and twelve (12) months.																															

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support						Modification Number / Title: 2 / W4009 Low Band Universal Communications System (LBUCS) Transmit			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	10.658	10.004	2.613	0.567	0.000	0.567	0.000	0.000	0.000	0.000	0.000	23.842
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	10.658	10.004	2.613	0.567	0.000	0.567	0.000	0.000	0.000	0.000	0.000	23.842
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	10.658	10.004	2.613	0.567	0.000	0.567	0.000	0.000	0.000	0.000	0.000	23.842
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Low Band Universal Communication System (LBUCS) Transmit will modernize the transmit subsystem hardware, software, and waveform components at Broadcast Transmitter Stations (BTS) and Broadcast Control Authority (BCA) sites including the Very Low Frequency (VLF) Broadcast Builder (VBB), AN/URU-30B Integrated VLF Transmit Terminal (IVTT), IVTT Proxy, the MD-1310, MD-1315, and MD-1316 Modulators, and the North Atlantic Treaty Organization (NATO) Interoperable Submarine Broadcast System (NISBS).												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support							Modification Number / Title: 2 / W4009 Low Band Universal Communications System (LBUCS) Transmit		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: VLF Broadcast System			Modification Type: TBD							Related RDT&E PEs: 0101402N		
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: W4009 Low Band Universal Communications System (LBUCS) Transmit</i>												
A Kits												
Non-Recurring												
1.1.1) Broadcast Keying Station (BKS)/Broadcast Control Authority (BCA) - NonOrganic ⁽¹³⁾	4 / 2.162	24 / 4.228	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 6.390
1.1.2) Broadcast Transmitter Station (BTS) - NonOrganic ⁽¹⁴⁾	8 / 1.800	20 / 4.075	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 5.875
<i>Subtotal: Non-Recurring</i>	- / 3.962	- / 8.303	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: W4009 Low Band Universal Communications System (LBUCS) Transmit</i>	12 / 3.962	44 / 8.303	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 12.265
<i>Subtotal: Procurement, All Modification Items</i>	- / 3.962	- / 8.303	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Production Support	- / 0.839	- / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.959
2.2) DSA	- / 2.158	- / 0.696	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.254
2.3) Data Logistics	- / 1.346	- / 0.025	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.396
2.4) Engineering Change Requests	- / 0.833	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.833
<i>Subtotal: Support</i>	- / 5.176	- / 0.841	- / 0.425	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: W4009 Low Band Universal Communications System (LBUCS) Transmit</i>	- / 1.520	- / 0.860	- / 2.188	- / 0.567	- / 0.000	- / 0.567	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 5.135
<i>Subtotal: Installation</i>	- / 1.520	- / 0.860	- / 2.188	- / 0.567	- / -	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	10.658	10.004	2.613	0.567	0.000	0.567	0.000	0.000	0.000	0.000	0.000	23.842

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support										Modification Number / Title: 2 / W4009 Low Band Universal Communications System (LBUCS) Transmit																	
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																	
Modification Item 1 of 1: W4009 Low Band Universal Communications System (LBUCS) Transmit																															
Manufacturer Information																															
Manufacturer Name: SSC LANT							Manufacturer Location: Charleston, SC																								
Administrative Leadtime (in Months): 5							Production Leadtime (in Months): 3																								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Mar 2017																														
Delivery Dates	Jun 2017																														
Installation Information																															
Method of Implementation: Alteration Installation Team:: Installation Name: Broadcast Control Authority & Broadcast Transmitter																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.520	4 / 0.267	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.787															
FY 2017			- / -	10 / 0.593	26 / 2.188	8 / 0.567	0 / 0.000	8 / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	44 / 3.348															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			8 / 1.520	14 / 0.860	26 / 2.188	8 / 0.567	0 / 0.000	8 / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	56 / 5.135															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021		FY 2022		FY 2023		TC	Tot							
	Q1	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	-	-	-	10	-	-	16	14	4	2	2	-	-	-	-	-	-	-	-	-	-	-	56							
Out	8	-	-	-	10	-	-	12	10	8	4	2	2	-	-	-	-	-	-	-	-	-	-	56							

Footnotes:

(13) Production costs for LBUCS equipment vary due to unique site configurations. LBUCS Transmit hardware components from COTS manufacturers are on short product lifecycles. Cost and duration for LBUCS Broadcast Control Authority (BCA) installations are greater than Broadcast Transmitter Stations (BTS) due to complexity of the BCA system. Additionally, install costs for BCA equipment vary due to

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12	P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support	Modification Number / Title: 2 / W4009 Low Band Universal Communications System (LBUCS) Transmit
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
unique site configuration and mix of CONUS and OCONUS locations. For example, OCONUS (Puerto Rico, Australia, Japan, Iceland, Hawaii, and Italy) install costs are higher due to international coordination, modifications (e.g. international power modifications, travel and shipping.) With FY17 funds, LBUCS will install 10 production and installation support facility systems for which the cost is significantly lower than the operational BCAs and BTSSs, as no international coordination, modification, shipping or travel will be required. These production and installation support facility systems installs can occur upon delivery, and no full deployment decision required. Additionally, several FY17 funded sites leverage LRIP equipment and require minimal modification to the existing structure. LBUCS Transmit equipment and cables will be installed in racks and must go through acceptance and integration testing prior to installation. This process can take up to 15 months due to complexity of each site's unique system configuration and special considerations (For example, international power modifications, adjustments for space availability, and extended shipping times for OCONUS sites). Installation schedule was arranged to accommodate sites with shorter integration timelines first and longer integration timelines later. The 14 installations taking place in FY17 have shorter integration timelines. Nearly all of the installations taking place in FY18 and FY19 are at OCONUS sites which require additional integration time, coordination, travel, and shipping, and therefore must be procured and installed in different years. LBUCS delayed the installation schedule due to factors including an emergent requirement to verify correction of cyber deficiencies prior to install, projected lack of availability of system-wide transmitter downtime (downtime is required to complete installations) in the wake of Hurricane Maria's impact on the Puerto Rico transmitter, as well as an emergent requirement for LBUCS to independently stand-up point-to-point connectivity between the BCA and BTS sites.		

(14) The LBUCS Transmit BTS production cost increased from PB18 due to an emergent requirement for LBUCS to independently stand-up turn-key point-to-point connectivity between the BCA and BTS sites. This requirement emerged because of a policy change by the Defense Information Systems Agency (DISA).

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support						Modification Number / Title: 3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)							
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-				
Gross/Weapon System Cost (\$ in Millions)	11.331	10.601	8.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.413				
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-				
Net Procurement (P-1) (\$ in Millions)	11.331	10.601	8.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.413				
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-				
Total Obligation Authority (\$ in Millions)	11.331	10.601	8.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.413				
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-				
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-				
Description:																
[P3A / W4010 Legacy NC3 NMHS]: FY14-FY18 Legacy Nuclear Command, Control and Communication Navy Modernized Hybrid Solution (NC3 NMHS): The Legacy NC3 NMHS messaging hardware and software will provide accurate and reliable delivery of time-critical messages for command and control of nuclear forces in a pre-attack environment for force direction, force management, situation monitoring and planning. The NC3 NMHS hardware and software upgrade at all sites will replace Navy Information eXchange Terminal(NIXT) at shore communications stations supporting NC3.																

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support						Modification Number / Title: 3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)			
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: 0101402N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)</i>												
A Kits												
Recurring												
1.1.1) W4010 NC3 NMHS - Nova (Legacy) - NonOrganic ⁽¹⁵⁾	7 / 1.950	4 / 3.337	4 / 3.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 8.561
1.1.2) W4010 NC3 NMHS - NIXT (Legacy) - NonOrganic ⁽¹⁶⁾	98 / 2.941	32 / 4.160	21 / 2.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	151 / 9.447
<i>Subtotal: Recurring</i>	- / 4.891	- / 7.497	- / 5.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)</i>	105 / 4.891	36 / 7.497	25 / 5.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	166 / 18.008
<i>Subtotal: Procurement, All Modification Items</i>	- / 4.891	- / 7.497	- / 5.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Nova/NIXT Legacy- Production Support	- / 0.229	- / 0.302	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.667
<i>Subtotal: Support</i>	- / 0.229	- / 0.302	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)</i>	- / 6.211	- / 2.802	- / 2.725	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 11.738
<i>Subtotal: Installation</i>	- / 6.211	- / 2.802	- / 2.725	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	11.331	10.601	8.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.413

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support								Modification Number / Title: 3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)																														
Manufacturer Information																														
Manufacturer Name: SSC PAC				Manufacturer Location: San Diego, CA																										
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 1																										
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates	Nov 2016	Nov 2017																												
Delivery Dates	Dec 2016	Dec 2017																												
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: W4010 NC3 NMHS - Nova (Legacy)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 1.144																
FY 2017	- / -	4 / 1.656	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.656																
FY 2018	- / -	- / -	4 / 1.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.660																
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total	7 / 1.144	4 / 1.656	4 / 1.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 4.460																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	2	2	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15					
Out	7	-	-	2	2	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15					

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3107 / Submarine Broadcast Support									Modification Number / Title: 3 / W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: W4010 Nuclear Command, Control and Communications Navy Modernized Hybrid Solution (NC3 NMHS)																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: W4010 NC3 NMHS - NIXT (Legacy)																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)												
Prior Years			98 / 5.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	98 / 5.067															
FY 2017			- / -	32 / 1.146	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	32 / 1.146															
FY 2018			- / -	- / -	21 / 1.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 1.065															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			98 / 5.067	32 / 1.146	21 / 1.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	151 / 7.278															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	98	8	8	8	8	1	6	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151					
Out	98	8	8	8	8	1	6	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151					

Footnotes:

(15) Unit cost fluctuation is due to procurement of variable systems to support Nova legacy configurations and the addition of Network Monitoring/Computer Network Defense(NETMon/CND) capability requirement to meet cyber security requirements.

(16) Unit cost fluctuation is due to procurement of variable systems to support Navy Information eXchange Terminal (NIXT) legacy configurations, and the addition of Network Monitoring/Computer Network Defense(NETMon/CND) capability requirement to meet cyber security requirements. Installation costs vary due to unique site configurations and equipment installation requirements.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications					3130 / Submarine Communication 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: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	495.331	62.305	86.204	78.580	0.000	78.580	73.630	64.510	62.011	60.158	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	495.331	62.305	86.204	78.580	0.000	78.580	73.630	64.510	62.011	60.158	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	495.331	62.305	86.204	78.580	0.000	78.580	73.630	64.510	62.011	60.158	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	0.305	0.701	1.377	-	1.377	1.066	0.095	0.018	0.036	Continuing	Continuing					
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
PROGRAM COVERAGE: The Submarine Communications Program mission is to create a common, automated, open system architecture radio room for all submarine classes. The program provides for the procurement and installation of systems incorporating the technical advances of network centric warfare to allow the submarine force to communicate as part of the Battle Group. The program addresses the unique demands of submarine communications, stealth, obsolescence issues and higher data rate requirements.																	
[P40A / L0035 Antenna Modifications]: - Antenna modifications provide for the procurement and installation of field change kits of legacy antenna equipment (OE-315, AN/BRA-24, AN/BRA-6B, BRT-1/1A). These modifications address performance issues, improve reliability and maintainability, decrease vulnerability, and provide cost effective technology refresh. Modifications are applicable to all submarine classes (LOS ANGELES, SEAWOLF, OHIO SSBN/SSGN, and VIRGINIA) and are implemented on a Fleet priority basis. Procurement and Installation unit costs vary due to procuring and installing different components each fiscal year.																	
[P40A / L0099 Towed Buoy Antenna (TBA) (AN/BRR-6/6B) Reliability Improvements]: The Towed Buoy Antenna (TBA) (AN/BRR-6/6B) system is installed on the OHIO Class Ballistic Missile Submarines (SSBN). Each boat has two (2) towed communications buoys with the sole function of supporting Navy Nuclear Command, Control, and Communications (NC3) strategic requirements, connecting the President of the United States (POTUS) to SSBN communications reception for the strategic deterrent mission. The TBA AN/BRR-6/6B system receives transmission across the Very Low Frequency (VLF), Low Frequency (LF), and High Frequency (HF) range. The buoy system provides significant operational flexibility by providing a means to passively receive communications while remaining at depth with minimal impact on boat's maneuverability or detectability.																	
Different hardware components are procured each fiscal year. Budget exhibits and quantities have been updated from PB18. Procurements are now subdivided into each type of upgrade to provide greater detail in budget request from year to year. Procurements vary each year due to the phased approach as prescribed in the AN/BRR-6/6B Towed Buoy Antenna Lean Six Sigma Event Final Report of 30 September 2011. Hardware components are selected by TBA unit interdependency, urgent need for improvement, and fielding efficiency without degrading SSBN operational readiness.																	
The TBA AN/BRR-6/6B reliability improvements provide for the procurement and installation of field change kits to improve system performance (measured by operational availability (Ao)) and reliability (measured by mean time between failures (MTBF)); improvements are applicable to SSBN only. The TBA AN/BRR-6/6B is a key component of the NC3 system and the primary means of receiving Emergency Action Messages (EAMs).																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications		P-1 Line Item Number / Title: 3130 / Submarine Communication 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: N/A				
[P3A / L0080 OE-538/BRC Inc 2]: OUTBOARD ELECTRONICS (OE)-538 & OE-592 ANTENNA GROUP - The OE-538 System is currently installed on all submarine classes except SSBN. The OE-592 system is currently installed on SSBNs. The OE-538 Inc 2 consists of two configurations: OE-538A and OE-538B. The OE-538A effort upgrades the OE-538 system from FY15-FY21 to support Mobile User Objective System (MUOS), Link-16 Tactical Data Link and Iridium capabilities. The OE-538B efforts upgrades the OE-538A from FY20-FY27 to support Global Positioning System (GPS) Anti-Jam and GPS Military Coded capabilities.				
[P3A - 2 / L0087 Submarine High Data Rate Antenna]: SUBMARINE HIGH DATA RATE (SubHDR) SATELLITE COMMUNICATIONS SYSTEM - The SubHDR system provides submarines with antennas that have the bandwidth, gain, and flexibility to meet the stated Commander, Submarine Force, United States Atlantic Fleet/Commander, Submarine Force, US Pacific Fleet (COMSUBLANT/COMSUBPAC) requirements for HDR communications in the Super High Frequency (SHF) and Extremely High Frequency (EHF) frequency spectrums. The Radome provides a watertight enclosure for the antenna and associated electronics, as well as being a transparent window for Radio Frequency, (RF) communication signals to pass through. This radome needs to be replaced with a newly designed radome because the existing radome is experiencing severe cracking after only 3 to 4 years of service, at which time it is required to be pulled from service in order to prevent an implosion. This new design will prevent those cracks from occurring.				
[P3A - 3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades]: The Common Submarine Radio Room (CSRR) is an interoperable submarine communications system operating within the Information Dominance architecture, which provides consistent and reliable two-way, modern, Internet Protocol (IP) connectivity to joint and combined forces. This evolutionary system achieves unmatched capability, cost reduction, and future technology integration via a multimedia, circuit sharing, and Commercial Off-The-Shelf (COTS) based open architecture that serves as the shipboard automated communications control system. Procurement in this line is for the radio room workstations, chassis, Radio Frequency Distribution and Control System (RFDACS), common power supplies, power distribution units, cabling, mounting kits and ancillary components required to integrate communications equipment for submarines. The RFDACS technology update for LOS ANGELES class submarines brings COTS functionality and supportability to the submarine external communications system. The CSRR Program supports LOS ANGELES, SEAWOLF, VIRGINIA and OHIO (SSBN and SSGN) class submarines.				
CSRR modernization activities bring new capabilities, address new requirements, resolve End-of-Life (EOL) and obsolescence issues or correct known system deficiencies. The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues.				
The Undersea Platforms Special Communications program provides a fully integrated and tested Undersea Assured Command & Control (UAC2) communications system enabling command and control (C2) in an environment where traditional communications are not available, thereby reducing platform susceptibility of detection and attack by the adversary.				
Link 16 provides an enhanced submarine communication system by providing a two-way Tactical Data Link (TDL) processing capability on all Submarine (Nuclear) (SSN) and Guided Missile Submarine (Nuclear) (SSGN) platforms. The Link 16 program provides submarine Command & Control systems with Link 16 tactical network communications capabilities for situational awareness in a contested environment and is a key element in naval tactical networking. The new technology ensures the submarine's continued ability to participate in network-centric warfare and exploit its inherent stealth capabilities in support of the Navy, Nuclear Command, Control, and Communications (NC3), Joint, and allied/coalition fight to achieve total battlespace information dominance.				

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications				3130 / Submarine Communication 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: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Submarine Communication Equipment	P-5a			- / 72.921	- / 2.575	- / 10.551	- / 16.807	- / -
P-3a	1 / L0080 OE-538/BRC Inc 2 (Upgrade)				- / 13.010	- / 11.852	- / 21.929	- / 20.465	- / 0.000
P-3a	2 / L0087 Submarine High Data Rate Antenna (Upgrade)				- / 38.145	- / 6.438	- / 0.144	- / 0.000	- / 0.000
P-3a	3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades (Various)				- / 65.795	- / 12.896	- / 14.452	- / 9.472	- / 0.000
P-3a	4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades (Various)				- / 31.948	- / 1.116	- / 5.123	- / 3.162	- / 0.000
P-3a	5 / L0084 CSRR-SSN (SEAWOLF) (Various)				- / 51.044	- / 3.266	- / 3.745	- / 2.334	- / 0.000
P-3a	6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades (Various)				- / 53.409	- / 9.510	- / 15.400	- / 12.405	- / 0.000
P-3a	7 / L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades (Various)				- / 169.059	- / 14.652	- / 14.860	- / 13.935	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 495.331	- / 62.305	- / 86.204	- / 78.580	- / 0.000
Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	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)
P-40a	Submarine Communication Equipment	P-5a			- / -	- / -	- / -	- / -	- / -
P-3a	1 / L0080 OE-538/BRC Inc 2 (Upgrade)				- / 23.284	- / 23.494	- / 24.032	- / 24.475	Continuing
P-3a	2 / L0087 Submarine High Data Rate Antenna (Upgrade)				- / 0.000	- / 7.370	- / 8.004	- / 8.167	Continuing
P-3a	3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades (Various)				- / 3.581	- / 2.476	- / 2.757	- / 2.131	Continuing
P-3a	4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades (Various)				- / 5.357	- / 4.021	- / 1.699	- / 0.000	Continuing
P-3a	5 / L0084 CSRR-SSN (SEAWOLF) (Various)				- / 2.741	- / 3.082	- / 2.800	- / 0.402	Continuing
P-3a	6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades (Various)				- / 10.567	- / 7.155	- / 6.950	- / 5.771	Continuing
P-3a	7 / L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades (Various)				- / 11.859	- / 5.216	- / 5.793	- / 9.027	Continuing
P-40	Total Gross/Weapon System Cost				- / 73.630	- / 64.510	- / 62.011	- / 60.158	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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

- FY19 Antenna Modifications: Procure and install multiple field change kits for legacy antenna equipment, applicable to all submarine classes, to address performance issues, improve reliability and maintainability, decrease vulnerability, and provide cost effective technology insertion.
- FY19 Towed Buoy Antenna (TBA)(AN/BRR-6/6B): Procure and install various hardware components which are fielded to the Ballistic Missile Submarine (SSBN) fleet to improve system performance (measured by operational availability) and reliability (measured by mean time between failures). FY19 funding increase of \$4.7M over the FY18 budget is due to additional procurements of Tow Cable Equipment and Nests and Inertial Measurement units required to support reliability improvements provide for the procurement and installation of field change kits to improve system performance (measured by operational availability (Ao)) and reliability (measured by mean time between failures (MTBF)); improvements are applicable to SSBN only.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 12: Submarine Communications		P-1 Line Item Number / Title: 3130 / Submarine Communication 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: N/A		
<p>- FY19 Common Submarine Radio Room (CSRR): Implements CSRR on LOS ANGELES class submarines and modernizes CSRR on OHIO (SSBN/SSGN), SEAWOLF and VIRGINIA platforms. Funding will support procurement of CSRR Increment 1 Version 4, Radio Frequency Distribution and Control Systems (RFDACS) to address Reliability, Maintainability, Availability (RMA) and Environmental Qualification Testing (EQT) deficiencies, Undersea Assured Command & Control (UAC2) Solution 1 and Solution 2, and Link 16 terminals. In addition, funding will support installation of CSRR Increment 1 Version 3, CSRR Increment 1 Version 4, RFDACS (procured as a separate CSRR component but fielded as part of the CSRR Inc1v4 modernization kit installations) and UAC2 Solution 1 and Solution 2. FY19 funding increase of \$1.6M over the FY18 budget is due to UAC2 and Link 16 procurements, not previously procured in FY18.</p> <p>- FY19 Submarine High Data Rate (SubHDR): Radome procurement inventory requirement met in FY17</p> <p>- FY19 Outboard Electronics (OE)-538 & OE-592 antenna group: Procure OE-538A upgrade kits to support submarine communications requirements: Mobile User Objective System (MUOS), Link-16 Tactical Data Link (TDL), and Iridium.</p>		

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12					P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment									Aggregated Items Title: Submarine Communication Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)
1) L0035 Antenna Modifications																				
1.1) Antenna Modifications ^{(1)(t)}	A		148.447	150	22.267	-	-	-	54.662	65	3.553	55.742	62	3.456	-	-	-	55.742	62	3.456
<i>Subtotal: 1) L0035 Antenna Modifications</i>			-	-	22.267	-	-	-	-	-	3.553	-	-	3.456	-	-	-	-	3.456	
2) Common Submarine Radio Room (CSRR) - Support Systems Modification Kits (Increment 1 Versio ⁽²⁾																				
2.1) Equipment - (Prior Years)	A		3,526.667	12	42.320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.2) Equipment - Mod Kits Inc 1 Ver 4 ^(t)	A		193.500	2	0.387	-	-	-	205.000	1	0.205	-	-	-	-	-	-	-	-	
2.3) Equipment - Multi-Reconfigurable Training System (MRTS)	A		281.000	8	2.248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2.4) Equipment - Undersea Assured Command & Control (UAC2) Solution 1 ^(t)	A		-	-	-	-	-	-	201.500	4	0.806	204.333	3	0.613	-	-	-	204.333	3	0.613
2.5) Equipment - UAC2 Solution 2 ^(t)	A		-	-	-	-	-	-	-	-	168.000	4	0.672	-	-	-	168.000	4	0.672	
2.6) Equipment - Link 16 ^(t)	A		-	-	-	-	-	-	-	-	618.000	2	1.236	-	-	-	618.000	2	1.236	
2.7) Production Support	A		-	-	0.526	-	-	-	-	-	0.061	-	-	0.151	-	-	-	-	0.151	
<i>Subtotal: 2) Common Submarine Radio Room (CSRR) - Support Systems Modification Kits (Increment 1 Versio</i>			-	-	45.481	-	-	-	-	-	1.072	-	-	2.672	-	-	-	-	2.672	
3) L0099 Towed Buoy Antenna (TBA) (AN/BRR-6/6B) Reliability Improvements ⁽³⁾																				
3.1) Equipment - (Prior Years)	A		47.027	110	5.173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3.2) Tow Cable Equipment & Nests ^(t)	A		-	-	-	-	-	-	63.533	45	2.859	64.978	134	8.707	-	-	-	64.978	134	8.707
3.3) Inertial Measurement Unit ^(t)	A		-	-	-	-	-	-	50.600	10	0.506	52.567	30	1.577	-	-	-	52.567	30	1.577
3.4) Antenna & Amplifier Improvements ^(t)	A		-	-	-	49.159	44	2.163	50.136	44	2.206	-	-	-	-	-	-	-	-	
3.8) Reel Boxes ^(t)	A		-	-	-	2.355	110	0.259	-	-	-	-	-	-	-	-	-	-	-	
3.9) Production Support	A		-	-	-	-	-	-	0.153	-	-	0.355	-	-	0.395	-	-	-	0.395	

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy													Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12					P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment								Aggregated Items Title: Submarine Communication Equipment				
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO		
			Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)	Unit Cost (\$K)	Qty (Each)	Total Cost (\$M)
<i>Subtotal: 3) L0099 Towed Buoy Antenna (TBA) (AN/BR-6/6B) Reliability Improvements</i>			-	-	5.173	-	-	2.575	-	-	5.926	-	-	10.679	-	-	10.679
Total			-	-	72.921	-	-	2.575	-	-	10.551	-	-	16.807	-	-	16.807
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																	
(†) indicates the presence of a P-5a																	
Footnotes:																	
(1) Antenna Modifications provide for the procurement and installation of field change kits of legacy antenna equipment (OE-315, AN/BRA-24, AN/BRA-6B, BRT-1/1A, Mast Mechanical Groups (MMG)). These modifications address performance issues, improve reliability and maintainability, decrease vulnerability, and provide cost effective technology insertion. FY19 will procure; 28 - AIS Amplifiers, 20 - Transmit/Receive Switches, 14 - Rotary Lip Seal Assemblies.																	
(2) CSRR Support Systems Modernization Kits provide for the procurement and installation of CSRR baseline modernization reconfigurable lab assets to improve system performance and reliability and vary by Increment, Version, and Platform. FY19 includes procurement of seven Undersea Assured Command & Control (UAC2) solution sets to support DoD Teleports, DoN Submarine Broadcast Control Authorities and the CSRR land based submarine radio rooms. In addition, funding will support procurement of two Link 16 terminals for the CSRR land based submarine radio rooms.																	
(3) Installation costs are included in procurement (turnkey). Quantities have been updated from PB18 to reflect greater fidelity in procurement unit costs and provide detail of each type of upgrade. Installation costs are included in procurement (turnkey). Quantities have been updated from PB18 to reflect greater fidelity in procurement unit costs and provide detail of each type of upgrade. Tow Cable equipment consists of Tow Cables and Cable Cutters; Nests are used to cradle the buoy. FY18 quantities account for cables only; FY19 includes cables, cutters and nests. Inertial Measurement Unit quantity increase from FY18 to FY19 due as a result of 20 additional Inertial Measurement Units required in FY19 for buoy roll, yaw and pitch stability needs.																	

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Aggregated Items: Submarine Communication Equipment				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) L0035 Antenna Modifications												
1.1) Antenna Modifications ⁽¹⁾		2018	TBD / TBD	C / TBD	TBD	Apr 2018	Sep 2018	65	54.662	Y		Mar 2018
1.1) Antenna Modifications ⁽¹⁾		2019	TBD / TBD	C / TBD	TBD	Apr 2019	Sep 2019	62	55.742	Y		Mar 2019
2) Common Submarine Radio Room (CSRR) - Support Systems Modification Kits (Increment 1 Versio												
2.2) Equipment - Mod Kits Inc 1 Ver 4		2018	SAIC / Charleston, SC	C / CPFF	SSC LANT	Feb 2018	Feb 2019	1	205.000	Y		Oct 2017
2.4) Equipment - Undersea Assured Command & Control (UAC2) Solution 1		2018	COMTECH / Tempe, AZ	C / FFP	SPAWAR	Jan 2018	Jun 2018	4	201.500	Y		Oct 2017
2.4) Equipment - Undersea Assured Command & Control (UAC2) Solution 1		2019	COMTECH / Tempe, AZ	C / FFP	SPAWAR	Nov 2018	Apr 2019	3	204.333	Y		Oct 2017
2.5) Equipment - UAC2 Solution 2		2019	COMTECH / Tempe, AZ	C / FFP	SSC LANT	Nov 2018	Nov 2019	4	168.000	Y		Oct 2018
2.6) Equipment - Link 16		2019 ⁽⁴⁾	TBD / TBD	C / TBD	TBD	Apr 2019	Apr 2020	2	618.000	Y		Jan 2018
3) L0099 Towed Buoy Antenna (TBA) (AN/BRR-6/6B) Reliability Improvements												
3.2) Tow Cable Equipment & Nests		2018	Unknown / Unknown	C / FFP	NSWC Philadelphia	Apr 2018	Jul 2018	45	63.533	Y		Oct 2017
3.2) Tow Cable Equipment & Nests		2019	Unknown / Unknown	C / FFP	NSWC Philadelphia	Dec 2018	Mar 2019	134	64.978	Y		Oct 2018
3.3) Inertial Measurement Unit		2018	Unknown / Unknown	C / FFP	NSWC Philadelphia	Apr 2018	Jul 2018	10	50.600	Y		Sep 2017
3.3) Inertial Measurement Unit		2019	Unknown / Unknown	C / FFP	NSWC Philadelphia	Dec 2018	Jan 2019	30	52.567	Y		Sep 2017
3.4) Antenna & Amplifier Improvements		2017	GDIT / Fairfax, VA	C / FFP	NUWC Newport	Oct 2017	Jan 2018	44	49.159	Y		Jul 2017
3.4) Antenna & Amplifier Improvements		2018	GDIT / Fairfax, VA	C / FFP	NUWC Newport	Dec 2017	Mar 2018	44	50.136	Y		Jul 2017
3.8) Reel Boxes		2017 ⁽⁵⁾	Unknown / TBD	C / FFP	NSWC Philadelphia	Nov 2017	Feb 2018	110	2.355	Y		Sep 2017

Footnotes:

⁽⁴⁾ Program office will leverage existing contract in the Multifunctional Information Distribution System Program Office to procure the terminals for submarines.

⁽⁵⁾ Commercial Off The Shelf

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 1 / L0080 OE-538/BRC Inc 2									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total						
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-						
Gross/Weapon System Cost (\$ in Millions)	13.010	11.852	21.929	20.465	0.000	20.465	23.284	23.494	24.032	24.475	Continuing	Continuing						
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Net Procurement (P-1) (\$ in Millions)	13.010	11.852	21.929	20.465	0.000	20.465	23.284	23.494	24.032	24.475	Continuing	Continuing						
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Total Obligation Authority (\$ in Millions)	13.010	11.852	21.929	20.465	0.000	20.465	23.284	23.494	24.032	24.475	Continuing	Continuing						
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-						
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-						
Description: Procurement and Installation of OUTBOARD ELECTRONICS (OE)-538 & OE-592 ANTENNA GROUP (OE-538)																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment							Modification Number / Title: 1 / L0080 OE-538/BRC Inc 2			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Submarine			Modification Type: Upgrade					Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: L0080 OE-538/BRC Inc 2													
B Kits													
Recurring													
1.1.1) Equipment - OE-538A Antenna Upgrade Kits Installed - NonOrganic ⁽⁶⁾	4 / 4.015	7 / 8.577	20 / 9.597	19 / 9.151	- / -	19 / 9.151	14 / 8.584	- / -	- / -	- / -	- / -	- / -	64 / 39.924
1.1.2) Equipment - OE-538A Antenna Upgrade Kits Not Installed - Organic	7 / 6.974	- / -	10 / 4.798	- / -	- / -	- / -	2 / 1.276	- / -	- / -	- / -	- / -	- / -	19 / 13.048
1.1.3) Equipment - OE-538A RFDACS Upgrade Kits Installed - NonOrganic ⁽⁷⁾	- / -	2 / 0.977	8 / 4.014	12 / 6.053	- / -	12 / 6.053	10 / 5.788	- / -	- / -	- / -	- / -	- / -	32 / 16.832
1.1.4) Equipment - OE-538A RFDACS Upgrade Kits Not Installed - Organic	- / -	1 / 0.489	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.489
1.1.5) Equipment - OE-538B Antenna Upgrade Kits Installed - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 16.467	27 / 15.327	22 / 13.290	Continuing	Continuing	
1.1.6) Equipment - OE-538B Antenna Upgrade Kits Not Installed - Organic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.161	5 / 2.914	9 / 5.613	Continuing	Continuing	
Subtotal: Recurring	- / 10.989	- / 10.043	- / 18.409	- / 15.204	- / -	- / 15.204	- / 15.648	- / 17.628	- / 18.241	- / 18.903	Continuing	Continuing	
Subtotal: L0080 OE-538/BRC Inc 2	11 / 10.989	10 / 10.043	38 / 18.409	31 / 15.204	- / -	31 / 15.204	26 / 15.648	31 / 17.628	32 / 18.241	31 / 18.903	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 10.989	- / 10.043	- / 18.409	- / 15.204	- / -	- / 15.204	- / 15.648	- / 17.628	- / 18.241	- / 18.903	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 0.814	- / 0.632	- / 1.096	- / 1.043	- / -	- / 1.043	- / 1.181	- / 1.193	- / 1.222	- / 1.245	Continuing	Continuing	
2.2) Other (DSA) ⁽⁸⁾	- / 0.080	- / 0.040	- / 0.105	- / 0.272	- / -	- / 0.272	- / 0.276	- / 0.240	- / 0.400	- / 0.364	Continuing	Continuing	
2.3) Support Prior Years	- / 0.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.700
Subtotal: Support	- / 1.594	- / 0.672	- / 1.201	- / 1.315	- / -	- / 1.315	- / 1.457	- / 1.433	- / 1.622	- / 1.609	Continuing	Continuing	
Installation													
Modification Item 1 of 1: L0080 OE-538/BRC Inc 2	- / 0.427	- / 1.137	- / 2.319	- / 3.946	- / 0.000	- / 3.946	- / 6.179	- / 4.433	- / 4.169	- / 3.963	Continuing	Continuing	
Subtotal: Installation	- / 0.427	- / 1.137	- / 2.319	- / 3.946	- / -	- / 3.946	- / 6.179	- / 4.433	- / 4.169	- / 3.963	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	13.010	11.852	21.929	20.465	0.000	20.465	23.284	23.494	24.032	24.475	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment												Modification Number / Title: 1 / L0080 OE-538/BRC Inc 2															
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: L0080 OE-538/BRC Inc 2														MDAP/MAIS Code:																	
Manufacturer Information																															
Manufacturer Name: Submarine Antenna Joint Venture														Manufacturer Location: Marion, MA & Manchester, NH																	
Administrative Leadtime (<i>in Months</i>): 5														Production Leadtime (<i>in Months</i>): 12																	
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	May 2017	Mar 2018	Mar 2019																												
Delivery Dates	May 2018	Mar 2019	Mar 2020																												
Installation Information																															
Method of Implementation: Method:: Installation Name: OE-538																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.427	2 / 1.137	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.564																
FY 2017			- / -	- / -	9 / 2.319	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 2.319																
FY 2018			- / -	- / -	- / -	28 / 3.946	0 / 0.000	28 / 3.946	- / -	- / -	- / -	- / -	- / -	0 / 0.000	28 / 3.946																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	31 / 6.179	- / -	- / -	- / -	- / -	0 / 0.000	31 / 6.179																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 4.433	- / -	- / -	- / -	0 / 0.000	24 / 4.433																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 4.169	- / -	- / -	0 / 0.000	29 / 4.169																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 3.963	- / -	0 / 0.000	27 / 3.963																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																
Total			2 / 0.427	2 / 1.137	9 / 2.319	28 / 3.946	0 / 0.000	28 / 3.946	31 / 6.179	24 / 4.433	29 / 4.169	27 / 3.963	Continuing	Continuing																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	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	-	-	5	4	-	10	9	9	-	14	9	8	-	7	7	10	-	10	10	9	-	11	8	8	Cont.	Cont.
Out	-	2	-	-	2	-	-	5	4	-	10	9	9	-	14	9	8	-	7	7	10	-	10	10	9	-	11	8	8	Cont.	Cont.
Method of Implementation (Organic): Equipment - OE-538A Antenna Upgrade Kits Not Installed - Not Installed														Installation Quantity: 19																	
Method of Implementation (Organic): Equipment - OE-538A RFDACS Upgrade Kits Not Installed - Not Installed														Installation Quantity: 1																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12	P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment	Modification Number / Title: 1 / L0080 OE-538/BRC Inc 2
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1:</i> L0080 OE-538/BRC Inc 2		MDAP/MAIS Code:
Installation Information		
Method of Implementation (Organic): Equipment - OE-538B Antenna Upgrade Kits Not Installed - Not Installed	Installation Quantity: 0	

Footnotes:

- (6) OE-538A, OE-538B, and Radio Frequency Distribution and Control System (RFDACS) unit cost varies by submarine class and economic quantity order. All OE-538A upgraded antennas will be upgraded to OE-538B. Installation schedule reflects both OE-538A Antenna and RFDACS upgrade kits. Two (2) antennas procured in FY18 will not be installed until FY20. These antennas were procured in FY18 vice FY19 to meet the early FY20 installation dates. Between PB18 and PB19, the budget was updated to break out Antenna Upgrades "installed" and "not installed", additionally, due to economic order quantity discounts, unit costs were updated. The antennas that are not installed are part of the rotatable pool required to meet implementation plan.
- (7) RFDACS unit cost varies based on submarine class. RFDACS procurement in support of OE-538A implementation outside the normal CSRR version upgrade.
- (8) Increase in support cost due to increase in installations from 9 in FY18 to 28 in FY19.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 2 / L0087 Submarine High Data Rate Antenna			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	38.145	6.438	0.144	0.000	0.000	0.000	0.000	7.370	8.004	8.167	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	38.145	6.438	0.144	0.000	0.000	0.000	0.000	7.370	8.004	8.167	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	38.145	6.438	0.144	0.000	0.000	0.000	0.000	7.370	8.004	8.167	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of Submarine High Data Rate Antenna (SubHDR)												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment							Modification Number / Title: 2 / L0087 Submarine High Data Rate Antenna		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Submarine			Modification Type: Upgrade				Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: L0087 Submarine High Data Rate Antenna</i>												
B Kits												
Recurring												
1.1.1) Replacement Radomes Installed - NonOrganic	93 / 23.540	9 / 2.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
1.1.2) Replacement Radomes Not Installed - Organic	- / -	10 / 2.850	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
1.1.3) RMA Kits - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 6.960	12 / 7.413	12 / 7.464	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 23.540	- / 5.790	- / -	- / -	- / -	- / -	- / -	- / 6.960	- / 7.413	- / 7.464	Continuing	Continuing
<i>Subtotal: L0087 Submarine High Data Rate Antenna</i>	93 / 23.540	19 / 5.790	- / -	- / -	- / -	- / -	- / -	11 / 6.960	12 / 7.413	12 / 7.464	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	- / 23.540	- / 5.790	- / -	- / -	- / -	- / -	- / -	- / 6.960	- / 7.413	- / 7.464	Continuing	Continuing
Support (All Modification Items)												
2.1) Production Support	- / 17.091	- / 0.190	- / -	- / -	- / -	- / -	- / -	- / 0.235	- / 0.218	- / 0.308	Continuing	Continuing
2.2) Other (DSA)	- / 6.419	- / 0.170	- / -	- / -	- / -	- / -	- / -	- / 0.175	- / 0.175	- / 0.175	Continuing	Continuing
<i>Subtotal: Support</i>	- / 13.510	- / 0.360	- / -	- / -	- / -	- / -	- / -	- / 0.410	- / 0.393	- / 0.483	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: L0087 Submarine High Data Rate Antenna</i>	- / 1.095	- / 0.288	- / 0.144	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.198	- / 0.220	Continuing	Continuing
<i>Subtotal: Installation</i>	- / 1.095	- / 0.288	- / 0.144	- / -	- / -	- / -	- / -	- / -	- / 0.198	- / 0.220	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	38.145	6.438	0.144	0.000	0.000	0.000	0.000	7.370	8.004	8.167	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment										Modification Number / Title: 2 / L0087 Submarine High Data Rate Antenna																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: L0087 Submarine High Data Rate Antenna																																	
Manufacturer Information																																	
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																										
Administrative Leadtime (in Months): 6							Production Leadtime (in Months): 12																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Apr 2017																																
Delivery Dates	Apr 2018																																
Installation Information																																	
Method of Implementation: [none specified]:: Installation Name: Submarine High Data Rate Antenna																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)															
Prior Years			75 / 1.095	18 / 0.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	93 / 1.383																		
FY 2017			- / -	- / -	9 / 0.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	9 / 0.144																		
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.198	- / -	0 / 0.000	11 / 0.198																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.220	0 / 0.000	12 / 0.220																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.216	12 / 0.216	12 / 0.216																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	Continuing																	
Total			75 / 1.095	18 / 0.288	9 / 0.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.198	12 / 0.220	Continuing	Continuing																
Installation Schedule																																	
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
In	72	3	-	4	14	-	-	3	6	-	-	-	-	-	-	-	-	-	-	-	3	8	-	-	3	9	Cont.	Cont.					
Out	72	3	-	4	14	-	-	3	6	-	-	-	-	-	-	-	-	-	-	-	3	8	-	-	3	9	Cont.	Cont.					
Method of Implementation (Organic): Replacement Radomes Not Installed - Not Installed														Installation Quantity: 10																			

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	65.795	12.896	14.452	9.472	0.000	9.472	3.581	2.476	2.757	2.131	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	65.795	12.896	14.452	9.472	0.000	9.472	3.581	2.476	2.757	2.131	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	65.795	12.896	14.452	9.472	0.000	9.472	3.581	2.476	2.757	2.131	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of CSRR upgrades on Ohio Class Ballistic Missile Submarine (Nuclear) (SSBN)												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment							Modification Number / Title: 3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Submarine			Modification Type: Various				Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: L0084 CSRR-SSBN (OHIO) Mod Upgrades</i>												
B Kits												
Recurring												
1.1.1) Equipment - Mod Kits Inc 1 Ver 3 - NonOrganic ⁽⁹⁾	10 / 19.965	4 / 8.770	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 28.735
1.1.2) Equipment - Mod Kits Inc 1 Ver 4 - NonOrganic ⁽¹⁰⁾	- / -	- / -	1 / 0.265	5 / 1.366	- / -	5 / 1.366	- / -	1 / 0.290	1 / 0.299	- / -	Continuing	Continuing
1.1.3) Equipment - RFDACS Mod Kits (Inc 1 Ver 4) - Organic ⁽¹¹⁾	- / -	- / -	1 / 0.550	5 / 2.833	- / -	5 / 2.833	- / -	1 / 0.601	1 / 0.619	- / -	Continuing	Continuing
1.1.4) Equipment - UAC2 Solution 1 - NonOrganic	- / -	- / -	12 / 1.152	1 / 0.099	- / -	1 / 0.099	1 / 0.102	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Recurring</i>	<i>- / 19.965</i>	<i>- / 8.770</i>	<i>- / 1.967</i>	<i>- / 4.298</i>	<i>- / -</i>	<i>- / 4.298</i>	<i>- / 0.102</i>	<i>- / 0.891</i>	<i>- / 0.918</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>
<i>Subtotal: L0084 CSRR-SSBN (OHIO) Mod Upgrades</i>	<i>10 / 19.965</i>	<i>4 / 8.770</i>	<i>14 / 1.967</i>	<i>11 / 4.298</i>	<i>- / -</i>	<i>11 / 4.298</i>	<i>1 / 0.102</i>	<i>2 / 0.891</i>	<i>2 / 0.918</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 19.965</i>	<i>- / 8.770</i>	<i>- / 1.967</i>	<i>- / 4.298</i>	<i>- / -</i>	<i>- / 4.298</i>	<i>- / 0.102</i>	<i>- / 0.891</i>	<i>- / 0.918</i>	<i>- / -</i>	<i>Continuing</i>	<i>Continuing</i>
Support (All Modification Items)												
2.1) ShipALT/DSA Nonrecurring ⁽¹²⁾	- / 5.012	- / 0.450	- / 1.325	- / 0.256	- / -	- / 0.256	- / 0.576	- / 0.598	- / -	- / 0.545	Continuing	Continuing
2.2) Enterprise Change Request ⁽¹³⁾	- / 6.010	- / 0.531	- / 1.137	- / 0.684	- / -	- / 0.684	- / 0.699	- / 0.672	- / 0.811	- / 0.617	Continuing	Continuing
2.3) Data/Logistics ⁽¹⁴⁾	- / 5.575	- / 0.624	- / 0.507	- / 0.491	- / -	- / 0.491	- / 0.106	- / 0.113	- / 0.240	- / 0.250	Continuing	Continuing
2.4) Production Support	- / 11.125	- / 0.511	- / 0.117	- / 0.257	- / -	- / 0.257	- / 0.006	- / 0.053	- / 0.055	- / -	Continuing	Continuing
2.5) Other (DSA Recurring)	- / 7.626	- / 0.445	- / 0.762	- / 0.672	- / -	- / 0.672	- / 0.299	- / 0.023	- / 0.378	- / 0.354	Continuing	Continuing
<i>Subtotal: Support</i>	<i>- / 35.348</i>	<i>- / 2.561</i>	<i>- / 3.848</i>	<i>- / 2.360</i>	<i>- / -</i>	<i>- / 2.360</i>	<i>- / 1.686</i>	<i>- / 1.459</i>	<i>- / 1.484</i>	<i>- / 1.766</i>	<i>Continuing</i>	<i>Continuing</i>
Installation												
<i>Modification Item 1 of 1: L0084 CSRR-SSBN (OHIO) Mod Upgrades</i>	<i>- / 10.482</i>	<i>- / 1.565</i>	<i>- / 8.637</i>	<i>- / 2.814</i>	<i>- / 0.000</i>	<i>- / 2.814</i>	<i>- / 1.793</i>	<i>- / 0.126</i>	<i>- / 0.355</i>	<i>- / 0.365</i>	<i>Continuing</i>	<i>Continuing</i>
<i>Subtotal: Installation</i>	<i>- / 10.482</i>	<i>- / 1.565</i>	<i>- / 8.637</i>	<i>- / 2.814</i>	<i>- / -</i>	<i>- / 2.814</i>	<i>- / 1.793</i>	<i>- / 0.126</i>	<i>- / 0.355</i>	<i>- / 0.365</i>	<i>Continuing</i>	<i>Continuing</i>
Total												
Total Cost (Procurement + Support + Installation)	65.795	12.896	14.452	9.472	0.000	9.472	3.581	2.476	2.757	2.131	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Modification Number / Title: 3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
Modification Item 1 of 1: L0084 CSRR-SSBN (OHIO) Mod Upgrades																							
Manufacturer Information																							
Manufacturer Name: SAIC (Mod Kits) ⁽¹⁵⁾				Manufacturer Location: Charleston, SC																			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Jan 2017	Apr 2018	Dec 2018																				
Delivery Dates	Jan 2018	Apr 2019	Dec 2019																				
Manufacturer Name: COMTECH (UAC2) ⁽¹⁶⁾				Manufacturer Location: Tempe, AZ																			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates		Jan 2018	Nov 2018																				
Delivery Dates		Sep 2018	Mar 2020																				
Installation Information																							
Method of Implementation: [none specified]:: Installation Name: SSBN Ohio																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 10.482	1 / 1.565	2 / 3.224	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 15.271											
FY 2017	- / -	- / -	3 / 4.838	1 / 1.661	0 / 0.000	1 / 1.661	- / -	- / -	- / -	- / -	0 / 0.000	4 / 6.499											
FY 2018	- / -	- / -	5 / 0.575	8 / 1.153	0 / 0.000	8 / 1.153	- / -	- / -	- / -	- / -	0 / 0.000	13 / 1.728											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.793	- / -	- / -	- / -	0 / 0.000	6 / 1.793											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.126	- / -	- / -	0 / 0.000	1 / 0.126											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.355	- / -	0 / 0.000	1 / 0.355											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.365	0 / 0.000	1 / 0.365											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	Continuing											
Total	7 / 10.482	1 / 1.565	10 / 8.637	9 / 2.814	0 / 0.000	9 / 2.814	6 / 1.793	1 / 0.126	1 / 0.355	1 / 0.365	Continuing	Continuing											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12								P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment								Modification Number / Title: 3 / L0084 CSRR-SSBN (OHIO) Mod Upgrades														
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:																						
<i>Modification Item 1 of 1: L0084 CSRR-SSBN (OHIO) Mod Upgrades</i>																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: SSBN Ohio																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	2	-	-	3	5	6	2	1	-	1	3	2	-	-	1	-	-	-	1	-	-	Cont.	Cont.		
Out	5	1	1	-	1	-	2	-	3	5	6	2	1	-	1	3	2	-	-	1	-	-	-	1	-	-	Cont.	Cont.		
Method of Implementation (Organic): Equipment - RFDACS Mod Kits (Inc 1 Ver 4)																			Installation Quantity: 0											
Footnotes:																														
(9) Quantities reflect alignment with fleet installation availabilities. Submarine availability windows fluctuate to optimize SSBN Operational Availability (Ao). The number and class of submarines available in any given year are very limited and, consequently, the ability to shift installations from one submarine to another is often not possible. Three CSRR Inc1V3 procurements in FY17 will not install until Q4 FY18 and one in Q2 FY19 due to Fleet rescheduling of availabilities.																														
(10) The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues. FY19 includes procurement of five CSRR Increment 1 Version 4 modernization kits.																														
(11) FY19 includes procurement of five Radio Frequency Distribution and Control Systems (RFDACS) to address Reliability, Maintainability, Availability (RMA) and Environmental Qualification Testing (EQT) deficiencies. RFDACS is procured as a separate CSRR Component but fielded as part of the CSRR Inc1v4 modernization kit installations.																														
(12) Funding supports development and planning of ShipALT design package, work element descriptions and design/GFI changes. The ShipALT design package is required the year prior to procurement because it is requested by the planning yard 12 months prior to install. It is also required the year that the first modernization kit or Undersea Assured Command & Control (UAC2) solution is procured for each CSRR version on each Class to meet ship construction deadlines.																														
(13) The Enterprise Change Request (ECR) is a configuration control process rigorously implemented for the approval of new CSRR baselines or for changes to C4I systems produced by other Component Programs of Record (PORs) that impact the CSRR baseline. These changes to other Component PORs frequently occur outside of a planned CSRR modernization and therefore, funding for these changes is required every fiscal year in order to speed the delivery of critical capabilities to the submarine force.																														
(14) Funds the initial logistics package, consisting of multiple individual products, for each modernization baseline (version). The logistics package is funded in the year prior to and the year that the first modernization kit or UAC2 solution is procured for each CSRR version on each submarine class.																														
(15) Production lead time for CSRR upgrade kits varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.																														
(16) Production lead time for UAC2 Solution 1 and 2 varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	31.948	1.116	5.123	3.162	0.000	3.162	5.357	4.021	1.699	0.000	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	31.948	1.116	5.123	3.162	0.000	3.162	5.357	4.021	1.699	0.000	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	31.948	1.116	5.123	3.162	0.000	3.162	5.357	4.021	1.699	0.000	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of CSRR and upgrades on SSGN (OHIO) Class Submarines												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment								Modification Number / Title: 4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades		
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: Submarine			Modification Type: Various					Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: L0084 CSRR-SSGN (OHIO) Mod Upgrades													
B Kits													
Recurring													
1.1.1) Equipment - Mod Kits (Prior Years) - NonOrganic	12 / 13.732	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 13.732
1.1.2) Equipment - Mod Kits Increment 1 Ver 4 - NonOrganic ⁽¹⁷⁾	- / -	- / -	- / -	2 / 0.633	- / -	2 / 0.633	2 / 0.652	- / -	- / -	- / -	- / -	- / -	4 / 1.285
1.1.3) Equipment - UAC2 Solution 1 - NonOrganic	- / -	- / -	2 / 0.384	2 / 0.396	- / -	2 / 0.396	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.780
1.1.4) Equipment - UAC2 Solution 2 - NonOrganic	- / -	- / -	- / -	1 / 0.272	- / -	1 / 0.272	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.272
1.1.5) Equipment - Link 16 - NonOrganic	- / -	- / -	- / -	1 / 0.618	- / -	1 / 0.618	2 / 1.273	1 / 0.656	- / -	- / -	- / -	- / -	4 / 2.547
Subtotal: Recurring	- / 13.732	- / -	- / 0.384	- / 1.919	- / -	- / 1.919	- / 1.925	- / 0.656	- / -	- / -	- / 0.000	- / 18.616	
Subtotal: L0084 CSRR-SSGN (OHIO) Mod Upgrades	12 / 13.732	- / -	2 / 0.384	6 / 1.919	- / -	6 / 1.919	4 / 1.925	1 / 0.656	- / -	- / -	- / -	- / -	25 / 18.616
Subtotal: Procurement, All Modification Items	- / 13.732	- / -	- / 0.384	- / 1.919	- / -	- / 1.919	- / 1.925	- / 0.656	- / -	- / -	- / 0.000	- / 18.616	
Support (All Modification Items)													
2.1) Enterprise Change Request/Nonrecurring ⁽¹⁸⁾	- / 2.793	- / 0.064	- / 1.117	- / 0.535	- / -	- / 0.535	- / 0.730	- / 0.777	- / 0.736	- / -	Continuing	Continuing	
2.2) ShipALT/DSA Nonrecurring ⁽¹⁹⁾	- / 1.621	- / 0.522	- / 2.626	- / 0.230	- / -	- / 0.230	- / 0.616	- / 0.623	- / -	- / -	Continuing	Continuing	
2.3) Data/Logistics ⁽²⁰⁾	- / 3.617	- / 0.530	- / 0.570	- / 0.088	- / -	- / 0.088	- / 0.206	- / 0.192	- / 0.248	- / -	Continuing	Continuing	
2.4) Production Support	- / 1.242	- / -	- / 0.023	- / 0.115	- / -	- / 0.115	- / 0.116	- / 0.039	- / -	- / -	Continuing	Continuing	
2.5) Other (DSA Recurring)	- / 1.559	- / -	- / 0.261	- / 0.129	- / -	- / 0.129	- / 0.286	- / 0.259	- / 0.310	- / -	Continuing	Continuing	
Subtotal: Support	- / 10.832	- / 1.116	- / 4.597	- / 1.097	- / -	- / 1.097	- / 1.954	- / 1.890	- / 1.294	- / -	Continuing	Continuing	
Installation													
Modification Item 1 of 1: L0084 CSRR-SSGN (OHIO) Mod Upgrades	- / 7.384	- / 0.000	- / 0.142	- / 0.146	- / 0.000	- / 0.146	- / 1.478	- / 1.475	- / 0.405	- / 0.000	- / 0.000	- / 0.000	- / 11.030
Subtotal: Installation	- / 7.384	- / -	- / 0.142	- / 0.146	- / -	- / 0.146	- / 1.478	- / 1.475	- / 0.405	- / -	- / 0.000	- / 0.000	- / 11.030
Total													
Total Cost (Procurement + Support + Installation)	31.948	1.116	5.123	3.162	0.000	3.162	5.357	4.021	1.699	0.000	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Modification Number / Title: 4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
Modification Item 1 of 1: L0084 CSRR-SSGN (OHIO) Mod Upgrades																							
Manufacturer Information																							
Manufacturer Name: SAIC (Mod Kits) ⁽²¹⁾				Manufacturer Location: Charleston, SC																			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates			Mar 2019																				
Delivery Dates			Mar 2020																				
Manufacturer Name: COMTECH (UAC2) ⁽²²⁾				Manufacturer Location: Tempe, AZ																			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates		Jan 2018	Nov 2018																				
Delivery Dates		Sep 2018	Mar 2020																				
Manufacturer Name: TBD (Link 16)				Manufacturer Location: TBD																			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates			Apr 2019																				
Delivery Dates			Apr 2020																				
Installation Information																							
Method of Implementation: [none specified]:: Installation Name: SSGN OHIO																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 7.384	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	12 / 7.384											
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2018	- / -	- / -	1 / 0.142	1 / 0.146	0 / 0.000	1 / 0.146	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.288											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.478	- / -	- / -	- / -	0 / 0.000	6 / 1.478											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.475	- / -	- / -	0 / 0.000	4 / 1.475											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.405	- / -	- / -	0 / 0.000	1 / 0.405											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12													Modification Number / Title: 4 / L0084 CSRR-SSGN (OHIO) Mod Upgrades																	
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																	
Modification Item 1 of 1: L0084 CSRR-SSGN (OHIO) Mod Upgrades																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: SSGN OHIO																														
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total															
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																							
Total				12 / 7.384	- / -	1 / 0.142	1 / 0.146	0 / 0.000	1 / 0.146	6 / 1.478	4 / 1.475	1 / 0.405	- / -	0 / 0.000	25 / 11.030															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	-	-	-	-	-	-	1	1	-	-	-	-	3	3	-	-	-	4	-	-	-	1	-	-	-	-	25		
Out	12	-	-	-	-	-	-	1	1	-	-	-	-	3	2	1	-	-	2	2	-	-	1	-	-	-	-	25		

Footnotes:

- (17) Quantities reflect alignment with fleet installation availabilities. The number and class of submarines available in any given year are very limited and consequently, the ability to shift installations from one submarine to another is often not possible. CSRR modernization activities bring new capabilities, address new requirements, resolve End-of-Life (EOL) and obsolescence issues or correct known system deficiencies. The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues. FY19 includes procurement of two CSRR Increment 1 Version 4 modernization kits.
- (18) The Enterprise Change Request (ECR) is a configuration control process rigorously implemented for the approval of new CSRR baselines or for changes to C4I systems produced by other Component Programs of Record (PORs) that impact the CSRR baseline. These changes to other Component PORs frequently occur outside of a planned CSRR modernization and therefore, funding for these changes is required every fiscal year in order to speed the delivery of critical capabilities to the submarine force.
- (19) Funding supports development and planning of ShipALT design package, work element descriptions and design/GFI changes. The ShipALT design package is required the year prior to procurement because it is requested by the planning yard 12 months prior to install. It is also required the year that the first modernization kit, Undersea Assured Command & Control (UAC2) solution, or Link 16 terminal is procured for each CSRR version on each Class to meet ship construction deadlines.
- (20) Funds the initial logistics package, consisting of multiple individual products, for each modernization baseline (version). The logistics package is funded in the year prior to and the year that the first modernization kit, UAC2 solution, or Link 16 terminal is procured for each CSRR version on each submarine class. Data/logistics funds are required in FY2022 to support C4I systems procured by other Component Programs of Record (PORs) that impact the CSRR baseline. These funds are required to develop allowance parts list (APLs) and interactive electronic technical manuals (IETMS).
- (21) Production lead time for upgrade kits varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.
- (22) Production lead time for UAC2 Solution 1 and 2 varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 5 / L0084 CSRR-SSN (SEAWOLF)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	51.044	3.266	3.745	2.334	0.000	2.334	2.741	3.082	2.800	0.402	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	51.044	3.266	3.745	2.334	0.000	2.334	2.741	3.082	2.800	0.402	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	51.044	3.266	3.745	2.334	0.000	2.334	2.741	3.082	2.800	0.402	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of CSRR and upgrades on SSN (SEAWOLF) Class Submarines.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 5 / L0084 CSRR-SSN (SEAWOLF)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Submarine			Modification Type: Various					Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: L0084 CSRR-SSN (SEAWOLF)													
B Kits													
Recurring													
1.1.1) Equipment (Prior Years) - NonOrganic		10 / 32.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 32.150
1.1.2) Equipment - Mod Kits Increment 1 Ver 4 - NonOrganic (23)		- / -	- / -	- / -	1 / 0.265	- / -	1 / 0.265	1 / 0.273	1 / 0.281	- / -	- / -	- / -	3 / 0.819
1.1.3) Equipment - UAC2 Solution 1 - NonOrganic		- / -	- / -	2 / 0.192	- / -	- / -	- / -	1 / 0.102	- / -	- / -	- / -	- / -	3 / 0.294
1.1.4) Equipment - UAC2 Solution 2 - NonOrganic		- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.288	- / -	- / -	- / -	- / -	1 / 0.288
1.1.5) Equipment - Link 16 - NonOrganic		- / -	- / -	- / -	1 / 0.618	- / -	1 / 0.618	- / -	1 / 0.656	- / -	- / -	- / -	2 / 1.274
Subtotal: Recurring		- / 32.150	- / -	- / 0.192	- / 0.883	- / -	- / 0.883	- / 0.375	- / 1.225	- / -	- / -	- / 0.000	- / 34.825
Subtotal: L0084 CSRR-SSN (SEAWOLF)		10 / 32.150	- / -	2 / 0.192	2 / 0.883	- / -	2 / 0.883	2 / 0.375	3 / 1.225	- / -	- / -	- / -	19 / 34.825
Subtotal: Procurement, All Modification Items		- / 32.150	- / -	- / 0.192	- / 0.883	- / -	- / 0.883	- / 0.375	- / 1.225	- / -	- / -	- / 0.000	- / 34.825
Support (All Modification Items)													
2.1) ShipALT/DSA Nonrecurring (24)		- / 1.563	- / 0.425	- / 1.238	- / 0.632	- / -	- / 0.632	- / 0.638	- / 0.365	- / -	- / -	Continuing	Continuing
2.2) Enterprise Change Request /Nonrecurring (25)		- / 2.117	- / -	- / 1.188	- / 0.539	- / -	- / 0.539	- / 0.607	- / 0.586	- / 0.921	- / 0.402	Continuing	Continuing
2.3) Data/Logistics (26)		- / 1.825	- / 0.514	- / 0.576	- / 0.227	- / -	- / 0.227	- / 0.214	- / 0.250	- / 0.310	- / -	Continuing	Continuing
2.4) Production Support		- / 1.704	- / -	- / 0.012	- / 0.053	- / -	- / 0.053	- / 0.023	- / 0.074	- / -	- / -	Continuing	Continuing
2.5) Other (DSA Recurring)		- / 2.527	- / 0.265	- / 0.309	- / -	- / -	- / -	- / 0.158	- / 0.101	- / 0.663	- / -	Continuing	Continuing
Subtotal: Support		- / 9.736	- / 1.204	- / 3.323	- / 1.451	- / -	- / 1.451	- / 1.640	- / 1.376	- / 1.894	- / 0.402	Continuing	Continuing
Installation													
Modification Item 1 of 1: L0084 CSRR-SSN (SEAWOLF)		- / 9.158	- / 2.062	- / 0.230	- / 0.000	- / 0.000	- / 0.000	- / 0.726	- / 0.481	- / 0.906	- / 0.000	- / 0.000	- / 13.563
Subtotal: Installation		- / 9.158	- / 2.062	- / 0.230	- / -	- / -	- / -	- / 0.726	- / 0.481	- / 0.906	- / -	- / 0.000	- / 13.563
Total													
Total Cost (Procurement + Support + Installation)		51.044	3.266	3.745	2.334	0.000	2.334	2.741	3.082	2.800	0.402	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Modification Number / Title: 5 / L0084 CSRR-SSN (SEAWOLF)								
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: L0084 CSRR-SSN (SEAWOLF)</i>								MDAP/MAIS Code:								
Manufacturer Information																
Manufacturer Name: SAIC (Mod Kits) ⁽²⁷⁾				Manufacturer Location: Charleston, SC												
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates			Apr 2019													
Delivery Dates			Apr 2020													
Manufacturer Name: COMTECH (UAC2) ⁽²⁸⁾				Manufacturer Location: Tempe, AZ												
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 9												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates		Jan 2018														
Delivery Dates		Sep 2018														
Manufacturer Name: TBD (Link 16)				Manufacturer Location: TBD												
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023									
Contract Dates			Apr 2019													
Delivery Dates			Apr 2020													
Installation Information																
Method of Implementation: [none specified]:: Installation Name: SEAWOLF																
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total				
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 9.158	1 / 2.062	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 11.220				
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2018	- / -	- / -	2 / 0.230	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.230				
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.726	- / -	- / -	- / -	0 / 0.000	2 / 0.726				
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.481	- / -	- / -	0 / 0.000	2 / 0.481				
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.906	- / -	0 / 0.000	3 / 0.906				
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
Total	9 / 9.158	1 / 2.062	2 / 0.230	- / -	- / -	- / -	2 / 0.726	2 / 0.481	3 / 0.906	- / -	0 / 0.000	19 / 13.563				

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12												P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment											Modification Number / Title: 5 / L0084 CSRR-SSN (SEAWOLF)															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: L0084 CSRR-SSN (SEAWOLF)																																						
Installation Information																																						
Method of Implementation: [none specified]:: Installation Name: SEAWOLF																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	-	2	1	-	-	-	19												
Out	9	-	1	-	-	-	-	1	1	-	-	-	-	-	2	-	1	-	1	-	2	-	1	-	-	19												

Footnotes:

(23) Quantities reflect alignment with fleet installation availabilities. The number and class of submarines available in any given year are very limited and consequently, the ability to shift installations from one submarine to another is often not possible. CSRR modernization activities bring new capabilities, address new requirements, resolve End-of-Life (EOL) and obsolescence issues or correct known system deficiencies. The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues. FY19 includes procurement of one CSRR Increment 1 Version 4 modernization kit.

(24) Funding supports development and planning of ShipALT design package, work element descriptions and design/GFI changes. The ShipALT design package is required the year prior to procurement because it is requested by the planning yard 12 months prior to install. It is also required the year that the first modernization kit, Undersea Assured Command & Control (UAC2) solution, or Link 16 terminal is procured for each CSRR version on each Class to meet ship construction deadlines.

(25) The Enterprise Change Request (ECR) is a configuration control process rigorously implemented for the approval of new CSRR baselines or for changes to C4I systems produced by other Component Programs of Record (PORs) that impact the CSRR baseline. These changes to other Component PORs frequently occur outside of a planned CSRR modernization and therefore, funding for these changes is required every fiscal year in order to speed the delivery of critical capabilities to the submarine force.

(26) Funds the initial logistics package, consisting of multiple individual products, for each modernization baseline (version). The logistics package is funded in the year prior to and the year that the first modernization kit, UAC2 solution, or Link 16 terminal is procured for each CSRR version on each submarine class.

(27) Production lead time for upgrade kits varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.

(28) Production lead time for UAC2 Solution 1 and 2 varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	53.409	9.510	15.400	12.405	0.000	12.405	10.567	7.155	6.950	5.771	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	53.409	9.510	15.400	12.405	0.000	12.405	10.567	7.155	6.950	5.771	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	53.409	9.510	15.400	12.405	0.000	12.405	10.567	7.155	6.950	5.771	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of CSRR upgrades on VIRGINIA Class submarines												

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Exhibit P-3a, Individual Modification: PB 2019 Navy											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment										
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:		
Models of Systems Affected: Submarine			Modification Type: Various					Related RDT&E PEs: 0604503N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: L0084 CSRR-SSN (VIRGINIA) Mod Upgrades													
B Kits													
Recurring													
1.1.1) Equipment - Mod Kits (Prior Years) - NonOrganic		4 / 4.872	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 4.872
1.1.2) Equipment - Baseline upgrade Increment 1 Ver 3 - NonOrganic		7 / 16.597	2 / 5.346	1 / 2.753	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 24.696
1.1.3) Equipment - Mod Kits Increment 1 Ver 4 - NonOrganic ⁽²⁹⁾		- / -	- / -	1 / 0.265	5 / 1.366	- / -	5 / 1.366	2 / 0.563	- / -	- / -	1 / 0.307	Continuing	Continuing
1.1.4) Equipment - RFDACS Mod Kits (Inc 1 Ver 4) - Organic ⁽³⁰⁾		- / -	- / -	1 / 0.550	4 / 2.266	- / -	4 / 2.266	- / -	- / -	- / -	1 / 0.638	Continuing	Continuing
1.1.5) Equipment - UAC2 Solution 1 - NonOrganic		- / -	- / -	12 / 1.152	7 / 0.693	- / -	7 / 0.693	5 / 0.510	2 / 0.210	2 / 0.216	- / -	- / -	28 / 2.781
1.1.6) Equipment - UAC2 Solution 2 - NonOrganic		- / -	- / -	- / -	1 / 0.272	- / -	1 / 0.272	- / -	2 / 0.576	1 / 0.297	- / -	- / -	4 / 1.145
1.1.7) Equipment - Link 16 - NonOrganic ⁽³¹⁾		- / -	- / -	- / -	3 / 1.854	- / -	3 / 1.854	4 / 2.546	3 / 1.967	4 / 2.701	2 / 1.391	- / -	16 / 10.459
Subtotal: Recurring		- / 21.469	- / 5.346	- / 4.720	- / 6.451	- / -	- / 6.451	- / 3.619	- / 2.753	- / 3.214	- / 2.336	Continuing	Continuing
Subtotal: L0084 CSRR-SSN (VIRGINIA) Mod Upgrades		11 / 21.469	2 / 5.346	15 / 4.720	20 / 6.451	- / -	20 / 6.451	11 / 3.619	7 / 2.753	7 / 3.214	4 / 2.336	Continuing	Continuing
Subtotal: Procurement, All Modification Items		- / 21.469	- / 5.346	- / 4.720	- / 6.451	- / -	- / 6.451	- / 3.619	- / 2.753	- / 3.214	- / 2.336	Continuing	Continuing
Support (All Modification Items)													
2.1) Support Cost (Prior Years)		- / 0.625	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.625
2.2) Data/Logistics ⁽³²⁾		- / 2.434	- / 0.440	- / 1.032	- / 0.167	- / -	- / 0.167	- / 0.743	- / 0.150	- / 0.220	- / 0.050	Continuing	Continuing
2.3) ShipALT/DSA Nonrecurring ⁽³³⁾		- / 3.980	- / 0.347	- / 1.992	- / 0.448	- / -	- / 0.448	- / 0.558	- / 0.250	- / 0.240	- / -	Continuing	Continuing
2.4) Enterprise Change Request ⁽³⁴⁾		- / 3.026	- / 0.542	- / 2.111	- / 0.282	- / -	- / 0.282	- / 0.840	- / 0.620	- / 0.724	- / 0.753	Continuing	Continuing
2.5) Production Support		- / 2.476	- / 0.336	- / 0.283	- / 0.387	- / -	- / 0.387	- / 0.217	- / 0.165	- / 0.193	- / 0.140	Continuing	Continuing
2.6) Other (DSA Recurring)		- / 1.901	- / 0.248	- / 0.395	- / 0.778	- / -	- / 0.778	- / 0.669	- / 0.451	- / 0.611	- / 0.415	Continuing	Continuing
Subtotal: Support		- / 14.442	- / 1.913	- / 5.813	- / 2.062	- / -	- / 2.062	- / 3.027	- / 1.636	- / 1.988	- / 1.358	Continuing	Continuing
Installation													
Modification Item 1 of 1: L0084 CSRR-SSN (VIRGINIA) Mod Upgrades		- / 17.498	- / 2.251	- / 4.867	- / 3.892	- / 0.000	- / 3.892	- / 3.921	- / 2.766	- / 1.748	- / 2.077	Continuing	Continuing
Subtotal: Installation		- / 17.498	- / 2.251	- / 4.867	- / 3.892	- / -	- / 3.892	- / 3.921	- / 2.766	- / 1.748	- / 2.077	Continuing	Continuing
Total													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Submarine			Modification Type: Various					Related RDT&E PEs: 0604503N				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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)	53.409	9.510	15.400	12.405	0.000	12.405	10.567	7.155	6.950	5.771	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Modification Number / Title: 6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
Modification Item 1 of 1: L0084 CSRR-SSN (VIRGINIA) Mod Upgrades																							
Manufacturer Information																							
Manufacturer Name: SAIC (Mod Kits) ⁽³⁵⁾				Manufacturer Location: Charleston, SC																			
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Jan 2017	Jan 2018	Dec 2018																				
Delivery Dates	Jan 2018	Jan 2019	Dec 2019																				
Manufacturer Name: COMTECH (UAC2) ⁽³⁶⁾				Manufacturer Location: Tempe, AZ																			
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates		Jan 2018	Nov 2018																				
Delivery Dates		Sep 2018	Dec 2019																				
Manufacturer Name: TBD (Link 16)				Manufacturer Location: TBD																			
Administrative Leadtime (<i>in Months</i>): 6				Production Leadtime (<i>in Months</i>): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates			Apr 2019																				
Delivery Dates			Apr 2020																				
Installation Information																							
Method of Implementation: Method:: Installation Name: Virginia Class																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 17.498	1 / 2.251	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	11 / 19.749											
FY 2017	- / -	- / -	2 / 4.637	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 4.637											
FY 2018	- / -	- / -	2 / 0.230	12 / 3.892	0 / 0.000	12 / 3.892	- / -	- / -	- / -	- / -	0 / 0.000	14 / 4.122											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	16 / 3.799	- / -	- / -	- / -	0 / 0.000	16 / 3.799											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.122	10 / 2.766	- / -	- / -	0 / 0.000	11 / 2.888											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.748	- / -	- / -	0 / 0.000	7 / 1.748											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.077	- / -	0 / 0.000	7 / 2.077											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing												
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing												

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12				P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment								Modification Number / Title: 6 / L0084 CSRR-SSN (VIRGINIA) Mod Upgrades																						
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																						
<i>Modification Item 1 of 1: L0084 CSRR-SSN (VIRGINIA) Mod Upgrades</i>																																		
Installation Information																																		
Method of Implementation: Method:: Installation Name: Virginia Class																																		
Installation Cost				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
				Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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				10 / 17.498	1 / 2.251	4 / 4.867	12 / 3.892	0 / 0.000	12 / 3.892	17 / 3.921	10 / 2.766	7 / 1.748	7 / 2.077	Continuing	Continuing																			
Installation Schedule																																		
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
	Q1	Q2	Q3	Q4	Q1	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	-	1	-	-	1	2	1	5	2	5	-	6	1	10	1	3	1	5	-	-	1	5	1	2	-	5	Cont.	Cont.			
Out	8	1	-	1	1	-	-	-	2	2	4	3	4	1	5	1	6	6	3	1	1	4	-	1	2	4	2	-	1	Cont.	Cont.			
Method of Implementation (Organic): Equipment - RFDACS Mod Kits (Inc 1 Ver 4)												Installation Quantity: 0																						
Footnotes:																																		
(29) Quantities reflect alignment with fleet installation availabilities. The number and class of submarines available in any given year are very limited and consequently, the ability to shift installations from one submarine to another is often not possible. CSRR modernization activities bring new capabilities, address new requirements, resolve End-of-Life (EOL) and obsolescence issues or correct known system deficiencies. The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues. FY19 includes procurement of five CSRR Increment 1 Version 4 modernization kits.																																		
(30) FY19 includes procurement of four Radio Frequency Distribution and Control Systems (RFDACS) to address Reliability, Maintainability, Availability (RMA) and Environmental Qualification Testing (EQT) deficiencies. RFDACS is procured as a separate CSRR Component but fielded as part of the CSRR Inc1v4 modernization kit installations.																																		
(31) Funding added in FY19 for three Link 16 terminals to improve system performance and reliability.																																		
(32) Funds the initial logistics package, consisting of multiple individual products, for each modernization baseline (version). The logistics package is funded in the year prior to and the year that the first modernization kit, Undersea Assured Command & Control (UAC2) solution, or Link 16 terminal is procured for each CSRR version on each submarine class.																																		
(33) Funding supports development and planning of ShipALT design package, work element descriptions and design/GFI changes. The ShipALT design package is required the year prior to procurement because it is requested by the planning yard 12 months prior to install. It is also required the year that the first modernization kit, UAC2 solution, or Link 16 terminal is procured for each CSRR version on each Class to meet ship construction deadlines.																																		
(34) The Enterprise Change Request (ECR) is a configuration control process rigorously implemented for the approval of new CSRR baselines or for changes to C4I systems produced by other Component Programs of Record (PORs) that impact the CSRR baseline. These changes to other Component PORs frequently occur outside of a planned CSRR modernization and therefore, funding for these changes is required every fiscal year in order to speed the delivery of critical capabilities to the submarine force.																																		
(35) Production lead time for upgrade kits varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.																																		
(36) Production lead time for UAC2 Solution 1 and 2 varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.																																		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment						Modification Number / Title: 7 / L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	169.059	14.652	14.860	13.935	0.000	13.935	11.859	5.216	5.793	9.027	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	169.059	14.652	14.860	13.935	0.000	13.935	11.859	5.216	5.793	9.027	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	169.059	14.652	14.860	13.935	0.000	13.935	11.859	5.216	5.793	9.027	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Procurement and Installation of CSRR and upgrades on LOS ANGELES Class Submarines												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment										Modification Number / Title: 7 / L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Submarine			Modification Type: Various				Related RDT&E PEs: 0604503N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades													
B Kits													
Recurring													
1.1.1) Equipment - Mod Kits Increment 1 Ver 3 - NonOrganic	29 / 103.411	1 / 4.374	1 / 4.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 112.290
1.1.2) Equipment - Mod Kits Increment 1 Ver 4 - NonOrganic ⁽³⁷⁾	- / -	- / -	2 / 0.530	8 / 2.185	- / -	8 / 2.185	5 / 1.407	- / -	- / -	- / -	- / -	Continuing	Continuing
1.1.3) Equipment - UAC2 Solution 1 - NonOrganic	- / -	- / -	18 / 1.728	11 / 1.089	- / -	11 / 1.089	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.817
1.1.4) Equipment - UAC2 Solution 2 - NonOrganic	- / -	- / -	- / -	1 / 0.272	- / -	1 / 0.272	1 / 0.280	3 / 0.864	- / -	5 / 1.530	- / -	10 / 2.946	
1.1.5) Equipment - Link 16 - NonOrganic ⁽³⁸⁾	- / -	- / -	- / -	5 / 3.090	- / -	5 / 3.090	1 / 0.637	1 / 0.656	5 / 3.377	5 / 3.478	- / -	17 / 11.238	
Subtotal: Recurring	- / 103.411	- / 4.374	- / 6.763	- / 6.636	- / -	- / 6.636	- / 2.324	- / 1.520	- / 3.377	- / 5.008	Continuing	Continuing	
Subtotal: L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades	29 / 103.411	1 / 4.374	21 / 6.763	25 / 6.636	- / -	25 / 6.636	7 / 2.324	4 / 1.520	5 / 3.377	10 / 5.008	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 103.411	- / 4.374	- / 6.763	- / 6.636	- / -	- / 6.636	- / 2.324	- / 1.520	- / 3.377	- / 5.008	Continuing	Continuing	
Support (All Modification Items)													
2.1) Enterprise Change Request/Nonrecurring ⁽³⁹⁾	- / 5.449	- / 1.238	- / 2.405	- / 0.536	- / -	- / 0.536	- / 1.629	- / 0.648	- / 0.674	- / 0.628	Continuing	Continuing	
2.2) ShipALT/DSA Nonrecurring ⁽⁴⁰⁾	- / 1.698	- / 0.372	- / 2.012	- / 0.607	- / -	- / 0.607	- / 0.705	- / -	- / -	- / 0.414	Continuing	Continuing	
2.3) Data/Logistics ⁽⁴¹⁾	- / 2.448	- / 0.552	- / 0.789	- / 0.278	- / -	- / 0.278	- / 0.313	- / 0.319	- / 0.301	- / 0.307	Continuing	Continuing	
2.4) Production Support	- / 6.722	- / 0.257	- / 0.405	- / 0.398	- / -	- / 0.398	- / 0.139	- / 0.091	- / 0.203	- / 0.300	Continuing	Continuing	
2.5) Other (DSA Recurring) ⁽⁴²⁾	- / 8.812	- / 0.913	- / 0.352	- / 0.983	- / -	- / 0.983	- / 0.942	- / 0.394	- / 0.425	- / 0.283	Continuing	Continuing	
Subtotal: Support	- / 25.129	- / 3.322	- / 5.963	- / 2.802	- / -	- / 2.802	- / 3.728	- / 1.452	- / 1.603	- / 1.932	Continuing	Continuing	
Installation													
Modification Item 1 of 1: L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades	- / 40.519	- / 6.946	- / 2.134	- / 4.497	- / 0.000	- / 4.497	- / 5.807	- / 2.244	- / 0.813	- / 2.087	Continuing	Continuing	
Subtotal: Installation	- / 40.519	- / 6.946	- / 2.134	- / 4.497	- / -	- / 4.497	- / 5.807	- / 2.244	- / 0.813	- / 2.087	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	169.059	14.652	14.860	13.935	0.000	13.935	11.859	5.216	5.793	9.027	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12			P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment					Modification Number / Title: 7 / L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades</i>																							
Manufacturer Information																							
Manufacturer Name: SAIC (Mod Kits) ⁽⁴³⁾				Manufacturer Location: Charleston, SC																			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Jan 2017	Jan 2018	Jan 2019																				
Delivery Dates	Jan 2018	Jan 2019	Jan 2020																				
Manufacturer Name: COMTECH (UAC2) ⁽⁴⁴⁾				Manufacturer Location: Tempe, AZ																			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 9																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates		Jan 2018	Nov 2018																				
Delivery Dates		Sep 2018	Sep 2019																				
Manufacturer Name: TBD (Link 16)				Manufacturer Location: TBD																			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates			Apr 2019																				
Delivery Dates			Apr 2020																				
Installation Information																							
Method of Implementation: Method:: Installation Name: LA Class																							
Installation Cost		Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total										
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 40.519	4 / 6.946	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000											
FY 2017		- / -	- / -	1 / 1.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000											
FY 2018		- / -	- / -	3 / 0.345	18 / 4.261	0 / 0.000	18 / 4.261	- / -	- / -	- / -	- / -	0 / 0.000											
FY 2019		- / -	- / -	- / -	2 / 0.236	0 / 0.000	2 / 0.236	23 / 5.807	- / -	- / -	- / -	0 / 0.000											
FY 2020		- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.244	- / -	- / -	0 / 0.000											
FY 2021		- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.813	- / -	- / -	4 / 0.813											
FY 2022		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.087	- / -	5 / 2.087											
FY 2023		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
To Complete		- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 12												P-1 Line Item Number / Title: 3130 / Submarine Communication Equipment																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
<i>Modification Item 1 of 1:</i> L0084 CSRR-SSN LOS ANGELES (LA) Mod Upgrades																														
Installation Information																														
Method of Implementation: Method:: Installation Name: LA Class																														
Installation Cost				Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total				
				Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (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				25 / 40.519		4 / 6.946		4 / 2.134		20 / 4.497		0 / 0.000		20 / 4.497		23 / 5.807		7 / 2.244		4 / 0.813		5 / 2.087		Continuing						
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				Tot	
	Q1	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	-	-	1	3	-	-	2	2	8	5	5	2	6	11	6	-	1	3	3	-	2	-	-	-	5	Cont.	Cont.		
Out	22	2	1	-	-	1	3	-	1	3	7	6	5	2	4	12	4	3	1	3	2	1	2	-	1	1	-	-	Cont.	Cont.

Footnotes:

(37) Quantities reflect alignment with fleet installation availabilities. The number and class of submarines available in any given year are very limited and consequently, the ability to shift installations from one submarine to another is often not possible. CSRR modernization activities bring new capabilities, address new requirements, resolve End-of-Life (EOL) and obsolescence issues or correct known system deficiencies. The unit cost variance between the CSRR Increment 1 Version 3 and Version 4 is due to different capabilities/configurations. For example, CSRR Increment 1 Version 3 is a more complex upgrade to the CSRR suite. CSRR Increment 1 Version 4 is planned to address equipment obsolescence and EOL issues. FY19 includes procurement of eight CSRR Increment 1 Version 4 modernization kits.

(38) Funding added in FY19 for five Link 16 terminals to improve system performance and reliability

(39) The Enterprise Change Request (ECR) is a configuration control process rigorously implemented for the approval of new CSRR baselines or for changes to C4I systems produced by other Component Programs of Record (PORs) that impact the CSRR baseline. These changes to other Component PORs frequently occur outside of a planned CSRR modernization and therefore, funding for these changes is required every fiscal year in order to speed the delivery of critical capabilities to the submarine force.

(40) Funding supports development and planning of ShipALT design package, work element descriptions and design/GFI changes. The ShipALT design package is required the year prior to procurement because it is requested by the planning yard 12 months prior to install. It is also required the year that the first modernization kit, Undersea Assured Command & Control (UAC2) solution, or Link 16 terminal is procured for each CSRR version on each Class to meet ship construction deadlines.

(41) Funds the initial logistics package, consisting of multiple individual products, for each modernization baseline (version). The logistics package is funded in the year prior to and the year that the first modernization kit, UAC2 solution, or Link 16 terminal is procured for each CSRR version on each submarine class.

(42) DSA Recurring Cost includes funding for CSRR planning yard activities.

(43) Production lead time for upgrade kits varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.

(44) Production lead time for UAC2 Solution 1 and 2 varies from 3 to 12 months depending on the contents of each kit and the specific components being modernized.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications					3215 / Satellite Communications 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: 237															
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	1,246.488	14.414	14.654	41.205	3.200	44.405	44.087	57.052	53.687	41.141	Continuing	Continuing			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	1,246.488	14.414	14.654	41.205	3.200	44.405	44.087	57.052	53.687	41.141	Continuing	Continuing			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	1,246.488	14.414	14.654	41.205	3.200	44.405	44.087	57.052	53.687	41.141	Continuing	Continuing			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	0.056	0.021	0.127	-	0.127	0.175	0.147	0.094	-	-	0.620			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
The FY 2019 funding request was reduced by \$2.000 million to account for the availability of prior year execution balances.															
The Satellite Communications (SATCOM) Systems P-1 line provides funds for procurement of shipboard terminal equipment for ship-to-ship, ship-to-shore and ship-to-aircraft tactical communications via earth orbiting relay satellites. This includes Radio Frequency (RF) equipment and baseband equipment assembled and grouped into systems and subsystems structured to address specific naval communications requirements. These systems provide modem processors and peripheral equipment that control the RF links for message traffic, direct data transfer and secure voice communications. They are selected and oriented by communications traffic levels, types of communications and operational missions. CBSP technical refresh of system modems and Ka Kits will directly support Assured Command and Control (AC2) posture, SATCOM reliability, space resiliency via band diversity and redundancy. AC2 modems enable the use of Wideband Global Satellite (WGS) X-Band (ship/submarine transmit and receive) and Ka-band (shore receive and transmit) resources to maintain link connectivity to provide assured access to mission critical communications in Anti-Access Anti-Denial (A2AD) jamming environments.															
[P3A / (NR117) Global Broadcast Service (GBS): GLOBAL BROADCAST SERVICE (GBS - NR117): GBS is a Joint Military Satellite Communications (MILSATCOM) program with the Air Force as Executive Agent for all services. GBS provides a continuous, high speed, one way information flow of high volume data to units ashore, afloat or special operations. GBS supports routine operations, training and military exercises, special activities, crises, situational awareness, weapons targeting, reconnaissance and the transition to and conduct of opposed operations short of nuclear war. Deployment of GBS internet protocol (IP) terminals will allow expanded use of military intelligence collection in a broader spectrum using MILSATCOM architecture. The Navy GBS Split IP effort enables near-real-time duplex asymmetric communications connectivity to ships/subs. GBS plays a pivotal role to support the Assured Command and Control (AC2) environment.															
[P3A - 2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat]: The Navy's next generation Commercial Satellite Communications (SATCOM) program provides the only source of wideband SATCOM to Patrol Coastal (PCs) and Mine Countermeasure Ships (MCMs), diversity for MILSATCOM on Unit Level Variant (ULV) ships, and augments MILSATCOM on Force Level Variant (FLV) ships. CBSP will support the procurement and installation of a commercial terminal and service architecture that significantly increase data throughput, Navy Anti-Access Area Denial posture, and SATCOM reliability and space resiliency by providing band diversity, assured access, and redundancy for MILSATCOM. Included in the program are Small Ship Variant (SSV - Patrol Coastal or Mine Countermeasure Ships), Unit Level Variant (ULV - examples are Guided Missile Destroyers or Guided Missile Frigates), and Force Level Variant (FLV - large combatant ships such as carriers).															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications				P-1 Line Item Number / Title: 3215 / Satellite Communications 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: 237									
Exhibits Schedule			Prior Years		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / Satellite Communications Systems				- / 887.457	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / (NR117) Global Broadcast Service (GBS) (TBD)				- / 206.522	- / 6.622	- / 5.024	- / 15.302	- / 3.200
P-3a	2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat (upgrade)				- / 135.532	- / 7.792	- / 2.260	- / 13.703	- / 0.000
P-3a	3 / (NR118) JMINI CS Shore (TBD)				- / 16.977	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / Commercial Broadband Satellite Assured C2 Modems (TBD)				- / 0.000	- / 0.000	- / 7.370	- / 6.200	- / 0.000
P-3a	5 / CBSP Ka Kits (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 6.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 1,246.488	- / 14.414	- / 14.654	- / 41.205	- / 3.200
Exhibits Schedule			FY 2020		FY 2021	FY 2022	FY 2023	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)
P-5	1 / Satellite Communications Systems				- / -	- / -	- / -	- / -	- / -
P-3a	1 / (NR117) Global Broadcast Service (GBS) (TBD)				- / 24.117	- / 19.981	- / 16.557	- / 8.661	- / 0.000
P-3a	2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat (upgrade)				- / 14.773	- / 15.186	- / 15.344	- / 15.609	Continuing
P-3a	3 / (NR118) JMINI CS Shore (TBD)				- / 1.557	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / Commercial Broadband Satellite Assured C2 Modems (TBD)				- / 1.540	- / 0.000	- / 0.000	- / 0.000	- / 15.110
P-3a	5 / CBSP Ka Kits (TBD)				- / 2.100	- / 5.300	- / 5.200	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 44.087	- / 57.052	- / 53.687	- / 41.141	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 2019 funding request increases to meet Assured Command and Controls (AC2) requirements for Global Broadcast System (GBS) afloat terminal, GBS portable receive terminal, and Commercial Broadband Satellite Program (CBSP) Unit level variants (ULV). And specifically, the FY 2019 funding request increase provides for the continued procurement of both Afloat and Portable Global Broadcast System (GBS) Program Receive Terminals and establishes an Engineering Change Order (ECO) to meet the Navy's Microsoft Windows 10 requirement Cyber Security Mandate (dated 08 December 2016). The ECO procures Public Key Infrastructure (PKI) hardware, engineering services and installations to support critical information assurance to the Fleet. The FY 2019 funding request increase also provides for Commercial Broadband Satellite Program (CBSP) procurement and installation of Unit Level Variant (ULV) terminals. And continues the procurement and installation of CBSP modem technical refresh and begins procurement and installation of Ka Kit upgrades which are both in support of Assured Command and Control (AC2). FY 2019 Non-Recurring Engineering (NRE) for Ka Kits will fund the CBSP Original Equipment Manufacturer (OEM) to design and develop a Force Level Variant (FLV) upgrade kit to replace the existing C/Ku-band feed assembly with a C/Ka-band feed assembly.

The FY 2019 funding request was reduced by \$2.100 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

OCO:

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications		P-1 Line Item Number / Title: 3215 / Satellite Communications 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: 237	FY 2019 \$3.2M Other Contingency Operations (OCO) funding procures 13 Portable GBS Systems for expanding Navy SEAL combat operations in US Central Command (CENTCOM) and other Areas of Responsibility (AORs). Increased operational use has reduced service life of legacy Portable GBS systems.	

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Item Number / Title [DODIC]: 1 / Satellite Communications Systems					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				887.457			0.000		0.000		0.000		0.000		0.000			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				887.457			0.000		0.000		0.000		0.000		0.000			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				887.457			0.000		0.000		0.000		0.000		0.000			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Consolidated Prior Year Requirements Cost																		
Recurring Cost																		
1.1.1) Consolidated PY Requirements ⁽¹⁾	-	-	883.185	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	883.185	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Consolidated Prior Year Requirements Cost</i>	-	-	883.185	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - (NR101) DAMA/MINI DAMA Cost																		
Recurring Cost																		
2.1.1) DAMA/MINI DAMA Procurement	5.000	70	0.350	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	0.350	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - (NR101) DAMA/MINI DAMA Cost</i>	-	-	0.350	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - (NR777) FMP Installation (Ship) Cost																		
Recurring Cost																		
3.1.1) MINI DAMA Ship	-	-	3.337	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	3.337	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - (NR777) FMP Installation (Ship) Cost</i>	-	-	3.337	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - (NR777) FMP DSA (Ship) Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems									Item Number / Title [DODIC]: 1 / Satellite Communications Systems													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
4.1) MINI DAMA DSA (Ship)	-	-	0.354	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Support - (NR777) FMP DSA (Ship) Cost</i>	-	-	0.354	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
Support - (NR555) Production Support Cost																										
5.1) DAMA/MINI DAMA	-	-	0.231	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
<i>Subtotal: Support - (NR555) Production Support Cost</i>	-	-	0.231	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								
Gross/Weapon System Cost	-	-	887.457	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000								

Remarks:

[Flyaway] Consolidated Prior Year Requirements include SHF, NESP, CBSP, and Spectral Warrior (SW) / Spider Net (SN) dollars.

Footnotes:

(1) Consolidated Prior Year Requirements cost of \$883.185M includes SHF, NESP, CBSP, and Spectral Warrior (SW) / Spider Net (SN) dollars.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems							Modification Number / Title: 1 / (NR117) Global Broadcast Service (GBS)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	206.522	6.622	5.024	15.302	3.200	18.502	24.117	19.981	16.557	8.661	0.000	305.986	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	206.522	6.622	5.024	15.302	3.200	18.502	24.117	19.981	16.557	8.661	0.000	305.986	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	206.522	6.622	5.024	15.302	3.200	18.502	24.117	19.981	16.557	8.661	0.000	305.986	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
GLOBAL BROADCAST SERVICE (GBS - NR117): GBS is a Joint Military Satellite Communications (MILSATCOM) program with the Air Force as Executive Agent for all services. GBS provides a continuous, high speed, one way information flow of high volume data to units ashore, afloat or special operations. GBS supports routine operations, training and military exercises, special activities, crises, situational awareness, weapons targeting, reconnaissance and the transition to and conduct of opposed operations short of nuclear war. Deployment of GBS internet protocol (IP) terminals will allow expanded use of military intelligence collection in a broader spectrum using MILSATCOM architecture. The Navy GBS Split IP effort enables near-real-time duplex asymmetric communications connectivity to ships/subs. GBS plays a pivotal role to support the Assured Command and Control (AC2) environment.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems						Modification Number / Title: 1 / (NR117) Global Broadcast Service (GBS)			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: (NR117) Global Broadcast Service (GBS)</i>												
B Kits												
Recurring												
1.1.1) Afloat Receive Terminal - NonOrganic	156 / 101.297	1 / 0.485	- / -	12 / 6.055	- / -	12 / 6.055	18 / 9.264	19 / 9.975	16 / 8.568	6 / 3.277	- / -	228 / 138.921
1.1.2) Portable Receive Terminal - Organic (2)	48 / 10.621	9 / 2.079	15 / 3.534	19 / 4.566	13 / 3.120	32 / 7.686	34 / 8.335	16 / 4.001	15 / 3.826	15 / 3.902	- / -	184 / 43.984
1.1.3) Modem Upgrades - NonOrganic	- / 10.744	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.744
1.1.4) Interim Modem Upgrades - NonOrganic	125 / 0.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 0.880
<i>Subtotal: Recurring</i>	- / 123.542	- / 2.564	- / 3.534	- / 10.621	- / 3.120	- / 13.741	- / 17.599	- / 13.976	- / 12.394	- / 7.179	- / 0.000	- / 194.529
<i>Subtotal: (NR117) Global Broadcast Service (GBS)</i>	329 / 123.542	10 / 2.564	15 / 3.534	31 / 10.621	13 / 3.120	44 / 13.741	52 / 17.599	35 / 13.976	31 / 12.394	21 / 7.179	- / -	537 / 194.529
<i>Subtotal: Procurement, All Modification Items</i>	- / 123.542	- / 2.564	- / 3.534	- / 10.621	- / 3.120	- / 13.741	- / 17.599	- / 13.976	- / 12.394	- / 7.179	- / 0.000	- / 194.529
Support (All Modification Items)												
2.1) Production Support	- / 22.012	- / 0.140	- / 0.195	- / 0.637	- / 0.080	- / 0.717	- / 0.863	- / 0.662	- / 0.526	- / 0.271	- / -	- / 25.386
2.2) Shore Pre Installation Design	- / 0.264	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.264
2.3) Afloat Receive Terminal DSA (3)	- / 9.264	- / 0.181	- / 0.026	- / 1.711	- / 0.000	- / 1.711	- / 1.944	- / 1.737	- / 0.881	- / 0.157	- / -	- / 15.901
2.4) Engineering Change Order (4)	- / 0.000	- / 3.114	- / 1.110	- / 0.350	- / 0.000	- / 0.350	- / 0.306	- / 0.398	- / 0.000	- / 0.000	- / -	- / 5.278
<i>Subtotal: Support</i>	- / 31.540	- / 3.435	- / 1.331	- / 2.698	- / 0.080	- / 2.778	- / 3.113	- / 2.797	- / 1.407	- / 0.428	- / 0.000	- / 46.829
Installation												
<i>Modification Item 1 of 1: (NR117) Global Broadcast Service (GBS)</i>	- / 51.440	- / 0.623	- / 0.159	- / 1.983	- / 0.000	- / 1.983	- / 3.405	- / 3.208	- / 2.756	- / 1.054	- / 0.000	- / 64.628
<i>Subtotal: Installation</i>	- / 51.440	- / 0.623	- / 0.159	- / 1.983	- / -	- / 1.983	- / 3.405	- / 3.208	- / 2.756	- / 1.054	- / 0.000	- / 64.628
Total												
Total Cost (Procurement + Support + Installation)	206.522	6.622	5.024	15.302	3.200	18.502	24.117	19.981	16.557	8.661	0.000	305.986

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems				Modification Number / Title: 1 / (NR117) Global Broadcast Service (GBS)				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Modification Item 1 of 1: (NR117) Global Broadcast Service (GBS)												
Manufacturer Information												
Manufacturer Name: RAYTHEON				Manufacturer Location: Sterling, VA								
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 5								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023					
Contract Dates	Aug 2017		Dec 2018									
Delivery Dates	Jan 2018		May 2019									
Manufacturer Name: Aqyr Technologies, Inc.				Manufacturer Location: Nashua, NH								
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 3								
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023					
Contract Dates	Aug 2017	Dec 2017	Dec 2018									
Delivery Dates	Nov 2017	Mar 2018	Mar 2019									
Installation Information												
Method of Implementation: [none specified]:: Installation Name: Afloat Receive Terminal												
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)			
Prior Years	152 / 45.190	4 / 0.623	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	156 / 45.813
FY 2017	- / -	- / -	1 / 0.159	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 0.159
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	12 / 1.983	0 / 0.000	12 / 1.983	- / -	- / -	- / -	- / -	0 / 0.000	12 / 1.983
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	18 / 3.405	- / -	- / -	- / -	0 / 0.000	18 / 3.405
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.208	- / -	- / -	0 / 0.000	19 / 3.208
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 2.756	- / -	0 / 0.000	16 / 2.756
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.054	0 / 0.000	6 / 1.054
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	152 / 45.190	4 / 0.623	1 / 0.159	12 / 1.983	0 / 0.000	12 / 1.983	18 / 3.405	19 / 3.208	16 / 2.756	6 / 1.054	0 / 0.000	228 / 58.378

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13												P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Modification Number / Title: 1 / (NR117) Global Broadcast Service (GBS)													
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																							
<i>Modification Item 1 of 1: (NR117) Global Broadcast Service (GBS)</i>																																			
Installation Information																																			
Method of Implementation: [none specified]:: Installation Name: Afloat Receive Terminal																																			
Installation Schedule																																			
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	152	-	-	2	2	-	1	-	-	-	6	6	-	-	9	9	-	-	10	9	-	-	8	8	-	-	3	3	-	228					
Out	152	-	-	2	2	-	-	1	-	-	-	6	6	-	-	9	9	-	-	10	9	-	-	8	8	-	-	3	3	228					
Method of Implementation: [none specified]:: Installation Name: Interim Modem Upgrades																																			
Installation Cost					Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total									
					Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)	Qty (Each) I	Total Cost (\$ M)									
Prior Years					125	6.250	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	0	/ 0.000	125	/ 6.250							
FY 2017					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2018					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2019					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2020					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2021					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2022					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
FY 2023					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
To Complete					-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -									
Total					125	6.250	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	-	/ -	0	/ 0.000	125	/ 6.250							
Installation Schedule																																			
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	120	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125							
Out	120	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125							
Method of Implementation (Organic): Portable Receive Terminal - Not Installed																							Installation Quantity: 184												
Footnotes:																																			

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	P-1 Line Item Number / Title: 3215 / Satellite Communications Systems	Modification Number / Title: 1 / (NR117) Global Broadcast Service (GBS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(2) 1. NR117: FY18 Portable Receive Terminal procurements increased from PB 18 due to the FY18 funds realignment from the CBSP Program to support the WINDOWS 10 Mandate for PKI upgrade implementation. 2. GBS Portable Receive Terminals are turn-key and therefore do not have installation costs associated with them. 3. FY 2019 \$3.2M Other Contingency Operations (OCO) funding procures quantity 13 Portable GBS Systems for expanding Navy SEAL combat operations in US Central Command (CENTCOM) and other Areas of Responsibility (AORs). Increased operational use has reduced service life of legacy Portable GBS systems. (3) FY19 DSA cost growth supports increased installations from Qty 1 in FY18 to Qty 12 in FY19. (4) Engineering Change Order (ECO) is required to implement Cybersecurity upgrades to increase system performance for fielded GBS Afloat Receive Terminals and Portable Receive Terminals. A portion of FY17 funding began Non-Recurring Engineering (NRE) to support end to end integration testing for Public Key Infrastructure (PKI) implementation. FY17 GBS funds were also realigned to CBSP Program (NR112) to accelerate a Dual Force Level Variant (FLV) antenna with installation planned for FY18. FY18-21 procures and installs Win 10 PKI upgrades and performs associated integration, assembly and test.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems						Modification Number / Title: 2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	135.532	7.792	2.260	13.703	0.000	13.703	14.773	15.186	15.344	15.609	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	135.532	7.792	2.260	13.703	0.000	13.703	14.773	15.186	15.344	15.609	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	135.532	7.792	2.260	13.703	0.000	13.703	14.773	15.186	15.344	15.609	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Navy's next generation Commercial Satellite Communications (SATCOM) program provides the only source of wideband SATCOM to Patrol Coastal (PCs) and Mine Countermeasure Ships (MCMs), diversity for Military Satellite Communications (MILSATCOM) on Unit Level Variant (ULV) ships, and augments MILSATCOM on Force Level Variant (FLV) ships. CBSP will support the procurement and installation of a commercial terminal and service architecture that significantly increase data throughput, Navy Anti-Access Area Denial posture, and SATCOM reliability and space resiliency by providing band diversity, assured access, and redundancy for MILSATCOM. Included in the program are Small Ship Variant (SSV - Patrol Coastal or Mine Countermeasure Ships), Unit Level Variant (ULV - examples are Guided Missile Destroyers or Guided Missile Frigates), and Force Level Variant (FLV - large combatant ships such as carriers).												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems							Modification Number / Title: 2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Submarines, ships			Modification Type: upgrade				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: (NR112) Commercial Broadband Satellite program (CBSP) - Afloat													
B Kits													
Recurring													
1.1.1) Small Ship Variant (SSV) - NonOrganic	27 / 4.290	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 4.290
1.1.2) Unit Level Variant (ULV) - NonOrganic ⁽⁵⁾	31 / 30.476	- / -	- / -	6 / 5.622	- / -	6 / 5.622	5 / 4.830	6 / 5.982	6 / 6.168	4 / 4.236	Continuing	Continuing	
1.1.3) Force Level Variant (FLV) - NonOrganic ⁽⁶⁾	22 / 36.078	2 / 4.606	- / -	- / -	- / -	- / -	1 / 1.914	- / -	- / -	- / -	- / -	- / -	25 / 42.598
Subtotal: Recurring	- / 70.844	- / 4.606	- / -	- / 5.622	- / -	- / 5.622	- / 6.744	- / 5.982	- / 6.168	- / 4.236	Continuing	Continuing	
Subtotal: (NR112) Commercial Broadband Satellite program (CBSP) - Afloat	80 / 70.844	2 / 4.606	- / -	6 / 5.622	- / -	6 / 5.622	6 / 6.744	6 / 5.982	6 / 6.168	4 / 4.236	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 70.844	- / 4.606	- / -	- / 5.622	- / -	- / 5.622	- / 6.744	- / 5.982	- / 6.168	- / 4.236	Continuing	Continuing	
Support (All Modification Items)													
2.1) Training Equipment	- / 0.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.304
2.2) Engineering Change Orders ⁽⁷⁾	- / 1.735	- / 0.210	- / 0.079	- / 2.960	- / -	- / 2.960	- / 0.522	- / 0.328	- / 0.311	- / 0.394	Continuing	Continuing	
2.3) Production Support	- / -	- / 0.275	- / -	- / 0.365	- / -	- / 0.365	- / 0.450	- / 0.424	- / 0.370	- / 0.254	Continuing	Continuing	
2.4) Other (DSA) ⁽⁸⁾	- / 11.685	- / 0.454	- / 0.401	- / 1.033	- / -	- / 1.033	- / 1.048	- / 1.427	- / 1.458	- / 1.537	Continuing	Continuing	
Subtotal: Support	- / 13.724	- / 0.939	- / 0.480	- / 4.358	- / -	- / 4.358	- / 2.020	- / 2.179	- / 2.139	- / 2.185	Continuing	Continuing	
Installation													
Modification Item 1 of 1: (NR112) Commercial Broadband Satellite program (CBSP) - Afloat	- / 50.964	- / 2.247	- / 1.780	- / 3.723	- / 0.000	- / 3.723	- / 6.009	- / 7.025	- / 7.037	- / 9.188	Continuing	Continuing	
Subtotal: Installation	- / 50.964	- / 2.247	- / 1.780	- / 3.723	- / -	- / 3.723	- / 6.009	- / 7.025	- / 7.037	- / 9.188	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	135.532	7.792	2.260	13.703	0.000	13.703	14.773	15.186	15.344	15.609	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Modification Number / Title: 2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
<i>Modification Item 1 of 1: (NR112) Commercial Broadband Satellite program (CBSP) - Afloat</i>																																	
Manufacturer Information																																	
Manufacturer Name: Harris - CBSP FLV							Manufacturer Location: Palm Beach, FL																										
Administrative Leadtime (<i>in Months</i>): 2							Production Leadtime (<i>in Months</i>): 6																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Feb 2017				Dec 2018																												
Delivery Dates	Aug 2017				Jun 2019																												
Installation Information																																	
Method of Implementation: Tiger Team:: Installation Name: Small Ship Variant (SSV), Unit Level Variant (ULV) and Force Level V																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																			
Prior Years			78 / 50.964	2 / 2.247	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	80 / 53.211																	
FY 2017			- / -	- / -	2 / 1.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 1.780																	
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019			- / -	- / -	- / -	3 / 3.723	0 / 0.000	3 / 3.723	3 / 3.582	- / -	- / -	- / -	- / -	- / -	0 / 0.000	6 / 7.305																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.427	4 / 4.629	- / -	- / -	- / -	0 / 0.000	6 / 7.056																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.396	4 / 4.527	- / -	- / -	Continuing	Continuing																		
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.510	4 / 5.205	0 / 0.000	6 / 7.715																			
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.983	Continuing	Continuing																		
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																		
Total			78 / 50.964	2 / 2.247	2 / 1.780	3 / 3.723	0 / 0.000	3 / 3.723	5 / 6.009	6 / 7.025	6 / 7.037	6 / 9.188	Continuing	Continuing																			
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot											
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
In	78	-	2	-	-	1	1	-	-	-	2	1	-	3	1	1	3	1	1	2	2	1	1	Cont.	Cont.								
Out	76	2	-	2	-	-	-	1	1	-	-	-	2	1	-	3	1	1	3	1	1	2	2	1	1	Cont.	Cont.						
Footnotes:																																	
(5) FY19 procures Qty 6 CBSP Unit Level Variant (ULV) terminals in support of DDG ship class.																																	

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	P-1 Line Item Number / Title: 3215 / Satellite Communications Systems	Modification Number / Title: 2 / (NR112) Commercial Broadband Satellite program (CBSP) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(6) 1. Force Level Variant (FLV) terminals include single and dual antenna configurations which influences average unit cost. FY17 funding reflects a realignment from the GBS Program and increases procurements from Qty 1 (single FLV antenna \$1.830M) to Qty 2 for a dual FLV antenna (\$2.776M). 2. FY17 Qty 1 install shifted to FY18 due to availability change for AS 39 vessel EMORY S. LAND. FY17 Install funds are provided to cover installation cost overruns. 3. FY18 ECO and DSA adjustments are due to a reprioritization to cover Qty 1 install increase.		
(7) Engineering changes required to implement bandwidth efficiency technologies to increase system performance for fielded Small Ship Variants (SSV) and Force Level Variants (FLV). Beginning in FY19, NRE funding supports both SSV and FLV, while FY18 and prior funded SSV only.		
(8) DSA estimates are based off of a percentage of the total installation, with 75% of costs being required the year prior (Qty 3 DDGs installed in FY20) for all pre-installation design work and 25% required the year of the actual installation (Qty 1 DDG installed in FY19). The FY18 to FY19 DSA cost variance is due to increased ship quantities being installed.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems					Modification Number / Title: 3 / (NR118) JMINI CS Shore			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	16.977	0.000	0.000	0.000	0.000	0.000	1.557	0.000	0.000	0.000	0.000	18.534
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	16.977	0.000	0.000	0.000	0.000	0.000	1.557	0.000	0.000	0.000	0.000	18.534
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	16.977	0.000	0.000	0.000	0.000	0.000	1.557	0.000	0.000	0.000	0.000	18.534
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Joint Ultra-High Frequency (UHF) Military Satellite Communication (MILSATCOM) Network Integrated Control System (JMINI CS) is a legacy system that commenced in 1998. JMINI CS is a Navy-led, Joint interest program providing integrated, dynamic, and centralized control of non-processed UHF MILSATCOM 5 and 25 kHz Demand Assigned Multiple Access (DAMA) and Demand Assigned Single Access (DASA) channels to maximize existing highly sought after SATCOM resources used to support operational strike missions as well as joint training and tactical exercises. The system provides decentralized web-based management of those resources for use as a situational awareness tool for Combatant Commanders and SATCOM Support Centers. The JMINI CS is required to operate beyond the original End of Life (EoL) in 2015 in order to continue to support mission critical operations through at least 2033. The globally integrated system consists of three major subsystems: Network Management System, Satellite Access Controller and the control terminals. The JMINI CS system refresh effort will replace obsolete and unsupported components or subsystems while maintaining interoperability with existing systems. Design and integration efforts were funded with RDTEN.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems						Modification Number / Title: 3 / (NR118) JMINI CS Shore			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: (NR118) JMINI CS Shore</i>												
B Kits												
Recurring												
1.1.1) JMINI Control System Shore - NonOrganic	5 / 11.756	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 11.756
1.1.2) MILCON P-913: Shore Based Enterprise Network Enhancements - Organic	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.557	- / -	- / -	- / -	- / -	1 / 1.557
<i>Subtotal: Recurring</i>	- / 11.756	- / -	- / -	- / -	- / -	- / -	- / 1.557	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: (NR118) JMINI CS Shore</i>	5 / 11.756	- / -	- / -	- / -	- / -	- / -	1 / 1.557	- / -	- / -	- / -	- / -	6 / 13.313
<i>Subtotal: Procurement, All Modification Items</i>	- / 11.756	- / -	- / -	- / -	- / -	- / -	- / 1.557	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) Production Support	- / 0.666	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.666
<i>Subtotal: Support</i>	- / 0.666	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Installation												
<i>Modification Item 1 of 1: (NR118) JMINI CS Shore</i>	- / 4.555	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.555
<i>Subtotal: Installation</i>	- / 4.555	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)	16.977	0.000	0.000	0.000	0.000	0.000	1.557	0.000	0.000	0.000	0.000	18.534

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Modification Number / Title: 3 / (NR118) JMINI CS Shore																
ID Code (A=Service Ready, B=Not Service Ready) : <i>Modification Item 1 of 1: (NR118) JMINI CS Shore</i>															MDAP/MAIS Code:															
Manufacturer Information																														
Manufacturer Name: VIASAT								Manufacturer Location: Carlsbad, CA.																						
Administrative Leadtime (<i>in Months</i>): 3								Production Leadtime (<i>in Months</i>): 1																						
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: Method:: Installation Name: JMINI CS																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.555	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 4.555																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -														
Total			5 / 4.555	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	5 / 4.555																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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						
Out	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5						
Method of Implementation (Organic): MILCON P-913: Shore Based Enterprise Network Enhancements - Not Installed															Installation Quantity: 1															

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems					Modification Number / Title: 4 / Commercial Broadband Satellite Assured C2 Modems				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	7.370	6.200	0.000	6.200	1.540	0.000	0.000	0.000	0.000	15.110
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	7.370	6.200	0.000	6.200	1.540	0.000	0.000	0.000	0.000	15.110
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	7.370	6.200	0.000	6.200	1.540	0.000	0.000	0.000	0.000	15.110
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Assured C2 Modems: Directly support Assured Command and Control (C2) posture, SATCOM reliability, space resiliency via band diversity and redundancy for MILSATCOM. Beginning in FY18, CBSP begins procurement of modems and peripheral equipment to the CBSP terminal to provide technology refresh and directly support Assured Command and Control (C2) communications.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Modification Number / Title: 4 / Commercial Broadband Satellite Assured C2 Modems
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Commercial Broadband Satellite Assured C2 Modems</i>													
A Kits													
Recurring													
1.1.1) Assured C2 Modems - NonOrganic ⁽⁹⁾	- / -	- / -	165 / 3.830	112 / 1.932	- / -	112 / 1.932	40 / 0.600	- / -	- / -	- / -	- / -	- / -	317 / 6.362
1.1.2) Assured C2 Modems - Not Installed - Organic ⁽¹⁰⁾	- / -	- / -	20 / 0.660	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.660
1.1.3) Production Support - Assured C2 Modems - Organic	- / -	- / -	- / 0.270	- / 0.120	- / -	- / 0.120	- / 0.036	- / -	- / -	- / -	- / -	- / -	- / 0.426
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 4.760	- / 2.052	- / -	- / 2.052	- / 0.636	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 7.448
<i>Subtotal: Commercial Broadband Satellite Assured C2 Modems</i>	- / -	- / -	185 / 4.760	112 / 2.052	- / -	112 / 2.052	40 / 0.636	- / -	- / -	- / -	- / -	- / -	337 / 7.448
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 4.760	- / 2.052	- / -	- / 2.052	- / 0.636	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 7.448
Installation													
<i>Modification Item 1 of 1: Commercial Broadband Satellite Assured C2 Modems</i>													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / 2.610	- / 4.148	- / -	- / 4.148	- / 0.904	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 7.662
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.000	7.370	6.200	0.000	6.200	1.540	0.000	0.000	0.000	0.000	0.000	15.110

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems								Modification Number / Title: 4 / Commercial Broadband Satellite Assured C2 Modems																		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																										
Modification Item 1 of 1: Commercial Broadband Satellite Assured C2 Modems																														
Manufacturer Information																														
Manufacturer Name: COMTECH				Manufacturer Location: Tempe, AZ																										
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 3																										
Dates	FY 2017	FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates		Jan 2018		Jan 2019																										
Delivery Dates		Apr 2018		Apr 2019																										
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Assured C2 Modems																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	165 / 2.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	165 / 2.610									
FY 2019	- / -	- / -	- / -	- / -	112 / 4.148	0 / 0.000	112 / 4.148	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	112 / 4.148									
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.904	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 0.904									
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
Total	- / -	- / -	- / -	165 / 2.610	112 / 4.148	0 / 0.000	112 / 4.148	40 / 0.904	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	317 / 7.662										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	45	60	60	-	32	40	40	-	20	10	10	-	-	-	-	-	-	-	-	-	317				
Out	-	-	-	-	-	45	60	60	-	32	40	40	-	20	10	10	-	-	-	-	-	-	-	-	-	317				
Method of Implementation (Organic): Assured C2 Modems - Not Installed - Not Installed																Installation Quantity: 20														
Footnotes:																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	P-1 Line Item Number / Title: 3215 / Satellite Communications Systems	Modification Number / Title: 4 / Commercial Broadband Satellite Assured C2 Modems
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(9) FY19 Average unit cost decrease compared to FY18 reflects upgraded modems buys that are less costly compared to new replacement modems that were procured in FY18. Procurements include a mix of upgraded modems, new replacement modems, and peripheral equipment required for this technology refresh. FY19 Installation unit cost increase compared to FY18 is due to the number of modems required by ship class and platform type. For example, a Dual Force Level Variant requires Qty 2 modem installations as compared to a Single Unit Level Variant (ULV) requiring Qty 1 modem.		
(10) FY18 procures 20 new replacement modems for shore sites that do not require installation.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems						Modification Number / Title: 5 / CBSP Ka Kits			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	6.000	0.000	6.000	2.100	5.300	5.200	0.000	0.000	18.600
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	6.000	0.000	6.000	2.100	5.300	5.200	0.000	0.000	18.600
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	6.000	0.000	6.000	2.100	5.300	5.200	0.000	0.000	18.600
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Current National focus is on highly contested environments and has highlighted a growing need of protected communications, specifically in a satellite denied environment. Assured Command and Control (AC2) Ka Band Kits will increase band diversity and access to Wideband Global SATCOM (WGS) and mitigates risk of loss of Beyond Line of Sight (BLOS) wideband communications in a SATCOM-denied environment for the CBSP Program. With this capability, CBSP will be able to reduce risk of loss of C2 communications on Unit Level Variant (ULV)/ Field Level Variant (FLV) class Combatant ships in a denied environment which would assure Command and Control (C2) including ISR, NIPR/SIPR, VTC, and other critical capabilities.

FY19 supports the procurement and installation of 3 ULV Kits.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3215 / Satellite Communications Systems						Modification Number / Title: 5 / CBSP Ka Kits			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: CBSP Ka Kits												
B Kits												
Recurring												
1.1.1) Unit Level Variant - NonOrganic ⁽¹¹⁾	- / -	- / -	- / -	3 / 0.352	- / -	3 / 0.352	6 / 0.861	5 / 1.390	6 / 1.647	- / -	- / -	20 / 4.250
1.1.2) Force Level Variant - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.100	6 / 2.077	- / -	- / -	13 / 4.177
Subtotal: Recurring	- / 0.000	- / -	- / -	- / 0.352	- / -	- / 0.352	- / 0.861	- / 3.490	- / 3.724	- / -	- / 0.000	- / 8.427
Subtotal: CBSP Ka Kits	- / -	- / -	- / -	3 / 0.352	- / -	3 / 0.352	6 / 0.861	12 / 3.490	12 / 3.724	- / -	- / -	33 / 8.427
Subtotal: Procurement, All Modification Items	- / 0.000	- / -	- / -	- / 0.352	- / -	- / 0.352	- / 0.861	- / 3.490	- / 3.724	- / -	- / 0.000	- / 8.427
Support (All Modification Items)												
2.1) DSA	- / -	- / -	- / -	- / 0.171	- / -	- / 0.171	- / 0.317	- / 0.360	- / 0.090	- / -	- / -	- / 0.938
2.2) Production Support Ka Kits	- / -	- / -	- / -	- / 0.015	- / -	- / 0.015	- / 0.296	- / 0.250	- / 0.186	- / -	- / -	- / 0.747
2.3) Ka Kit Non-Recurring Engineering (NRE) ⁽¹²⁾	- / -	- / -	- / -	- / 5.062	- / -	- / 5.062	- / -	- / -	- / -	- / -	- / -	- / 5.062
Subtotal: Support	- / 0.000	- / -	- / -	- / 5.248	- / -	- / 5.248	- / 0.613	- / 0.610	- / 0.276	- / -	- / 0.000	- / 6.747
Installation												
Modification Item 1 of 1: CBSP Ka Kits	- / 0.000	- / 0.000	- / 0.000	- / 0.400	- / 0.000	- / 0.400	- / 0.626	- / 1.200	- / 1.200	- / 0.000	- / 0.000	- / 3.426
Subtotal: Installation	- / 0.000	- / -	- / -	- / 0.400	- / -	- / 0.400	- / 0.626	- / 1.200	- / 1.200	- / -	- / 0.000	- / 3.426
Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	6.000	0.000	6.000	2.100	5.300	5.200	0.000	0.000	18.600

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems										Modification Number / Title: 5 / CBSP Ka Kits																
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: CBSP Ka Kits													MDAP/MAIS Code:																	
Manufacturer Information																														
Manufacturer Name: Harris - CBSP							Manufacturer Location: Palm Beach, FL																							
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 3																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																							
Contract Dates			Dec 2018																											
Delivery Dates			Mar 2019																											
Installation Information																														
Method of Implementation: [none specified]: Installation Name: Unit Level Variant																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2019			- / -	- / -	- / -	3 / 0.400	0 / 0.000	3 / 0.400	- / -	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.400															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.626	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.626															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.522	- / -	- / -	- / -	0 / 0.000	5 / 0.522															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.636	- / -	- / -	- / -	0 / 0.000	6 / 0.636															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			- / -	- / -	- / -	3 / 0.400	0 / 0.000	3 / 0.400	6 / 0.626	5 / 0.522	6 / 0.636	- / -	- / -	0 / 0.000	20 / 2.184															
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	5	-	-	-	6	-	-	-	-	-	20			
Out	-	-	-	-	-	-	-	-	-	1	2	-	-	3	3	-	-	2	3	-	-	3	3	-	-	-	-	20		
Method of Implementation: [none specified]: Installation Name: Force Level Variant																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)				
Prior Years			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -			

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3215 / Satellite Communications Systems								Modification Number / Title: 5 / CBSP Ka Kits																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: CBSP Ka Kits																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Force Level Variant																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)													
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.678	- / -	- / -	0 / 0.000	7 / 0.678																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.564	- / -	0 / 0.000	6 / 0.564																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.678	6 / 0.564	- / -	0 / 0.000	13 / 1.242																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	-	-	-	6	-	-	-	-	-	13				
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	-	-	3	3	-	-	-	-	13			

Footnotes:

- (11) FY19 supports the procurement and installation of 3 ULV Ka Kits in an effort to reduce risk of loss of C2 communications on Unit Level Variant (ULV) class Combatant ships in a denied environment which would assure Command and Control (C2).
- (12) FY19 Non-Recurring Engineering (NRE) will fund the CBSP Original Equipment Manufacturer (OEM) to design and develop a Force Level Variant (FLV) upgrade kit to replace the existing C/Ku-band feed assembly with a C/Ka-band feed assembly. The design will be consistent with the current feed assembly which will allow for replacement without changing the design of the FLV terminal.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:							
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications					3216 / Navy Multiband Terminal (NMT)							
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: 290												
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,053.558	33.992	69.764	113.885	0.000	113.885	92.150	21.536	31.279	19.072	73.062	1,508.298
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,053.558	33.992	69.764	113.885	0.000	113.885	92.150	21.536	31.279	19.072	73.062	1,508.298
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,053.558	33.992	69.764	113.885	0.000	113.885	92.150	21.536	31.279	19.072	73.062	1,508.298
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	0.040	0.126	0.231	-	0.231	0.159	-	-	-	-	0.556
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Navy Multiband Terminal (NMT) System provides funds for procurement of ship, submarine, and shore protected and wideband Military Satellite Communications (MILSATCOM) terminals via earth orbiting relay satellites in the Super High Frequency, Ka, and Extremely High Frequency (EHF) bands. The NMT provides warfighters with the assured, jam resistant, secure SATCOM for message traffic, data transfer and secure voice communications. These procurements are scheduled to meet the satellite communications requirements established by the Chief of Naval Operations in the Fleet Communications Planning and Programming documents.												
NAVY MULTIBAND TERMINAL (NMT - NS108): The NMT program is the next generation maritime military satellite communications terminal. The NMT Program is the required Navy component to the Advanced Extremely High Frequency (AEHF) Program for enhancing protected and survivable satellite communications to Naval forces. NMT multiband communication capabilities will communicate two way Ka-Band on Wideband Global SATCOM (WGS) and shipboard and submarine terminals to communicate with X-Band using the Defense Satellite Communications System and WGS. NMT is compatible with today's Navy Low Data Rate/Medium Data Rate terminals, X-Band terminals and will sustain the MILSATCOM architecture by providing connectivity across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence. The NMT system will replenish and improve on the capabilities of both the Military Strategic and Tactical Relay System (MILSTAR) and WGS system by equipping the warfighters with the assured, jam resistant, secure communications as described in the Operational Requirements Document (Wideband Gapfiller System ORD, AFSPC ORD 004-99, May 3, 2000) for the joint AEHF Satellite Communications and WGS System.												
The NMT protected system AN/WSC-9 V (Variant) is comprised of three configurations for ships, submarines and shore sites known as Communication Groups. Terminal Communication Groups will integrate protected and wideband signal processing to multiband Antenna Groups. The Antenna Groups align to the specific Terminal Variant for ship, submarine and shore platforms and provides the SATCOM capabilities known as Q/Ka and X/Ka assigned to platforms. NMT includes the Advanced Time Division Multiple Access (TDMA) Interface Processor (IP) and supports increased data transfers for the Automated Digital Network System (ADNS) router architecture supporting improved Quality of Service (QoS) capability, smaller form factor and easier integration into operational environments, further supporting network user access to protected MILSATCOM connectivity. Technical refresh of modems and the associated architectures will directly support Assured Command and Control (AC2) posture, SATCOM reliability, space resiliency via band diversity and redundancy. AC2 modems enable the use of Wideband Global Satellite (WGS) X-Band (ship/submarine transmit and receive) and Ka-band (shore receive and transmit) resources to maintain link connectivity to provide assured access to mission critical communications in jamming environments.												

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 13: Satellite Communications				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						
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: 290										
Exhibits Schedule			Prior Years		FY 2017	FY 2018	FY 2019 Base			
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 / 3216 Navy Multiband Terminal (NMT) - Afloat (TBD)				- / 743.900	- / 12.249	- / 40.302	- / 62.366	- / 0.000	- / 62.366
P-3a	2 / 3216 Navy Multiband Terminal (NMT) - Ashore (TBD)				- / 110.695	- / 1.533	- / 4.488	- / 10.035	- / 0.000	- / 10.035
P-3a	3 / X/Ka Backfits (TBD)				- / 137.385	- / 3.907	- / 2.842	- / 1.738	- / 0.000	- / 1.738
P-3a	4 / NMT Ashore Antennas (TBD)				- / 14.581	- / 0.715	- / 2.872	- / 3.942	- / 0.000	- / 3.942
P-3a	5 / ATIP (TBD)				- / 46.997	- / 15.588	- / 7.746	- / 9.309	- / 0.000	- / 9.309
P-3a	6 / Assured C2 Modems (TBD)				- / 0.000	- / 0.000	- / 11.514	- / 26.495	- / 0.000	- / 26.495
P-40	Total Gross/Weapon System Cost				- / 1,053.558	- / 33.992	- / 69.764	- / 113.885	- / 0.000	- / 113.885
Exhibits Schedule			FY 2020		FY 2021	FY 2022	FY 2023	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)	
P-3a	1 / 3216 Navy Multiband Terminal (NMT) - Afloat (TBD)				- / 61.118	- / 13.365	- / 15.079	- / 15.176	- / 72.496	- / 1,036.051
P-3a	2 / 3216 Navy Multiband Terminal (NMT) - Ashore (TBD)				- / 17.723	- / 0.392	- / 7.901	- / 0.000	- / 0.000	- / 152.767
P-3a	3 / X/Ka Backfits (TBD)				- / 0.000	- / 0.000	- / 1.791	- / 0.000	- / 0.000	- / 147.663
P-3a	4 / NMT Ashore Antennas (TBD)				- / 0.000	- / 0.000	- / 4.411	- / 3.664	- / 0.000	- / 30.185
P-3a	5 / ATIP (TBD)				- / 0.845	- / 1.886	- / 2.097	- / 0.232	- / 0.566	- / 85.266
P-3a	6 / Assured C2 Modems (TBD)				- / 12.464	- / 5.893	- / 0.000	- / 0.000	- / 0.000	- / 56.366
P-40	Total Gross/Weapon System Cost				- / 92.150	- / 21.536	- / 31.279	- / 19.072	- / 73.062	- / 1,508.298

*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:

This exhibit has been updated to include more refined cost estimates for the fielding of Assured Command and Control (AC2) modems and Advanced Time Division Multiple Access Interface Processor (ATIP) and for fact of life changes such as installation availability shifts. The FY19 funding increase provides for the procurement and installation of NMT terminals, AC2 modems, ATIPS, Ashore antennas and X/Ka Back-Fits . Specifically, the FY19 funding request provides for the procurement of 6 NMT terminals and the installation of 15 NMT terminals to align with earliest remaining installation availabilities.

As the program nears Full Operational Capability (FOC), the hardware being procured supports specific ship platform variants. Should an installation slip, the hardware for that platform cannot necessarily be aligned to a different platform creating an appearance of ahead of need for prior year procurements.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 1 / 3216 Navy Multiband Terminal (NMT) - Afloat				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	743.900	12.249	40.302	62.366	0.000	62.366	61.118	13.365	15.079	15.176	72.496	1,036.051	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	743.900	12.249	40.302	62.366	0.000	62.366	61.118	13.365	15.079	15.176	72.496	1,036.051	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	743.900	12.249	40.302	62.366	0.000	62.366	61.118	13.365	15.079	15.176	72.496	1,036.051	
(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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
(Afloat Ship) (Afloat Sub): Provides jam resistant, low probability of interception and detection for protected extended data rate communications with Advanced Extremely High Frequency (AEHF) capability.													
The FY19 request provides for the procurement of 4 NMT shipboard terminal and the installation of 12 NMT shipboard terminals to align with earliest remaining installation availabilities. Budget updates also include the breakout of Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) costs. IA&T efforts are performed once terminals and antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the terminals and antennas required for NMT ship and submarine afloat platforms. SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT system is operational post installation on afloat platforms.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 1 / 3216 Navy Multiband Terminal (NMT) - Afloat			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Ships, submarines			Modification Type: TBD				Related RDT&E PEs: 0303109N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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												
<i>Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat</i>												
B Kits												
Recurring												
1.1.1) Afloat Ship - NonOrganic ⁽¹⁾	118 / 379.712	- / -	1 / 8.179	4 / 27.395	- / -	4 / 27.395	7 / 37.380	- / -	- / -	- / -	- / -	130 / 452.666
1.1.2) Afloat Sub - NonOrganic	67 / 61.109	2 / 2.985	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	69 / 64.094
<i>Subtotal: Recurring</i>	- / 440.821	- / 2.985	- / 8.179	- / 27.395	- / -	- / 27.395	- / 37.380	- / -	- / -	- / -	- / 0.000	- / 516.760
<i>Subtotal: 3216 Navy Multiband Terminal (NMT) - Afloat</i>	185 / 440.821	2 / 2.985	1 / 8.179	4 / 27.395	- / -	4 / 27.395	7 / 37.380	- / -	- / -	- / -	- / -	199 / 516.760
<i>Subtotal: Procurement, All Modification Items</i>	- / 440.821	- / 2.985	- / 8.179	- / 27.395	- / -	- / 27.395	- / 37.380	- / -	- / -	- / -	- / 0.000	- / 516.760
Support (All Modification Items)												
2.1) NMT Integration, Assembly & Test (IA&T)	- / 2.748	- / 2.263	- / 0.738	- / 0.125	- / -	- / 0.125	- / 0.512	- / 1.175	- / -	- / -	- / -	- / 17.561
2.2) Production Support - Ship	- / 17.522	- / 0.029	- / 0.491	- / 1.644	- / -	- / 1.644	- / 2.243	- / -	- / -	- / -	- / -	- / 21.929
2.3) Production Support - Sub	- / 3.663	- / 0.315	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.978
2.4) Other DSA - Ship	- / 30.073	- / 1.532	- / 3.491	- / 3.041	- / -	- / 3.041	- / 1.574	- / 0.857	- / 0.132	- / 0.194	- / 0.574	- / 41.468
2.5) Other DSA - Sub	- / 7.096	- / 0.188	- / 0.314	- / 0.228	- / -	- / 0.228	- / -	- / -	- / -	- / -	- / -	- / 7.826
2.6) NMT System Operational Verification Test (SOVT)	- / 2.108	- / 2.976	- / 1.258	- / 1.112	- / -	- / 1.112	- / 0.873	- / 0.712	- / 0.454	- / -	- / 0.472	- / 9.965
<i>Subtotal: Support</i>	- / 63.210	- / 7.303	- / 6.292	- / 6.150	- / -	- / 6.150	- / 5.202	- / 2.744	- / 0.586	- / 0.194	- / 1.046	- / 92.727
Installation												
<i>Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat</i>	- / 239.869	- / 1.961	- / 25.831	- / 28.821	- / 0.000	- / 28.821	- / 18.536	- / 10.621	- / 2.053	- / 4.927	- / 11.874	- / 344.493
<i>Subtotal: Installation</i>	- / 239.869	- / 1.961	- / 25.831	- / 28.821	- / -	- / 28.821	- / 18.536	- / 10.621	- / 2.053	- / 4.927	- / 11.874	- / 344.493
Total												
Total Cost (Procurement + Support + Installation)	743.900	12.249	40.302	62.366	0.000	62.366	61.118	13.365	15.079	15.176	72.496	1,036.051

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)										Modification Number / Title: 1 / 3216 Navy Multiband Terminal (NMT) - Afloat																
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																
Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Afloat																														
Manufacturer Information																														
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																							
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 15																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates	Jan 2017		Jan 2018		Jan 2019																									
Delivery Dates	Apr 2018		Apr 2019		Apr 2020																									
Installation Information																														
Method of Implementation: Method:: Installation Name: Navy Multiband Terminal (NMT) - Afloat																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 239.869	4 / 1.961	14 / 25.831	9 / 24.146	0 / 0.000	9 / 24.146	2 / 6.150	1 / 3.540	- / -	- / -	- / -	1 / 2.969	185 / 304.466															
FY 2017			- / -	- / -	- / -	2 / 0.869	0 / 0.000	2 / 0.869	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.869															
FY 2018			- / -	- / -	- / -	1 / 3.806	0 / 0.000	1 / 3.806	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 3.806															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	4 / 12.386	- / -	- / -	- / -	- / -	0 / 0.000	4 / 12.386															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 7.081	1 / 2.053	1 / 4.927	3 / 8.905	7 / 22.966																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -													
Total			154 / 239.869	4 / 1.961	14 / 25.831	12 / 28.821	0 / 0.000	12 / 28.821	6 / 18.536	3 / 10.621	1 / 2.053	1 / 4.927	4 / 11.874	199 / 344.493																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	140	7	2	5	2	2	6	1	7	-	7	5	-	-	1	-	5	-	1	2	-	-	1	-	-	1	4	199		
Out	135	5	7	2	5	2	2	6	1	7	-	7	5	-	-	1	-	5	-	-	1	2	-	-	1	-	-	5	199	
Footnotes:																														
(1) 1. FY19 request provides for the procurement and installation of NMT afloat terminals and reflects current Raytheon contract pricing. Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) engineering services are required to deliver and install the NMT Terminal System. 2. FY19-FY23 continues the installation of NMT Terminals. Prior Year (PY) procurements installed in FY19 align to specific ship and submarine NMT configurations. NMT scheduled installations are dependent on limited ship and submarine availabilities as the program nears Full Operational Capability (FOC).																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)	Modification Number / Title: 1 / 3216 Navy Multiband Terminal (NMT) - Afloat
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Installation costs are based on current program office estimates. 3. IA&T costs are budgeted in the year of the hardware delivery. Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12-month period with the last delivery occurring 27 months after award. For example, the last terminal delivery from the FY15 prior year buy is scheduled March 2017. 4. The FY19 Shipboard procurement unit cost is lower than the FY18 cost due to the Economic Order Quantity (EOQ) savings. 5. System Operational Verification Test (SOVT) costs are tied to the end of the installation availability. 6. NMT scheduled installations are dependent on limited ship and submarine availabilities as the program nears FOC. Install cost fluctuations are driven by the configuration of the NMT system and the platform type. For example, estimated installation cost for a LHD 1 class (large deck) platform with dual Q/X/Ka capability is approximately three times greater than a DDG 51 class platform (small deck) with the same Q/X/Ka capability. Large deck ships consist of 2 Terminal Communication Groups with 4, 5, or 6 antennas. The antenna mix is dependent on the specific configuration requirement for each ship. For example, Small deck ships consist of 1 Terminal Communication Group with 2, 3, or 4 antennas. There are 13 variants of the NMT and antenna size varies by class (ranging from 54" to 96").		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)									
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	110.695	1.533	4.488	10.035	0.000	10.035	17.723	0.392	7.901	0.000	0.000	152.767
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	110.695	1.533	4.488	10.035	0.000	10.035	17.723	0.392	7.901	0.000	0.000	152.767
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	110.695	1.533	4.488	10.035	0.000	10.035	17.723	0.392	7.901	0.000	0.000	152.767
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The FY19 request provides for the procurement of 2 NMT shore terminals to align with earliest remaining installation availabilities. Budget updates also include the breakout of Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) costs. IA&T efforts are performed once terminals and antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the terminals and antennas required for NMT shore platforms. SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT system is operational post installation on ashore platforms.												
[Ashore] Provides jam resistant, low probability of interception and detection for protected extended rate communications with Advanced Extremely High Frequency (AEHF) capability.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 2 / 3216 Navy Multiband Terminal (NMT) - Ashore			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Shore stations			Modification Type: TBD				Related RDT&E PEs: 0303109N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: 3216 Navy Multiband Terminal (NMT) - Ashore												
B Kits												
Recurring												
1.1.1) Ashore - NonOrganic (2)		32 / 65.804	- / -	1 / 3.227	2 / 5.408	- / -	2 / 5.408	5 / 12.887	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>		- / 65.804	- / -	- / 3.227	- / 5.408	- / -	- / 5.408	- / 12.887	- / -	- / -	- / -	- / 0.000
<i>Subtotal: 3216 Navy Multiband Terminal (NMT) - Ashore</i>		32 / 65.804	- / -	1 / 3.227	2 / 5.408	- / -	2 / 5.408	5 / 12.887	- / -	- / -	- / -	- / -
<i>Subtotal: Procurement, All Modification Items</i>		- / 65.804	- / -	- / 3.227	- / 5.408	- / -	- / 5.408	- / 12.887	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)												
2.1) NMT Integration, Assembly & Test (I&T)		- / 0.687	- / 0.476	- / -	- / 0.125	- / -	- / 0.125	- / 0.256	- / 0.392	- / -	- / -	- / -
2.2) Production Support - Ashore		- / 2.929	- / 0.029	- / 0.194	- / 0.324	- / -	- / 0.324	- / 0.773	- / -	- / -	- / -	- / -
2.3) Other DSA - Ashore		- / 0.397	- / 0.397	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.794
2.4) NMT System Operational Verification Test (SOVT)		- / 0.650	- / 0.631	- / 0.084	- / 0.171	- / -	- / 0.171	- / 0.262	- / -	- / 0.454	- / -	- / -
<i>Subtotal: Support</i>		- / 4.663	- / 1.533	- / 0.278	- / 0.620	- / -	- / 0.620	- / 1.291	- / 0.392	- / 0.454	- / -	- / 0.000
Installation												
Modification Item 1 of 1: 3216 Navy Multiband Terminal (NMT) - Ashore		- / 40.228	- / 0.000	- / 0.983	- / 4.007	- / 0.000	- / 4.007	- / 3.545	- / 0.000	- / 7.447	- / 0.000	- / 0.000
<i>Subtotal: Installation</i>		- / 40.228	- / -	- / 0.983	- / 4.007	- / -	- / 4.007	- / 3.545	- / -	- / 7.447	- / -	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		110.695	1.533	4.488	10.035	0.000	10.035	17.723	0.392	7.901	0.000	0.000
152.767												

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Exhibit P-3a, Individual Modification: PB 2019 Navy													Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)									Modification Number / Title: 2 / 3216 Navy Multiband Terminal (NMT) - Ashore																			
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:																			
<i>Modification Item 1 of 1:</i> 3216 Navy Multiband Terminal (NMT) - Ashore																																
Manufacturer Information																																
Manufacturer Name: Raytheon							Manufacturer Location: Marlborough, MA																									
Administrative Leadtime (<i>in Months</i>): 3							Production Leadtime (<i>in Months</i>): 15																									
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																			
Contract Dates	Jan 2017		Jan 2018		Jan 2019																											
Delivery Dates	Apr 2018		Apr 2019		Apr 2020																											
Installation Information																																
Method of Implementation: Method:: Installation Name: Navy Multiband Terminal (NMT) - Ashore																																
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																		
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																		
Prior Years			27 / 40.228	- / -	1 / 0.983	2 / 2.671	0 / 0.000	2 / 2.671	- / -	- / -	2 / 2.128	- / -	0 / 0.000	32 / 46.010																		
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2018			- / -	- / -	- / -	1 / 1.336	0 / 0.000	1 / 1.336	- / -	- / -	- / -	- / -	- / -	0 / 0.000	1 / 1.336																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.545	- / -	- / -	- / -	- / -	0 / 0.000	2 / 3.545																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.319	- / -	- / -	0 / 0.000	5 / 5.319																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																
Total			27 / 40.228	- / -	1 / 0.983	3 / 4.007	0 / 0.000	3 / 4.007	2 / 3.545	- / -	7 / 7.447	- / -	0 / 0.000	40 / 56.210																		
Installation Schedule																																
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		FY 2023		TC	Tot											
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
In	23	-	-	-	2	2	-	-	1	-	-	2	1	-	-	2	-	-	-	2	3	2	-	-	-	40						
Out	23	-	-	-	-	2	2	-	-	1	-	-	2	1	-	-	2	-	-	-	2	3	2	-	-	-	40					
Footnotes:																																
(2) 1. FY19 request provides for the procurement and installation of NMT shore terminals and reflects current Raytheon contract pricing. Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) engineering services are required to deliver and install the NMT Terminal System. 2. FY19-FY23 continues the installation of NMT Terminals. Installation costs are based on current program office estimates. 3. IA&T costs are budgeted in the year of the hardware delivery. Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12-month period																																

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13	P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)	Modification Number / Title: 2 / 3216 Navy Multiband Terminal (NMT) - Ashore
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
with the last delivery occurring 27 months after award. For example, the last terminal delivery from the FY15 prior year buy is scheduled March 2017. 4. The FY19 Shore procurement unit cost is lower than the FY18 cost due to the Economic Order Quantity (EOQ) savings. 5. System Operational Verification Test (SOVT) costs are tied to the end of the shore installation availability.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 3 / X/Ka Backfits			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	137.385	3.907	2.842	1.738	0.000	1.738	0.000	0.000	1.791	0.000	0.000	147.663
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	137.385	3.907	2.842	1.738	0.000	1.738	0.000	0.000	1.791	0.000	0.000	147.663
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	137.385	3.907	2.842	1.738	0.000	1.738	0.000	0.000	1.791	0.000	0.000	147.663
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: X/Ka Backfits continue to be fielded on platforms with NMT Q/Ka Ship terminals that were procured during Low Rate Initial Production (LRIP) and require the wideband capability that the X/Ka Antenna Group provides. The X/Ka hardware was unavailable during the first two years of production but is required to provide the full Wideband capability to the Fleet. Budget updates also include the breakout of Integration, Assembly and Test (IA&T) and System Operational Verification Test (SOVT) costs. IA&T efforts are performed once terminals and antennas are delivered from Raytheon Production Facilities to the government site SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the terminals and antennas required for NMT shore platforms. SOVT efforts are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT system is operational post installation on ashore platforms.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)							Modification Number / Title: 3 / X/Ka Backfits			
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: X/Ka Backfits													
A Kits													
Recurring													
1.1.1) X/Ka Backfits - NonOrganic ⁽³⁾	48 / 68.494	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 68.494
<i>Subtotal: Recurring</i>	- / 68.494	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 68.494
<i>Subtotal: X/Ka Backfits</i>	48 / 68.494	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 68.494
<i>Subtotal: Procurement, All Modification Items</i>	- / 68.494	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 68.494
Support (All Modification Items)													
2.1) NMT Integration, Assembly & Test (IA&T)	- / 1.030	- / 0.357	- / 0.492	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.879
2.2) NMT System Operational Verification Test (SOVT)	- / 1.171	- / 1.056	- / 0.419	- / 0.086	- / -	- / 0.086	- / -	- / -	- / -	- / 0.091	- / -	- / -	- / 2.823
<i>Subtotal: Support</i>	- / 2.201	- / 1.413	- / 0.911	- / 0.086	- / -	- / 0.086	- / -	- / -	- / -	- / 0.091	- / -	- / 0.000	- / 4.702
Installation													
Modification Item 1 of 1: X/Ka Backfits	- / 66.690	- / 2.494	- / 1.931	- / 1.652	- / 0.000	- / 1.652	- / 0.000	- / 0.000	- / 1.700	- / 0.000	- / 0.000	- / 0.000	- / 74.467
<i>Subtotal: Installation</i>	- / 66.690	- / 2.494	- / 1.931	- / 1.652	- / -	- / 1.652	- / -	- / -	- / 1.700	- / -	- / -	- / 0.000	- / 74.467
Total													
Total Cost (Procurement + Support + Installation)	137.385	3.907	2.842	1.738	0.000	1.738	0.000	0.000	1.791	0.000	0.000	0.000	147.663

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)								Modification Number / Title: 3 / X/Ka Backfits																		
ID Code (A=Service Ready, B=Not Service Ready) : Modification Item 1 of 1: X/Ka Backfits												MDAP/MAIS Code:																		
Manufacturer Information																														
Manufacturer Name: RAYTHEON ⁽⁴⁾						Manufacturer Location: Marlborough																								
Administrative Leadtime (in Months): 3						Production Leadtime (in Months): 15																								
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: X/Ka Backfits																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)						
Prior Years	44 / 66.690		1 / 2.494		1 / 1.931		1 / 1.652		0 / 0.000		1 / 1.652		- / -		- / -		1 / 1.700		- / -		0 / 0.000		48 / 74.467							
FY 2017	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2018	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2019	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2020	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2021	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2022	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete	- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -							
Total	44 / 66.690		1 / 2.494		1 / 1.931		1 / 1.652		0 / 0.000		1 / 1.652		- / -		- / -		1 / 1.700		- / -		0 / 0.000		48 / 74.467							
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	35	4	2	3	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	48				
Out	34	1	4	2	3	-	1	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	48				

Footnotes:

⁽³⁾ 1. Fielded platforms with the Q/Ka configuration require an X/Ka backfit, which has additional costs dependent on platform (large vs small deck). IA&T costs are budgeted in the year of the hardware delivery. Procurement Lead Time (PLT) is 15 months to deliver the first terminal. Deliveries continue over a 12-month period with the last delivery occurring 27 months after award. For example, the last terminal delivery from the FY15 prior year buy is scheduled March 2017. NMT scheduled installations are dependent on limited ship availabilities as the program nears FOC.

⁽⁴⁾ Procurements completed in prior years.

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)					Modification Number / Title: 4 / NMT Ashore Antennas				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	14.581	0.715	2.872	3.942	0.000	3.942	0.000	0.000	4.411	3.664	0.000	30.185
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	14.581	0.715	2.872	3.942	0.000	3.942	0.000	0.000	4.411	3.664	0.000	30.185
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	14.581	0.715	2.872	3.942	0.000	3.942	0.000	0.000	4.411	3.664	0.000	30.185
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The original NMT acquisition strategy was to re-use legacy FOT Shore Antennas that would be refurbished. However, antennas coming in for overhaul were in worse than expected condition; all required major overhaul parts including bearings, cable assemblies, motors, slip rings, and rotary joints. Refurbished FOT antennas posed long-term supportability problems due to obsolescence. Therefore, in Prior Year procurements (PY FY15), the program office procured 17 Shore antennas to provide optimal capability to the fleet.

PB19 NMT budget includes the breakout of Integration, Assembly and Test (I&T) efforts which are performed once the Ashore Antennas are delivered from Raytheon Production Facilities to the government site at SSC Atlantic, Charleston SC. SSC Atlantic serves as the lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the antennas required for NMT shore platforms. NMT Installations include System Operational Verification Test (SOVT) which are performed by SSC Atlantic, Charleston, SC and SSC Pacific, San Diego, CA and validate the NMT antenna is operational post installation on shore sites.

[NMT Ashore Antennas] Shore Antennas comprise of a Q Band configuration to provide SATCOM capabilities.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 4 / NMT Ashore Antennas			
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:					
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: NMT Ashore Antennas												
A Kits												
Recurring												
1.1.1) NMT Ashore Antennas - NonOrganic ⁽⁵⁾		17 / 13.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 13.903
Subtotal: Recurring		- / 13.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 13.903
Subtotal: NMT Ashore Antennas		17 / 13.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 13.903
Subtotal: Procurement, All Modification Items		- / 13.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 13.903
Support (All Modification Items)												
2.1) NMT Integration, Assembly & Test (IA&T)		- / -	- / 0.715	- / 1.353	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.068
2.2) NMT System Operational Verification Test (SOVT)		- / -	- / -	- / 0.168	- / 0.428	- / -	- / 0.428	- / -	- / -	- / 0.454	- / 0.370	- / -
Subtotal: Support		- / 0.000	- / 0.715	- / 1.521	- / 0.428	- / -	- / 0.428	- / -	- / -	- / 0.454	- / 0.370	- / 0.000
Installation												
Modification Item 1 of 1: NMT Ashore Antennas		- / 0.678	- / 0.000	- / 1.351	- / 3.514	- / 0.000	- / 3.514	- / 0.000	- / 0.000	- / 3.957	- / 3.294	- / 0.000
Subtotal: Installation		- / 0.678	- / -	- / 1.351	- / 3.514	- / -	- / 3.514	- / -	- / -	- / 3.957	- / 3.294	- / 0.000
Total												
Total Cost (Procurement + Support + Installation)		14.581	0.715	2.872	3.942	0.000	3.942	0.000	0.000	4.411	3.664	0.000
30.185												

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)								Modification Number / Title: 4 / NMT Ashore Antennas																		
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																		
Modification Item 1 of 1: NMT Ashore Antennas																														
Manufacturer Information																														
Manufacturer Name: RAYTHEON ⁽⁶⁾								Manufacturer Location: Marlborough																						
Administrative Leadtime (in Months): 3								Production Leadtime (in Months): 15																						
Dates	FY 2017	FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																		
Contract Dates																														
Delivery Dates																														
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: NMT Ashore Antennas																														
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 0.678	- / -	2 / 1.351	5 / 3.514	0 / 0.000	5 / 3.514	- / -	- / -	5 / 3.957	4 / 3.294	0 / 0.000	17 / 12.794																
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -															
Total			1 / 0.678	- / -	2 / 1.351	5 / 3.514	0 / 0.000	5 / 3.514	- / -	- / -	5 / 3.957	4 / 3.294	0 / 0.000	17 / 12.794																
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	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	2	-	-	-	-	-	-	-	3	2	-	2	2	-	-	17		
Out	-	1	-	-	-	-	-	2	-	-	-	3	2	-	-	-	-	-	-	-	3	2	-	2	2	-	-	17		
Footnotes:																														
(5) 1. FY18-FY23 Ashore Antenna fielding changes are due to program reprioritization to support NMT Ashore site capabilities. 2. FY18 Integration, Assembly and Test (IA&T) engineering services are required for the final delivery of NMT Terminal Antennas procured in prior years. 3. FY18-FY20 System Operational Verification Test (SOVT) costs represent the effort to operationally verify the capability following the completion of the antenna installation at Shore sites.																														
(6) Procurements completed in prior years.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 5 / ATIP			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	46.997	15.588	7.746	9.309	0.000	9.309	0.845	1.886	2.097	0.232	0.566	85.266
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	46.997	15.588	7.746	9.309	0.000	9.309	0.845	1.886	2.097	0.232	0.566	85.266
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	46.997	15.588	7.746	9.309	0.000	9.309	0.845	1.886	2.097	0.232	0.566	85.266
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Initial NMT procurements included the Time Division Multiple Access (TDMA) Interface Processor (TIP) pending the development of the Advanced Time Division Multiple Access (TDMA) Interface Processor (IP). Although ATIP is required to receive NMT's full netted communications capability over the Extreme Data Rate (XDR), it also is fielded independently of NMT as a Back-Fit to replace the legacy TIP's from the Fleet thereby improving Cyber Security posture and Reliability of the system. ATIPs require Integration, Assembly and Test (IA&T). IA&T efforts are performed once ATIPs are delivered from COMTECH to the government sites at SSC Pacific, San Diego, CA. SSC Pacific serves as lead integrator and performs Pre-Installation, Test and Check-Out (PITCO) of the modems required for NMT ship and submarine afloat platforms. NMT Installation updates include System Operational Verification Test (SOVT). SOVT efforts are performed by SSC Pacific, San Diego, CA and validate ATIPs are operational post installation on afloat platforms and ashore sites.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 5 / ATIP				
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:				
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
		Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: ATIP													
A Kits													
Recurring													
1.1.1) Advanced TDMA Interface Processors (ATIP) - NonOrganic ⁽⁷⁾	297 / 28.240	15 / 2.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	312 / 30.544
<i>Subtotal: Recurring</i>	- / 28.240	- / 2.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
<i>Subtotal: ATIP</i>	297 / 28.240	15 / 2.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	312 / 30.544
<i>Subtotal: Procurement, All Modification Items</i>	- / 28.240	- / 2.304	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Support (All Modification Items)													
2.1) IA&T - ATIP	- / -	- / -	- / 1.985	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.985
2.2) SOVT - ATIP	- / -	- / -	- / 1.648	- / 1.369	- / -	- / 1.369	- / 0.696	- / 0.499	- / 0.145	- / 0.074	- / 0.038	- / 0.038	- / 4.469
<i>Subtotal: Support</i>	- / 0.000	- / -	- / 3.633	- / 1.369	- / -	- / 1.369	- / 0.696	- / 0.499	- / 0.145	- / 0.074	- / 0.038	- / 0.038	- / 6.454
Installation													
Modification Item 1 of 1: ATIP	- / 18.757	- / 13.284	- / 4.113	- / 7.940	- / 0.000	- / 7.940	- / 0.149	- / 1.387	- / 1.952	- / 0.158	- / 0.528	- / 0.528	- / 48.268
<i>Subtotal: Installation</i>	- / 18.757	- / 13.284	- / 4.113	- / 7.940	- / -	- / 7.940	- / 0.149	- / 1.387	- / 1.952	- / 0.158	- / 0.528	- / 0.528	- / 48.268
Total													
Total Cost (Procurement + Support + Installation)	46.997	15.588	7.746	9.309	0.000	9.309	0.845	1.886	2.097	0.232	0.566	0.566	85.266

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Exhibit P-3a, Individual Modification: PB 2019 Navy												Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13				P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)								Modification Number / Title: 5 / ATIP																			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
Modification Item 1 of 1: ATIP																															
Manufacturer Information																															
Manufacturer Name: COMTECH ⁽⁸⁾								Manufacturer Location: Tempe, AZ																							
Administrative Leadtime (<i>in Months</i>): 3								Production Leadtime (<i>in Months</i>): 3																							
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Jan 2017																														
Delivery Dates	Apr 2017																														
Installation Information																															
Method of Implementation: [none specified]:: Installation Name: Advanced TDMA Interface Processors (ATIP)																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)														
Prior Years			103 / 18.757	65 / 13.284	26 / 4.113	94 / 7.940	0 / 0.000	94 / 7.940	1 / 0.149	8 / 0.770	- / -	- / -	0 / 0.000	297 / 45.013																	
FY 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.617	8 / 1.952	1 / 0.158	2 / 0.528	15 / 3.255																	
FY 2018			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2019			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																	
Total			103 / 18.757	65 / 13.284	26 / 4.113	94 / 7.940	0 / 0.000	94 / 7.940	1 / 0.149	12 / 1.387	8 / 1.952	1 / 0.158	2 / 0.528	312 / 48.268																	
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	78	25	-	22	22	21	-	13	13	24	24	23	23	-	-	1	-	-	2	5	5	-	1	4	3	-	-	1	-	2	312
Out	53	25	25	-	22	22	21	-	13	13	24	24	23	23	-	-	1	-	-	2	5	5	-	1	4	3	-	-	1	2	312

Footnotes:

(7) 1. ATIP modem installations will take place during a Window of Opportunity (WOO) availability that includes a 14-day window to perform and complete the installation. 2. The FY19 Qty 94 ATIP planned installs include Qty 18 shipboard ATIP installs, Qty 22 submarine ATIP installs and Qty 54 for 9 Shore sites (6 modems per shore site). FY18-FY23 ATIP installation cost and quantity adjustments reflect updated cost estimates based upon actuals to date for individual configuration types.

(8) ATIP procurements completed in 2017.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)						Modification Number / Title: 6 / Assured C2 Modems			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	11.514	26.495	0.000	26.495	12.464	5.893	0.000	0.000	0.000	56.366
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	11.514	26.495	0.000	26.495	12.464	5.893	0.000	0.000	0.000	56.366
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	11.514	26.495	0.000	26.495	12.464	5.893	0.000	0.000	0.000	56.366
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Assured C2 Modems: Beginning in FY18, Modem tech refresh directly supports Assured Command and Control (AC2) posture, SATCOM reliability, space resiliency via band diversity and redundancy for MILSATCOM.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13			P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)							Modification Number / Title: 6 / Assured C2 Modems			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore Stations, Ships			Modification Type: TBD					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Assured C2 Modems</i>													
A Kits													
Recurring													
1.1.1) Assured C2 Modems - NonOrganic ⁽⁹⁾		- / -	- / -	112 / 4.211	242 / 9.146	- / -	242 / 9.146	90 / 3.260	35 / 1.123	- / -	- / -	- / -	479 / 17.740
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / 4.211	- / 9.146	- / -	- / 9.146	- / 3.260	- / 1.123	- / -	- / -	- / 0.000	- / 17.740
<i>Subtotal: Assured C2 Modems</i>		- / -	- / -	112 / 4.211	242 / 9.146	- / -	242 / 9.146	90 / 3.260	35 / 1.123	- / -	- / -	- / -	479 / 17.740
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / 4.211	- / 9.146	- / -	- / 9.146	- / 3.260	- / 1.123	- / -	- / -	- / 0.000	- / 17.740
Support (All Modification Items)													
2.1) Production Support - Assured C2 Modems		- / -	- / -	- / 0.253	- / 0.549	- / -	- / 0.549	- / 0.196	- / 0.067	- / -	- / -	- / -	- / 1.065
2.2) IA&T - Assured C2 Modems		- / -	- / -	- / 3.131	- / 6.901	- / -	- / 6.901	- / 2.618	- / 1.038	- / -	- / -	- / -	- / 13.688
2.3) SOVT - Assured C2 Modems		- / -	- / -	- / 0.537	- / 1.711	- / -	- / 1.711	- / 1.466	- / 1.246	- / -	- / -	- / -	- / 4.960
<i>Subtotal: Support</i>		- / 0.000	- / -	- / 3.921	- / 9.161	- / -	- / 9.161	- / 4.280	- / 2.351	- / -	- / -	- / 0.000	- / 19.713
Installation													
<i>Modification Item 1 of 1: Assured C2 Modems</i>		- / 0.000	- / 0.000	- / 3.382	- / 8.188	- / 0.000	- / 8.188	- / 4.924	- / 2.419	- / 0.000	- / 0.000	- / 0.000	- / 18.913
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 3.382	- / 8.188	- / -	- / 8.188	- / 4.924	- / 2.419	- / -	- / -	- / 0.000	- / 18.913
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	11.514	26.495	0.000	26.495	12.464	5.893	0.000	0.000	0.000	56.366

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 13							P-1 Line Item Number / Title: 3216 / Navy Multiband Terminal (NMT)							Modification Number / Title: 6 / Assured C2 Modems																
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:																							
Modification Item 1 of 1: Assured C2 Modems																														
Manufacturer Information																														
Manufacturer Name: TBD							Manufacturer Location: TBD																							
Administrative Leadtime (<i>in Months</i>): 1							Production Leadtime (<i>in Months</i>): 3																							
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																	
Contract Dates			Jan 2018		Nov 2018																									
Delivery Dates			Apr 2018		Feb 2019																									
Installation Information																														
Method of Implementation: [none specified]:: Installation Name: Assured C2 Modems																														
Installation Cost			Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total					
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2018	- / -	- / -	- / -	112 / 3.382	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	112 / 3.382									
FY 2019	- / -	- / -	- / -	- / -	242 / 8.188	0 / 0.000	242 / 8.188	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	242 / 8.188										
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 4.924	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	90 / 4.924										
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 2.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	35 / 2.419										
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -									
To Complete	- / -	- / -	- / -	- / -	112 / 3.382	242 / 8.188	0 / 0.000	242 / 8.188	90 / 4.924	35 / 2.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	479 / 18.913										
Total	- / -	- / -	- / -	- / -	112 / 3.382	242 / 8.188	0 / 0.000	242 / 8.188	90 / 4.924	35 / 2.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	479 / 18.913										
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	-	56	56	-	81	81	80	-	30	30	30	-	12	12	11	-	-	-	-	-	479				
Out	-	-	-	-	-	-	56	56	-	81	81	80	-	30	30	30	-	12	12	11	-	-	-	-	-	479				

Footnotes:

(9) 1. FY18-FY21 AC2 Modem procurement and installation updates are the results of more refined cost estimates. The AC2 modems will be fielded at 7 DISA shore teleport sites and on 143 ship platforms. Qty 48 modems are required for each DISA shore site for a total of 336 shore modems. FY19 funds the procurement and installation of Qty 50 shipboard platforms and Qty 4 Shore sites (Shore total Qty 192). 2. FY18-FY21 DSA costs were included in previous budget submissions but have since been removed as the AC2 modem installation will be performed as an Engineering Change and do not require a 75%/25% DSA planning structure. 3. Ship Modem installations will take place during a Window of Opportunity (WOO) availability that includes a 8 day window to perform and complete the installation.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 14: Shore Communications					P-1 Line Item Number / Title: 3302 / Joint Communications Support Element (JCSE)												
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	19.981	4.156	4.256	4.292	0.000	4.292	4.293	4.478	4.757	4.545	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	19.981	4.156	4.256	4.292	0.000	4.292	4.293	4.478	4.757	4.545	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	19.981	4.156	4.256	4.292	0.000	4.292	4.293	4.478	4.757	4.545	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 Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description: The Joint Communications Support Element (JCSE) Program is responsible for procuring hardware and software to support Defensive Cyber Operations, Transport technologies (narrowband, wideband and protected satellite communications), C4 Architecture (network elements that provide access to the Defense Information Systems Network (DISN) cloud), and C2 On-The-Move (land, air and ground based tactical capabilities) in concert with Strategic Planning Guidance. JCSE's Modernization Program is structured around Combatant Command (CCMD) requirements using emerging technologies. Services formally influence JCSE's acquisition plan through semi-annual program reviews and make recommendations in concert with Major Defense Acquisition Program (MDAP) schedules, ensuring that Service dollars meet Joint Service requirements. The modernization program goals include meeting emerging real-world operational requirements with improved capabilities, smaller footprint, reduced operations and maintenance costs, and seamless integration with the global information grid.																	
This line funds the Department of the Navy's portion of the JCSE Program. This program is jointly funded by Army, Navy, Marine Corps, and Air Force in support of Joint Tactical Force and Joint Special Operations Task Force Headquarters.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 14: Shore Communications				P-1 Line Item Number / Title: 3302 / Joint Communications Support Element (JCSE)						
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A						
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base			
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-40a	JCS Communications Equipment				- / 19.981	- / 4.156	- / 4.256	- / 4.292	- / -	- / 4.292
P-40	Total Gross/Weapon System Cost				- / 19.981	- / 4.156	- / 4.256	- / 4.292	- / 0.000	- / 4.292

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

FY19 funds the procurement of Communication requirements identified to support personnel and equipment to establish and maintain emergency communications detachments in support of Joint Task Force and Joint Special Operations Task Force Commanders.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 14					P-1 Line Item Number / Title: 3302 / Joint Communications Support Element (JCSE)									Aggregated Items Title: JCS Communications Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
1) Joint Communication Support Element Modernization																				
1.1) Joint Communication Support Element Modernization ⁽¹⁾	A		-	-	19.981	-	-	4.156	-	-	4.256	-	-	4.292	-	-	-	-	-	4.292
<i>Subtotal: 1) Joint Communication Support Element Modernization</i>			-	-	19.981	-	-	4.156	-	-	4.256	-	-	4.292	-	-	-	-	-	4.292
Total			-	-	19.981	-	-	4.156	-	-	4.256	-	-	4.292	-	-	-	-	-	4.292
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				

Footnotes:

⁽¹⁾ Quantities are not shown. Quantities and equipment type are determined by the COCOM on an annual basis based on Joint Task Force and Joint Special Operations Task Force operational requirements for critical communications.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:												
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment					3415 / Info Systems Security Program (ISSP)												
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: 0303140N									
Line Item MDAP/MAIS Code: N/A																	
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total					
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Cost (\$ in Millions)	1,591.864	92.454	89.663	153.526	0.000	153.526	169.790	167.008	164.884	171.918	Continuing	Continuing					
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Net Procurement (P-1) (\$ in Millions)	1,591.864	92.454	89.663	153.526	0.000	153.526	169.790	167.008	164.884	171.918	Continuing	Continuing					
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-					
Total Obligation Authority (\$ in Millions)	1,591.864	92.454	89.663	153.526	0.000	153.526	169.790	167.008	164.884	171.918	Continuing	Continuing					
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)	-	0.163	0.951	1.968	-	1.968	1.488	1.620	1.187	1.809	Continuing	Continuing					
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-					
Description:																	
The Information Systems Security Program (ISSP) ensures the protection of Navy and joint cyberspace systems from exploitation and attack. Systems include wired and wireless telecommunications systems, cybersecurity systems, and the content processed, stored, or transmitted therein. ISSP includes protection of the Navy's National Security Systems (NSS).																	
The rapid change in the underlying commercial and government cyber infrastructures makes cybersecurity an increasingly complex and dynamic problem. ISSP provides the Navy's warfighter the essential information trust characteristics of availability, confidentiality, integrity, authentication, and non-repudiation. Cybersecurity capabilities must evolve quickly to meet the rapidly evolving threats and vulnerabilities.																	
Programs within the ISSP budget include:																	
P5 / Public Key Infrastructure (PKI): PKI implements a secure infrastructure for the generation, management, and delivery of digital certificates for secure electronic transactions, hardware certificate-based two-way authentication to networks, applications, web servers, and secure email.																	
P5 / Navy Cyber Situational Awareness (NCSA): NCSA is a command and control infrastructure that provides Navy commanders with timely, trusted, and comprehensive Situational Awareness (SA) of the cyberspace domain to include tailored, near real-time visualization of network health, vulnerabilities, and operational readiness through the correlation of data from multiple sources. NCSA enables early threat detection and timely decision making. NCSA ashore systems will enable Navy commanders to monitor, assess, plan, and direct Navy networks to provide a high-level of confidence that operational missions can be executed as planned in adverse cyber conditions. Cyber SA will be provided via web-accessible services generated from a primary core suite fielded at Navy Cyber Defense Operations Command (NCDOC). Visualizations and analytics will be customized based on end user needs, shareable and tailorabile between different end users. End users include Fleet Cyber Command/Commander Tenth Fleet (FCC/C10F), Fleet Maritime Operations Centers (MOCs), NCDOC, and Navy Network Warfare Command (NNWC). NCSA procures equipment to collect, curate, analyze, and visualize maritime operations critical for providing Navy commanders with timely, trusted, and comprehensive SA of the cyberspace domain; Data as a Service (DaaS) which provides the ability to ingest disparate data from numerous data sources; analytics suite of software and logic to integrate and translate the data ingested by the DaaS component; visualization/user interface to display cyber SA data that are relevant to the unique needs of the Cyber Commander and for display via common visual services; as well as equipment for platforms conducting Ballistic Missile Defense (BMD) and Nuclear Command, Control, and Communications, Navy (NC3-N) missions. The data that is collected and analyzed via SHARKCAGE will be presented and visualized via the NCSA capability. Joint Regional Security Stacks (JRSS)/Cyber Situational Awareness Analytics Cloud (CSAAC) will integrate NCSA with CSAAC which achieves an integrated cyberspace mission to support Joint, maritime cyber, and mission operations. Ensures seamless information exchange and sharing of analytics, providing shared cyber SA. CSAAC is one of the five key elements of Joint Information Environment (JIE), providing cyber SA tools, collecting and analyzing data from the JRSS and joint management system.																	

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment		P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303140N
Line Item MDAP/MAIS Code: N/A		
<p>P3A / Computer Network Defense (CND): CND provides capabilities to secure the Cyber Domain. CND is a set of processes and protective measures that use computer networks to detect, monitor, protect, analyze and defend against network infiltrations resulting in service/network denial, degradation and disruptions. CND enables a government or military institute/organization to defend against network attacks perpetrated by malicious or adversarial computer systems or networks. The Fixed Submarine Broadcast System (FSBS) includes the Nuclear Command, Control, and Communications, Navy (NC3-N) requirement to defend networks supporting Emergency Action Messages (EAM) transmission.</p> <p>P3A / Navy Cryptography (Crypto): Navy Crypto modernizes legacy cryptographic equipment which includes families of Communications Security (COMSEC) and Transmission Security (TRANSEC) devices that are divided into crypto voice, crypto data, crypto products and associated ancillary devices. These devices provide modern cryptographic solutions to replace obsolete, legacy devices within the crypto categories in order to meet mandated National Security Agency (NSA) cease key dates for modernized encryption. Advanced Cryptographic Capabilities (ACC), will provide NSA mandated cryptographic security software modernization of various communications security devices by cease key dates (details held at a higher classification).</p> <p>P3A / Key Management (KM): KM is a collection of Tier 2 security equipment, Key Management Infrastructure (KMI), and Tier 3 equipment Simple Key Loader (SKL). KMI will be a single, automated, network-accessible, electronic-based Key Management (KM) and predominantly electronic cryptographic product delivery infrastructure. It will provide Net Centric, reliable, timely, and secure COMSEC material management and distribution. It will additionally provide the means for secure ordering, generation, production, distribution, management and auditing of cryptographic products. The National Security Agency (NSA) mandates a tech refresh for the KMI system every five years.</p> <p>P3A / SHARKCAGE: SHARKCAGE is a global, federated Defensive Cyberspace Operations (DCO) enclave consisting of shore sensor nodes, DCO analysis workbenches, and analytic nodes. Utilizing one-way passive taps in a protected, isolated, classified environment, SHARKCAGE consolidates cyber event data from multiple platforms and networks, providing Navy DCO forces with a shared environment and common platform for integrated workflow, collaboration, and analysis. SHARKCAGE efficiently detects, correlates, and analyzes nation and non-nation state attacks against maritime data and the Naval Networking Environment (NNE). The data that is collected and analyzed via SHARKCAGE will be presented and visualized via the NCSA capability.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy								Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						
ID Code (A=Service Ready, B=Not Service Ready): A		Program Elements for Code B Items: N/A			Other Related Program Elements: 0303140N					
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule			Prior Years		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)	
P-5	1 / Info Systems Security Program (ISSP)	P-5a			- / 1,073.567	- / 1.323	- / 4.000	- / 2.746	- / 0.000	- / 2.746
P-3a	1 / Computer Network Defense (CND) Increment 2- Afloat (DA070) (Various)				- / 25.698	- / 4.513	- / 3.998	- / 2.982	- / 0.000	- / 2.982
P-3a	2 / Computer Network Defense (CND) Increment 2- Ashore (DA070) (Various)				- / 135.721	- / 30.363	- / 24.154	- / 29.632	- / 0.000	- / 29.632
P-3a	3 / Navy Cryptography (Crypto) - Afloat (DA071) (Various)				- / 179.980	- / 33.149	- / 28.512	- / 40.031	- / 0.000	- / 40.031
P-3a	4 / Navy Cryptography (Crypto) - Ashore (DA071) (Initial)				- / 38.837	- / 10.849	- / 6.735	- / 38.353	- / 0.000	- / 38.353
P-3a	5 / Key Management (KM) - Afloat (DA005) (Various)				- / 71.405	- / 9.009	- / 5.242	- / 5.073	- / 0.000	- / 5.073
P-3a	6 / Key Management (KM) - Ashore (DA005) (Various)				- / 66.656	- / 3.248	- / 4.803	- / 6.212	- / 0.000	- / 6.212
P-3a	7 / SHARKCAGE - Afloat (DA070) (Initial)				- / 0.000	- / 0.000	- / 3.083	- / 13.260	- / 0.000	- / 13.260
P-3a	8 / SHARKCAGE - Ashore (DA070) (Various)				- / 0.000	- / 0.000	- / 9.136	- / 15.237	- / 0.000	- / 15.237
P-40	Total Gross/Weapon System Cost				- / 1,591.864	- / 92.454	- / 89.663	- / 153.526	- / 0.000	- / 153.526
Exhibits Schedule			FY 2020		FY 2021	FY 2022	FY 2023	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)	
P-5	1 / Info Systems Security Program (ISSP)	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Computer Network Defense (CND) Increment 2- Afloat (DA070) (Various)				- / 2.454	- / 2.096	- / 1.977	- / 1.869	Continuing	Continuing
P-3a	2 / Computer Network Defense (CND) Increment 2- Ashore (DA070) (Various)				- / 32.292	- / 29.965	- / 30.707	- / 34.985	Continuing	Continuing
P-3a	3 / Navy Cryptography (Crypto) - Afloat (DA071) (Various)				- / 35.650	- / 34.348	- / 36.213	- / 37.835	Continuing	Continuing
P-3a	4 / Navy Cryptography (Crypto) - Ashore (DA071) (Initial)				- / 34.728	- / 29.842	- / 33.678	- / 33.489	Continuing	Continuing
P-3a	5 / Key Management (KM) - Afloat (DA005) (Various)				- / 5.763	- / 8.160	- / 8.550	- / 7.052	Continuing	Continuing
P-3a	6 / Key Management (KM) - Ashore (DA005) (Various)				- / 5.910	- / 3.604	- / 3.448	- / 5.201	Continuing	Continuing
P-3a	7 / SHARKCAGE - Afloat (DA070) (Initial)				- / 38.841	- / 39.292	- / 41.154	- / 37.885	Continuing	Continuing
P-3a	8 / SHARKCAGE - Ashore (DA070) (Various)				- / 11.187	- / 15.116	- / 4.805	- / 9.069	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 169.790	- / 167.008	- / 164.884	- / 171.918	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 2019 funding request was reduced by (\$1.326) million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment		P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303140N
Line Item MDAP/MAIS Code: N/A		
The FY 2019 funding increase is driven by the requirement to field cybersecurity infrastructure to the fleet. The primary drivers for the increase are Navy Cryptography, Advanced Cryptographic Capabilities (ACC), and SHARKCAGE.		
Computer Network Defense (CND) Increment 2-Ashore increase in FY19 to fund Shore Based Enterprise Network Enhancements. The FY19 funding is for the planning, design, relocation, procurement and installation of mission related C4I/IT equipment to new Naval Computer and Telecommunications for MILCON 913 Area Master Station Atlantic (NCTAMS LANT) Facility.		
Navy Cryptography Afloat FY19 increase to procure 90 VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Crypto Modernization (VACM) as required to meet mandated National Security Agency (NSA) cease key dates. It additionally procures the initial 24 Advanced Cryptographic Capability (ACC) to meet the NSA mandated cryptographic security software modernization of various communications security devices.		
CND will also procure equipment to secure Navy afloat and ashore network information systems. Procurements will include hardware and software such as host-based protection tools, Department of Defense (DoD) mandated cyber security tools, cyber security capabilities, servers, laptops, ancillary devices, and equipment for Nuclear Command, Control, and Communications, Navy (NC3-N) networks supporting Emergency Action Messages (EAM) transmission to afloat and ashore platforms.		
Navy Cryptography (Crypto) - Ashore: FY19 increase funds to procurement of 1,279 VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Crypto Modernization (VACM) required to meet mandated National Security Agency (NSA) cease key dates; the initial 16 Advanced Cryptographic Capability (ACC) to meet the NSA mandated cryptographic security software modernization of various communications security devices.		
Navy Cryptography (Crypto) - Afloat (DA071): FY19 increase is for (139) In-Line Network Encryptors (INE) and (1) COMSEC Phase II.		
Key Management (KM) (DA005): (1,233) Simple Key Loaders (SKL) and (95) Key Management Infrastructure (KMI) Tech Refresh NSA mandated five-year refresh cycle.		
SHARKCAGE (DA070): Under the Department of the Navy's direction FY19 is required for an increase in the procurement of (18) SHARKCAGE Afloat Suites, (2) Analytic Ashore Suites, and (5) Sensor Ashore Suites, which are required to detect emerging threats in the tactical environment, provide the capability to analyze active cyber threats and take actions to contain/stop actual or potential cyber threat activities.		
Public Key Infrastructure (PKI) (DA018): (10) PKI systems to include: Real-Time Automated Personal Identification System (RAPIDS) hardware/software, Navy Certificate Validation Infrastructure (NCVI) Secret Internet Protocol Router Network (SIPRNet) & Non-Classified Internet Protocol Router Network (NIPRNet) hardware/software, and Logon Token product end items.		

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)									Item Number / Title [DODIC]: 1 / Info Systems Security Program (ISSP)					
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:					
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				1,073.567			1.323		4.000		2.746		0.000		2.746			
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				1,073.567			1.323		4.000		2.746		0.000		2.746			
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				1,073.567			1.323		4.000		2.746		0.000		2.746			
(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 Thousands)				-			-		-		-		-		-			
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - Consolidated Prior Year Requirements Cost																		
Non Recurring Cost																		
1.1.1) Consolidated Prior Year Requirements ⁽¹⁾	-	-	1,021.226	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	1,021.226	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - Consolidated Prior Year Requirements Cost</i>	-	-	1,021.226	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - Public Key Infrastructure (PKI) (DA018) Cost																		
Recurring Cost																		
2.1.1) PKI - Procurement ^(†)	0.708	45,296	32.059	88.500	10	0.885	88.500	10	0.885	88.500	10	0.885	-	-	0.000	88.500	10	0.885
<i>Subtotal: Recurring Cost</i>	-	-	32.059	-	-	0.885	-	-	0.885	-	-	0.885	-	-	0.000	-	-	0.885
<i>Subtotal: Hardware - Public Key Infrastructure (PKI) (DA018) Cost</i>	-	-	32.059	-	-	0.885	-	-	0.885	-	-	0.885	-	-	0.000	-	-	0.885
Hardware - Navy Cyber Situational Awareness (NCSA) (DA070) Cost																		
Recurring Cost																		
3.1.1) NCSA - Procurement ^(†)	-	-	0.000	-	-	0.000	900.000	2	1.800	900.000	1	0.900	-	-	0.000	900.000	1	0.900
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.000	-	-	1.800	-	-	0.900	-	-	0.000	-	-	0.900

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15					P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)								Item Number / Title [DODIC]: 1 / Info Systems Security Program (ISSP)															
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:															
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																												
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total												
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)										
Subtotal: Hardware - Navy Cyber Situational Awareness (NCSA) (DA070) Cost	-	-	0.000	-	-	0.000	-	-	1.800	-	-	0.900	-	-	0.000	-	-	0.900										
Hardware - PKI INSTALLATIONS Cost																												
Recurring Cost																												
5.1.1) PKI - Installations	-	-	9.592	-	-	0.300	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300										
Subtotal: Recurring Cost	-	-	9.592	-	-	0.300	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300										
Subtotal: Hardware - PKI INSTALLATIONS Cost	-	-	9.592	-	-	0.300	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300										
Hardware - Navy Cyber Situational Awareness (NCSA) INSTALLATIONS Cost																												
Recurring Cost																												
6.1.1) NCSA - Installations ⁽²⁾	-	-	0.000	-	-	0.000	-	-	0.568	-	-	0.284	-	-	0.000	-	-	0.284										
Subtotal: Recurring Cost	-	-	0.000	-	-	0.000	-	-	0.568	-	-	0.284	-	-	0.000	-	-	0.284										
Subtotal: Hardware - Navy Cyber Situational Awareness (NCSA) INSTALLATIONS Cost	-	-	0.000	-	-	0.000	-	-	0.568	-	-	0.284	-	-	0.000	-	-	0.284										
Support - Public Key Infrastructure (PKI) Cost																												
7.1) PKI - Production Support	-	-	5.825	-	-	0.023	-	-	0.023	-	-	0.023	-	-	0.000	-	-	0.023										
7.2) PKI - DSA	-	-	4.865	-	-	0.115	-	-	0.162	-	-	0.218	-	-	0.000	-	-	0.218										
Subtotal: Support - Public Key Infrastructure (PKI) Cost	-	-	10.690	-	-	0.138	-	-	0.185	-	-	0.241	-	-	0.000	-	-	0.241										
Support - Navy Cyber Situational Awareness (NCSA) Cost																												
8.1) NCSA - Production Support	-	-	0.000	-	-	0.000	-	-	0.087	-	-	0.048	-	-	0.000	-	-	0.048										
8.2) NCSA - DSA	-	-	0.000	-	-	0.000	-	-	0.175	-	-	0.088	-	-	0.000	-	-	0.088										
Subtotal: Support - Navy Cyber Situational Awareness (NCSA) Cost	-	-	0.000	-	-	0.000	-	-	0.262	-	-	0.136	-	-	0.000	-	-	0.136										
Gross/Weapon System Cost	-	-	1,073.567	-	-	1.323	-	-	4.000	-	-	2.746	-	-	0.000	-	-	2.746										

(†) indicates the presence of a P-5a

Footnotes:

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15	P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)	Item Number / Title [DODIC]: 1 / Info Systems Security Program (ISSP)		
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:			
(1) Consolidated Prior Year (PY) Requirements - PY requirements were consolidated into one line and include the following programs: Computer Network Defense (CND), Navy Cryptography (Crypto), Key Management (KM) and Cyber Virtual System Enclave (VSE).				
(2) Navy Cyber Situational Awareness (NCSA) unit costs fluctuate with variant being fielded.				

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)					Item Number / Title [DODIC]: 1 / Info Systems Security Program (ISSP)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.1) PKI - Procurement		2017	Defense Manpower Data Center (DMDC) / Alexandria, VA	WR	Alexandria, VA	Feb 2017	Mar 2017	10	88.500	Y		
2.1.1) PKI - Procurement		2018	Defense Manpower Data Center (DMDC) / Alexandria, VA	WR	Alexandria, VA	Feb 2018	Mar 2018	10	88.500	Y		
2.1.1) PKI - Procurement		2019	Defense Manpower Data Center (DMDC) / Alexandria, VA	WR	Alexandria, VA	Feb 2019	Mar 2019	10	88.500	Y		
3.1.1) NCSA - Procurement		2018	SPAWAR Systems Center (SSC) Pacific / San Diego, CA	WR	San Diego, CA	Dec 2017	Mar 2018	2	900.000	Y		
3.1.1) NCSA - Procurement		2019	SPAWAR Systems Center (SSC) Pacific / San Diego, CA	WR	San Diego, CA	Dec 2018	Mar 2019	1	900.000	Y		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 1 / Computer Network Defense (CND) Increment 2- Afloat (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	25.698	4.513	3.998	2.982	0.000	2.982	2.454	2.096	1.977	1.869	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	25.698	4.513	3.998	2.982	0.000	2.982	2.454	2.096	1.977	1.869	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	25.698	4.513	3.998	2.982	0.000	2.982	2.454	2.096	1.977	1.869	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
Computer Network Defense (CND): CND provides capabilities to secure the Cyber Domain. CND is a set of processes and protective measures that use computer networks to detect, monitor, protect, analyze and defend against network infiltrations resulting in service/network denial, degradation and disruptions. CND enables Navy networks to defend against cyber attacks perpetrated by malicious or adversarial computer systems or networks.												
The CND afloat capability will remain until all systems have transitioned to Consolidated Afloat Networks and Enterprise Services (CANES). CND afloat Operating System Environment (OSE) includes host-based protection tools, system vulnerability tools, cyber remediation tools, supporting hardware and software for Department of Defense (DoD) mandated tools, enhanced data correlation tools, switches, ancillary devices and other related security tools.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 1 / Computer Network Defense (CND) Increment 2- Afloat (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Ship, Sub			Modification Type: Various				Related RDT&E PEs: 0303140N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Afloat (DA070)</i>													
B Kits													
Recurring													
1.1.1) Operating System Environment (OSE) SW - NonOrganic ⁽³⁾	224 / 6.758	40 / 1.356	34 / 1.206	22 / 0.804	- / -	22 / 0.804	19 / 0.684	16 / 0.584	14 / 0.525	14 / 0.525	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 6.758	- / 1.356	- / 1.206	- / 0.804	- / -	- / 0.804	- / 0.684	- / 0.584	- / 0.525	- / 0.525	Continuing	Continuing	
<i>Subtotal: Computer Network Defense (CND) Increment 2- Afloat (DA070)</i>	224 / 6.758	40 / 1.356	34 / 1.206	22 / 0.804	- / -	22 / 0.804	19 / 0.684	16 / 0.584	14 / 0.525	14 / 0.525	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 6.758	- / 1.356	- / 1.206	- / 0.804	- / -	- / 0.804	- / 0.684	- / 0.584	- / 0.525	- / 0.525	Continuing	Continuing	
Support (All Modification Items)													
2.1) Train-the-Trainer ⁽⁴⁾	- / 3.648	- / 0.655	- / 0.524	- / 0.519	- / 0.000	- / 0.519	- / 0.335	- / 0.325	- / 0.317	- / 0.317	Continuing	Continuing	
2.2) Production Support	- / 0.601	- / 0.008	- / 0.060	- / 0.063	- / 0.000	- / 0.063	- / 0.036	- / 0.031	- / 0.030	- / 0.029	Continuing	Continuing	
2.3) DSA	- / 1.235	- / 0.050	- / 0.047	- / 0.050	- / 0.000	- / 0.050	- / 0.050	- / 0.050	- / 0.055	- / 0.045	Continuing	Continuing	
<i>Subtotal: Support</i>	- / 5.484	- / 0.713	- / 0.631	- / 0.632	- / -	- / 0.632	- / 0.421	- / 0.406	- / 0.402	- / 0.391	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Afloat (DA070)</i>	- / 13.456	- / 2.444	- / 2.161	- / 1.546	- / 0.000	- / 1.546	- / 1.349	- / 1.106	- / 1.050	- / 0.953	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 13.456	- / 2.444	- / 2.161	- / 1.546	- / -	- / 1.546	- / 1.349	- / 1.106	- / 1.050	- / 0.953	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	25.698	4.513	3.998	2.982	0.000	2.982	2.454	2.096	1.977	1.869	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																	
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15														Modification Number / Title: 1 / Computer Network Defense (CND) Increment 2- Afloat (DA070)																	
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																	
Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Afloat (DA070)																															
Manufacturer Information																															
Manufacturer Name: Operating System Environment (OSE) SW - SPAWAR System Center (SSC) Atlantic														Manufacturer Location: Charleston, SC																	
Administrative Leadtime (<i>in Months</i>): 2														Production Leadtime (<i>in Months</i>): 1																	
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																								
Contract Dates	Dec 2016	Dec 2017	Dec 2018																												
Delivery Dates	Jan 2017	Jan 2018	Jan 2019																												
Installation Information																															
Method of Implementation: Installed:: Installation Name: Computer Network Defense (CND) Increment 2- Afloat																															
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																	
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)																							
Prior Years			224 / 13.456	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	224 / 13.456																
FY 2017			- / -	40 / 2.444	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	40 / 2.444																
FY 2018			- / -	- / -	34 / 2.161	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	34 / 2.161																
FY 2019			- / -	- / -	- / -	22 / 1.546	0 / 0.000	22 / 1.546	- / -	- / -	- / -	- / -	- / -	0 / 0.000	22 / 1.546																
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	19 / 1.349	- / -	- / -	- / -	- / -	0 / 0.000	19 / 1.349																
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.106	- / -	- / -	- / -	0 / 0.000	16 / 1.106																
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 1.050	- / -	- / -	0 / 0.000	14 / 1.050																
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.953	Continuing	Continuing	Continuing	Continuing															
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	Continuing	Continuing															
Total			224 / 13.456	40 / 2.444	34 / 2.161	22 / 1.546	0 / 0.000	22 / 1.546	19 / 1.349	16 / 1.106	14 / 1.050	14 / 0.953	Continuing	Continuing	Continuing	Continuing															
Installation Schedule																															
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
In	211	13	21	10	7	2	14	10	9	1	10	6	6	-	7	7	4	1	7	5	4	-	4	7	3	-	6	2	6	Cont.	Cont.
Out	210	14	20	8	10	2	13	11	9	1	8	8	6	-	7	7	4	1	6	6	4	-	4	7	3	-	6	2	6	Cont.	Cont.
Footnotes:																															
(3) Operating System Environment (OSE) Software (SW) - FY19 quantities decrease as Consolidated Afloat Networks and Enterprise Services (CANES) is implemented. The CND shipboard infrastructure will move ashore in order to protect Navy afloat and ashore networks from cyber threats. OSE SW is centrally managed and loads software onto hardware. Quantities reflect one system per ship platform.																															

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15	P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)	Modification Number / Title: 1 / Computer Network Defense (CND) Increment 2- Afloat (DA070)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(4) Train-the-Trainer - CND is designated Training Support Agent (TSA) and is required to transition initial training (train the trainer) to an approved solution at the schoolhouses.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 2 / Computer Network Defense (CND) Increment 2- Ashore (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	135.721	30.363	24.154	29.632	0.000	29.632	32.292	29.965	30.707	34.985	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	135.721	30.363	24.154	29.632	0.000	29.632	32.292	29.965	30.707	34.985	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	135.721	30.363	24.154	29.632	0.000	29.632	32.292	29.965	30.707	34.985	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
Computer Network Defense (CND) ashore sites represent multiple CND architectures/capabilities within each build that are specifically procured for each site based on the site mission and latest cyber threat. CND builds and variants are specifically designed to each site in accordance with CND's rapid Information Technology (IT) fielding construct.													
CND ashore sites include: IT 21st Century (IT-21) Networks Operation Centers (NOC) which provide regional protection to shore and afloat assets within their area of responsibility; Navy Cyber Defense Operations Command (NCDOC), the designated Navy CND service provider, whose mission is to coordinate, monitor, analyze, and oversee the defense of Navy computer networks and NOCs who are responsible for accomplishing CND missions; Theater Network Operations and Security Centers (TNOSC) and Outside the Continental United States (OCONUS) Navy Enterprise Network (ONE-Net) Local Network Service Centers (LNSC). The ONE-Net security initiative consolidates LNSCs to their parent TNOSCs for more efficient operation and enables greater failover capability between ONE-Net sites; Broadcast Control Authorities (BCA); Fixed Submarine Broadcast System (FSBS); P-913: Shore Based Enterprise Network Enhancements for the Naval Computer and Telecommunications Area Master Station Atlantic (NCTAMSLANT) Facility (MILCON P-913) which requires the CND capability; Naval Computer and Telecommunications Station (NCTS) San Diego which provides Unclassified but Sensitive Internet Protocol Router Network (NIPRNet) and Secret Internet Protocol Router Network (SIPRNet) computer networking and the associated DoD mandated Information Assurance (IA)/CND tools upgrades to multiple Navy shore and afloat commands on the West coast; Pre-Planned Product Improvement (P3I) NCDOC upgrade which replaces end-of-life equipment with more robust capability at NCDOC to enhance the command's Cyber Defense Mission Support System (CDMSS) architectural framework to provide the necessary storage capability and processing power to ingest and analyze increased volumes of data from additional sources; The Virtual Training Environment (VTE) initiative which will transition equipment to an approved solution at the schoolhouses. CND is designated Training Support Agent (TSA); and CND Production Labs that provide CND architecture for production representative systems. In addition, the Nuclear Command, Control, and Communications, Navy (NC3-N) network which supports Emergency Action Messages (EAM) transmission to ashore and afloat adds CND capabilities at NCDOC, BCA and FSBS in support of the national NC3 mission.													
CND also provides ashore infrastructure to provision the latest cyber security updates to all afloat tactical units; including Consolidated Afloat Networks and Enterprise Services (CANES), Integrated Shipboard Network System (ISNS) and other networks, which roll up cyber network data to NCDOC. CND will deploy technologies to shore commands and the shore-based afloat infrastructure to improve network defense and security wholeness, countering intruders and attacks aimed at disrupting tactical communications at the afloat gateways and shore commands; this will help the Navy's ability to prevent, constrain, and mitigate cyber-attacks and critical vulnerabilities, as well as provide greater resiliency, awareness, data analytics, redundancy, and diversity into the Navy's Defense-in-Depth (DiD) strategy. CND shore sites will have modern network sensors, improving the ability to detect unusual network patterns and prevent/deter malicious attacks.													
CND procurement/installation quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Costs may vary by site and variant.													

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 2 / Computer Network Defense (CND) Increment 2- Ashore (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore			Modification Type: Various				Related RDT&E PEs: 0303140N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: Computer Network Defense (CND) Increment 2- Ashore (DA070)													
B Kits													
Recurring													
1.1.1) Networks Operation Centers (NOC) - NonOrganic (5)	25 / 28.022	4 / 3.739	4 / 3.630	4 / 3.751	- / -	4 / 3.751	4 / 3.865	4 / 4.028	4 / 4.040	4 / 4.080	Continuing	Continuing	
1.1.2) Navy Cyber Defense Operations Command (NCDOC) - NonOrganic (6)	8 / 10.207	5 / 5.036	2 / 1.944	2 / 2.019	- / -	2 / 2.019	2 / 1.943	2 / 1.990	2 / 2.074	2 / 2.080	Continuing	Continuing	
1.1.3) Theater Network Operations & Security Center (TNOSC) - NonOrganic (7)	18 / 20.929	3 / 2.764	3 / 2.680	3 / 2.700	- / -	3 / 2.700	3 / 2.805	3 / 2.910	3 / 2.925	3 / 2.940	Continuing	Continuing	
1.1.4) Broadcast Control Authorities (BCA) - NonOrganic (8)	16 / 6.007	4 / 0.661	4 / 0.684	4 / 0.711	- / -	4 / 0.711	4 / 0.680	4 / 0.698	4 / 0.701	4 / 0.704	Continuing	Continuing	
1.1.5) Navy Enterprise Network (ONE-Net) Local Network Service Centers (LNSC) - NonOrganic (9)	13 / 1.488	11 / 0.770	- / -	- / -	- / -	- / -	11 / 0.825	- / -	- / -	11 / 0.825	Continuing	Continuing	
1.1.6) Fixed Submarine Broadcast System (FSBS) - NonOrganic (10)	- / -	7 / 2.000	7 / 2.080	7 / 2.184	- / -	7 / 2.184	7 / 2.100	7 / 2.104	7 / 2.107	7 / 2.118	Continuing	Continuing	
1.1.7) P-913: Shore Based Enterprise Network Enhancements - NonOrganic (11)	- / -	- / -	- / -	1 / 2.913	- / -	1 / 2.913	1 / 2.198	- / -	- / -	- / -	- / -	2 / 5.111	
1.1.8) Naval Computer andTelecommunications Station (NCTS) - NonOrganic (12)	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.289	- / -	- / -	1 / 2.369	- / -	2 / 4.658	
1.1.9) Pre-Planned Product Improvement (P3I): NCDOC Upgrade - Organic (13)	3 / 12.226	1 / 1.842	1 / 1.916	1 / 1.992	- / -	1 / 1.992	1 / 2.013	1 / 2.093	1 / 2.135	1 / 2.146	Continuing	Continuing	
1.1.10) Virtual Training Environment - Organic (14)	2 / 2.710	1 / 0.765	1 / 0.795	1 / 0.835	- / -	1 / 0.835	1 / 0.828	1 / 0.861	1 / 0.878	1 / 0.882	Continuing	Continuing	
1.1.11) CND Production Labs - Organic (15)	15 / 20.524	3 / 3.863	3 / 4.017	3 / 4.218	- / -	3 / 4.218	3 / 4.167	3 / 4.334	3 / 4.420	3 / 4.422	Continuing	Continuing	
Subtotal: Recurring	- / 102.113	- / 21.440	- / 17.746	- / 21.323	- / -	- / 21.323	- / 23.713	- / 19.018	- / 19.280	- / 22.566	Continuing	Continuing	
Subtotal: Computer Network Defense (CND) Increment 2- Ashore (DA070)	100 / 102.113	39 / 21.440	25 / 17.746	26 / 21.323	- / -	26 / 21.323	38 / 23.713	25 / 19.018	25 / 19.280	37 / 22.566	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 102.113	- / 21.440	- / 17.746	- / 21.323	- / -	- / 21.323	- / 23.713	- / 19.018	- / 19.280	- / 22.566	Continuing	Continuing	
Support (All Modification Items)													
2.1) Train-the-Trainer (16)	- / 3.156	- / 0.890	- / 0.924	- / 0.990	- / -	- / 0.990	- / 1.005	- / 1.052	- / 1.200	- / 1.200	Continuing	Continuing	
2.2) Production Support	- / 4.946	- / 1.061	- / 0.783	- / 0.526	- / -	- / 0.526	- / 1.208	- / 0.365	- / 0.554	- / 0.473	Continuing	Continuing	
2.3) DSA	- / 3.742	- / 0.882	- / 0.594	- / 0.701	- / -	- / 0.701	- / 0.744	- / 0.710	- / 0.771	- / 0.811	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 2 / Computer Network Defense (CND) Increment 2- Ashore (DA070)		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Shore			Modification Type: Various				Related RDT&E PEs: 0303140N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Support</i>	- / 11.844	- / 2.833	- / 2.301	- / 2.217	- / -	- / 2.217	- / 2.957	- / 2.127	- / 2.525	- / 2.484	Continuing	Continuing
Installation												
<i>Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Ashore (DA070)</i>	- / 21.764	- / 6.090	- / 4.107	- / 6.092	- / 0.000	- / 6.092	- / 5.622	- / 8.820	- / 8.902	- / 9.935	Continuing	Continuing
<i>Subtotal: Installation</i>	- / 21.764	- / 6.090	- / 4.107	- / 6.092	- / -	- / 6.092	- / 5.622	- / 8.820	- / 8.902	- / 9.935	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	135.721	30.363	24.154	29.632	0.000	29.632	32.292	29.965	30.707	34.985	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy														Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)										Modification Number / Title: 2 / Computer Network Defense (CND) Increment 2- Ashore (DA070)																			
ID Code (A=Service Ready, B=Not Service Ready) :														MDAP/MAIS Code:																			
Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Ashore (DA070)																																	
Manufacturer Information																																	
Manufacturer Name: CND Equipment - SPAWAR System Center (SSC) Atlantic							Manufacturer Location: Charleston, SC																										
Administrative Leadtime (<i>in Months</i>): 2							Production Leadtime (<i>in Months</i>): 3																										
Dates	FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023																				
Contract Dates	Dec 2016		Dec 2017		Dec 2018																												
Delivery Dates	Mar 2017		Mar 2018		Mar 2019																												
Installation Information																																	
Method of Implementation: Installed:: Installation Name: Computer Network Defense (CND) Increment 2- Ashore																																	
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total																			
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 21.764	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	80 / 21.764																	
FY 2017			- / -	34 / 6.090	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	34 / 6.090																	
FY 2018			- / -	- / -	20 / 4.107	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	20 / 4.107																	
FY 2019			- / -	- / -	- / -	21 / 6.092	0 / 0.000	21 / 6.092	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 6.092																	
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	33 / 5.622	- / -	- / -	- / -	- / -	- / -	0 / 0.000	33 / 5.622																	
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 8.820	- / -	- / -	- / -	- / -	0 / 0.000	20 / 8.820																	
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 8.902	- / -	- / -	- / -	0 / 0.000	20 / 8.902																	
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 9.935	- / -	- / -	0 / 0.000	32 / 9.935																	
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																	
Total			80 / 21.764	34 / 6.090	20 / 4.107	21 / 6.092	0 / 0.000	21 / 6.092	33 / 5.622	20 / 8.820	20 / 8.902	32 / 9.935	Continuing	Continuing																			
Installation Schedule																																	
PYS	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC	Tot											
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4													
In	80	-	23	-	11	-	10	-	10	-	12	-	9	-	20	1	12	-	10	-	10	-	21	-	11	Cont.	Cont.						
Out	79	1	23	-	11	-	10	-	10	-	12	-	9	-	20	1	12	-	10	-	10	-	21	-	11	Cont.	Cont.						
Method of Implementation (Organic): Pre-Planned Product Improvement (P3I): NCDOC Upgrade - Not Installed														Installation Quantity: 0																			
Method of Implementation (Organic): Virtual Training Environment - Not Installed														Installation Quantity: 0																			

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15	P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)	Modification Number / Title: 2 / Computer Network Defense (CND) Increment 2- Ashore (DA070)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Modification Item 1 of 1: Computer Network Defense (CND) Increment 2- Ashore (DA070)		
Installation Information		
Method of Implementation (Organic): CND Production Labs - Not Installed		Installation Quantity: 0
Footnotes:		
(5) Networks Operation Centers (NOC) - Installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CND capabilities Steering Group (CCSG).		
(6) Navy Cyber Defense Operations Command (NCDOC) - Installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CCSG.		
(7) Theater Network Operations & Security Center (TNOSC) - Installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CCSG.		
(8) Broadcast Control Authorities (BCA) - Installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CCSG.		
(9) Navy Enterprise Network (ONE-Net) - Local Network Service Centers (LNSC) - CND Inc 2 Shore installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CCSG.		
(10) Fixed Submarine Broadcast System (FSBS) - Installation unit cost fluctuations vary by site type as well as the variant/capabilities being fielded to the site. CND quantities represent multiple CND architectures with an assortment of builds that are specifically designed to each site. Installation cost will vary based on equipment installed/removed as well as location. In accordance with CND's rapid IT fielding, CND procurement/installation costs will vary year to year due to the delivering capabilities determined by the CCSG.		
(11) P-913: Shore Based Enterprise Network Enhancements - FY19 funding is for the planning, design, relocation, procurement and installation of mission related C4I/IT equipment to new Naval Computer and Telecommunications Area Master Station Atlantic (NCTAMS LANT) Facility (MILCON P-913). FY19 unit cost reflects a more robust cybersecurity capability.		
(12) Naval Computer and Telecommunications Station (NCTS) - San Diego provides NIPRNet and SIPRNet computer networking and the associated DoD mandated IA/CND tools upgrades to multiple Navy shore and afloat commands.		
(13) Pre-Planned Product Improvement (P3I): NCDOC Upgrade - FY19 unit cost increase reflects a more robust cybersecurity capability required to upgrade end-of-life equipment to support the NCDOC mission.		
(14) Virtual Training Environment (VTE) - CND is required to transition equipment to an approved solution at the schoolhouses. Mandatory system upgrades required annually to address the latest cyber threat. No associated install costs.		
(15) CND Production Labs - No associated install costs.		
(16) Train-the-Trainer - CND is designated Training Support Agent (TSA) and is required to transition initial training (train the trainer) to an approved solution at the schoolhouses.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 3 / Navy Cryptography (Crypto) - Afloat (DA071)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	179.980	33.149	28.512	40.031	0.000	40.031	35.650	34.348	36.213	37.835	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	179.980	33.149	28.512	40.031	0.000	40.031	35.650	34.348	36.213	37.835	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	179.980	33.149	28.512	40.031	0.000	40.031	35.650	34.348	36.213	37.835	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Navy Cryptography (Crypto) program is designated as Department of Navy's (DoN) Cryptographic Modernization Program Office (CMPO). CMPO procures, installs, and provides life-cycle support for National Security Agency (NSA) Type-1 end cryptographic units for United States Navy (USN) (to include Military Sealift Command (MSC) platforms), United States Marine Corps (USMC), and United States Coast Guard (USCG). Navy Crypto afloat equipment includes: Families of Communications Security (COMSEC) and Transmission Security (TRANSEC) devices that are divided into crypto voice, crypto data, crypto products and associated ancillary devices. These devices provide modern cryptographic solutions to replace obsolete, legacy devices within the crypto categories for all Services.												
Crypto Data products include: Advanced Cryptographic Capabilities (ACC), which provide NSA mandated cryptographic security software modernization of various communications security devices by cease key dates (details held at a higher classification); In-Line Network Encryptors (INE); KIV-7M (COMSEC Serial Crypto Replacement); KW-46; Cryptographic Universal Enclosures (CUE), and KGV-11M TRANSEC.												
Crypto Voice products include: VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Cryptographic Modernization (VACM). VACM is the modern cryptographic product replacement for legacy secure voice products.												
Space and Naval Warfare Systems Command (SPAWAR) is the VACM Central Procuring Agency for the USN to include the MSC, Naval Air Systems Command (NAVAIR), USMC and USCG.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 3 / Navy Cryptography (Crypto) - Afloat (DA071)		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Models of Systems Affected: Ship			Modification Type: Various				Related RDT&E PEs: 0303140N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: Navy Cryptography (Crypto) - Afloat (DA071)												
B Kits												
Recurring												
1.1.1) KW-46 - NonOrganic	153 / 4.572	68 / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	221 / 6.579
1.1.2) Cryptographic Universal Enclosures (CUE) CSRR - NonOrganic	47 / 9.805	7 / 0.805	4 / 0.463	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 11.073
1.1.3) COMSEC Serial Crypto Replacement (Phase II) - NonOrganic	94 / 1.657	18 / 0.360	5 / 0.100	1 / 0.020	- / -	1 / 0.020	- / -	- / -	- / -	- / -	- / -	118 / 2.137
1.1.4) VINSON/Advanced Narrowband Digital Voice Terminal CM (VACM) - NonOrganic ⁽¹⁷⁾	50 / 11.500	37 / 8.510	39 / 8.970	90 / 20.700	- / -	90 / 20.700	84 / 19.320	73 / 16.790	83 / 19.090	86 / 19.780	Continuing	Continuing
1.1.5) In-Line Network Encryptors (INE) - Organic	4,849 / 64.470	88 / 1.056	232 / 2.784	139 / 1.668	- / -	139 / 1.668	132 / 1.584	127 / 1.524	145 / 1.740	166 / 1.992	Continuing	Continuing
1.1.6) Advanced Cryptographic Capability (ACC) - Organic ⁽¹⁸⁾	- / -	- / -	- / -	24 / 12.000	- / -	24 / 12.000	12 / 6.000	- / -	- / -	- / -	- / -	36 / 18.000
1.1.7) KGV-11M Transmission Security (TRANSEC) - Organic	- / -	- / -	- / -	- / -	- / -	- / -	87 / 1.566	528 / 9.504	528 / 9.504	528 / 9.504	- / -	1,671 / 30.078
Subtotal: Recurring	- / 92.004	- / 12.738	- / 12.317	- / 34.388	- / -	- / 34.388	- / 28.470	- / 27.818	- / 30.334	- / 31.276	Continuing	Continuing
Subtotal: Navy Cryptography (Crypto) - Afloat (DA071)	5,193 / 92.004	218 / 12.738	280 / 12.317	254 / 34.388	- / -	254 / 34.388	315 / 28.470	728 / 27.818	756 / 30.334	780 / 31.276	Continuing	Continuing
Subtotal: Procurement, All Modification Items	- / 92.004	- / 12.738	- / 12.317	- / 34.388	- / -	- / 34.388	- / 28.470	- / 27.818	- / 30.334	- / 31.276	Continuing	Continuing
Support (All Modification Items)												
2.1) Production Support ⁽¹⁹⁾	- / 24.104	- / 0.427	- / 0.456	- / 1.221	- / -	- / 1.221	- / 1.030	- / 1.000	- / 1.101	- / 1.094	Continuing	Continuing
2.2) DSA ⁽²⁰⁾	- / 31.381	- / 6.195	- / 4.696	- / 0.638	- / -	- / 0.638	- / 0.569	- / 0.470	- / 0.381	- / 0.465	Continuing	Continuing
Subtotal: Support	- / 55.485	- / 6.622	- / 5.152	- / 1.859	- / -	- / 1.859	- / 1.599	- / 1.470	- / 1.482	- / 1.559	Continuing	Continuing
Installation												
Modification Item 1 of 1: Navy Cryptography (Crypto) - Afloat (DA071)	- / 32.491	- / 13.789	- / 11.043	- / 3.784	- / 0.000	- / 3.784	- / 5.581	- / 5.060	- / 4.397	- / 5.000	Continuing	Continuing
Subtotal: Installation	- / 32.491	- / 13.789	- / 11.043	- / 3.784	- / -	- / 3.784	- / 5.581	- / 5.060	- / 4.397	- / 5.000	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	179.980	33.149	28.512	40.031	0.000	40.031	35.650	34.348	36.213	37.835	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy				Date: February 2018									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15		P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)				Modification Number / Title: 3 / Navy Cryptography (Crypto) - Afloat (DA071)							
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:									
Modification Item 1 of 1: Navy Cryptography (Crypto) - Afloat (DA071)													
Manufacturer Information													
Manufacturer Name: KW-46 - Raytheon (NSA)				Manufacturer Location: Columbia, MD									
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 7									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023						
Contract Dates	Feb 2017												
Delivery Dates	Sep 2017												
Manufacturer Name: Communications Security (COMSEC) (Phase II) - Raytheon (NSA)				Manufacturer Location: Waltham, MA									
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 7									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023						
Contract Dates	Feb 2017	Feb 2018	Feb 2019										
Delivery Dates	Sep 2017	Sep 2018	Sep 2019										
Manufacturer Name: VINSON/Advanced Narrowband Digital Voice Terminal CM (VACM) - Raytheon (USAF)				Manufacturer Location: Largo, FL									
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 12									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023						
Contract Dates	Dec 2016	Dec 2017	Dec 2018										
Delivery Dates	Dec 2017	Dec 2018	Dec 2019										
Manufacturer Name: Cryptographic Universal Enclosures (CUE) - CSRR - SPAWAR Systems Center (SSC) Pacific				Manufacturer Location: San Diego, CA									
Administrative Leadtime (<i>in Months</i>): 4				Production Leadtime (<i>in Months</i>): 7									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023						
Contract Dates	Feb 2017	Feb 2018											
Delivery Dates	Sep 2017	Sep 2018											
Manufacturer Name: In-Line Network Encryptors (INE) - NSA				Manufacturer Location: Fort Meade, MD									
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 7									
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023						
Contract Dates	Jan 2017	Jan 2018	Jan 2019										
Delivery Dates	Aug 2017	Aug 2018	Aug 2019										
Manufacturer Name: Advanced Cryptographic Capability (ACC) - TBD ⁽²¹⁾				Manufacturer Location: TBD									
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 7									

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15															Modification Number / Title: 3 / Navy Cryptography (Crypto) - Afloat (DA071)																					
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:																					
Modification Item 1 of 1: Navy Cryptography (Crypto) - Afloat (DA071)																																				
Manufacturer Information																																				
Dates	FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023																	
Contract Dates							Jan 2019																													
Delivery Dates							Aug 2019																													
Installation Information																																				
Method of Implementation: Installed:: Installation Name: Navy Cryptography (Crypto) - Afloat																																				
Installation Cost			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete	Total													
				Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)	Qty (Each) I Total Cost (\$ M)																											
Prior Years				224 / 32.491	120 / 11.851	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	344 / 44.342																
FY 2017				- / -	21 / 1.938	109 / 10.605	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	130 / 12.543																
FY 2018				- / -	- / -	2 / 0.438	46 / 3.784	0 / 0.000	46 / 3.784	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	48 / 4.222																
FY 2019				- / -	- / -	- / -	- / -	- / -	- / -	91 / 5.581	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	91 / 5.581																
FY 2020				- / -	- / -	- / -	- / -	- / -	- / -	84 / 5.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	84 / 5.060																
FY 2021				- / -	- / -	- / -	- / -	- / -	- / -	73 / 4.397	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	73 / 4.397																
FY 2022				- / -	- / -	- / -	- / -	- / -	- / -	83 / 5.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	83 / 5.000																
FY 2023				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																
To Complete				- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing																
Total				224 / 32.491	141 / 13.789	111 / 11.043	46 / 3.784	0 / 0.000	46 / 3.784	91 / 5.581	84 / 5.060	73 / 4.397	83 / 5.000	Continuing	Continuing																					
Installation Schedule																																				
			FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022			FY 2023		TC													
PYS			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot												
In			205	19	33	20	23	65	39	33	34	5	20	14	12	25	21	26	19	20	25	23	16	17	23	22	11	16	24	30	13	Cont.	Cont.			
Out			203	21	33	20	23	65	39	33	34	5	20	14	12	25	21	26	19	20	25	23	16	17	23	22	11	16	24	30	13	Cont.	Cont.			
Method of Implementation (Organic): In-Line Network Encryptors (INE)															Installation Quantity: 0																					
Method of Implementation (Organic): Advanced Cryptographic Capability (ACC)															Installation Quantity: 36																					
Method of Implementation (Organic): KGV-11M Transmission Security (TRANSEC)															Installation Quantity: 1671																					

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Exhibit P-3a, Individual Modification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15	P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)	Modification Number / Title: 3 / Navy Cryptography (Crypto) - Afloat (DA071)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Footnotes:		
(17) VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Crypto Modernization (VACM) (NonOrganic) - FY19 increase in quantities is required to meet mandated National Security Agency (NSA) cease key dates (December 31, 2020). VACM NonOrganic quantities are grouped per ship set/platform. Procurement profile aligns to fielding plan and type of platform requiring installation; Top Secret platforms are the priority and then Secret. (18) Advanced Cryptographic Capability (ACC) - FY19 increase is for the initial procurement of ACC to meet the NSA mandated cryptographic security software modernization of various communications security devices. (19) Production support - FY19 increase aligns to increase in VACM and ACC procurements. (20) Design Service Allocation (DSA) - FY19 decrease is due to completion of KW-46 fielding, which accounts for majority of DSA costs. (21) Advanced Cryptographic Capability (ACC) - Contract not awarded - Vendor is TBD.		

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 4 / Navy Cryptography (Crypto) - Ashore (DA071)			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	38.837	10.849	6.735	38.353	0.000	38.353	34.728	29.842	33.678	33.489	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	38.837	10.849	6.735	38.353	0.000	38.353	34.728	29.842	33.678	33.489	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	38.837	10.849	6.735	38.353	0.000	38.353	34.728	29.842	33.678	33.489	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Navy Cryptography (Crypto) ashore equipment includes: Families of Communications Security (COMSEC) and Transmission Security (TRANSEC) devices that are divided into crypto voice, crypto data, crypto products and associated ancillary devices. These devices provide modern cryptographic solutions to replace obsolete, legacy devices within the crypto categories for all Services. Navy Crypto Ashore sites include: United States Navy (USN), United States Marine Corps (USMC), United States Coast Guard (USCG) facilities, Ballistic Missile Defense (BMD) facilities, production/integration sites, and training sites.

Crypto Data products include Advanced Cryptographic Capability (ACC), which provide National Security Agency (NSA) mandated cryptographic security software modernization of various communications security devices by cease key dates(details held at a higher classification).

Crypto Voice products include VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Cryptographic Modernization (VACM).

Space and Naval Warfare Systems Command (SPAWAR) is the VACM Central Procuring Agency for the USN to include the Military Sealift Command (MSC), Naval Air Systems Command (NAVAIR), USMC and USCG.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 4 / Navy Cryptography (Crypto) - Ashore (DA071)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore			Modification Type: Initial				Related RDT&E PEs: 0303140N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Navy Cryptography (Crypto) - Ashore (DA071)</i>													
B Kits													
Recurring													
1.1.1) VINSON/Advanced Narrowband Digital Voice Terminal CM (VACM) - Organic (22)	1,727 / 19.611	759 / 8.729	367 / 4.221	1,242 / 14.283	- / -	1,242 / 14.283	1,160 / 13.340	1,122 / 12.903	1,208 / 13.892	1,233 / 14.180	Continuing	Continuing	
1.1.2) Advanced Cryptographic Capability (ACC) - Organic (23)	- / -	- / -	- / -	16 / 8.000	- / -	16 / 8.000	9 / 4.500	5 / 2.500	6 / 3.000	6 / 3.000	Continuing	Continuing	
1.1.3) VACM - NonOrganic (24)	19 / 7.315	- / -	6 / 2.310	37 / 14.245	- / -	37 / 14.245	32 / 12.320	27 / 10.395	34 / 13.090	31 / 11.935	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 26.926	- / 8.729	- / 6.531	- / 36.528	- / -	- / 36.528	- / 30.160	- / 25.798	- / 29.982	- / 29.115	Continuing	Continuing	
<i>Subtotal: Navy Cryptography (Crypto) - Ashore (DA071)</i>	1,746 / 26.926	759 / 8.729	373 / 6.531	1,295 / 36.528	- / -	1,295 / 36.528	1,201 / 30.160	1,154 / 25.798	1,248 / 29.982	1,270 / 29.115	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 26.926	- / 8.729	- / 6.531	- / 36.528	- / -	- / 36.528	- / 30.160	- / 25.798	- / 29.982	- / 29.115	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support (25)	- / 11.911	- / 0.297	- / 0.204	- / 1.232	- / -	- / 1.232	- / 1.021	- / 0.880	- / 1.026	- / 1.012	Continuing	Continuing	
<i>Subtotal: Support</i>	- / 11.911	- / 0.297	- / 0.204	- / 1.232	- / -	- / 1.232	- / 1.021	- / 0.880	- / 1.026	- / 1.012	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: Navy Cryptography (Crypto) - Ashore (DA071)</i>	- / 0.000	- / 1.823	- / 0.000	- / 0.593	- / 0.000	- / 0.593	- / 3.547	- / 3.164	- / 2.670	- / 3.362	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 0.000	- / 1.823	- / -	- / 0.593	- / -	- / 0.593	- / 3.547	- / 3.164	- / 2.670	- / 3.362	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	38.837	10.849	6.735	38.353	0.000	38.353	34.728	29.842	33.678	33.489	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018															
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)					Modification Number / Title: 4 / Navy Cryptography (Crypto) - Ashore (DA071)															
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:																			
Modification Item 1 of 1: Navy Cryptography (Crypto) - Ashore (DA071)																							
Manufacturer Information																							
Manufacturer Name: VINSON/Advanced Narrowband Digital Voice Terminal CM (VACM) - Raytheon (USAF)				Manufacturer Location: Largo, FL																			
Administrative Leadtime (<i>in Months</i>): 2				Production Leadtime (<i>in Months</i>): 12																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates	Dec 2016	Dec 2017	Dec 2018																				
Delivery Dates	Dec 2017	Dec 2018	Dec 2019																				
Manufacturer Name: Advanced Cryptographic Capability (ACC) - TBD ⁽²⁶⁾				Manufacturer Location: TBD																			
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 7																			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023																
Contract Dates			Jan 2019																				
Delivery Dates			Aug 2019																				
Installation Information																							
Method of Implementation: Installed:: Installation Name: Navy Cryptography (Crypto) - Ashore																							
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total											
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 1.823	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	19 / 1.823											
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -											
FY 2018	- / -	- / -	- / -	6 / 0.593	0 / 0.000	6 / 0.593	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.593											
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	37 / 3.547	- / -	- / -	- / -	0 / 0.000	37 / 3.547											
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	32 / 3.164	- / -	- / -	- / -	0 / 0.000	32 / 3.164											
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	27 / 2.670	- / -	- / -	- / -	0 / 0.000	27 / 2.670											
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 3.362	0 / 0.000	34 / 3.362											
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing											
Total	- / -	19 / 1.823	- / -	6 / 0.593	0 / 0.000	6 / 0.593	37 / 3.547	32 / 3.164	27 / 2.670	34 / 3.362	Continuing	Continuing											

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018											
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15								P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)								Modification Number / Title: 4 / Navy Cryptography (Crypto) - Ashore (DA071)														
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:																						
Modification Item 1 of 1: Navy Cryptography (Crypto) - Ashore (DA071)																														
Installation Information																														
Method of Implementation: Installed: Installation Name: Navy Cryptography (Crypto) - Ashore																														
Installation Schedule																														
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	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	10	-	-	-	6	-	-	-	26	6	5	-	9	22	1	-	27	-	-	-	34	-	-	Cont.	Cont.
Out	-	-	-	-	9	10	-	-	-	6	-	-	-	26	6	5	-	9	22	1	-	27	-	-	-	34	-	-	Cont.	Cont.
Method of Implementation (Organic): VINSON/Advanced Narrowband Digital Voice Terminal CM (VACM)																			Installation Quantity: 0											
Method of Implementation (Organic): Advanced Cryptographic Capability (ACC)																			Installation Quantity: 0											
Footnotes:																														
(22) VINSON/Advanced Narrowband Digital Voice Terminal (ANDVT) Crypto Modernization (VACM) (Organic) - FY19 increase in quantities is required to meet mandated National Security Agency (NSA) cease key dates (December 31, 2020). Organic quantities are per device, not shore site. Procurement profile aligns to site requirements; Top Secret sites are the priority and then Secret.																														
(23) Advanced Cryptographic Capability (ACC) - FY19 increase is for the initial procurement of ACC to meet the NSA mandated cryptographic security software modernization of various communications security devices.																														
(24) VACM (NonOrganic) - FY19 increase in quantities is required to meet mandated NSA cease key dates (December 31, 2020). NonOrganic quantities are grouped per shore site, not by device. Procurement profile aligns to fielding plan and type of site requiring installation; Top Secret sites are the priority and then Secret.																														
(25) Production support - FY19 increase aligns to increase in VACM and ACC procurements.																														
(26) Advanced Cryptographic Capability (ACC) - Contract not awarded - Vendor is TBD.																														

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)					Modification Number / Title: 5 / Key Management (KM) - Afloat (DA005)				
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	71.405	9.009	5.242	5.073	0.000	5.073	5.763	8.160	8.550	7.052	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	71.405	9.009	5.242	5.073	0.000	5.073	5.763	8.160	8.550	7.052	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	71.405	9.009	5.242	5.073	0.000	5.073	5.763	8.160	8.550	7.052	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
Key Management (KM) is a collection of Tier 2 security equipment, Key Management Infrastructure (KMI), and Tier 3 equipment Simple Key Loader (SKL).												
KMI is the next generation Tier 2 product to replace the legacy Local Management Device/Key Processor (LMD/KP) Electronic Key Management System (EKMS). KMI includes the Management Client (MGC), Advanced Key Processor (AKP) and High Assurance Internet Protocol Equipment (HAIPE) devices. KMI provides a net-centric, web based architecture for the ordering, management and distribution of all cryptographic key material to support Navy users.												
The AN/PYQ-10 SKL is a ruggedized, portable, hand-held fill device, for securely receiving, storing, and transferring data between compatible cryptographic and communications equipment. The SKL is backward-compatible with existing End Cryptographic Units (ECU) and forward-compatible with future security equipment and systems, including KMI.												
KMI Tech Refresh is a hardware and software upgrade to KMI Spiral 2 that is mandated by National Security Agency (NSA) to occur every five-years.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 5 / Key Management (KM) - Afloat (DA005)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Ship			Modification Type: Various				Related RDT&E PEs: 0303140N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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: Key Management (KM) - Afloat (DA005)													
B Kits													
Recurring													
1.1.1) KMI Spiral 2 - NonOrganic	200 / 5.358	21 / 0.565	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	221 / 5.923
1.1.2) Simple Key Loader (SKL) - Organic (27)	7,915 / 40.715	1,037 / 3.650	1,246 / 4.402	659 / 2.333	- / -	659 / 2.333	190 / 0.674	171 / 0.608	720 / 2.566	1,125 / 4.017	Continuing	Continuing	
1.1.3) KMI Tech Refresh - NonOrganic (28)	- / -	- / -	3 / 0.102	28 / 0.959	- / -	28 / 0.959	41 / 1.408	59 / 2.033	37 / 1.278	19 / 0.657	Continuing	Continuing	
Subtotal: Recurring	- / 46.073	- / 4.215	- / 4.504	- / 3.292	- / -	- / 3.292	- / 2.082	- / 2.641	- / 3.844	- / 4.674	Continuing	Continuing	
Subtotal: Key Management (KM) - Afloat (DA005)	8,115 / 46.073	1,058 / 4.215	1,249 / 4.504	687 / 3.292	- / -	687 / 3.292	231 / 2.082	230 / 2.641	757 / 3.844	1,144 / 4.674	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	- / 46.073	- / 4.215	- / 4.504	- / 3.292	- / -	- / 3.292	- / 2.082	- / 2.641	- / 3.844	- / 4.674	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 2.761	- / 0.148	- / 0.164	- / 0.119	- / -	- / 0.119	- / 0.077	- / 0.093	- / 0.132	- / 0.148	Continuing	Continuing	
2.2) Train the Trainer	- / 0.204	- / 0.096	- / 0.136	- / 0.087	- / -	- / 0.087	- / 0.041	- / 0.088	- / 0.099	- / 0.105	Continuing	Continuing	
2.3) DSA (29)	- / 12.526	- / 0.800	- / 0.388	- / 1.125	- / -	- / 1.125	- / 2.213	- / 2.838	- / 1.525	- / 1.025	Continuing	Continuing	
Subtotal: Support	- / 15.491	- / 1.044	- / 0.688	- / 1.331	- / -	- / 1.331	- / 2.331	- / 3.019	- / 1.756	- / 1.278	Continuing	Continuing	
Installation													
Modification Item 1 of 1: Key Management (KM) - Afloat (DA005)	- / 9.841	- / 3.750	- / 0.050	- / 0.450	- / 0.000	- / 0.450	- / 1.350	- / 2.500	- / 2.950	- / 1.100	Continuing	Continuing	
Subtotal: Installation	- / 9.841	- / 3.750	- / 0.050	- / 0.450	- / -	- / 0.450	- / 1.350	- / 2.500	- / 2.950	- / 1.100	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	71.405	9.009	5.242	5.073	0.000	5.073	5.763	8.160	8.550	7.052	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy								Date: February 2018												
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)					Modification Number / Title: 5 / Key Management (KM) - Afloat (DA005)												
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:												
Modification Item 1 of 1: Key Management (KM) - Afloat (DA005)																				
Manufacturer Information																				
Manufacturer Name: Simple Key Loader (SKL) - Sierra Nevada Corporation				Manufacturer Location: Sparks, NV																
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 2																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	Feb 2017	Feb 2018	Feb 2019																	
Delivery Dates	Apr 2017	Apr 2018	Apr 2019																	
Manufacturer Name: Key Management Infrastructure (KMI) Spiral 2 - NSA				Manufacturer Location: Fort Meade, MD																
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 4																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates	Mar 2017																			
Delivery Dates	Jul 2017																			
Manufacturer Name: Key Management Infrastructure (KMI) Tech Refresh - NSA				Manufacturer Location: Fort Meade, MD																
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 4																
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023													
Contract Dates		Mar 2018	Mar 2019																	
Delivery Dates		Jul 2018	Jul 2019																	
Installation Information																				
Method of Implementation: Installed:: Installation Name: Key Management (KM) - Afloat																				
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)									
Prior Years	156 / 9.841	44 / 2.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	200 / 12.541								
FY 2017	- / -	21 / 1.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	21 / 1.050								
FY 2018	- / -	- / -	1 / 0.050	2 / 0.100	0 / 0.000	2 / 0.100	- / -	- / -	- / -	- / -	0 / 0.000	3 / 0.150								
FY 2019	- / -	- / -	- / -	7 / 0.350	0 / 0.000	7 / 0.350	21 / 0.950	- / -	- / -	- / -	0 / 0.000	28 / 1.300								
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.400	33 / 1.650	- / -	- / -	0 / 0.000	41 / 2.050								
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.850	42 / 2.050	- / -	- / -	0 / 0.000	59 / 2.900								
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.900	16 / 0.750	- / -	0 / 0.000	37 / 1.650								
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.350	Continuing	Continuing								
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing								
Total	156 / 9.841	65 / 3.750	1 / 0.050	9 / 0.450	0 / 0.000	9 / 0.450	29 / 1.350	50 / 2.500	63 / 2.950	23 / 1.100	Continuing	Continuing								

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Exhibit P-3a, Individual Modification: PB 2019 Navy																		Date: February 2018																					
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15												P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)											Modification Number / Title: 5 / Key Management (KM) - Afloat (DA005)																
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																											
Modification Item 1 of 1: Key Management (KM) - Afloat (DA005)																																							
Installation Information																																							
Method of Implementation: Installed: Installation Name: Key Management (KM) - Afloat																																							
Installation Schedule																																							
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot									
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4															
In	134	22	16	22	16	11	-	-	1	-	1	1	7	-	9	6	14	-	8	18	24	-	21	16	26	-	13	2	8	Cont.	Cont.								
Out	130	26	15	20	17	12	1	-	1	-	1	1	4	3	9	6	13	1	7	18	23	2	21	15	24	3	12	3	7	Cont.	Cont.								
Method of Implementation (Organic): Simple Key Loader (SKL) - Not Installed																		Installation Quantity: 0																					
Footnotes:																																							
(27) Simple Key Loaders (SLK) - FY19 decrease is due to the attrition rate caused by the seven-year battery life span. SKL procurements are required to replenish the fleet with key-fill devices required to conduct secure, mission-critical communications. Quantities fluctuate to remain within the Inventory Objective Capability (IOC).																																							
(28) Key Management Infrastructure (KMI) Tech Refresh - FY19 increase is the result of National Security Agency (NSA) mandated five-year refresh cycle. KMI Tech Refresh modernizes all KMI Spiral 2 systems. Unit cost increase from Spiral 2 to KMI Tech Refresh are due to change in hardware.																																							
(29) Design Services Allocation (DSA) - FY19 increase aligns to the fielding of KMI Tech Refresh.																																							

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 6 / Key Management (KM) - Ashore (DA005)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	66.656	3.248	4.803	6.212	0.000	6.212	5.910	3.604	3.448	5.201	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	66.656	3.248	4.803	6.212	0.000	6.212	5.910	3.604	3.448	5.201	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	66.656	3.248	4.803	6.212	0.000	6.212	5.910	3.604	3.448	5.201	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Key Management (KM) ashore sites include: United States Navy (USN), United States Marine Corps (USMC), United States Coast Guard (USCG) facilities, production integration sites, and training sites. KM ashore systems include: Simple Key Loader (SKL), Key Management Infrastructure (KMI) Spiral 1 & 2 and KMI Tech Refresh. KMI is the next generation Tier 2 product to replace the legacy Local Management Device/Key Processor (LMD/KP) Electronic Key Management System (EKMS). KMI includes the Management Client (MGC), Advanced Key Processor (AKP) and High Assurance Internet Protocol Equipment (HAIPE) devices. KMI provides a net-centric, web based architecture for the ordering, management and distribution of all cryptographic key material to support Navy users. The AN/PYQ-10 SKL is a ruggedized, portable, hand-held fill device, for securely receiving, storing, and transferring data between compatible cryptographic and communications equipment. The SKL is backward-compatible with existing End Cryptographic Units (ECU) and forward-compatible with future security equipment and systems, including KMI. KMI Tech Refresh is a hardware and software upgrade to KMI Spiral 2 that is mandated by National Security Agency (NSA) to occur every five-years.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 6 / Key Management (KM) - Ashore (DA005)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore			Modification Type: Various				Related RDT&E PEs: 0303140N						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: Key Management (KM) - Ashore (DA005)</i>													
B Kits													
Recurring													
1.1.1) KMI Spiral 1&2 - NonOrganic	481 / 12.779	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	481 / 12.779
1.1.2) Simple Key Loader (SKL) - Organic ⁽³⁰⁾	9,525 / 28.180	788 / 2.774	1,207 / 4.264	574 / 2.032	- / -	574 / 2.032	102 / 0.362	160 / 0.569	712 / 2.538	1,323 / 4.724	Continuing	Continuing	
1.1.3) KMI Tech Refresh - NonOrganic ⁽³¹⁾	- / -	- / -	6 / 0.205	67 / 2.295	- / -	67 / 2.295	64 / 2.197	65 / 2.240	16 / 0.553	4 / 0.138	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 40.959	- / 2.774	- / 4.469	- / 4.327	- / -	- / 4.327	- / 2.559	- / 2.809	- / 3.091	- / 4.862	Continuing	Continuing	
<i>Subtotal: Key Management (KM) - Ashore (DA005)</i>	10,006 / 40.959	788 / 2.774	1,213 / 4.469	641 / 4.327	- / -	641 / 4.327	166 / 2.559	225 / 2.809	728 / 3.091	1,327 / 4.862	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 40.959	- / 2.774	- / 4.469	- / 4.327	- / -	- / 4.327	- / 2.559	- / 2.809	- / 3.091	- / 4.862	Continuing	Continuing	
Support (All Modification Items)													
2.1) Production Support	- / 3.855	- / 0.102	- / 0.148	- / 0.160	- / -	- / 0.160	- / 0.086	- / 0.100	- / 0.110	- / 0.175	Continuing	Continuing	
2.2) Train the Trainer	- / 0.249	- / 0.172	- / 0.102	- / 0.135	- / -	- / 0.135	- / 0.065	- / 0.092	- / 0.097	- / 0.117	Continuing	Continuing	
2.3) Pre-Design Install Planning ⁽³²⁾	- / 6.643	- / -	- / 0.084	- / 1.415	- / -	- / 1.415	- / 0.250	- / 0.103	- / -	- / 0.047	- / -	- / 8.542	
<i>Subtotal: Support</i>	- / 10.747	- / 0.274	- / 0.334	- / 1.710	- / -	- / 1.710	- / 0.401	- / 0.295	- / 0.207	- / 0.339	Continuing	Continuing	
Installation													
<i>Modification Item 1 of 1: Key Management (KM) - Ashore (DA005)</i>	- / 14.950	- / 0.200	- / 0.000	- / 0.175	- / 0.000	- / 0.175	- / 2.950	- / 0.500	- / 0.150	- / 0.000	Continuing	Continuing	
<i>Subtotal: Installation</i>	- / 14.950	- / 0.200	- / -	- / 0.175	- / -	- / 0.175	- / 2.950	- / 0.500	- / 0.150	- / -	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	66.656	3.248	4.803	6.212	0.000	6.212	5.910	3.604	3.448	5.201	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018									
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 6 / Key Management (KM) - Ashore (DA005)										
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:									
<i>Modification Item 1 of 1: Key Management (KM) - Ashore (DA005)</i>																			
Manufacturer Information																			
Manufacturer Name: Simple Key Loader (SKL) - Sierra Nevada Corporation					Manufacturer Location: Sparks, NV														
Administrative Leadtime (<i>in Months</i>): 4					Production Leadtime (<i>in Months</i>): 2														
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates	Feb 2017	Feb 2018	Feb 2019																
Delivery Dates	Apr 2017	Apr 2018	Apr 2019																
Manufacturer Name: Key Management Infrastructure (KMI) Tech Refresh - NSA					Manufacturer Location: Fort Meade, MD														
Administrative Leadtime (<i>in Months</i>): 5					Production Leadtime (<i>in Months</i>): 4														
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023												
Contract Dates		Mar 2018	Mar 2019																
Delivery Dates		Jul 2018	Jul 2019																
Installation Information																			
Method of Implementation: Installed:: Installation Name: Key Management (KM) - Ashore																			
Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total							
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)							
Prior Years	457 / 14.950	24 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	481 / 15.150							
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -							
FY 2018	- / -	- / -	- / -	6 / 0.150	0 / 0.000	6 / 0.150	- / -	- / -	- / -	- / -	0 / 0.000	6 / 0.150							
FY 2019	- / -	- / -	- / -	1 / 0.025	0 / 0.000	1 / 0.025	66 / 1.350	- / -	- / -	- / -	0 / 0.000	67 / 1.375							
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	64 / 1.600	- / -	- / -	- / -	0 / 0.000	64 / 1.600							
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 0.500	32 / 0.100	- / -	0 / 0.000	65 / 0.600							
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.050	- / -	0 / 0.000	16 / 0.050							
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing							
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing							
Total	457 / 14.950	24 / 0.200	- / -	7 / 0.175	0 / 0.000	7 / 0.175	130 / 2.950	33 / 0.500	48 / 0.150	- / -	Continuing	Continuing							

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Exhibit P-3a, Individual Modification: PB 2019 Navy																			Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15												P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)											Modification Number / Title: 6 / Key Management (KM) - Ashore (DA005)															
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																										
Modification Item 1 of 1: Key Management (KM) - Ashore (DA005)																																						
Installation Information																																						
Method of Implementation: Installed: Installation Name: Key Management (KM) - Ashore																																						
Installation Schedule																																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
	Q1	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	8	-	22	2	-	-	-	-	-	4	2	1	18	36	29	47	-	-	18	15	15	16	16	1	-	-	-	Cont.	Cont.								
Out	449	8	-	1	23	-	-	-	-	-	3	3	1	16	27	40	40	7	-	18	15	-	16	31	1	-	-	-	Cont.	Cont.								
Method of Implementation (Organic): Simple Key Loader (SKL) - Not Installed												Installation Quantity: 0																										
Footnotes:																																						
(30) Simple Key Loaders (SLK) - FY19 decrease is due to the attrition rate caused by the seven-year battery life span. SKL procurements are required to replenish the fleet with key-fill devices required to conduct secure, mission-critical communications. Quantities fluctuate to remain within the Inventory Objective Capability (IOC).																																						
(31) Key Management Infrastructure (KMI) Tech Refresh - FY19 increase of KMI Tech Refresh devices is the result of National Security Agency (NSA) mandated five-year refresh cycle. KMI Tech Refresh modernizes all KMI Spiral 2 systems. Unit cost increase from Spiral 2 to KMI Tech Refresh are due to change in hardware.																																						
(32) Pre-Install Design Planning - FY19 increase reflects a one-for-one procurement to pre-install design planning cost associated with KMI Tech Refresh procurements/installations; Fluctuations in out years are attributed to not all installations requiring pre-install design planning due to multiple devices being installed at one site.																																						

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 7 / SHARKCAGE - Afloat (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	3.083	13.260	0.000	13.260	38.841	39.292	41.154	37.885	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	3.083	13.260	0.000	13.260	38.841	39.292	41.154	37.885	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	3.083	13.260	0.000	13.260	38.841	39.292	41.154	37.885	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-
Description: SHARKCAGE is a global, federated Defensive Cyberspace Operations (DCO) enclave consisting of sensor nodes, DCO analysis workbenches, and analytic nodes. Utilizing one-way passive taps in a protected, isolated, classified environment, SHARKCAGE consolidates cyber event data from multiple platforms and networks, providing Navy DCO forces with a shared environment and common platform for integrated workflow, collaboration, and analysis. SHARKCAGE efficiently detects, correlates, and analyzes nation and non-nation state attacks against maritime data and the Naval Networking Environment (NNE). SHARKCAGE afloat suites includes laptops, servers, switches, storage, network taps/cables, and forensic equipment to enable deployed DCO forces to conduct localized mobile analysis. Afloat suites also include hardware and software for enhanced data correlation tools, ancillary devices, and other related security tools.												

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)							Modification Number / Title: 7 / SHARKCAGE - Afloat (DA070)			
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Ship, Sub			Modification Type: Initial					Related RDT&E PEs: 0303140N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1: SHARKCAGE - Afloat (DA070)</i>													
B Kits													
Recurring													
1.1.1) SHARKCAGE Afloat Suite - NonOrganic ⁽³³⁾		- / -	- / -	4 / 1.000	18 / 4.500	- / -	18 / 4.500	53 / 13.250	54 / 13.500	57 / 14.250	52 / 13.000	Continuing	Continuing
<i>Subtotal: Recurring</i>		- / 0.000	- / -	- / 1.000	- / 4.500	- / -	- / 4.500	- / 13.250	- / 13.500	- / 14.250	- / 13.000	Continuing	Continuing
<i>Subtotal: SHARKCAGE - Afloat (DA070)</i>		- / -	- / -	4 / 1.000	18 / 4.500	- / -	18 / 4.500	53 / 13.250	54 / 13.500	57 / 14.250	52 / 13.000	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>		- / 0.000	- / -	- / 1.000	- / 4.500	- / -	- / 4.500	- / 13.250	- / 13.500	- / 14.250	- / 13.000	Continuing	Continuing
Support (All Modification Items)													
2.1) Train-the-Trainer		- / -	- / -	- / 0.150	- / 0.150	- / -	- / 0.150	- / 0.150	- / 0.150	- / 0.150	- / 0.150	Continuing	Continuing
2.2) Production Support		- / -	- / -	- / 0.050	- / 0.150	- / -	- / 0.150	- / 0.372	- / 0.331	- / 0.331	- / 0.360	Continuing	Continuing
2.3) DSA		- / -	- / -	- / 0.383	- / 1.710	- / -	- / 1.710	- / 5.194	- / 5.061	- / 5.048	- / 4.875	Continuing	Continuing
<i>Subtotal: Support</i>		- / 0.000	- / -	- / 0.583	- / 2.010	- / -	- / 2.010	- / 5.716	- / 5.542	- / 5.529	- / 5.385	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1: SHARKCAGE - Afloat (DA070)</i>		- / 0.000	- / 0.000	- / 1.500	- / 6.750	- / 0.000	- / 6.750	- / 19.875	- / 20.250	- / 21.375	- / 19.500	Continuing	Continuing
<i>Subtotal: Installation</i>		- / 0.000	- / -	- / 1.500	- / 6.750	- / -	- / 6.750	- / 19.875	- / 20.250	- / 21.375	- / 19.500	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	3.083	13.260	0.000	13.260	38.841	39.292	41.154	37.885	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)												Modification Number / Title: 7 / SHARKCAGE - Afloat (DA070)						
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:							
Modification Item 1 of 1: SHARKCAGE - Afloat (DA070)																						
Manufacturer Information																						
Manufacturer Name: SHARKCAGE Equipment - SPAWAR Systems Center (SSC) Pacific										Manufacturer Location: San Diego, CA												
Administrative Leadtime (<i>in Months</i>): 2										Production Leadtime (<i>in Months</i>): 3												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023															
Contract Dates		Dec 2017	Dec 2018																			
Delivery Dates		Mar 2018	Mar 2019																			
Installation Information																						
Method of Implementation: Installed: Installation Name: SHARKCAGE - Afloat (DA070)																						
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2018			- / -	- / -	4 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 1.500					
FY 2019			- / -	- / -	- / -	18 / 6.750	0 / 0.000	18 / 6.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	18 / 6.750					
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	53 / 19.875	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	53 / 19.875					
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 20.250	- / -	- / -	- / -	- / -	- / -	0 / 0.000	54 / 20.250					
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	57 / 21.375	- / -	- / -	- / -	- / -	0 / 0.000	57 / 21.375					
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 19.500	Continuing	Continuing	Continuing	Continuing	Continuing					
To Complete			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing					
Total			- / -	- / -	4 / 1.500	18 / 6.750	0 / 0.000	18 / 6.750	53 / 19.875	54 / 20.250	57 / 21.375	52 / 19.500	Continuing	Continuing	Continuing	Continuing	Continuing					
Installation Schedule																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	3	-	1	-	11	5	2	-	23	20	10	-	16	24	14		
Out	-	-	-	-	-	3	-	1	-	11	4	3	-	18	22	13	-	7	23	24		
																	22	10	25	-		
																	30	13	9	Cont.		
																	7	15	Cont.	Cont.		
Footnotes:																						
(33) SHARKCAGE Afloat Suite - FY19 is required for an increase of afloat suites needed to detect emerging threats in the tactical environment, provide the capability to analyze active cyber threats and take actions to contain/stop actual or potential cyber threat activities. Increases reflected in Production Support and DSA accordingly.																						

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 8 / SHARKCAGE - Ashore (DA070)		
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	9.136	15.237	0.000	15.237	11.187	15.116	4.805	9.069	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	9.136	15.237	0.000	15.237	11.187	15.116	4.805	9.069	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	9.136	15.237	0.000	15.237	11.187	15.116	4.805	9.069	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SHARKCAGE ashore suites represent multiple SHARKCAGE architectures and variants that are specifically designed to each site in accordance with Fleet and Defensive Cyber Operations (DCO) requirements based on emergent threats in the tactical environment. Capabilities provided include network tapping, sensing, and analytic toolsets for passively monitoring multiple Navy networks to detect and assess cyber threats across multiple security enclaves. Ashore sites include Navy Cyber Defense Operations Command (NCDOC), Navy Information Operations Commands (NIOC), Fleet Cyber Command / Commander Tenth Fleet (FCC/C10F), Nuclear Command, Control, and Communications, Navy (NC3-N) sites, Ballistic Missile Defense (BMD) sites (i.e., Aegis Ashore), and SHARKCAGE production labs, as well as other network concentration facilities.

SHARKCAGE procures equipment to include: hardware, software, servers, data storage, taps, switches, laptops, and ancillary systems that provide the following capabilities: passive network sensor nodes that collect live network traffic and use signature-based and heuristic intrusion detection systems (IDS) to conduct initial analysis and alerting; analytic nodes which consist primarily of systems supporting ingest, storage, retention, retrieval, correlation, and real-time alerting of network traffic Packet Capture (PCAP) and event data; and analysis workbenches which provide an environment of tools for DCO analysts to support all aspects of the DCO mission, local to DCO forces at FCC/C10F, NCDOC, NIOC, Naval Computer and Telecommunications Stations (NCTS), and Naval Computer and Telecommunications Area Master Stations (NCTAMS).

SHARKCAGE NCDOC Suite is the primary ashore site that supports the entire Navy enterprise and provides the capability to analyze active cyber threats and take actions to contain/stop actual or potential threat activities. Tech refresh will occur every five years.

SHARKCAGE Analytic Suite provides a regional/area of responsibility capability to analyze active cyber threats and take actions to contain/stop actual or potential threat activities. Tech refresh will occur every five years.

SHARKCAGE Sensor Suite provide operators with the ability to conduct data ingest, data storage, data retention, data retrieval, data correlation, and real-time alerting of event-based data to support the DCO mission. Tech refresh will occur every five years.

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Exhibit P-3a, Individual Modification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)						Modification Number / Title: 8 / SHARKCAGE - Ashore (DA070)				
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:			
Models of Systems Affected: Shore			Modification Type: Various					Related RDT&E PEs: 0303140N					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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													
<i>Modification Item 1 of 1:</i> SHARKCAGE - Ashore (DA070)													
B Kits													
Recurring													
1.1.1) SHARKCAGE NCDOC Suite - NonOrganic ⁽³⁴⁾		- / -	- / -	1 / 7.200	- / -	- / -	- / -	- / -	- / -	1 / 7.200	Continuing	Continuing	
1.1.2) SHARKCAGE Analytic Suite - NonOrganic ⁽³⁵⁾		- / -	- / -	- / -	2 / 9.600	- / -	2 / 9.600	1 / 4.800	2 / 9.600	- / -	- / -	Continuing	Continuing
1.1.3) SHARKCAGE Sensor Suite - NonOrganic		- / -	- / -	1 / 0.325	5 / 1.625	- / -	5 / 1.625	7 / 2.275	5 / 1.625	6 / 1.950	1 / 0.325	Continuing	Continuing
Subtotal: Recurring		- / 0.000	- / -	- / 7.525	- / 11.225	- / -	- / 11.225	- / 7.075	- / 11.225	- / 1.950	- / 7.525	Continuing	Continuing
Subtotal: SHARKCAGE - Ashore (DA070)		- / -	- / -	2 / 7.525	7 / 11.225	- / -	7 / 11.225	8 / 7.075	7 / 11.225	6 / 1.950	2 / 7.525	Continuing	Continuing
Subtotal: Procurement, All Modification Items		- / 0.000	- / -	- / 7.525	- / 11.225	- / -	- / 11.225	- / 7.075	- / 11.225	- / 1.950	- / 7.525	Continuing	Continuing
Support (All Modification Items)													
2.1) Train-the-Trainer		- / -	- / -	- / 0.150	- / 0.150	- / -	- / 0.150	- / 0.150	- / 0.150	- / 0.150	- / 0.150	Continuing	Continuing
2.2) Production Support		- / -	- / -	- / 0.370	- / 0.386	- / -	- / 0.386	- / 0.169	- / 0.354	- / 0.101	- / 0.193	- / -	- / 1.573
2.3) DSA		- / -	- / -	- / 0.216	- / 0.661	- / -	- / 0.661	- / 0.775	- / 0.677	- / 0.504	- / 0.326	Continuing	Continuing
Subtotal: Support		- / 0.000	- / -	- / 0.736	- / 1.197	- / -	- / 1.197	- / 1.094	- / 1.181	- / 0.755	- / 0.669	Continuing	Continuing
Installation													
<i>Modification Item 1 of 1:</i> SHARKCAGE - Ashore (DA070)		- / 0.000	- / 0.000	- / 0.875	- / 2.815	- / 0.000	- / 2.815	- / 3.018	- / 2.710	- / 2.100	- / 0.875	Continuing	Continuing
Subtotal: Installation		- / 0.000	- / -	- / 0.875	- / 2.815	- / -	- / 2.815	- / 3.018	- / 2.710	- / 2.100	- / 0.875	Continuing	Continuing
Total													
Total Cost (Procurement + Support + Installation)		0.000	0.000	9.136	15.237	0.000	15.237	11.187	15.116	4.805	9.069	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Navy															Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15				P-1 Line Item Number / Title: 3415 / Info Systems Security Program (ISSP)												Modification Number / Title: 8 / SHARKCAGE - Ashore (DA070)						
ID Code (A=Service Ready, B=Not Service Ready) :															MDAP/MAIS Code:							
Modification Item 1 of 1: SHARKCAGE - Ashore (DA070)																						
Manufacturer Information																						
Manufacturer Name: SHARKCAGE Equipment - SPAWAR Systems Center (SSC) Pacific										Manufacturer Location: San Diego, CA												
Administrative Leadtime (<i>in Months</i>): 2										Production Leadtime (<i>in Months</i>): 3												
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023															
Contract Dates		Dec 2017	Dec 2018																			
Delivery Dates		Mar 2018	Mar 2019																			
Installation Information																						
Method of Implementation: Installed: Installation Name: SHARKCAGE - Ashore (DA070)																						
Installation Cost			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total								
			Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 2017			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -				
FY 2018			- / -	- / -	2 / 0.875	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.875					
FY 2019			- / -	- / -	- / -	7 / 2.815	0 / 0.000	7 / 2.815	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 2.815					
FY 2020			- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.018	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	8 / 3.018					
FY 2021			- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 2.710	- / -	- / -	- / -	- / -	- / -	0 / 0.000	7 / 2.710					
FY 2022			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.100	- / -	- / -	- / -	- / -	0 / 0.000	6 / 2.100					
FY 2023			- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.875	Continuing	Continuing	Continuing	Continuing	Continuing					
To Complete			- / -	- / -	- / -	2 / 0.875	7 / 2.815	0 / 0.000	7 / 2.815	8 / 3.018	7 / 2.710	6 / 2.100	2 / 0.875	Continuing	Continuing	Continuing	Continuing					
Total			- / -	- / -	- / -	2 / 0.875	7 / 2.815	0 / 0.000	7 / 2.815	8 / 3.018	7 / 2.710	6 / 2.100	2 / 0.875	Continuing	Continuing	Continuing	Continuing					
Installation Schedule																						
PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	2	-	-	-	7	-	-	-	8	-	-	-	7	-	-		
Out	-	-	-	-	-	-	-	-	2	-	-	-	7	-	-	-	6	-	-	-		
																	2	-	-	Cont.		
																	2	-	-	Cont.		

Footnotes:

(34) SHARKCAGE Navy Cyber Defense Operations Command (NCDOC) Suite - FY19 decrease reflects a five year tech refresh cycle. NCDOC is the primary SHARKCAGE suite that supports the entire Navy enterprise and provides the capability to analyze active cyber threats and take actions to contain/stop actual or potential threat activities.

(35) SHARKCAGE Analytic Suite - FY19 is for the procurement of Analytic Suites, which provides a regional/Area of Responsibility (AOR) capability to analyze active cyber threats and take actions to contain/stop actual or potential threat activities. Tech refresh will occur every five years.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment					P-1 Line Item Number / Title: 3417 / MIO Intel Exploitation Team							
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3.470	0.920	0.961	0.951	0.000	0.951	0.968	0.986	1.005	1.025	-	10.286
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3.470	0.920	0.961	0.951	0.000	0.951	0.968	0.986	1.005	1.025	-	10.286
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3.470	0.920	0.961	0.951	0.000	0.951	0.968	0.986	1.005	1.025	-	10.286
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[P40A / 343SA - Maritime Interdiction Operations Intel Exploitation Team]: Tactical Electronic Warfare Equipment: Procure Tactical Electronic Warfare (EW) equipment to be used in support of Indications and Warning and Force Protection. The capability includes an array of Tactical EW systems capable of both digital and analogue collection in the Radio Frequency (RF) environment. Specific collection capabilities include Digital and Analogue data collection; Specific Emitter ID, which discerns unique attributes of specific radar; Satellite Communication capability; Wireless Networks to conduct surveys, which is a telecom network mapping, and Document and Media Exploitation allowing capture of media from electronic devices.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 15: Cryptographic Equipment				P-1 Line Item Number / Title: 3417 / MIO Intel Exploitation Team						
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A						
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base			
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$M)					
P-40a	MIO Intel Exploitation Team	P-5a			- / 3.470	- / 0.920	- / 0.961	- / 0.951	- / -	- / 0.951
P-40	Total Gross/Weapon System Cost				- / 3.470	- / 0.920	- / 0.961	- / 0.951	- / 0.000	- / 0.951

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:

The FY19 funding request supports the procurement of eight (8) devices which conduct surveys of telecommunications and network mapping. Devices use a supported computer platform plus Standard or Next Generation device/media connectors for document and media exploitation, allowing capture of media from electronic devices.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15					P-1 Line Item Number / Title: 3417 / MIO Intel Exploitation Team								Aggregated Items Title: MIO Intel Exploitation Team				
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO		
			Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
1) 343SA - Maritime Interdiction Operations Intel Exploitation Team																	
1.1) 343SA - Satellite Communications Equipment ^(†)	A		-	-	-	0.307	3	0.920	-	-	-	-	-	-	-	-	-
1.2) 343SA - Wireless Networks Mapping Equipment / Surveys ^{(1)(t)}	A		0.341	3	1.024	-	-	-	-	-	-	0.119	8	0.951	-	-	0.119
1.3) 343SA - Wireless Networks Telcom Equipment	A		0.151	3	0.453	-	-	-	-	-	-	-	-	-	-	-	-
1.4) 343SA - Specific Emitter Identification Devices	A		0.341	3	1.024	-	-	-	-	-	-	-	-	-	-	-	-
1.5) 343SA - Digital / Analogue Collection Devices ^(†)	A		-	-	-	-	-	-	0.120	8	0.961	-	-	-	-	-	-
1.6) DRT 1301C+/ TRS V7 Wireless Receiving System	A		0.875	1	0.875	-	-	-	-	-	-	-	-	-	-	-	-
1.7) LANSHARK 5	A		0.094	1	0.094	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 1) 343SA - Maritime Interdiction Operations Intel Exploitation Team</i>			-	-	3.470	-	-	0.920	-	-	0.961	-	-	0.951	-	-	0.951
Total			-	-	3.470	-	-	0.920	-	-	0.961	-	-	0.951	-	-	0.951

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

(†) indicates the presence of a P-5a

Footnotes:

(1) Tax applied to FYDP starting 2019.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 15			P-1 Line Item Number / Title: 3417 / MIO Intel Exploitation Team					Aggregated Items: MIO Intel Exploitation Team				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1) 343SA - Maritime Interdiction Operations Intel Exploitation Team												
1.1) 343SA - Satellite Communications Equipment		2017	Prime Vendor / Various	MIPR	DLA	Feb 2017	Aug 2017	3	0.307	N		Oct 2016
1.2) 343SA - Wireless Networks Mapping Equipment / Surveys ⁽¹⁾		2019	TBD / TBD	C / TBD	TBD	Feb 2019	Aug 2019	8	0.119	N	Jun 2019	Nov 2018
1.5) 343SA - Digital / Analogue Collection Devices		2018	TBD / TBD	TBD	TBD	Jul 2018	Jan 2019	8	0.120	N	Dec 2018	Jan 2018

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity:					P-1 Line Item Number / Title:										
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 16: Cryptologic Equipment					3501 / Cryptologic Communications Equip										
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total			
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost (\$ in Millions)	69.031	23.698	16.667	14.209	2.000	16.209	13.164	15.912	18.428	18.600	-	191.709			
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Net Procurement (P-1) (\$ in Millions)	69.031	23.698	16.667	14.209	2.000	16.209	13.164	15.912	18.428	18.600	-	191.709			
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Total Obligation Authority (\$ in Millions)	69.031	23.698	16.667	14.209	2.000	16.209	13.164	15.912	18.428	18.600	-	191.709			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-			
Flyaway Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-			
Description:															
[P5 / 1V045 Access Systems & Subsystems]: Cryptologic Carry-On Equipment: The Cryptologic Carry-On Program (CCOP) procures state-of-the-art, commercial off-the-shelf signal acquisition equipment (hardware and software) in response to combatant commander requirements for a quick-reaction surface, subsurface, and airborne cryptologic carry-on capability. The equipment is procured according to the overall requirements detailed in the Shipboard Information Warfare / Cryptologic System Operational Requirements Document and specific execution year fleet requirements as defined by the Signals Of Interest (SOI) Integrated Product Team (IPT) and in concert with Shipboard Signals Exploitation Space (SSES) programs to ensure synergy and seamless transition to permanently installed SSES systems. The IPT meets several times a year and determines which SOIs/Targets on the SOI list need to be addressed. Due to a continually changing threat environment, detailed requirements are dynamic and equipment procured varies each year by quantity and type. Equipment suites can be configured for many targets and tasking. Target specific subsystems can either operate as stand-alone within cryptologic spaces or as an add-on to existing equipment. Hardware procurement includes: receivers, recorders, tactical computers and related peripherals, antennas, electronic-warfare support measures systems, precision geolocation equipment, advanced signal and search equipment including spectrum analyzers and associated portable special intelligence communications equipment. CCOP equipment is installed as an augment to cryptologic capabilities on subsurface, surface, and air platforms. There are approximately 124 cryptologic capable surface ships and shore sites in the current Navy inventory. Each of these are potential users of this carry-on equipment, as are subsurface and air platforms. The temporary installation of equipment is coordinated through fleet electronic support personnel. A primary system in inventory is the Carry On Radio Spectrum Analysis & Intelligence Reporting (CORSAIR) system. Funds continue to procure CORSAIR core architecture system upgrades to provide additional affordable functionality to the combatant commands. Additional signal acquisition equipment to address specific combatant command requirements include such systems as Digital Receiver Technology (DRT), Hostile forces Integrated Targeting Service (HITS), Maritime Toxic Pen (MTP), TURBULENTWAVE / TURBULENTWIND / TURBULENTSAIL, BLUESTREAM servers, RED FALCON / VULCAN, STINGRAY, MUDCAT, Toxic Fog, Radio Frequency Distribution Unit (RFDU), TEAPARTY/TEALEAF, and Generic Area Limitations Environment (GALE)-Lite. This line also supports the procurement of STALLION hardware for CCOP team training.															
[P5 / Global Signal Analysis Laboratory (GSAL) NAVIFOR [60]]: GDX6D - GLOBAL SIGNAL ANALYSIS LABORATORY (GSAL): The Navy GSAL program, under project name CLASSIC SENSEI, provides for the timely analysis of data derived from maritime mobile Information Warfare (IW) operations. GSAL support is conducted by Signals Analysis Laboratories (SAL) co-located with Fleet Information Operations Centers (FIOC) at theater-level analysis and processing centers and by QuickLook / Nodes forward-based at fleet concentration areas. The GSAL program office equips the SAL's with advanced signals analysis capabilities in order to accomplish the high order analysis that is required to effectively address SAL processing and exploitation requirements in support of both maritime tactical and national strategic IW objectives. Additionally, SAL's are equipped with specialized capabilities to support FIOC maritime Signal Descriptor File (SDF) requirements. Funding is required to maintain and sustain SAL operations while allowing for upgrades required to integrate new technology to accommodate the highly technical analysis requirements attendant with a highly diverse and constantly changing electromagnetic environment. Additionally, Navy SAL's are integral components of the global collaborative enterprise architecture via the GSAL LABLINK data handling subsystem. LABLINK provides for advanced data manipulation, achieving, and forwarding / exchange while providing connectivity and global reachback in support of analysis with collaborating military, national, and international partners via signal screening and processing tools resident in LABLINK. GSAL theater-level laboratories are located at Navy Information Operations Command (NIOC) Hawaii (Pacific SAL), and NIOC Ft Gordon, Georgia (Atlantic SAL). Forward-based															

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 16: Cryptologic Equipment		P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip
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		
screening and forwarding QuickLook / Nodes are located at Souda Bay, Crete (potential relocation within the European theater), NIOC Bahrain, and a future installation at Kadena, Japan. Other GSAL facilities are located at NIOC Yokosuka, Japan, and at the Naval Information Warfare Activity (NIWA).		
[P5 / GDX6D - System Integration and Installation of Hardware]: Fleet Information Operations Centers (FIOC): There are FIOCs co-located with National Security Agency (NSA) Cryptologic Centers supporting the geographical Satellite Communication Network (SATCOM). Each are charged with providing regionally focused Information Operation (IO) and Signal Intelligence (SIGINT) support to Fleet Commanders. FIOCs leverage NSA capabilities, analysis, and manpower in support of Fleet requirements. Funds are required for purchasing and maintaining life cycle support for command and control systems connected to SCI networks at the FIOCs. Funds are also provided to develop and maintain a common baseline of analytical intelligence software tools supporting FIOC capability areas as defined in the FIOC operational strategy (OPSTRAT).		
[P5 / EW Fleet Synthetic Trainer Consolidation]: The Department's Fleet Synthetic Training (FST) (SIGINT / C-ISR) initiative addresses the lack of realistic SIGINT / C-ISR during exercises supporting the Fleet Training Continuum (FTC). Addresses critical requirements for SIGINT and C-ISR in Fleet Synthetic Training (FST) required in preparing Intelligence personnel/teams for forward deployed operations.		
This effort provides the ability to exercise shipboard TS-SCI capabilities in an environment not subject to counter-detection. Improves staff operational planning and tactical decision making combined with improvements to overall Intelligence team readiness and certification throughout the Optimized-Fleet Response Plan (O-FRP). Supports Assured C2 and Cyber Situational Awareness/Cyber Defense and Enhanced Naval Network Environment (NNE) Information Dominance IPCLs. Builds upon GENSER NCTE (Navy Continuous Training Environment) to expand the existing GENSER NCTE with Above GENSER capabilities to include TS-SCI FST architecture/capabilities. Provides for architecture, capabilities and scenario build-out as well as required life-cycle management.		
This capability will enhance individual units and Strike Groups in exercising integrated kinetic and non-kinetic capabilities, to include operations/intelligence fusion required for comprehensive maritime operations and operational proficiency in Electromagnetic Maneuver Warfare (EMW). FY 18 and out will fund Life Cycle Management (LCM) of the TS/SCI NCTE node on the East Coast and 14 Portable Embarkation Kits (PEKs).		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 16: Cryptologic Equipment				3501 / Cryptologic Communications Equip					
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-5	1 / Cryptologic Communications Equip	P-5a, P-21			- / 69.031	- / 23.698	- / 16.667	- / 14.209	- / 2.000
P-40	Total Gross/Weapon System Cost				- / 69.031	- / 23.698	- / 16.667	- / 14.209	- / 2.000
*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: FY19 funds will continue to satisfy signals exploitation capability gaps as determined by the Cryptologic Carry-on Program (CCOP) Signals of Interest (SOI) Integrated Product Team (IPT). At this time the recommendations for procurements that are best suited to address identified gaps may include: Digital Receiver Technology (DRT), Hostile forces Integrated Targeting Service (HITS), Maritime Toxic Pen (MTP), TURBULENTWAVE / TURBULENTWIND / TURBULENTSAIL, BLUESTREAM servers, RED FALCON / VULCAN, STINGRAY, MUDCAT, Toxic Fog, Radio Frequency Distribution Unit (RFDU), TEAPARTY/TEALEAF, and Generic Area Limitations Environment (GALE)-Lite, BLACKBIRD AND QUICKSHOT as well as Adaptive Mission Packages. This line supports the procurement of STALLION hardware for CCOP team training.									
FY19 funds will provide for the timely analysis of data derived from maritime mobile Information Warfare (IW) operations. Global Signals Analysis Laboratory (GSAL) support is conducted by Signals Analysis Laboratories (SAL) co-located with Fleet Information Operations Centers (FIOC) at theater-level analysis and processing centers and by QuickLook/Nodes forward-based at fleet concentration areas. The Navy's Fleet Synthetic Training (FST) (SIGINT / C-ISR) initiative addresses the lack of realistic SIGINT / C-ISR during exercises supporting the Fleet Training Continuum (FTC). Addresses critical requirements for SIGINT and C-ISR in Fleet Synthetic Training (FST) required in preparing Intelligence personnel/teams for forward deployed operations. FST provides the ability to exercise shipboard TS-SCI capabilities in an environment not subject to counter-detection; improves staff operational planning and tactical decision making combined with improvements to overall Intelligence team readiness and certification throughout the Optimized-Fleet Response Plan (O-FRP). Supports Assured C2 and Cyber Situational Awareness/Cyber Defense and Enhanced Naval Network Environment (NNE) Information Dominance IPCLs; builds upon GENSER NCTE (Navy Continuous Training Environment) to expand the existing GENSER NCTE with Above GENSER capabilities to include TS-SCI FST architecture/capabilities; provides for architecture, capabilities and scenario build-out as well as required life-cycle sustainment and maintenance.									
OCO: FY19 Overseas Contingency Operations (OCO) funds will procure advanced Information Operations hardware in support of the ongoing Navy response to Joint Urgent Operational Need (CC-0558) for Counter Unmanned Aerial Systems (CUAS) efforts. More information is available at a higher classification.									

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16				P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip									Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip						
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:						
Resource Summary				Prior Years			FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total				
Procurement Quantity (<i>Units in Each</i>)				-			-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				69.031			23.698		16.667		14.209		2.000		16.209				
Less PY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				69.031			23.698		16.667		14.209		2.000		16.209				
Plus CY Advance Procurement (\$ in Millions)				-			-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				69.031			23.698		16.667		14.209		2.000		16.209				
(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 Thousands)				-			-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total			
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	
Hardware - 1V045 Access Systems & Subsystems Cost																			
Recurring Cost																			
1.1.1) CCOP Systems & Subsystems ^(†) (1)	245.090	245	60.047	236.422	90	21.278	236.305	59	13.942	238.791	46	10.984	222.222	9	2.000	236.073	55	12.984	
<i>Subtotal: Recurring Cost</i>	-	-	60.047	-	-	21.278	-	-	13.942	-	-	10.984	-	-	2.000	-	-	12.984	
<i>Subtotal: Hardware - 1V045 Access Systems & Subsystems Cost</i>	-	-	60.047	-	-	21.278	-	-	13.942	-	-	10.984	-	-	2.000	-	-	12.984	
Hardware - GDX6D - Global Signal Analysis Equipment Cost																			
Recurring Cost																			
2.1.1) Global Signal Analysis Laboratory (GSAL) NAVIFOR [60] ^(†) (1)	1,972.333	3	5.917	746.000	1	0.746	783.000	1	0.783	772.000	1	0.772	-	-	-	772.000	1	0.772	
<i>Subtotal: Recurring Cost</i>	-	-	5.917	-	-	0.746	-	-	0.783	-	-	0.772	-	-	-	-	-	0.772	
<i>Subtotal: Hardware - GDX6D - Global Signal Analysis Equipment Cost</i>	-	-	5.917	-	-	0.746	-	-	0.783	-	-	0.772	-	-	-	-	-	0.772	
Hardware - GDX6D - System Integration and Installation of Hardware Cost																			
Recurring Cost																			
3.1.1) System Intergration & Installation of Hardware (FIOC) NAVIFOR [60] ^(†)	-	-	-	-	670.000	1	0.670	741.000	1	0.741	739.000	1	0.739	-	-	-	739.000	1	0.739

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Exhibit P-5, Cost Analysis: PB 2019 Navy													Date: February 2018													
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16				P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip									Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip													
ID Code (A=Service Ready, B=Not Service Ready) :													MDAP/MAIS Code:													
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																										
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total										
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)								
Subtotal: Recurring Cost	-	-	-	-	-	0.670	-	-	0.741	-	-	0.739	-	-	-	-	-	0.739								
Subtotal: Hardware - GDX6D - System Integration and Installation of Hardware Cost	-	-	-	-	-	0.670	-	-	0.741	-	-	0.739	-	-	-	-	-	0.739								
Hardware - EW Fleet Synthetic Trainer Consolidation Cost																										
Recurring Cost																										
4.1.1) EW Fleet Synthetic Trainer Consolidation ^(†)	-	-	-	-	-	-	153.000	1	0.153	159.000	1	0.159	-	-	-	159.000	1	0.159								
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	0.153	-	-	0.159	-	-	-	-	-	0.159								
Subtotal: Hardware - EW Fleet Synthetic Trainer Consolidation Cost	-	-	-	-	-	-	-	-	0.153	-	-	0.159	-	-	-	-	-	0.159								
Hardware - Fleet Synthetic Training (FST) SIGINT / C-ISR Cost																										
Recurring Cost																										
5.1.1) Tier 1 TS/SCI NCTE & VOIP Procurement & Installation ^(†)	-	-	-	-	-	-	396.000	1	0.396	300.000	1	0.300	-	-	-	300.000	1	0.300								
5.1.2) Tier 1 Life Cycle Management (LCM) ^(†)	-	-	-	-	-	-	159.000	1	0.159	202.000	1	0.202	-	-	-	202.000	1	0.202								
5.1.5) Fleet Training Wholeness (FTW) ^(†)	-	-	-	-	-	-	-	-	-	700.000	1	0.700	-	-	-	700.000	1	0.700								
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	0.555	-	-	1.202	-	-	-	-	-	1.202								
Subtotal: Hardware - Fleet Synthetic Training (FST) SIGINT / C-ISR Cost	-	-	-	-	-	-	-	-	0.555	-	-	1.202	-	-	-	-	-	1.202								
Support - 1V555 Production Support Cost																										
6.1) Production Support	-	-	3.067	-	-	1.004	-	-	0.493	-	-	0.353	-	-	-	-	-	0.353								
Subtotal: Support - 1V555 Production Support Cost	-	-	3.067	-	-	1.004	-	-	0.493	-	-	0.353	-	-	-	-	-	0.353								
Gross/Weapon System Cost	-	-	69.031	-	-	23.698	-	-	16.667	-	-	14.209	-	-	-	2.000	-	16.209								
Remarks:																										
[Hardware/Recurring] [P5 / Fleet Synthetic Training (FST) SIGINT/C-ISR]: Fleet Synthetic Training (FST) SIGINT/C-ISR: In FY 18 and out, this will fund Life Cycle Management (LCM) of the TS/SCI NCTE node on the East Coast and 14 Portable Embarkation Kits (PEKs).																										

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Exhibit P-5, Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16	P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip	Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip
ID Code (A=Service Ready, B=Not Service Ready) : (†) indicates the presence of a P-5a	MDAP/MAIS Code:	
Footnotes: ⁽¹⁾ Funding increase from FY18 to FY19 reflects the continuation of satisfying signals exploitation gaps and Signals of Interest (SOI). Quantity and unit cost of Cryptologic Carry-on Program (CCOP) systems and subsystems vary because procurements are in response to current Combatant Command fleet requirements as well as the Signals of Interest (SOI) and target threat list which is updated twice a year. CCOP system and subsystem unit costs range from \$.050M to \$.900M, with the exception of Maritime Toxic Pen (MTP) which is priced at \$2.150M per system. The unit cost listed above represents the average price per system.		

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16			P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip					Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) CCOP Systems & Subsystems ^(†)		2017 ⁽²⁾	VARIOUS ⁽³⁾ / VARIOUS	Various	SSC PAC/SSC LANT	Feb 2017	Jul 2017	79	236.428	Y		Oct 2016
1.1.1) CCOP Systems & Subsystems ^(†)	✓	2017	VARIOUS ⁽³⁾ / VARIOUS	Various	** NO PCO **	Oct 2016	Mar 2017	11	236.400	Y		
1.1.1) CCOP Systems & Subsystems ^(†)		2018	VARIOUS ⁽³⁾ / VARIOUS	C / TBD	SSC PAC/SSC LANT	Feb 2018	Jul 2018	36	237.833	N	Apr 2018	Oct 2017
1.1.1) CCOP Systems & Subsystems ^(†)	✓	2018	VARIOUS ⁽³⁾ / VARIOUS	C / TBD	SSC PAC/SSC LANT	Feb 2018	Jul 2018	23	233.913	N	Apr 2018	Oct 2017
1.1.1) CCOP Systems & Subsystems ^(†)		2019	VARIOUS ⁽³⁾ / VARIOUS	C / TBD	SSC PAC/SSC LANT	Feb 2019	Jul 2019	46	238.791	N	Apr 2019	Oct 2018
1.1.1) CCOP Systems & Subsystems ^(†)	✓	2019	VARIOUS ⁽³⁾ / VARIOUS	C / TBD	SSC PAC/SSC LANT	Feb 2019	Jul 2019	9	222.222	N	Apr 2019	Oct 2018
2.1.1) Global Signal Analysis Laboratory (GSAL) NAVIFOR [60]		2017	NAVAIR / Patuxent River	MIPR	SPAWAR San Diego	Apr 2017	Apr 2017	1	746.000	N	Nov 2017	
2.1.1) Global Signal Analysis Laboratory (GSAL) NAVIFOR [60]		2018	NAVAIR / Patuxent River	MIPR	SPAWAR San Diego	Feb 2018	Feb 2018	1	783.000	N	Feb 2018	
2.1.1) Global Signal Analysis Laboratory (GSAL) NAVIFOR [60]		2019	NAVAIR / Patuxent River	C / TBD	SPAWAR	Feb 2019	Feb 2019	1	772.000	N	Feb 2019	
3.1.1) System Intergration & Installation of Hardware (FIOC) NAVIFOR [60] ^(†)		2017	SPAWAR / San Diego	C / FFP	SPAWAR San Diego	Mar 2017	Sep 2017	1	670.000	N	Apr 2017	
3.1.1) System Intergration & Installation of Hardware (FIOC) NAVIFOR [60] ^(†)		2018	SPAWAR / San Diego	C / FFP	SPAWAR San Diego	Feb 2018	Aug 2018	1	741.000	N	Nov 2017	
3.1.1) System Intergration & Installation of Hardware (FIOC) NAVIFOR [60] ^(†)		2019	SPAWAR / San Diego	C / FFP	SPAWAR San Diego	Sep 2019	Mar 2020	1	739.000	N	Nov 2018	
4.1.1) EW Fleet Synthetic Trainer Consolidation		2018	SSC PAC / San Diego	MIPR	SSC PAC (Stallion Engineering)	Feb 2018	Jul 2018	1	153.000	N	Sep 2018	
4.1.1) EW Fleet Synthetic Trainer Consolidation		2019	SSC PAC / San Diego	MIPR	SSC PAC (Stallion Engineering)	Feb 2019	Jul 2019	1	159.000	N	Aug 2019	
5.1.1) Tier 1 TS/SCI NCTE & VOIP Procurement & Installation		2018	Alion Science & Technology / McLean, VA	C / FFP	DTIC	Oct 2017	Oct 2017	1	396.000	N	Jan 2018	Oct 2016
5.1.2) Tier 1 Life Cycle Management (LCM)		2018	Alion Science & Technology / McLean, VA	C / FFP	DTIC	Oct 2017	Oct 2017	1	159.000	N	Jan 2018	Oct 2016
5.1.5) Fleet Training Wholeness (FTW)		2019	Alion Science & Technology / McLean, VA	C / FFP	DTIC	Jan 2019	Jan 2019	1	700.000	N	Oct 2018	Oct 2018

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16	P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip	Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip

(†) indicates the presence of a P-21

Footnotes:

(²) FY17 Vendors: BIT systems, TICOM, KAB, SRC

(³) Cryptologic Carry-on Program (CCOP) equipment is procured according to the overall requirements detailed in the Shipboard Information Warfare/Cryptologic System Operational Requirements Document and specific execution year fleet requirements as defined by the Signals Of Interest (SOI) Integrated Product Team (IPT). Due to a continually changing threat environment, detailed requirements are dynamic, contract award timelines and equipment procured varies each year by quantity and type.

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Exhibit P-21, Production Schedule: PB 2019 Navy																				Date: February 2018																																																																																																																																																																																																																																																								
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Exhibit P-21, Production Schedule: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 16			P-1 Line Item Number / Title: 3501 / Cryptologic Communications Equip					Item Number / Title [DODIC]: 1 / Cryptologic Communications Equip				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	VARIOUS ⁽³⁾ - VARIOUS	1	40	90	0	4	5	9	0	4	5	9
2	SPAWAR - San Diego				0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽³⁾ Cryptologic Carry-on Program (CCOP) equipment is procured according to the overall requirements detailed in the Shipboard Information Warfare/Cryptologic System Operational Requirements Document and specific execution year fleet requirements as defined by the Signals Of Interest (SOI) Integrated Product Team (IPT). Due to a continually changing threat environment, detailed requirements are dynamic, contract award timelines and equipment procured varies each year by quantity and type.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 17: Other Electronic Support					P-1 Line Item Number / Title: 3620 / Coast Guard 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: N/A													
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (\$ in Millions)	104.986	32.291	36.584	40.713	0.000	40.713	60.806	68.563	61.321	62.574	Continuing	Continuing	
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (\$ in Millions)	104.986	32.291	36.584	40.713	0.000	40.713	60.806	68.563	61.321	62.574	Continuing	Continuing	
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (\$ in Millions)	104.986	32.291	36.584	40.713	0.000	40.713	60.806	68.563	61.321	62.574	Continuing	Continuing	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-	
Description: The FY 2019 funding request was reduced by \$5.000 million to account for the availability of prior year execution balances.													
The Coast Guard Equipment line funds the Coast Guard Combat System Suite for United States Coast Guard (USCG) cutters under the Coast Guard Surface Asset Acquisition Program. Under inter-service agreement (delineated in OPNAVINST 4000.79B), DON plans, programs, and budgets for specific Navy military equipment, systems and logistic support requirements for Coast Guard units to ensure the Coast Guard is prepared to execute naval warfare tasks in consonance with US Navy units. Ship construction and installation costs are funded under the Department of Homeland Security appropriation.													
The Combat Systems and Weapons Suite will be aligned with future naval ship building programs to support commonality among the two Service's systems and meet National Fleet objectives.													
The Combat System Suite must compliment and integrate with Navy Combat Systems. The suite is an appropriate balance of equipment to ensure the Coast Guard is prepared to accomplish the assigned Naval Warfare tasks in concert with US Navy units. The Surface Asset Acquisition Program Combat Suites include the following:													
[P40A / CG001 - SPQ-9B RADAR]: Provides the AN/SPQ-9B radar for the Maritime Security Cutter, Large (WMSL) Class, aka the National Security Cutter, to track surface targets and low fliers in support of potential gun engagements.													
[P40A / IFF AIMS]: Provides the AN/UPX-29A Identification Friend or Foe (IFF) System for the WMSL Class and the Offshore Patrol Cuter (OPC) Class, aka the Maritime Security Cutter, Medium (WMSM). The AN/APX-123 Transponder is procured for the Fast Response Cutter (FRC) aka Patrol Coastal Cutter (WPC).													
[P40A / IFF AIMS TEST HARDWARE WMSM]: Hardware procurement for the IFF AIMS Land-Based Test Site for in support of the WMSM program (non-recurring cost).													
[P40A / CG003 DECOYS MK 53]: Provides the MK 53 Mod 6 Decoy Launching System (DLS) for the WMSL and OPC Classes to provide soft-kill capability.													
[P40A / CG004 SLQ-32]: Provides the AN/SLQ-32 Electronic Warfare System and the Battle Force Electronic Warfare Trainer (BEWT) for the WMSL Class to perform Electronic Support Measures to support soft-kill measures.													

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 17: Other Electronic Support		P-1 Line Item Number / Title: 3620 / Coast Guard 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: N/A		
[P40A / CG005 MK 46/MK 20 OPTICAL SIGHT]: Provides the MK 46 Mod 1 Optical Sighting System (OSS) for WMSL 750-753. The MK 20 Mod 0 Electro-Optical Sighting System (EOSS) is procured for WMSL 754-757 and the OPC. These sighting systems are components of the MK48 Gun Weapon System (GWS) and provide fire control optical daytime and thermal imaging (infrared) sensor, and laser range finding to support engagements of hostile surface and air targets.		
[P40A / CG006 COMBAT SYSTEM INTEGRATION]: Ensures successful integration and system interoperability of Navy type equipment that affects the Combat System of USCG National Security Cutters (WMSLs), FRCs, OPC, and the '270 Medium Endurance Cutter (WMEC) modernization effort.		
[P40A / CG007 MULTI-MODE RADAR]: Provides the Multi-Mode Radar (MMR) to perform surface search, air search, and air traffic advisory control object detection and tracking functions for the OPC.		
FY2017-2018 MMR integration includes software upgrade to correlate radar contacts, radar video tracks and IFF information. Also includes the MMR hardware integration of the IFF antenna onto the MMR antenna (drawing updates and technical publications).		
[P40A / CG008 ATHENA CCD]: ATHENA Control, Correlation & Display (CCD) System for the OPC. The ATHENA CCD uses existing AEGIS BSL 9, Common Source Library (CSL) code to control and display MMR and IFF data. The systems will also provide target queuing for Gun Weapon System engagement.		
FY2017-2018 ATHENA Combat System Control and Display integration supports software upgrade and hardware/software integration of the Technical Insertion (TI)-16 Common Display System for the MMR and IFF to provide data to the AN/SLQ-32(V)6 and the MK48 Gun Weapon System for target engagement on the OPC. Includes safety, certification, technical documentation, and information assurance efforts.		
[P40A / OPC C4I]: Funds are required for the procurement of Command, Control, Communications, Computers, and Intelligence (PEO C4I) for the new OPC Class, the Coast Guard's highest acquisition priority. Under inter-service agreement, the Navy budgets for specific Navy military equipment, systems and logistic support requirements for Coast Guard units to ensure the Coast Guard is prepared to execute naval warfare tasks in consonance with US Navy units. Ship construction and installation costs are funded under the Department of Homeland Security appropriation. Specific C4I systems to be procured include: AN/SRC-65 VHF/UHF Line of Sight Satellite Communication, ARC-210 Radios (Qty 11 per ship); OE-570A Antenna Qty (2); Navy Modular Automated Communications System (AN/SYQ-26) Qty (1); Fleet Broadcast Qty (8); CRYPTO Qty (1); OA-9277A Antenna Coupler Qty (3); and Command and Control Processor (C2P) AN/UYQ-120 Qty (2).		

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Exhibit P-40, Budget Line Item Justification: PB 2019 Navy							Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					
1810N: Other Procurement, Navy / BA 02: Communications & Electronics Equip / BSA 17: Other Electronic Support				3620 / Coast Guard 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: N/A									
Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 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)
P-40a	Coast Guard Equipment	P-5a			- / 104.986	- / 32.291	- / 36.584	- / 40.713	- / -
P-40	Total Gross/Weapon System Cost				- / 104.986	- / 32.291	- / 36.584	- / 40.713	- / 0.000
*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: The FY 2019 funding request was reduced by \$5.000 million to account for the availability of prior year execution balances.									
The growth in the FY 2019 funding request is attributable to increases by the Department to procure Navy Type/Navy Owned (NT/NO) combat system elements for the Congressionally added WMSL 759 to the USCG's budget. Additional funding was added across the FYDP to support the '270 Medium Endurance Cutter (WMEC) Combat System Modernization effort which will replace all unsupportable systems across the USCG cutter class achieving expected service life beyond FY 2033.									
Funds procure NT/NO combat systems, support equipment, Integrated Logistics Support (ILS), certification, test and production support for USCG National Security Cutter (WMSL Class), Fast Response Cutter (WPC Class) and Offshore patrol Cutter (WMSM Class) being constructed under the Coast Guard's Surface Asset Acquisition Program. These efforts are ongoing. Funds provide AN/SPQ-9B ILS support for WMSL 758; procure IFF AN/APX-123(V) equipment, ILS and certification support for WPCs; procure IFF UPX-29A equipment, INCO spares, and ILS support for WMSM 3, WMSL 759 and WMSL 760; support IFF ILS and multi-year certifications for WMSLs 756-758; procure MK53 MOD 10 DLS for WMSM 3 and WMSL 759; provide BEWT for WMSL 758; procure the EOSS for WMSL 759; provide combat system integration for WMSLs 757-760, WPCs 1131-1140, and WMSMs 3 & 4; procure the Multi-mode Radar for the WMSM 3; provide MMR hardware/software integration for the WMSM and 270' Modernization efforts; and provide WMSM combat system integration of the Technical Insertion (TI)-16 Common Display System and integration support for the ATHENA Control Correlation and Display (CCD) System.									
Funds procure navy specific equipment, C4I systems, and integrated logistic support for the USCG OPCs under an inter-service agreement. FY 2019 funds support AN/SRC-65 VHF/UHF Line of Sight Satellite Communication ARC-210 Radios; OE-570A Antenna; Navy Modular Automated Communications System (AN/SYQ-26); Fleet Broadcast; CRYPTO; A-9277A Antenna Coupler and Command and Control Processor (C2P) AN/UYQ-120.									

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17					P-1 Line Item Number / Title: 3620 / Coast Guard Equipment									Aggregated Items Title: Coast Guard Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1) CG001 - SPQ-9B RADAR																				
1.1) SPQ-9B ILS/ TEST SUPPORT	A		-	-	5.890	-	-	0.370	-	-	0.444	-	-	-	-	-	-	-	-	-
1.2) SPQ-9B RADAR (¹)	A		-	-	-	-	-	-	6,081K	1	6.081	-	-	-	-	-	-	-	-	-
Subtotal: 1) CG001 - SPQ-9B RADAR			-	-	5.890	-	-	0.370	-	-	6.525	-	-	-	-	-	-	-	-	-
2) IFF AIMS																				
2.2) IFF AIMS CERTIFICATION WPC	A		-	-	0.556	-	-	0.125	-	-	0.127	-	-	0.129	-	-	-	-	-	0.129
2.3) IFF AIMS ILS SUPPORT WPC	A		-	-	1.246	-	-	0.214	-	-	0.218	-	-	0.222	-	-	-	-	-	0.222
2.4) IFF AIMS EQUIPMENT WPC (² (^t))	A		114,896.55	29	3.332	103,250.00	3	0.310	142,500.00	3	0.428	106,000.00	3	0.318	-	-	-	106,000.00	3	0.318
2.5) IFF EQUIPMENT/ INCO SPARES WMSM (³ (^t))	A		-	-	-	110,000.00	1	0.110	477,000.00	1	0.477	509,000.00	1	0.509	-	-	-	509,000.00	1	0.509
2.6) IFF UPX-46 WMSM (⁴ (^t))	A		-	-	-	912,000.00	1	0.912	929,000.00	1	0.929	947,000.00	1	0.947	-	-	-	947,000.00	1	0.947
2.7) IFF ILS SUPPORT WMSM	A		-	-	-	-	-	0.225	-	-	0.229	-	-	0.233	-	-	-	-	-	0.233
2.8) IFF AIMS TEST HARDWARE WMSM (⁵)	A		-	-	-	-	-	-	-	-	-	-	-	1.223	-	-	-	-	-	1.223
2.9) IFF AIMS WMSL(^t)	A		4,435K	2	8.870	-	-	-	477,000.00	1	0.477	-	-	-	-	-	-	-	-	-
2.10) IFF AIMS UPX-29 LLT WMSL(^t)	A		259,000.00	3	0.777	-	-	-	929,000.00	1	0.929	-	-	-	-	-	-	-	-	-
2.11) IFF AIMS MODIFICATION KITS	A		81,250.00	4	0.325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.12) IFF AIMS SUPPORT EQUIPMENT WMSL(^t)	A		83,285.71	7	0.583	96,000.00	1	0.096	-	-	-	96,000.00	3	0.288	-	-	-	96,000.00	3	0.288
2.13) IFF AIMS PRODUCTION SUPPORT WMSL	A		-	-	0.678	-	-	0.068	-	-	0.035	-	-	-	-	-	-	-	-	-
2.14) IFF AIMS ILS/ TEST SUPPORT WMSL (⁶)	A		-	-	0.888	-	-	0.046	-	-	0.277	-	-	0.975	-	-	-	-	-	0.975

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17					P-1 Line Item Number / Title: 3620 / Coast Guard Equipment									Aggregated Items Title: Coast Guard Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.15) IFF AIMS CERTIFICATION WMSL	A		-	-	0.384	-	-	0.075	-	-	0.079	-	-	-	-	-	-	-	-	-
<i>Subtotal: 2) IFF AIMS</i>			-	-	17.639	-	-	2.181	-	-	4.205	-	-	4.844	-	-	-	-	-	4.844
3) CG003 DECOYS MK 53																				
3.1) MK53 MOD 6/10 DLS WMSM ^(†)	A		-	-	-	1,208K	1	1.208	1,231K	1	1.231	1,254K	1	1.254	-	-	-	1,254K	1	1.254
3.2) MK53 MOD 6/10 DLS WMSL ^(†)	A		-	-	-	-	-	-	1,231K	1	1.231	-	-	-	-	-	-	-	-	-
3.3) MK53 ILS/TEST SUPPORT	A		-	-	3.904	-	-	0.375	-	-	0.979	-	-	0.649	-	-	-	-	-	0.649
<i>Subtotal: 3) CG003 DECOYS MK 53</i>			-	-	3.904	-	-	1.583	-	-	3.441	-	-	1.903	-	-	-	-	-	1.903
4) CG004 SLQ-32																				
4.1) BEWT WMSL ^(†)	A		1,053K	1	1.053	-	-	0.022	-	-	0.022	-	-	0.022	-	-	-	-	-	0.022
4.2) SLQ-32 ELECTRONIC WARFARE SYSTEM	A		14,090K	2	28.180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) SLQ-32 REFURBISHMENT	A		2,310K	3	6.931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) SLQ-32 SUPPORT EQUIPMENT	A		159,000.00	1	0.159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5) SLQ-32 PRODUCTION SUPPORT WMSL	A		-	-	2.339	-	-	0.240	-	-	0.236	-	-	-	-	-	-	-	-	-
4.6) SLQ-32 ILS/ TEST SUPPORT	A		-	-	1.888	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7) SLQ-32 CERTIFICATION	A		-	-	0.338	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: 4) CG004 SLQ-32</i>			-	-	40.888	-	-	0.262	-	-	0.258	-	-	0.022	-	-	-	-	-	0.022
5) CG005 MK 46/MK 20 OPTICAL SIGHT																				
5.1) MK20 (EOSS) OPC ^(†)	A		-	-	-	1,690K	1	1.690	-	-	-	1,755K	3	5.265	-	-	-	1,755K	3	5.265
5.2) ILS/TEST SUPPORT	A		-	-	-	-	-	0.225	-	-	-	-	-	0.466	-	-	-	-	-	0.466
5.3) MODIFICATION KITS WMSL	A		-	-	0.297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.4) MK 46/MK 20 WMSL ^(†)	A		14,525K	1	14.525	-	-	-	1,722K	1	1.722	-	-	-	-	-	-	-	-	-
5.5) DATA WMSL	A		-	-	0.286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6) SOFTWARE WMSL	A		-	-	2.402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy														Date: February 2018						
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17					P-1 Line Item Number / Title: 3620 / Coast Guard Equipment									Aggregated Items Title: Coast Guard Equipment						
Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
5.7) PROGRAM SUPPORT WMSL	A		-	-	1.632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8) ORDALE WMSL	A		-	-	0.770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.9) ILS/TEST SPT WMSL	A		-	-	2.023	-	-	-	-	-	0.178	-	-	0.048	-	-	-	-	-	0.048
<i>Subtotal: 5) CG005 MK 46/MK 20 OPTICAL SIGHT</i>			-	-	21.935	-	-	1.915	-	-	1.900	-	-	5.779	-	-	-	-	-	5.779
6) CG006 COMBAT SYSTEM INTEGRATION																				
6.1) CSI ⁽⁸⁾	A		-	-	14.730	-	-	1.031	-	-	1.045	-	-	2.856	-	-	-	-	-	2.856
<i>Subtotal: 6) CG006 COMBAT SYSTEM INTEGRATION</i>			-	-	14.730	-	-	1.031	-	-	1.045	-	-	2.856	-	-	-	-	-	2.856
7) CG007 MULTI-MODE RADAR																				
7.1) MMR SYSTEM ^(†)	A		-	-	-	8,569K	1	8.569	8,680K	1	8.680	8,845K	1	8.845	-	-	-	8,845K	1	8.845
7.2) MMR INTEGRATION ⁽⁹⁾	A		-	-	-	-	-	8.568	-	-	2.720	-	-	-	-	-	-	-	-	-
7.3) MMR ILS/TEST SUPPORT ⁽¹⁰⁾	A		-	-	-	-	-	0.773	-	-	0.992	-	-	1.797	-	-	-	-	-	1.797
<i>Subtotal: 7) CG007 MULTI-MODE RADAR</i>			-	-	0.000	-	-	17.910	-	-	12.392	-	-	10.642	-	-	-	-	-	10.642
8) CG008 ATHENA CCD																				
8.1) ATHENA CCD INTEGRATION ⁽¹¹⁾	A		-	-	-	-	-	7.039	-	-	0.526	-	-	2.563	-	-	-	-	-	2.563
8.2) ATHENA TI-16 CPS/CDS	A		-	-	-	-	-	-	-	-	-	-	-	1.480	-	-	-	-	-	1.480
<i>Subtotal: 8) CG008 ATHENA CCD</i>			-	-	0.000	-	-	7.039	-	-	0.526	-	-	4.043	-	-	-	-	-	4.043
9) OPC C4I ⁽¹²⁾																				
9.1) CRYPTO ^(†)	A		-	-	-	-	-	-	62,000.00	1	0.062	62,000.00	1	0.062	-	-	-	62,000.00	1	0.062
9.2) C2P ^{(13)(†)}	A		-	-	-	-	-	-	1,215K	1	1.215	1,134K	2	2.268	-	-	-	1,134K	2	2.268
9.3) ARC-210 ^(†)	A		-	-	-	-	-	-	295,909.09	11	3.255	283,606.06	11	3.120	-	-	-	283,606.06	11	3.120
9.4) OE-570A ^(†)	A		-	-	-	-	-	-	443,000.00	1	0.443	413,000.00	2	0.826	-	-	-	413,000.00	2	0.826
9.5) OA-9277A ^(†)	A		-	-	-	-	-	-	293,000.00	1	0.293	277,000.00	3	0.831	-	-	-	277,000.00	3	0.831
9.6) NAVMACS ^(†)	A		-	-	-	-	-	-	333,500.00	2	0.667	333,000.00	1	0.333	-	-	-	333,000.00	1	0.333
9.7) FLEET BROADCAST ^{(14)(†)}	A		-	-	-	-	-	-	357,000.00	1	0.357	398,000.00	8	3.184	-	-	-	398,000.00	8	3.184
<i>Subtotal: 9) OPC C4I</i>			-	-	0.000	-	-	-	-	-	6.292	-	-	10.624	-	-	-	-	-	10.624
Total			-	-	104.986	-	-	32.291	-	-	36.584	-	-	40.713	-	-	-	-	-	40.713

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

(†) indicates the presence of a P-5a

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Navy	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17	P-1 Line Item Number / Title: 3620 / Coast Guard Equipment

Footnotes:

- (1) Provides the AN/SPQ-9B radar for the Maritime Security Cutter, Large (WMSL) Class, aka the National Security Cutter, to track surface targets and low fliers in support of potential gun engagements.
- (2) IFF Equipment suite for the WPC consists of MK XII equipment, Radar Control Transmitter (RCU), Radar Receiver-Transmitter shipping and installation fixtures which have various unit costs. The IFF AIMS Equipment unit price is an average unit cost for the various components being procured that year.
- (3) IFF Equipment suite for the OPC consists of the RT-1912C, C-12720, AS-177B, AN/APX-123 KIT, AN/UPX-41(C), AN/USM-719, KIV-78 and INCO spares with various unit costs.
- (4) IFF UPX-29A WMSM item name corrected to IFF UPX-46 WMSM
- (5) Non-recurring one time cost for procurement of hardware for the IFF AIMS land-based test site to support the WMSM program.
- (6) FY2019 increase is attributable to (a) additional IFF ILS Test Support for the congressionally added WMSL 759 in FY2019, (b) continuing IFF ILS Test Support for the congressionally added WMSL 758 in FY2018, and (c) the non-recurring cost (\$0.634 million) for a critical field change update for WMSL 750 to 755 (NSC 1 to 6) to avoid future costs and problems associated with hardware and software obsolescence.
- (7) FY2018 BEWT funds support engineering efforts associated with WMSL 757 system installation, inspection, and acceptance.
- (8) FY2019 Combat System Integration increase is attributable (1) to support Combat System Integration of the first delivery of the Multi-Mode Radar in FY2019 (December 2018), (2) to support Combat System Integration of the ATHENA Control, Correlation & Display (CCD) System on OPCs in FY2019, and (3) for the Installation and Information Assurance (IA) Certification of the FY2019 Hardware Procurement for the IFF AIMS Land-Based Test Site in support of the WMSM Program.
- (9) The Multi-Mode Radar (MMR) integration efforts include the software upgrade to correlate radar video tracks and IFF information and the detail design of the IFF antenna onto the MMR antenna hardware integration to include drawing updates and technical publications.
- (10) FY19 MMR ILS/TEST SUPPORT increase is attributable to the installation costs of the Multi-Mode Radar (MMR) in FY19. Each MMR delivery has an associated installation cost separate from the baseline ILS/TEST SUPPORT that supports the MMR Program, with FY19 the first year of MMR delivery.
- (11) The Combat System Control and Display OPC integration supports hardware and software integration of the Technical Insertion (TI)-16 Common Display System for the Multi-Mode Radar, IFF and to provide data to the MK48 Gun Weapon System for target engagement. Includes safety, certification, technical documentation, and information assurance efforts.
- (12) No associated equipment installation costs across the FYDP USCG will install the C4I systems. Procurements provide assets for OPC Hulls #1 through Hull #9 across the FYDP.
- (13) FY18 C2P unit cost changed as a result of an erroneous ship count. The C2P unit is being procured for only one ship in FY18, and this C2P variant is upgraded to a Tech Refresh Unit with LINK-22 capability.
- (14) FY 2019 Fleet Broadcast (SSR-1) increase in unit cost and quantities from FY18 to FY19 is attributed to additional integration costs of 4 separate components spread over 8 separate hardware units. Total quantity of 9 systems meets the inventory objective for Hulls 1-9.

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17			P-1 Line Item Number / Title: 3620 / Coast Guard Equipment					Aggregated Items: Coast Guard Equipment				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2) IFF AIMS												
2.4) IFF AIMS EQUIPMENT WPC (2)		2017	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2017	Jul 2018	3	103,250.00	Y		Dec 2015
2.4) IFF AIMS EQUIPMENT WPC (2)		2018	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2018	Jul 2019	3	142,500.00	Y		Dec 2015
2.4) IFF AIMS EQUIPMENT WPC (2)		2019	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2019	Jul 2020	3	106,000.00	Y		Dec 2015
2.5) IFF EQUIPMENT/INCO SPARES WMSM (3)		2017	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2017	Jul 2018	1	110,000.00	Y		Dec 2015
2.5) IFF EQUIPMENT/INCO SPARES WMSM (3)		2018	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2018	Jul 2019	1	477,000.00	Y		Dec 2015
2.5) IFF EQUIPMENT/INCO SPARES WMSM (3)		2019	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2019	Jul 2020	1	509,000.00	Y		Dec 2015
2.6) IFF UPX-46 WMSM (4)		2017	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2017	Jul 2018	1	912,000.00	Y		Dec 2015
2.6) IFF UPX-46 WMSM (4)		2018	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2018	Jul 2019	1	929,000.00	Y		Dec 2015
2.6) IFF UPX-46 WMSM (4)		2019	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2019	Jul 2020	1	947,000.00	Y		Dec 2015
2.9) IFF AIMS WMSL		2018	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2018	Jul 2019	1	477,000.00	Y		Dec 2016
2.10) IFF AIMS UPX-29 LLT WMSL		2018	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAVAIR	Jan 2018	Jul 2019	1	929,000.00	Y		Dec 2016
2.12) IFF AIMS SUPPORT EQUIPMENT WMSL		2017	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAWCAD	Jan 2017	Jan 2018	1	96,000.00	Y		Dec 2015
2.12) IFF AIMS SUPPORT EQUIPMENT WMSL		2019	NAVAIR NAWC/AD / ST. INIGOES, MD	WR	NAWCAD	Oct 2018	Oct 2019	3	96,000.00	Y		Dec 2015
3) CG003 DECOYS MK 53												
3.1) MK53 MOD 6/10 DLS WMSM		2017	BAES / AUSTRALIA	C / FP	NAVSEA	Mar 2017	Jul 2018	1	1,208K	Y		Jan 2016
3.1) MK53 MOD 6/10 DLS WMSM		2018	BAES / AUSTRALIA	C / FP	NAVSEA	Mar 2018	Jul 2019	1	1,231K	Y		Jul 2017
3.1) MK53 MOD 6/10 DLS WMSM		2019	BAES / AUSTRALIA	C / TBD	NAVSEA	Mar 2019	Jul 2020	1	1,254K	Y		Jul 2017
3.2) MK53 MOD 6/10 DLS WMSL		2018	BAES / AUSTRALIA	C / FP	NAVSEA	Mar 2018	Mar 2018	1	1,231K	Y		Sep 2016
5) CG005 MK 46/MK 20 OPTICAL SIGHT												
5.1) MK20 (EOSS) OPC		2017	L3 KEO / NORTHAMPTON, MA	SS / FP	NAVSEA	Aug 2017	Feb 2019	1	1,690K	Y		Jan 2016
5.1) MK20 (EOSS) OPC		2019 ⁽¹⁵⁾	L3 KEO / NORTHAMPTON, MA	SS / FP	NAVSEA	Apr 2019	Oct 2020	3	1,755K	Y		Jan 2016
5.4) MK 46/MK 20 WMSL		2018	L3 KEO / NORTHAMPTON, MA	SS / FP	NAVSEA	Apr 2018	Apr 2020	1	1,722K	Y		Sep 2016

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Exhibit P-5a, Procurement History and Planning: PB 2019 Navy								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 02 / 17			P-1 Line Item Number / Title: 3620 / Coast Guard Equipment					Aggregated Items: Coast Guard Equipment				
Item Number / Title [DODIC]	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
7) CG007 MULTI-MODE RADAR												
7.1) MMR SYSTEM		2017 ⁽¹⁶⁾	SAAB USA / Syracuse, NY, USA	C / FFP	NAVSEA	Sep 2017	Dec 2018	1	8,569K	Y		Oct 2016
7.1) MMR SYSTEM		2018 ⁽¹⁷⁾	SAAB USA / Syracuse, NY, USA	C / FP	NAVSEA	Feb 2018	Jun 2019	1	8,680K	Y		Oct 2016
7.1) MMR SYSTEM		2019 ⁽¹⁸⁾	SAAB USA / Syracuse, NY, USA	C / TBD	NAVSEA	Mar 2019	May 2020	1	8,845K	Y		Oct 2016
9) OPC C4I												
9.1) CRYPTO		2018	SSC LANT / Charleston, SC	C / IDIQ	SSC LANT	Mar 2018	Mar 2019	1	62,000.00	Y		
9.1) CRYPTO		2019	SSC LANT / Charleston, SC	C / IDIQ	SSC LANT	Mar 2019	Mar 2020	1	62,000.00	Y		
9.2) C2P ⁽¹³⁾		2018	NEIF (Lockheed) / San Diego	C / CPFF	SPAWAR	Jan 2018	Jul 2019	1	1,215K	Y		
9.2) C2P ⁽¹³⁾		2019	NEIF (Lockheed) / San Diego	C / CPFF	SPAWAR	Jan 2019	Jul 2020	2	1,134K	Y		
9.3) ARC-210		2018	Rockwell Collins / Cedar Rapids, IA	C / FFP	NAWCAD	Jan 2018	Jul 2019	11	295,909.09	Y		
9.3) ARC-210		2019	Rockwell Collins / Cedar Rapids, IA	C / FFP	NAWCAD	Jan 2019	Jul 2020	11	283,606.06	Y		
9.4) OE-570A		2018	Trivec Avant / Huntington Beach, CA	C / FFP	SPAWAR	Mar 2018	Dec 2018	1	443,000.00	Y		
9.4) OE-570A		2019	Trivec Avant / Huntington Beach, CA	C / FFP	SPAWAR	Jan 2019	Oct 2019	2	413,000.00	Y		
9.5) OA-9277A		2018	Rockwell Collins/Cedar Rapids / NAWCAD	C / FFP	SSC LANT	Jan 2018	Jul 2019	1	293,000.00	Y		
9.5) OA-9277A		2019	SSC LANT/Various / Charleston, SC	C / FFP	SSC LANT	Jan 2019	Jul 2020	3	277,000.00	Y		
9.6) NAVMACs		2018	General Dynamics / Falls Church, VA	C / FFP	SPAWAR	Jan 2018	Aug 2018	2	333,500.00	Y		
9.6) NAVMACs		2019	TBD / TBD	C / FFP	SPAWAR	Jan 2019	Aug 2019	1	333,000.00	Y		
9.7) FLEET BROADCAST ⁽¹⁴⁾		2018	SSC PAC @San Diego / San Diego	C / FFP	SSC PAC	Jul 2018	Jan 2019	1	357,000.00	Y		
9.7) FLEET BROADCAST ⁽¹⁴⁾		2019	SSC PAC @San Diego / San Diego	C / FFP	SSC PAC	Jul 2019	Jan 2020	8	398,000.00	Y		

Footnotes:

⁽¹⁵⁾ The procurement purchase dates to meet the IYNDS for WMEC 1 and OPC 3 in FY 19 is April 2019 and May 2019, respectively. Delivery dates: WMEC 1 OCT- 2021 and OPC 3 NOV -2021. Precise procurement and delivery dates for WMSL is TBD.

⁽¹⁶⁾ MFG List Procurement Lead Time for this order is 13 months from end of 2017-09, with scheduled delivery in 2018-12.

⁽¹⁷⁾ MFG List Procurement Lead Time for this order is 16 months from end of 2017-09, with scheduled delivery in 2019-06.

⁽¹⁸⁾ MFG List's Procurement Lead Time for this order is approximately 15 months, with scheduled delivery of 2020-05.

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