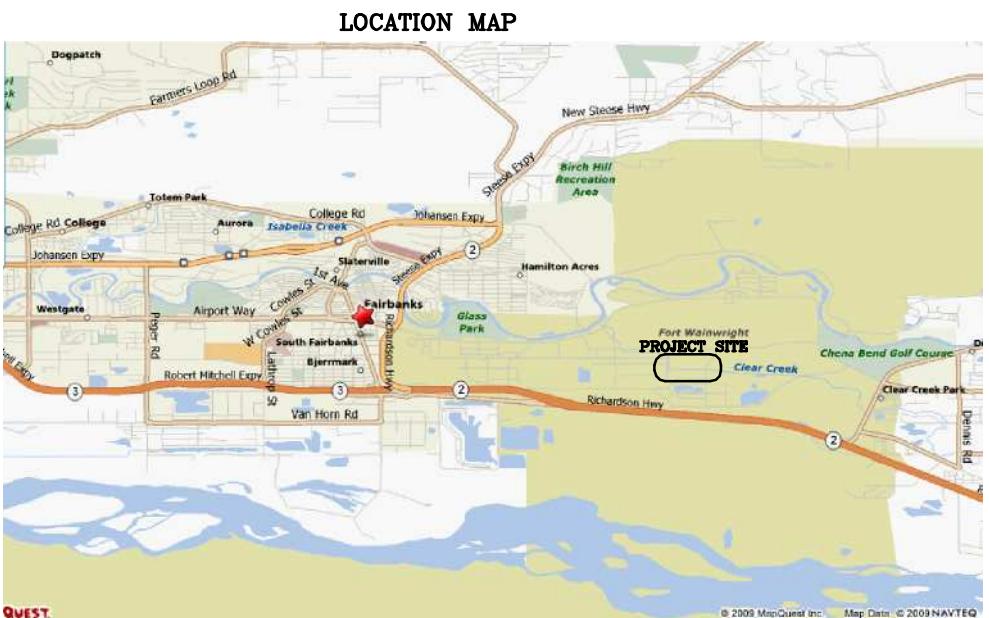


PROJECT NO. J101395, J101396, J101397

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE - FTW336A FORT WAINWRIGHT, ALASKA

SHEET NO.	SHEET NAME
COVER	COVER SHEET
G-01	SITE PLAN
X-01	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
X-02	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
X-03	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
M-01	EXISTING VAULT H6-3-3 LOWER LEVEL PLAN
M-02	EXISTING VAULT H6-3-3 UPPER LEVEL PLAN
M-03	EXISTING VAULT H6-3-3 ADJACENT TO BLDG 2080
M-04	NEW VAULT G6-9-3
M-05	DIRECT BURIED PIPING PLAN
M-06	SCHEMATICS & DETAILS
E-01	EXISTING VAULT H6-3-3 & UTILIDOR
E-02	EXISTING VAULT H6-3-3 & UTILIDOR
E-03	EXISTING VAULT H6-3-3 & UTILIDOR
E-04	NEW VAULT G6-9-3
E-05	DIRECT BURIED CONDUIT PLAN
E-06	PP-G693 (PANELBOARD SCHEDULE)
E-07	UTILIDOR SERVICE CONNECTION DETAILS
E-08	DUCT BANK DETAIL
PC-01	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-02	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-03	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-04	NEW VAULT G6-9-3
PC-05	DIRECT BURIED DUCT PLAN
PC-06	BUILDING METER INTERFACE DETAIL
PC-07	MISCELLANEOUS UTILITY MONITORING DETAILS



Prepared For

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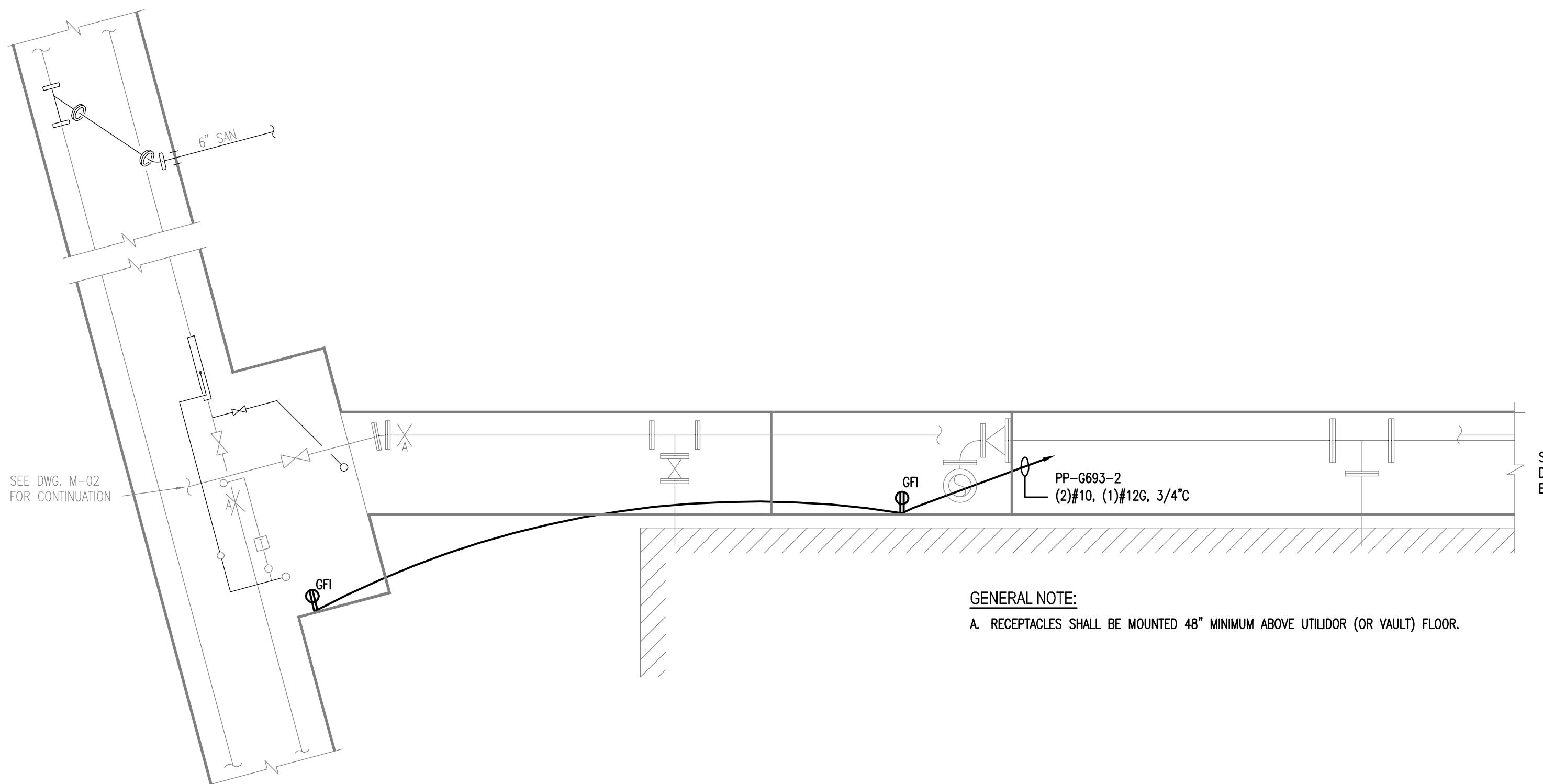
907-455-1500 Phone
907-455-6788 fax
PO Box 74040
Fairbanks, Alaska 99701

FOSDICK & HILMER
ENERGY GROUP

Fosdick & Hilmer Inc
309 Vine Street, Suite 50
Cincinnati, Ohio 45202

Prepared By

513-241-5640 Phone
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www.fheng.com



LOWER LEVEL PLAN 
SCALE: 1/4"=1'-0"

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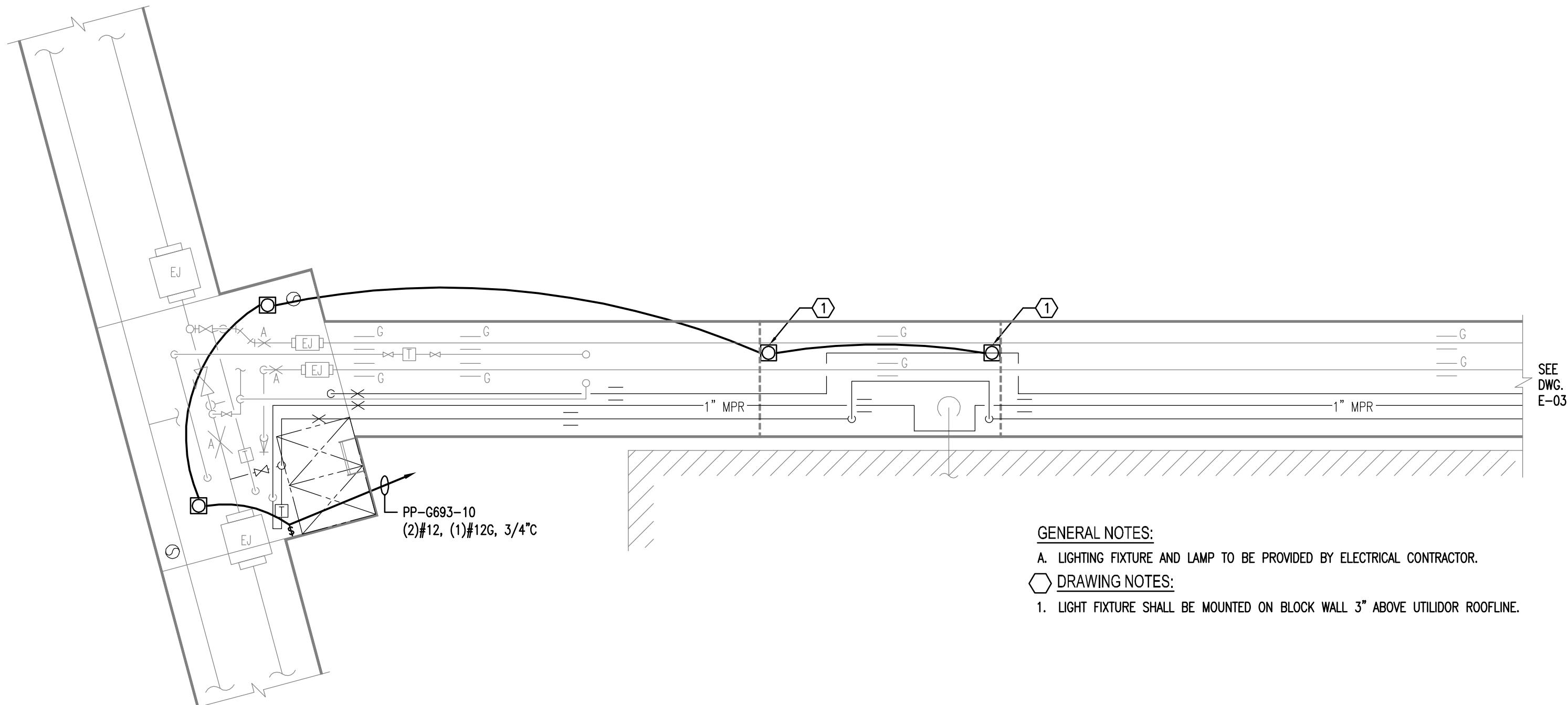


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714 Fourth Avenue, Suite 20
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Telephone (907) 455-1500
Fax (907) 455-6788

Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: JRS
Checked By: EAE

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & UTILIDOR
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-01



UPPER LEVEL PLAN 
SCALE: 1/4"=1'-0"

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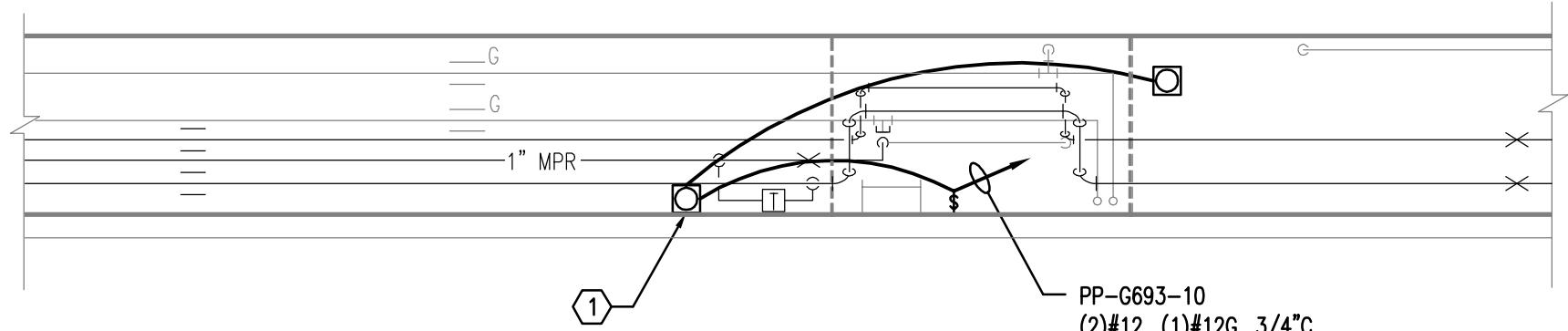
Jimmy Huntington Building
714 Fourth Avenue, Suite 20
Fairbanks, Alaska 99701
Telephone (907) 455-1500
Fax (907) 455-6788

Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: RHW
Checked By: EAE

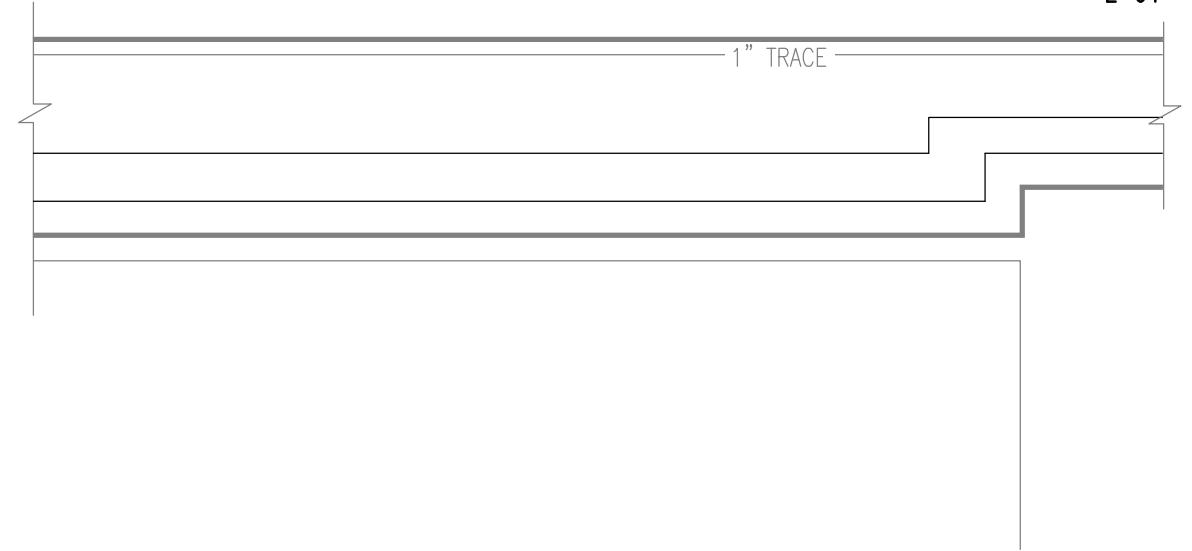
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & UTILIDOR
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-02

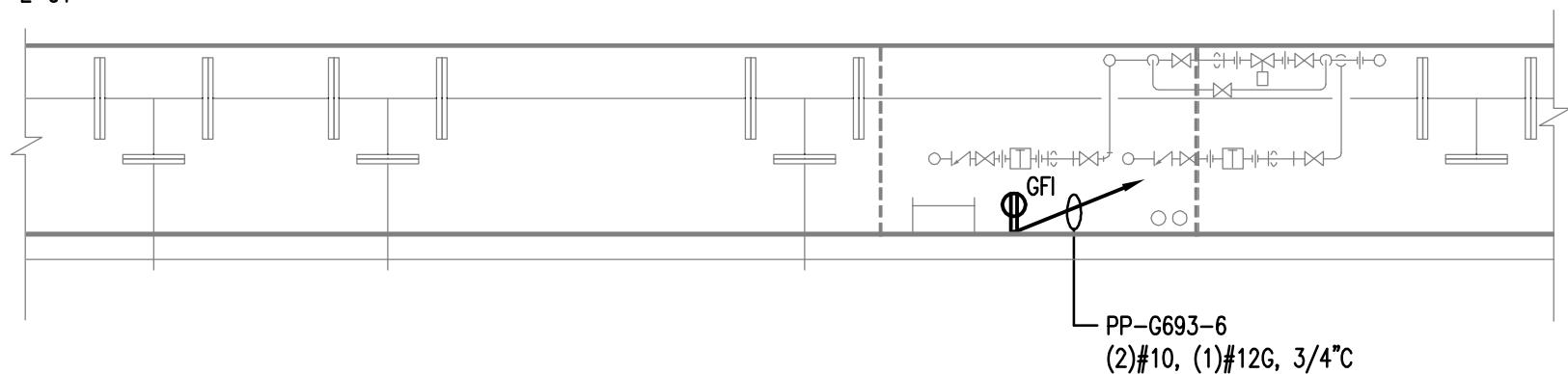
SEE
DWG.
E-02



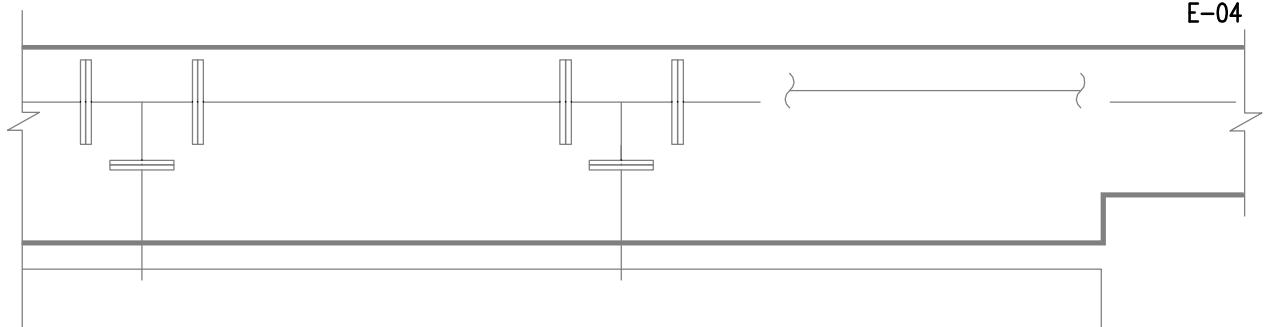
SEE
DWG.
E-04



SEE
DWG.
E-01



SEE
DWG.
E-04



LOWER LEVEL PLAN 
SCALE: 1/4"=1'-0"

GENERAL NOTES:

- A. RECEPTACLES SHALL BE MOUNTED 48" MINIMUM ABOVE UTILIDOR (OR VAULT) FLOOR.

 DRAWING NOTES:

1. LIGHT FIXTURE SHALL BE MOUNTED ON UTILIDOR WALL 6" BELOW MPS PIPING.

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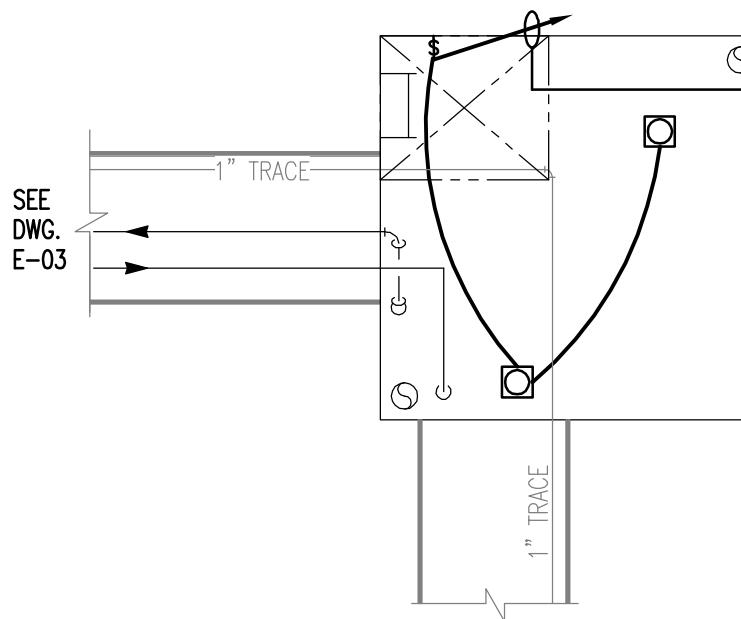


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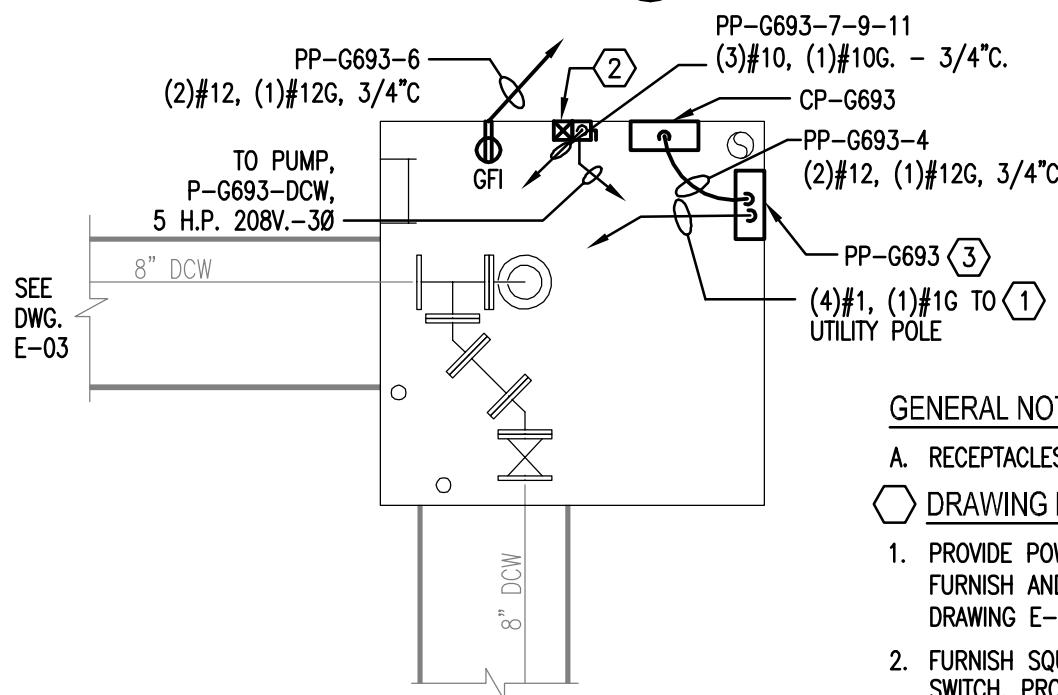
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & UTILIDOR
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-03



PP-G693-10
(2) #12, (1) #12G, 3/4"C

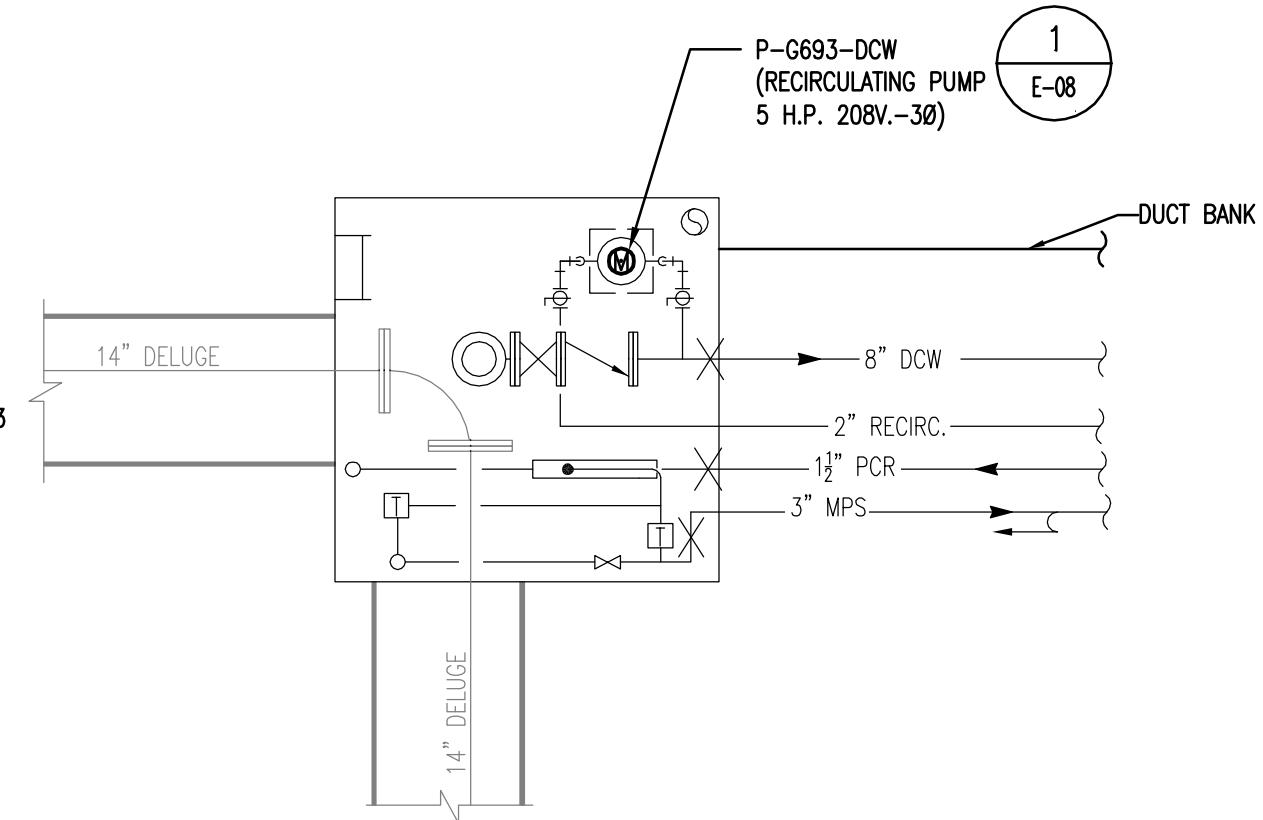
UPPER LEVEL PLAN 



SEE
DWG.
E-03

SCALE: 1/4"=1'-0"

SEE
DWG.
E-03



1
E-08

GENERAL NOTES:

- A. RECEPTACLES SHALL BE MOUNTED 48" MINIMUM ABOVE UTILIDOR (OR VAULT) FLOOR.

DRAWING NOTES:

1. PROVIDE POWER TO PANELBOARD FROM UTILITY POLE (TO BE DETERMINED, SEE DRAWING G-01). FURNISH AND INSTALL ELECTRICAL SERVICE PER UTILIDOR SERVICE CONNECTION DETAIL (REFERENCE DRAWING E-07).
2. FURNISH SQUARE D MODEL 8538SCW12V02CS COMBINATION STARTER WITH FUSIBLE-TYPE DISCONNECT SWITCH. PROVIDE 5 HP RECIRCULATION PUMP CONNECTED TO PANEL PP-G693 AS SHOWN ON DRAWINGS.
3. FURNISH PANELBOARD PP-G693 WITH NEMA 4X ENCLOSURE AND CIRCUIT BREAKERS AS INDICATED ON PANELBOARD SCHEDULE (SEE DRAWING E-06).

MID LEVEL PLAN 

SCALE: 1/4"=1'-0"

LOWER LEVEL PLAN 

SCALE: 1/4"=1'-0"

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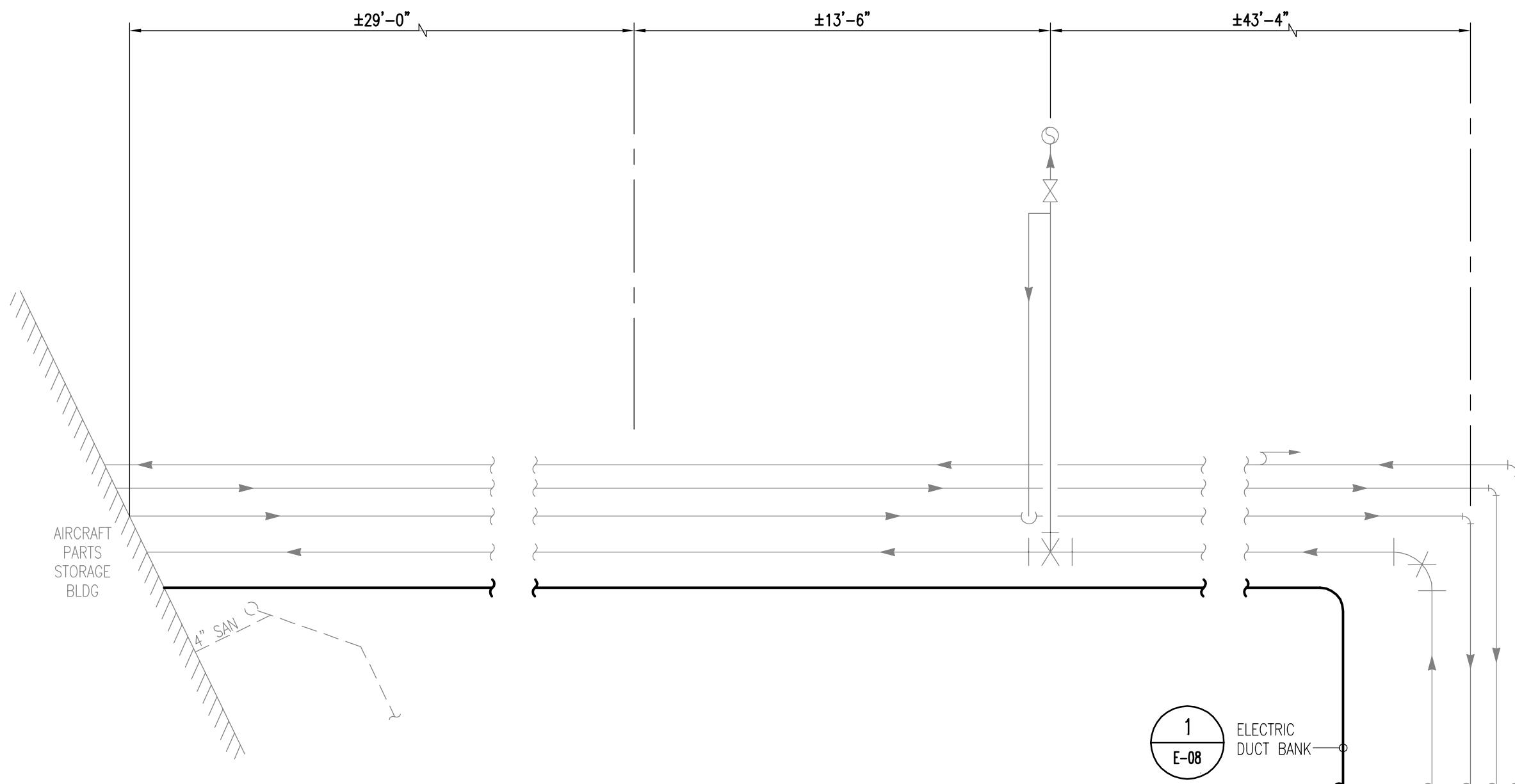


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Checked By: EAE

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-04



FROM NEW VAULT G6-9-3
SEE DWG. E-04 FOR
CONTINUATION

PLAN
SCALE: 1/4"=1'-0"



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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
DIRECT BURIED CONDUIT PLAN
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-05

PANELBOARD SCHEDULE

* LOAD SUMMARY	CL	DF	DEMAND LOAD			TOTAL
			A	B	C	
L Lighting	1.5	1	1.5	1.5	1.5	1.5
R Convenience Recept	1.8	1	0.9		0.9	1.8
H Heating						
C Cooling						
A HVAC						
P Process	0.6	1		0.6		0.6
O Other Continuous	4.5	1	1.5	1.5	1.5	4.5
N Other Noncontinuous						
Total	8.4		2.4	3.6	2.4	8.4

 Min. Feeder Ampacity **37.5**

 Square D QO320L125G Load Center
in Hoffman A24H2006SS6LP3PT
enclosure

PP-G693
PANELBOARD DESIGNATION

VOLTAGE	208Y/120V
PHASING	3PH., 4W.
SYSTEM	NORMAL
BUS SIZE	125A
MAINS	125A ML; 100A backfed
FEEDER NO	
FEEDER SIZE	(4)#1, (1)#1G
FEEDER PROT	
FEEDER LENGTH	
FEEDER V. DROP	
FAULT CURRENT	65 kAIC
ENCLOSURE	NEMA 4X
MOUNTING/FEED	SURFACE/TOP

DESCRIPTION		*	CB	KVA	A	B	C	KVA	CB	DESCRIPTION	*
1	Main Breaker		100A-3P		0.9			0.9	20A-1P	Convenience Receptacles (North)	R 2
3					0.6			0.6	20A-1P	CP-G693 (Control Panel)	P 4
5					0.9			0.9	20A-1P	Convenience Receptacles (South)	R 6
7	P-G693-DCW (Recirculation Pump, 5 HP)	O	35A-3P	1.5	1.5				20A-1P	(spare)	8
9		O		1.5		3		1.5	20A-1P	Utilidor Lighting	L 10
11		O		1.5		1.5				(space)	12
13	(space)									(space)	14
15	(space)									(space)	16
17	(space)									(space)	18
19	(space)									(space)	20
SUB-FEED PANEL(S) KVA											
Total Connected Load				2.4	3.6	2.4					

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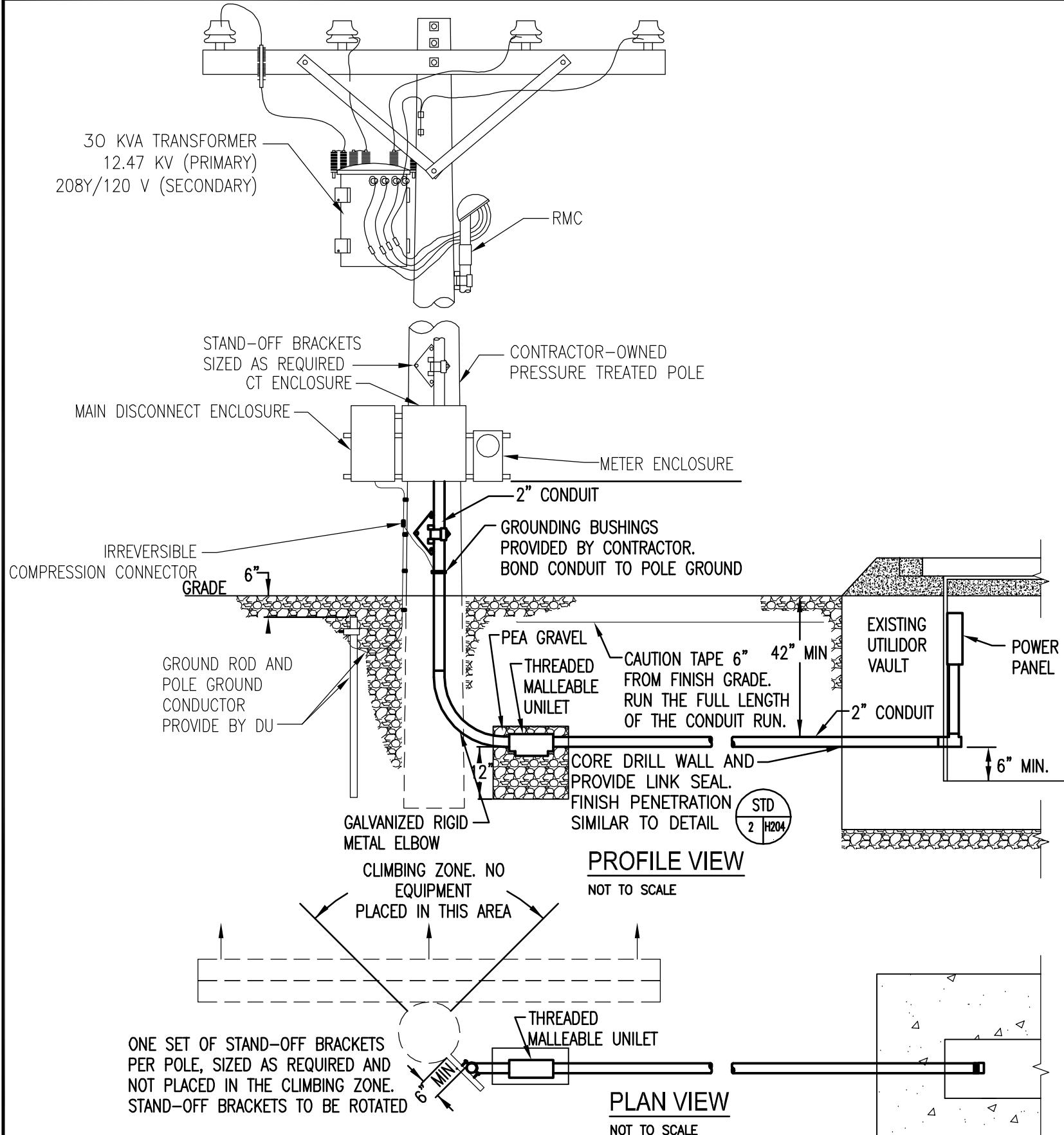
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 Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: LBG
Drawn By: LBG
Checked By: LBG

 UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
PP-G693 (PANELBOARD SCHEDULE)
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

 Drawing No.
E-06



GENERAL DETAIL NOTES:

- A. RISER CONDUIT DETAIL APPLICABLE TO SINGLE-PHASE POWER INSTALLATIONS.
- B. ITEMS IN BOLD ARE TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- C. USE ADDITIONAL COUPLINGS AND NIPPLES AS REQUIRED FOR 42" CONDUIT DEPTH AND POSITIONING.
- D. CREATE A 12" DEEP GRAVEL SUMP AT UNILET CONNECTION. (USE PEA GRAVEL AFTER WRAPPING CONNECTION WITH TYPAR) PLACE UNILET AT LOWEST POINT IN CONDUIT RUN. AT DU'S DISCRETION, UNILET MAY BE OMITTED IF HOPE CONDUIT IS USED AND CONDUIT RUN DRAINS TOWARDS UTILIDOR VAULT. IF ANY CONDUIT ENTERS VAULT FROM THE SIDE, THEN THE BOTTOM OUTSIDE EDGE OF THE CONDUIT SHALL BE A MINIMUM OF 6" ABOVE THE VAULT FLOOR. THIS INSTALLATION SHALL BE INSPECTED BY DU BEFORE BACKFILLING.
- E. LEAVE COVER OFF UNILET TO ALLOW MOISTURE TO DRAIN FROM CONDUIT INTO SURROUNDING PEA GRAVEL.
- F. SLOPE ALL UNDERGROUND CONDUITS 1/4" PER FOOT MINIMUM TOWARDS UNILET.
- G. ALL SWEEPS, ELBOWS ABOVE OR BELOW GRADE, AND CONDUIT ABOVE GRADE SHALL BE GALVANIZED RIGID METAL CONDUIT. PVC CONDUIT SHALL NOT BE ACCEPTED IN PRIMARY RUNS.
- H. INSTALL FIRST SECTION OF CONDUIT ON POLE FOR INSPECTION. CONDUITS WHICH ARE NOT PLUMB SHALL NOT BE ACCEPTED.
- I. CONTRACTOR SHALL PROVIDE A TENTED AND HEATED AREA FOR PULLING AND TERMINATING CABLES FOR UNDERGROUND INSTALLATIONS AFTER SEPTEMBER 15TH.
- J. FOR CONNECTIONS TO EXISTING SERVICE LINES, CONTRACTOR SHALL DRESS CABLES, GROUP, JOIN WITH COMPRESSION FITTINGS, AND INSULATE.
- K. USE OF SPLIT BOLTS IS NOT ALLOWED.
- L. CONTRACTOR SHALL PROVIDE AND MAINTAIN A MINIMUM 4' WIDE CLEARANCE BETWEEN THE SERVICE ENTRANCE AND THE DU POLE.
- M. CONDUCTOR INSULATION SHALL BE TYPE XHHW OR RHW.
- N. SERVICE EQUIPMENT WITH MAIN DISCONNECT, CT AND METER ENCLOSURE ON UNISTRUT SHALL MEET ALL REQUIREMENTS PER: "TYPICAL METERED SERVICE" & "GROUNDING DETAIL" ELECTRICAL SERVICE LINE STANDARDS, PP. 19-21, DOYON UTILITIES, INC., MARCH 2008.

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309 VINE STREET, SUITE 50
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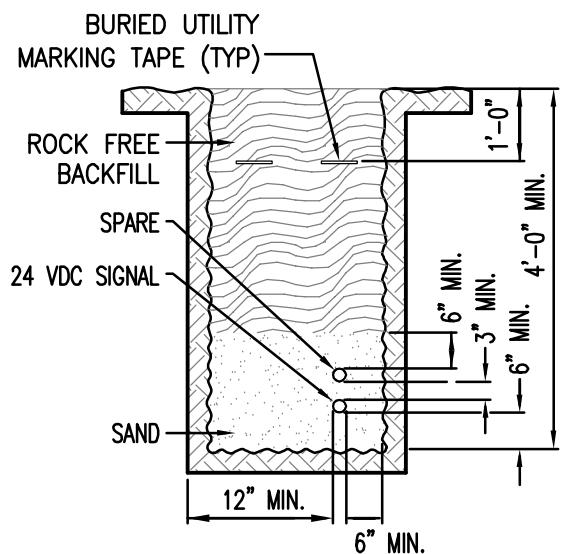


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Date: 23 FEB 2010	Scale: NTS	Drawing No.
Designed By: LBG		
Drawn By: EMS		
Checked By: NEM		
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE UTILIDOR SERVICE CONNECTION DETAILS FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397		E-07

GENERAL DETAIL NOTES:

- A. BACKFILL MATERIAL ABOVE THE CONDUIT BEDDING MATERIAL SHALL BE NATIVE MATERIAL IF IT COMPLIES WITH ALASKA DOT SECTION 204 - 2.01, TYPE C.
- B. BACKFILL COMPACTION SHALL COMPLY WITH ALASKA DOT SECTION 301 - 3.03. MOISTURE/DENSITY RELATIONS OF SOILS SHALL BE CALCULATED IN ACCORDANCE WITH AASHTO T 99 OR T 180.
- C. PROVIDE (2) 2" SCHEDULE 40 HDPE CONDUITS.
- D. PROVIDE SPACERS AT A MINIMUM OF EVERY 8'-0".



DETAIL 1 DUCT BANK
N.T.S.
E-04
E-05

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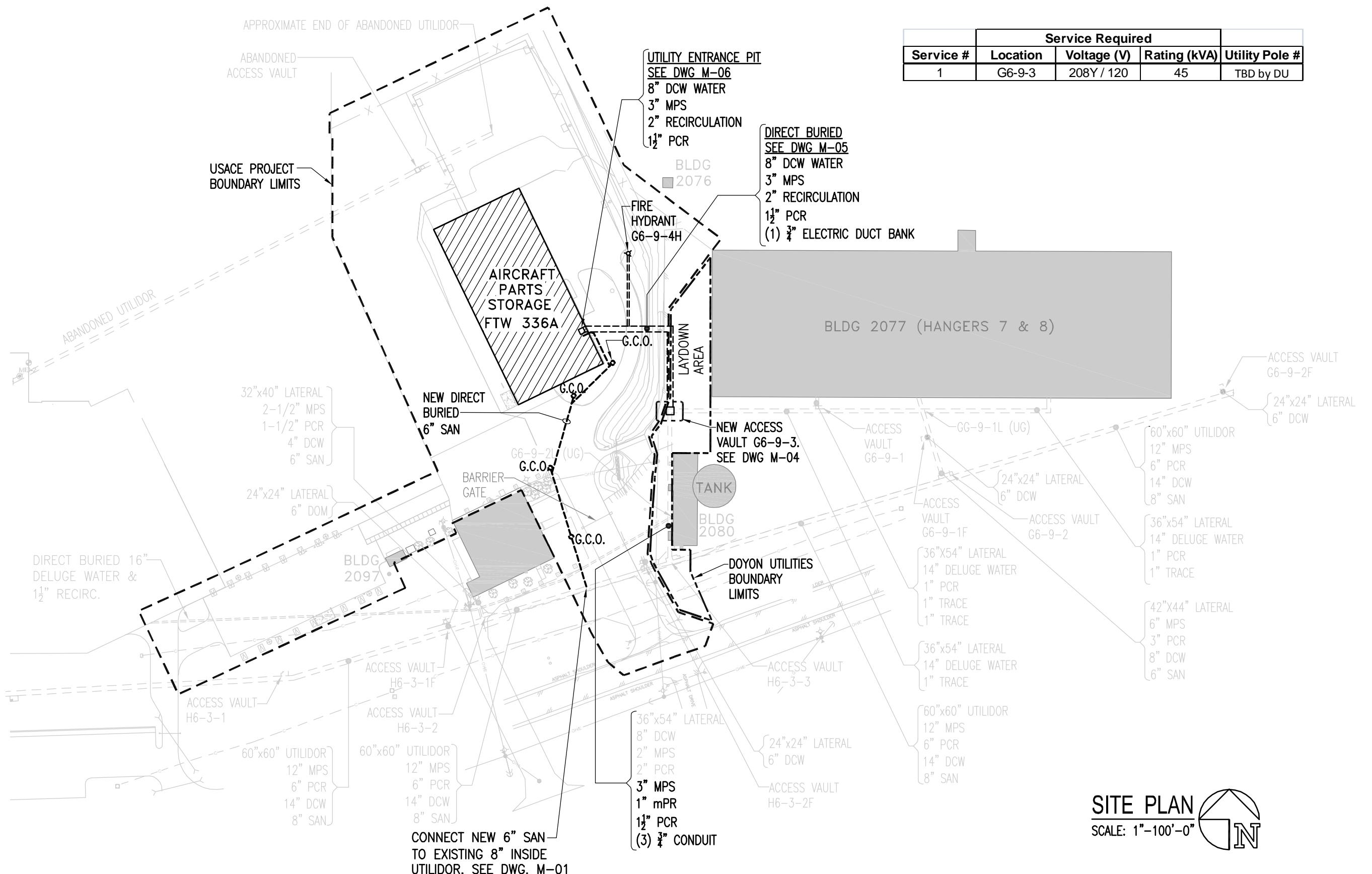


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Drawn By: EMS
Checked By: NEM

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
DUCT BANK DETAIL
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
E-08



REV. NO.	DATE	DESCRIPTION
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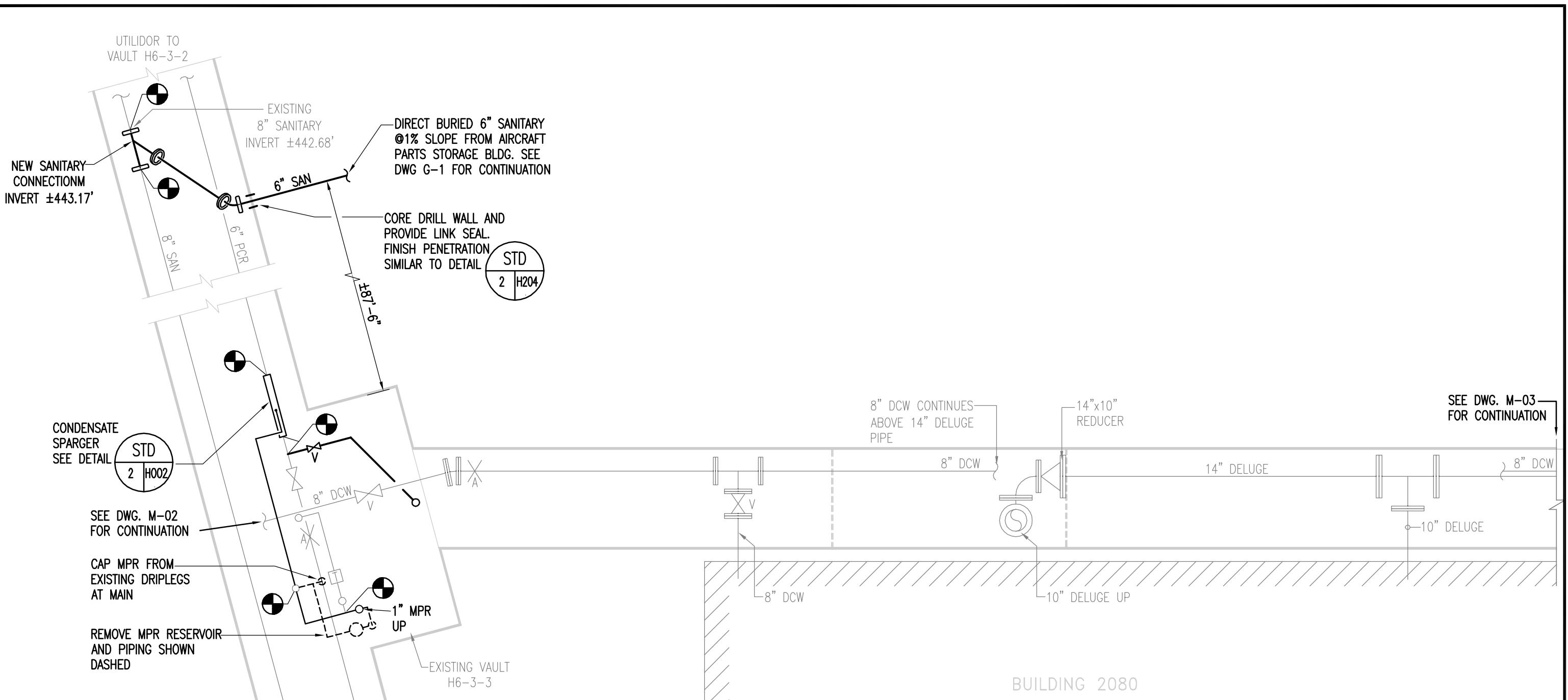


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**10
TS
M
M
M** **UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
SITE PLAN**

FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.



LOWER LEVEL PLAN 
SCALE: 1/4"=1'-0"

REV. NO.	DATE	DESCRIPTION
	04/09/10	ISSUED FOR CONSTRUCTION

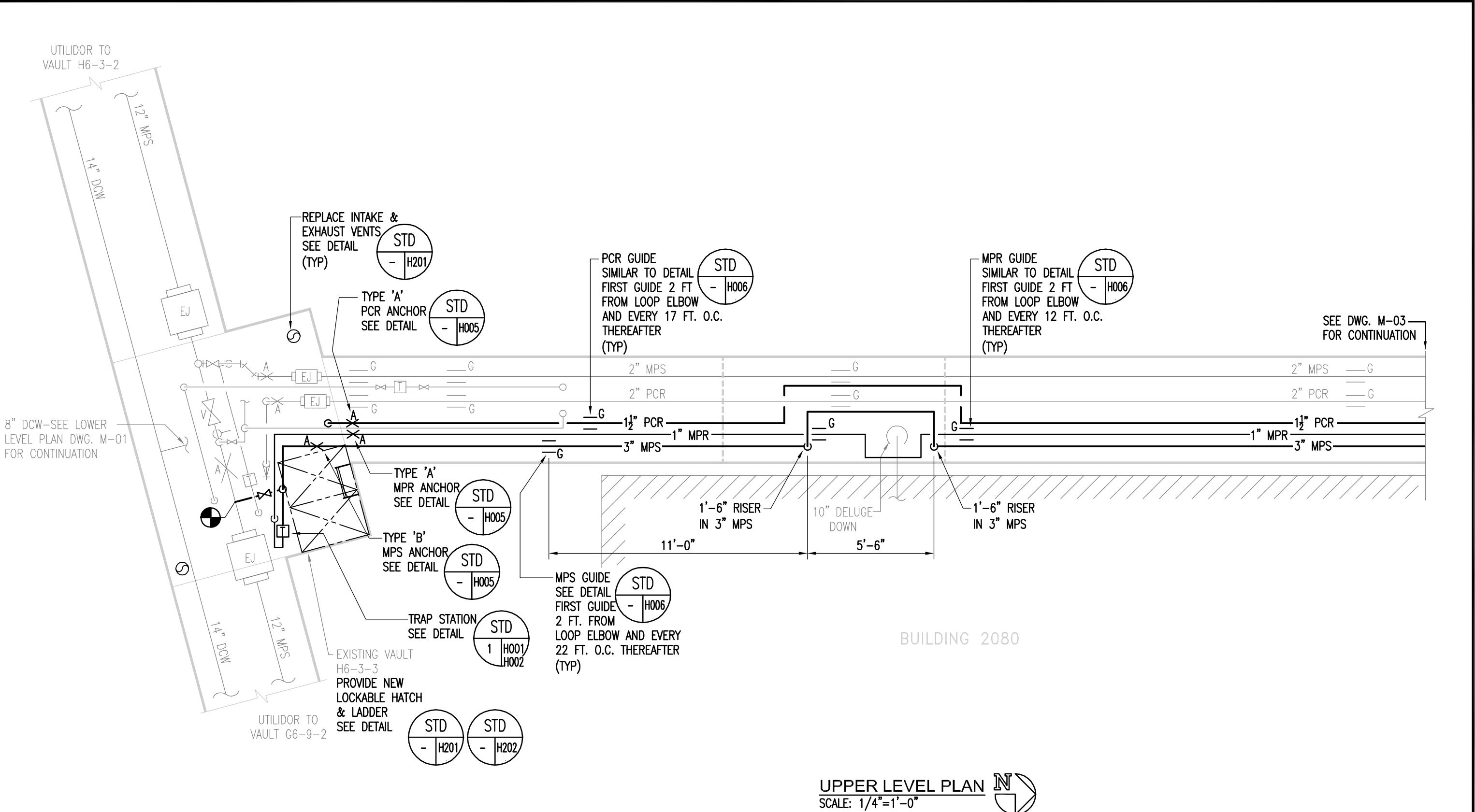
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Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: JRS
Checked By: EAE
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 LOWER LEVEL PLAN
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
M-01



REV. NO.	DATE	DESCRIPTION
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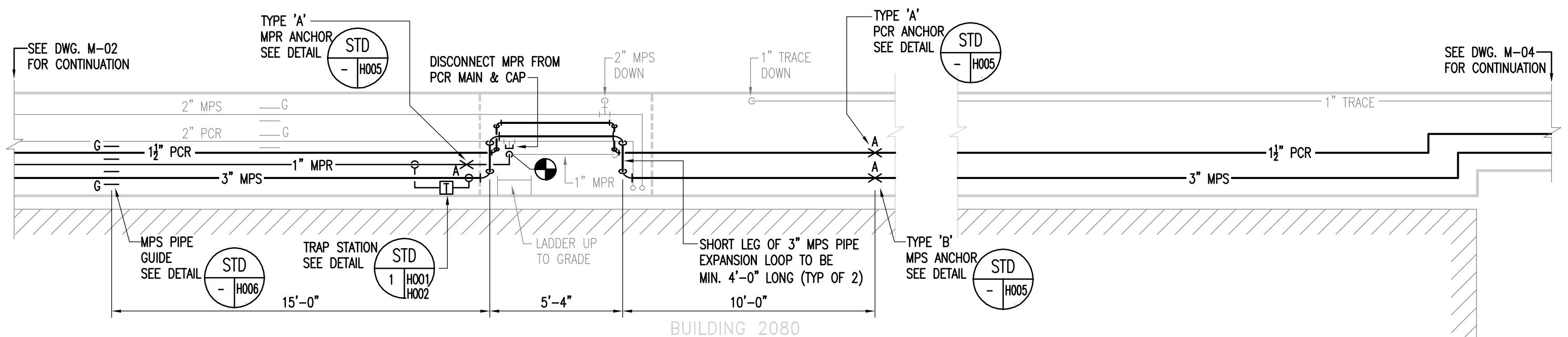
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Date:	19 FEB 20
Scale:	1/4"=1'-0"
Designed By:	JRW
Drawn By:	JRW
Checked By:	EAR

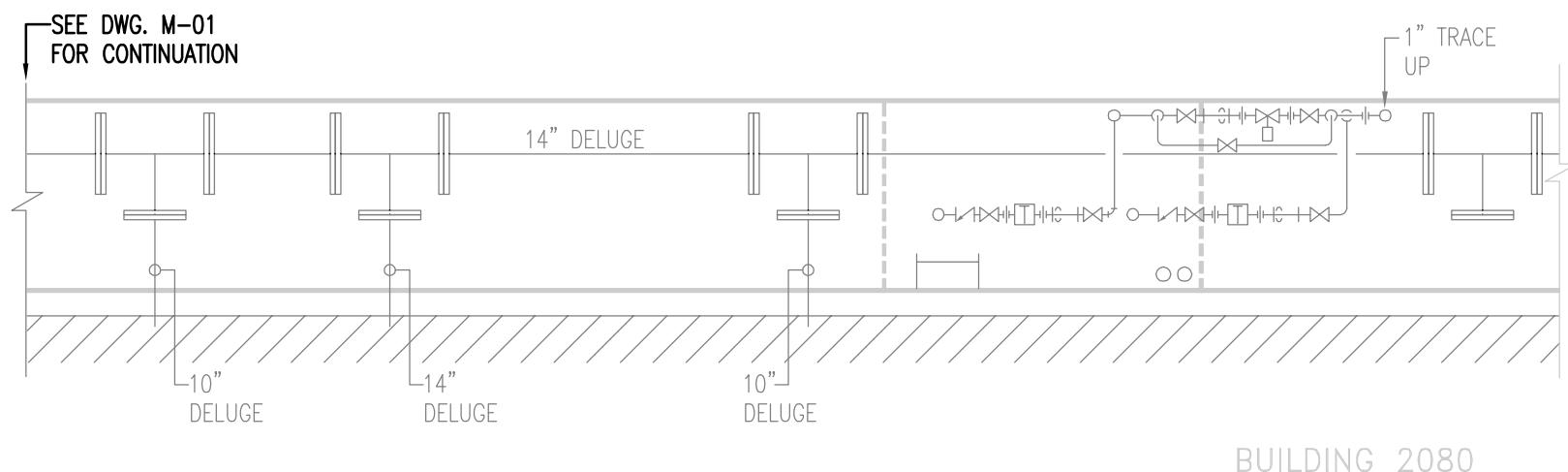
UPPER LEVEL PL

0 **UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE**
" **EXISTING VAULT H6-3-3 UPPER LEVEL PLAN**
S **FORT WAINWRIGHT, AK.**
E **DU PROJECT NO. J101395, J101396, J101397**

Drawing No.
M-02



UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"



LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"

REV. NO.	DATE	DESCRIPTION
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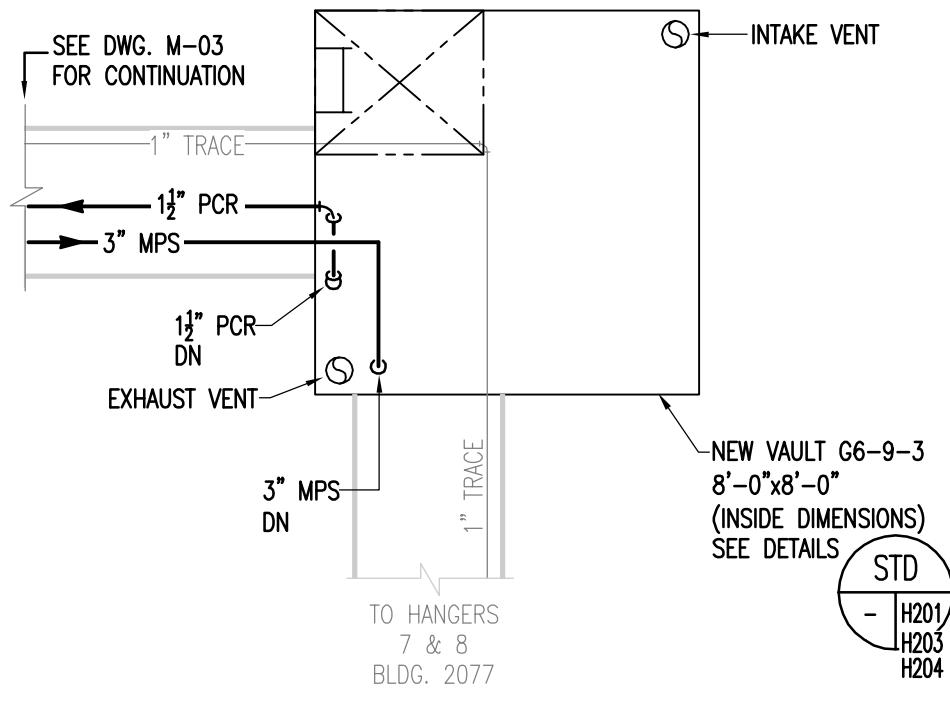


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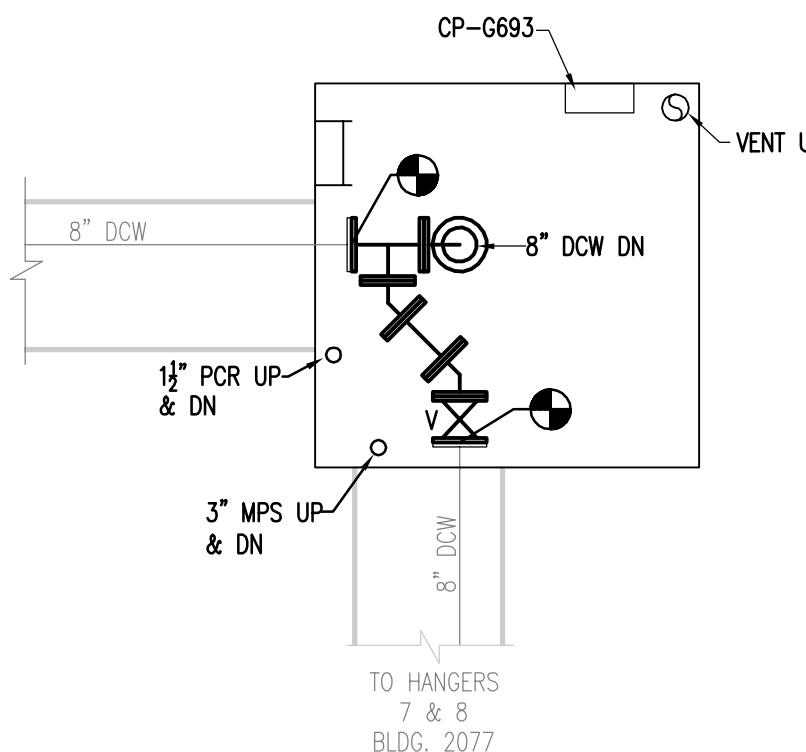
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 ADJACENT TO BLDG 2080
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
M-03



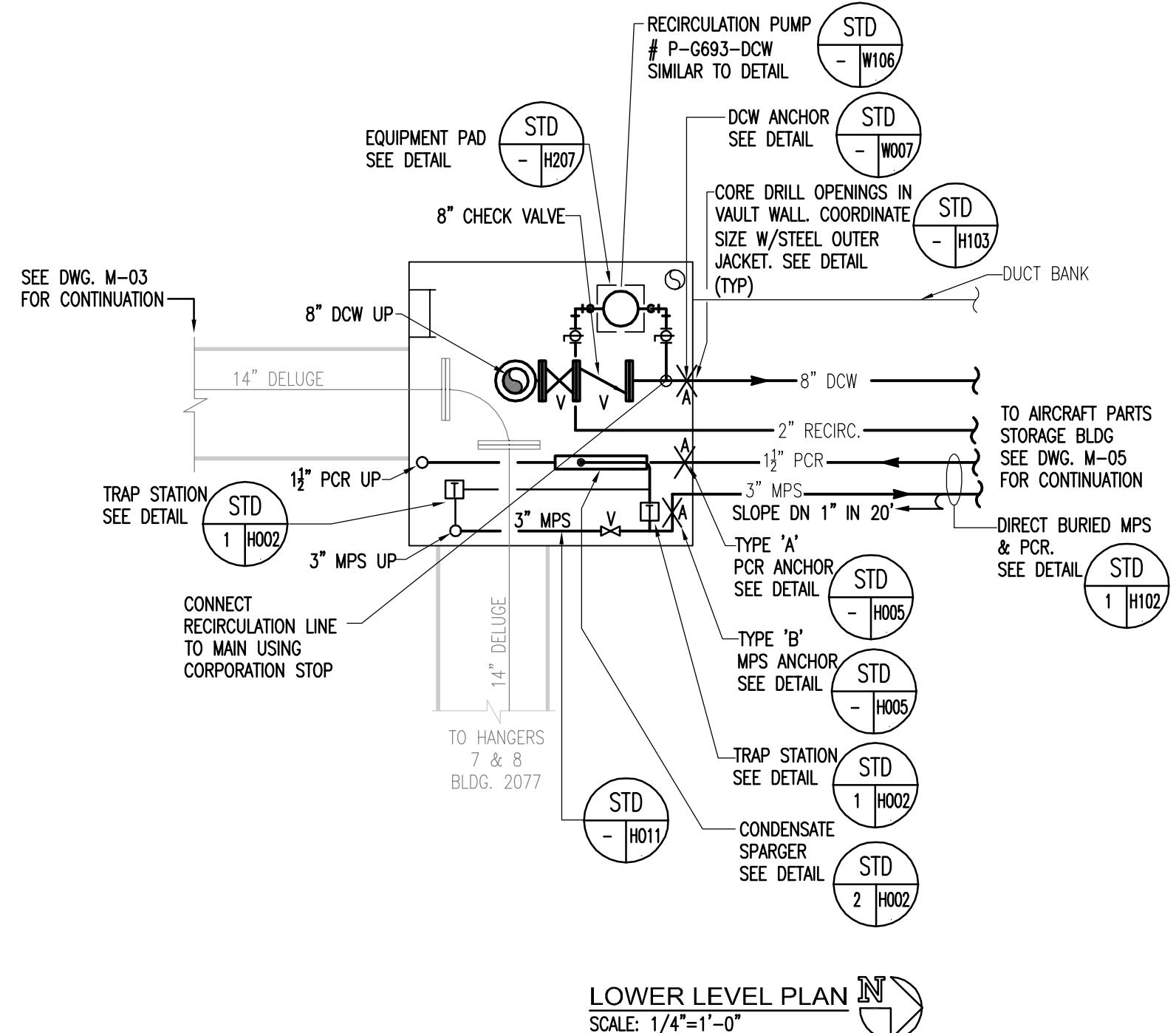
UPPER LEVEL PLAN

SCALE: 1/4"=1'-0"



MID LEVEL PLAN

SCALE: 1/4"=1'-0"



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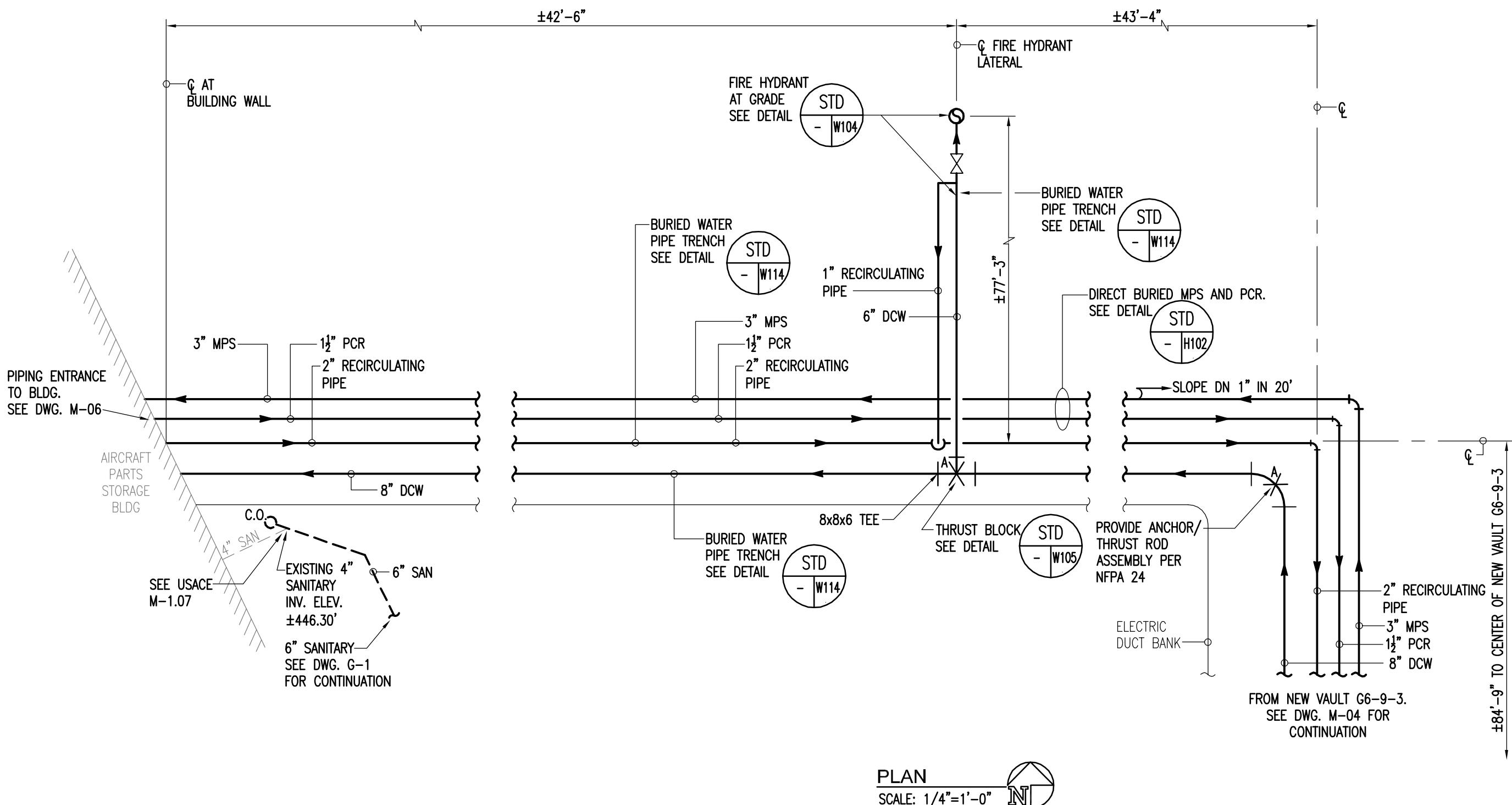


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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
M-04



REV. NO.	DATE	DESCRIPTION
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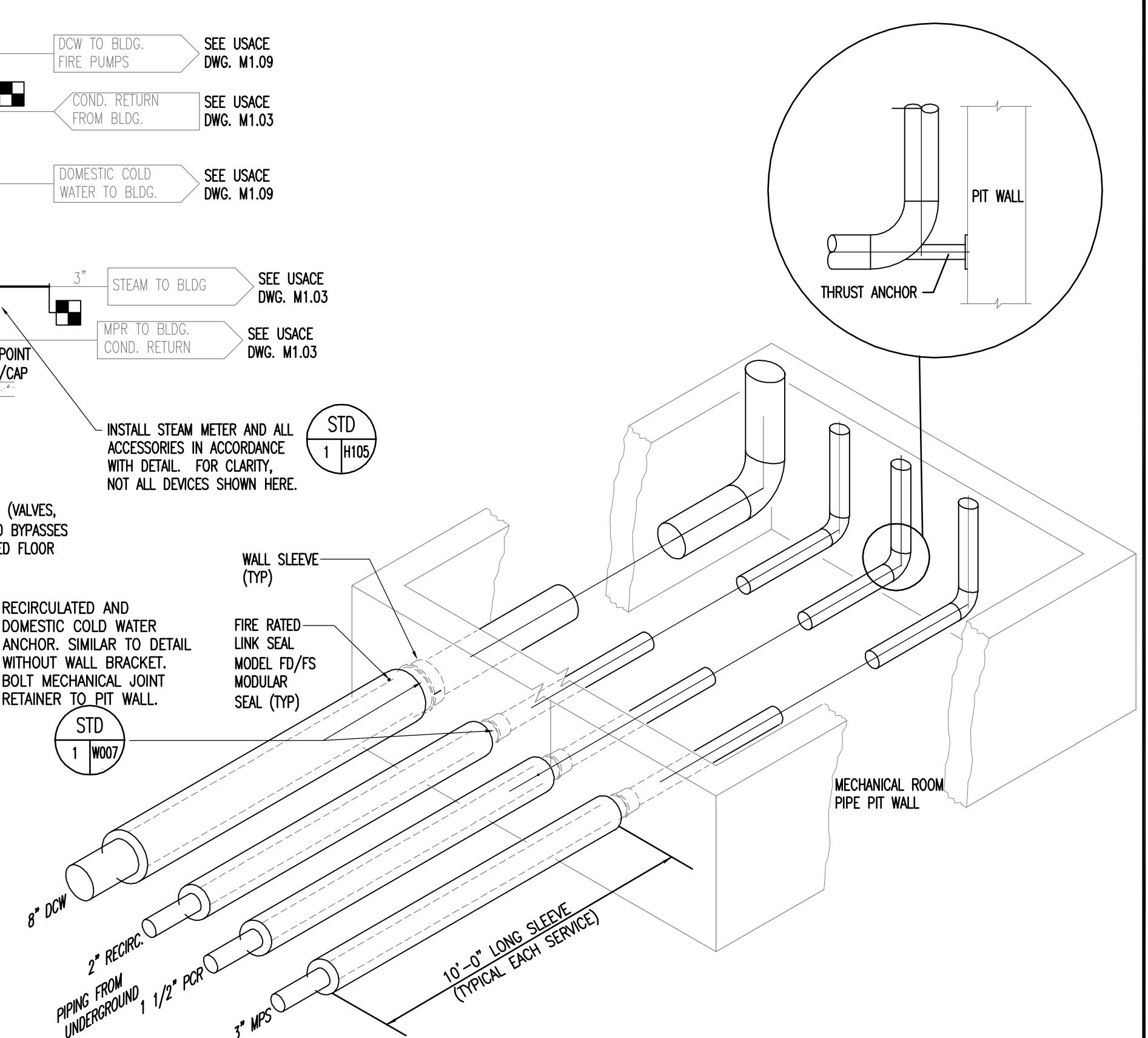
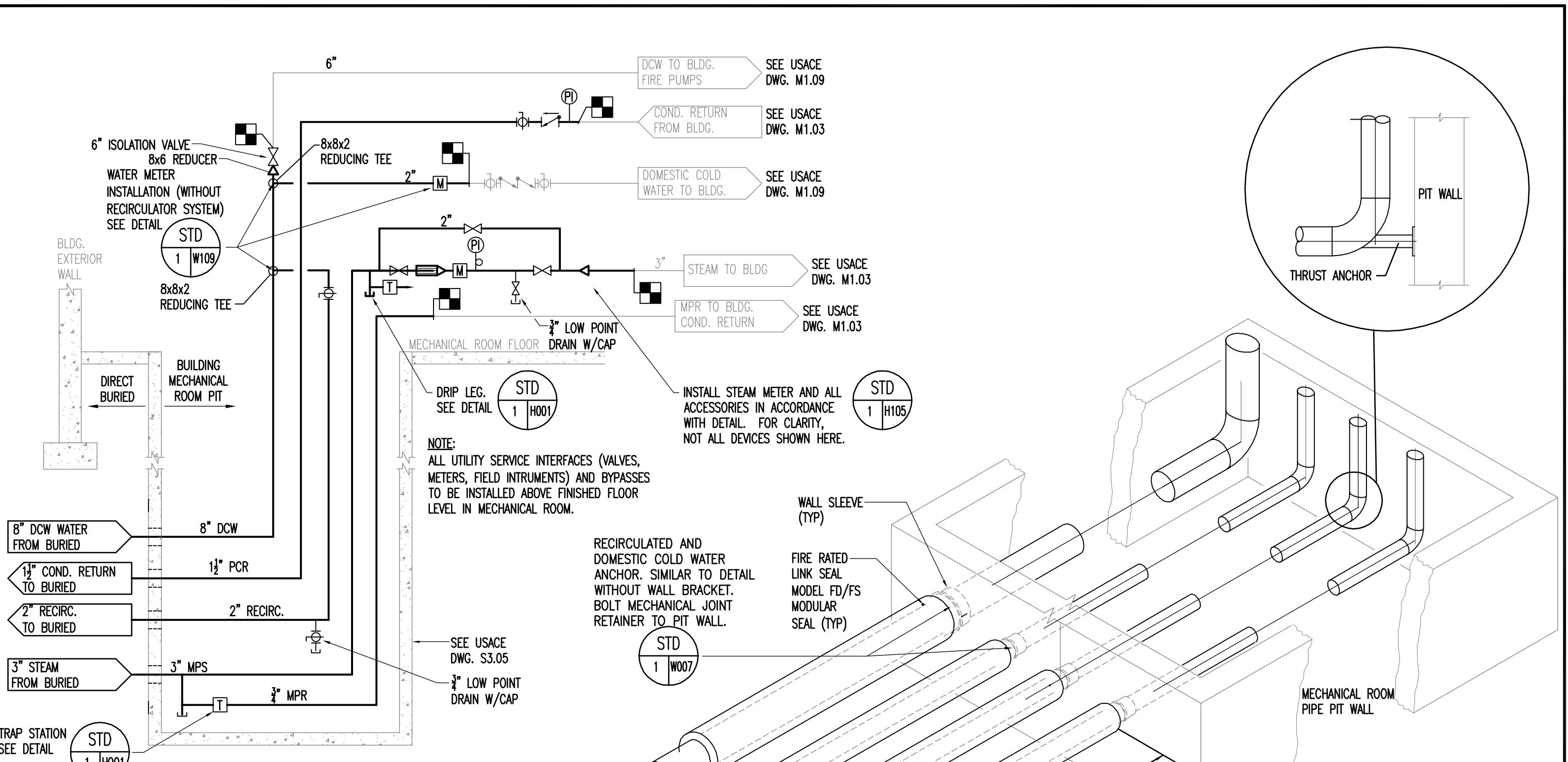


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Designed By: JRS
Drawn By: JRS
Checked By: EAE

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
DIRECT BURIED PIPING PLAN
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
M-05



REV. NO.	DATE	DESCRIPTION
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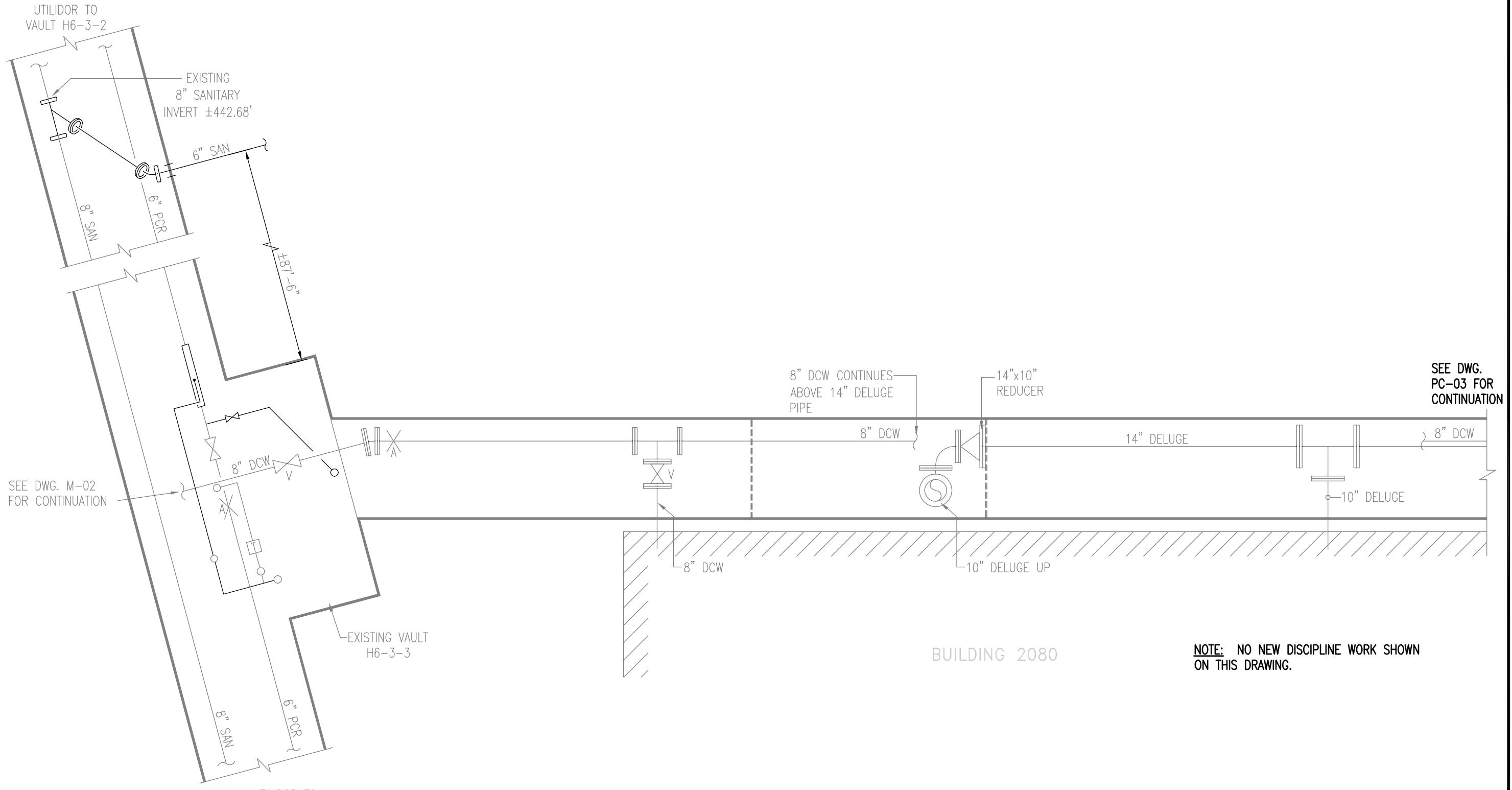
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Designed By: JRS
Drawn By: JRS
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**UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
SCHEMATICS & DETAILS**
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397

Drawing No.
M-06



LOWER LEVEL PLAN 
SCALE: 1/4"=1'-0"

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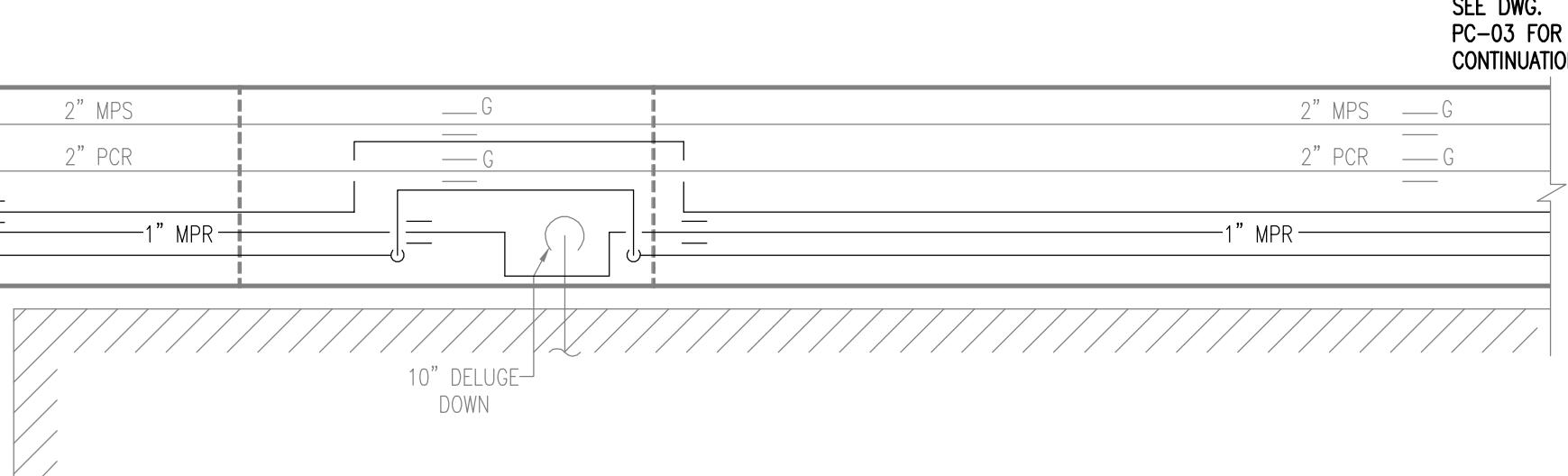
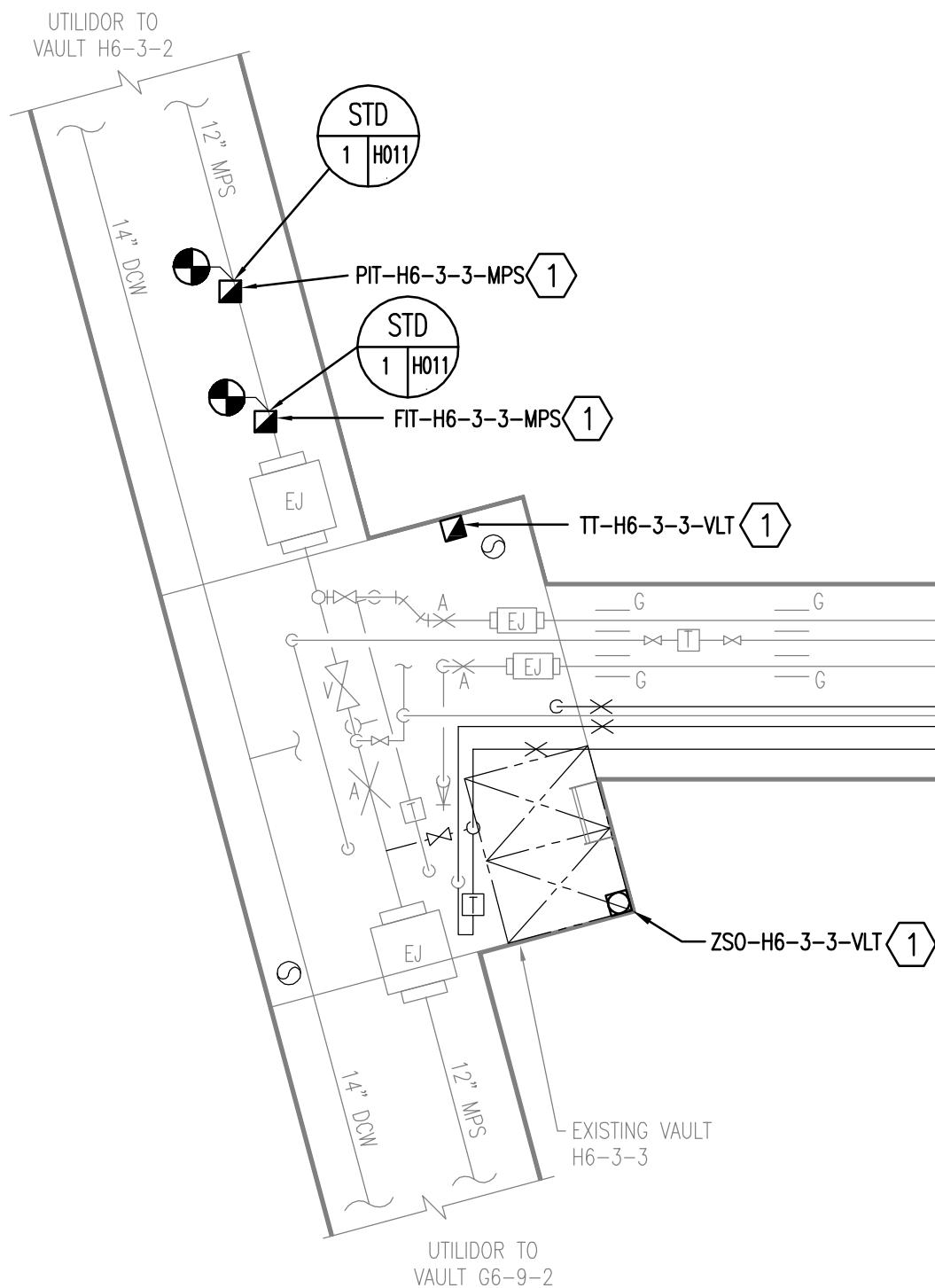


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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-01



BUILDING 2080

DRAWING NOTES:

- FIELD DEVICES SHALL BE WIRED TO CP-G693 IN VAULT G6-9-3.

UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"

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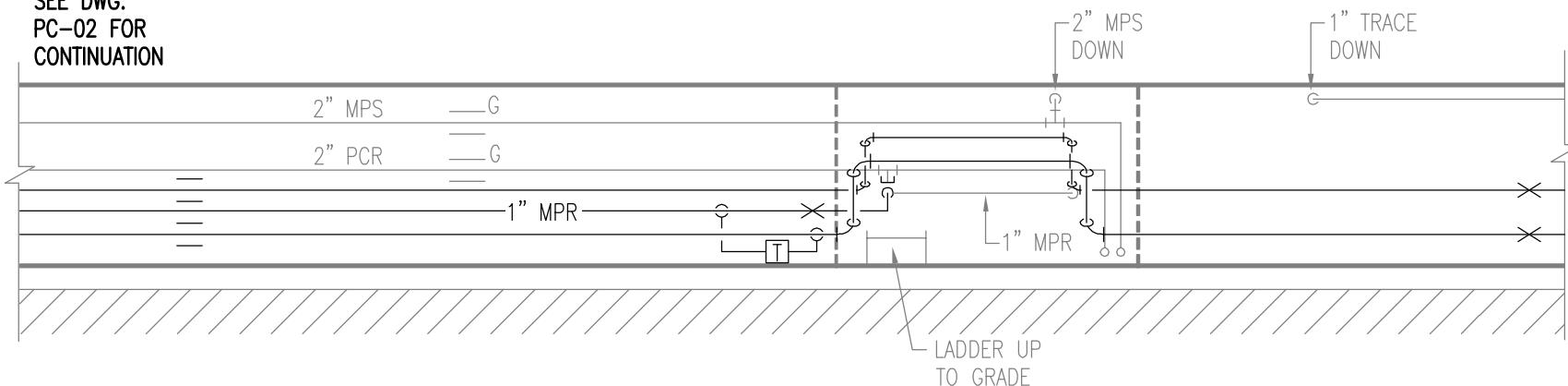
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Date: 19 FEB 2010
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Designed By: JRS
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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-02

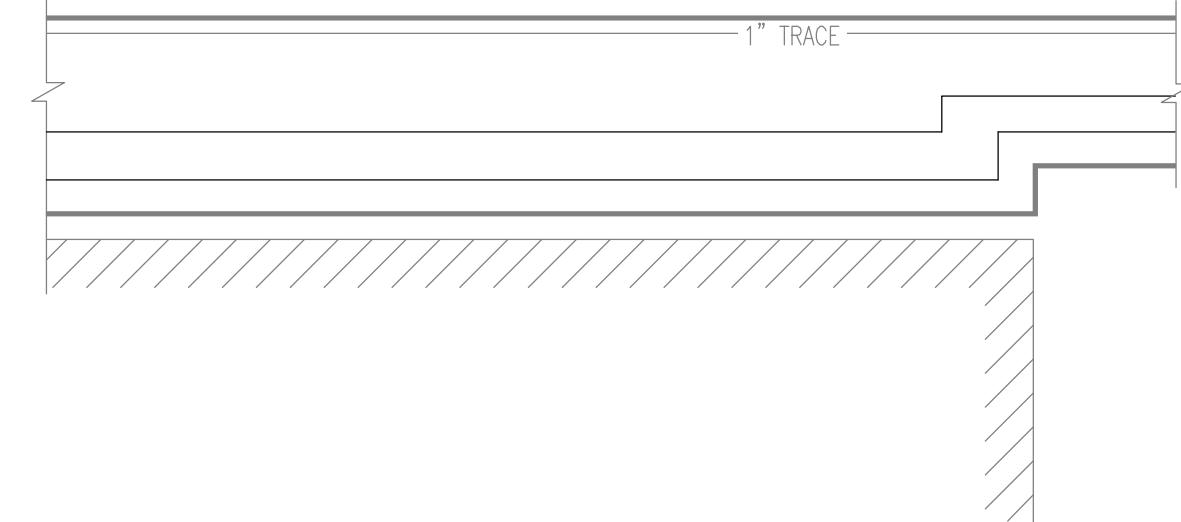
SEE DWG.
PC-02 FOR
CONTINUATION



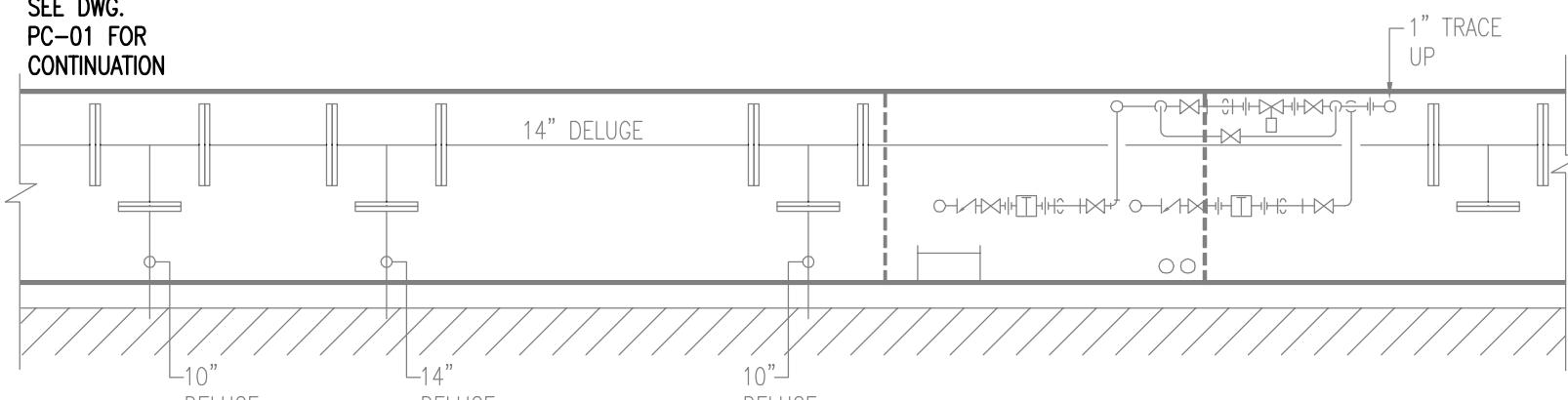
BUILDING 2080

UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"

SEE DWG.
PC-04 FOR
CONTINUATION



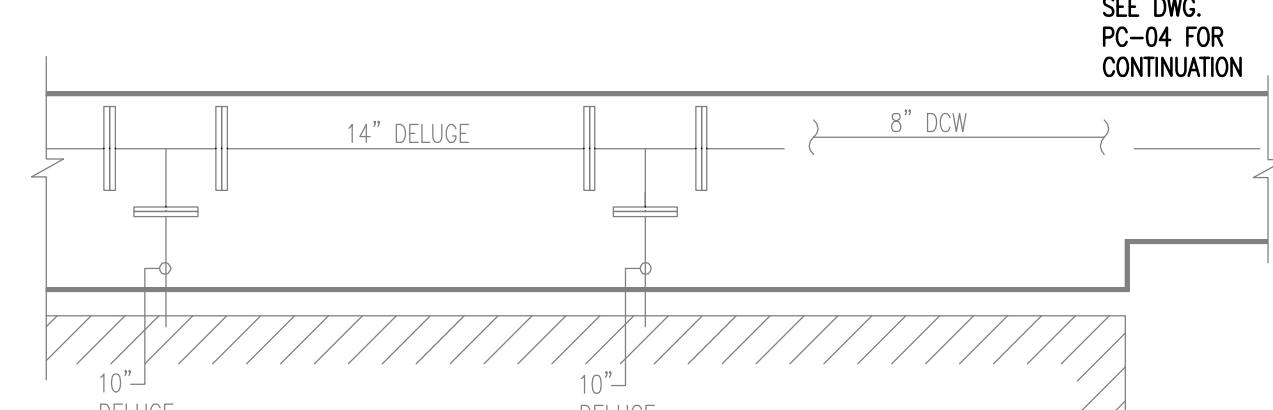
SEE DWG.
PC-01 FOR
CONTINUATION



BUILDING 2080

LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"

SEE DWG.
PC-04 FOR
CONTINUATION



NOTE: NO NEW DISCIPLINE WORK SHOWN
ON THIS DRAWING.

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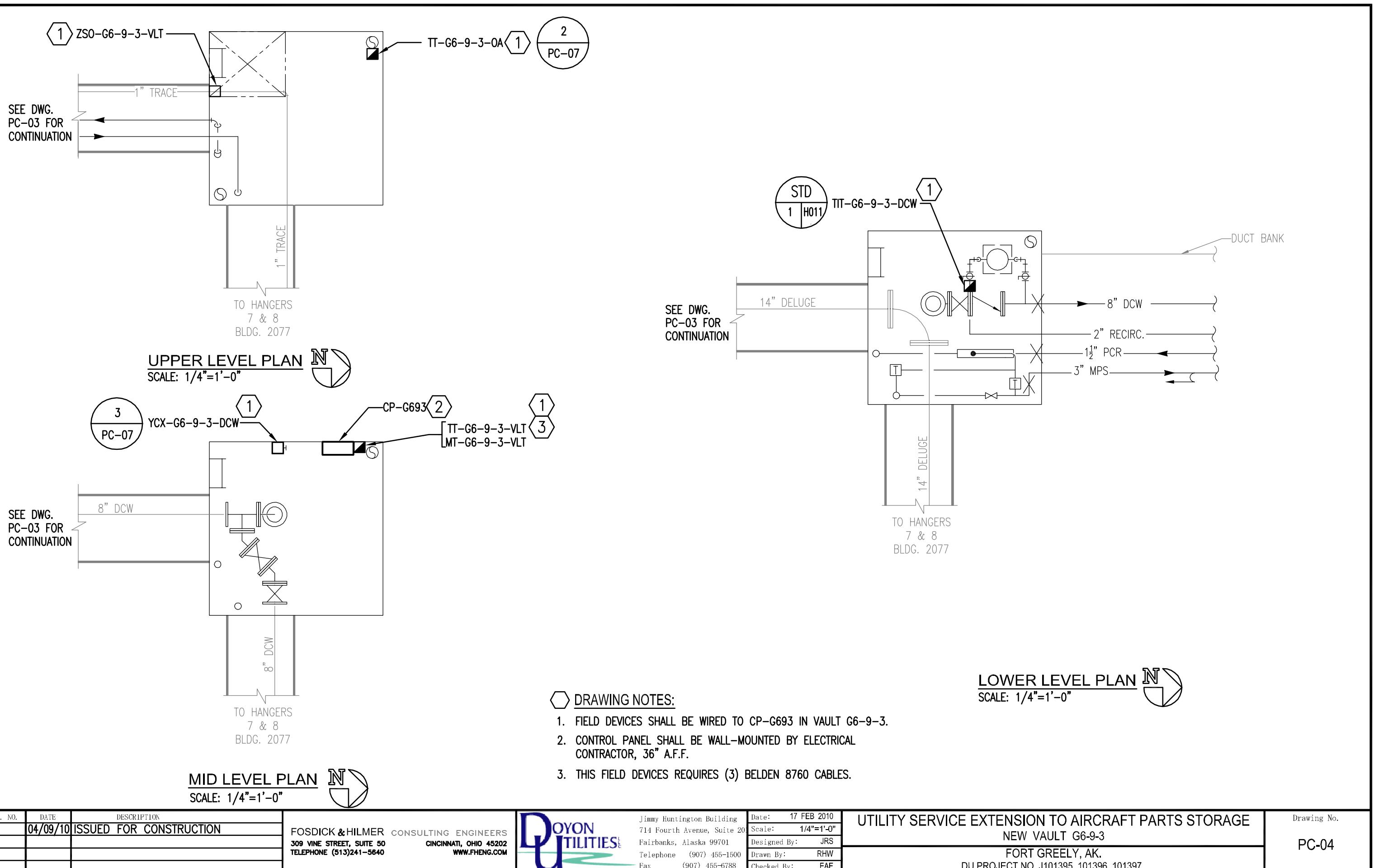


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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-03



1
PC-06

SEE DETAIL FOR
WATER AND STEAM
METER ELECTRICAL
CONNECTIONS.

AIRCRAFT
PARTS
STORAGE
BLDG

3" MPS
1½" PCR
2" RECIRCULATING
PIPE

4" SAN
6" SAN

8" DCW

1" RECIRCULATING
PIPE

3" MPS
1½" PCR
2" RECIRCULATING
PIPE

BURIED WATER
PIPE TRENCH
SEE DETAIL

STD
W114

ELECTRIC
DUCT BANK

2" RECIRCULATING
PIPE
3" MPS
1½" PCR
8" DCW

FROM NEW VAULT G6-9-3
SEE DWG. PC-04 FOR
CONTINUATION.

PLAN
SCALE: 1/4"=1'-0"
ND

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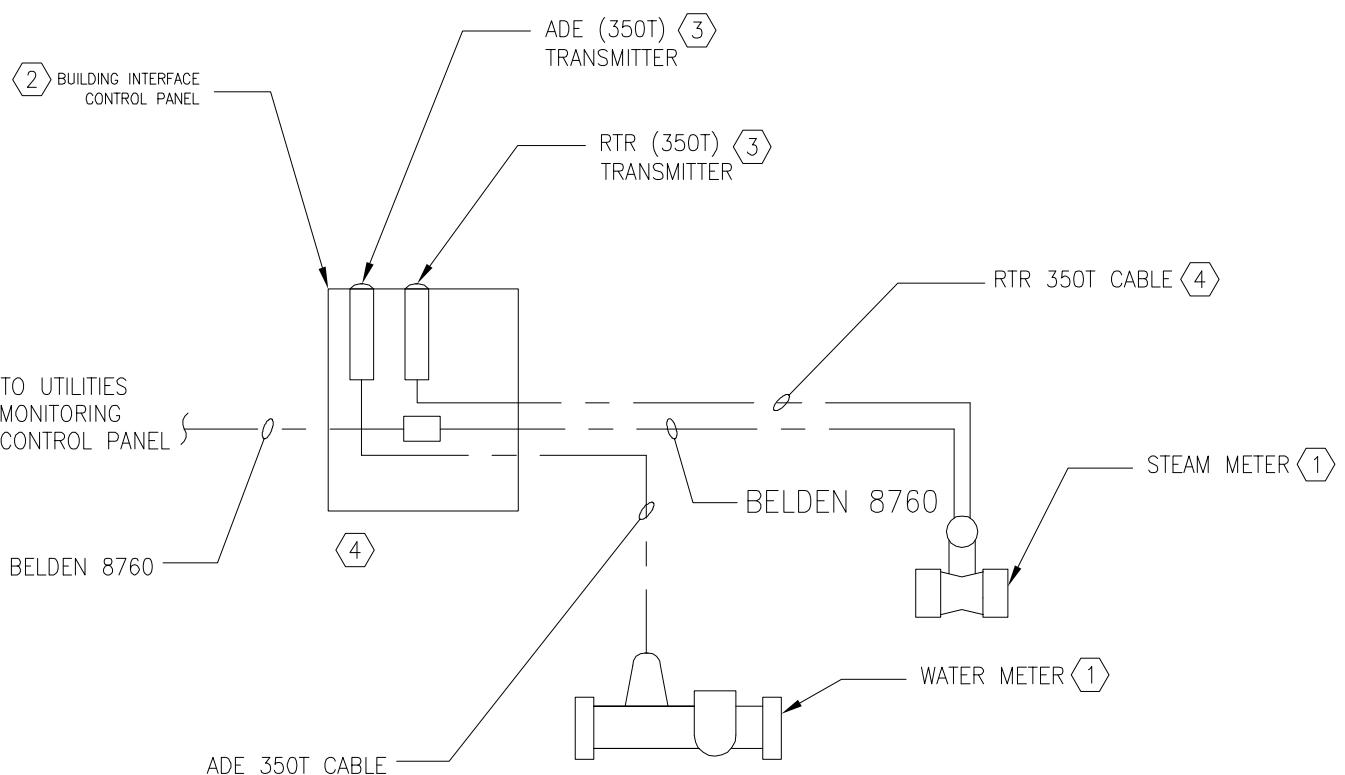


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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
DIRECT BURIED DUCT PLAN
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-05



DETAIL NOTES:

1. FURNISHED BY DOYON UTILITIES, INSTALLED BY MECHANICAL CONTRACTOR.
2. FURNISHED BY DOYON UTILITIES, INSTALLED BY ELECTRICAL CONTRACTOR. PANEL TO BE MOUNTED A MINIMUM OF 36" A.F.F.
3. FURNISHED BY DOYON UTILITIES AS PART OF INTERFACE PANEL ASSEMBLY.
4. FURNISHED BY DOYON UTILITIES AS PART OF INTERFACE PANEL ASSEMBLY. INSTALLED BY ELECTRICAL CONTRACTOR. LEAVE REMAINING LENGTH COILED AT ONE END. DO NOT CUT TO FIT.
5. EXACT LOCATION OF THE BUILDING INTERFACE CONTROL PANEL SHALL BE INTERATIVELY DETERMINED (IE., TEST, RELOCATE IF NECESSARY, RETEST), AS THE POINT AT WHICH RECEPTION BY THE TANTALUS ELECTRIC METER IS OPTIMALLY ACHIEVED. IF FINAL LOCATION IS NOT ACCEPTABLE TO THE ENGINEER, TRANSMITTERS CAN BE REMOTE MOUNTED FROM THE PANEL.

DEVICE TAGS

PROJECT	BUILDING NAME	BUILDING METER INTERFACE PANEL	STEAM METER	WATER METER	UTILITIES MONITORING CONTROL PANEL
336A	AIRCRAFT PARTS STORAGE	CP-336AM	FIT-336A-MPS	FIT-336A-DCW	CP-G693

DETAIL 1 BUILDING METER INTERFACE

N.T.S.

PC-05

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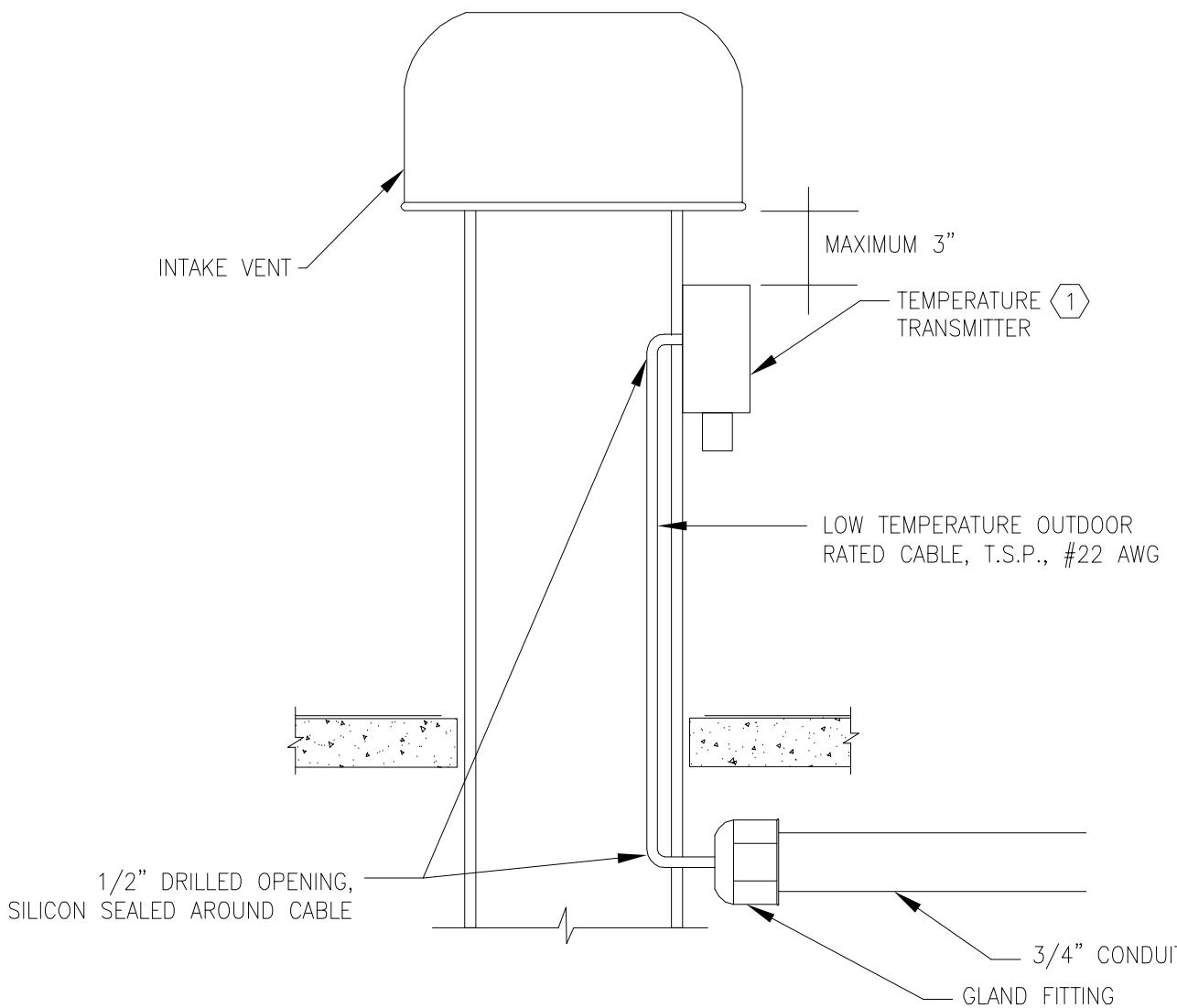


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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
BUILDING METER INTERFACE DETAIL
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-06



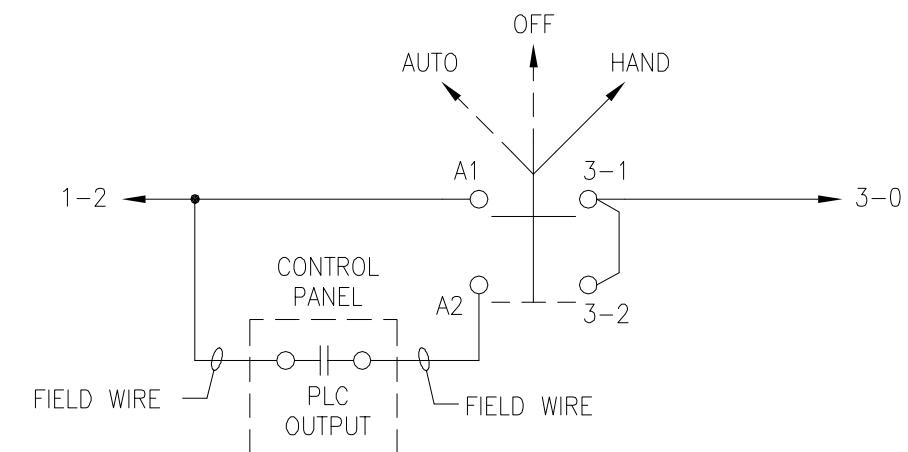
DETAIL 2 OUTDOOR AIR TEMPERATURE TRANSMITTER
N.T.S. PC-04

DETAIL GENERAL NOTE:

A. SEE DOYON UTILITIES STANDARD DRAWING UES-DD-H206 FOR VENT INSTALLATION DETAILS.

DETAIL NOTES:

1. DRILL AND TAP INTAKE VENT PIPE FOR CONNECTION OF DEVICE.



**DETAIL 3 HYDRANT WATER RECIRCULATING PUMP
H-O-A CONTROL**
N.T.S. PC-04

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**UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
MISCELLANEOUS UTILITY MONITORING DETAILS**
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-07

ABBREVIATIONS:		V	VALVE	SYMBOLS:		SYMBOLS:	
A	ANCHOR	VAC	VOLTS - ALTERNATING CURRENT		POINT OF REMOVAL (DEMOLITION)	<input type="checkbox"/>	DISCRETE DEVICE WITH (2) #14 UNLESS OTHERWISE NOTED. DISCRETE DEVICE (THHN)
ACM	ASBESTOS CONTAINING MATERIAL	VDC	VOLTS - DIRECT CURRENT		POINT OF CONNECTION (NEW WORK)	<input type="checkbox"/>	DISCRETE DEVICE WITH (1) BELDEN 8461 UNLESS OTHERWISE NOTED. DISCRETE DEVICE (CABLE)
C	RIGID STEEL CONDUIT	VLT	VAULT		NEW WORK (PER DISCIPLINE)	<input type="checkbox"/>	ANALOG DEVICE WITH (1) BELDEN 8760 UNLESS OTHERWISE NOTED. 2-WIRE ANALOG DEVICE
CMP	CORRUGATED METAL PIPE				NEW WORK (OF OTHER DISCIPLINES)	<input type="checkbox"/>	ANALOG DEVICE WITH (1) VENDOR CABLE UNLESS OTHERWISE NOTED. VENDOR SENSOR
CP	CONTROL PANEL				EXISTING TO REMAIN (BY OTHERS)	<input type="checkbox"/>	DISCRETE DEVICE WITH (1) BELDEN 8791 UNLESS OTHERWISE NOTED. LIMIT SWITCHES (2)
CV	CONTROL VALVE				UNDERGROUND UTILITIES (AS NOTED ON DRAWINGS)	<input type="checkbox"/>	DISCRETE DEVICE WITH (4) #12 AND (1)-#12 GND. UNLESS OTHERWISE NOTED. ELECTRIC 2-POSITION VALVES
DCW	DOMESTIC COLD WATER				EXISTING TO BE REMOVED	<input type="checkbox"/>	
DIP	DUCTILE IRON PIPE				ACCESS HATCH	<input type="checkbox"/>	
DIP@50%	DUCTILE IRON PIPE WITH SLOPE				VENTILATION STACK	<input type="checkbox"/>	
DLG	DELUGE				BOLLARD	<input type="checkbox"/>	
DU	DOYON UTILITIES				POINT OF DEMARCACTION	<input type="checkbox"/>	
(E)GRD	EXISTING GRADE				THRUST BLOCK	<input type="checkbox"/>	
EJ	EXPANSION JOINT				HYDRANT	<input type="checkbox"/>	
FH	FIRE HYDRANT				STEAM TRAP ASSEMBLY	<input type="checkbox"/>	
FM	FORCED MAIN				GATE VALVE	<input type="checkbox"/>	
G	GROUND				BALL VALVE	<input type="checkbox"/>	
GCO	GRADE CLEAN OUT				BUTTERFLY VALVE	<input type="checkbox"/>	
GFI	GROUND FAULT INTERRUPTER				GLOBE VALVE	<input type="checkbox"/>	
H5-1-1S	SANITARY MANHOLE NO.				REDUCTION	<input type="checkbox"/>	
H5-1-1F	EXISTING FIRE HYDRANT NO.				METER (FLOW)	<input type="checkbox"/>	
H5-1-1H	NEW FIRE HYDRANT NO.				ANCHOR	<input type="checkbox"/>	
H5-1-1	VAULT NO.				EXPANSION JOINT	<input type="checkbox"/>	
HPR	HIGH PRESSURE CONDENSATE RETURN				ELECTRIC CONTROL VALVE	<input type="checkbox"/>	
HPS	HIGH PRESSURE STEAM				PUMP	<input type="checkbox"/>	
INV	INVERT				PIPE GUIDE	<input type="checkbox"/>	
LPR	LOW PRESSURE CONDENSATE RETURN				HOMERUN CONDUIT WITH PANELBOARD AND CIRCUIT SHOWN	<input type="checkbox"/>	
LPS	LOW PRESSURE STEAM				120 VAC DUPLEX RECEPTACLE	<input type="checkbox"/>	
MH	ACCESS VAULT				120 VAC DUPLEX GROUND FAULT INTERRUPTION RECEPTACLE	<input type="checkbox"/>	
MPR	MEDIUM PRESSURE CONDENSATE RETURN				LIGHT SWITCH	<input type="checkbox"/>	
MPS	MEDIUM PRESSURE STEAM				LED LIGHT WITH JUNCTION BOX	<input type="checkbox"/>	
(N)GRD	NEW GRADE				JUNCTION BOX	<input type="checkbox"/>	
NRS	NON-RISING STEM VALVE						
PCR	PUMPED CONDENSATE RETURN						
PP	POWER PANEL						
RECIR	RECIRCULATION OF DCW MAINS						
SAN	GRAVITY SEWER						
TOL	TOP OF LID						
UG	NO DIRECT VAULT ACCESS						

INSTRUMENT TAGNAME MATRIX					
	FIRST-LETTER		SUCCEEDING-LETTERS		
	BASE	MODIFIER	PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	---	ALARM	---	---
C	---	---	---	CONTROL	CLOSED
D	---	DIFFERENTIAL	---	---	---
E	VOLTAGE	---	ELEMENT	---	---
F	FLOW	RATIO	---	---	---
G	---	---	GLASS	---	---
H	HAND	---	---	---	HIGH
I	CURRENT	---	INDICATE	---	---
J	POWER	---	---	---	---
K	TIME	RATE OF CHANGE	---	---	---
L	LEVEL	---	LIGHT	---	LOW
M	HUMIDITY	MOMENTARY	---	---	MIDDLE
O	---	---	ORIFICE	---	OPEN
P	PRESSURE	---	---	---	---
Q	QUANTITY	TOTALIZE	---	---	---
S	SPEED , FREQUENCY	---	---	SWITCH	---
T	TEMPERATURE	---	---	TRANSMITTER	---
V	VIBRATION	---	---	VALVE	---
Y	EVENT, STATE	---	---	---	---
Z	POSITION	---	---	---	---

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UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
 SYMBOLS, ABBREVIATIONS & GENERAL NOTES
 FORT WAINWRIGHT, AK.
 DU PROJECT NO. J101395, J101396, J101397

Drawing No.
 X-02

GENERAL INSTALLATION NOTES (M SERIES DRAWINGS):

- A. ABATE ALL ACM AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- B. PROVIDE ALL EARTHWORK, EXCAVATION, BACKFILL, AND RESTORATION OF SURFACE CONDITIONS AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- C. CONTRACTOR SHALL ASSUME THAT ALL EXISTING UTILIDOR LIDS ARE REMOVABLE UNLESS OTHERWISE NOTED ON DRAWINGS.
- D. PROVIDE UTILIDOR INSULATION AS DESCRIBED IN SPECIFICATIONS FOR UTILIDORS EXPOSED AS PART OF THIS CONTRACT.
- E. AN ATTEMPT HAS BEEN MADE FOR DU TO FURNISH ALL MAJOR PIPING AND EQUIPMENT ASSOCIATED WITH NEW WORK. IN THE EVENT THAT ALL REQUIRED MATERIALS HAVE NOT BEEN FURNISHED, CONTRACTOR SHALL PROVIDE ALL REMAINING MATERIALS. SEE LIST OF DU FURNISHED MATERIALS IN THE CONTRACT DOCUMENTS.
- F. SUBMIT FOR REVIEW BY ENGINEER, STRUCTURAL DESIGN FOR ALL NEW VAULTS AS SHOWN ON DRAWINGS. DESIGN SHALL BE OF SIZE SHOWN ON DRAWINGS AND SHALL CONFORM TO ALL STATE AND LOCAL CODES. FINAL APPROVED DESIGN SHALL BEAR STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN STATE OF ALASKA.
- G. INSTALL ALL DU FURNISHED MATERIALS AS DESCRIBED IN CONTRACT DOCUMENTS. REFER TO PC-SERIES DRAWINGS FOR FIELD DEVICE INSTALLATION LOCATIONS.
- H. PROVIDE ALL SUPPORTS, ANCHORS, GUIDES, AND INSULATION ASSOCIATED WITH ALL PIPING INSTALLED ON THIS PROJECT.
- I. REPLACE ALL EXISTING VAULT ACCESS HATCHES WITH DU FURNISHED ACCESS HATCH AND RAISE FINAL ELEVATION A MINIMUM OF 12 INCHES ABOVE FLOOD PLANE.
- J. REPLACE ALL EXISTING VAULT LADDERS THAT DO NOT MEET CURRENT OSHA STANDARDS. MODIFY EXISTING LADDERS AS NECESSARY TO COORDINATE WITH ACCESS HATCHES AND ALL PIPING.
- K. REPLACE ALL EXISTING VAULT VENTS AND BOLLARDS.

GENERAL INSTALLATION NOTES (E SERIES DRAWINGS):

- A. PROVIDE ALL EARTHWORK, EXCAVATION, BACKFILL, AND RESTORATION OF SURFACE CONDITIONS AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- B. PROVIDE CONNECTIONS FROM POLE MOUNTED METERS TO POWER PANELBOARDS AS SHOWN ON DRAWINGS. DU WILL PROVIDE PRIMARY POLE-MOUNTED TRANSFORMERS, SECONDARY SERVICE FEEDS, AND METERING.
- C. PROVIDE POWER PANELBOARDS, LOAD PANELBOARDS AND SERVICE DISCONNECTS AS SHOWN ON DRAWINGS.
- D. INSTALL DU FURNISHED PANELS AS SHOWN ON DRAWINGS.
- E. PROVIDE EACH ACCESS VAULT WITH SWITCHED LED LIGHTING AND CONVENIENCE RECEPTACLES. RECEPTACLES SHALL BE MOUNTED A MINIMUM OF 48" FROM VAULT FLOORS UNLESS INDICATED OTHERWISE.
- F. PROVIDE 120 VAC POWER TO EACH ACCESS VAULT FROM PANELBOARDS TO LIGHTING, RECEPTACLES, CONTROL PANELS, AND SUMP PUMPS AS SHOWN ON DRAWINGS. ALL CONDUIT AND WIRING SHALL BE INSTALLED AT AN ELEVATION NO LESS THAN 18" FROM TOP OF WALL OF VAULT.

GENERAL INSTALLATION NOTES (PC SERIES DRAWINGS):

- A. PROCESS CONTROLS DRAWINGS REFERENCE WORK TO BE DONE BY BOTH THE CONTRACTORS.
- B. ALL INSTRUMENTS, FIELD DEVICES AND CONTROL PANELS WILL BE FURNISHED BY THE OWNER, UNLESS OTHERWISE SPECIFIED.
- C. PROVIDE CABLING AND CONDUIT FOR PROCESS CONTROLS INSTRUMENTATION IN UTILIDORS PER SYMBOL LEGEND. MINIMUM CONDUIT SIZE: 3/4". CONDUIT FILL SHALL NOT EXCEED 50%. LOW VOLTAGE CONTROLS CABLING SHALL BE RUN IN SEPARATE CONDUIT FROM 120VAC.
- D. SEE CONTROL PANEL REFERENCE DRAWINGS FOR WIRING TERMINATIONS.

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