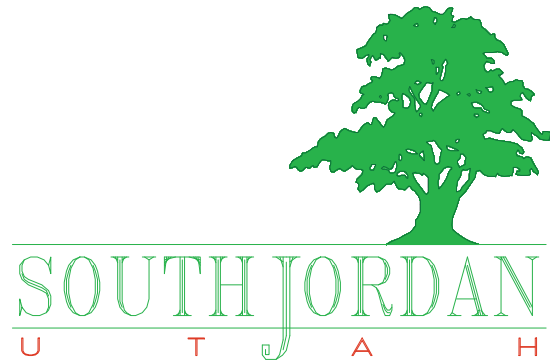
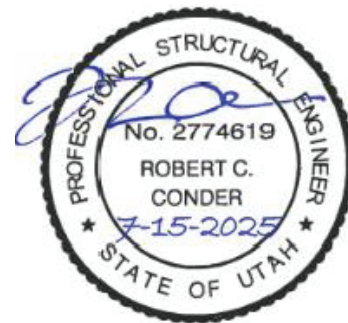
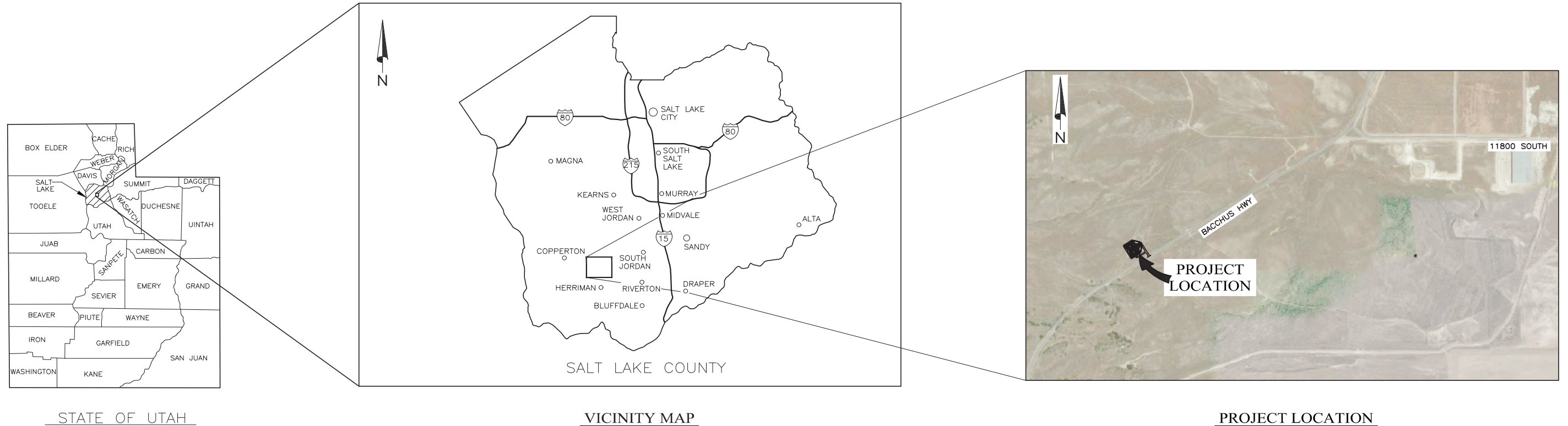




SOUTH JORDAN CITY

ZONES 7 & 8 - 8.4MG TANK

JULY 2025



HANSEN, ALLEN & LUCE DESIGN TEAM

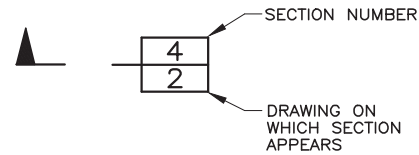
MARVIN E. ALLEN, P.E. — PRINCIPAL IN CHARGE
TYLER G. ALLEN, P.E. — PROJECT MANAGER
GARRICK STEPHENSON, P.E. — PROJECT ENGINEER
ROBERT C. CONDER, S.E. — STRUCTURAL ENGINEER
(CONDER ENGINEERING)
KEITH B. HEGERHORST, P.E. — ELECTRICAL ENGINEER
(HPE INC. ELECTRICAL)
JAY R. MCQUIVEY, P.E. — GEOTECHNICAL
(APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS)
ERIC LYMAN — LANDSCAPE ARCHITECT
(EA LYMAN LANDSCAPE ARCHITECT)

SECTION & DETAIL IDENTIFICATION

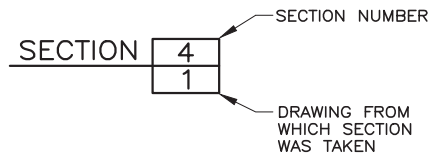
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SECTION IDENTIFICATION

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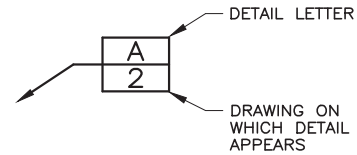


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SECTION IS IDENTIFIED AS:

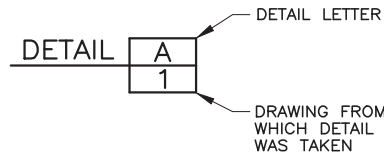


DETAIL IDENTIFICATION

DETAIL CALL-OUT ON DRAWING NO. 1:



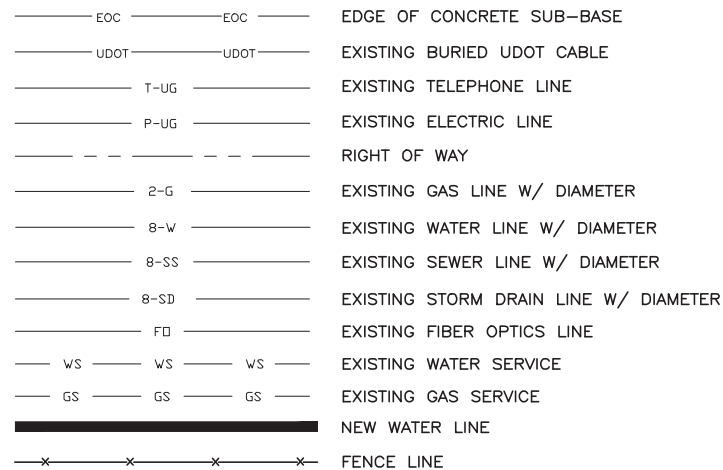
ON DRAWING NO. 2, THIS
DETAIL IS IDENTIFIED AS:



NOTES:

1. IF SECTION CUT AND SECTION OR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A LINE.
2. DETAIL LETTERS "I" AND "O" NOT USED.

LEGEND



GENERAL

- | | |
|-----|--------------------------------|
| G-1 | COVER SHEET |
| G-2 | LEGEND & INDEX OF DRAWINGS |
| G-3 | GENERAL NOTES & SURVEY CONTROL |
| G-4 | ABBREVIATIONS |

CIVIL

- | | |
|-------|---------------------------------------|
| C-1 | SITE PLAN |
| C-1A | SITE GRADING & DRAINAGE PLAN |
| C-1B | GRADING & DRAINAGE POINT TABLE |
| C-1C | SITE UTILITIES PLAN |
| C-2 | TANK SECTIONS |
| C-3 | TANK PLAN |
| C-4 | TANK PIPING PLAN |
| C-5 | TANK OVERFLOW PIPING & DETAILS I |
| C-6 | TANK OVERFLOW PIPING & DETAILS II |
| C-7 | TANK INLET & OUTLET PIPING I |
| C-8 | TANK INLET & OUTLET PIPING II |
| C-9 | TANK DRAIN OUTLET SECTION & DETAILS |
| C-10 | VALVE VAULT PLAN & PIPE DETAILS |
| C-11 | VALVE VAULT SECTIONS I |
| C-12 | VALVE VAULT SECTIONS II |
| C-13 | VALVE VAULT FITTING SCHEDULE & DETAIL |
| C-14 | MISCELLANEOUS DETAILS I |
| C-15 | MISCELLANEOUS DETAILS II |
| C-16 | ACCESS ROAD DETAILS I |
| C-16A | ACCESS ROAD DETAILS II |
| C-17 | CHAIN LINK FENCING & DETAILS |
| C-18 | STORM DRAIN DETAILS |

STRUCTURAL

- | | |
|------|--|
| S-1 | GENERAL STRUCTURAL NOTES |
| S-1A | TANK SECTION & STRUCTURAL NOTES I |
| S-2 | STRUCTURAL NOTES & SPECIAL INSPECTIONS |
| S-3 | TANK PLAN - FLOOR |
| S-4 | TANK PLAN - ROOF |
| S-5 | TANK OUTSIDE WALL & DETAILS I |
| S-6 | TANK INSIDE WALL & DETAILS II |
| S-7 | TANK COMMON WALL & COLUMN DETAILS |
| S-8 | TANK COLUMN ELEVATIONS |
| S-9 | TANK TYPICAL DETAILS |
| S-10 | TANK ROOF REINFORCEMENT |
| S-11 | TANK ROOF TENDON DETAILS |
| S-12 | TANK ROOF TENDON PROFILES |
| S-13 | TANK FLOOR TENDON DETAILS |
| S-14 | TANK EQUIPMENT HATCH DETAILS |
| S-15 | TANK VENT DETAILS |
| S-16 | VALVE VAULT & DECK PLAN |
| S-17 | VALVE VAULT SECTIONS |
| S-18 | STAIR & GRATE PLAN & DETAILS |
| S-19 | VALVE VAULT STAIRS & DETAILS |
| S-20 | TANK EMERGENCY OVERFLOW DRAIN BOX |
| S-21 | TANK CONCRETE STAIRS PLAN & SECTION |
| S-22 | TANK CONCRETE STAIRS DETAILS |
| S-23 | MISCELLANEOUS DETAIL I |
| S-24 | MISCELLANEOUS DETAIL II |

ELECTRICAL

- E-1.1 LEGEND & GENERAL NOTES
- E-1.2 TAG LIST
- E-2.1 ONE-LINE DIAGRAMS
- E-2.2 CP-2 SMALL MOTOR CONTROL PANEL
- E-3.1 SCHEDULES
- E-4.1 SITE PLAN
- E-4.2 VAULT ELECTRICAL PLAN
- E-4.3 VAULT LIGHTING PLAN
- E-5.1 ENCLOSURE ARRANGEMENTS
- E-6.1 DETAILS SHEET 1
- E-6.2 DETAILS SHEET 2
- E-6.3 DETAILS SHEET 3

LANDSCAPE

- L1.1 LANDSCAPE PLAN

PLAN & PROFILE

- | | |
|-------|-------------------------------|
| PP-1 | TANK DRAIN (CELL 2) |
| PP-1A | TANK DRAIN |
| PP-1B | TANK DRAIN (CELL 1) |
| PP-2 | 30" TANK OUTLET (CELLS 1 & 2) |
| PP-3 | TANK INLET (CELL 1) |
| PP-4 | TANK INLET (CELL 2) |
| PP-5 | TANK OVERFLOW |
| PP-6 | JWCD CONNECTION LINE |
| PP-7 | TANK TRANSMISSION LINE |



DESIGNED KBH
DRAFTED KBH
CHECKED KBH
DATE SEPT. 2022

NO. 3
DATE
NO. 1
DATE

ELECTRICAL UTILITY INSTALLATION

UTILITY INFORMATION

UTILITY COMPANY:	ROCKY MOUNTAIN POWER
UTILITY COMPANY CONTACT:	ALF KAMICK (601) 642-2051
CONTACT INFORMATION PHONE:	(801) 576-6250, (888) 329-6041
WORK ORDER NUMBER:	8255982

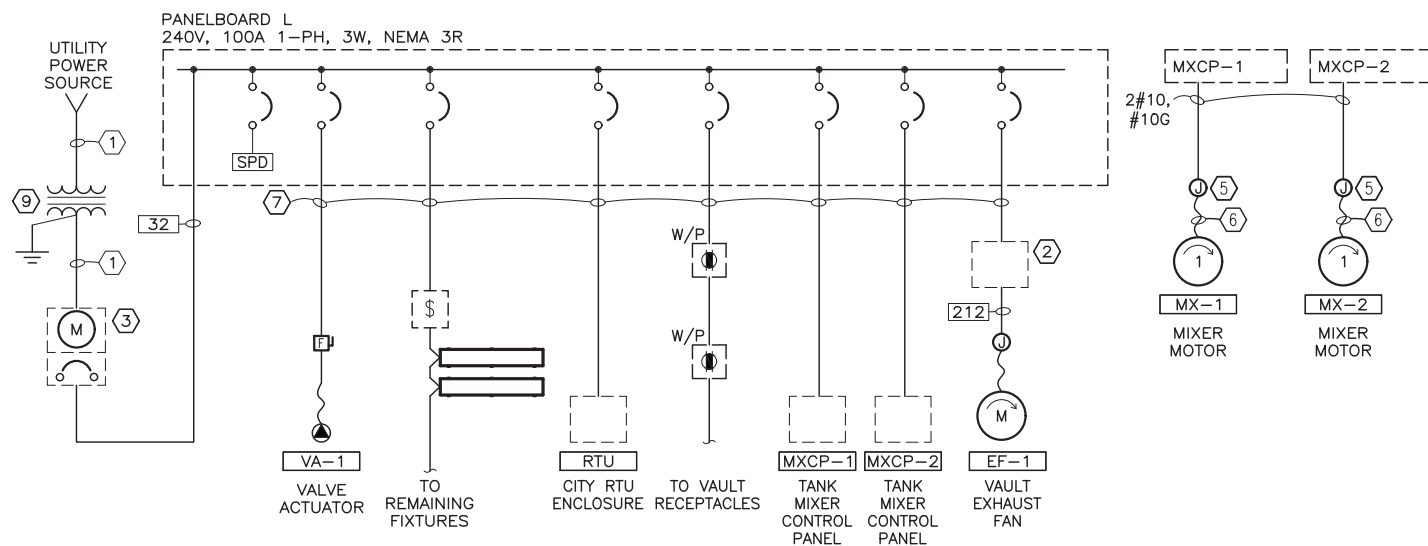
SERVICE PRIMARY	SUPPLIED BY:	INSTALLED BY:
PRIMARY TRENCHING/BACKFILL	CONTRACTOR	CONTRACTOR
PRIMARY CONDUIT	CONTRACTOR	CONTRACTOR
PRIMARY CONDUCTOR	UTILITY COMPANY	UTILITY COMPANY

SERVICE TRANSFORMER	SUPPLIED BY:	INSTALLED BY:
TRANSFORMER PAD	UTILITY COMPANY	UTILITY COMPANY
TRANSFORMER	UTILITY COMPANY	UTILITY COMPANY

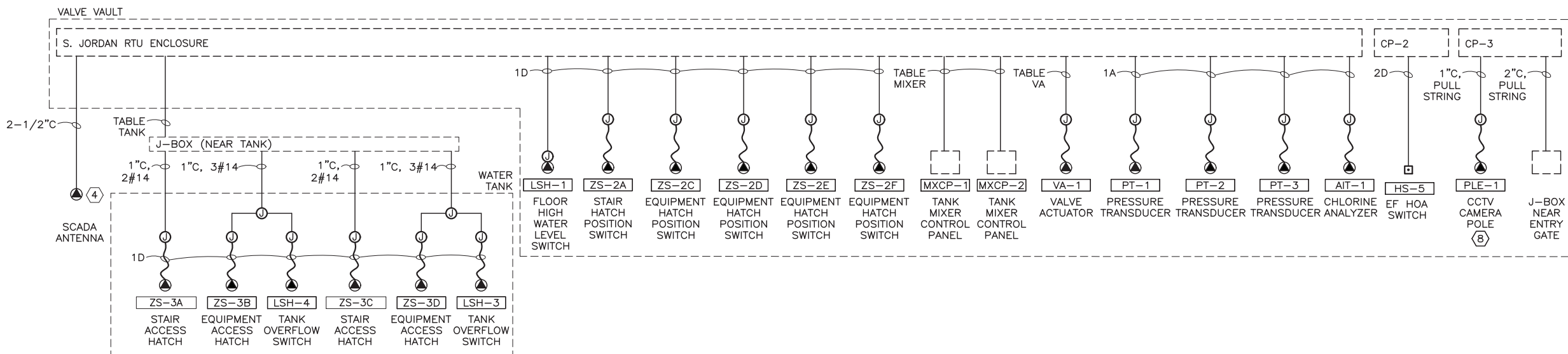
SERVICE SECONDARY	SUPPLIED BY:	INSTALLED BY:
SECONDARY TRENCHING/BACKFILL	-	CONTRACTOR
SECONDARY CONDUIT	CONTRACTOR	CONTRACTOR
SECONDARY CONDUCTOR	UTILITY COMPANY	UTILITY COMPANY

METERING EQUIPMENT	SUPPLIED BY:	INSTALLED BY:
METER	UTILITY COMPANY	UTILITY COMPANY
METER SOCKET	CONTRACTOR	CONTRACTOR
CONNECTION TO MAIN	CONTRACTOR	CONTRACTOR
CURRENT TRANSFORMER PAD	-	-
MAIN SERVICE DISCONNECT	-	-
CT ENCL. TO METER SOCKET WIRING	-	-
CT ENCL. TO METER SOCKET CONDUIT	-	-

MAIN SERVICE DISCONNECT	SUPPLIED BY:	INSTALLED BY:
CIRCUIT BREAKER	CONTRACTOR	CONTRACTOR
FUSED DISCONNECT SWITCH	-	-



POWER ONE-LINE DIAGRAM



INSTRUMENTATION AND CONTROL ONE-LINE DIAGRAM

TABLE VA (CP-1 TO VALVE ACTUATOR)

CONDUIT SIZE	CONDUCTOR QTY	SIZE	CP-1 TO VALVE ACTUATOR SIGNAL DESCRIPTION
3/4"	1	#16TSP	VALVE COMMAND POSITION
3/4"	1	#16TSP	VALVE POSITION

TABLE TANK (CP-1 TO TANK J-BOX)

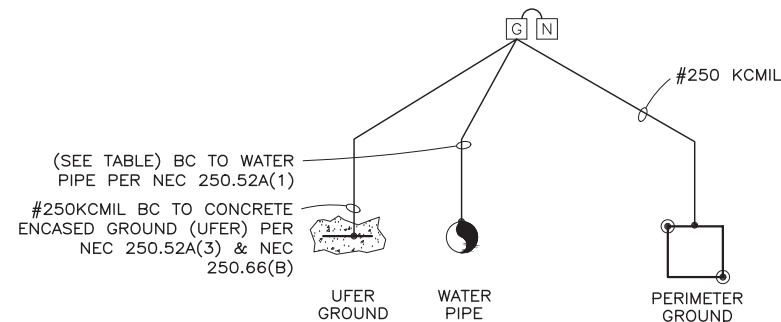
CONDUIT SIZE	CONDUCTOR QTY	SIZE	CP-1 TO TANK J-BOX SIGNAL DESCRIPTION
1"	1	#14	COMMON INPUT
1"	1	#14	HATCH POSITION SWITCH (ZS-3A)
1"	1	#14	HATCH POSITION SWITCH (ZS-3B)
1"	1	#14	HATCH POSITION SWITCH (ZS-3C)
1"	1	#14	HATCH POSITION SWITCH (ZS-3D)
1"	1	#14	TANK LEVEL SWITCH (LSH-3)
1"	1	#14	TANK FVH SWITCH (LSH-4)
1"	4	#14	SPARE

TABLE MIXER (CP-1 TO MIXER)

CONDUIT SIZE	CONDUCTOR QTY	SIZE	SIGNAL DESCRIPTION
1"	1	#14	COMMON INPUT
1"	1	#14	COMMON OUTPUT
1"	1	#14	MIXER COMMAND RUN
1"	1	#14	MIXER HOA SWITCH IN AUTO
1"	1	#14	MIXER HOA SWITCH IN HAND
1"	1	#14	MIXER RUNNING
1"	1	#14	MIXER VFD FAULT
1"	3	#14	SPARE
3/4"	1	#18TSP	MIXER VFD SPEED
3/4"	1	#18TSP	MIXER COMMAND STOP

I&C WIRE/CONDUIT TABLE

IDENT.	CONDUIT SIZE	CONDUCTOR QTY	SIZE	SIGNAL DESCRIPTION
1A	3/4"	1	#18TSP	1 ANALOG SIGNAL
2A	3/4"	2	#18TSP	2 ANALOG SIGNALS
3A	3/4"	3	#18TSP	3 ANALOG SIGNALS
IDENT.	CONDUIT SIZE	CONDUCTOR QTY	SIZE	SIGNAL DESCRIPTION
1D	3/4"	2	#14	1 COMMON, 1 DISCRETE SIG.
2D	3/4"	3	#14	1 COMMON, 2 DISCRETE SIG.
3D	3/4"	4	#14	1 COMMON, 3 DISCRETE SIG.
4D	3/4"	5	#14	1 COMMON, 4 DISCRETE SIG.



GROUNDING DIAGRAM

H.P.E. INC. ELECTRICAL ENGINEERS
POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH
AMERICAN FORK, UT 84003
HPE PROJECT:22.049
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST ©2025

GENERAL NOTES:

- FOR DEVICE AND EQUIPMENT LOCATIONS REFER TO ELECTRICAL PLAN SHEETS.
- ALL CONDUCTORS FROM EACH DEVICE OR INSTRUMENT AS SPECIFIED ON CONTROL ONE-LINE TO BE CONTINUOUS FROM CONTROL PANEL THROUGH PULL BOXES OR WIREWAYS TO DEVICE WITHOUT SPLICES.

SHEET KEYNOTES:

- 3"C, AS REQUIRED BY THE UTILITY COMPANY.
- EXHAUST FAN CONTROL PANEL CP-2.
- METERING PEDESTAL, 100A MIN. 240 VAC, 1-PH, 3-W WITH 100A MAIN CIRCUIT BREAKER. LABEL AS "MAIN SERVICE DISCONNECT" AND WITH AVAILABLE FAULT CURRENT AS REQUIRED BY NEC 110.24.
- INSTALL ANTENNA SUPPORT, CONDUIT FOR COAX, GROUNDING AND WEATHERHEAD. COAX AND ANTENNA INSTALLED BY OWNER. FOR LOCATION, REFER TO KEYNOTE 3 ON E-4.1.
- POLYCARBONATE J-BOX INSTALLED IN TANK HATCH OPENING.
- CABLE SUPPLIED WITH MIXER MOTOR.
- FOR CONDUIT AND CONDUCTOR INFORMATION REFER TO THE PANELBOARD SCHEDULE FOR THE CIRCUIT ID, THEN REFER TO THE CONDUIT/CONDUCTOR TABLE.
- SHOWN FOR PLE-1. DUPLICATE FOR CCTV PLE-2. PULL BOXES NOT SHOWN.
- UTILITY TRANSFORMER: 25 KVA, 120/240 V SECONDARY. FIBERGLASS PAD SUPPLIED AND INSTALLED BY UTILITY COMPANY.



PROJECT ENGINEER

DESIGNED	KBH	3			
DRAFTED	KBH	2			
CHECKED	KBH	1			
DATE	SEPT. 2022	NO.	DATE		

REVISIONS

SCALE

NONE

SOUTH JORDAN CITY
1600 WEST TOWNE CENTER DRIVE
SOUTH JORDAN, UTAH 84095



ZONES 7 & 8 – 8.4 MG TANK
ELECTRICAL
SCHEDULES

SHEET
E-3.1
176.41.100

S. JORDAN TANK VALVE VAULT PANELBOARD L

LOCATION: VALVE VAULT		MFR: SQUARE D COMPANY		100 AMPS		VOLTS: 240/120										
DIMENSIONS: 5.75"D x 20"W x 38"H		TYPE: NQ				PHASE: 1										
MOUNTING: SURFACE		NEMA: 3R		100 M.C.B.		WIRES: 3										
FEED: TOP				10,000 A.I.C.		FED FROM: UTILITY										
		PHASE LOADS														
BRKR		WIRE				A		B			WIRE		BRKR			
A	P	SIZE	CONT.	N. CONT.	NO	CONT.	N. CONT.	CONT.	N. CONT.	NO	N. CONT.	CONT.	A	P		
20	1	RESIDUAL CHLORINE ANALYZER	212	200		1	950	0		2		750	212	CP-1 S. JORDAN RTU	20	1
20	1	RECEPT, VALVE VAULT	312		900	3		244	900	4	0	244	212	CP-2 EXHAUST FAN CONTROL PANEL	20	2
20	1	LTS, VALVE VAULT	212	140		5	384	0		6	0	244	-	-	-	-
30	1	MXCP-1 MIXER CONTROL PANEL	20	1,920		7		1,920	414	8	414		212	VA-1 BALL VALVE ACTUATOR	20	2
30	1	MXCP-2 MIXER CONTROL PANEL	20	1,920		9	1,920	414		10	414		-	-	-	-
	1	AVAILABLE SPACE	-			11		150	0	12		150	212	CP-3 CCTV ENCLOSURE	20	1
	1	AVAILABLE SPACE	-			13	0	0		14			-	SPARE	20	1
	1	AVAILABLE SPACE	-			15		0	0	16			-	SPARE	20	1
	1	AVAILABLE SPACE	-			17	0	0		18				AVAILABLE SPACE	20	1
TOTAL WATTS:			4,180	900		3,254	414	2,314	1,314	0	0	828	1,387			
CONTINUOUS LOAD:			5,567													
CONTINUOUS LOAD * 125%:			6,959													
NON-CONTINUOUS LOAD:			1,728													
DESIGN WATTS:			8,687													
MIN. RATING (AMPS):			36.2													

EQUIPMENT SCHEDULE

ITEM	DESCRIPTION	LOCATION	EQUIPMENT RATING						DISCONNECT					CONNECTION	STARTER TYPE	NOTES
			VOLTS	PH	HP	WATTS	FLA	MCA	AMPS	VOLTS	POLES	NEMA	FUSE			
MX-1	MIXER MOTOR	TANK	120	1	1	1,920		-	-	-	-	-	-	HARD WIRED	VHD	1)
MX-2	MIXER MOTOR	TANK	120	1	1	1,920		-	-	-	-	-	-	HARD WIRED	VHD	1)
MXCP-1	MIXER CONTROL PANEL	VALVE VAULT	120	1	-	1,920		-	-	-	-	-	-	HARD WIRED	-	
MXCP-2	MIXER CONTROL PANEL	VALVE VAULT	120	1	-	1,920		-	-	-	-	-	-	HARD WIRED	-	
VA-1	VALVE ACTUATOR	VALVE VAULT	230	1	1/3	828	3.6							HARD WIRED	INCL.	

NOTES: 1) VFD LOCATED IN MIXER CONTROL PANEL

MECHANICAL HVAC EQUIPMENT SCHEDULE

ITEM	DESCRIPTION	LOCATION	EQUIPMENT RATING					DISCONNECT					CONNECTION	STARTER TYPE	NOTES
			VOLTS	PH	HP	WATTS	FLA	MCA	AMPS	VOLTS	POLES	NEMA			
EF-01	EXHAUST FAN	VALVE VAULT	210	1	-	487	3.6	-	-	-	-	-	HARD-WIRED	GVNR	1)

NOTES: 1) NO DISCONNECT REQUIRED AS POWER SOURCE IS WITHIN SITE OF LOAD.

EXHAUST FAN CONTROL PANEL CP-2

LOCATION: VALVE VAULT			MFR: CUSTOM			AMPS			VOLTS: 240			
DIMENSIONS: BY CONTRACTOR			TYPE: NEMA 12						PHASE: 1			
MOUNTING: SURFACE						- M.C.B.			WIRES: 3			
FEED: N/A						A.I.C.			FED FROM: L-6,8			
									PHASE LOADS			
BRKR			WIRE			A			B			
A	P	DESCRIPTION	SIZE	CONT.	N. CONT.	NO	CONT.	N. CONT.	CONT.	N. CONT.		
10	1	CONTROL POWER		50		1	50	0				
15	1	VAULT EXHAUST FAN	212	487		2	244	0	244	0		
10	1	SPARE CB				3	0	0				
TOTAL WATTS:					537	0	294	0	244	0		
CONTINUOUS LOAD:					537							
CONTINUOUS LOAD* 125%:					671							
NON-CONTINUOUS LOAD:					0							
DESIGN WATTS:					671							
MIN. RATING (AMPS):					2.8							

FIXTURE SCHEDULE

TYPE	DESCRIPTION	NAME	MANUFACTURER		FIX VA	LAMP	LUMENS	TEMPERATURE (KELVIN)	MOUNTING	NOTES
			CATALOG NO.							
F1	1' LED ENCLOSED INDUSTRIAL FIBERGLASS HOUSING, DAMP LOCATION, MVOLT, 4,000 LUMENS	METALUX	1VT2LED-LD5-6-DR-UNV-LB10-CD-L-U		5J	INCL.	5,000	4,500	SURFACE	
F2	VAPORTITE FIBER REFLECTOR	JR4 FNR	1VWR555		1'	N/A	881	1,300	WALL	
F3	SQUARE STEEL SCHE, 4' X 12', 100 AMP SCINTILLATOR	KW	SSP12-4.0-1-HBL		N/A	N/A	N/A	N/A	N/A	

H.P.E. INC. ELECTRICAL ENGINEERS
POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH
AMERICAN FORK, UT 84003
HPE PROJECT:22.049
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST
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SITE PLAN ITEMS (E-4.1)

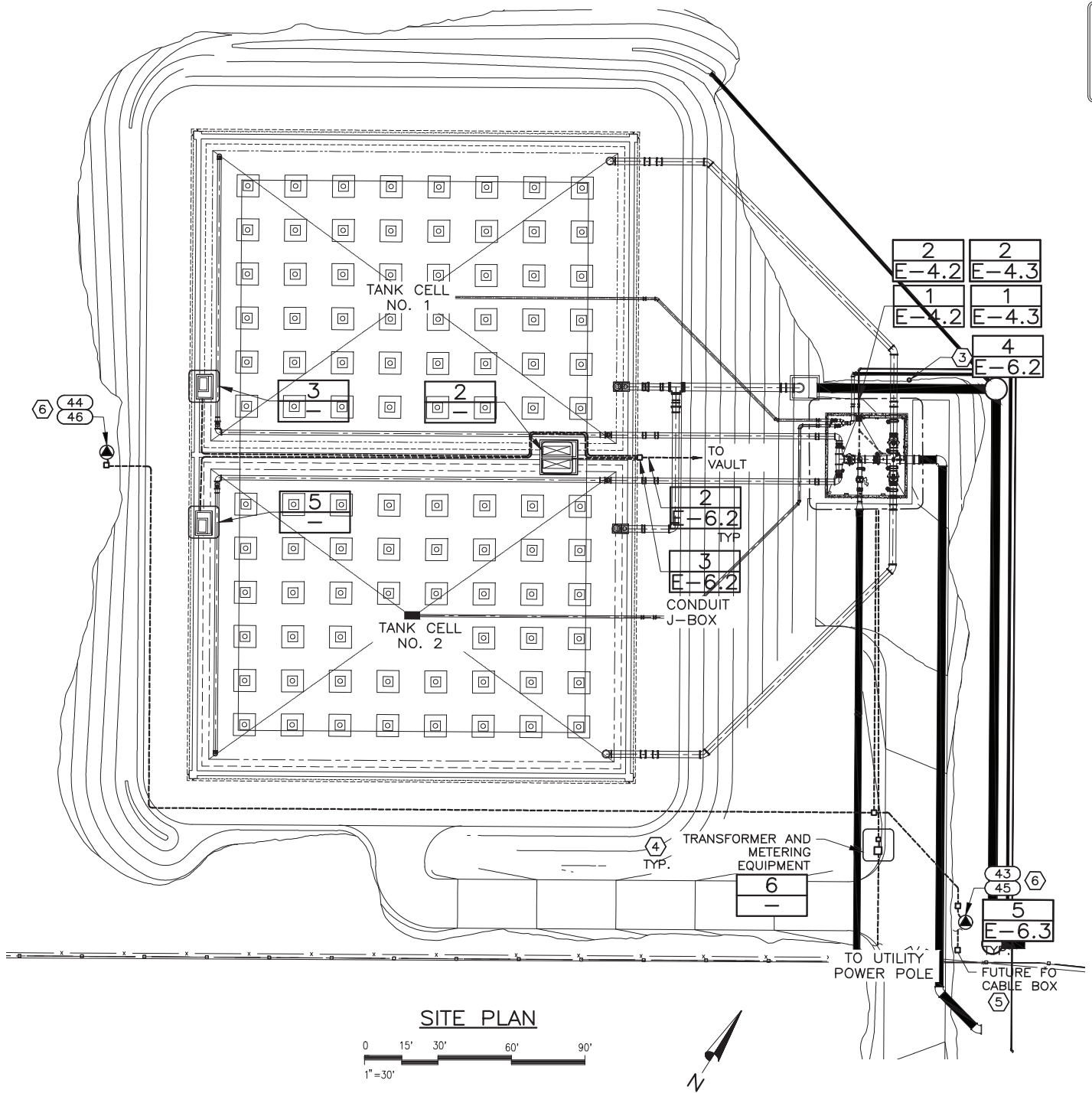
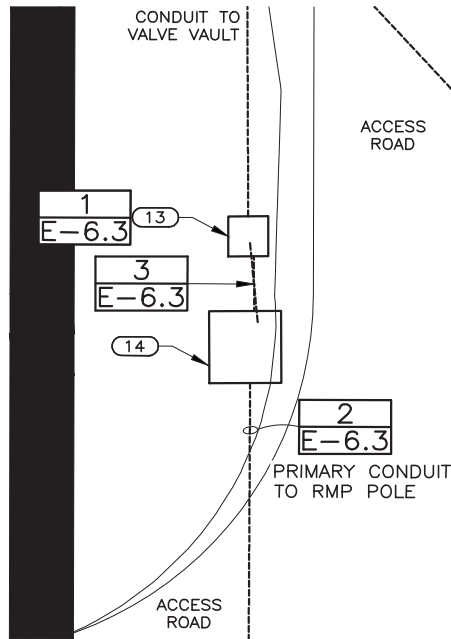
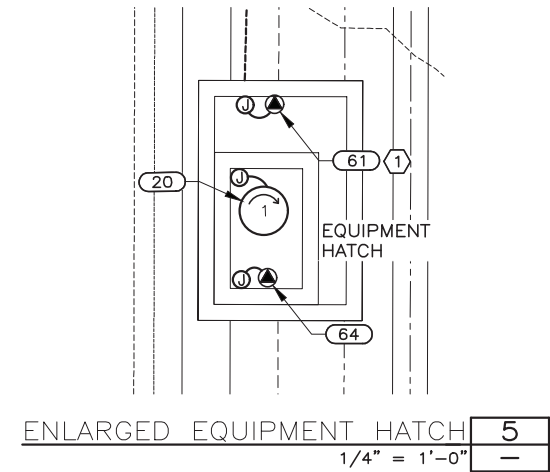
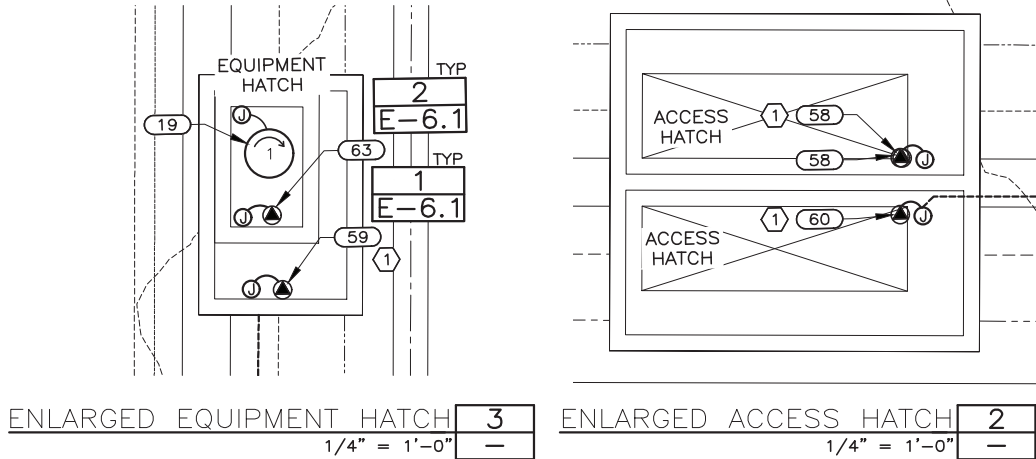
DRAWING ID	TAG	DESCRIPTION	LOCATION	POWER SOURCE
13	MP	MIXING PIPES/VALVE	SITE	UTILITY
14	XFM	UTILITY TRANSFORMER	SITE	UTILITY
19	MX-1	MIXER 1	CELL NO. 1	MXCP-1
20	MX-2	MIXER 2	CELL NO. 2	MXCP-2
43	PLE 1	CCTV CAMERA POLE (FIX TYPE F3)	SITE	
44	PLE 2	CCTV CAMERA POLE (FIX TYPE F3)	SITE	
45	CCTV-1	CCTV CAMERA	SITE	-
46	CCTV-2	CCTV CAMERA	SITE	-
58	ZS-3A	STAIR HATCH POSITION SWITCH	CELL NO. 1	CP-1/RTU
59	ZS-3B	EQUIPMENT HATCH POSITION SWITCH	CELL NO. 1	CP-1/RTU
60	ZS-3C	STAIR HATCH POSITION SWITCH	CELL NO. 2	CP-1/RTU
61	ZS-3D	EQUIPMENT HATCH POSITION SWITCH	CELL NO. 2	CP-1/RTU
63	LSH 2	TANK OVERFLOW LEVEL SWITCH	CELL NO. 1	CP 1/RTU
64	LSH 3	TANK OVERFLOW LEVEL SWITCH	CELL NO. 2	CP 1/RTU

GENERAL NOTES:

- REFER TO ONE-LINE DIAGRAMS FOR CONDUIT AND CONDUCTOR REQUIREMENTS.
- ALL CONDUCTORS FROM EACH DEVICE OR INSTRUMENT AS SPECIFIED ON CONTROL ONE-LINE TO BE CONTINUOUS FROM CONTROL PANEL THROUGH PULL BOXES OR WIREWAYS TO DEVICE WITHOUT SPLICES.
- MIXER MOTOR CONTROLLERS LOCATED IN VALVE VAULT.

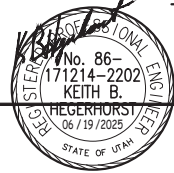
SHEET KEYNOTES:

- INSTALL HATCH POSITION SWITCH ON PRIMARY HATCH. HATCH ORIENTATION VARIES. INSTALL AS REQUIRED.
- HIGH LEVEL SWITCH IN EQUIPMENT HATCH ONLY. REFER TO INSTALLATION DETAIL 2/E6.1.
- SCADA ANTENNA POLE: INSTALL A 60-FT. WESTERN RED CEDAR, CLASS 2 WOOD POLE, BURIED 8-FT. PROVIDE A 18" LIGHTNING FINIAL ON POLE TOP WITH #6 BC GROUND CONDUCTOR STAPLED TO POLE EVERY 24" TO TWO 3/4"x10" COPPER COATED GROUND RODS. SEPARATE GROUND ROD'S A MINIMUM OF 10'. INSTALL A 1" C ON STAND-OFFS TO 12" ABOVE ANTENNA WITH WEATHERHEAD. ANTENNA AND RADIO COAX SUPPLIED AND INSTALLED BY SCADA CONTRACTOR TO BE INSTALLED 50' AGL.
- CONCRETE POLYMER PULL BOX. MIN. 24"x24"x16".
- CONCRETE POLYMER PULL BOX NEAR ENTRY GATE FOR FUTURE FIBER OPTIC CABLES. INSTALL CONDUIT WITH PULL STRING TO CP-3 IN VAULT.
- OWNER TO PROVIDE/INSTALL CCTV CAMERAS ON POLES AT A FUTURE DATE.



10/07
FILE NAME:
FILE DATE:

HANSEN
ALLEN
& LUCE
ENGINEERS



PROJECT ENGINEER

DESIGNED KBH
DRAFTED KBH
CHECKED KBH
DATE SEPT. 2022

NO.

DATE

REVISIONS

SCALE
AS
SHOWN

SOUTH JORDAN CITY
1600 WEST TOWNE CENTER DRIVE
SOUTH JORDAN, UTAH 84095



ZONES 7 & 8 - 8.4 MG TANK
ELECTRICAL
SITE PLAN

SHEET

E-4.1

176.41.100

10/07

FILE NAME:
FILE DATE:



PROJECT ENGINEER

DESIGNED	KBH	3		
DRAFTED	KBH	2		
CHECKED	KBH	1		
DATE	SEPT. 2022	NO.	DATE	

NO.

DATE

REVISIONS

BY

APVD.

SCALE
AS
SHOWN

SOUTH JORDAN CITY
1600 WEST TOWNE CENTER DRIVE
SOUTH JORDAN, UTAH 84095



ZONES 7 & 8 – 8.4 MG TANK
ELECTRICAL
VAULT ELECTRICAL PLANS

SHEET

E-4.2

176.41.100

H.P.E. INC. ELECTRICAL ENGINEERS
POWER SYSTEMS, CONTROL & INSTRUMENTATION SYSTEMS
HEGERHORST POWER ENGINEERING INCORPORATED (801) 642-2051
708 EAST 50 SOUTH
AMERICAN FORK, UT 84003
HPE PROJECT:22.049
FOR INFORMATION ABOUT THIS JOB, PLEASE CONTACT: KEITH HEGERHORST

VAULT POWER PLAN ITEMS

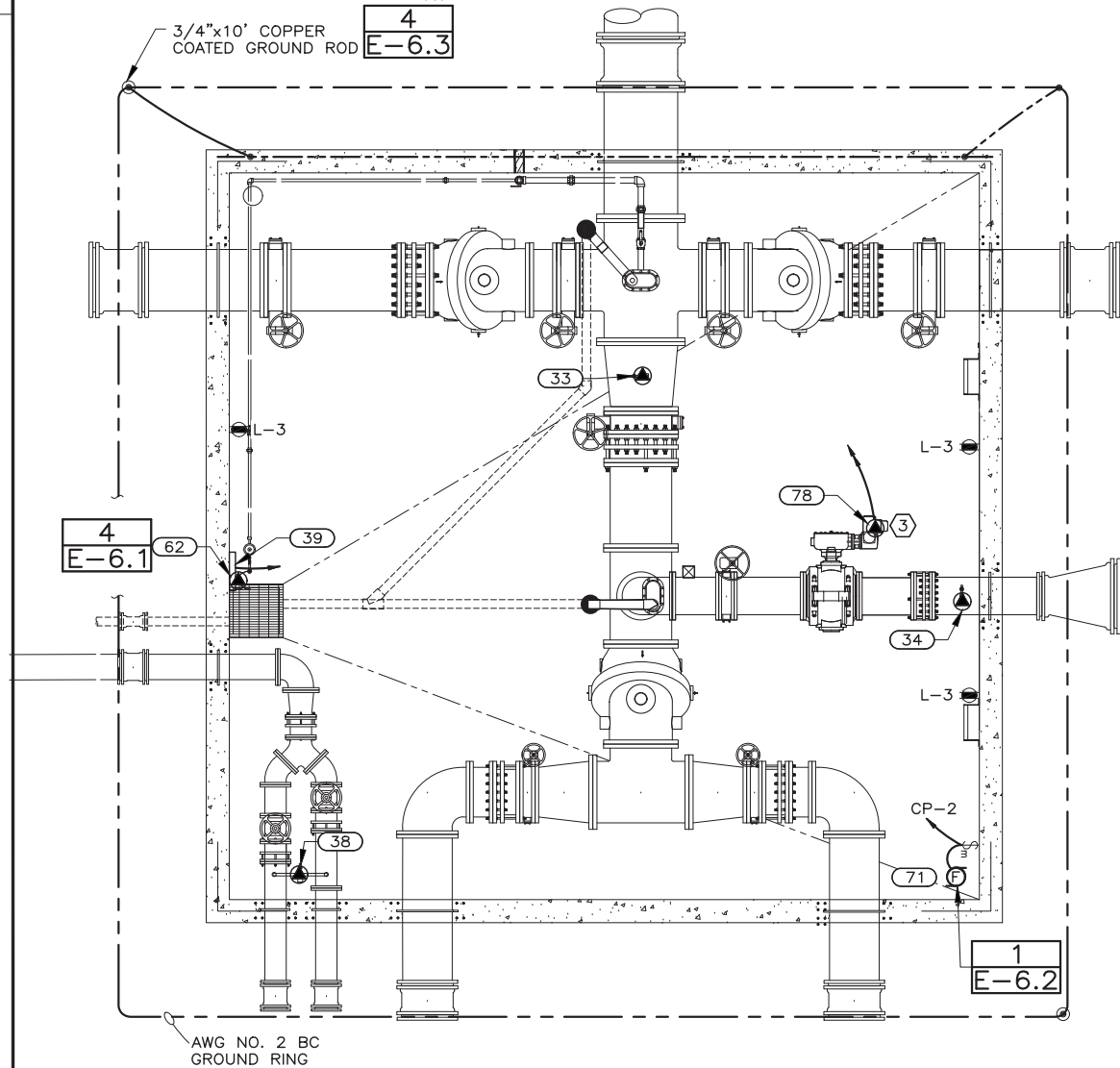
DRAWING ID	TAG	DESCRIPTION	POWER SOURCE	LOCATION
10	CP-1/RTU	MIXER SEADA RIU-FW3 OSURF	I-2	VALVE VAULT I
11	CP-2	EXHAUST FAN CONTROL PANEL	L-4,6	VALVE VAULT
15	PNL L	PANELBOARD L	HP	VALVE VAULT
21	CP-3	CCTV ENCLOSURE	L-12	VALVE VAULT
33	PT-1	PRESSURE TRANSMITTER	CP-1/RTU	VALVE VAULT
34	PI-2	PRESSURE TRANSMITTER	CP-1/RTU	VALVE VAULT I
38	PI-3	PRESSURE TRANSMITTER	CP-1/RTU	VALVE VAULT I
39	AIT 1	CHLORINE ANALYZER	L-1	VALVE VAULT
41	MXCP-1	MIXER CONTROL PANEL 1	L-7	VALVE VAULT
42	MXCP-2	MIXER CONTROL PANEL 2	L-9	VALVE VAULT
52	ZS-2A	STAIR HATCH POSITION SWITCH	CP-1/RTU	VALVE VAULT
54	ZS-2C	EQUIPMENT HATCH POSITION SWITCH	CP-1/RTU	VALVE VAULT I
55	ZS-2D	EQUIPMENT HATCH POSITION SWITCH	CP-1/RTU	VALVE VAULT I
56	ZS-2E	EQUIPMENT HATCH POSITION SWITCH	CP-1/RTU	VALVE VAULT
57	ZS-2F	EQUIPMENT HATCH POSITION SWITCH	CP-1/RTU	VALVE VAULT
62	LSII-1	VAULT FLOOR LEVEL WATER LEVEL SWITCH	CP-1/RTU	VALVE VAULT
71	CF-1	EXHAUST FAN	CP-2	VALVE VAULT
76	HE-1	EXHAUST FAN HORN SWITCH	CP-2	VALVE VAULT I
78	VA-1	BAIT VALVE ACTUATION	I-8,10	VALVE VAULT I

GENERAL NOTES:

- FOR POWER SOURCE OR "HOME RUN" REFER TO THE ITEM LIST TABLE. REFER TO THE PANELBOARD SCHEDULE OR POWER ONE-LINE DIAGRAM FOR A CIRCUIT ID, THEN REFER TO THE CONDUIT/CONDUCTOR TABLE ON E-1.2.
- CONDUIT PENETRATIONS INTO VAULT SHALL HAVE A MINIMUM OF 18-INCHES OF GROUND COVER. DO NOT INSTALL CONDUITS THROUGH VAULT ROOF DECK.
- INSTALL RECEPTACLES AT +36-IN ABOVE FINISHED FLOOR OR PLATFORM LEVEL.

SHEET KEYNOTES:

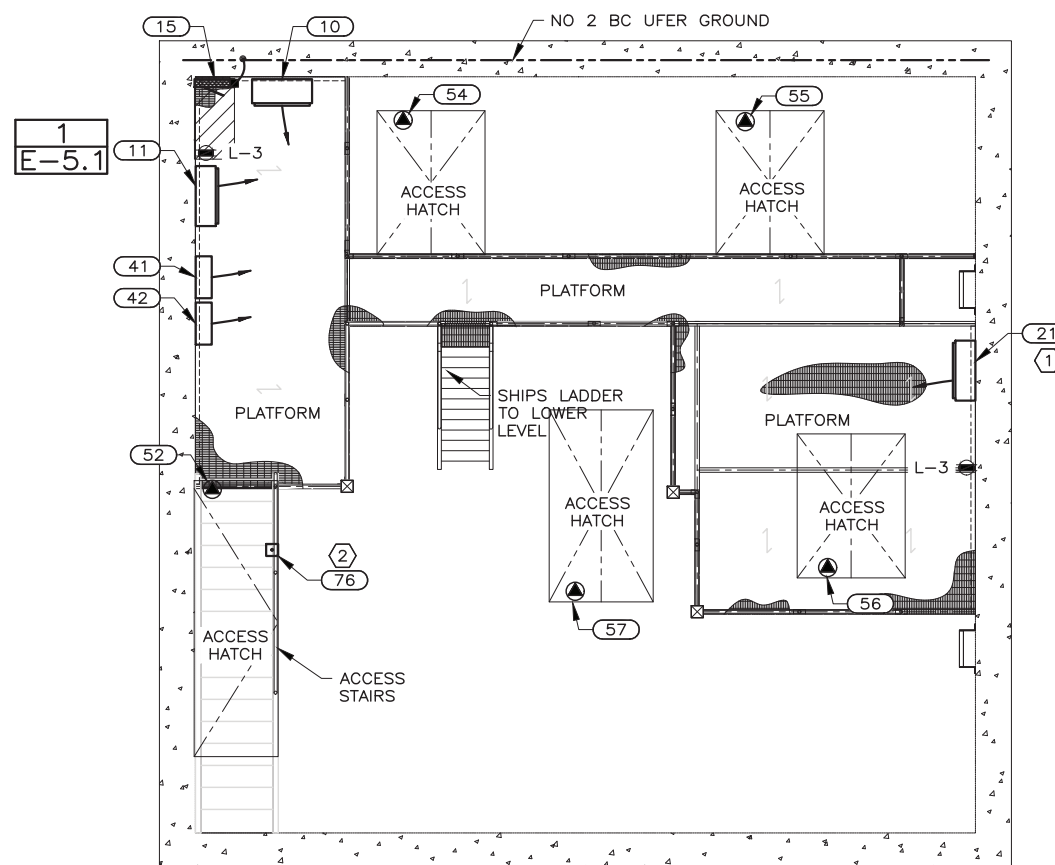
- PROVIDE AND INSTALL A 36"HX30"WX12"D STEEL ENCLOSURE WITH INTERNAL MOUNTING PANEL. LABEL AS CP-3 CCTV EQUIPMENT.
- INSTALL SWITCH SO AN OPERATOR CAN ACCESS THE SWITCH WITHOUT ENTERING THE VAULT.
- VALVE IS ON PLATFORM LEVEL. REFER TO SECTION 1/C-11 FOR LOCATION.



LOWER LEVEL PLAN

1

E-4.1
1/4" = 1'-0"



PLATFORM LEVEL PLAN

2

E-4.1
1/4" = 1'-0"





10/07
FILE NAME:
FILE DATE:



PROJECT ENGINEER

DESIGNED	KBH	3		
DRAFTED	KBH	2		
CHECKED	KBH	1		
DATE	SEPT. 2022	NO.	DATE	

REVISIONS

BY	APVD.
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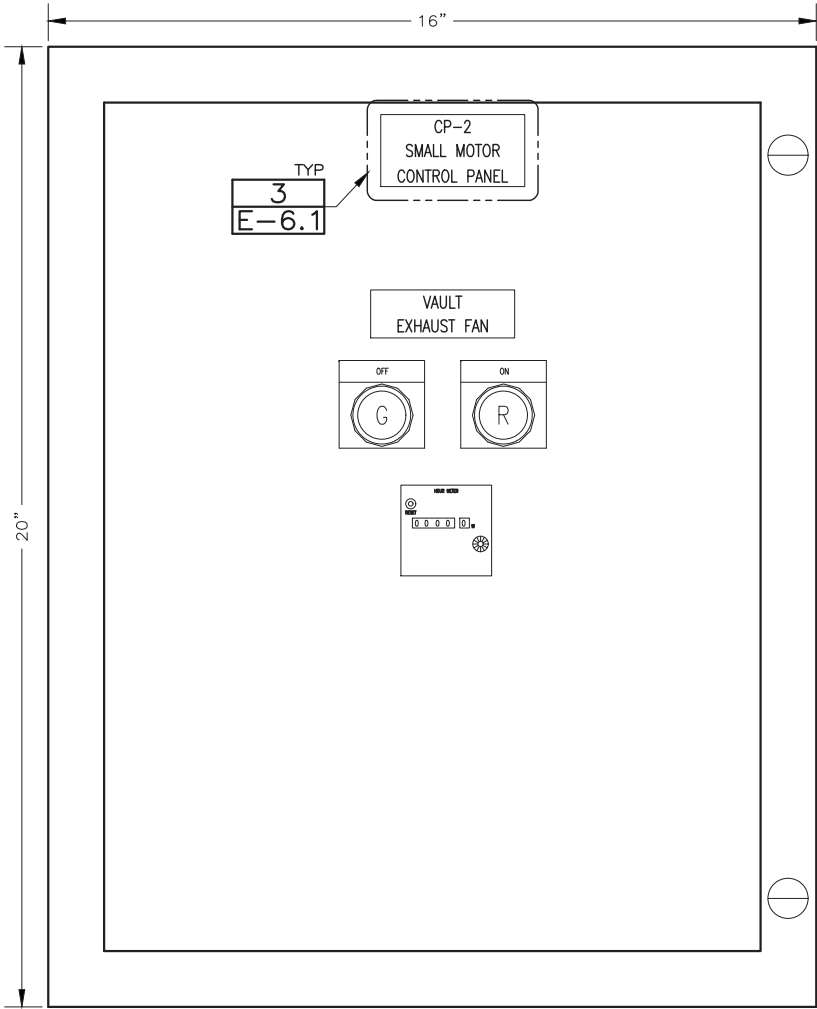
SCALE
AS
SHOWN

SOUTH JORDAN CITY
1600 WEST TOWNE CENTER DRIVE
SOUTH JORDAN, UTAH 84095



ZONES 7 & 8 – 8.4 MG TANK
ELECTRICAL
ENCLOSURE ARRANGEMENTS

SHEET
E-5.1
176.41.100



CP-2 ARRANGEMENT

1

6" = 1'-0"

E-4.2

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GENERAL NOTES:

1. CONTRACTOR SHALL DETERMINE ENCLOSURE DIMENSIONS BASED ON COMPONENTS SELECTED. SIZE SHOWN IS APPROXIMATE. INTERNAL ARRANGEMENT DETERMINED BY CONTRACTOR.
2. CP-2 TYPICAL CONTROL DIAGRAM SHOWN ON E2.2.

SHEET KEYNOTES:

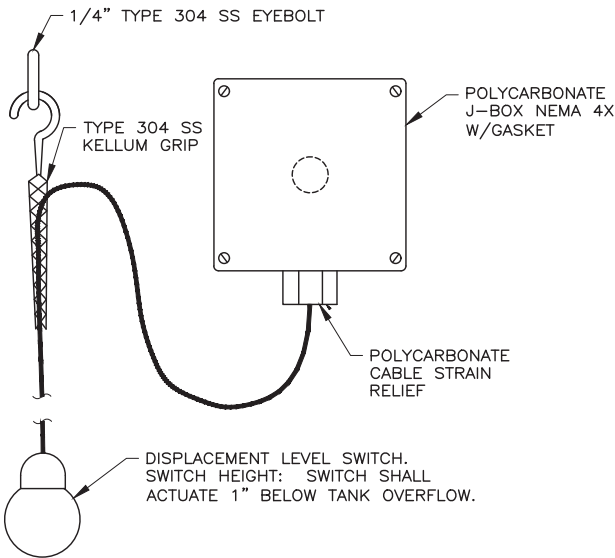
1. CP-2 ENCLOSURE SHALL INCLUDE THE TIME SWITCH.

GENERAL NOTES:

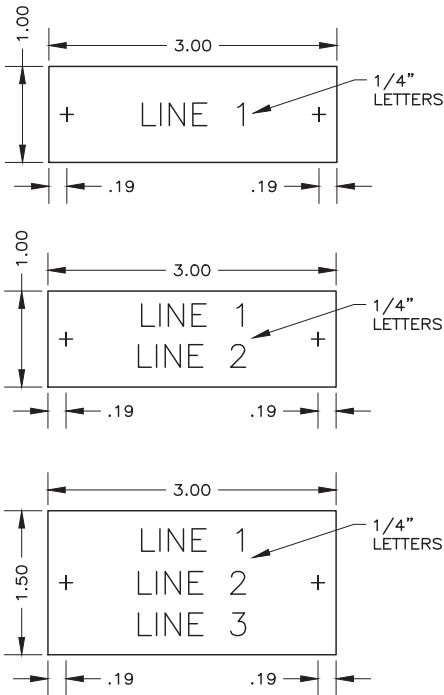
1. STANDARD ELECTRICAL DETAILS. HATCH CONSTRUCTION MAY NOT MATCH. MODIFY AS REQUIRED.

SHEET KEYNOTES:

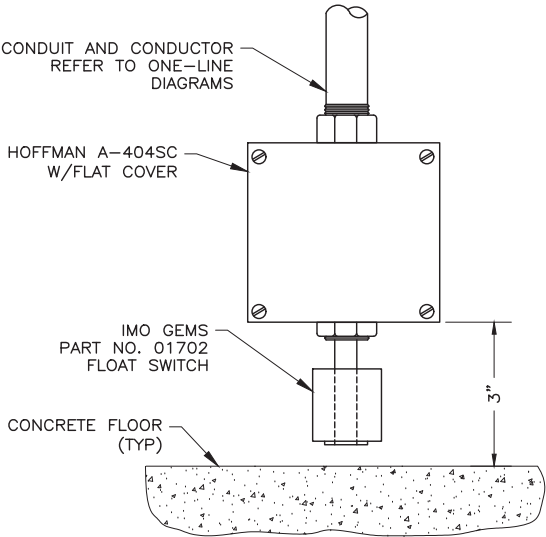
1. HEIGHT OF LEVEL SWITCH SHALL BE PROVIDED DURING CONSTRUCTION.
2. TWO HATCH POSITION SWITCHES SHOWN IN THIS PHOTO. CONTRACTOR SHALL INSTALL ONLY ONE POSITION SWITCH ON THE PRIMARY HATCH DOOR. PLUNGER SWITCH SHALL BE ACTUATED WITH HATCH HOLD-OPEN BRACKET WHEN HATCH IS CLOSED.
3. LOCATE ALL J-BOXES ON SECURE SIDE OF HATCH.
4. SEAL CONDUIT PENETRATION WITH SEALANT.



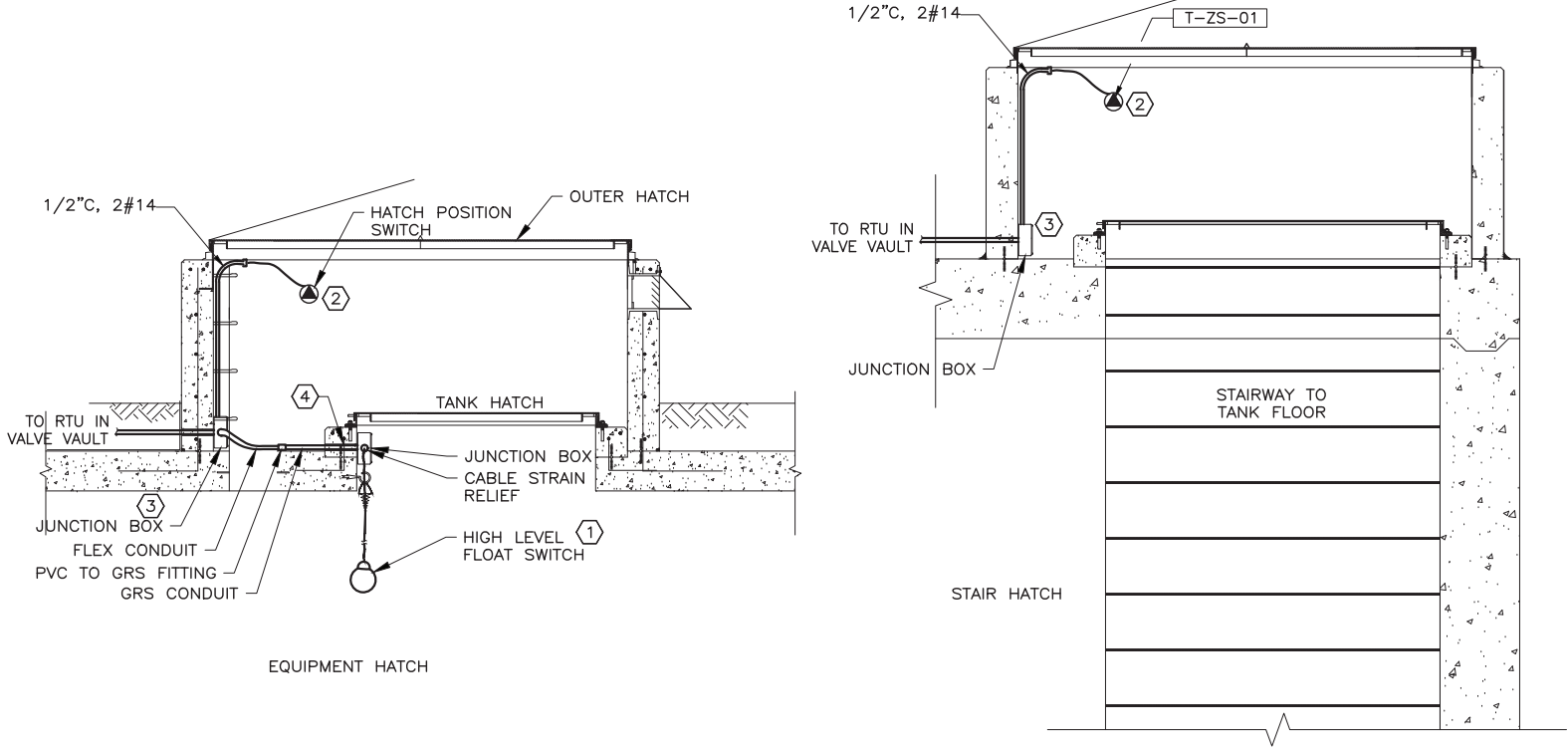
FLOAT SWITCH INSTALLATION 2
6" = 1'-0" E-4.1



NAMEPLATES 3
1' = 1'-0" E-5.1



FLOOR LEVEL SWITCH 4
6" = 1'-0" E-4.2



TANK HATCH SWITCH INSTALLATION 1
1/2" = 1'-0" E-4.1



(TYPICAL HATCH INTRUSION SWITCH INSTALLATION)

PHOTO 1 2

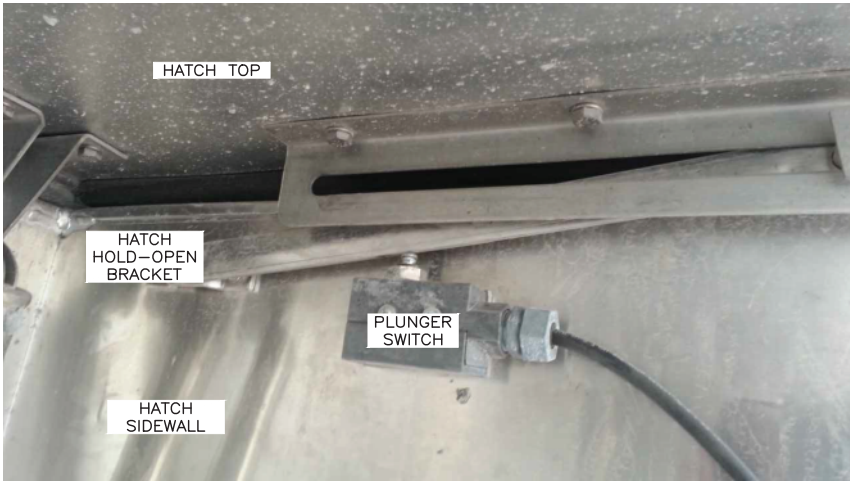


PHOTO 2

10/07
FILE NAME:
FILE DATE:

HANSEN
ALLEN
& LUCE
ENGINEERS



PROJECT ENGINEER

DESIGNED	KBH	3			
DRAFTED	KBH	2			
CHECKED	KBH	1			
DATE	SEPT. 2022	NO.	DATE		

REVISIONS

BY APVD.

SCALE
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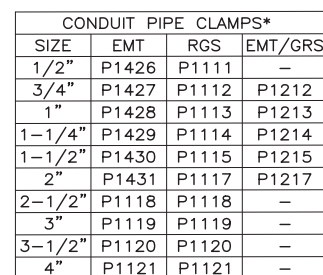


ZONES 7 & 8 - 8.4 MG TANK
ELECTRICAL
DETAILS SHEET 1

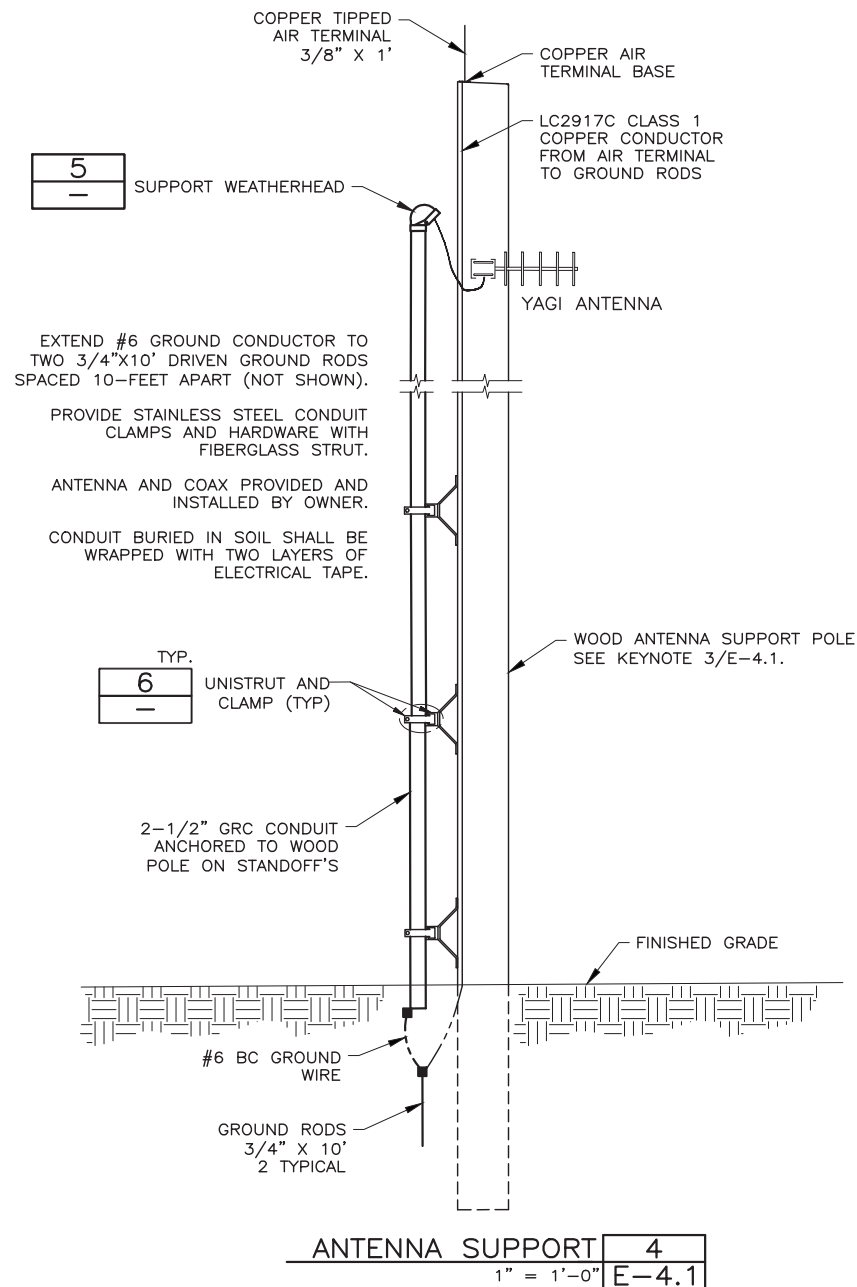
SHEET

E-6.1

176.41.100



* = SUPPLIED WITH SLOTTED
HEAD SCREW AND NUT



FILE NAME:
FILE DATE:



PROJECT ENGINEER

DESIGNED	KBH	3	
DRAFTED	KBH	2	
CHECKED	KBH	1	
DATE	SEPT. 2022	NO.	DATE

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ZONES 7 & 8 - 8.4 MG TANK
ELECTRICAL
DETAILS SHEET 2

SHEET
E-6.2
176.41.100



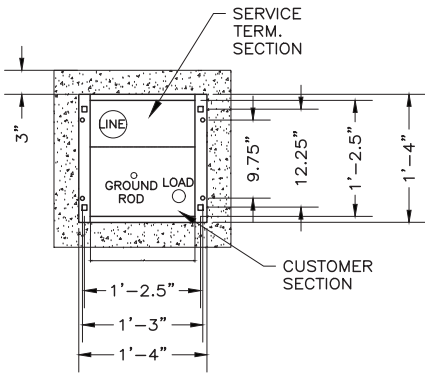
SCALE AT 1" = 1'-0"

3" RECOMMENDED MIN. FOUNDATION EXTENSION ALL SIDES.

6-INCH RECOMMENDED MINIMUM FOUNDATION DEPTH BELOW GRADE LEVEL

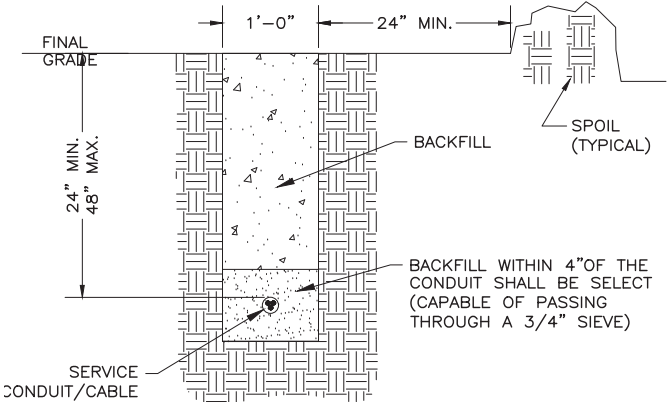
36" MIN. PEDESTAL CLEARANCE TYPICAL FRONT & BACK REQUIRED PER N.E.C. 110-16

(4) 5/8-11 X 8 (450mm 16UNC) ANCHOR BOLTS RECOMMENDED

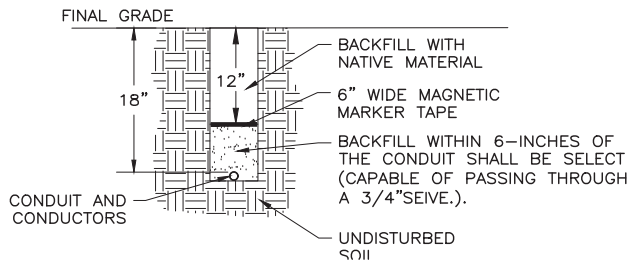


MOUNTING BASE
DETAIL

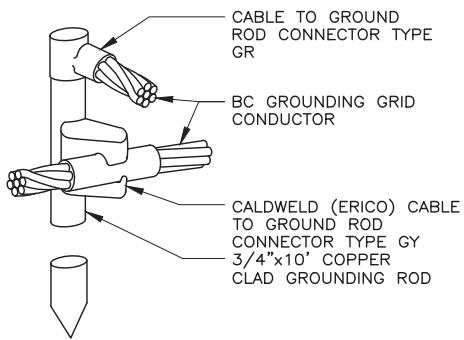
- PEDESTAL MOUNTING HOLES
- ANCHOR BOLT MOUNTING HOLES



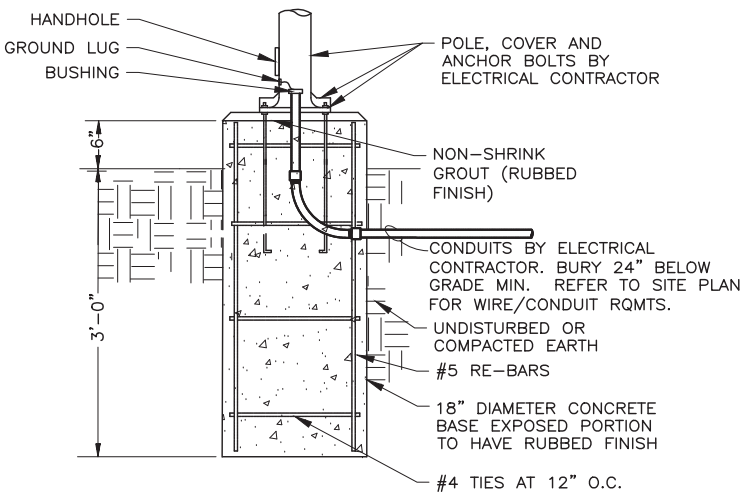
RMP PRIMARY CONDUIT TRENCH 2
1" = 1'-0" E-4.1



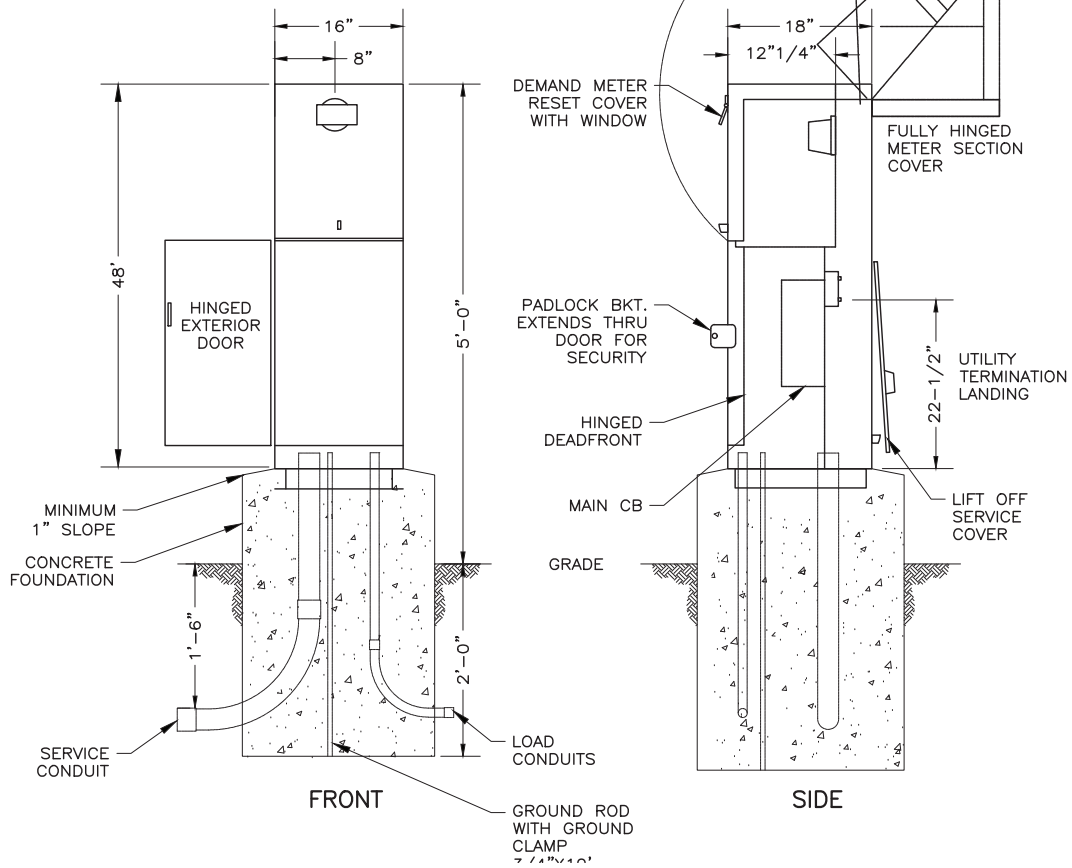
SECONDARY SERVICE CONDUIT TRENCH 3
1" = 1'-0" E-4.1



GROUND ROD INSTALLATION 4
6" = 1'-0" E-4.2



POLE BASE DETAIL 5
1" = 1'-0" E-4.1



METERING PEDESTAL 1
1" = 1'-0" E-4.1

10/07
FILE NAME:
FILE DATE: