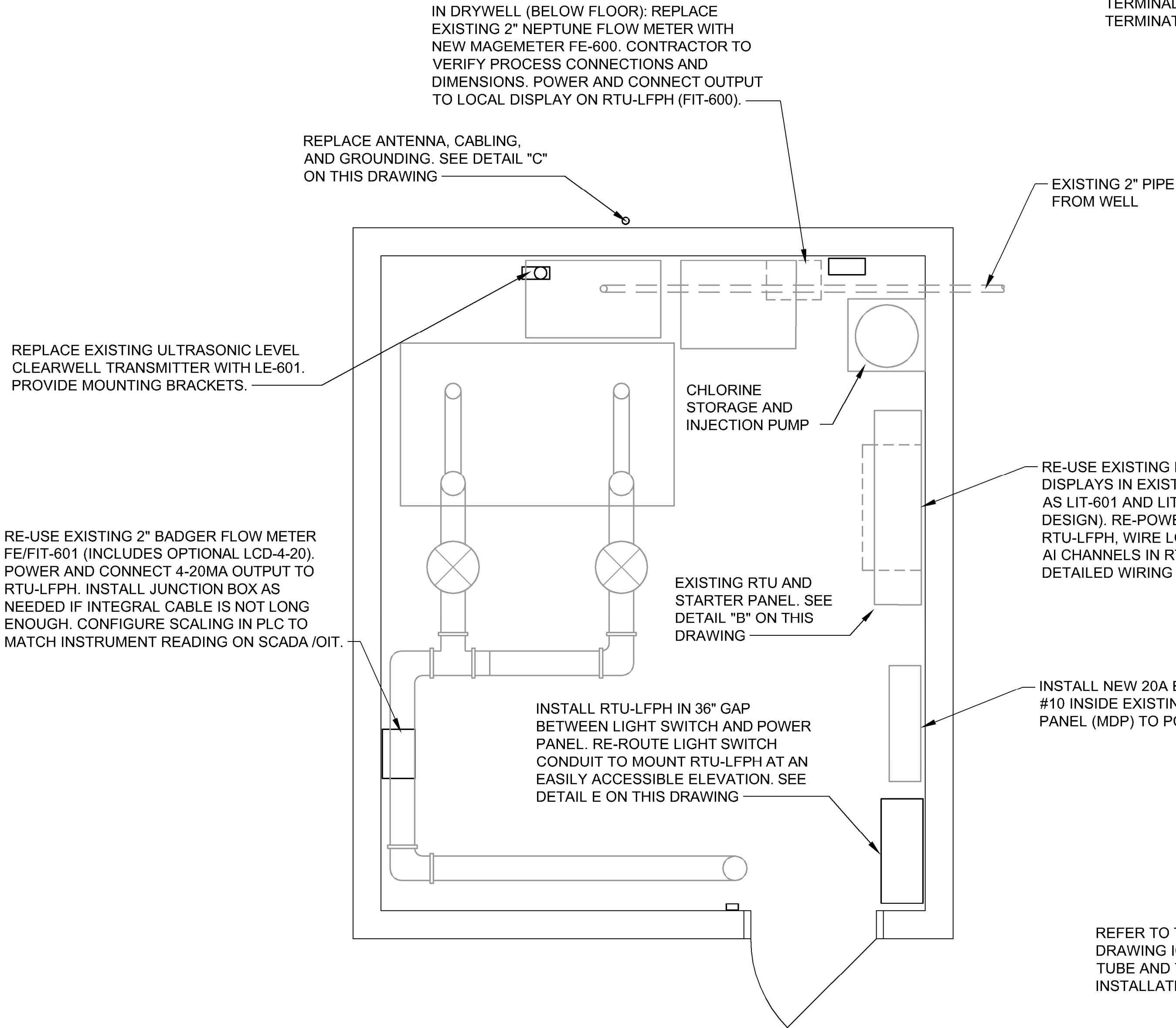


701021206-6-22P(D)/5C: PROJECT 29964.12 3967 AutoD64632093B:1037M/P: CURE1318472DRAWINGS/CIVIL/CURE-104_220.dwg



DETAIL A - PUMP HOUSE PLAN
SCALE: 1/2"=1'-0"

NOTE:
SEE SHEET I04.200 FOR OVERALL LOCATION MAP

REMOVE RTU EQUIPMENT INSIDE EXISTING PANEL, INSTALL MARSHALLING TERMINAL STRIP. EXTEND ALL I/O TO NEW RTU-LFPH. FOR TERMINAL STRIP DETAILS, REFER TO I/O TERMINATION DRAWINGS I04.224 AND I04.226.

EXISTING 2" PIPE FROM WELL

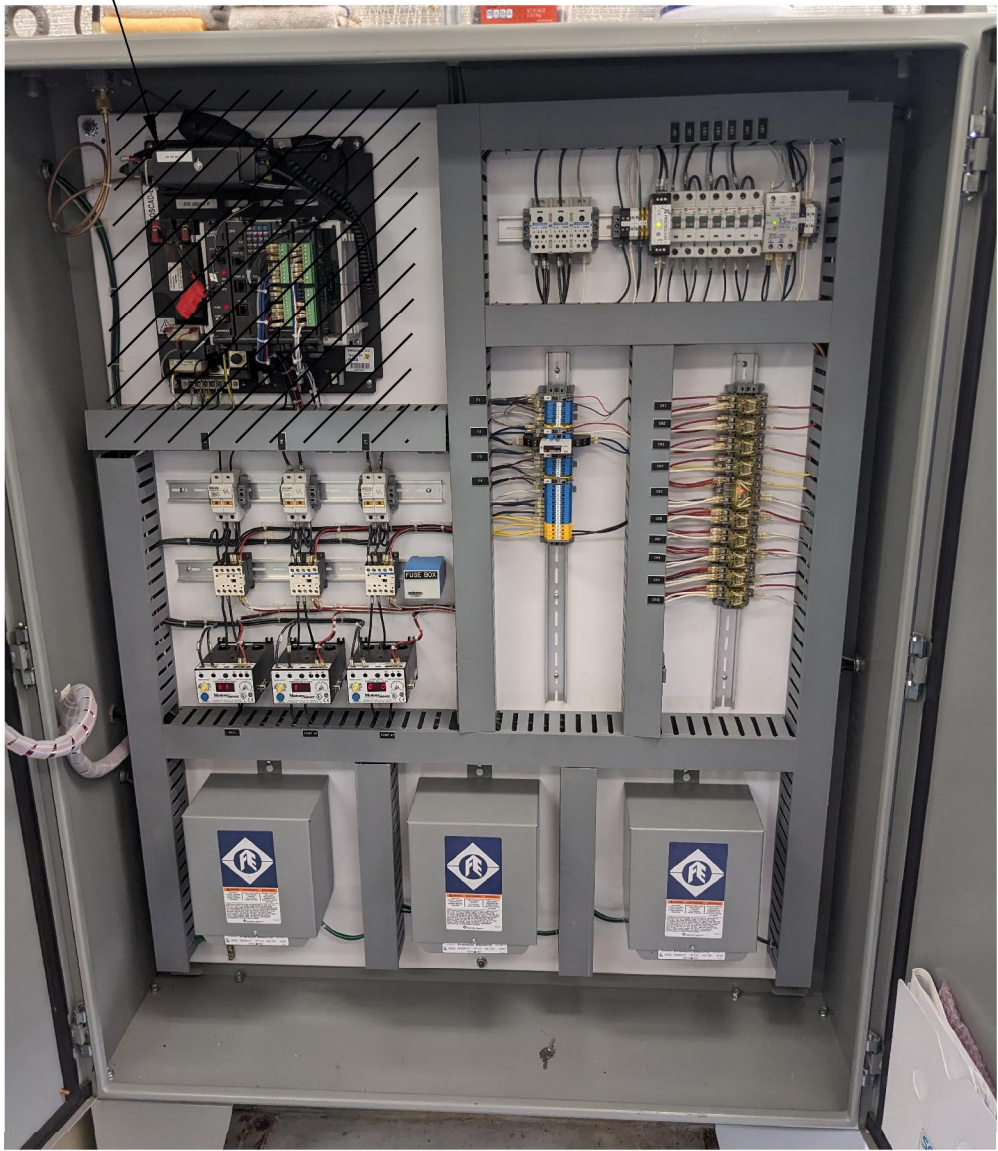
RE-USE EXISTING RED LION DISPLAYS IN EXIST RTU#6 (TAGGED AS LIT-601 AND LIT-604 IN THIS DESIGN). RE-POWER LOOPS FROM RTU-LFPH, WIRE LOOPS THROUGH AI CHANNELS IN RTU-LFPH. SEE DETAILED WIRING DIAGRAM I04.226.

INSTALL NEW 20A BREAKER IN CKT #10 INSIDE EXISTING POWER PANEL (MDP) TO POWER RTU-LFPH

REFER TO TYPICAL DETAIL "A" ON DRAWING I04.400 FOR MONITOR TUBE AND TRANSDUCER INSTALLATION

MOUNT NEMA 4 JUNCTION BOX AT WELL HEAD, SO THAT TRANSDUCER CAN BE REPLACED WITHOUT RE-RUNNING CABLE BACK TO WELLHOUSE. SHORTEN INTEGRAL TRANSDUCER CABLE WITH MANUFACTURER CABLE SHORTING KIT, CAPPING THE PRESSURE COMPENSATION TUBE WITH FILTER PER MANUFACTURER INSTALLATION MANUAL

RUN ONE #16TSP TO LIT-600 IN UNDERGROUND 3/4" PVC



DETAIL B - EXISTING RTU (INTERIOR)
SCALE: NONE

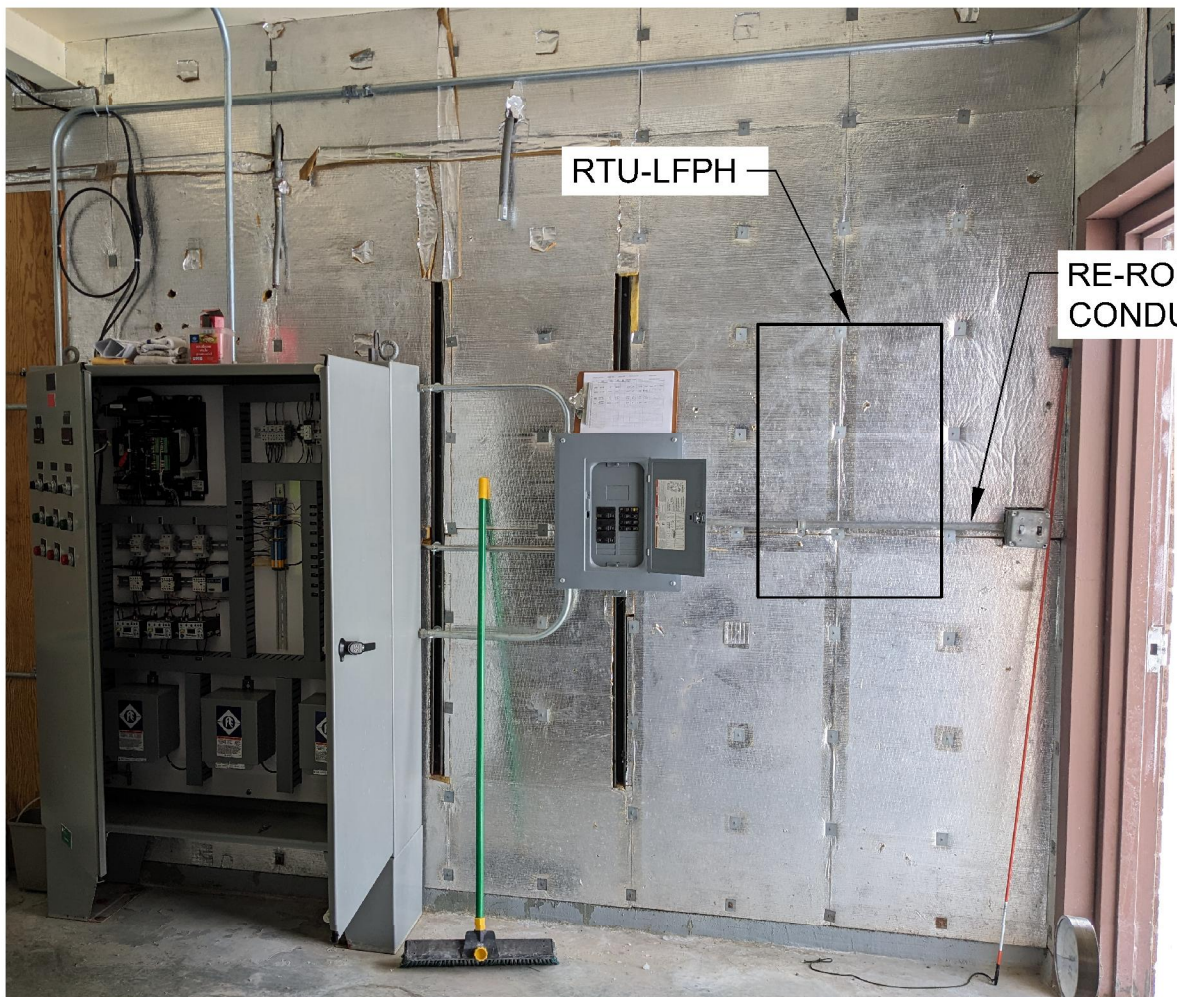


DETAIL D - EXISTING WELL
SCALE: NONE

REPLACE ANTENNA, GROUND KIT, AND COAX CABLING BACK TO RTU. RE-USE EXISTING GROUNDING CONNECTION AND MAST. WEATHERPROOF ALL COAX CONNECTORS IN OUTSIDE LOCATIONS. REFER TO RADIO SPECIFICATION 40 66 63-13 AND RADIO DETAILS ON I04.401 FOR ANTENNA AND CABLE SPECIFICATIONS, INCLUDING ANTENNA CENTERLINE AND AZIMUTH.

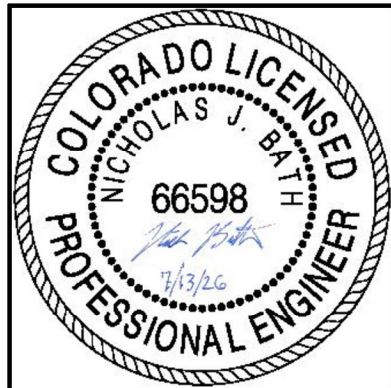


DETAIL C - EXISTING ANTENNA
SCALE: NONE



DETAIL E - RTU MOUNTING LOCATION
SCALE: NONE

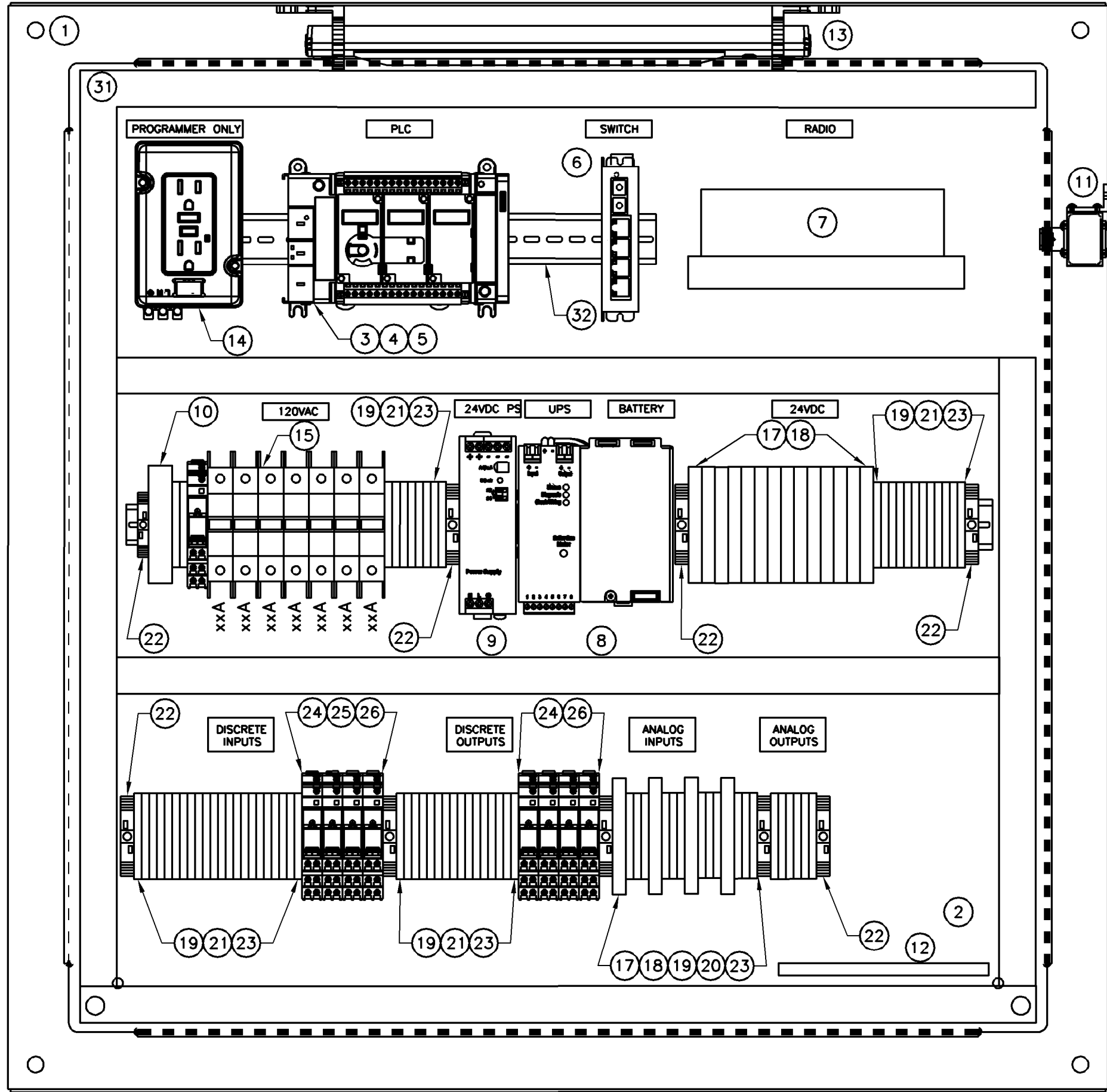
1/2"=1'-0" 1' 0 1' 2' 3' 4' 5'



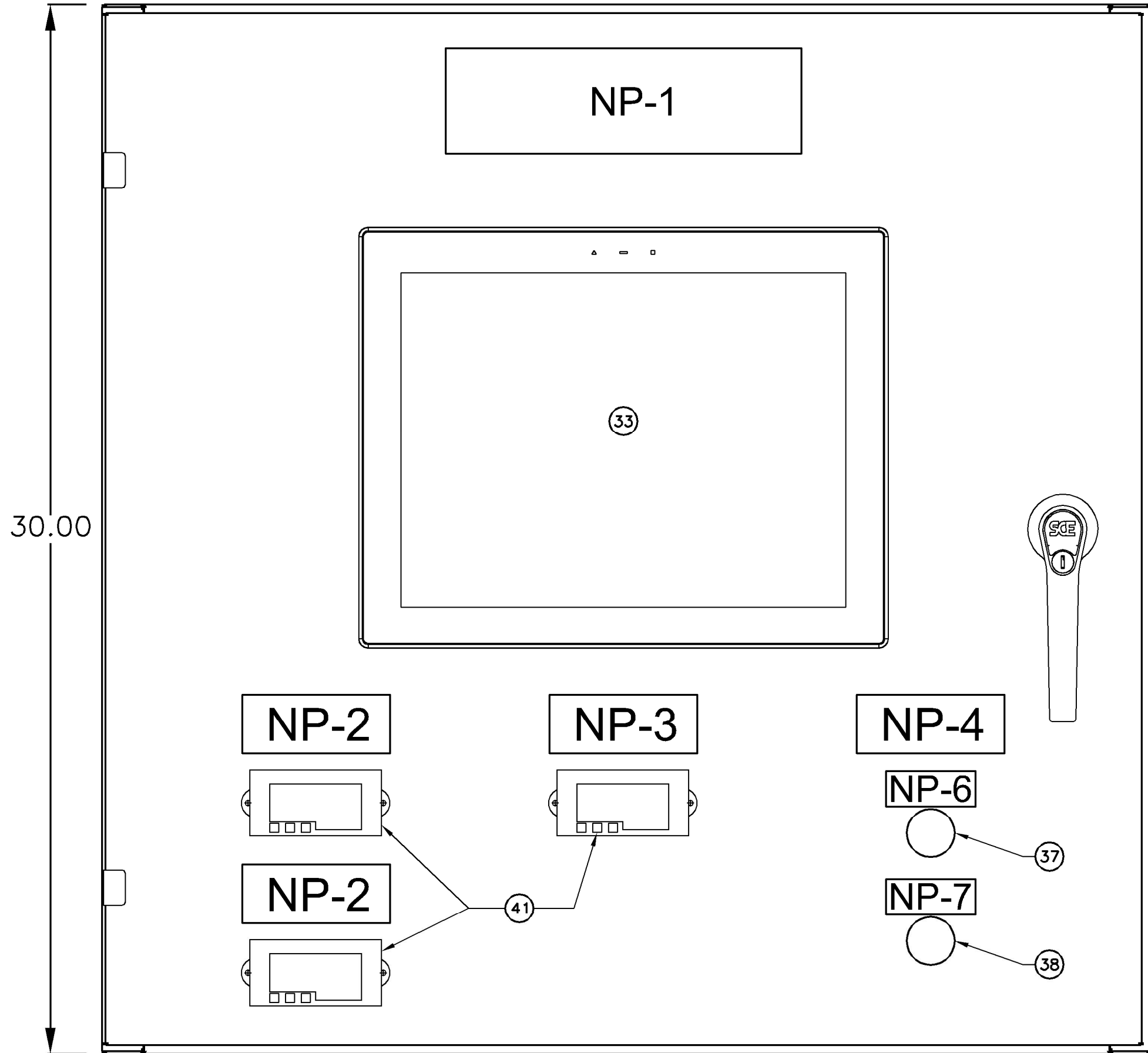
A/E FIRM	DESIGNED:	SUB SHEET NO.
PRIME:	NJB	
STANLEY CONSULTANTS, INC.	CADD	
Phoenix, Arizona	BKG	
	TECH. REVIEW:	
	TTV	
	DATE:	
	JULY 13, 2026	

TITLE OF SHEET	DRAWING NO.
LAKE FORK PUMPHOUSE I&C LOCATION PLAN	616
CURECANTI NATIONAL RECREATION AREA	187471
PKG. NO.	SHEET
318-472	154
	OF 183

7/13/2026 8:43 PM SCI PROJECT 29964.12 3967 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\04_222.dwg



PANEL INTERIOR LAYOUT
SCALE: NONE



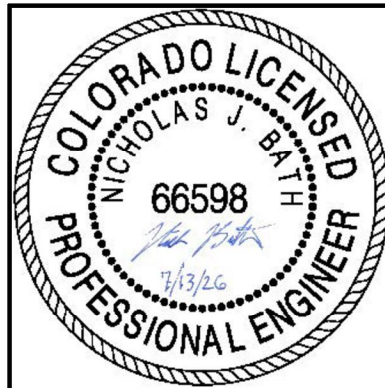
PANEL EXTERIOR LAYOUT
SCALE: NONE

ITEM	QTY	DESCRIPTION	SPECIFICATION	MANUF. (SEE NOTE 1)	MODEL
1	1	NEMA 4X ENCLOSURE, HANDLE LOCK, 30" X 30" X 12"	40 67 00	SAGINAW	SCE-30EL3012SSLPPL
2	1	SUBPANEL, 30" X 30"	40 67 00	SAGINAW	SCE-30P30
3	1	PLC WITH INTEGRAL I/O, 24VDC POWERED, MIN. 14 24VDC DISCRETE INPUTS, 10 RELAY OUTPUTS, 1-10/100 BASE-T ETHERNET PORT, SUPPORT FOR MODBUS TCP/IP, 1 RS-232/485	40 63 43		
4	1	4-CHANNEL ANALOG INPUT CARD	40 63 43	ALLEN BRADLEY	2080-L70E-QWB
5	1	2-CHANNEL ANALOG OUTPUT CARD	40 63 43	ALLEN BRADLEY	2080-IF4
6	1	INDUSTRIAL ETHERNET SWITCH, DIN RAIL MOUNTED, UNMANAGED, 24VDC POWERED, 4 RJ-45 10/100 BASE-TX PORTS, 1 FIBER PORT 100BASE-FX, MULTIMODE	40 62 00	RED LION	SLX-5ES-2ST
7	1	VHF RANGE ETHERNET RADIO, COAX PORT, QTY 2 - 10/100 BASE-T ETHERNET PORTS	40 66 63-13	APRISA	SR+
8	1	24VDC UPS, 24VDC IN, 24VDC OUT, 10A, WITH 12V 5AH BATTERY	40 67 00	PULS	UB10.241 & UBC10.241-N1
9	1	24VDC POWER SUPPLY, 10A/240W	40 67 00	PULS	CP10.241
10	1	SURGE SUPPRESSOR	40 67 00	PHOENIX CONTACT	PLUGTRAB
11	1	RADIO FREQUENCY SURGE PROTECTOR	40 66 63-13	POLYPHASOR	VHF50HN-B
12	1	GROUNDING BAR	40 67 00		
13	1	ENCLOSURE LIGHT WITH MOTION DETECTOR, 120VAC	40 67 00	PHOENIX CONTACT	PLD E 409 350 MS
14	1	DUPLEX RECEPTACLE	40 67 00	ALLEN BRADLEY	1492-REC15
15	AS NEEDED	AC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1492-D1CXXX
16	AS NEEDED	DC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1489-M1CXXX
17	AS NEEDED	24VDC FUSES, AS NEEDED	40 67 00	BUSSMAN	
18	AS NEEDED	FUSED TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-H4
19	AS NEEDED	FEED-THROUGH TERMINAL BLOCK, 600V, 25A	40 67 00	ALLEN BRADLEY	1492-J3
20	AS NEEDED	GROUNDING TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-JG3
21	AS NEEDED	TERMINAL BLOCK JUMPERS	40 67 00	ALLEN BRADLEY	1492-CJ5-10
22	AS NEEDED	TERMINAL BLOCK ANCHORS	40 67 00	ALLEN BRADLEY	1492-EAJ35
23	AS NEEDED	TERMINAL BLOCK END BARRIER	40 67 00	ALLEN BRADLEY	1492-EBJ3
24	AS NEEDED	24VDC RELAYS AND RELAY BASES, INTERPOSING, 6A CONTACTS, SPDT	40 67 00	ALLEN BRADLEY	700-HLT12Z24
25	AS NEEDED	120VAC RELAYS	40 67 00	ALLEN BRADLEY	700-HL
26	AS NEEDED	RELAY END BARRIERS	40 67 00	ALLEN BRADLEY	700-HN177
27	AS NEEDED	CAT6 CABLE	40 67 00		
28	AS NEEDED	COAX CABLE	40 66 63-13	TIMES MICROWAVE	LMR-400-DB
29	AS NEEDED	16AWG TSP CABLE	40 67 00		
30	AS NEEDED	14AWG MACHINE WIRE CABLE	40 67 00		
31	AS NEEDED	WIRE DUCT		PANDUIT	
32	AS NEEDED	DIN RAIL			
33	1	TOUCHSCREEN OPERATOR INTERFACE TERMINAL (OIT), COLOR, MIN 15", 24VDC POWERED, 1-10/100 BASE-T ETHERNET PORT	40 63 43	RED LION	CR30001500000420
34					
35					
36					
37	1	3-POSITION SELECTOR SWITCH, 4X, 30MM, 2 N.O. CONTACTS PER SWITCH POSITION	40 67 00	ALLEN BRADLEY	800H-JR2B
38	1	GREEN PILOT LIGHT, 4X, 120VAC, LED, PUSH-TO-TEST, 30.5MM	40 67 00	ALLEN BRADLEY	800H-QRTH2G
39					
40					
41	3	LOOP POWERED 24VDC 4-20MA ANALOG SIGNAL INDICATOR AND RE-TRANSMITTER	40 70 00-16	ENDRESS & HAUSER	RIA15
42					
43					
44					
45					
46					
47					
48					
49					
50					

BILL OF MATERIAL

ITEM	QTY	LINE1	LINE2	LINE3	LETTER SIZE
NP-1	1	CURECANTI NAT. REC AREA	LAKE FORK PUMPHOUSE	RTU-LFPH	1/4"
NP-2	1	WELL FLOW	FIT-600		3/16"
NP-3	1	WELL LEVEL	LIT-600		3/16"
NP-4	1	CHEMICAL PUMP	P-603		3/16"
NP-5	1	CLEARWELL PUMP FLOW	FIT-601		3/16"
NP-6	1	HAND-OFF-REMOTE			9/64"
NP-7	1	RUNNING			9/64"

NAMEPLATE SCHEDULE



A/E FIRM
PRIME
STANLEY CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.

104.222

TITLE OF SHEET

LAKE FORK PUMPHOUSE
RTU (LFPH) PANEL
LAYOUT & BOM

CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
155
OF 183

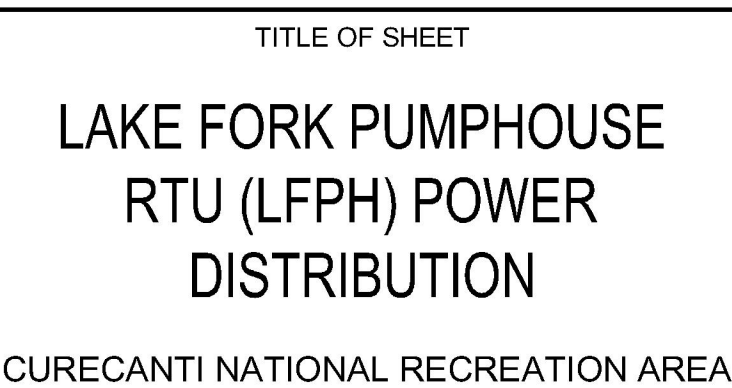
GENERAL NOTES:

- THE PURPOSE OF THIS DRAWING IS TO EXEMPLIFY THE EXPECTED COMPONENTS, GENERAL LAYOUT, AND PANEL SIZE. CONTRACTORS ARE NOT LIMITED TO THE EXAMPLE COMPONENTS DEPICTED ON THIS DRAWING. REFER TO DIVISION 40 SPECIFICATIONS FOR PANEL COMPONENTS AND FUNCTIONAL REQUIREMENTS OF EACH RTU.
- THE SIZE OF 24VDC POWER SOURCE IS A PRELIMINARY MINIMUM, BASED ON COMPONENTS USED AS A BASIS OF DESIGN. CONTRACTOR MAY UPSIZE POWER SOURCE IF CONTRACTOR-SELECTED COMPONENTS REQUIRE MORE POWER

LP-1, CKT #10
INSTALL 20A BREAKER IN EXIST POWER DISTRIBUTION PANEL



1. THIS IS A SCHEMATIC DRAWING TO DEMONSTRATE THE EXPECTED POWER DISTRIBUTION AND PROTECTION. THE SIZE OF ALL FUSES AND BREAKERS ARE BASED ON BASIS-OF-DESIGN COMPONENTS SHOWN IN THE BOM. CONTRACTOR TO PROVIDE AND SIZE CIRCUIT PROTECTION BASED ON MAXIMUM AMPERAGE OF ACTUAL CONTRACTOR-SELECTED COMPONENTS AND EXISTING FIELD DEVICES.



DRAWING NO.
616
187471

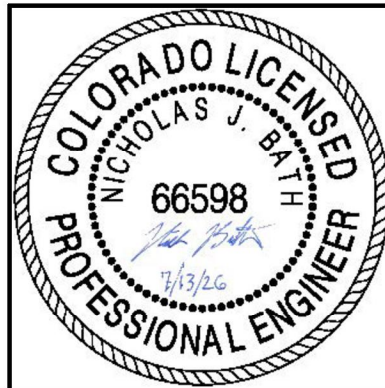
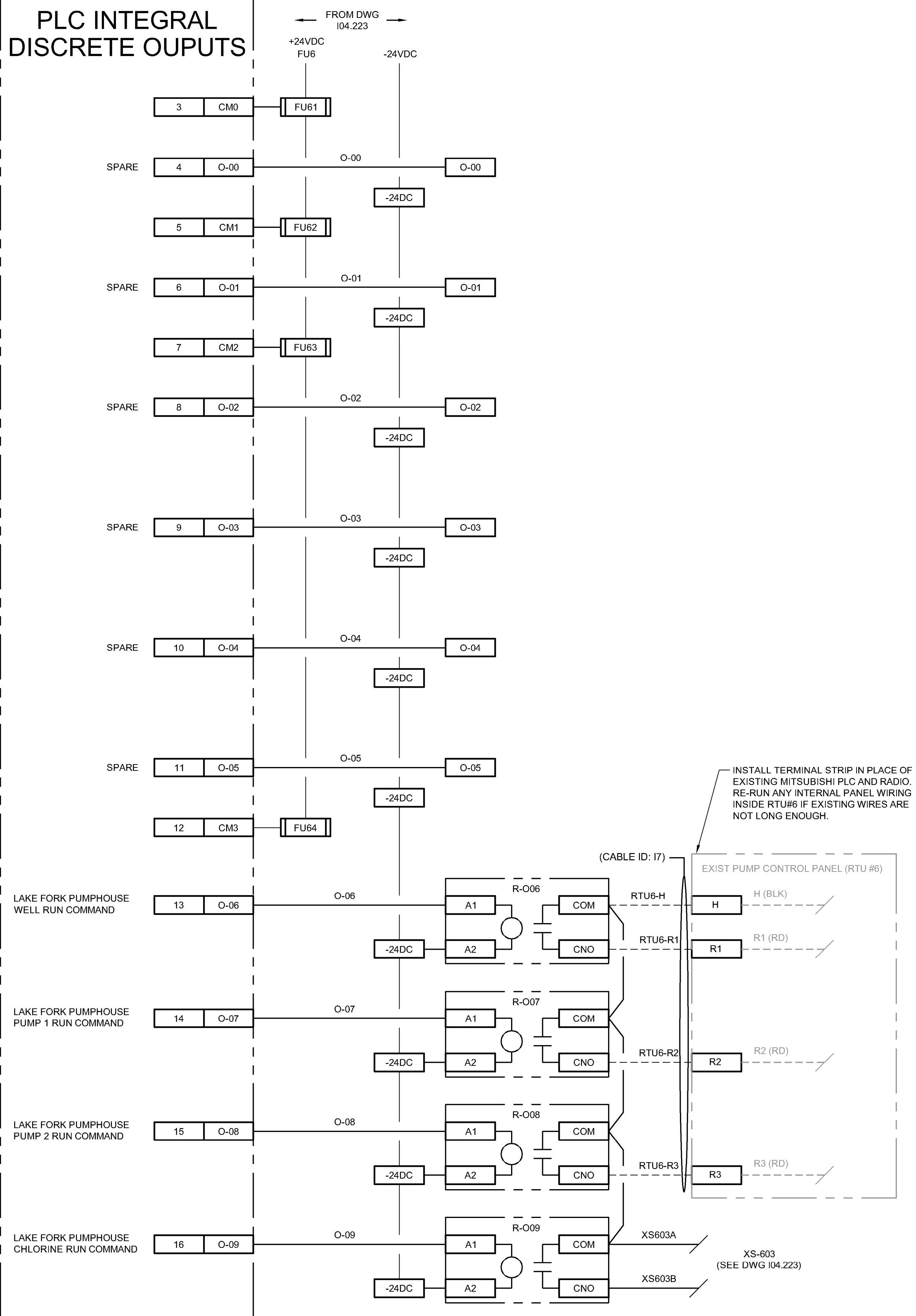
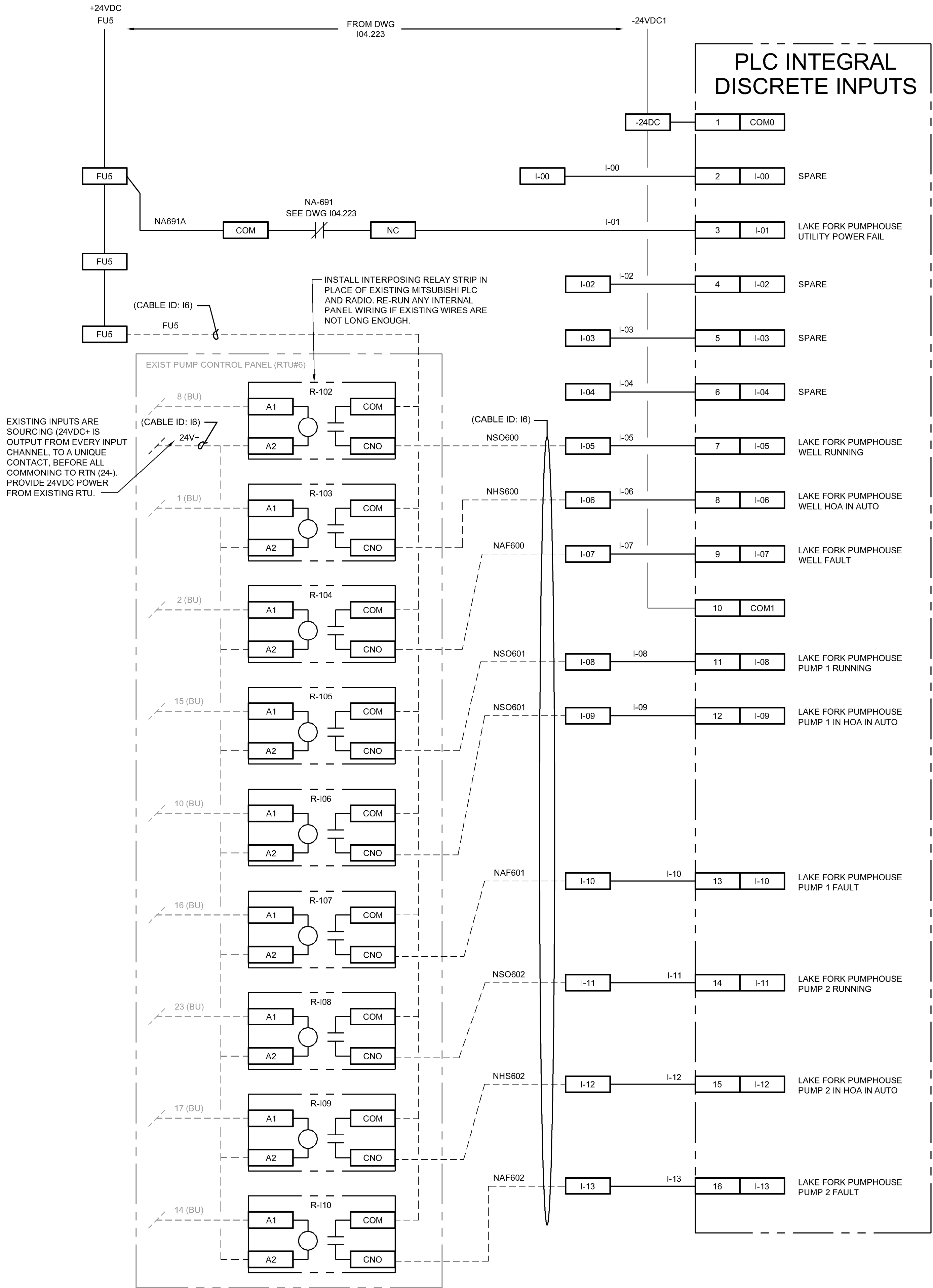
PKG.
NO.
318-
472

SHEET

156

OF 183

7/13/2026 8:43 PM SCI PROJECT 29964.12 3967 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\I04_224.dwg



A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
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TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.

104.224

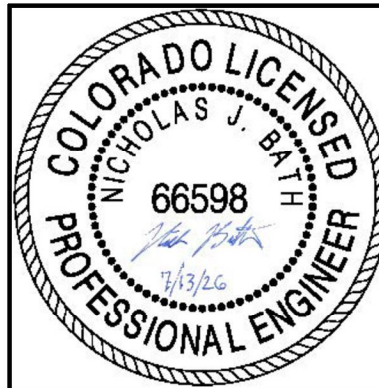
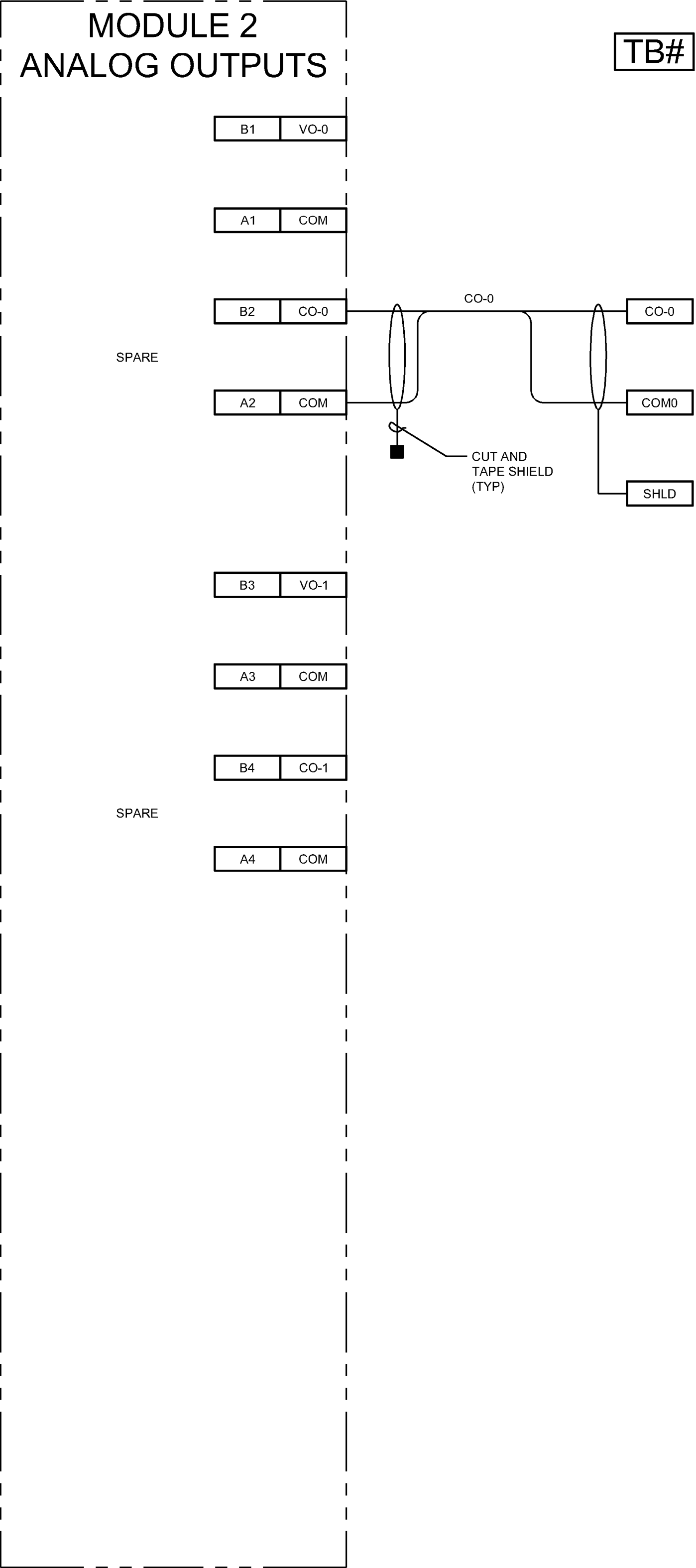
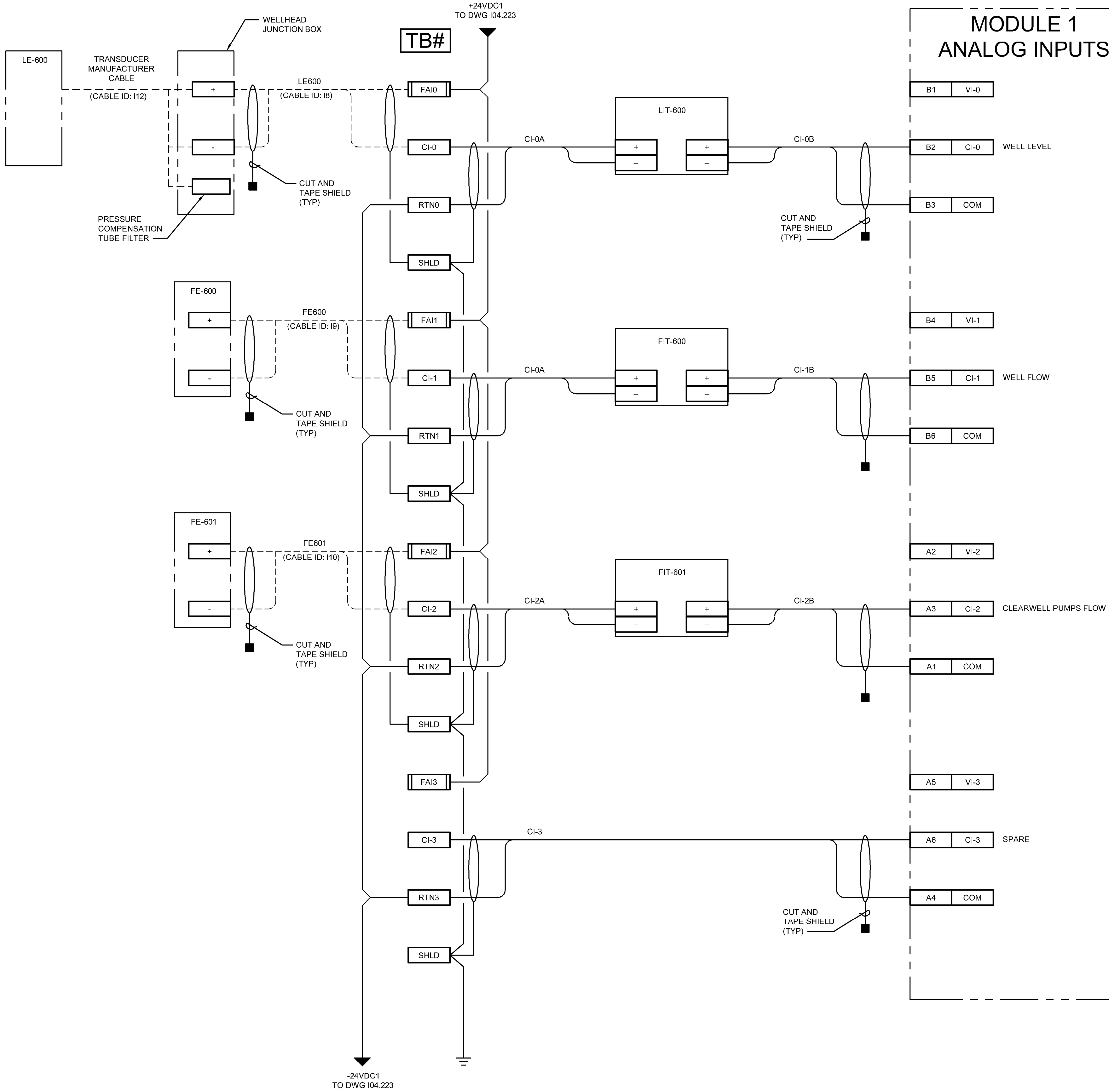
TITLE OF SHEET

LAKE FORK PUMPHOUSE
RTU (LFPH) DISCRETE IO
TERM

CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
157
OF 183

7/13/2026 8:44 PM SCI PROJECT 29964.12 3967 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\I04_225.dwg



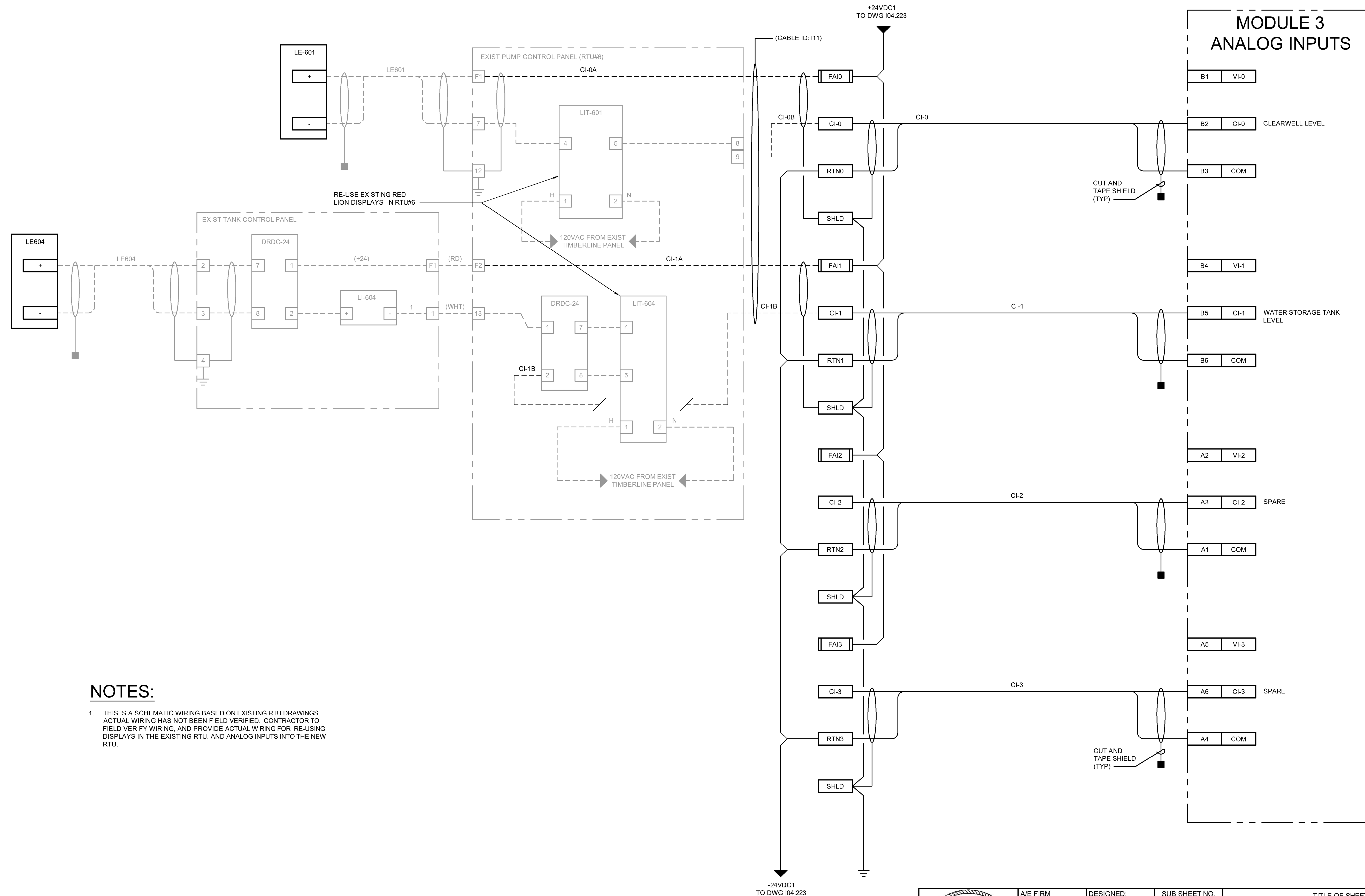
A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.
104.225

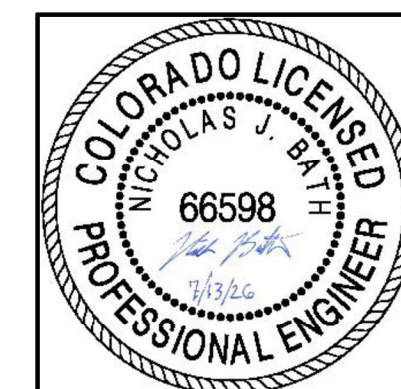
TITLE OF SHEET
LAKE FORK PUMPHOUSE
RTU (LFPH) ANALOG IO
TERM
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
158
OF 183



NOTES:

1. THIS IS A SCHEMATIC WIRING BASED ON EXISTING RTU DRAWINGS. ACTUAL WIRING HAS NOT BEEN FIELD VERIFIED. CONTRACTOR TO FIELD VERIFY WIRING, AND PROVIDE ACTUAL WIRING FOR RE-USING DISPLAYS IN THE EXISTING RTU, AND ANALOG INPUTS INTO THE NEW RTU.



A/E FIRM		DESIGNED:	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.		
PRIME:		NJB	104.226	LAKE FORK PUMPHOUSE RTU (LFPH) ANALOG IO TERM		616		
STANLEY CONSULTANTS, INC. Phoenix, Arizona		CADD				187471		
		BKG						
TECH. REVIEW:						PKG. NO.		SHEET
TTV						318- 472		159
DATE:						OF 183		
JULY 13, 2026				CURECANTI NATIONAL RECREATION AREA				

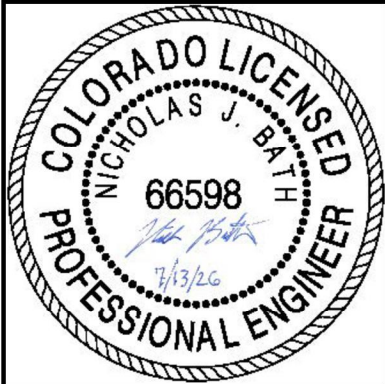
7/13/2026 8:44 PM SCI PROJECT 28964.12 8478 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\04_227.dwg

INSTRUMENTATION & CONTROLS CABLE SCHEDULE						
CABLE ID	CABLE TYPE (SEE NOTE 1)	CABLE SEGREGATION	FROM	TO	TERMINATION DRAWING	PURPOSE
I1	2C/#12 AWG+GND	120VAC	POWER DISTRIBUTION PANEL (EXIST)	RTU-LFPH	I04.223	RTU POWER
I2	2C/#12 AWG+GND	120VAC	POWER DISTRIBUTION PANEL (EXIST)	RTU-LFPH	I04.223	CHEM PUMP POWER
I3	2C/#12 AWG+GND	120VAC	RTU-LFPH	CHEMICAL DOSING PUMP RECEPTACLE P-603	I04.223	CHEM PUMP POWER
I4	COAX	N/A	RTU-LFLS	ANTENNA	I04.223	RADIO COMMS
I5						
I6	20C/#14	24VDC	RTU-LFPH	RTU#6 PUMP CONTROL PANEL (EXIST)	I04.224	I/O
I7	8C/#14	120VAC	RTU-LFPH	RTU#6 PUMP CONTROL PANEL (EXIST)	I04.224	I/O
I8	1P/#16 TSP	24VDC	RTU-LFPH	WELL LEVEL LE-600	I04.225 / I04.400	I/O
I9	2P/#16 TSP	24VDC	RTU-LFPH	WELL FLOW FE-600	I04.225	I/O
I10	2P/#16 TSP	24VDC	RTU-LFPH	CLEARWELL PUMPS FLOW FE-601 (EXIST)	I04.225	I/O
I11	2P/#16 TSP	24VDC	RTU-LFPH	RTU#6 PUMP CONTROL PANEL (EXIST)	I04.226	I/O
I12	MANUFACTURER PROVIDED	24VDC	WELL LEVEL LE-600 JUNCTION BOX	TRANSDUCER LE-600	I04.225 / I04.400	I/O

NOTES:

1. CABLE KEY:
XXA/#YY ZZZ

A: C = SINGLE, P = PAIR
XX: QUANTITY
YY: CONDUCTOR GAUGE
ZZZ: ADDITIONAL SPECIFICATION
TSP = TWISTED SHIELDED PAIR
2. REFER TO I04.220 FOR LOCATION OF INSTRUMENTATION AND CONTROLS EQUIPMENT.
3. CABLES OF THE DIFFERENT VOLTAGE SEGREGATION SHALL BE RUN IN SEPARATE CONDUIT.



A/E FIRM
PRIME:
STANLEY CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
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TTV
DATE:
JULY 13, 2026

SUB SHEET NO.

104.227

TITLE OF SHEET

LAKE FORK PUMPHOUSE
RTU (LFPH) CABLE
SCHEDULE

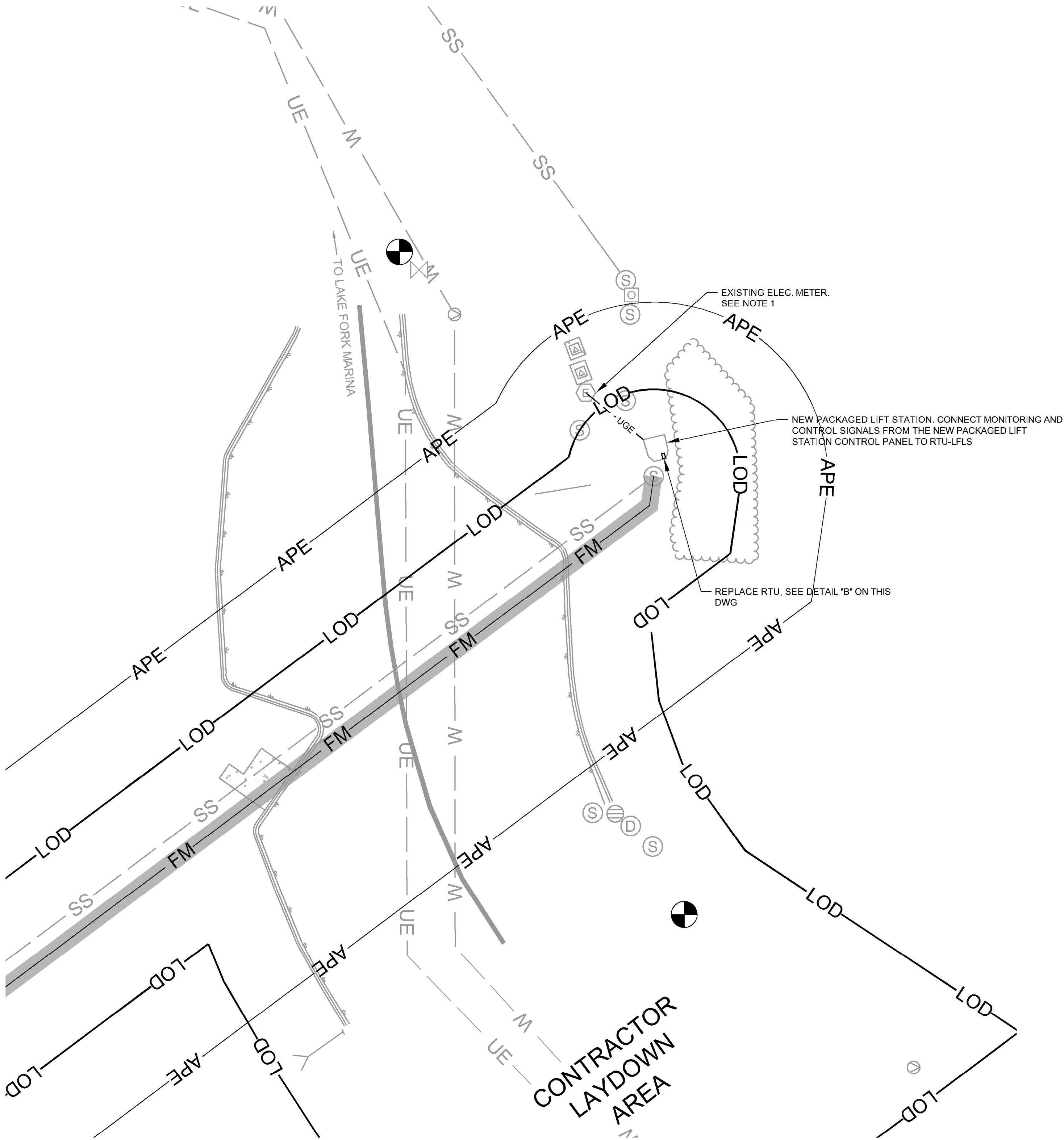
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471

PKG. NO.
318-
472

SHEET
160
OF 183

- NOTES:
- REFER TO DWG E3.01 FOR ELECTRICAL DETAILS
 - REFER TO DWG C3.02 FOR CIVIL DETAILS



DETAIL A - SITE PLAN
SCALE: 1"=20'



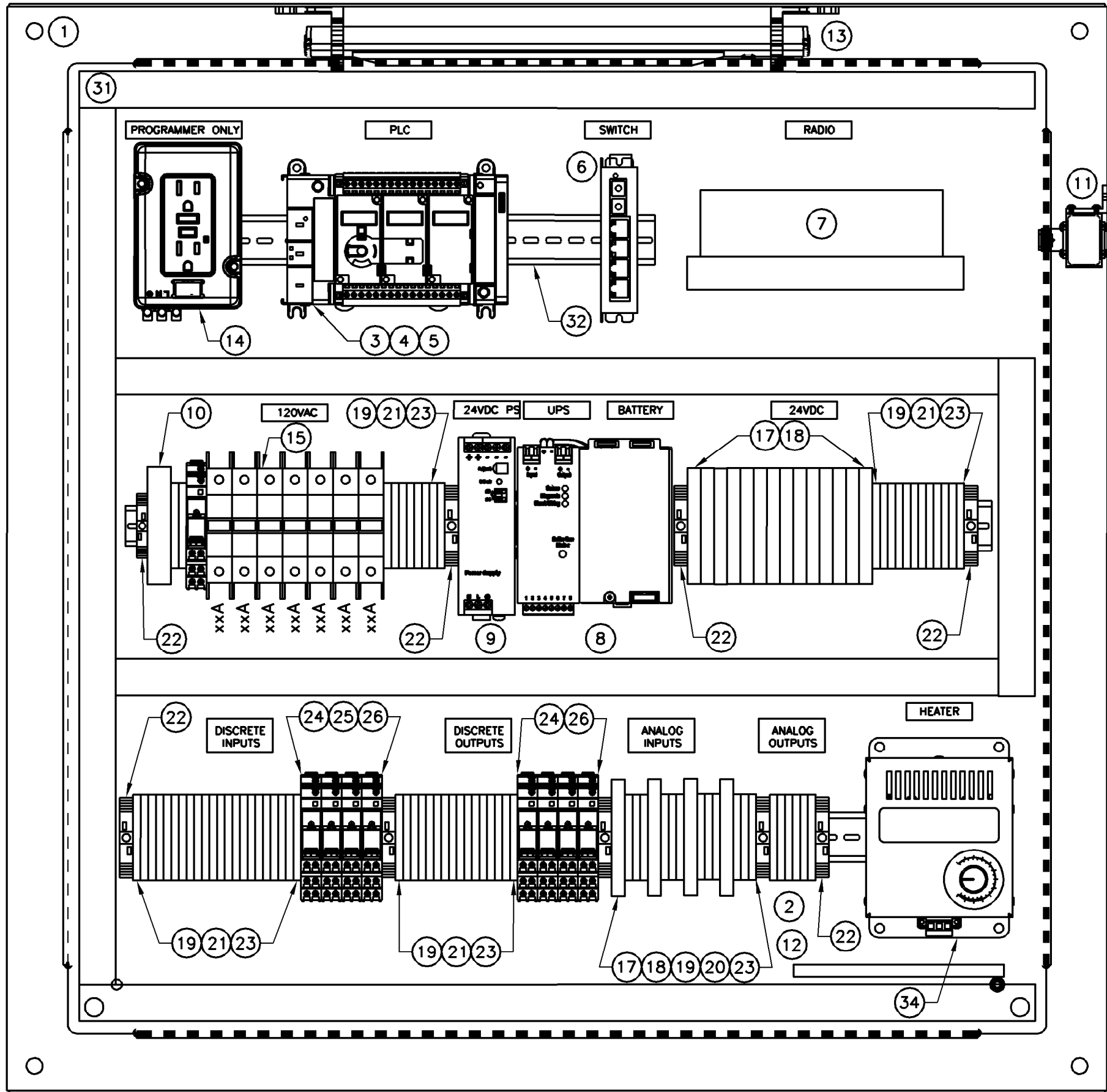
PROVIDE & INSTALL NEW MAST STRUCTURE ADJACENT TO NEW LIFT STATION. PROVIDE & INSTALL NEW ANTENNA, GROUND KIT, GROUND ROD, AND COAX CABLING TO RTU. WEATHERPROOF ALL COAX CONNECTORS IN OUTSIDE LOCATIONS. REFER TO RADIO SPECIFICATION 40 66 63-13 AND RADIO DETAILS ON I04.401 FOR ANTENNA AND CABLE SPECIFICATIONS, INCLUDING ANTENNA CENTERLINE AND AZIMUTH.

DETAIL B - EXISTING RTU AND ANTENNA
NO SCALE

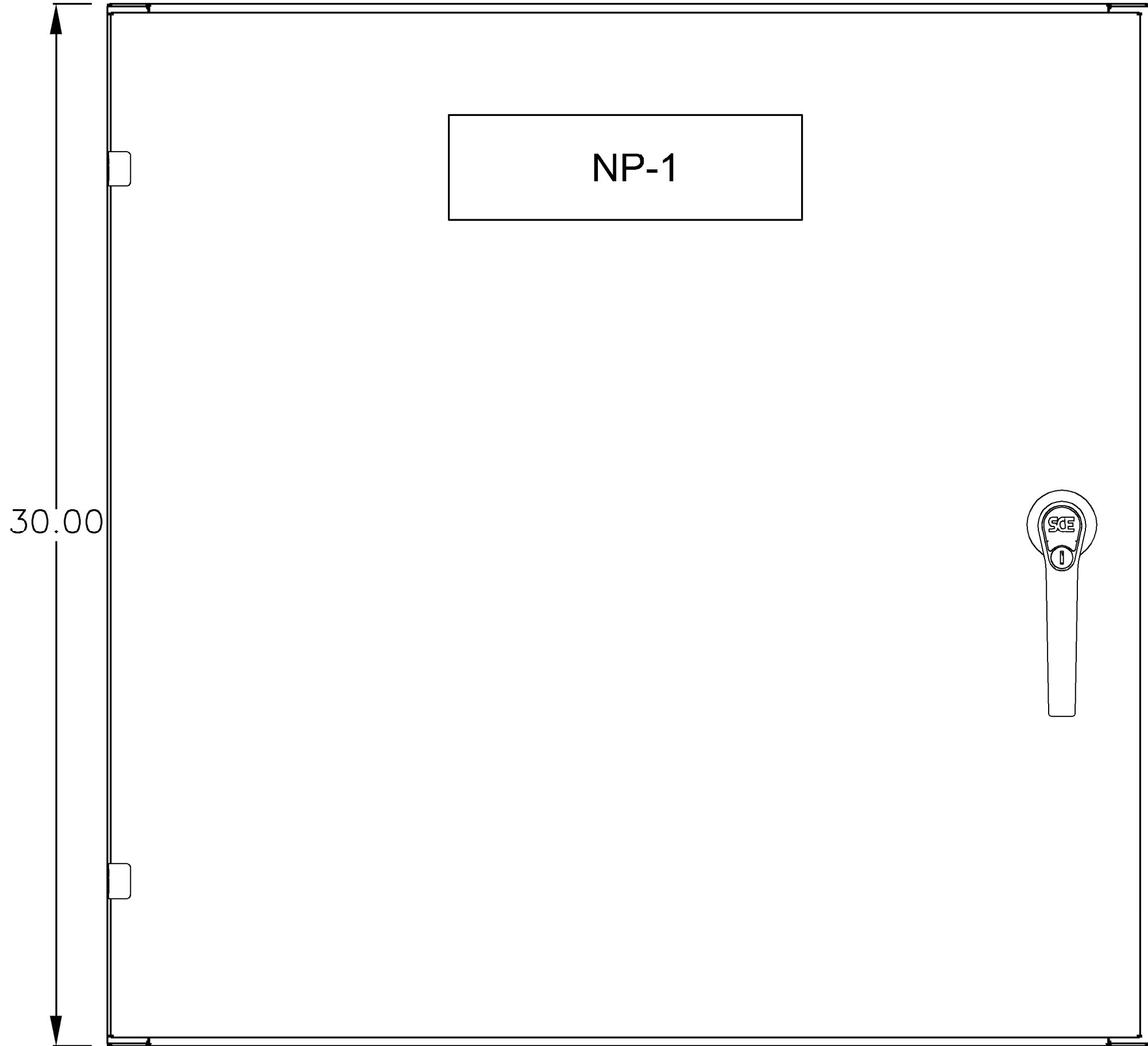
NOTE:
SEE SHEET I04.200 FOR OVERALL LOCATION MAP

	A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.	
	PRIME:	NJB	104.230	LAKE FORK LIFT STATION I&C LOCATION PLAN		616	
	STANLEY CONSULTANTS, INC. Phoenix, Arizona	CADD				187471	
	BKG	TECH. REVIEW:				PKG. NO.	SHEET
	TTV	DATE:		CURECANTI NATIONAL RECREATION AREA		318- 472	161
	JULY 13, 2026					OF 183	

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PANEL INTERIOR LAYOUT
SCALE: NONE



PANEL EXTERIOR LAYOUT
SCALE: NONE

ITEM	QTY	DESCRIPTION	SPECIFICATION	MANUF. (SEE NOTE 1)	MODEL
1	1	NEMA 4X ENCLOSURE, HANDLE LOCK, 36" X 36" X 12"	40 67 00	SAGINAW	SCE-36EL3612LPPPL
2	1	SUBPANEL, 36" X 36"	40 67 00	SAGINAW	SCE-36P36
3	1	PLC WITH INTEGRAL I/O, 24VDC POWERED, MIN. 14 24VDC DISCRETE INPUTS, 10 RELAY OUTPUTS, 1-10/100 BASE-T ETHERNET PORT, SUPPORT FOR MODBUS TCP/IP, 1 RS-232/485 SERIAL PORT, SUPPORT FOR MODBUS RTU	40 63 43		
4	1	4-CHANNEL ANALOG INPUT CARD	40 63 43	ALLEN BRADLEY	2080-L70E-QWB
5	1	2-CHANNEL ANALOG OUTPUT CARD	40 63 43	ALLEN BRADLEY	2080-IF4
6	1	INDUSTRIAL ETHERNET SWITCH, DIN RAIL MOUNTED, UNMANAGED, 24VDC POWERED, 4 RJ-45 10/100 BASE-TX PORTS, 1 FIBER PORT 100BASE-FX, MULTIMODE	40 62 00	RED LION	SLX-5ES-2ST
7	1	VHF RANGE ETHERNET RADIO, COAX PORT, QTY 2 - 10/100 BASE-T ETHERNET PORTS	40 66 63-13	APRISA	SR+
8	1	24VDC UPS, 24VDCIN, 24VDC OUT, 10A, WITH 12V 5AH BATTERY	40 67 00	PULS	UB10.241 & UBC10.241-N1
9	1	24VDC POWER SUPPLY, 10A/240W	40 67 00	PULS	CP10.241
10	1	SURGE SUPPRESSOR	40 67 00	PHOENIX CONTACT	PLUGTRAB
11	1	RADIO FREQUENCY SURGE PROTECTOR	40 66 63-13	POLYPHASOR	VHF50HN-B
12	1	GROUNDING BAR	40 67 00		
13					
14					
15	AS NEEDED	AC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1492-D1CXXX
16	AS NEEDED	DC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1489-M1CXXX
17	AS NEEDED	24VDC FUSES, AS NEEDED	40 67 00	BUSSMAN	
18	AS NEEDED	FUSED TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-H4
19	AS NEEDED	FEED-THROUGH TERMINAL BLOCK, 600V, 25A	40 67 00	ALLEN BRADLEY	1492-J3
20	AS NEEDED	GROUNDING TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-JG3
21	AS NEEDED	TERMINAL BLOCK JUMPERS	40 67 00	ALLEN BRADLEY	1492-CJJ5-10
22	AS NEEDED	TERMINAL BLOCK ANCHORS	40 67 00	ALLEN BRADLEY	1492-EAJ35
23	AS NEEDED	TERMINAL BLOCK END BARRIER	40 67 00	ALLEN BRADLEY	1492-EBJ3
24	AS NEEDED	24VDC RELAYS AND RELAY BASES, INTERPOSING, 6A CONTACTS, SPDT	40 67 00	ALLEN BRADLEY	700-HLT12Z24
25	AS NEEDED	120VAC RELAYS	40 67 00	ALLEN BRADLEY	700-HL
26	AS NEEDED	RELAY END BARRIERS	40 67 00	ALLEN BRADLEY	700-HN177
27	AS NEEDED	CAT6 CABLE	40 67 00		
28	AS NEEDED	COAX CABLE	40 66 63-13	TIMES MICROWAVE	LMR-400-DB
29	AS NEEDED	16AWG-TSP CABLE	40 67 00		
30	AS NEEDED	14AWG MACHINE WIRE CABLE	40 67 00		
31	AS NEEDED	WIRE DUCT		PANDUIT	
32	AS NEEDED	DIN RAIL			
33					
34					
35	1	DEAD-FRONT PANEL 36" X 36", FOR MOUNTING INTERFACE COMPONENTS INSIDE	40 67 00	SAGINAW	SCE-DF36EL36LP
36					
37					
38					
39					
40	1	PANEL DOOR SWITCH	40 67 00		
41	1	LOOP POWERED 24VDC 4-20MA ANALOG SIGNAL INDICATOR AND RE-TRANSMITTER	40 70 00-16	ENDRESS & HAUSER	RIA15
42	2	12VDC BATTERIES, 105 AH			
43	1	24VDC SOLAR CHARGER			
44					
45					
46					
47					
48					
49					
50					

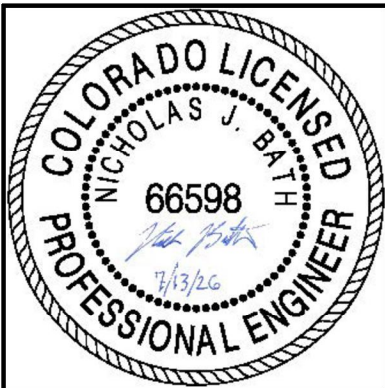
BILL OF MATERIAL

ITEM	QTY	LINE1	LINE2	LINE 3	LETTER SIZE
NP-1	1	CURECANTI NAT. REC AREA	LAKE FORK LIFT STATION	RTU-LFLS	1/4"

NAMEPLATE SCHEDULE

GENERAL NOTES:

- THE PURPOSE OF THIS DRAWING IS TO EXEMPLIFY THE EXPECTED COMPONENTS, GENERAL LAYOUT, AND PANEL SIZE. CONTRACTORS ARE NOT LIMITED TO THE EXAMPLE COMPONENTS DEPICTED ON THIS DRAWING. REFER TO DIVISION 40 SPECIFICATIONS FOR PANEL COMPONENTS AND FUNCTIONAL REQUIREMENTS OF EACH RTU.
- THE SIZE OF 24VDC POWER SOURCE IS A PRELIMINARY MINIMUM, BASED ON COMPONENTS USED AS A BASIS OF DESIGN. CONTRACTOR MAY UPSIZE POWER SOURCE IF CONTRACTOR-SELECTED COMPONENTS REQUIRE MORE POWER.



A/E FIRM
PRIME:
STANLEY CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.

104.231

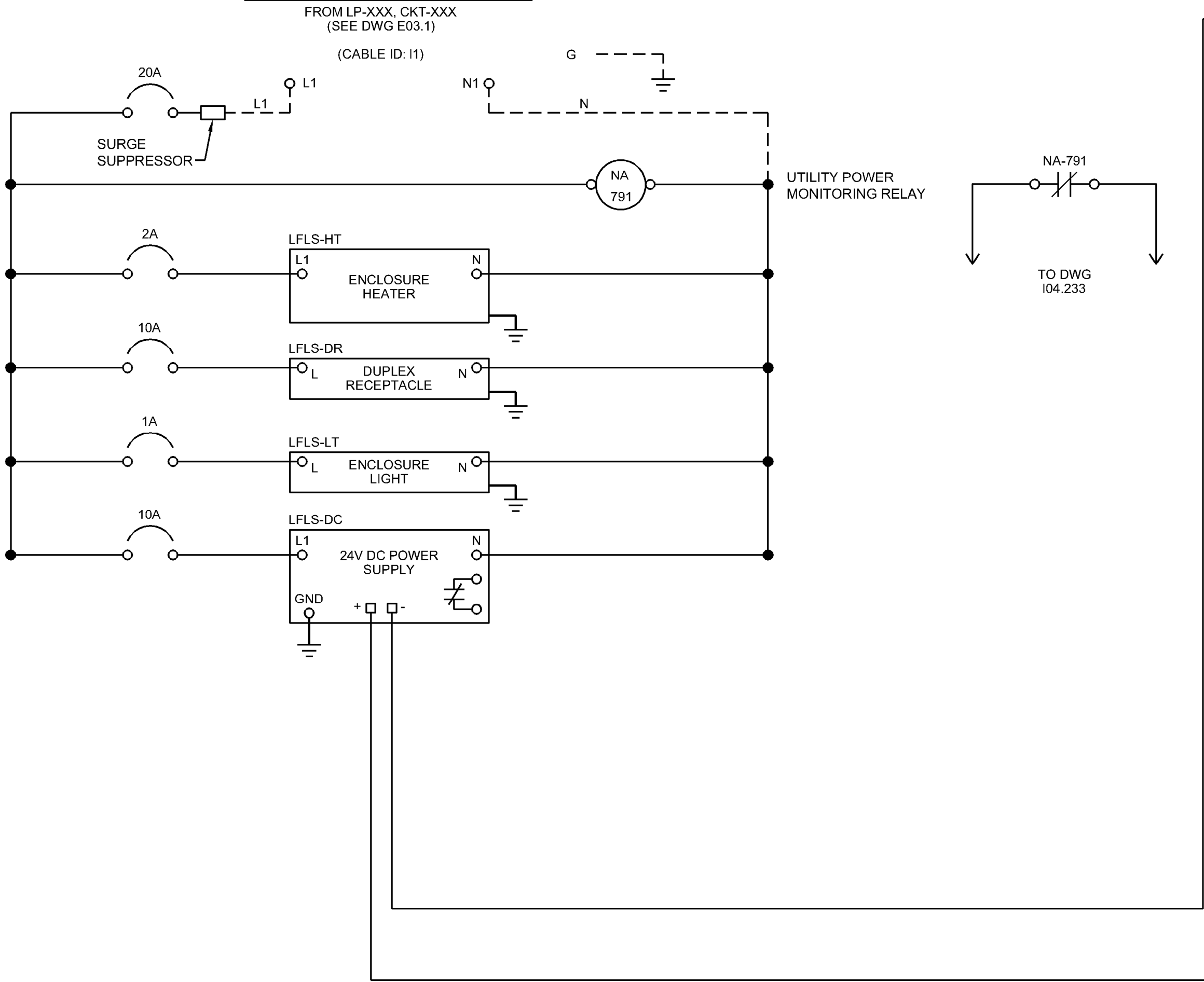
TITLE OF SHEET

LAKE FORK LIFT
STATION RTU (LFLS)
PANEL LAYOUT & BOM

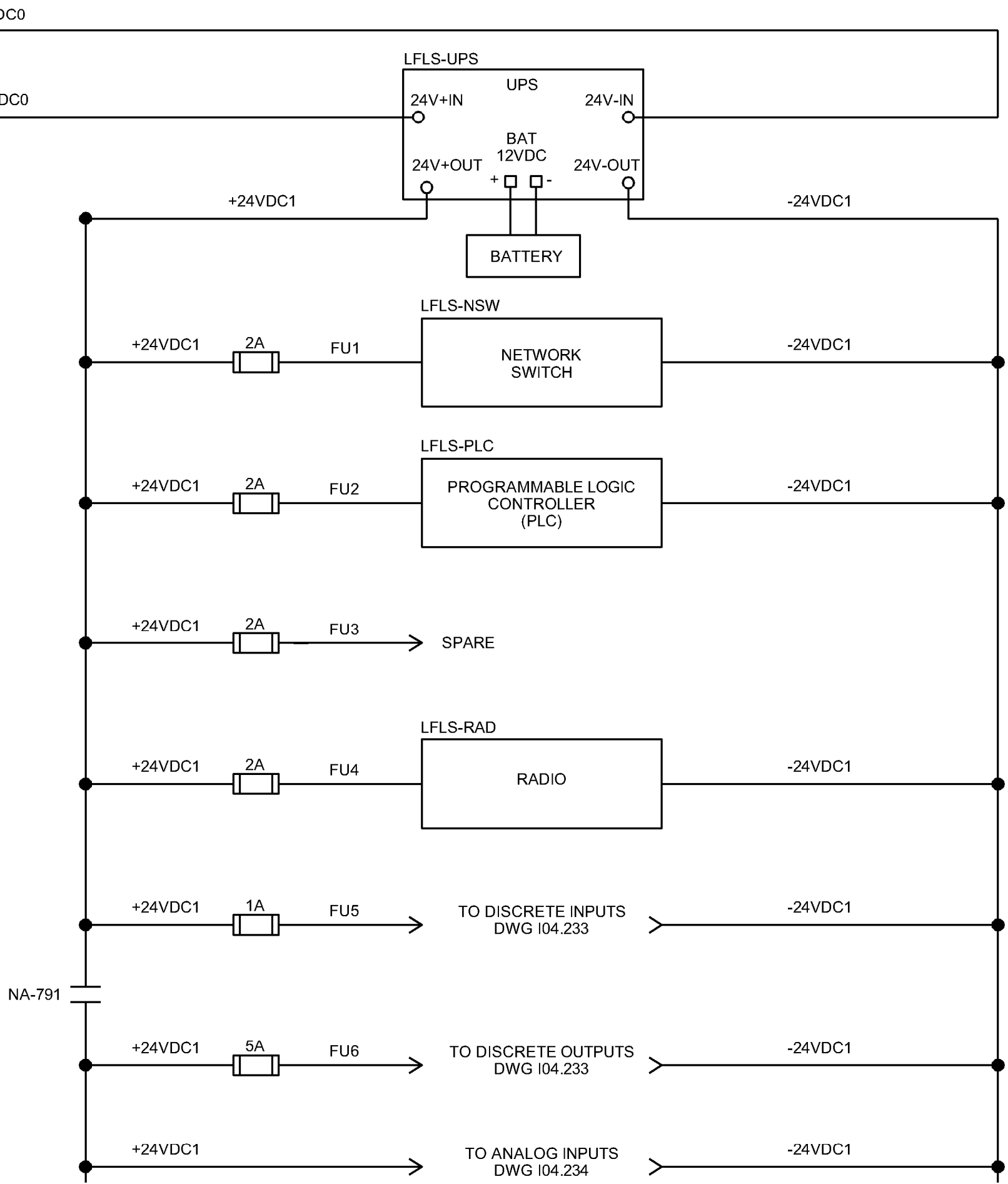
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
162
OF 183

120VAC SOURCE

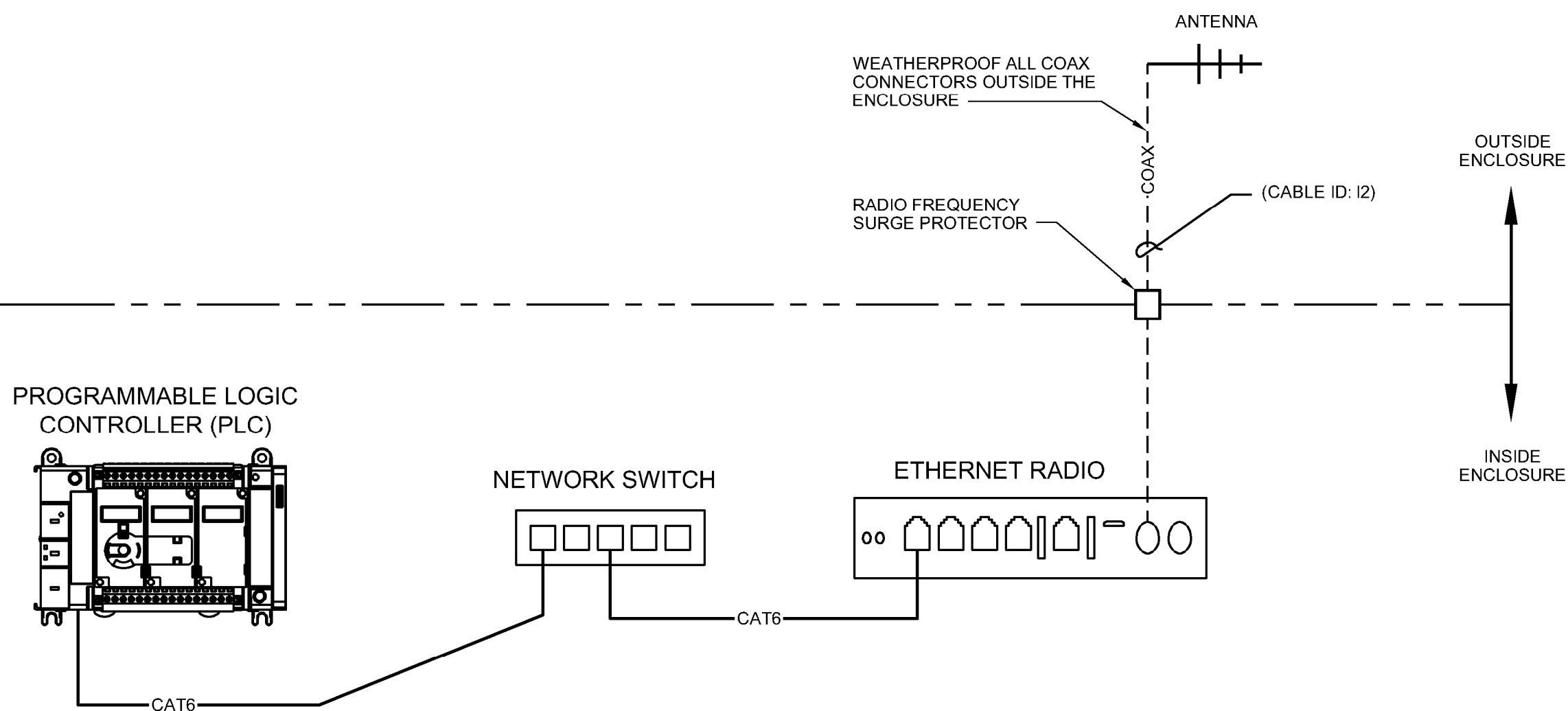


POWER DISTRIBUTION

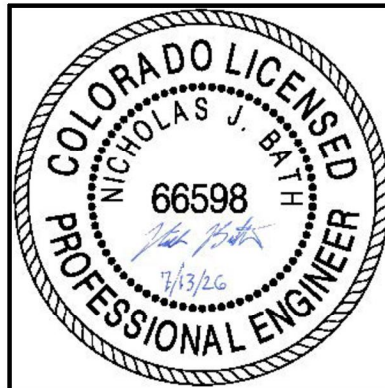


NOTES:

1. THIS IS A SCHEMATIC DRAWING TO DEMONSTRATE THE EXPECTED POWER DISTRIBUTION AND PROTECTION. THE SIZE OF ALL FUSES AND BREAKERS ARE BASED ON BASIS-OF-DESIGN COMPONENTS SHOWN IN THE BOM. CONTRACTOR TO PROVIDE AND SIZE CIRCUIT PROTECTION BASED ON MAXIMUM AMPERAGE OF ACTUAL CONTRACTOR-SELECTED COMPONENTS AND EXISTING FIELD DEVICES.



NETWORK TERMINATION DETAIL



A/E FIRM
PRIME:
STANLEY CONSULTANTS, INC.
Phoenix, Arizona

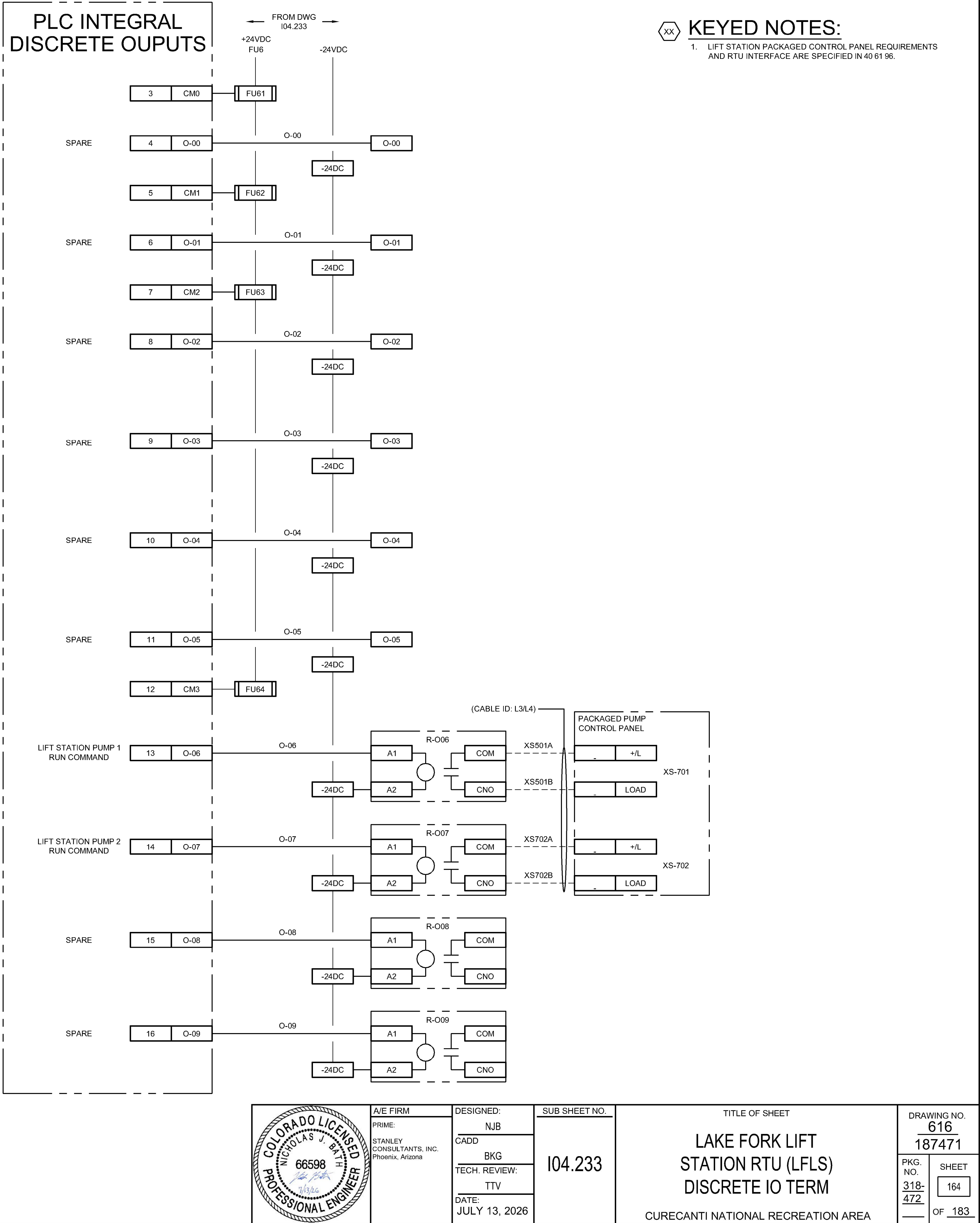
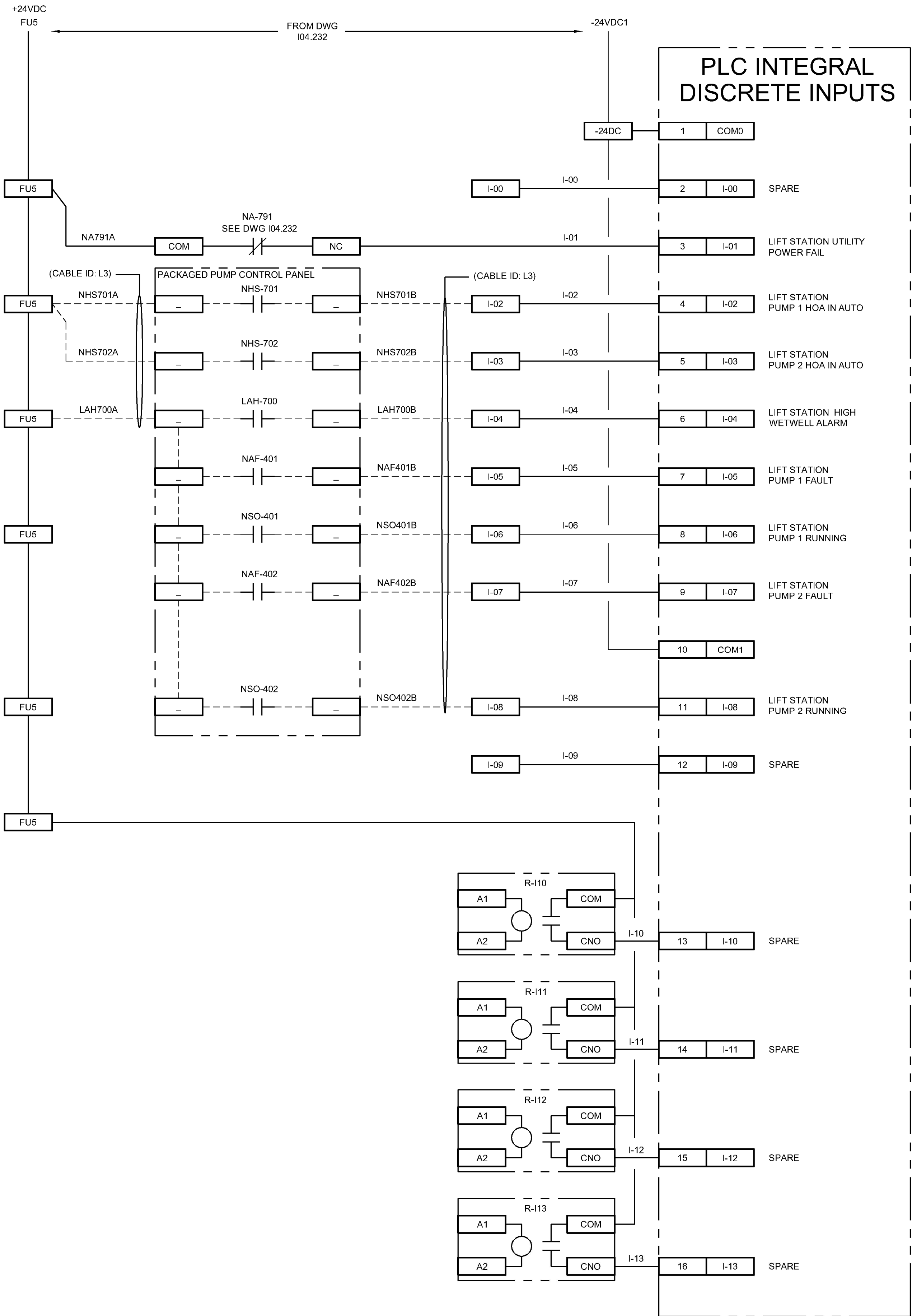
DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.
104.232

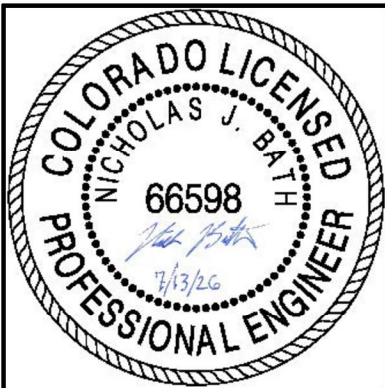
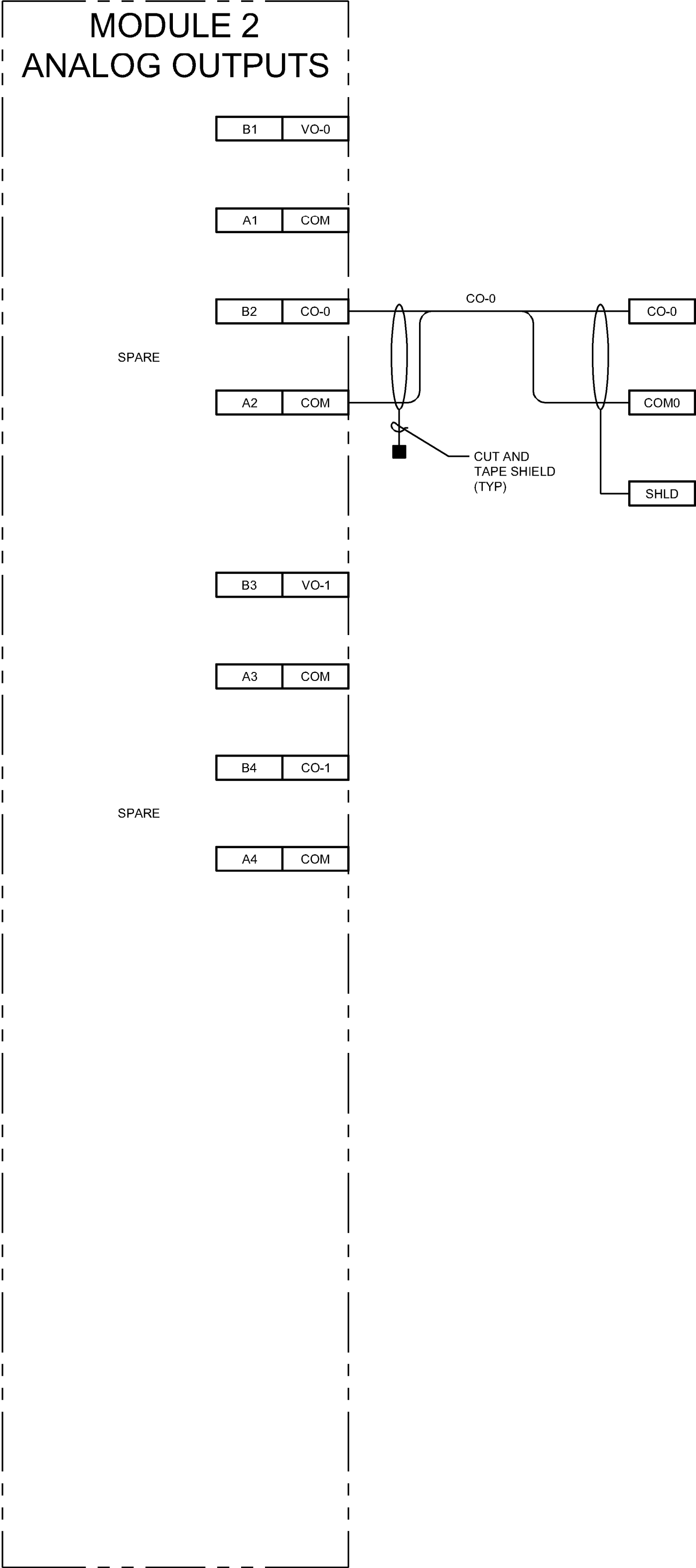
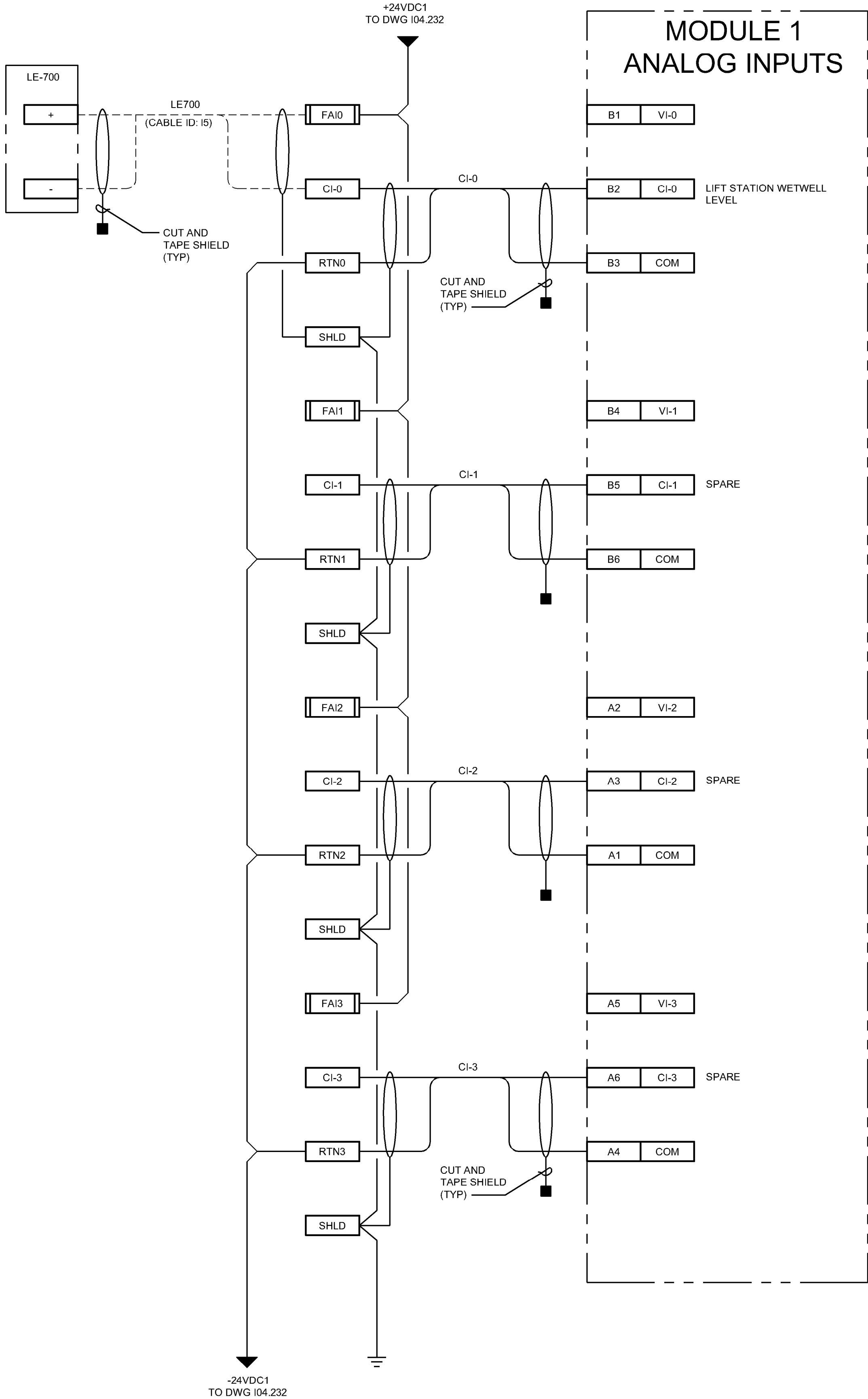
TITLE OF SHEET
LAKE FORK LIFT
STATION RTU (LFLS)
POWER DISTRIBUTION
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
163
OF 183

7/13/2026 8:44 PM SCI PROJECT 29964.12 3967 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\04_233.dwg



7/13/2026 8:44 PM SCI PROJECT 29964.12 3967 AutoDesk Civil 3D 2024 P:\CURE\318472\DRAWINGS\CIVIL\CURE\I04_234.dwg



A/E FIRM
PRIME:
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CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
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TTV
DATE:
JULY 13, 2026

SUB SHEET NO.

104.234

TITLE OF SHEET

LAKE FORK LIFT
STATION RTU (LFLS)
ANALOG IO TERM

CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG.
NO.
318-
472
SHEET
165
OF 183

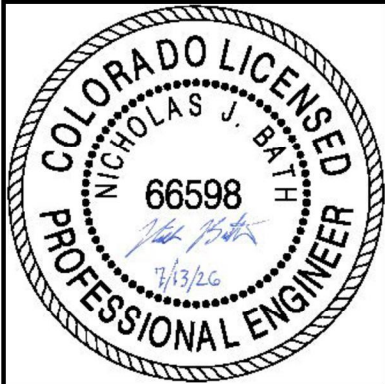
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INSTRUMENTATION & CONTROLS CABLE SCHEDULE						
CABLE ID	CABLE TYPE (SEE NOTE 1)	CABLE SEGREGATION	FROM	TO	TERMINATION DRAWING	PURPOSE
I1	2C/#12 AWG+GND	120VAC	POWER DISTRIBUTION PANEL (NEW)	RTU-LFLS	I04.232	RTU POWER
I2	COAX	N/A	RTU-LFLS	ANTENNA	I04.232	RADIO COMMS
I3	16C/#14	24VDC	RTU-LFLS	PACKAGED PUMP CONTROL PANEL	I04.233	I/O
I4	16C/#14	120VAC	RTU-LFLS	PACKAGED PUMP CONTROL PANEL	I04.233	I/O
I5	2P/#16 TSP	24VDC	RTU-LFLS	PACKAGED PUMP CONTROL PANEL LE-700	I04.234	I/O

NOTES:

1. CABLE KEY:
XXA/#YY ZZZ

A: C = SINGLE, P = PAIR
XX: QUANTITY
YY: CONDUCTOR GAUGE
ZZZ: ADDITIONAL SPECIFICATION
TSP = TWISTED SHIELDED PAIR
2. REFER TO I04.230 FOR LOCATION OF INSTRUMENTATION AND CONTROLS EQUIPMENT.
3. CABLES OF THE DIFFERENT VOLTAGE SEGREGATION SHALL BE RUN IN SEPARATE CONDUIT.



A/E FIRM
PRIME:
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JULY 13, 2026

SUB SHEET NO.

104.235

TITLE OF SHEET

LAKE FORK LIFT
STATION RTU (LFLS)
CABLE SCHEDULE

CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471

PKG.
NO.
318-
472
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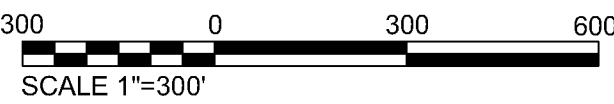
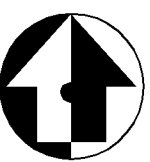
SHEET
166
OF 183



IOLA I&C SITE PLAN

SCALE: 1"=300'

NOTE:
SEE COVER SHEET FOR OVERALL LOCATION MAP

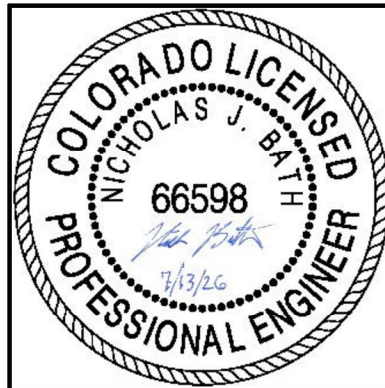
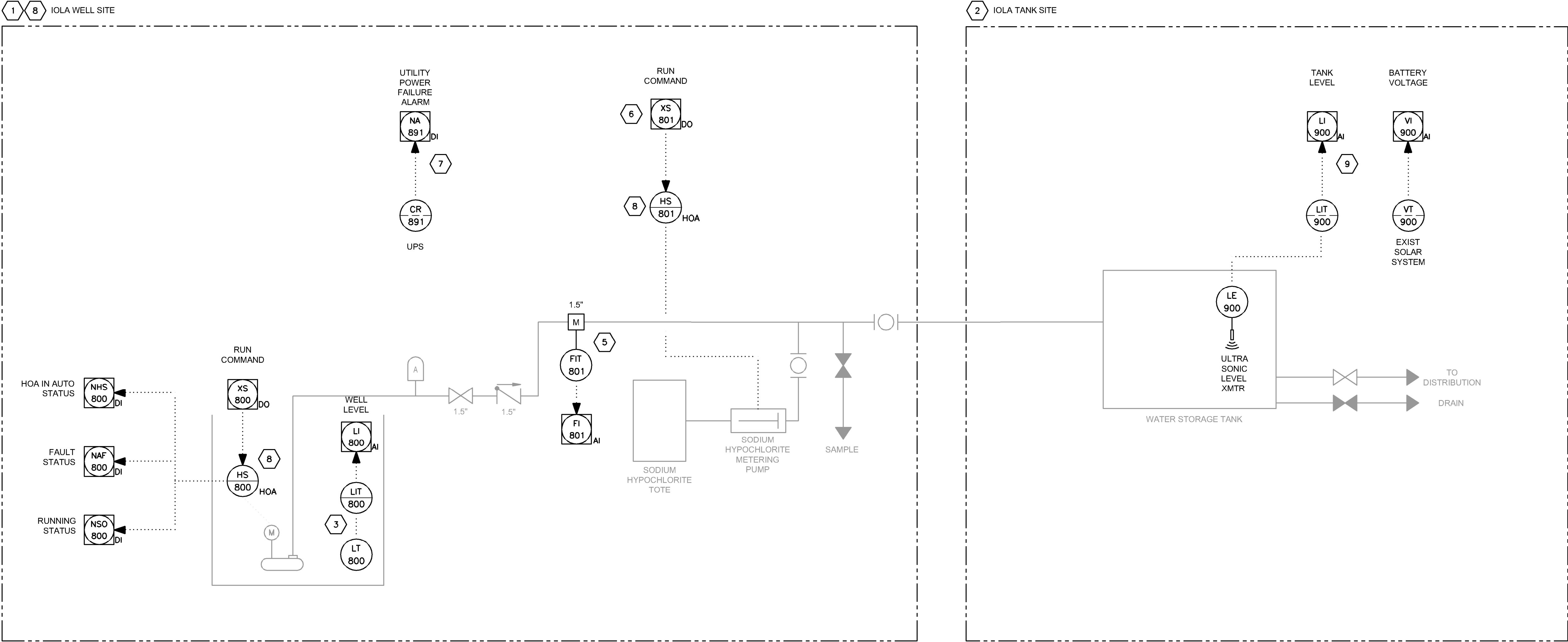


	A/E FIRM	DESIGNED:	104.300	TITLE OF SHEET IOLA I&C SITE PLAN CURECANTI NATIONAL RECREATION AREA		DRAWING NO. 616	
	PRIME:	NJB				187471	
	STANLEY CONSULTANTS, INC. Phoenix, Arizona	CADD				PKG. NO.	SHEET
		BKG				318-	167
		TECH. REVIEW:				472	OF 183
		TTV					
		DATE:					
		JULY 13, 2026					



KEYED NOTES:

- ALL SIGNALS DEPICTED AT IOLA WELL SITE TO BE TIED INTO THE IOLA WELL (IOW) RTU. REFER TO THE I/O LIST ON DRAWING I04.002. REFER TO SITE DETAILS AND RTU DESIGN STARTING AT I04.320.
- ALL SIGNALS DEPICTED AT IOLA TANK SITE TO BE TIED INTO THE IOLA TANK (IOT) RTU. REFER TO THE I/O LIST ON DRAWING I04.002. REFER TO SITE DETAILS AND RTU DESIGN STARTING AT I04.330.
- PROVIDE AND INSTALL A NEW WELL LEVEL SENSOR.
- NOT USED
- EXISTING FLOW METER NOT TIED INTO SCADA. REPLACE FLOW METER AND TIE INTO SCADA. CONTRACTOR TO VERIFY LINE SIZE AND PROCESS CONNECTIONS.
- EXISTING CHEMICAL PUMP START/ STOP (POWER RECEPTACLE) IS DRIVEN DIRECTLY BY WELL RUN STATUS. MODIFY SO THAT NEW RTU CONTROLLER CONTROLS CHEMICAL PUMP START/ STOP.
- A UPS TO POWER RTU. AND MONITOR UTILITY POWER USING A RELAY OR RELAY OUTPUT FROM THE UPS.
- PROVIDE LOCAL CONTROL STATIONS FOR WELL AND CHEMICAL PUMP, INDEPENDENT OF RTU CONTROLLER.
- REPLACE TANK LEVEL TRANSMITTER. NEW TRANSMITTER TO PROVIDE LOCAL READOUT IN RTU DEADPANEL.



A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

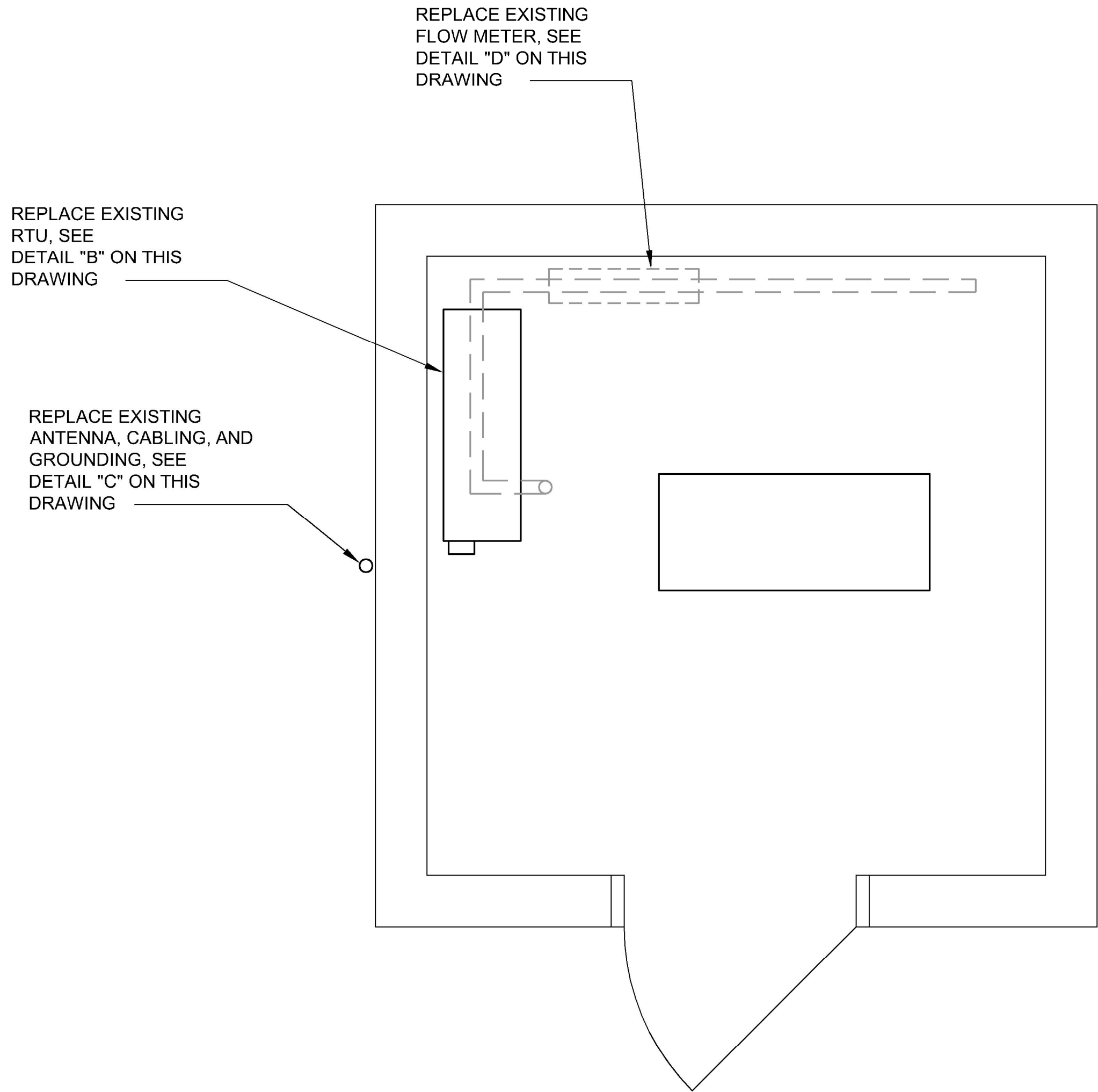
DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.
104.301

TITLE OF SHEET
IOLA WATER PROCESS
FLOW &
INSTRUMENTATION
DIAGRAM
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
168
OF 183

7010101206-6-2025(1/50) PROJECT 29964.12 3967 AutoD646320206B-1672M P:\CURE\318472\DRAWINGS\CIVIL\CURE\I04_320.dwg



DETAIL A - PUMP HOUSE PLAN

SCALE: 1/2"=1'-0"

NOTE:
SEE SHEET I04.300 FOR OVERALL LOCATION MAP

REPLACE EXISTING
TIMBERLINE RTU #5,
WITH RTU-IOW



DETAIL B - EXISTING RTU

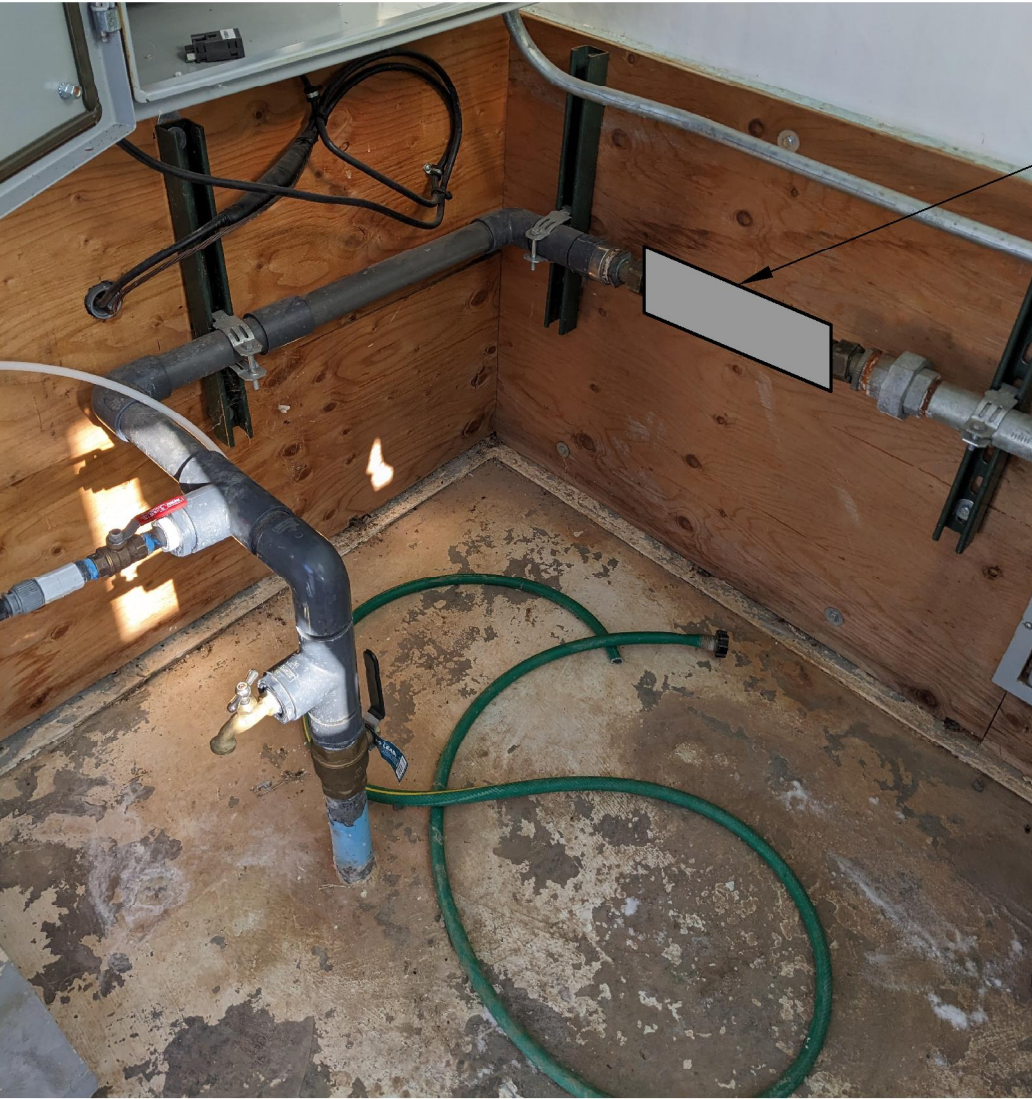
SCALE: NONE

REPLACE ANTENNA, GROUND KIT, AND COAX
CABLING BACK TO RTU. RE-USE EXISTING
GROUNDING CONNECTION AND MAST.
WEATHERPROOF ALL COAX CONNECTORS IN
OUTSIDE LOCATIONS. REFER TO RADIO
SPECIFICATION 40 66 63-13 AND RADIO
DETAILS ON I04.401 FOR ANTENNA AND
CABLE SPECIFICATIONS, INCLUDING
ANTENNA CENTERLINE AND AZIMUTH.



DETAIL C - EXISTING ANTENNA

SCALE: NONE



REPLACE EXISTING 1.5" BADGER
MODEL 55 FLOW METER WITH
MAGMETER FE/FIT-801. CONTRACTOR
TO SPECIFY PROCESS CONNECTIONS.
ACTUAL MOUNTING LOCATION ON
PIPE MAY CHANGE - REFER TO
MANUFACTURER SPECIFICATIONS FOR
UPSTREAM AND DOWNSTREAM
DISTANCES. POWER NEW FLOW
METER AND CONNECT 4-20MA
SIGNAL TO NEW RTU-IOW

NOTES:

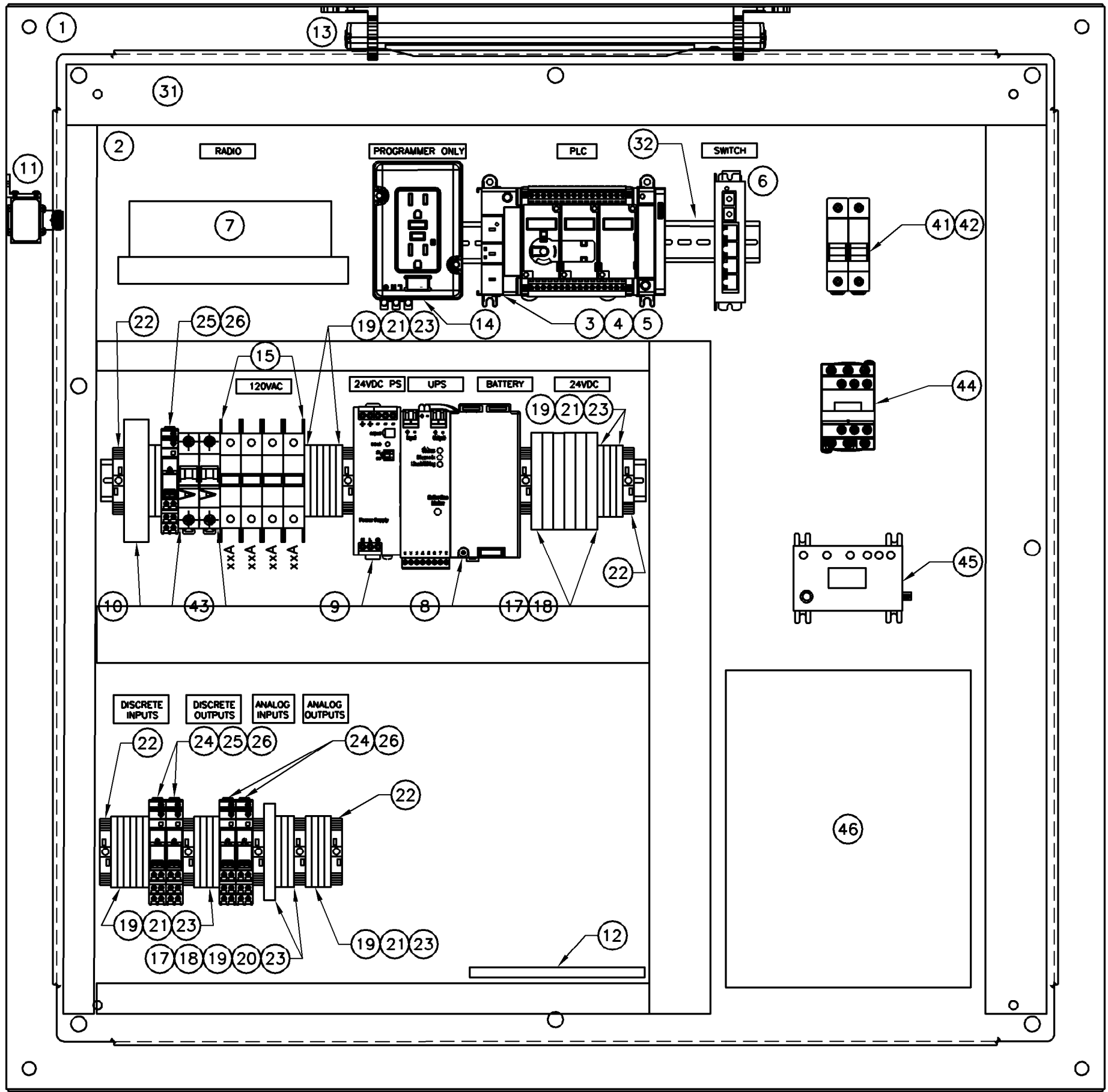
1. REFER TO TYPICAL DETAIL "A" ON DRAWING I04.400 FOR WELL
MONITOR TUBE AND TRANSDUCER INSTALLATION.

DETAIL D - EXISTING WELL

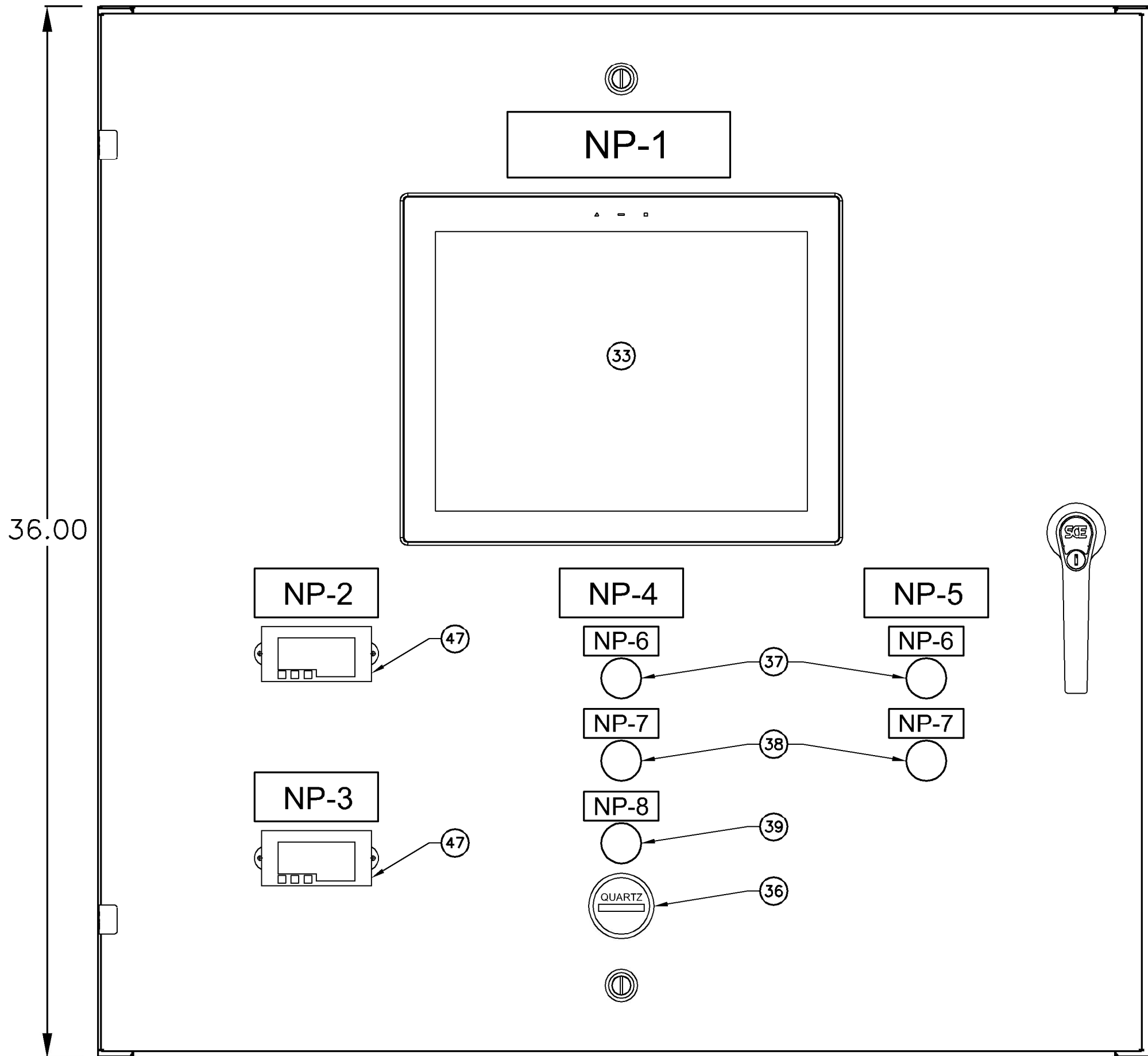
SCALE: NONE

	A/E FIRM	DESIGNED:	104.320	TITLE OF SHEET IOLA WELL I&C LOCATION PLAN CURECANTI NATIONAL RECREATION AREA		DRAWING NO. 616 187471	
	PRIME:	NJB					
	STANLEY CONSULTANTS, INC. Phoenix, Arizona	CADD BKG					
		TECH. REVIEW: TTV					
		DATE: JULY 13, 2026			PKG. NO. 318- 472	SHEET 169	OF 183

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PANEL INTERIOR LAYOUT
SCALE: NONE



PANEL EXTERIOR LAYOUT
SCALE: NONE

ITEM	QTY	DESCRIPTION	SPECIFICATION	MANUF. (SEE NOTE 1)	MODEL
1	1	NEMA 4X ENCLOSURE, HANDLE LOCK, 36" X 36" X 12"	40 67 00	SAGINAW	SCE-36EL3612LPPL
2	1	SUBPANEL, 36" X 36"	40 67 00	SAGINAW	SCE-36P36
3	1	PLC WITH INTEGRAL I/O, 24VDC POWERED, MIN. 14 24VDC DISCRETE INPUTS, 10 RELAY OUTPUTS, 1-10/100 BASE-T ETHERNET PORT, SUPPORT FOR MODBUS TCP/IP, 1 RS-232/485	40 63 43	ALLEN BRADLEY	2080-L70E-QWB
4	1	4-CHANNEL ANALOG INPUT CARD	40 63 43	ALLEN BRADLEY	2080-IF4
5	1	2-CHANNEL ANALOG OUTPUT CARD	40 63 43	ALLEN BRADLEY	2080-OF2
6	1	INDUSTRIAL ETHERNET SWITCH, DIN RAIL MOUNTED, UNMANAGED, 24VDC POWERED, 4 RJ-45 10/100 BASE-TX PORTS, 1 FIBER PORT 100BASE-FX, MULTIMODE	40 62 00	RED LION	SLX-5ES-2ST
7	1	VHF RANGE ETHERNET RADIO, COAX PORT, QTY 2 - 10/100 BASE-T ETHERNET PORTS	40 66 63-13	APRISA	SR+
8	1	24VDC UPS, 24VDC IN, 24VDC OUT, 10A, WITH 12V 5AH BATTERY	40 67 00	PULS	UB10.241 & UBC10.241-N1
9	1	24VDC POWER SUPPLY, 10A/240W	40 67 00	PULS	CP10.241
10	1	SURGE SUPPRESSOR	40 67 00	PHOENIX CONTACT	PLUGTRAB
11	1	RADIO FREQUENCY SURGE PROTECTOR	40 66 63-13	POLYPHASOR	VHF50HN-B
12	1	GROUNDING BAR	40 67 00		
13	1	ENCLOSURE LIGHT WITH MOTION DETECTOR, 120VAC	40 67 00	PHOENIX CONTACT	PLD E 409 350 MS
14	1	DUPLEX RECEPTACLE	40 67 00	ALLEN BRADLEY	1492-REC15
15	AS NEEDED	AC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1492-D1CXXX
16	AS NEEDED	DC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1489-M1CXXX
17	AS NEEDED	24VDC FUSES, AS NEEDED	40 67 00	BUSSMAN	
18	AS NEEDED	FUSED TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-H4
19	AS NEEDED	FEED-THROUGH TERMINAL BLOCK, 600V, 25A	40 67 00	ALLEN BRADLEY	1492-J3
20	AS NEEDED	GROUNDING TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-JG3
21	AS NEEDED	TERMINAL BLOCK JUMPERS	40 67 00	ALLEN BRADLEY	1492-CJJ5-10
22	AS NEEDED	TERMINAL BLOCK ANCHORS	40 67 00	ALLEN BRADLEY	1492-EAJ35
23	AS NEEDED	TERMINAL BLOCK END BARRIER	40 67 00	ALLEN BRADLEY	1492-EBJ3
24	AS NEEDED	24VDC RELAYS AND RELAY BASES, INTERPOSING, 6A CONTACTS, SPDT	40 67 00	ALLEN BRADLEY	700-HLT12Z24
25	AS NEEDED	120VAC RELAYS	40 67 00	ALLEN BRADLEY	700-HL
26	AS NEEDED	RELAY END BARRIERS	40 67 00	ALLEN BRADLEY	700-HN177
27	AS NEEDED	CAT6 CABLE	40 67 00		
28	AS NEEDED	COAX CABLE	40 66 63-13	TIMES MICROWAVE	LMR-400-DB
29	AS NEEDED	16AWG TSP CABLE	40 67 00		
30	AS NEEDED	14AWG MACHINE WIRE CABLE	40 67 00		
31	AS NEEDED	WIRE DUCT		PANDUIT	
32	AS NEEDED	DIN RAIL			
33	1	TOUCHSCREEN OPERATOR INTERFACE TERMINAL (OIT), COLOR, MIN 15", 24VDC POWERED, 1-10/100 BASE-T ETHERNET PORT	40 63 43	RED LION	CR30001500000420
34					
35					
36	1	ELAPSED TIME INDICATOR	40 67 00	TRUMETER	722 SERIES
37	2	3-POSITION SELECTOR SWITCH, 4X, 30MM, 2 N.O. CONTACTS PER SWITCH POSITION	40 67 00	ALLEN BRADLEY	800H-JR2B
38	2	GREEN PILOT LIGHT, 4X, 120VAC, LED, PUSH-TO-TEST, 30.5MM	40 67 00	ALLEN BRADLEY	800H-QRTH2G
39	1	RED PILOT LIGHT, 4X, 120VAC, LED, PUSH-TO-TEST, 30.5MM	40 67 00	ALLEN BRADLEY	800H-QRTH2R
40					
41	1	2-POLE FUSEHOLDER W/ INDICATORS	SEE DWGS	FERRAZ SHAWMUT	USCC2I
42	2	10-AMP TIME DELAY, CLASS CC FUSE	SEE DWGS	FERRAZ SHAWMUT	ATDR10
43	2	SINGLE POLE, 3-AMP, C CURVE CIRCUIT BREAKER	SEE DWGS	EATON	FAZ-C3-1-SP
44	1	MOTOR CONTACTOR	SEE DWGS	SCHNEIDER ELECTRIC	LC1K0910U7
45	1	MOTOR OVERLOAD RELAY	SEE DWGS	LITTELFUSE	77C
46	1	MOTOR CONTROL BOX	SEE DWGS	FRANKLIN ELECTRIC	282 302 8110
47	2	LOOP POWERED 24VDC 4-20MA ANALOG SIGNAL INDICATOR AND RE-TRANSMITTER	40 70 00-16	ENDRESS & HAUSER	RIA15
48					
49					
50					

BILL OF MATERIAL

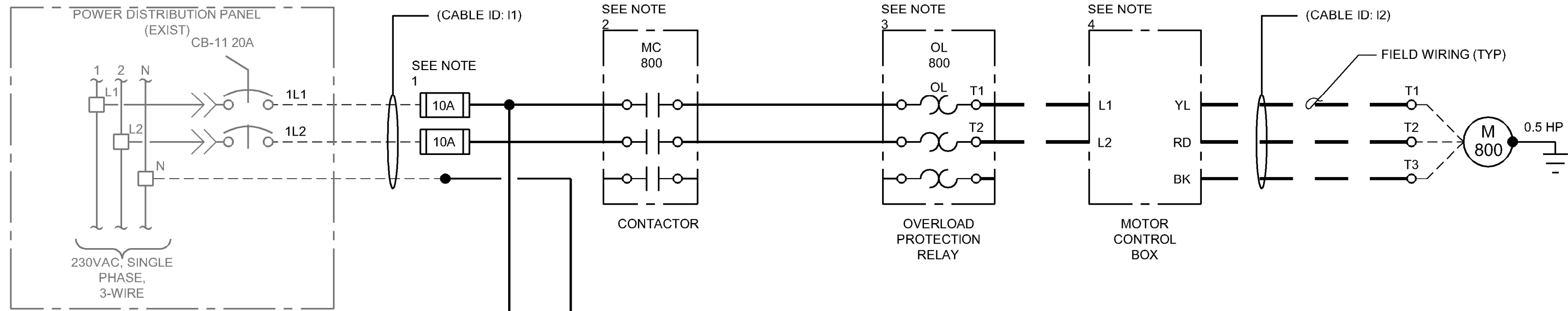
ITEM	QTY	LINE 1	LINE 2	LINE 3	LETTER SIZE
NP-1	1	CURECANTI NAT. REC AREA	IOLA WELL	RTU-IOW	1/4"
NP-2	1	WELL FLOW	FIT-801		3/16"
NP-3	1	WELL LEVEL	LIT-800		3/16"
NP-4	1	WELL PUMP	P-800		3/16"
NP-5	1	CHEMICAL PUMP	P-801		3/16"
NP-6	2	HAND-OFF-REMOTE			9/64"
NP-7	2	RUNNING			9/64"
NP-8	1	FAULTED			9/64"

NAMEPLATE SCHEDULE

	A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 616 187471
	PRIME:	NJB			
	STANLEY CONSULTANTS, INC. Phoenix, Arizona	CADD			
	BKG	TECH. REVIEW:			
	TTV	DATE:			
	JULY 13, 2026				
CURECANTI NATIONAL RECREATION AREA					

GENERAL NOTES:

- THE PURPOSE OF THIS DRAWING IS TO EXEMPLIFY THE EXPECTED COMPONENTS, GENERAL LAYOUT, AND PANEL SIZE. CONTRACTORS ARE NOT LIMITED TO THE EXAMPLE COMPONENTS DEPICTED ON THIS DRAWING. REFER TO DIVISION 40 SPECIFICATIONS FOR PANEL COMPONENTS AND FUNCTIONAL REQUIREMENTS OF EACH RTU.
- THE SIZE OF 24VDC POWER SOURCE IS A PRELIMINARY MINIMUM, BASED ON COMPONENTS USED AS A BASIS OF DESIGN. CONTRACTOR MAY UPSIZE POWER SOURCE IF CONTRACTOR-SELECTED COMPONENTS REQUIRE MORE POWER.

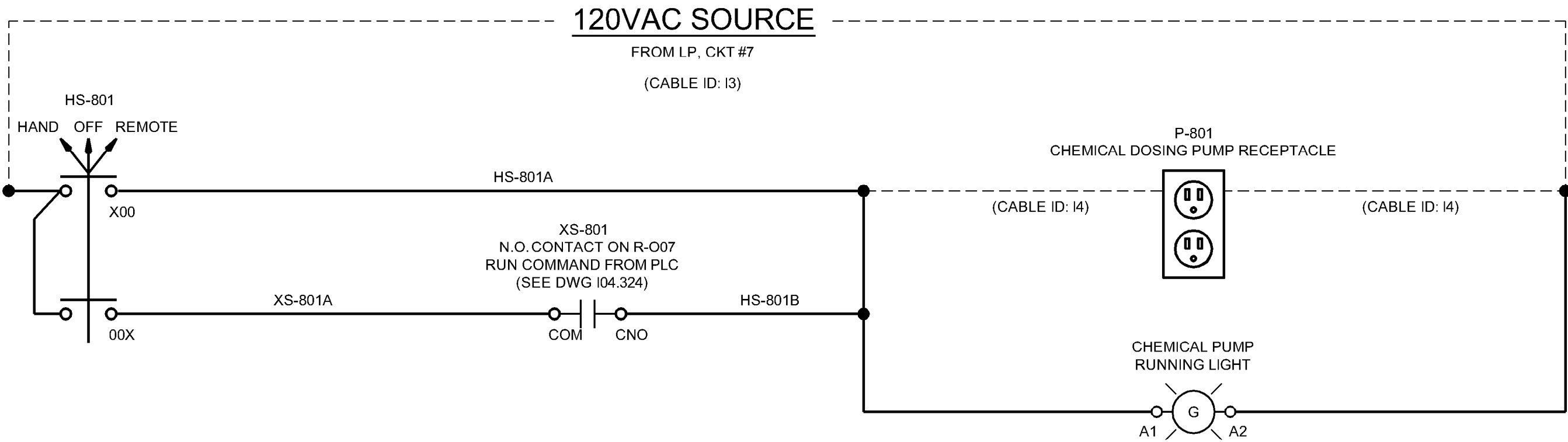
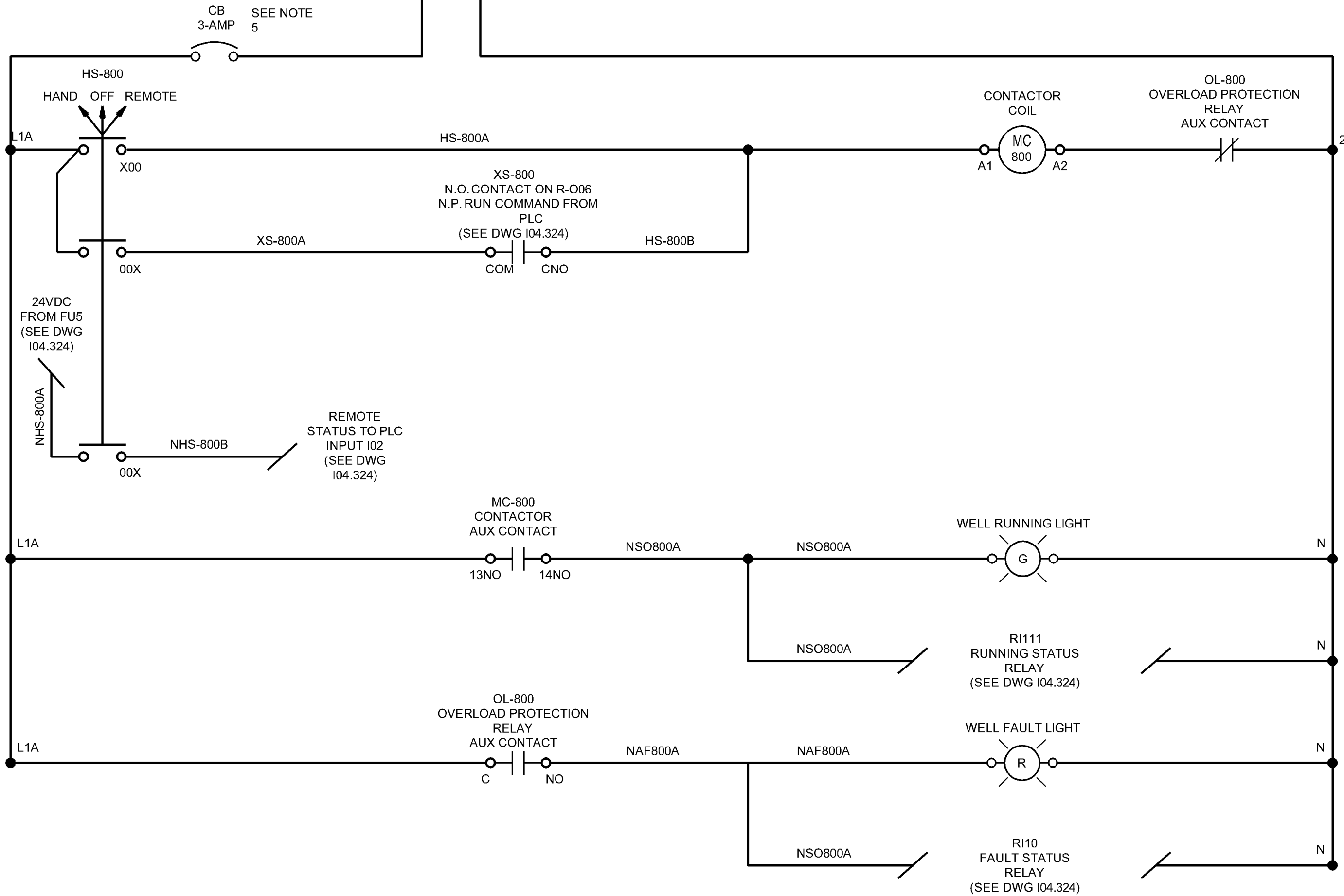


NOTES:

- FUSE SPECIFICATIONS:
 - 10-AMP
 - TIME DELAY, CLASS CC
- MOTOR CONTACTOR SPECIFICATIONS:
 - 3-POLE, 3 NORMALLY OPEN CONTACTS
 - 9-AMP OPERATIONAL CURRENT
 - 480 VAC MINIMUM RATED POWER CIRCUIT VOLTAGE
 - 120 VAC RATED CONTROL CIRCUIT VOLTAGE
- OVERLOAD PROTECTION RELAY SPECIFICATIONS:
 - RATED 230 VAC, SINGLE PHASE, LINE VOLTAGE
 - OVERCURRENT PROTECTION RATED IN ACCORDANCE WITH NEC 430.32(A)(1). REFER TO MOTOR NAMEPLATE.
- MOTOR CONTROL BOX SPECIFICATIONS:
 - RATED FOR SUBMERSIBLE MOTORS
 - RATED FOR 1/2 HORSEPOWER MOTOR
 - RATED 230 VAC, SINGLE PHASE
- CIRCUIT BREAKER SPECIFICATIONS:
 - SINGLE POLE
 - RATED 3-AMPS
 - C CURVE MAGNETIC TRIP POINT

DRAWING LEGEND:

- RTU TERMINAL BLOCK
- LOCAL DEVICE TERMINAL OR DEVICE TERMINAL IN CAB/PNL WITH NO EXTERNAL CONNECTION
- FIELD TERMINAL BLOCK

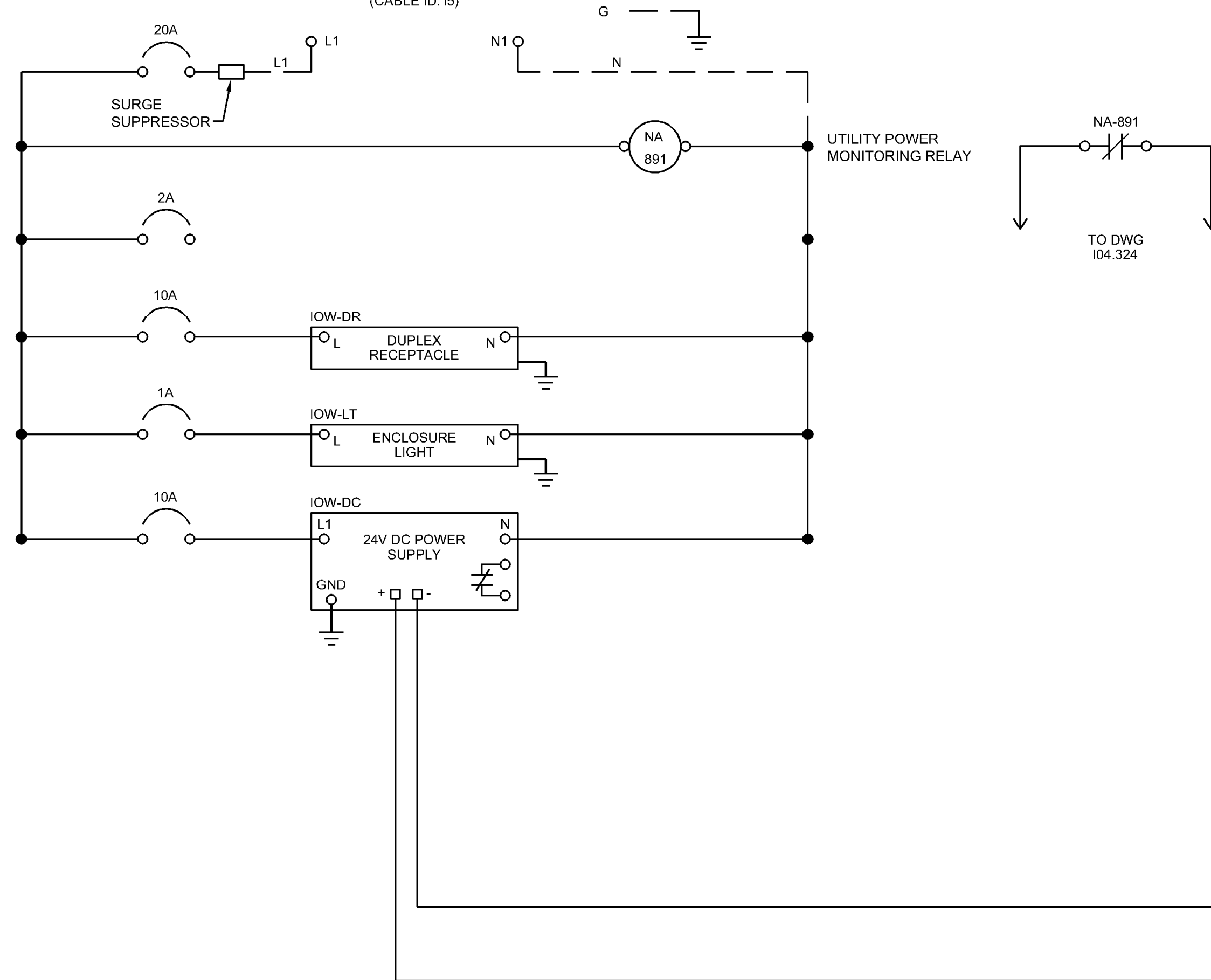


P-800 IOLA WELL AND CHEM PUMP CONTROL SCHEMATIC

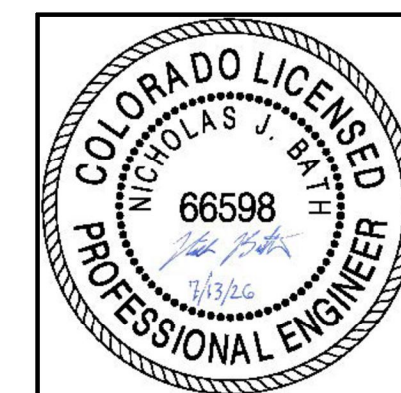
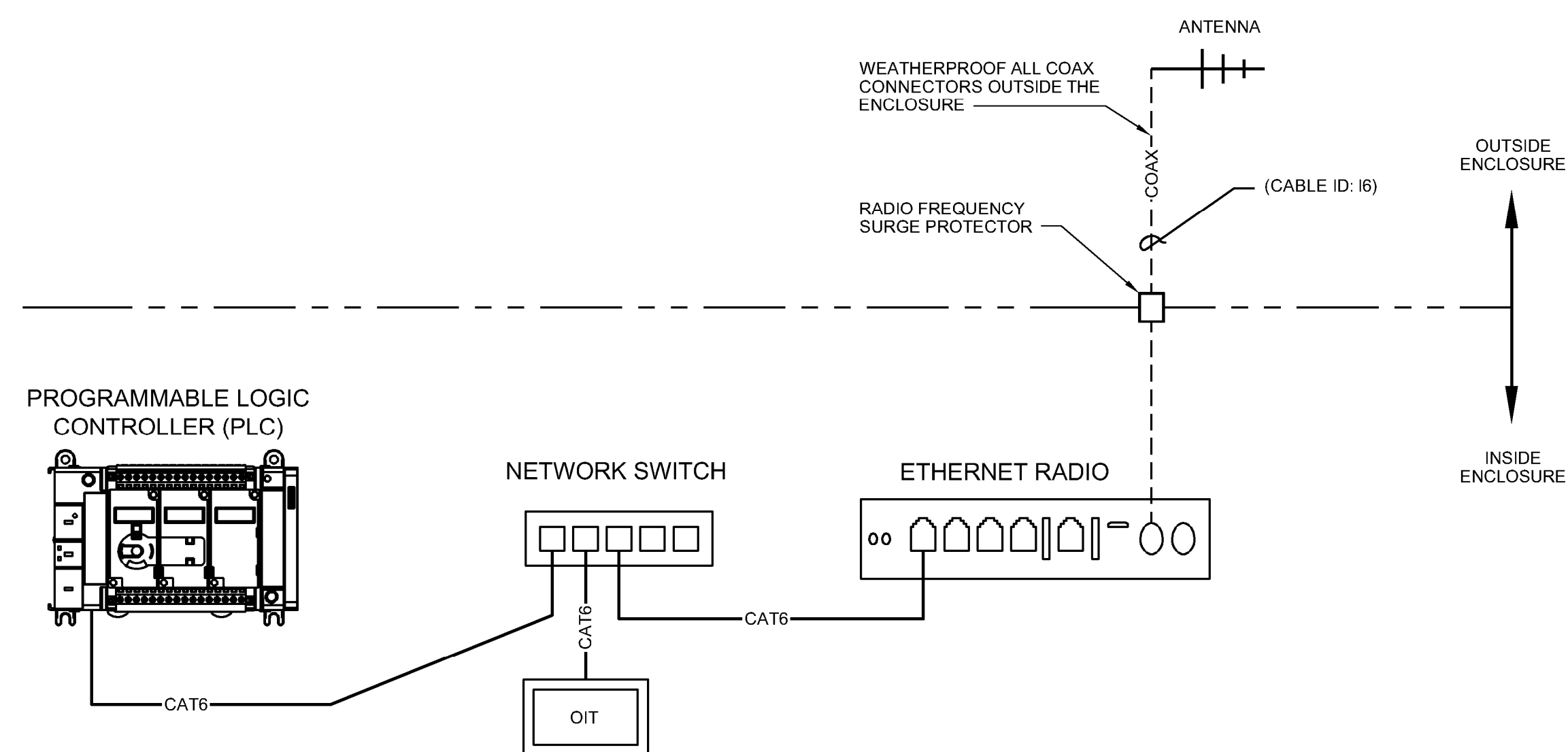
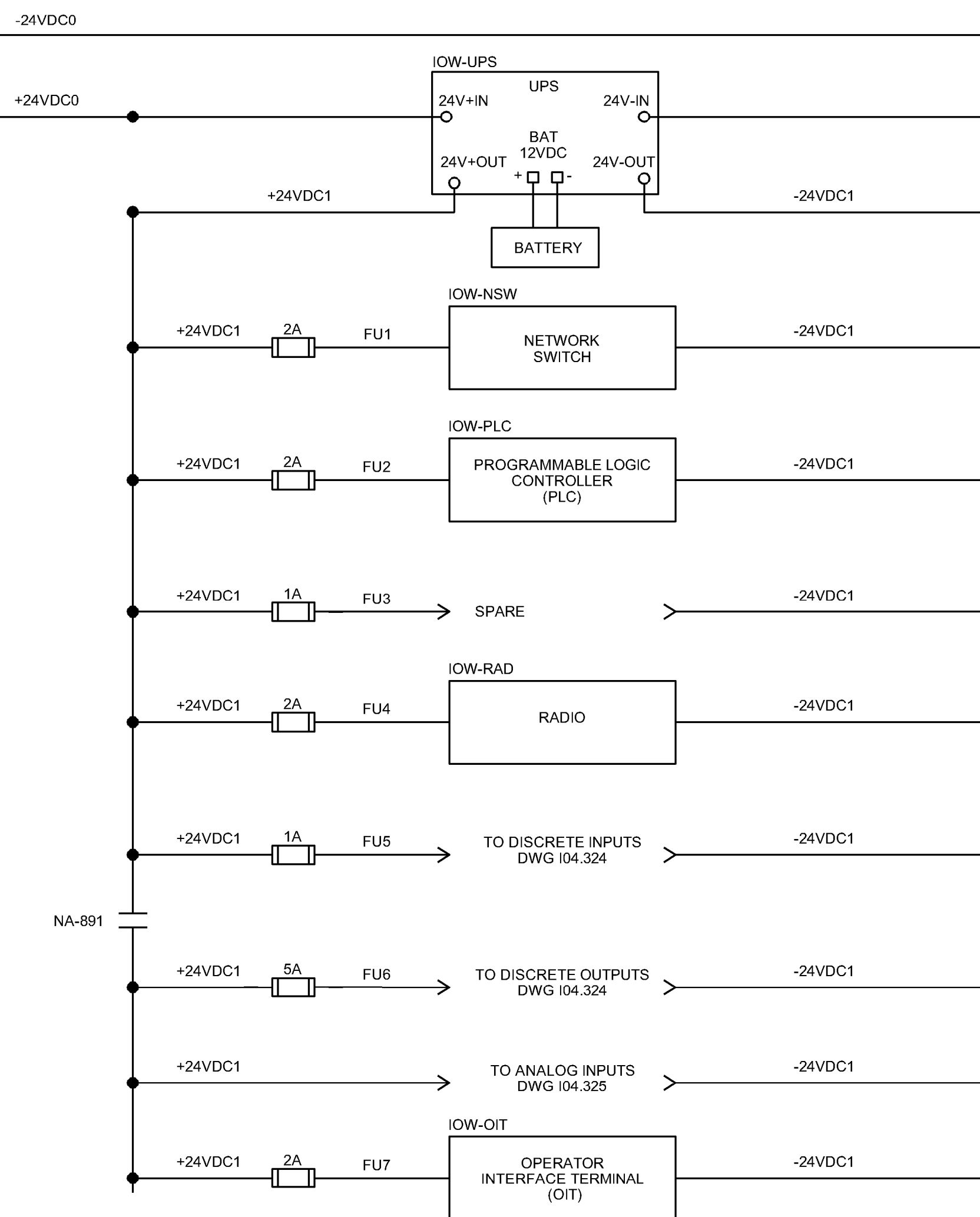
	A/E FIRM PRIME: STANLEY CONSULTANTS, INC. Phoenix, Arizona	DESIGNED: NJB CADD BKG TECH. REVIEW: TTV DATE: JULY 13, 2026	SUB SHEET NO. 104.322	TITLE OF SHEET IOLA WELL RTU (IOW) MOTOR CTRL SCHEMATIC CURECANTI NATIONAL RECREATION AREA		DRAWING NO. 616 187471
				PKG. NO. 318- 472	SHEET 171	
					OF 183	

FROM LP-XXX. CKT-XXX

(CABLE ID: 15)

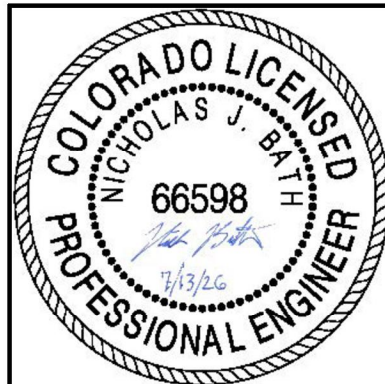
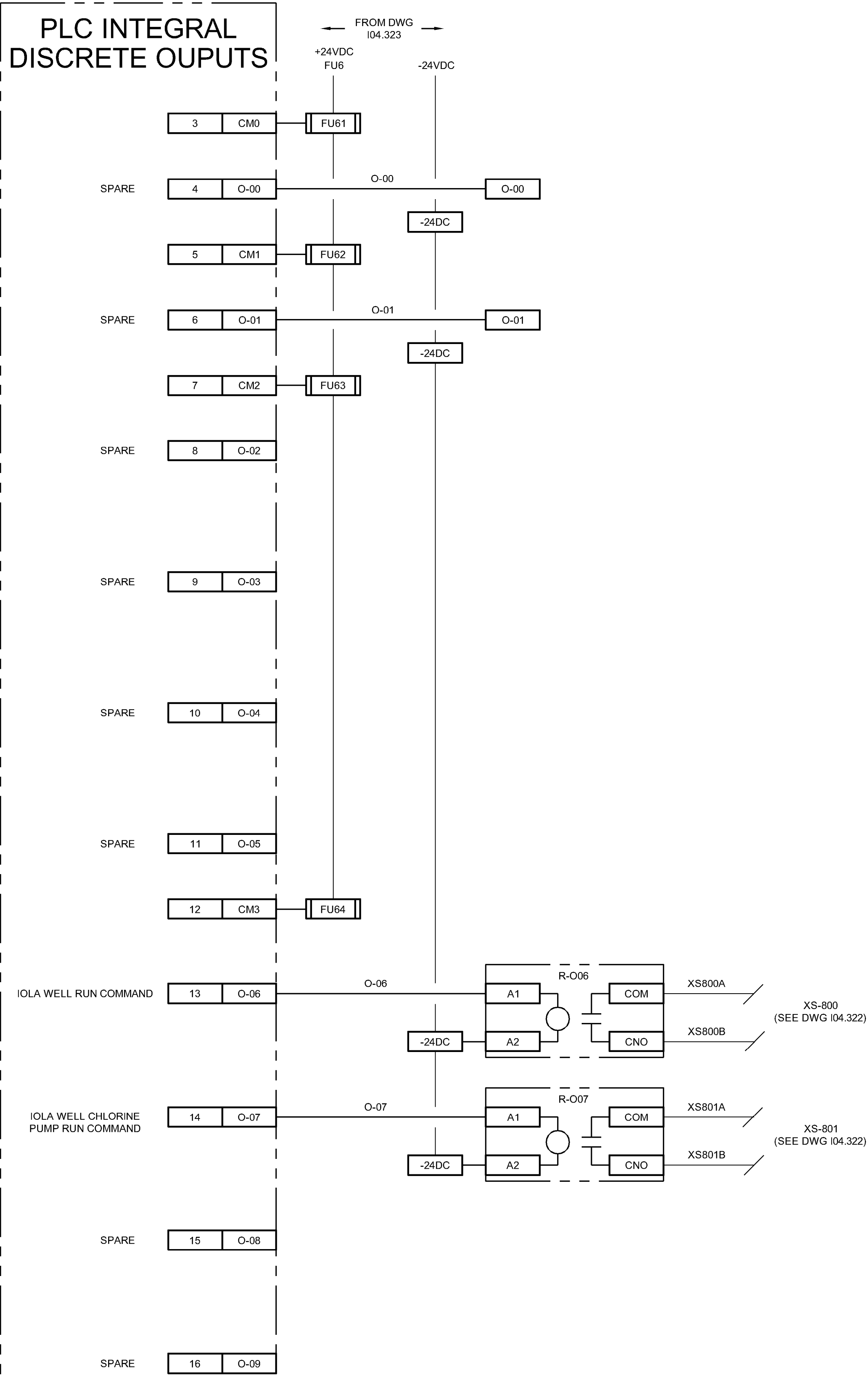
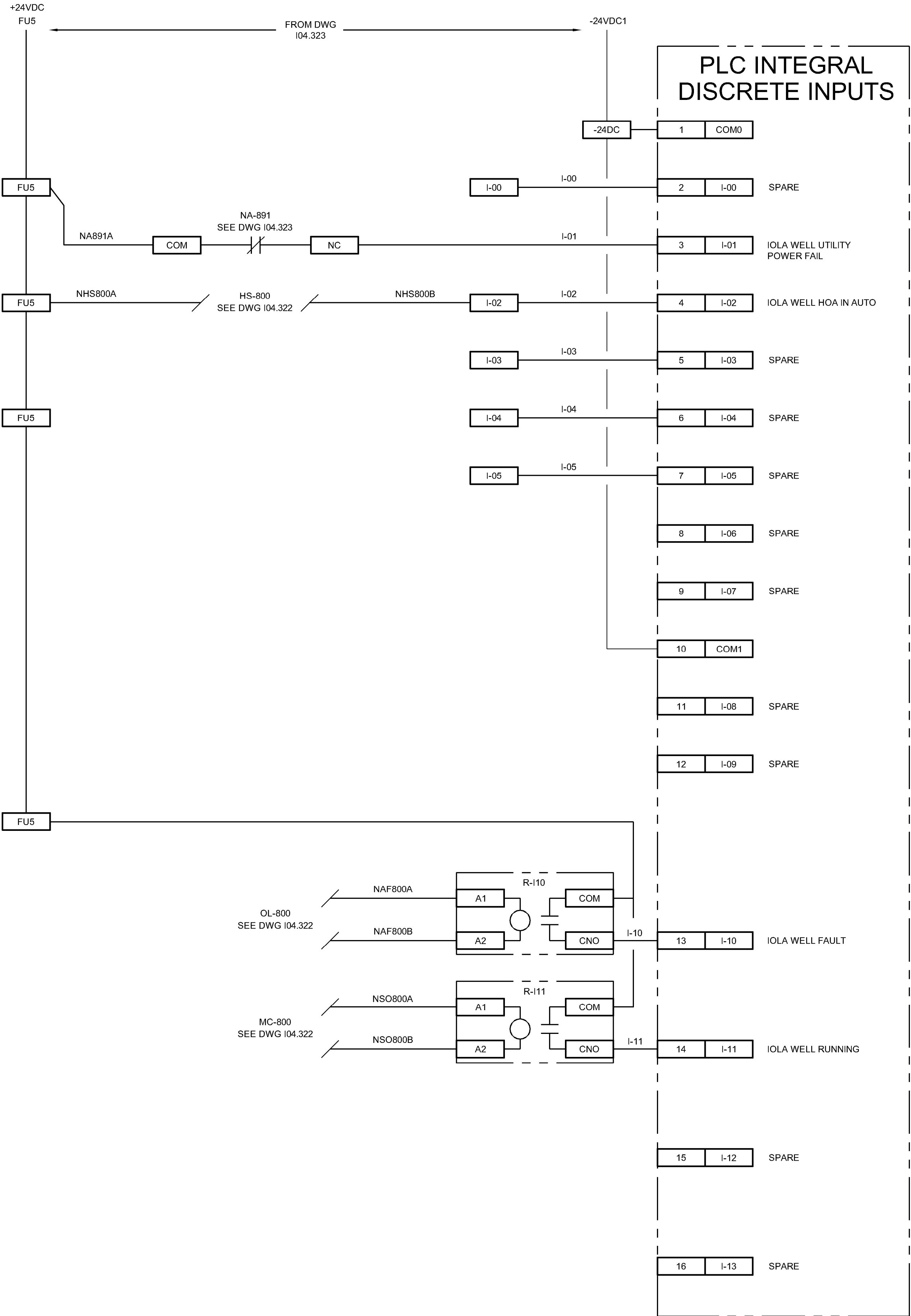


1. THIS IS A SCHEMATIC DRAWING TO DEMONSTRATE THE EXPECTED POWER DISTRIBUTION AND PROTECTION. THE SIZE OF ALL FUSES AND BREAKERS ARE BASED ON BASIS-OF-DESIGN COMPONENTS SHOWN IN THE BOM. CONTRACTOR TO PROVIDE AND SIZE CIRCUIT PROTECTION BASED ON MAXIMUM AMPERAGE OF ACTUAL CONTRACTOR-SELECTED COMPONENTS AND EXISTING FIELD DEVICES.



A/E FIRM		DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.	
PRIME:		NJB	104.323	IOLA WELL RTU (IOW) POWER DISTRIBUTION	616	
STANLEY CONSULTANTS, INC. Phoenix, Arizona		CADD			187471	
		BKG			PKG. NO. 318-472	SHEET 172
		TECH. REVIEW: TTV				
		DATE: JULY 13, 2026			CURECANTI NATIONAL RECREATION AREA	

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A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

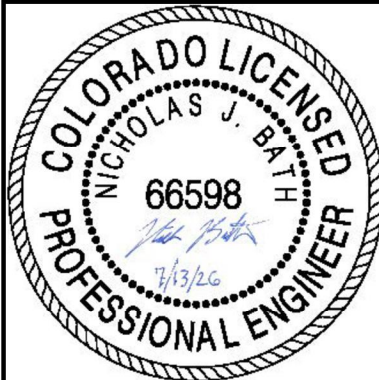
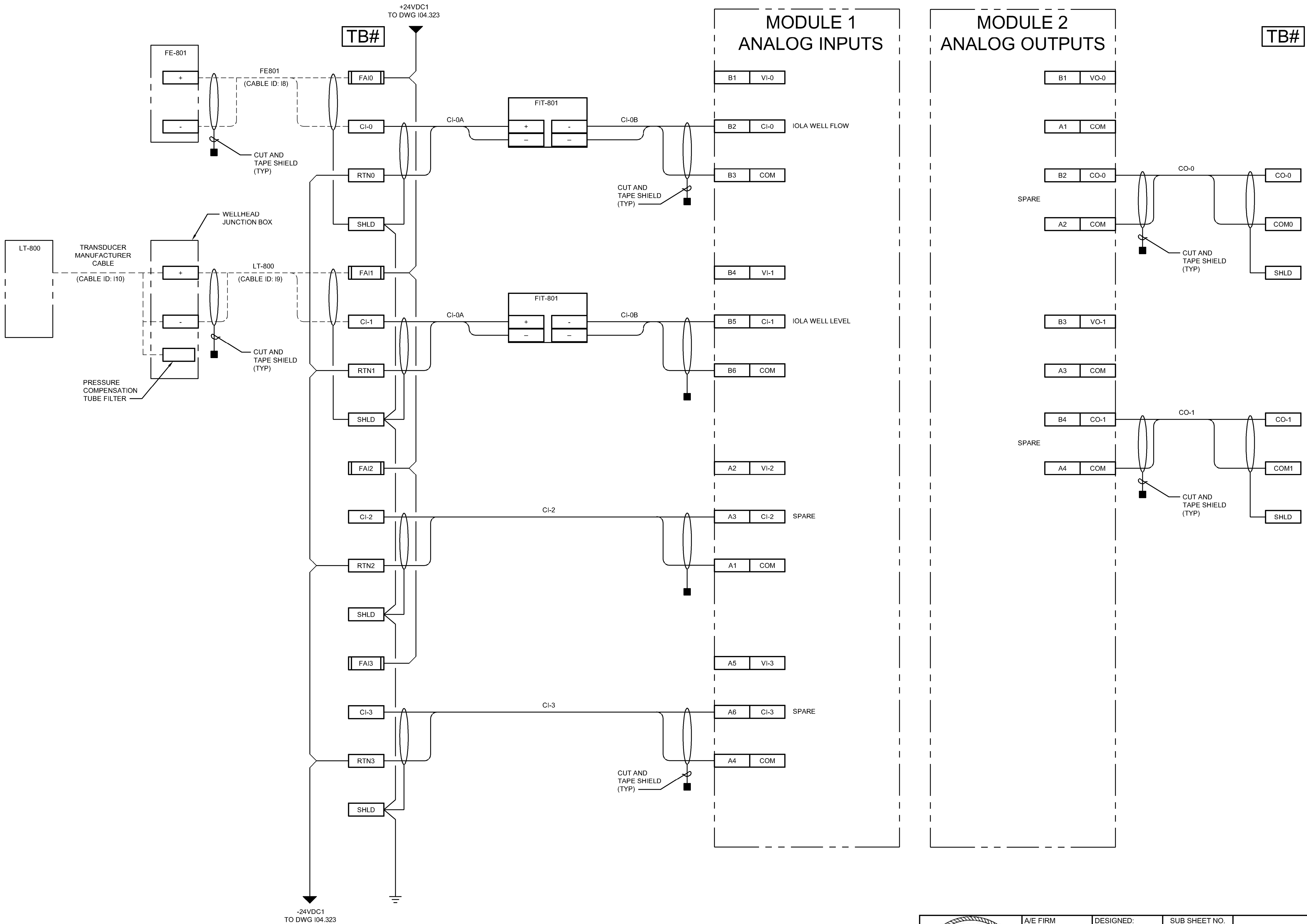
DESIGNED:
NJB
CADD
BKG
TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.
104.324

TITLE OF SHEET
IOLA WELL RTU (IOW)
DISCRETE IO TERM
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
173
OF 183

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A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
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TECH. REVIEW:
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DATE:
JULY 13, 2026

SUB SHEET NO.
104.325

TITLE OF SHEET
IOLA WELL RTU (IOW)
ANALOG IO TERM
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
472
SHEET
174
OF 183

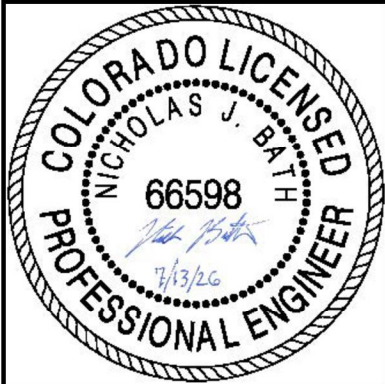
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INSTRUMENTATION & CONTROLS CABLE SCHEDULE						
CABLE ID	CABLE TYPE (SEE NOTE 1)	CABLE SEGREGATION	FROM	TO	TERMINATION DRAWING	PURPOSE
I1	REUSE EXISTING	230VAC	POWER DISTRIBUTION PANEL (EXIST)	RTU-IOW	I04.322	PUMP POWER
I2	REUSE EXISTING	230VAC	RTU-IOW	WELL PUMP	I04.322	PUMP POWER
I3	2C/#12 AWG+GND	120VAC	LP CKT 7	RTU-IOW	I04.322	CHEM PUMP POWER
I4	2C/#12 AWG+GND	120VAC	RTU-IOW	CHEM PUMP RECEPTACLE (EXIST)	I04.322	CHEM PUMP POWER
I5	2C/#12 AWG+GND	120VAC	POWER DISTRIBUTION PANEL (EXIST)	RTU-IOW	I04.323	RTU POWER
I6	COAX	N/A	RTU-IOW	ANTENNA	I04.323	RADIO COMMS
I7						
I8	2P/#16 TSP	24VDC	RTU-IOW	IOLA WELL FLOW FE-801	I04.325	I/O
I9	1P/#16 TSP	24VDC	RTU-IOW	WELL LEVEL LT-800 JUNCTION BOX	I04.325 / I04.400	I/O
I10	MANUFACTURER PROVIDED	24VDC	WELL LEVEL LT-800 JUNCTION BOX	TRANSDUCER LT-800	I04.325 / I04.400	I/O

NOTES:

1. CABLE KEY:
XXA#YY ZZZ

A: C = SINGLE, P = PAIR
XX: QUANTITY
YY: CONDUCTOR GAUGE
ZZZ: ADDITIONAL SPECIFICATION
TSP = TWISTED SHIELDED PAIR
2. REFER TO I04.320 FOR LOCATION OF INSTRUMENTATION AND CONTROLS EQUIPMENT.
3. CABLES OF THE DIFFERENT VOLTAGE SEGREGATION SHALL BE RUN IN SEPARATE CONDUIT.



A/E FIRM
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JULY 13, 2026

SUB SHEET NO.

I04.326

TITLE OF SHEET

IOLA WELL RTU (IOW)
CABLE SCHEDULE

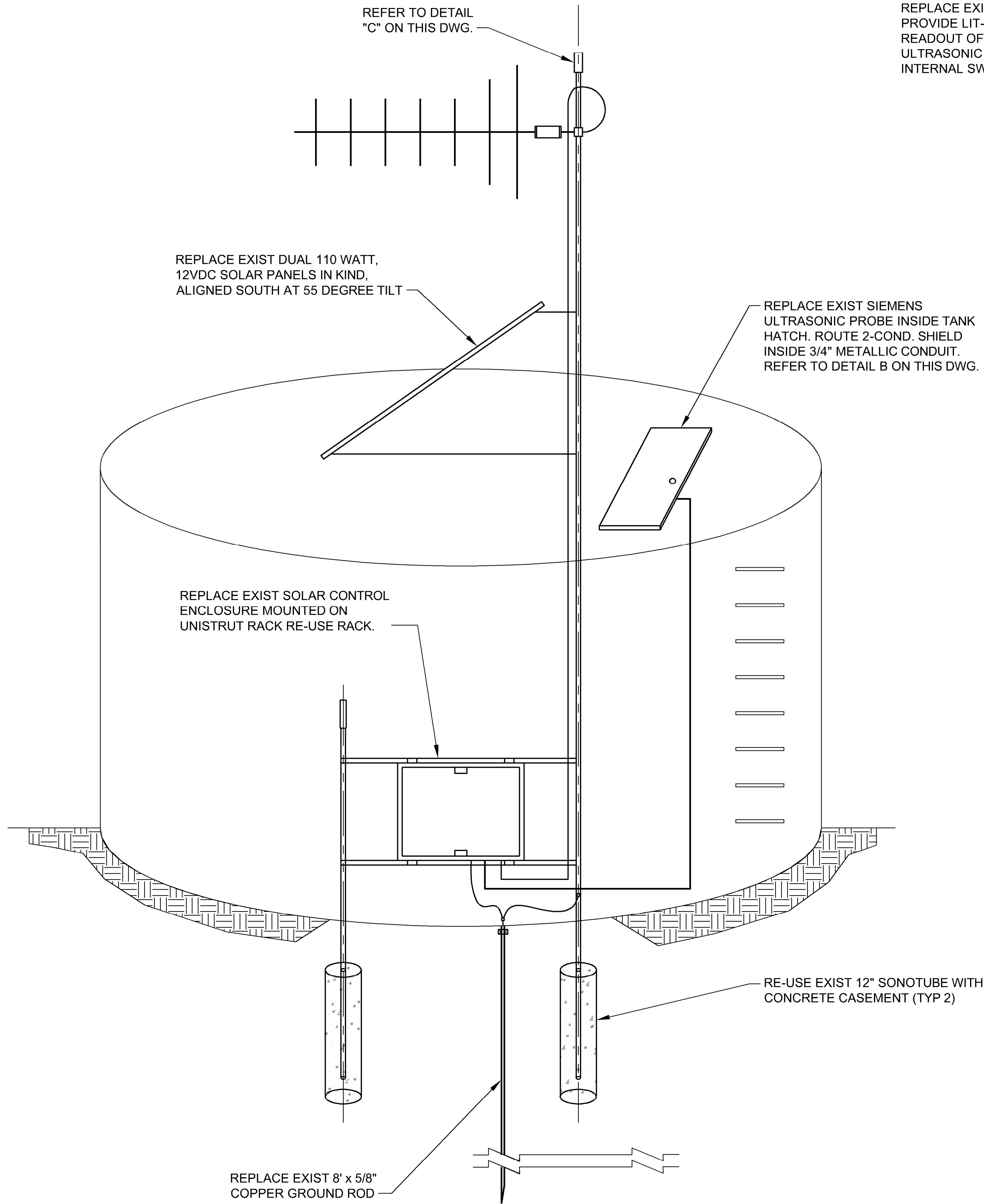
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471

PKG. NO.
318-
472

SHEET
175
OF 183

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DETAIL A - EXISTING SCHEMATIC

SCALE: NONE

NOTE:
SEE SHEET I04.300 FOR OVERALL LOCATION MAP

REPLACE EXISTING RTU WITH RTU-IOT. PROVIDE LIT-900 PANEL-MOUNTED LOCAL READOUT OF TANK LEVEL FROM NEW ULTRASONIC SENSOR LE-900, ON INTERNAL SWING OUT DOOR



DETAIL B - EXISTING RTU (INTERIOR)

SCALE: NONE

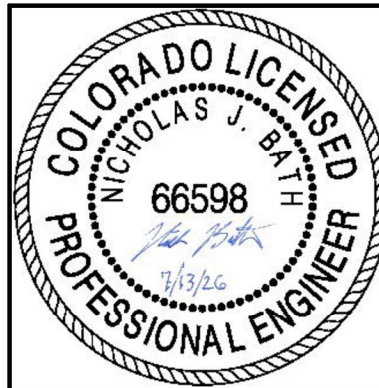
REPLACE ANTENNA, GROUND KIT, AND COAX CABLING BACK TO RTU. RE-USE EXISTING GROUNDING CONNECTION AND MAST. WEATHERPROOF ALL COAX CONNECTORS IN OUTSIDE LOCATIONS. REFER TO RADIO SPECIFICATION 40 66 63-13 AND RADIO DETAILS ON I04.401 FOR ANTENNA AND CABLE SPECIFICATIONS, INCLUDING ANTENNA CENTERLINE AND AZIMUTH.



DETAIL C - EXISTING ANTENNA

SCALE: NONE

REPLACE EXISTING SIEMENS ULTRASONIC LEVEL TRANSMITTER UNDER HATCH WITH LE-900



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104.330

TITLE OF SHEET

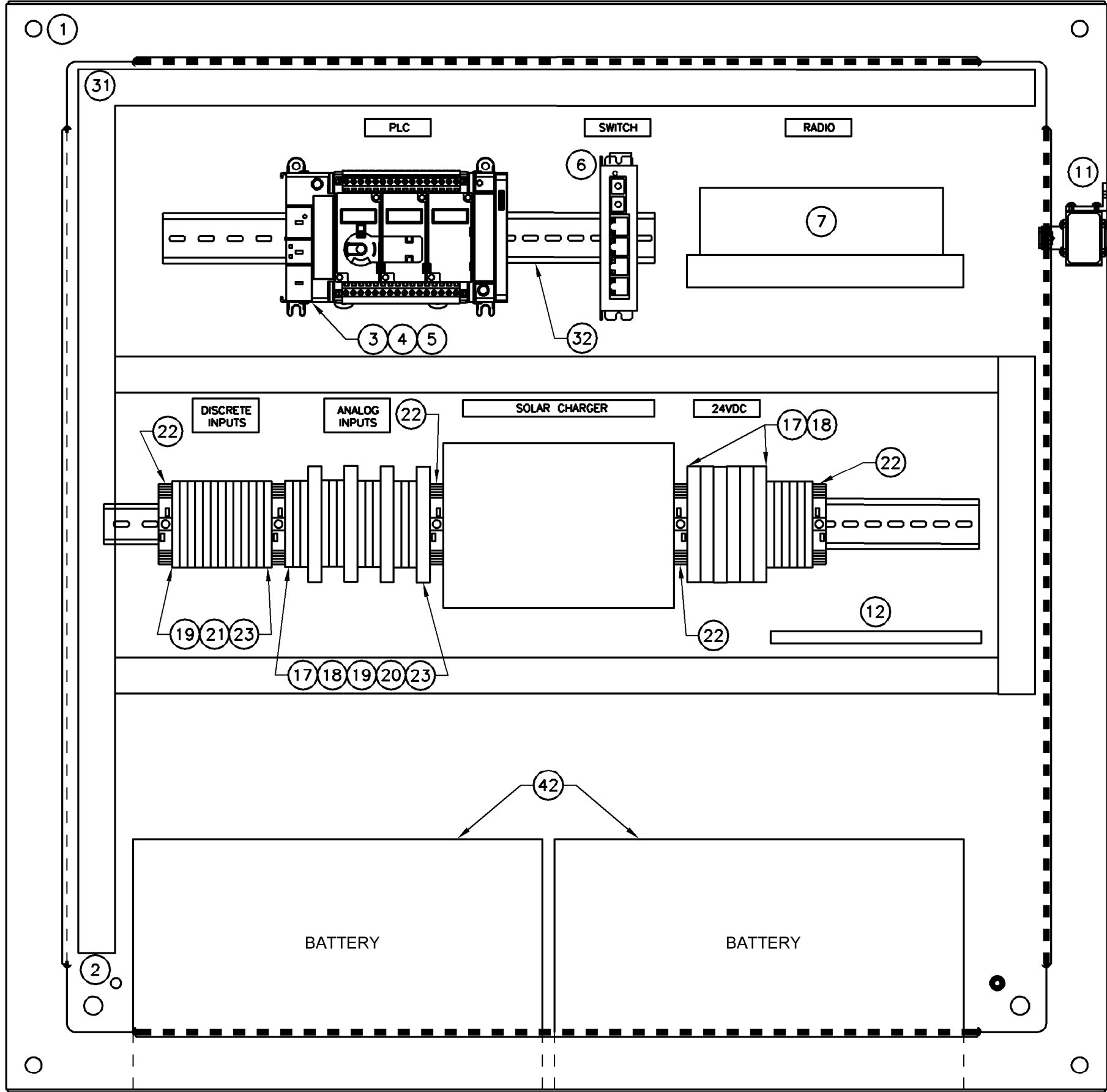
IOLA TANK I&C
LOCATION

CURECANTI NATIONAL RECREATION AREA

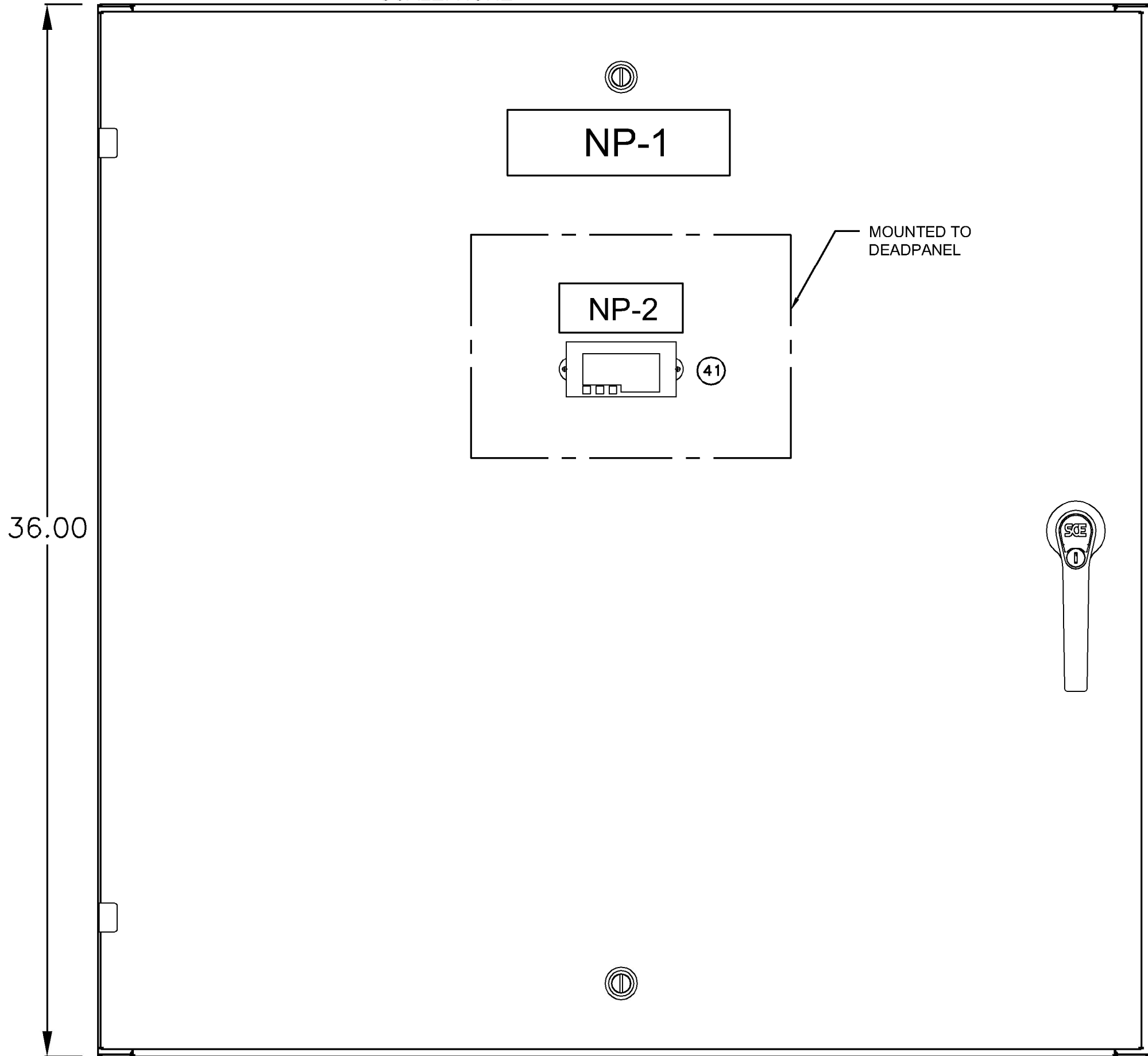
DRAWING NO.
616
187471

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NO.
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472
SHEET
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OF 183

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PANEL INTERIOR LAYOUT
SCALE: NONE



PANEL EXTERIOR & DEADPANEL LAYOUT
SCALE: NONE

ITEM	QTY	DESCRIPTION	SPECIFICATION	MANUF. (SEE NOTE 1)	MODEL
1	1	NEMA 4X ENCLOSURE, HANDLE LOCK, 36" X 36" X 12"	40 67 00	SAGINAW	SCE-36EL3612LPPL
2	1	SUBPANEL, 36" X 36"	40 67 00	SAGINAW	SCE-36P36
3	1	PLC WITH INTEGRAL I/O, 24VDC POWERED, MIN. 14 24VDC DISCRETE INPUTS, 10 RELAY OUTPUTS, 1-10/100 BASE-T ETHERNET PORT, SUPPORT FOR MODBUS TCP/IP, 1 RS-232/485 SERIAL PORT, SUPPORT FOR MODBUS RTU	40 63 43		
4	1	4-CHANNEL ANALOG INPUT CARD	40 63 43	ALLEN BRADLEY	2080-L70E-QWB
5	1	2-CHANNEL ANALOG OUTPUT CARD	40 63 43	ALLEN BRADLEY	2080-IF4
6	1	INDUSTRIAL ETHERNET SWITCH, DIN RAIL MOUNTED, UNMANAGED, 24VDC POWERED, 4 RJ-45 10/100 BASE-TX PORTS, 1 FIBER PORT 100BASE-FX, MULTIMODE	40 62 00	RED LION	SLX-5ES-2ST
7	1	VHF RANGE ETHERNET RADIO, COAX PORT, QTY 2 - 10/100 BASE-T ETHERNET PORTS	40 66 63-13	APRISA	SR+
8	1	24VDC UPS, 24VDC IN, 24VDC OUT, 10A, WITH 12V 5AH BATTERY	40 67 00	PULS	UB10.241 & UBC10.241-N1
9	1	24VDC POWER SUPPLY, 10A/240W	40 67 00	PULS	CP10.241
10	1	SURGE SUPPRESSOR	40 67 00	PHOENIX CONTACT	PLUGTRAB
11	1	RADIO FREQUENCY SURGE PROTECTOR	40 66 63-13	POLYPHASOR	VHF50HN-B
12	1	GROUNDING BAR	40 67 00		
13					
14					
15	AS NEEDED	AC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1492-D1CXXX
16	AS NEEDED	DC CIRCUIT BREAKERS	40 67 00	ALLEN BRADLEY	1489-M1CXXX
17	AS NEEDED	24VDC FUSES, AS NEEDED	40 67 00	BUSSMAN	
18	AS NEEDED	FUSED TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-H4
19	AS NEEDED	FEED-THROUGH TERMINAL BLOCK, 600V, 25A	40 67 00	ALLEN BRADLEY	1492-J3
20	AS NEEDED	GROUNDING TERMINAL BLOCKS	40 67 00	ALLEN BRADLEY	1492-JG3
21	AS NEEDED	TERMINAL BLOCK JUMPERS	40 67 00	ALLEN BRADLEY	1492-CJJ5-10
22	AS NEEDED	TERMINAL BLOCK ANCHORS	40 67 00	ALLEN BRADLEY	1492-EAJ35
23	AS NEEDED	TERMINAL BLOCK END BARRIER	40 67 00	ALLEN BRADLEY	1492-EBJ3
24	AS NEEDED	24VDC RELAYS AND RELAY BASES, INTERPOSING, 6A CONTACTS, SPDT	40 67 00	ALLEN BRADLEY	700-HLT12224
25	AS NEEDED	120VAC RELAYS	40 67 00	ALLEN BRADLEY	700-HL
26	AS NEEDED	RELAY END BARRIERS	40 67 00	ALLEN BRADLEY	700-HN177
27	AS NEEDED	CAT6 CABLE	40 67 00		
28	AS NEEDED	COAX CABLE	40 66 63-13	TIMES MICROWAVE	LMR-400-DB
29	AS NEEDED	16AWG TSP CABLE	40 67 00		
30	AS NEEDED	14AWG MACHINE WIRE CABLE	40 67 00		
31	AS NEEDED	WIRE DUCT		PANDUIT	
32	AS NEEDED	DIN RAIL			
33					
34					
35	1	DEAD-FRONT PANEL 36" X 36", FOR MOUNTING INTERFACE COMPONENTS INSIDE	40 67 00	SAGINAW	SCE-DF36EL36LP
36					
37					
38					
39					
40	1	PANEL DOOR SWITCH	40 67 00		
41	1	LOOP POWERED 24VDC 4-20MA ANALOG SIGNAL INDICATOR AND RE-TRANSMITTER	40 70 00-16	ENDRESS & HAUSER	RIA15
42	2	12VDC BATTERIES, 105 AH			
43	1	24VDC SOLAR CHARGER			
44					
45					
46					
47					
48					
49					
50					

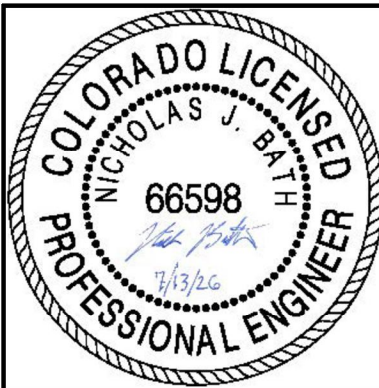
BILL OF MATERIAL

ITEM	QTY	LINE 1	LINE 2	LINE 3	LETTER SIZE
NP-1	1	CURECANTI NAT. REC AREA	IOLA TANK	RTU-IOT	1/4"
NP-2	1	TANK LEVEL	LIT-900		3/16"

NAMEPLATE SCHEDULE

GENERAL NOTES:

- THE PURPOSE OF THIS DRAWING IS TO EXEMPLIFY THE EXPECTED COMPONENTS, GENERAL LAYOUT, AND PANEL SIZE. CONTRACTORS ARE NOT LIMITED TO THE EXAMPLE COMPONENTS DEPICTED ON THIS DRAWING. REFER TO DIVISION 40 SPECIFICATIONS FOR PANEL COMPONENTS AND FUNCTIONAL REQUIREMENTS OF EACH RTU.
- THE SIZE OF 24VDC POWER SOURCE IS A PRELIMINARY MINIMUM, BASED ON COMPONENTS USED AS A BASIS OF DESIGN. CONTRACTOR MAY UPSIZE POWER SOURCE IF CONTRACTOR-SELECTED COMPONENTS REQUIRE MORE POWER



A/E FIRM
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STANLEY
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Phoenix, Arizona

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JULY 13, 2026

SUB SHEET NO.

104.331

TITLE OF SHEET

IOLA TANK RTU (IOT)
PANEL LAYOUT & BOM

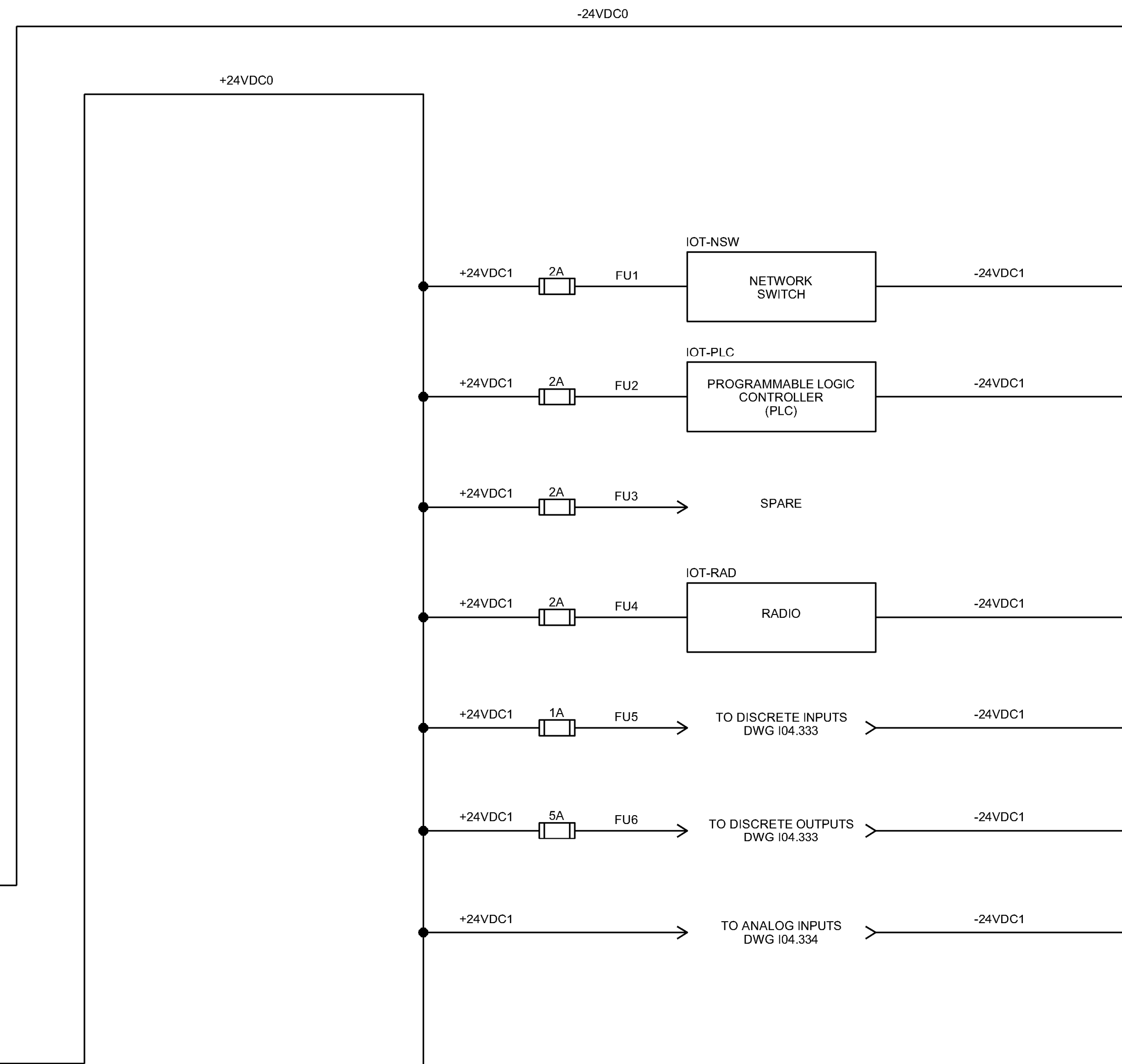
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
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OF 183

The diagram illustrates the power system for the IOT-VT-900. It shows the following components and connections:

- SOLAR PANELS (IOT-SPL):** The primary power source, connected to the solar charger via a cable labeled (CABLE ID: 11).
- 24VDC SOLAR CHARGER (IOT-CHR):** Receives power from the solar panels and provides a 24V-OUT to the battery.
- 24VDC BATTERY:** Stores energy and provides a 24V+OUT to the IOT-VT-900.
- IOT-VT-900:** A signal conditioner with a PWR input connected to the battery's 24V+OUT. It has an OUTPUT that is connected to the ANALOG INPUT CI-1 of the DWG I04.334.

1. THIS IS A SCHEMATIC DRAWING TO DEMONSTRATE THE EXPECTED POWER DISTRIBUTION AND PROTECTION. THE SIZE OF ALL FUSES AND BREAKERS ARE BASED ON BASIS-OF-DESIGN COMPONENTS SHOWN IN THE BOM. CONTRACTOR TO PROVIDE AND SIZE CIRCUIT PROTECTION BASED ON MAXIMUM AMPERAGE OF ACTUAL CONTRACTOR-SELECTED COMPONENTS AND EXISTING FIELD DEVICES.

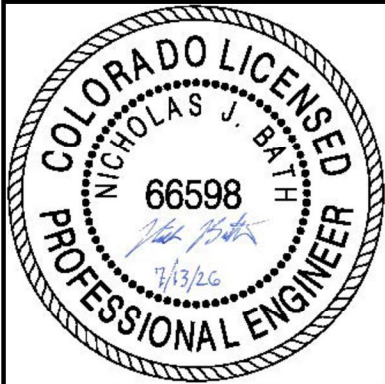
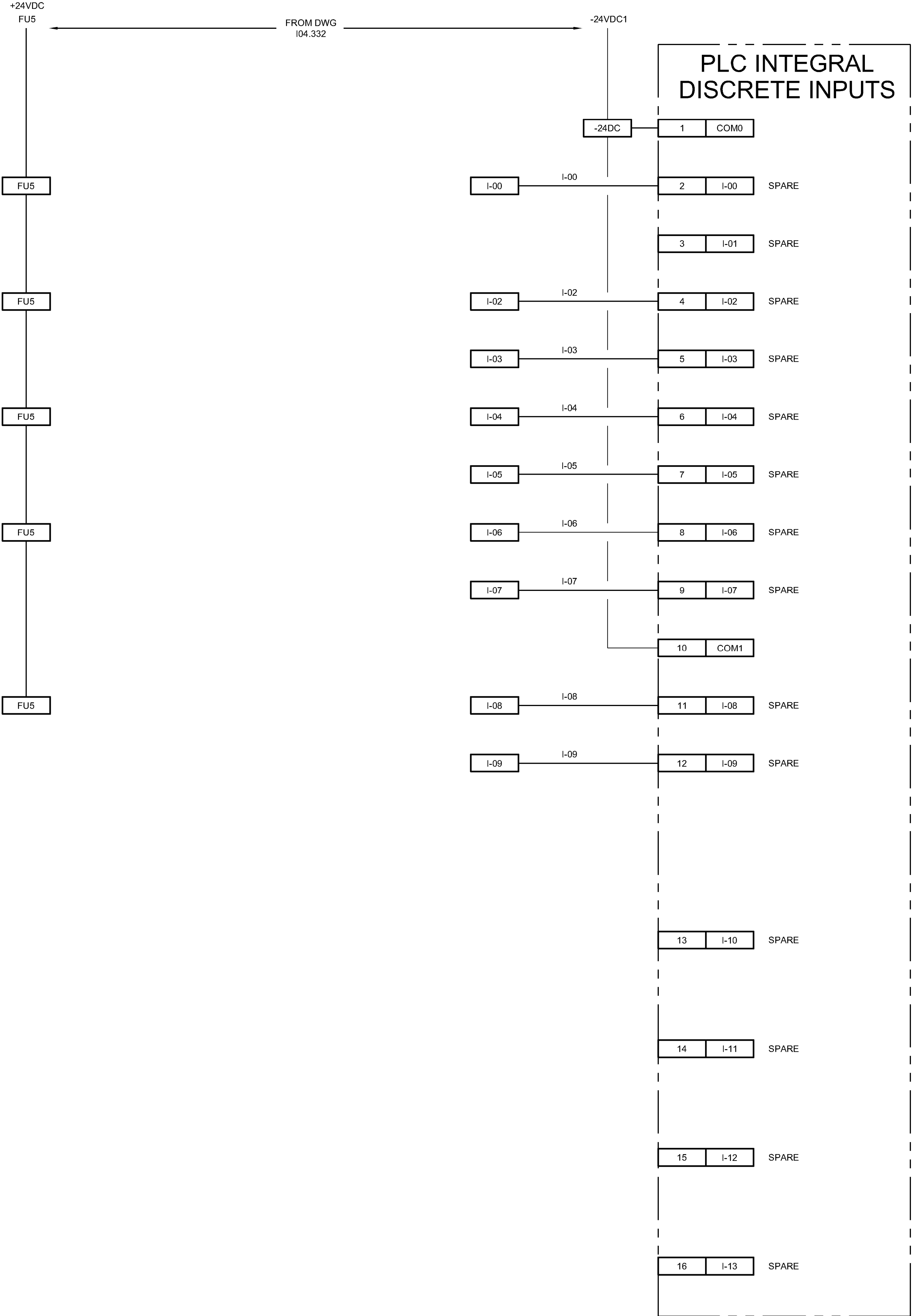


The diagram illustrates a network enclosure with the following components and connections:

- Internal Components:**
 - PROGRAMMABLE LOGIC CONTROLLER (PLC):** Located on the left, connected to the Managed Network Switch via CAT6.
 - MANAGED NETWORK SWITCH:** A 4-port switch connected to the PLC and the Ethernet Radio via CAT6.
 - ETHERNET RADIO:** A device with multiple ports, connected to the Managed Network Switch via CAT6.
- External Connections:**
 - ANTENNA:** Connected to the Ethernet Radio via a COAX cable.
 - WEATHERPROOF ALL COAX CONNECTORS OUTSIDE THE ENCLOSURE:** A label pointing to the antenna connection point.
 - RADIO FREQUENCY SURGE PROTECTOR:** A device connected to the COAX cable between the antenna and the Ethernet Radio.
 - (CABLE ID: I2):** A label for the COAX cable.
- Enclosure Orientation:**
 - OUTSIDE ENCLOSURE:** Indicated by an upward arrow on the right.
 - INSIDE ENCLOSURE:** Indicated by a downward arrow on the right.

	A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 616 187471		
	PRIME:	NJB				104.332	
	STANLEY CONSULTANTS, INC. Phoenix, Arizona	CADD					IOLA TANK RTU (IOT) POWER DISTRIBUTION
		BKG					
	TECH. REVIEW:	TTV			PKG. NO. 318- <u>472</u> OF 183		
	DATE:	JULY 13, 2026				SHEET 178	

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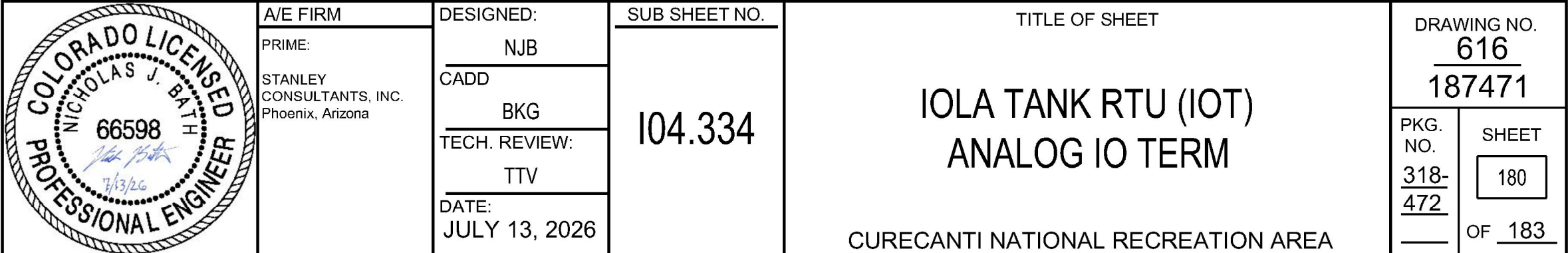
A/E FIRM
PRIME:
STANLEY
CONSULTANTS, INC.
Phoenix, Arizona

DESIGNED:
NJB
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TECH. REVIEW:
TTV
DATE:
JULY 13, 2026

SUB SHEET NO.
104.333

TITLE OF SHEET
IOLA TANK RTU (IOT)
DISCRETE IO TERM
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
616
187471
PKG. NO.
318-
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OF 183



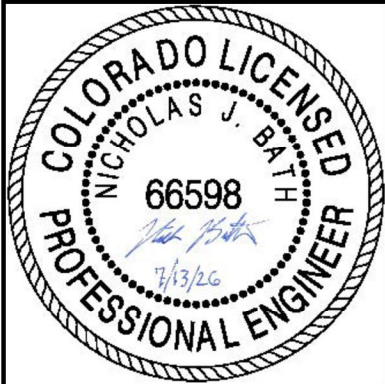
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INSTRUMENTATION & CONTROLS CABLE SCHEDULE						
CABLE ID	CABLE TYPE (SEE NOTE 1)	CABLE SEGREGATION	FROM	TO	TERMINATION DRAWING	PURPOSE
I1	MANUFACTURER PROVIDED	24VDC	SOLAR PANEL	RTU-IOT	I04.332	RTU POWER
I2	COAX	N/A	RTU-IOT	ANTENNA	I04.332	RADIO COMMS
I3	1P/#16 TSP	24VDC	RTU-IOT	IOLA TANK LEVEL LE-900	I04.334	I/O

NOTES:

1. CABLE KEY:
XXA#YY ZZZ

A: C = SINGLE, P = PAIR
XX: QUANTITY
YY: CONDUCTOR GAUGE
ZZZ: ADDITIONAL SPECIFICATION
TSP = TWISTED SHIELDED PAIR
2. REFER TO I04.330 FOR LOCATION OF INSTRUMENTATION AND CONTROLS EQUIPMENT.
3. CABLES OF THE DIFFERENT VOLTAGE SEGREGATION SHALL BE RUN IN SEPARATE CONDUIT.



A/E FIRM
PRIME:
STANLEY CONSULTANTS, INC.
Phoenix, Arizona

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JULY 13, 2026

SUB SHEET NO.

I04.335

TITLE OF SHEET

IOLA TANK RTU (IOT)
CABLE SCHEDULE

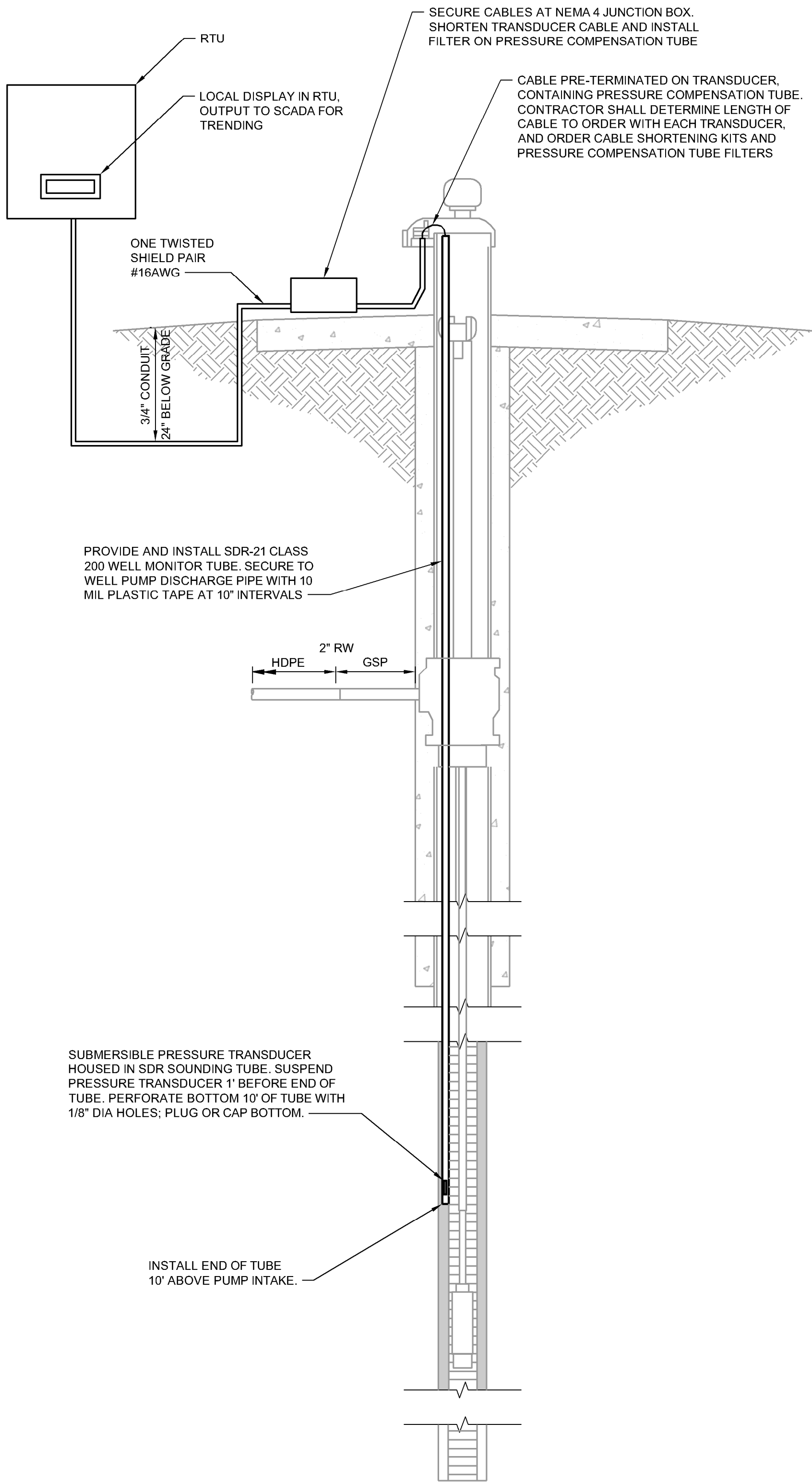
CURECANTI NATIONAL RECREATION AREA

DRAWING NO.
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PKG. NO.
318-
472
OF 183

SHEET
181

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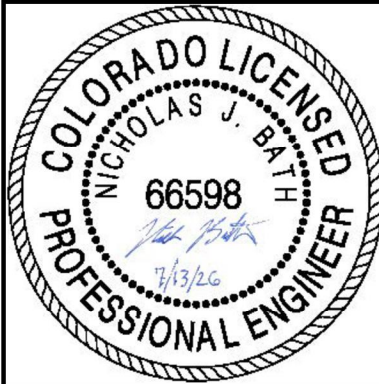


TYPICAL WELL LEVEL TRANSDUCER INSTALLATION DETAIL

SCALE: NO SCALE

NOTES:

- THIS IS A TYPICAL TRANSDUCER INSTALLATION DETAIL FOR 4 EXISTING WELLS. CONTRACTOR TO DETERMINE PRESENCE AND DEPTH OF ANY EXISTING OF MONITOR TUBES. INSTALL NEW MONITOR TUBES PER THIS DETAIL WHERE NOT PRESENT.
ELK CREEK WELL 3 - PERMIT 33693-F
ELK CREEK WELL 4 - PERMIT 32263-FR
LAKE FORK WELL - 33691-F
IOLA WELL - PERMIT 299794-A
- ONLY ELK CREEK WELL 4 IS KNOWN TO HAVE AN EXISTING MONITOR TUBE AND TRANSDUCER. AT THIS SITE, REPLACE THE TRANSDUCER, RE-USE MONITOR TUBE.
- PROVIDE AND INSTALL TRANSDUCER IN MONITOR TUBE, JUNCTION BOX, AND CONDUIT AND CABLE BACK TO THE RTU, PER THIS DETAIL
- REFER TO 40 70 00-16 FOR TRANSDUCER AND LEVEL DISPLAY SPECIFICATIONS



A/E FIRM	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET		DRAWING NO.	
PRIME: STANLEY CONSULTANTS, INC. Phoenix, Arizona	NJB	104.400	WELL TRANSDUCER INSTALL DETAIL		616	
	CADD				187471	
	BKG					
	TECH. REVIEW:					
	TTV					
DATE:	JULY 13, 2026				PKG. NO.	SHEET
					318-472	182
					OF 183	
CURECANTI NATIONAL RECREATION AREA						

