

USER: User FILE: E:\2024_Projects\19_Cocopah-Sewer\6_CAD\7_100PCT\Cocopah-G1-COVER SHEET.dwg 4/03/2025 - 9:10am

SHEET
1 OF 31

GENERAL NOTES

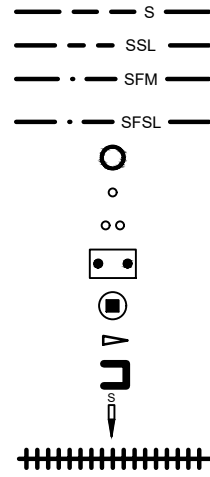
1. THE UTILITIES SHOWN IN PLAN AND PROFILE ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS. (ALL UTILITIES MAY NOT BE SHOWN.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATIONS OF ALL UTILITIES FROM THE OWNERS OF RESPECTIVE UTILITIES. ALL UTILITIES SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO EXCAVATION.
2. ALL MINOR OBSTRUCTIONS MAY NOT BE SHOWN ON PLANS. THE CONTRACTOR SHALL VISIT THE SITE AND DETERMINE THE ACTUAL CONDITIONS WITH REGARD TO THE EXISTENCE OF FENCES, DRIVEWAYS, TREES, SIDEWALKS, CULVERTS, UTILITIES AND OTHER MISCELLANEOUS OBSTACLES THAT MAY INTERFERE WITH CONSTRUCTION PRIOR TO SUBMITTING BIDS.
3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OR PIPELINE COMPANY, THE OWNER OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF TO THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE OF ANY AND ALL DAMAGE CAUSED BY IT'S FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL COMPLY WITH IHS TECHNICAL PROVISIONS, STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES, AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "ARIZONA 811" PROCEDURES, OR OTHERWISE
4. EXISTING PIPE MATERIAL CALLED OUT IN DRAWINGS SHOULD BE FIELD VERIFIED.
5. SYMBOLS ON THE DRAWINGS (BECAUSE OF THEIR SIZE) MAY NOT REPRESENT THE EXACT LOCATION OF EITHER PROPOSED OR EXISTING UTILITIES. (EX. GATE VALVES & HYDRANTS)
6. ALL WORK WITH THE RIGHT-OF-WAY OF A STREET, ROAD, HIGHWAY OR OTHER PUBLIC THOROUGHFARE SHALL MEET THE COMPACTION REQUIREMENTS OF THE GOVERNING AUTHORITY.
7. CONTRACTOR SHALL COMPLY WITH THE RIGHT-OF-WAY PERMIT FOR THE INSTALLATION INCLUDING ALL OF THE REQUIREMENTS FOR TRAFFIC CONTROL AND COMPACTION. ALL WORK WITHIN THE RIGHT-OF-WAY OF ROADS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORMED TRAFFIC CONTROL DEVICES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTING, PROTECTING AND MAINTAINING ANY NECESSARY TRAFFIC CONTROL.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY, AND FOR KNOWLEDGE AND COMPLIANCE WITH APPLICABLE OSHA STANDARDS. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES IN A SAFE CONDITION PROTECTING THE WORKERS AND THE GENERAL PUBLIC. TRENCH PROTECTION SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS. EXCAVATIONS SHALL BE SLOPED, BRACED, OR SHORED AS REQUIRED BY OSHA REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFE HANDLING OF CONSTRUCTION EQUIPMENT AND MATERIALS TO AND FROM THE STAGING/STORAGE AREA AND FOR SITE SECURITY. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND NO ADDITIONAL COMPENSATION SHALL BE MADE THEREFORE.
9. THE CONTRACTOR SHALL CONFINE HIS/HER WORK TO WITHIN THE CONSTRUCTION LIMITS AND/OR RIGHT-OF-WAY TO PRESERVE EXISTING VEGETATION AND PRIVATE PROPERTY. OVERNIGHT PARKING OF CONTRACTOR'S EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAY OPENINGS OF DESIGNATED TRAFFIC LANDES. THE CONTRACTOR SHALL SCHEDULE HIS TRENCHING INSTALLATION AND BACKFILL OPERATIONS SO THAT ACCESS TO ANY DRIVEWAY IS NOT DISRUPTED LONGER THAN ONE WORKING DAY.
10. IF DEWATERING IS USED TO INSTALL UTILITIES, THEN A CONSTRUCTION DEWATERING WASTEWATER DISCHARGE PERMIT FROM THE TRIBE IS REQUIRED IF DISCHARGING INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH, OR ANY WATERS OF THE UNITED STATES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING THE TRENCH BEDDING MATERIAL. IF SOIL BORROWING IS NEEDED FOR TRENCH BACKFILL, THE SOIL BORROWING SITE SHALL BE DETERMINED AND APPROVED BY THE OWNER.
12. CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE OF 5 FEET AWAY FROM ANY PRE-EXISTING STRUCTURES FOR ALL EXCAVATIONS.

SEWER NOTES

1. THE MINIMUM DEPTH OF COVER OVER SANITARY SEWER GRAVITY OR FORCE MAINS IS 36".
2. ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. GO-NO-GO MANDREL DEFLECTION TESTS SHALL BE PERFORMED ON GRAVITY SEWERS FROM MANHOLE TO MANHOLE UP TO AND INCLUDING THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM. THESE TESTS SHALL BE REQUESTED AND PAID FOR BY THE CONTRACTOR.
4. LEAKAGE TESTS SHALL BE PERFORMED ON ALL SEGMENTS OF A GRAVITY SEWER SYSTEM, INCLUDING SERVICE LATERALS, AND MANHOLES. LEAKAGE TESTS SHALL BE IN ACCORDANCE WITH IHS PHOENIX AREA SANITATION FACILITIES CONSTRUCTION TECHNICAL PROVISIONS TP-06.11. OWNER'S REPRESENTATIVE SHALL BE INVITED AND PRESENT FOR ALL TESTINGS. ANY WATER USED IN TESTING SHALL BE CONSERVED AND RE-USED AS MUCH AS POSSIBLE.
5. ALL SEWER LINES CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE PIPE TRENCH AREAS AS SHOWN IN THE DRAWING. CONTRACTORS SHOULD ALWAYS BE AWARE OF THE POSSIBILITY OF UNDISCOVERED ARCHAEOLOGICAL SITES AND TRADITIONAL CULTURAL PROPERTIES (I.E. CRADLE BOARDS, FUNERAL DEPOSITS, ETC.). IF SUBTERRANEAN CULTURAL RESOURCES ARE ENCOUNTERED, SEWER LINE CONSTRUCTION ACTIVITIES MUST HALT AND THE TRIBAL HISTORIC PRESERVATION OFFICE (THPO) MUST BE NOTIFIED IMMEDIATELY.
6. THE CONTRACTOR SHALL FLUSH ALL SEWER LINES BEFORE PRE-FINAL INSPECTION TO REMOVE SAND, SILT AND OTHER FOREIGN MATERIAL IN ACCORDANCE WITH IHS PHOENIX AREA SANITATION FACILITIES CONSTRUCTION TECHNICAL PROVISIONS TP-06.11.

LEGEND

PROPOSED



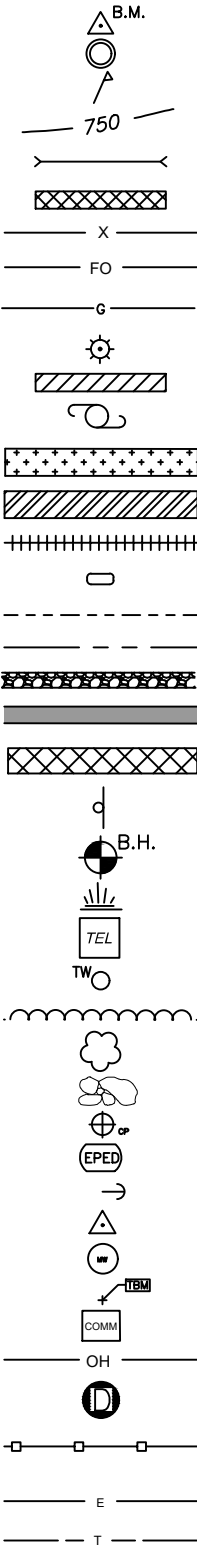
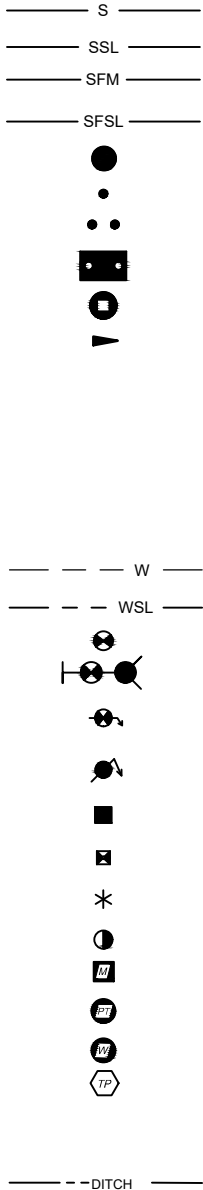
SEWER

SEWER MAIN
SEWER SERVICE LINE
SEWER FORCE MAIN
SEWER FORCE SERVICE LINE
SEWER MANHOLES
ONE-WAY CLEANOUT
TWO-WAY CLEANOUT
SEPTIC TANK
LIFT STATION
DIRECTION OF FLOW
CAP
UTILITY MARKER POST
SEWER LINE TO BE ABANDONED IN PLACE

WATER

NEW WATER MAIN
NEW WATER SERVICE LINE
GATE VALVE
FIRE HYDRANT W/VALVE
FLUSH HYDRANT W/VALVE
AIR RELEASE/VACUUM VALVE
SADDLE W/CORPORATION STOP
CURB STOP W/BOX
INDIVIDUAL PRESSURE RELEASE VALVE
YARD HYDRANT
METER PIT/BOX
IN-GROUND PRESSURE TANK
WELL
GEOTECHNICAL TEST PIT
NEW WATER MAIN USING THE EXISTING WATER LINE ALIGNMENT
IRRIGATION DITCH

EXISTING



GENERAL

BENCHMARK
IRON PIN
CARSONITE MARKER
CONTOUR LINE
CULVERT
DIRECTIONAL DRILLING
FENCE
FIBER OPTIC
GAS
LIGHT POLE
INSULATION
POWER POLE
ACCESS HATCH
EQUIPMENT TO BE ABANDONED
FEATURE TO BE ABANDONED
PROPANE TANK
PROPERTY LINE
RIGHT-OF-WAY
ROAD (DIRT/GRAVEL)
ROAD (PAVED)
ROAD BORING/CROSSING
SIGN
SOIL BORING
SWAMP
TELEPHONE PED
TRACING WIRE BOX
TREE LINE
TREE
RIP RAP
CONTROL POINT
ELECTRIC PED
GUY / ANCHOR
MONUMENT
MONITORING WELL
TEMPORARY BENCHMARK
CATV PEDESTALS
OVERHEAD POWER
STORM WATER INLET MANHOLE
CHAINLINK FENCE
BURIED ELECTRICAL LINE
TELEPHONE LINE



DATE	REVISIONS	INIT.
03/31/2025	ISSUE FOR 100% SUBMITTAL	

G2

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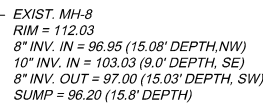
INDIAN HEALTH SERVICE

INDIAN HEALTH SERVICE
• PHS • 1955

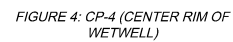
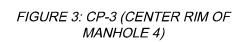
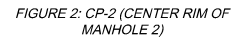
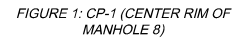
G2 - GENERAL NOTES AND LEGEND
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: COCOPAH-G2-NOTES-AND-LEGEND
LAYOUT NAME: G2
PROJ ENG: ---
SCALE: N.T.S.

DRAWN BY: SL
CHECKED BY: QH
APPROVED BY: XB



CONTROL POINT ELEVATIONS ARE IN NAVD1988.

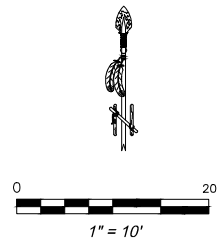
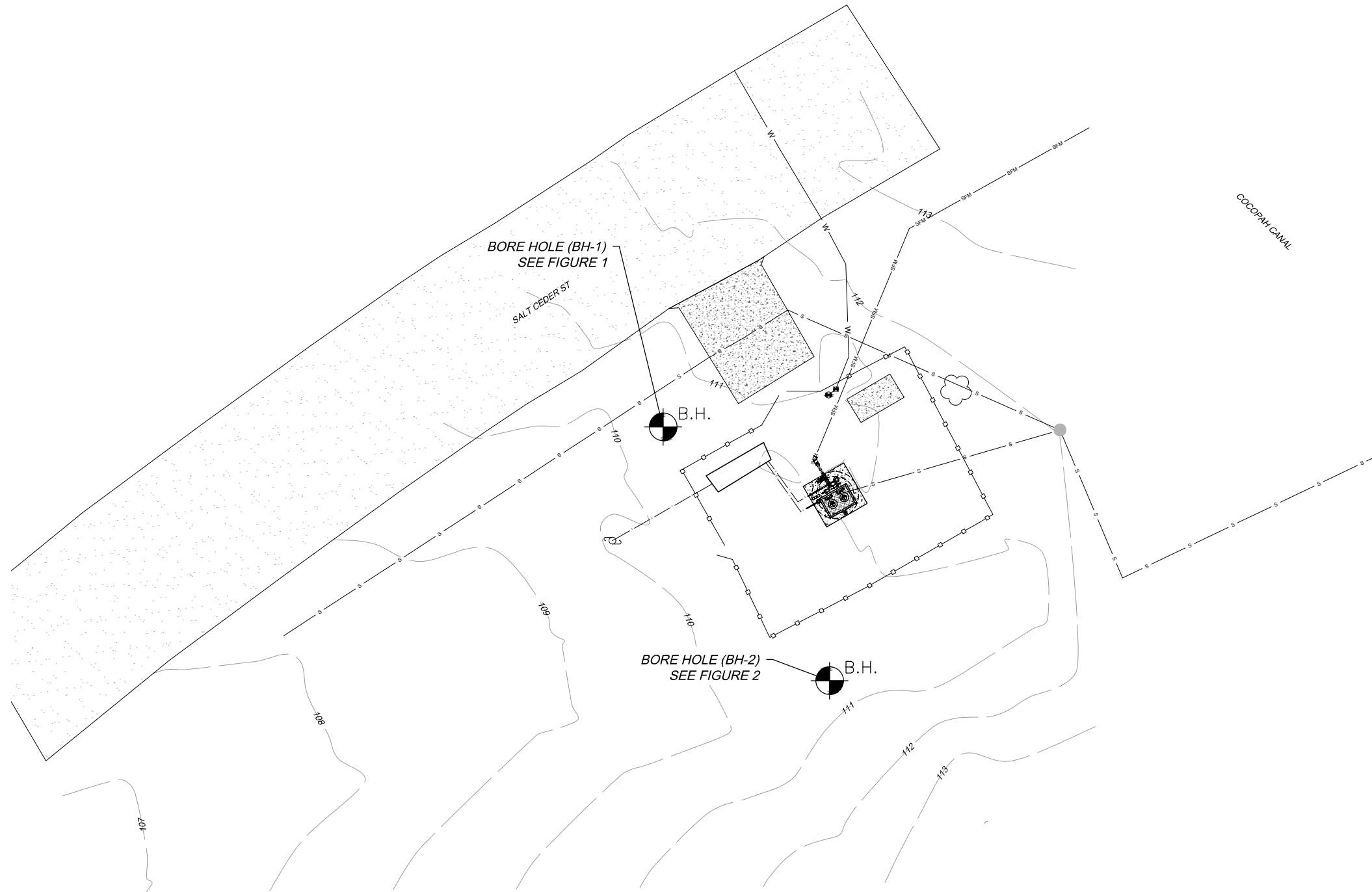


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PHONE: 720-474-0941



FILE NAME: COCOPAH-63-EXIST SITE SURVEY	
DRAWN BY: SL	
CHECKED BY: QH	
LAYOUT NAME: G3	
PROJ ENG: --	SCALE: 1" = 10'



NOTES:

1. GEOTECHNICAL BOREHOLES PERFORMED IN OCTOBER 2024 BY GEOTEK, INC.
2. TWO BOREHOLES WERE ESTABLISHED (BH-1 AND BH-2)



FIGURE 1 - BH-1 LOCATION

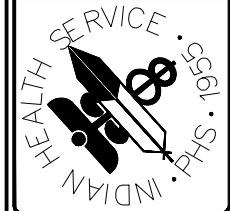


FIGURE 2 - BH-2 LOCATION

[illegible]

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G4 - GEOBORE HOLES LOCATION
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME:	COCOPAH-G3-EXIST SITE SURVEY
LAYOUT NAME:	G4
PROJ ENG:	---
SCALE:	1" = 10'

SHEET

BORING LOG GENERAL NOTES

CONSISTENCY OF FINE-GRAINED SOILS			RELATIVE DENSITY OF COARSE-GRAINED SOILS	
Unconfined Compressive Strength, q_u , psf	Standard Penetration or N-Value (SS) Blows/Ft	Consistency	Standard Penetration (SPT) or N-Value (SS) Blows/Ft	Relative Density
< 500	< 2	Very Soft	0 - 3	Very Loose
500 - 1,000	2 - 3	Soft	4 - 9	Loose
1,001 - 2,000	4 - 7	Firm	10 - 29	Medium Dense
2,001 - 4,000	8 - 16	Stiff	30 - 49	Dense
4,001 - 8,000	17 - 32	Very Stiff	50+	Very Dense
> 8,001	32+	Hard		

SPT penetration test using 140 pound hammer, with 30 inch free fall on 2 inch outside diameter (1-3/8 ID) sampler
 For ring sampler using 140 lb hammer, with a 30 inch free fall on 3 inch outside diameter (2-1/2 ID) sample,
 use N -value $\times 0.636$ to get Standard N -value
 For fine grained soil consistency, thumb penetration used per ASTM D-2488

RELATIVE PROPORTIONS OF SAND AND GRAVEL		GRAIN SIZE TERMINOLOGY	
Descriptive Term of other constituents	Percent of Dry Weight	Major Component of Sample	Particle Size
Trace	< 15	Boulders	Over 12 inches
With	15 - 29	Cobbles	3 inches to 12 inches
Modifier	> 30	Gravel	#4 Sieve to 3 inches
		Sand	#200 Sieve to #4 Sieve
		Silt or Clay	Passing #200 Sieve






RELATIVE HARDNESS OF CEMENTED SOILS (CALICHE)	
Description	General Characteristics
Very Dense to Moderately Hard	Partially Cemented Granular Soil - Can be carved with a knife and broken with force by hand.
Very Stiff to Moderately Hard	Partially Cemented Fine-Grained Soil - Can be carved with a knife and broken with force by hand.
Moderately Hard	Moderate hammer blow required to break a sample
Hard	Heavy hammer blow required to break a sample
Very Hard	Repeated heavy hammer blow required to break a sample

MOISTURE CLASSIFICATION	
Description*	Degree of Saturation
Dry	0%
Slightly Moist	1% - 50%
Moist	51%-75%
Wet	76% - 99%
Saturated	100%

*Defined as Condition of Sand

BORING LOG LEGEND

MATERIAL DESCRIPTION		
Soil Pattern	USCS Symbol	USCS Classification
	FILL	Artificial Fill
	GP or GW	Poorly/Well graded GRAVEL
	GM	Silty GRAVEL
	GC	Clayey GRAVEL
	GP-GM or GW-GM	Poorly/Well graded GRAVEL with Silt
	GP-GC or GW-GC	Poorly/Well graded GRAVEL with Clay
	GC-GM	Silty Clayey GRAVEL
	SP or SW	Poorly/Well graded SAND
	SM	Silty SAND
	SC	Clayey SAND
	SP-SM or SW-SM	Poorly/Well graded SAND with Silt
	SP-SC or SW-SC	Poorly/Well graded SAND with Clay
	SC-SM	Silty Clayey SAND
	ML	SILT
	MH	Elastic SILT
	CL-ML	Silty CLAY
	CL	Lean CLAY
	CH	Fat CLAY
	PECM	PARTIALLY CEMENTED
	CEM	CEMENTED
	BDR	BEDROCK

SAMPLING	
	SPT
	Ring Sample
	No Recovery
	Bulk Sample
	Water Table

CONSISTENCY							
Cohesionless Soils		Cohesive Soils		Cementation		Bedrock	
VL	Very Loose	So	Soft	MH	Mod. Hard	ES	Extremely Strong
L	Loose	F	Firm	H	Hard	VS	Very Strong
MD	Medium Dense	S	Stiff	VH	Very Hard	SI	Strong
D	Dense	VS	Very Stiff			MSI	Moderately Strong
VD	Very Dense					W	Weak
						Fr	Friable

BORING LOG

PROJECT #:	2666-AB
PROJECT:	East Cocopah Lift Station
CLIENT:	Bai Engineers
LOCATION:	Somerton, AZ

LOGGED BY: AA
METHOD: H.S.A
OPERATOR: Integrity
DATE: 10/16/24

SAMPLES				BORING NUMBER: B-1	Consistency	LABORATORY TESTING				
Depth (ft)	Sample Type	Blows/foot	Soil Pattern			USCS Symbol	Water Content (%)	Dry Density (pcf)	Swell (%)	Plasticity Index
MATERIAL DESCRIPTION AND COMMENTS										
1		18		FILL	MD					
2				(SM) Artificial Fill, Brown Silty SAND with Gravel, Sl. Moist, Lt. Cementation						
3		18		SM	MD	3	103	0.1	NP	
4				Brown Silty SAND, Sl. Moist, Med. Dense, Lt. Cementation						
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15		22								
16										
17										
18										
19										
20		16		SP-SM	MD	1	101		NP	
21				Light Brown Poorly Graded SAND with Silt, Sl. Moist, Med. Dense, Lt. Cementation						
Boring Continued on Next Page										

BORING LOG

PROJECT #:	2666-AB
PROJECT:	East Cocopah Lift Station
CLIENT:	Bai Engineers
LOCATION:	Somerton, AZ

LOGGED BY: AA
METHOD: H.S.A
OPERATOR: Integrity
DATE: 10/16/24

Depth (ft)	SAMPLES				USCS Symbol	BORING NUMBER: B-1 Continued	Consistency	LABORATORY TESTING			
	Sample Type	Blows/foot	Soil Pattern					Water Content (%)	Dry Density (pcf)	Swell (%)	Plasticity Index
23					SP-SM	Lt. Brown Poorly Graded SAND with Silt, Sl. Moist, Med. Dense, Lt. Cementation	MD				
24											
25				18		No Recovery, Groundwater Encountered, Saturated					
26						Boring Ends at Approximately 26 Feet Depth Groundwater Encountered at Approximately 25 Feet Depth					

BORING LOG

PROJECT #:	2666-AB
PROJECT:	East Cocopah Lift Station
CLIENT:	Bai Engineers
LOCATION:	Somerton, AZ

LOGGED BY:	AA
METHOD:	H.S.A
OPERATOR:	Integrity
DATE:	10/16/24

SAMPLES				USCS Symbol	BORING NUMBER: B-2	Consistency	LABORATORY TESTING			
Depth (ft)	Sample Type	Blows/foot	Soil Pattern				Water Content (%)	Dry Density (pcf)	Swell (%)	Plasticity Index
MATERIAL DESCRIPTION AND COMMENTS										
1				FILL	(SM) Artificial Fill, Brown Silty SAND, Sl. Moist, Lt. Cementation, Organics to 6"	D				
2		53					1	105		
3										
4				SM	Brown Silty SAND, Sl. Moist, Med. Dense, Lt. Cementation	MD				
5		16					1	98		
6										
7										
8										
9										
10		18					1	99		
11					Increase in Sand					
12				SP-SM	Light Brown Poorly Graded SAND with Silt, Sl. Moist, Med. Dense, Lt. Cementation	MD				
13										
14										
15		29					1	104		
16										
17										
18										
19										
20		16					3	98		
21										
Boring Continued on Next Page										

BORING LOG

PROJECT #:	2666-AB
PROJECT:	East Cocopah Lift Station
CLIENT:	Bai Engineers
LOCATION:	Somerton, AZ

LOGGED BY: AA
METHOD: H.S.A
OPERATOR: Integrity
DATE: 10/16/24

SAMPLES				USCS Symbol	BORING NUMBER: B-2 Continued	Consistency	LABORATORY TESTING			
Depth (ft)	Sample Type	Blows/foot	Soil Pattern				MATERIAL DESCRIPTION AND COMMENTS			
							Water Content (%)	Dry Density (pcf)	Swell (%)	Plasticity Index
23				SP-SM	Lt. Brown Poorly Graded SAND with Silt, Sl. Moist, Med. Dense, Lt. Cementation	MD				
24										
25					No Recovery, Groundwater Encountered, Wet					
26										
27										
28										
29										
30					No Recovery, Saturated					
31										
					Boring Ends at Approximately 31.5 Feet Depth Groundwater Encountered at Approximately 25 Feet Depth					

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G5 - GEOBORE LOGS
 EAST COCOPAH LIFT STATION RENOVATION
 COCOPAH INDIAN RESERVATION, ARIZONA

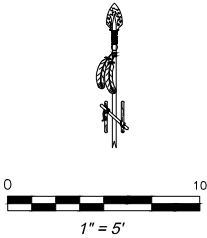
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CHECKED BY: QH	LAYOUT NAME: G5
APPROVED BY: XB	PROJ ENG: -- SCALE: N.T.S.

SHEET

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OF

31



KEY NOTES

- 1 EXISTING 30' X 40' LIFT STATION SITE
- 2 BACKUP GENERATOR, SEE FIGURE 1
- 3 ELECTRICAL PANEL, SEE FIGURE 2
- 4 7.5' X 7.5' X 8" CONCRETE SLAB
- 5 6" DIAMETER LIFT STATION WITH TWO PUMPS, SEE FIGURE 3
- 6 8" GRAVITY SEWER
- 7 10" GRAVITY SEWER
- 8 TWO 4" GATE VALVES AND CHECK VALVES, SEE FIGURE 4
- 9 4" TO 6" REDUCER
- 10 6" FORCE MAIN
- 11 EXISTING LIFT CRANE
- 12 JUNCTION BOX
- 13 ELECTRICAL CONDUITS
- 14 CHAIN LINK FENCE
- 15 12' DOUBLE GATE
- 16 3' ENTRANCE GATE
- 17 POWER POLE
- 18 CONCRETE PAD
- 19 WATER SERVICE LINE
- 20 WATER CURB STOP AND HOSE, SEE FIGURE 5



FIGURE 1 - BACKUP GENERATOR



FIGURE 2 - ELECTRICAL PANEL



FIGURE 3 - 6' DIA. LIFT STATION



**FIGURE 4 - 4" GATE VALVES
AND CHECK VALVES**



**FIGURE 5 - WATER CURB BOX
AND HOSE**



Expires: 03-31-2026

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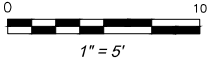
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GREENWOOD VILLAGE, CO 80111
PHONE: 720-474-0941



C1 - EXISTING SITE PLAN

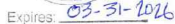
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CHECKED BY: QH	
APPROVED BY: XB	

SHEET



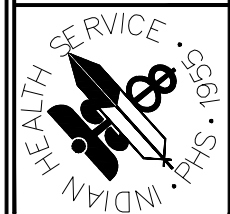
- 1 NEW INTERIOR-LINED 4" DIA. DIVERSION MANHOLE MH-A1 WITH MARKER POST (SHORING REQUIRED)
DEPTH = 14.70'
SEE SHEET P1 FOR DETAILS
SEE DETAIL 6B, SHEET D1 FOR MANHOLE DETAIL
SEE DETAIL 1B, SHEET D1 FOR MARKER POST DETAIL
- 2 NEW INTERIOR-LINED 4" DIA. DIVERSION MANHOLE MH-A2 WITH MARKER POST (SHORING REQUIRED)
DEPTH = 10.20'
SEE SHEET P1 FOR DETAILS
SEE DETAIL 6B, SHEET D1 FOR MANHOLE DETAIL
SEE DETAIL 1B, SHEET D1 FOR MARKER POST DETAIL
- 3 NEW 8" GRAVITY SEWER MAIN FROM MH-A1 TO NEW LIFT STATION
SEE SHEET P1 FOR DETAILS
- 4 NEW 8" GRAVITY SEWER MAIN FROM MH-A2 TO NEW LIFT STATION
SEE SHEET P1 FOR DETAILS
- 5 NEW 8" DIA. LIFT STATION WETWELL WITH TWO PUMPS
NORTHING = 572075.59
EASTING = 415693.73
SEE SHEETS P1 & P2 FOR DETAILS
- 6 NEW 6" FORCE MAIN
- 7 CONNECT TO EXISTING 6" FORCE MAIN WITH 6" 45 DEG. BEND AND 6" GATE VALVE WITH BOX
- 8 PUMP CONTROL PANEL MOUNT ON ELECTRICAL EQUIPMENT RACK (SEE ELECTRICAL SHEET E4 FOR DETAIL)
- 9 14' X 10.5' CONCRETE PAD FOR BACKUP GENERATOR POWERED BY DIESEL (SEE ELECTRICAL SHEET E4 FOR DETAIL)
- 10 REUSE AND/OR NEW CHAIN-LINK FENCE AS NEEDED.
- 11 NEW OR REUSE EXISTING PEDESTRIAN GATE IF POSSIBLE.
- 12 ELECTRICAL CONDUITS
- 13 JUNCTION BOX
- 14 CAP EXISTING SEWER MAIN WITH CONCRETE
- 15 CONCRETE PAD ~ 80 SQ. FT X 6" THICK
- 16 CONTRACTOR TO REMOVE AND REPLACE EXISTING CHAIN-LINK FENCE
- 17 UTILITY MARKER POST (SEE DETAIL 1B, SHEET D1)
- 18 8" GATE VALVE WITH BOX
- 19 6" GATE VALVE WITH BOX
- 20 11' X 7' CONCRETE PAD FOR ELECTRICAL EQUIPMENT RACK (SEE DETAIL 12, SHEET D5)
- 21 12' X 12' CONCRETE PAD FOR LIFT STATION WETWELL (SEE SHEET P2)

- 1) COORDINATE WITH IRRIGATION CANAL USERS DURING CONSTRUCTION

[illegible]

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C3 - PROPOSED SITE PLAN

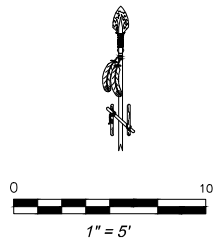
FILE NAME: COCOPAH-C3-PROPOSED-SITE-PLAN	
LAYOUT NAME: C3	
PROJ ENG: --	SCALE: 1" = 5'
APPROVED BY: XB	
CHECKED BY: QH	
DRAWN BY: SL	

SHEET



GRADING SUMMARY (SITE ONLY)

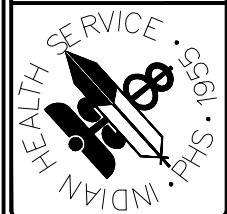
NET CUT VOLUME: 1 CUBIC YARD
NET FILL VOLUME: 7 CUBIC YARD

[illegible]

45



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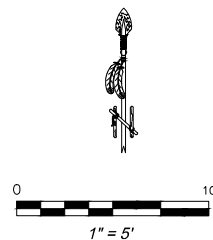
C4 – PROPOSED GRADING PLAN
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: COCOPAH--PROPOSED--GRADING--PLAN	
DRAWN BY: SL	
CHECKED BY: QH	
LAYOUT NAME: C4	
PROJ ENG: ---	SCALE: 1" = 5'
APPROVED BY: XB	

SHEET

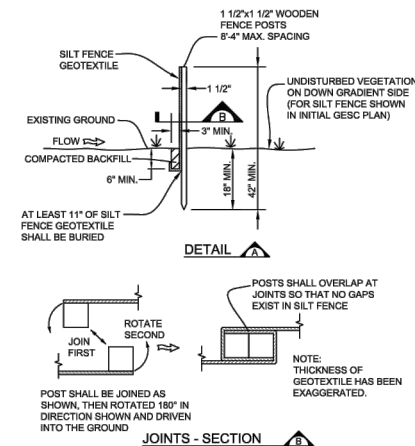


 *SILT FENCE*
 *FLOW DIRECTION*



1. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL FROM THE BEGINNING OF INFRASTRUCTURE CONSTRUCTION THROUGH THE COMPLETION OF CONSTRUCTION. TEMPORARY EROSION CONTROL PROCEDURES SHALL INCLUDE BUT ARE NOT BE LIMITED TO:

- A. STRAW BALE CHECK DAMS AROUND INLETS AND MANHOLES.
 - B. SILT FILTER FENCE AROUND DISTURBED PORTIONS OF SITE.
 - C. SITE ACCESS SHALL BE LIMITED TO STABILIZED ENTRANCE TO MINIMIZE TRACKING SEDIMENT OFFSITE.
 - D. THE SITE CONTRACTOR SHALL EMPLOY A STREET SWEEPER AS OFTEN AS REQUIRED TO KEEP SURROUNDING STREETS CLEAN.
 - E. THE SITE CONTRACTOR SHALL PROVIDE A QUALIFIED PERSON TO INSPECT THIS SITE FOR COMPLIANCE WITH THIS PLAN:
 - 1) ON A WEEKLY BASIS AND
 - 2) WITHIN 24 HOURS OF ANY RAINFALL EXCEEDING 0.5 INCHES IN A 24 HOUR PERIOD.
2. EROSION CONTROL METHODS SHALL BE PROVIDED AND APPROVED BY OWNER OR ENGINEER.
3. AFTER THE COMPLETION OF CONSTRUCTION, PERMANENT EROSION CONTROL PROCEDURES SHALL INCLUDE:
- A. SEEDING AND SODDING OF DISTURBED AREAS
 - B. STONE RIP-RAP AT DRAINAGE DISCHARGES
4. ALL WORK DONE ON THIS SHEET IS COMPENSATED IN THE BID SCHEDULE, EROSION CONTROL.



1. SEE PLAN VIEW FOR:
- LOCATION AND LENGTH OF FENCE

2. ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
3. SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4622.
 - U/L DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D 4355.
4. SILT FENCE INDICATED ON INITIAL ESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

1. THE ESC MANAGER SHALL INSPECT SILT FENCE WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6-INCHES.
3. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

— x — x — x — (SF) SILT FENCE (18)

DETAIL A - SILT FENCE DETAIL

[illegible]

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C5 - EROSION CONTROL PLAN

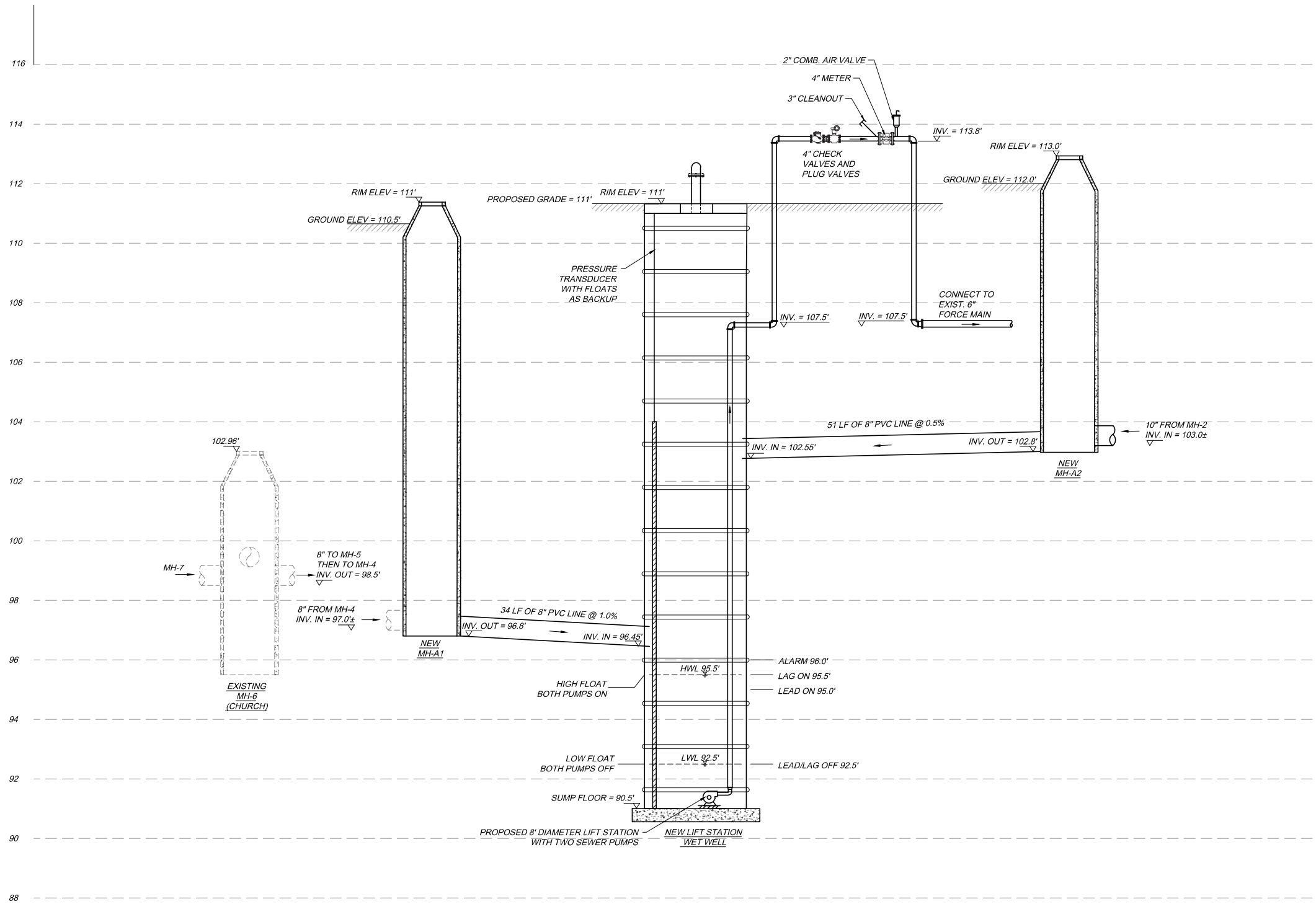
C3 - EROSION CONTROL PLAN
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: COCOPAH-PROPOSED-GRADING-PLAN	
LAYOUT NAME: C5	
PROJ ENG: --	SCALE: 1" = 5'
APPROVED BY: XB	
DRAWN BY: SL	
CHECKED BY: QH	

DRAWN BY: SL
CHECKED BY: QH
APPROVED BY: XB

SHEET

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PROPOSED PROCESS FLOW DIAGRAM

NOTES:

1. LIFT STATION INFLUENT FLOW DATA

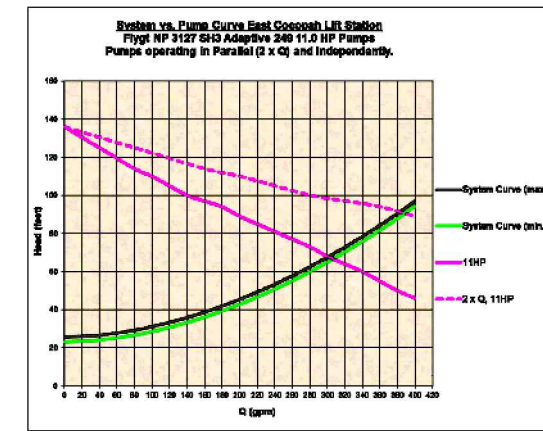
	DAILY FLOW (GPD)	LIFT STATION FLOW RANGES (GPM)		
		20 HOUR AVERAGE	MINIMUM (AVG. / 2)	PEAK FLOW (AVG.X 4)
EXISTING	33,600	28	14	112
DESIGN	40,320	34	17	134

2. PROPOSED WETWELL DIMENSIONS

Wet Well Diameter	8	ft
Rim Elevation	111.00	ft
Ground Elevation	111.00	ft
Gravity Invert In Elevation	96.45	ft
High Water Level (Pump On)	95.00	ft
Low Water Level (Pump Off)	92.50	ft
Invert Elevation	90.50	ft
Wet Well Depth	20.50	ft

3. PUMP SELECTION

TWO (2) FLYGT CONCERTOR NP 3127 SH-3 ADAPTIVE 249 PUMPS
460V, 3 PHASE, 60 HZ, 800 TO 3495 RPM
SIZE: 11 HP
DESIGN POINT: 300 GPM @ 68' TDH

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P1 – PROCESS FLOW DIAGRAM
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: COCOPAH-P1-PROPOSED-PROCESS-FLOW	
DRAWN BY: SL	
CHECKED BY: QH	
LAYOUT NAME: P1	
APPROVED BY: XB	
PROJ ENG: --	SCALE: N.T.S.

SHEET

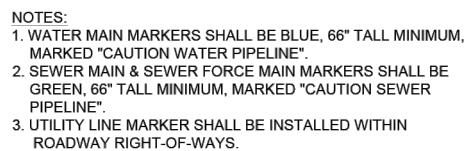


NOTES:
1) STANDARD COMPONENTS LISTED FROM: PAQ/SFC SANITATION FACILITIES TECHNICAL PROVISIONS, PUBLISHED MARCH 2019.
REFER TO SECTION 42 WHEN EVALUATING APPROVED EQUAL.

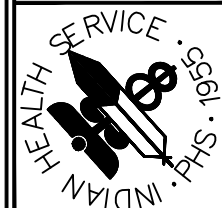
2) PER SECTION 42.02.E.07, THE ADJUSTABLE SUPPORTS SHALL BE EQUAL TO:

- A) CLOW F-1608**
- B) ITT GRINNELL FIGURE 264**
- C) FABRICATED FROM COLD GALVANIZED STEEL**



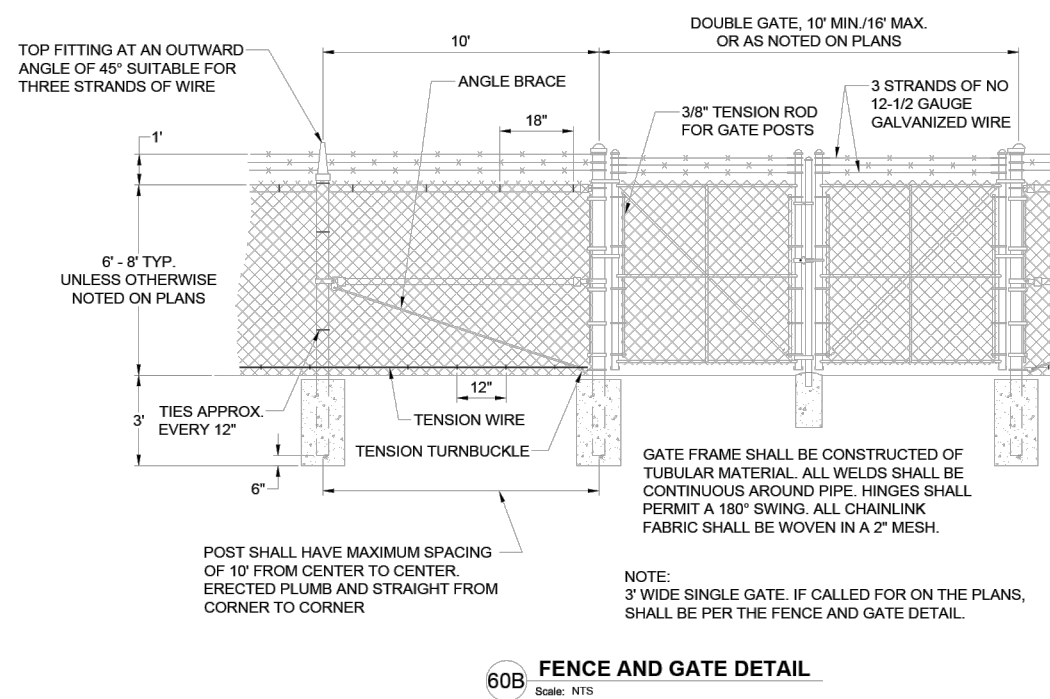
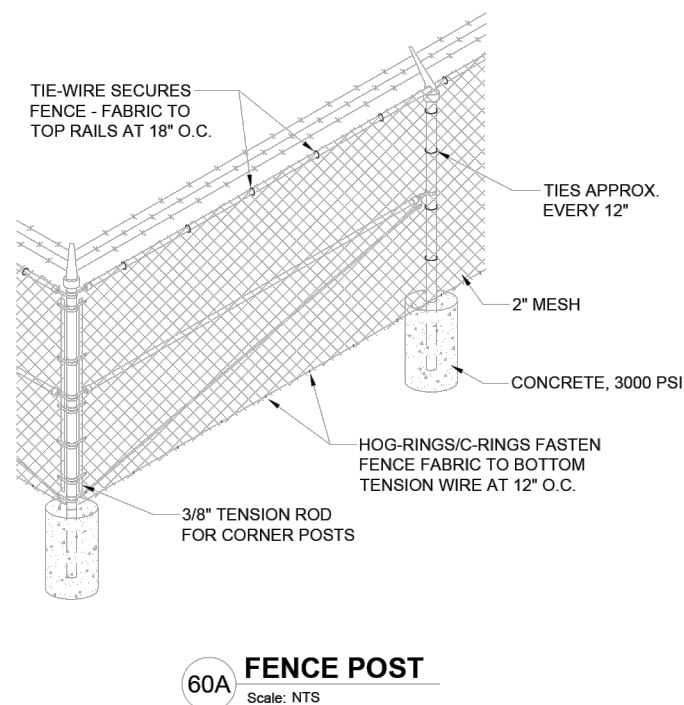
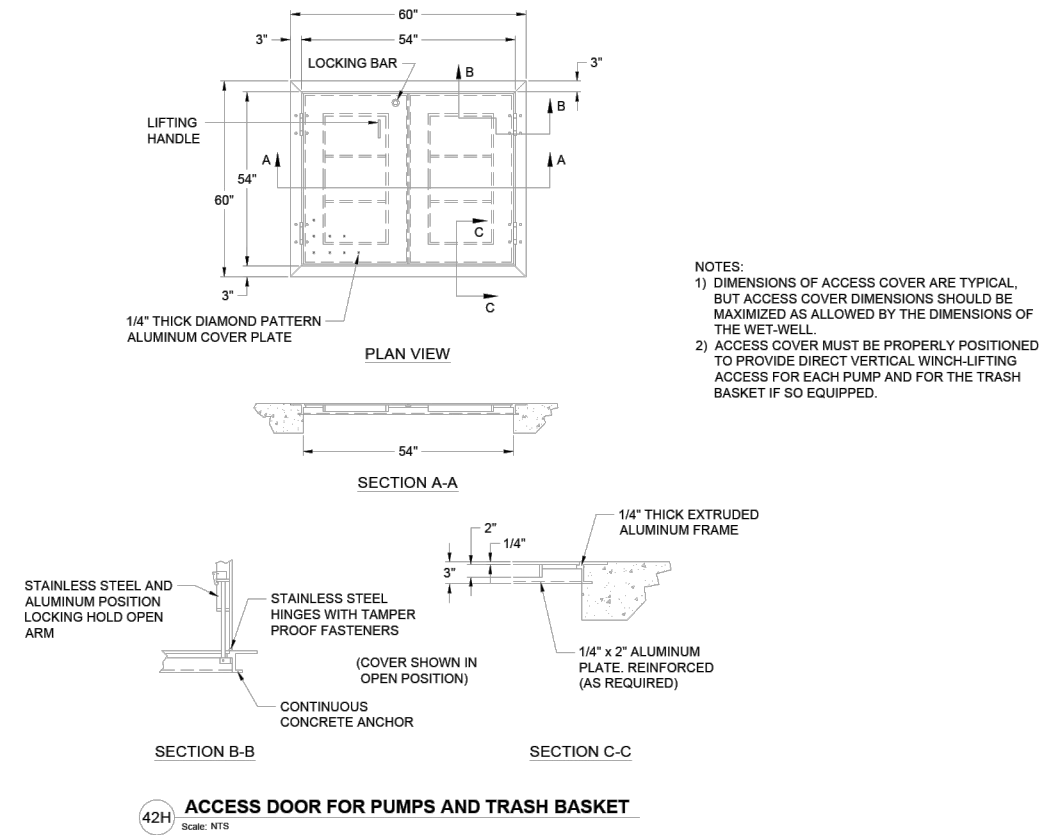
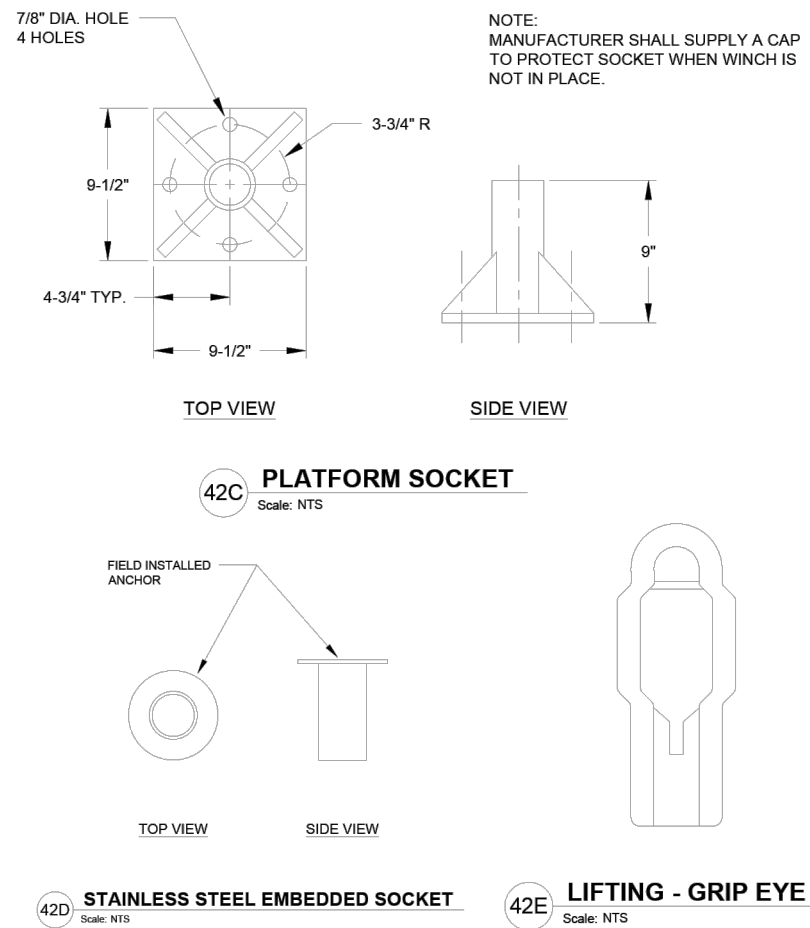
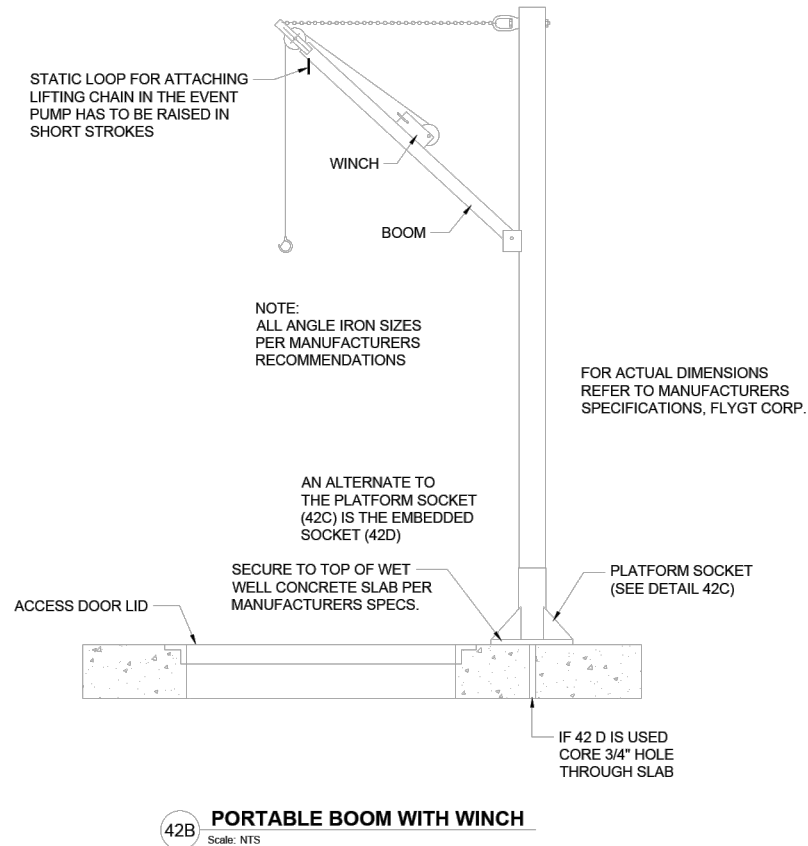


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FILE NAME: COCOPAH-D1-DETAILS
LAYOUT NAME: D1
PROJ ENG: -- SCALE:

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2D

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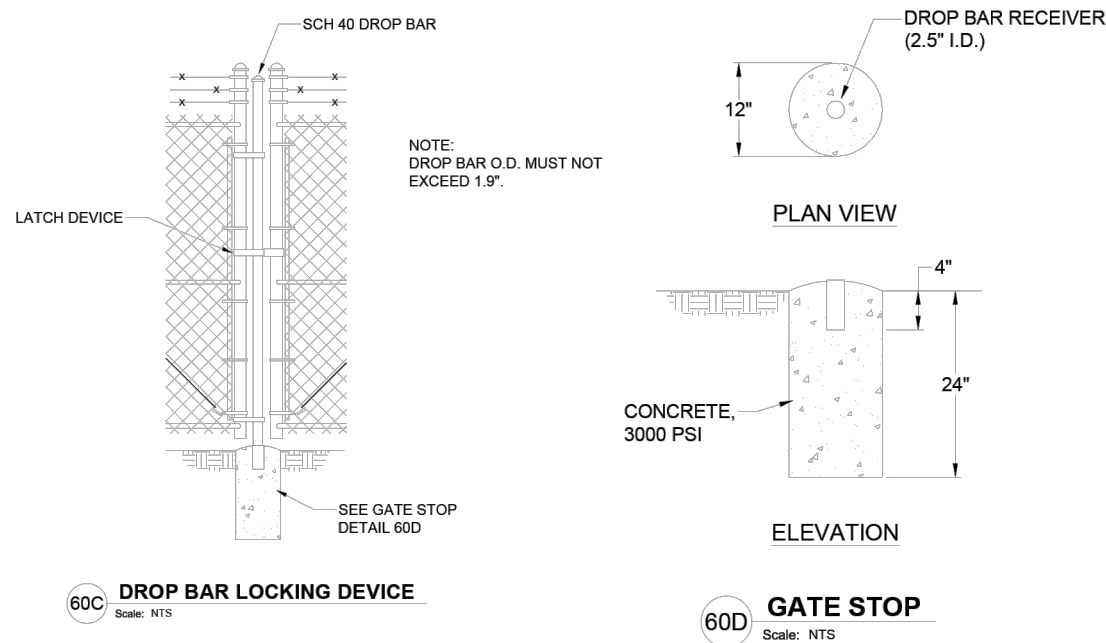
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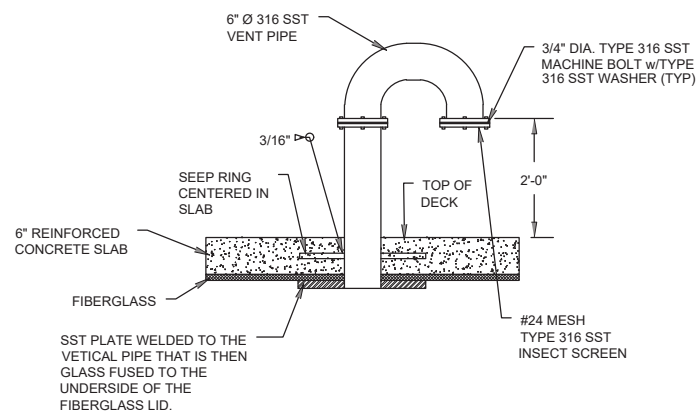
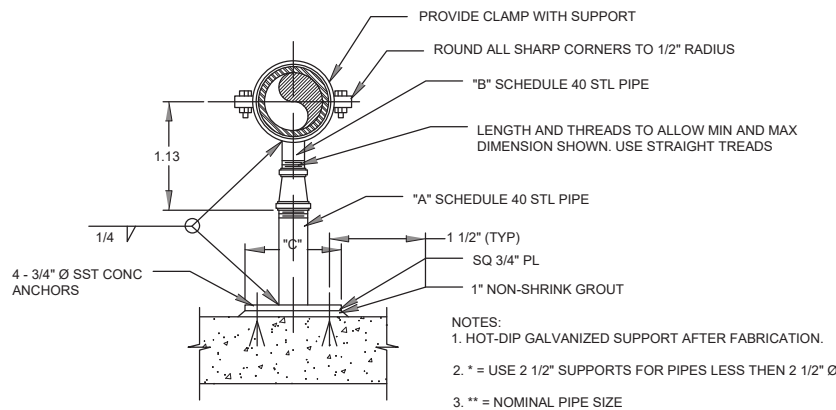
FILE NAME: COCOPAH-D1-DETAILS	
LAYOUT NAME: D2	
PROJ ENG: ---	SCALE: N.T.S.

SHEET
14 OF 31





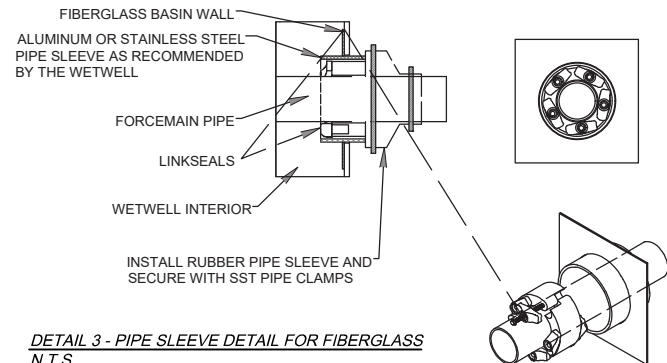
SIZE OF SUPPORTE D PIPE **	PIPE SIZE "A"	PIPE SIZE "B"	"C"	"D"	
				MINIMUM	MAXIMUM
2 1/2"	2 1/2	1 1/2	12	8	13
3	2 1/2	1 1/2	12	8 1/2	13 1/2
3 1/2	2 1/2	1 1/2	12	8 1/2	13 1/2
4	3	2 1/2	12	9 1/2	14
6	3	2 1/2	12	10 1/2	15 1/2
8	3	2 1/2	12	11 1/2	16 1/2
10	3	2 1/2	12	13 1/2	18 1/2
12	3	2 1/2	12	15	19 1/2
14	4	3	12	16 1/2	20 1/2
16	4	3	12	17 1/2	22 1/2
18	6	3 1/2	14	19 1/2	24
20	6	3 1/2	14	21	25 1/2
24	6	4	14	23 1/2	28 1/2
30	6	4	14	27	31 1/2
32	6	4	14	28 1/2	32 1/2
36	6	4	14	30 1/2	34 1/2



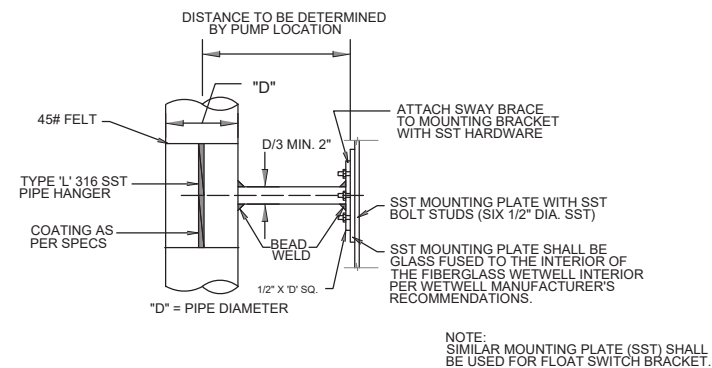
DETAIL 4 - VENT PIPE DETAIL
N.T.S.

NOTES:

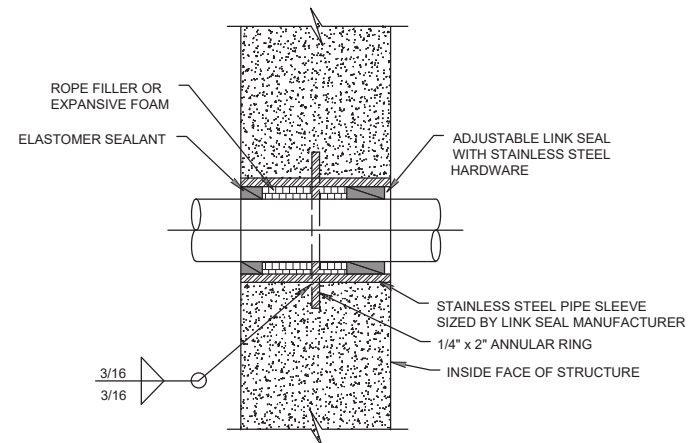
1. CONTRACTOR SHALL UTILIZE EXISTING WETWELL MANUFACTURER (L.F. MANUFACTURINE, INC., GIDDINGS, TX) OR MANUFACTURE'S CERTIFIED REPRESENTATIVE TO GLASS FUSE THE SLEEVES TO THE WETWELL WALLS IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
2. NO REPAIRS, PENETRATIONS OR PROTRUSIONS TO THE EXISTING FIBERGLASS WETWELL SHALL BE MADE BY ANYONE OTHER THAN THE WETWELL MANUFACTURER OR MANUFACTURER'S CERTIFIED REPRESENTATIVE.
3. ALL PIPE SLEEVE FOR FORCEMAIN LINES AND DRAIN LINES SHALL BE GLASS FUSED TO WALL OF FIBERGLASS WETWELL MANUFACTURER'S RECOMMENDATIONS.
4. THE FIBERGLASS WETWELL SHALL BE CLEANED AND PREPARED IN AND AROUND THE WALL PENETRATIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS TO FULLY SECURE THE SLEEVES.
5. ALL LINKSEAL HARDWARE SHALL BE NON CORROSIVE STAINLESS STEEL MATERIALS.
6. LINKSEALS SHALL BE INSTALLED IN ACCORDANCE WITH LINKSEAL MANUFACTURER'S RECOMMENDATIONS.



DETAIL 3 - PIPE SLEEVE DETAIL FOR FIBERGLASS
N.T.S.



DETAIL 5 - PIPE SWAY BRACE DETAIL
N.T.S.



- NOTES:

1. CONTRACTOR TO VERIFY AND COORDINATE LOCATION OF PIPE SLEEVE WITH PRECAST CONCRETE MANUFACTURER.
2. IN WALLS THICKER THAN 12", LINK SEAL SHALL BE INSTALLED AT BOTH ENDS OF WALL SLEEVE.
3. WHERE OUTSIDE FACE OF STRUCTURE IS ABOVE GRADE, FILL THE OUTSIDE 2" OF THE SLEEVE WITH NON-SHRINK GROUT.

DETAIL 6 - SLEEVE INSTALLATION THROUGH WALLS AND FLOOR SLABS DETAIL
N.T.S.

[illegible]

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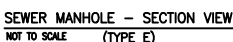
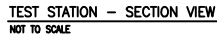
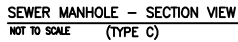


<p>D3 - DETAILS</p> <p>EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA</p>		<p>FILE NAME: COCOPAH-D1-DETAILS</p>
<p>1L _____</p>	<p>_____</p>	<p>LAYOUT NAME: D3</p>
<p>1H _____</p>	<p>_____</p>	<p>PROJ ENG: --</p>
<p>1B _____</p>	<p>_____</p>	<p>SCALE: N.T.S.</p>

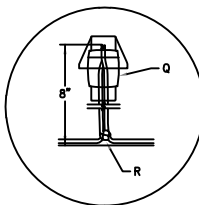
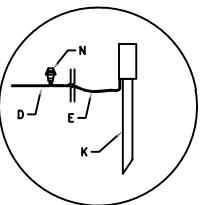
DRAWN BY:
CHECKED BY:
APPROVED BY: X

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- ### CONSTRUCTION NOTES



- ### CONSTRUCTION NOTES

- ### A. MANHOLE



- DETAIL 10 - LOCATOR WIRE



10

SONS
MITTAL

DATE _____

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D4 - DETAILS

FILE NAME: COCOPAH-D1--DETAILS	
LAYOUT NAME: D4	
PROJ ENG: --	SCALE:
APPROVED BY: XB	
CHECKED BY: QH	
DRAWN BY: SL	

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OF 31

SECTION

PVC PIPE (CORRUGATED) DETAIL

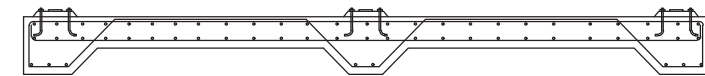
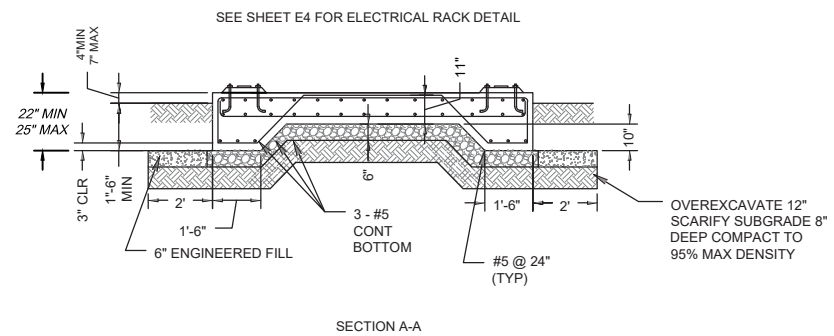
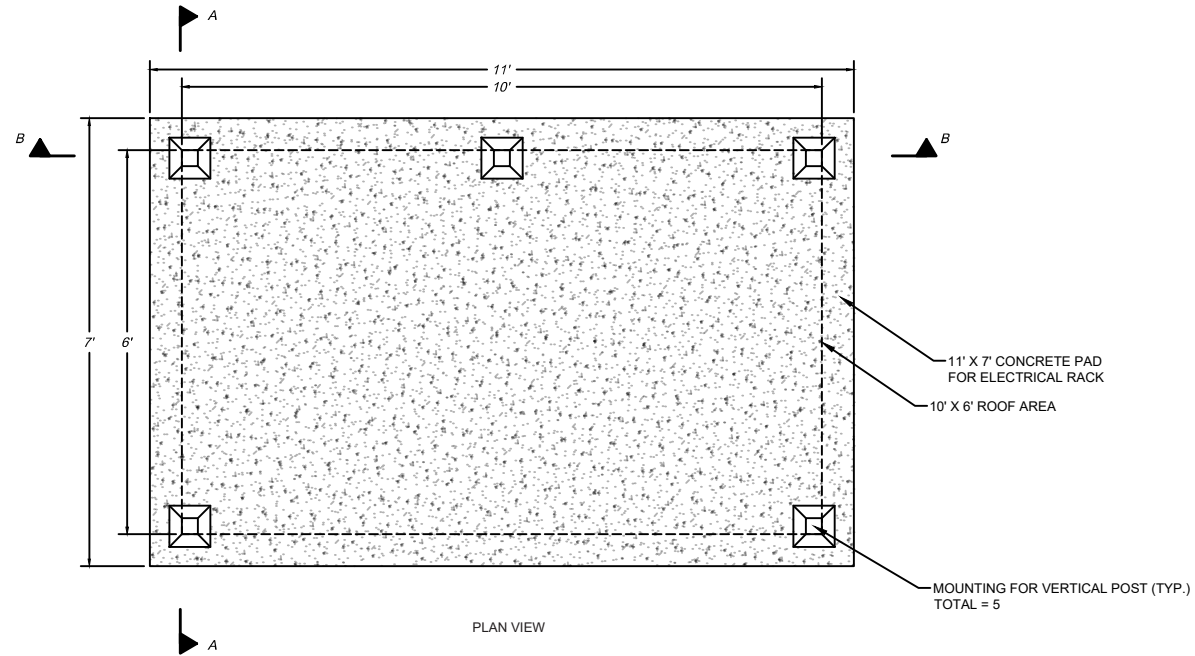
HDPE PIPE DETAIL

PVC PIPE (SMOOTH-WALL) DETAIL

CONCRETE PIPE DETAIL

TYPICAL
WATER STOP GASKET DETAIL

DETAIL 11 - CAST-IN-PLACE CONNECTIONS



NOTES:

1. CONDUITS & PANELS NOT SHOWN FOR CLARITY. REFER TO ACTUAL REQUIREMENTS OF ELECTRICAL ENGINEER.
2. INSTALL NIPPLES BETWEEN EQUIPMENT AND WIREWAY SIZED AS REQUIRED TO ACCOMMODATE CONDUCTORS PER NEC.

SECTION B-B

SECTION A-A

DETAIL 12 - ELECTRICAL RACK CONCRETE DETAIL

[illegible]

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D5 - DETAILS

00 - DETAILS
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: COCOPAH-D1-DETAILS

LAYOUT NAME: D5

PROJ ENG: -- SCALE: N.T.S.

DRAWN BY: SL

CHECKED BY: QH

APPROVED BY: XB

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ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	WALL OUTLET AND SURFACE MOUNTED FIXTURE
	FLUORESCENT OUTLET AND FIXTURE
	SINGLE POLE SWITCH, FLUSH MOUNTED 48" A.F.F.
	DUPLEX CONVENIENCE OUTLET, 18" A.F.F.
	WEATHERPROOF DUPLEX CONVENIENCE OUTLET, 18" A.F.F.
	DUPLEX CONVENIENCE OUTLET, GROUND FAULT CIRCUIT INTERRUPTER, 18" A.F.F.
	JUNCTION BOX INSTALLED ABOVE LAY-IN CEILING WITH FLEXIBLE CONDUIT CONNECTION TO LAY-IN FIXTURES. MAXIMUM 4'-0" LENGTH OF CONDUIT, WITH REQUIRED CONDUCTORS ALONG WITH GREEN GROUND CONDUCTOR
	JUNCTION BOX FLUSH IN WALL, HEIGHT AS INDICATED ON DRAWINGS, WITH CONNECTION TO EQUIPMENT
	CONCEALED BRANCH CIRCUIT WITH CONDUCTORS AS INDICATED. NEUTRAL, HOT, SWITCH LEG AND GROUND RESPECTIVELY
	BRANCH CIRCUIT OR CONDUIT INSTALLED UNDERGROUND OR UNDER FLOOR
	HOMERUN TO PANELBOARD WITH BRANCH CIRCUIT NUMBERS INDICATED
	SOLENOID VALVE
	LIMIT SWITCH
	PRESSURE TRANSMITTER
	FIRE ALARM SMOKE AND HEAT DETECTOR, PHOTOELECTRIC TYPE, 120V AUX CONTACTS
	MOTOR CONNECTION FOR FRACTIONAL HP MOTOR (1/3 HP OR LESS), PROVIDE THERMAL OVERLOAD SWITCH (WEATHERPROOF IF OUTSIDE) ADJACENT TO MOTOR UNLESS SWITCH IS SHOWN ELSEWHERE ON PLANS
	MOTOR CONNECTION FOR MOTOR WITH HP INDICATED
	DISCONNECT SWITCH, POLES AND RATING AS INDICATED OR AS REQUIRED, NEMA 3R IF INSTALLED OUTSIDE
	FUSED DISCONNECT SWITCH, FUSE, POLES AND RATING AS INDICATED OR AS REQUIRED, NEMA 3R IF INSTALLED OUTSIDE
	COMBINATION MAGNETIC MOTOR CONTROLLER/DISCONNECT SWITCH. SIZE, POLES, FUSES AND OVERLOADS PER MOTOR SERVED
	MAGNETIC MOTOR CONTROLLER, SIZE AND POLES PER MOTOR SERVED
	TRANSFORMER, DRY TYPE, SIZE AS INDICATED
	THERMOSTAT(M), 48" A.F.F.
	120V PANELBOARD, REFER TO PANEL SCHEDULE
	277V PANELBOARD, REFER TO PANEL SCHEDULE
	SPECIAL PURPOSE CABINET, AS INDICATED ON DRAWINGS
	INTRUSION ALARM DOOR CONTACT MAGNETIC
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	CONTACTOR
	MOTOR OVERLOADS
	RED PILOT LIGHT
	GREEN PILOT LIGHT
	TRANSFORMER
	RELAY
	SWITCH
	FUSE(S)
	CIRCUIT BREAKER
	PROGRAMMABLE LOGIC CONTROLLER
	REMOTE TERMINAL UNIT
	THERMOSTAT
	WEATHERPROOF (NEMA 3R)
NOTES: • LIGHTING FIXTURES ARE OF TYPE AS INDICATED ON LIGHT FIXTURE SCHEDULE U.N.O.	
• MOUNTING HEIGHTS FOR DEVICES CALLED OUT AT 18" A.F.F. ARE TO THE BOTTOM OF THE DEVICE UNLESS OTHERWISE NOTED.	
• MOUNTING HEIGHTS FOR DEVICES CALLED OUT AT 48" A.F.F. ARE TO THE TOP OF THE DEVICE UNLESS OTHERWISE NOTED.	
• ANY SPECIFIC DETAILS ABOVE (MOUNTING HEIGHTS, PART NUMBERS, CONNECTION METHODS, ETC.) MAY BE MODIFIED OR REPLACED BY INFORMATION ON PLANS, SCHEDULES, DETAILS, RISERS, ETC. DETAILS NOT SPECIFICALLY MODIFIED REMAIN AS GIVEN ABOVE.	

GENERAL NOTES
SPECIFICATIONS

- IF THERE IS A CONFLICT BETWEEN PLANS/SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS FOR ANY DEVICE, PART, OR MATERIAL USED IN THE PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY IN WRITING THE ENGINEER FOR CLARIFICATION.
- THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE PLANS, AND THE SITE CONDITIONS PRIOR TO BID OPENING AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY AMBIGUITIES, CONTRADICTIONS OR IRREGULARITIES IN THE PLANS.
- IF, DURING BIDDING OR CONSTRUCTION, THE CONTRACTOR IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE PLANS, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS, OR DISCREPANCIES IN OR POSSIBLE OMISSIONS FROM THE DRAWINGS OR SPECIFICATIONS, THEY SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND REQUEST AN INTERPRETATION OF CORRECTION THEREOF. DURING THE BIDDING PROCESS AN ADDENDUM (IF NEEDED) WILL BE ISSUED.
- THE CONTRACT, IF AWARDED, WILL BE ON THE BASIS OF MATERIAL AND EQUIPMENT SPECIFIED OR DESCRIBED IN THE BIDDING DOCUMENTS WITHOUT CONSIDERATION OF POSSIBLE SUBSTITUTE OR "OR EQUAL" ITEMS. WHEREVER A BRAND NAME IS SPECIFIED OR DESCRIBED IN THE BIDDING DOCUMENTS A SUBSTITUTE OR "OR EQUAL" ITEM OF MATERIAL OR EQUIPMENT MAY BE FURNISHED OR USED BY CONTRACTOR IF ACCEPTABLE TO ENGINEER, APPLICATION FOR SUCH ACCEPTANCE WILL NOT BE CONSIDERED BY ENGINEER UNTIL AFTER THE EFFECTIVE DATE OF AGREEMENT. THE PROCEDURE FOR SUBMISSION OF ANY SUCH APPLICATION BY CONTRACTOR AND CONSIDERATION BY ENGINEER IS SET FORTH IN THE GENERAL CONDITIONS.

EXISTING UTILITIES & OBSTACLES TO WORK

- THE CONTRACTOR IS RESPONSIBLE TO INSTALL ALL ITEMS DESCRIBED IN THESE PLANS IN A MANNER THAT PROTECTS THE EXISTING FACILITY. THE CONTRACTOR MUST CONTACT THE ENGINEER IMMEDIATELY IF HE IS UNABLE TO PERFORM THIS WORK WITHOUT DAMAGE TO THE EXISTING FACILITY. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING INFORMATION SHOWN ON THESE PLANS. DESIGN ELEMENTS OF THIS PROJECT WILL NOT CHANGE WITHOUT CHANGE ORDER UNLESS THE CONTRACTOR NOTIFIES THE ENGINEER IN A TIMELY MANNER REGARDING ITEMS DESCRIBED IN THIS NOTE. CHANGES IN ALIGNMENT CAUSED BY UNKNOWN OR UNANTICIPATED SITE CONDITIONS SHALL BE ACCOUNTED FOR BY THE APPROPRIATE UNIT PRICES, AS RECOMMENDED BY THE ENGINEER AND APPROVED BY THE OWNER.
- THE EXISTENCE, CONDITION AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WAS OBTAINED BY A CAREFUL SEARCH OF AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THEIR LOCATING, PROTECTION OF, OR ANY DAMAGE TO THESE LINES OR STRUCTURES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND OBTAIN LINE SPOTS.
- THE FOLLOWING IS A LIST OF POSSIBLE OBSTRUCTIONS AND SHALL NOT BE CONSIDERED A COMPLETE LIST OF POSSIBLE OBSTRUCTIONS: EXISTING UTILITIES, STRUCTURE, GEOTECHNICAL FEATURES, ALL CONDUIT, CABLES, PIPES, WATERLINES, SEWER LINES, GAS LINES, POWER LINES, TELEPHONE AND TELEGRAPH LINES, TREES, MONUMENTS, TRAFFIC CONTROL DEVICES AND OTHER STRUCTURES, BOTH BELOW AND ABOVE GROUND.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COSTS OF REPAIR OF ANY AND ALL DAMAGE TO ANY UTILITY (WHICH IS PREVIOUSLY KNOWN AND DISCLOSED TO HIM BY THE UTILITY OR SHOWN ON THESE PLANS) AS MAY BE CAUSED BY HIS OPERATIONS.
- FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT ARIZONA 811 WHICH CAN BE CONTACTED AT (602) 659-7500, FOR LOCATION OF EXISTING UTILITIES.
- CONTRACTOR SHALL GIVE ALL PUBLIC AND PRIVATE UTILITY COMPANIES NOTICE AS SOON AS POSSIBLE, IN NO EVENT LESS THAN FORTY EIGHT (48) HOURS, FOR ANY WORK THAT IS UNDERSTOOD TO INTERFERE WITH THE SERVICE OF ANY EXISTING PUBLIC OR PRIVATE UTILITY. IF SUCH PUBLIC OR PRIVATE UTILITY DOES NOT COOPERATE FOR THE PROTECTION OF ITS SERVICES, CONTRACTOR SHALL NOTIFY ENGINEER.
- CONTRACTOR SHALL IMMEDIATELY REPORT ANY DAMAGES TO PUBLIC OR PRIVATE PROPERTY TO THE OWNER OF THE PROPERTY INVOLVED AND TO THE ENGINEER. CONTRACTOR SHALL REPAIR OR RESTORE AT HIS OWN EXPENSE ANY DAMAGE TO PUBLIC OR PRIVATE PROPERTY, FOR WHICH THEY ARE DIRECTLY OR INDIRECTLY RESPONSIBLE, TO A CONDITION EQUAL TO THAT EXISTING BEFORE DAMAGE. CONTRACTOR SHALL PROMPTLY NOTIFY HIS INSURANCE CARRIER OF SUCH DAMAGE. IF CONTRACTOR FAILS TO GIVE SUCH NOTICE TO HIS INSURANCE CARRIER OR REFUSES TO EFFECT SUCH REPAIRS OR RESTORATION UPON RECEIPT OF NOTICE, THE ENGINEER MAY CAUSE SUCH REPAIRS OR RESTORATION AND DEDUCT THE COST THEREOF FROM MONEYS DUE, OR WHICH MAY BECOME DUE, TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RECORDING EXISTING CONDITIONS IN ACCORDANCE WITH THE SUPPLEMENTARY CONDITIONS OF THE CONTRACT BEFORE CONSTRUCTION BEGINS. THE RECORD OF EXISTING CONDITIONS SHALL BE USED AS THE "EQUAL CONDITION BEFORE DAMAGE" IN THE EVENT OF DAMAGE TO PUBLIC OR PRIVATE PROPERTY. CONTRACTOR FAILURE TO RECORD EXISTING CONDITIONS WILL MAKE THE OWNERS CLAIM OF "EQUAL CONDITION BEFORE DAMAGE" THE STANDARD THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING AND THE ENGINEER WILL BE IN THE POSITION OF NOT BEING ABLE TO SUPPORT THE CONTRACTOR IN THE MEDIATION OF ANY DISPUTE.
- UTILITY LOCATION CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF LOCATION OF ALL EXISTING UTILITIES.

SITE CONDITIONS

- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES ADJACENT TO THE CONSTRUCTION AREA.
- EPA STORM WATER DISCHARGE REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE TO APPLICABLE PORTIONS OF THE EPA STORM WATER DISCHARGE REGULATIONS.
- UST ABATEMENT. THE CONTRACTOR SHALL USE WATERING EQUIPMENT FOR DUST POLLUTION ABATEMENT AS REQUIRED OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

SITE DESIGN

- SUBGRADE. ALL ELECTRICAL SUBGRADE AND TRENCH BACKFILL SHALL BE COMPACTED TO 95 % OF STANDARD PROCTOR. ALL SUBGRADE AND BACKFILL SHALL BE COMPACTED IN MAXIMUM 8" LOOSE LIFTS. MOISTURE CONTENT AT THE TIME OF COMPACTION SHALL NOT EXCEED OPTIMUM OR BE LESS THAN 5 PERCENTAGE POINTS BELOW OPTIMUM. DRIVEWAYS, APRONS, FILLETS, CURB AND GUTTER, AND OTHER CONCRETE PAVEMENT SHALL BE PLACED ON 6" OF COMPACTED SUBGRADE.
- RESTORE SURFACE AT TRENCH TO EXISTING CONDITIONS.

COMMUNICATION

- CONTRACTOR SHALL KEEP THE OWNER AND THE ENGINEER UPDATED WEEKLY ON THE CONSTRUCTION SCHEDULE AND/OR PHASE SCHEDULE, AND PROGRESS TO DATE.

STAGING STORAGE & DEBRIS DISPOSAL

- DEBRIS GENERATED BY CONSTRUCTION ACTIVITIES SHALL BE DISPOSED OF AT A PERMITTED LANDFILL OR OTHER DULY CERTIFIED REFUSE FACILITY. THE DISPOSAL OF DEBRIS IS NOT A PAY ITEM.

RECORD DRAWINGS

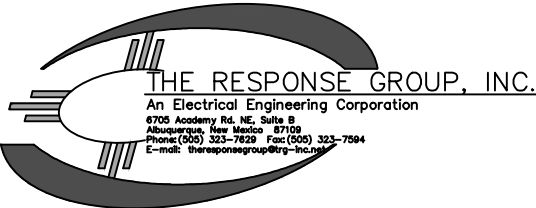
- THE CONTRACTOR SHALL PROVIDE A RECORD SKETCH ON THESE PLANS FOR THE AS-CONSTRUCTED CONDITIONS.

PHASE AND SCHEDULE

- CONTRACTOR SHALL PHASE AND SCHEDULE WORK IN SUCH A WAY AS TO PROVIDE MINIMAL POWER OUTAGES AT THE FACILITY. A PROJECT SCHEDULE SHALL BE SUBMITTED TO THE OWNER FOR REVIEW PRIOR TO ISSUANCE OF NOTICE-TO-PROCEED. CHANGES IN SCHEDULE SHALL BE PRESENTED TO OWNER AND ENGINEER AT LEAST 7 DAYS PRIOR TO PROPOSED IMPLEMENTATION. THESE SCHEDULES, SCHEMATICS AND DIAGRAMS SHALL BE UPDATED WEEKLY AS THE WORK PROGRESSES. MOST CHANGE OVER SHALL BE DONE ON WEEKENDS OR AFTER HOURS.

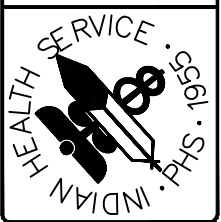
SUBMITTALS

- CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL EQUIPMENT, MATERIALS, PROCESSES AND SCHEDULES AND AS REQUESTED BY ENGINEER.

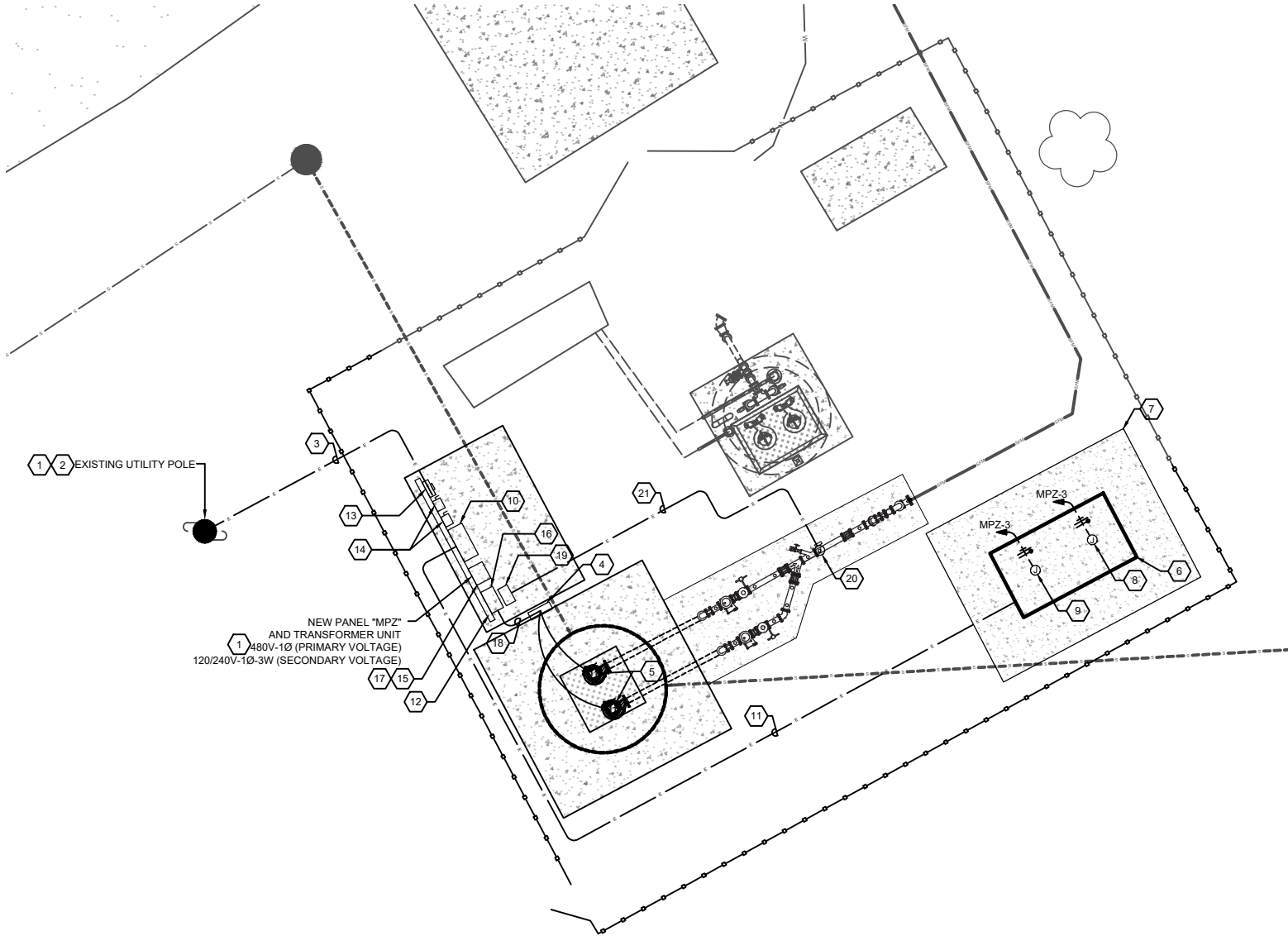


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E1 - ELECTRICAL NOTES AND LEGEND EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA		FILE NAME: E1 ELECTRICAL LEGEND AND NOTES	SCALE: N.T.S.
DRAWN BY: SL	CHECKED BY: QH	LAYOUT NAME: E1	PROJ ENG: --
APPROVED BY: XB			



ELECTRICAL SITE PLAN

SCALE: 1" = 5'-0"

WARNING

IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY. AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OR PIPELINE COMPANY, THE OWNER OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF TO THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK, THE CONTRACTOR IS FULLY RESPONSIBLE OF ANY AND ALL DAMAGE CAUSED BY IT'S FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES, AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION. WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "NM ONE CALL" PROCEDURES, OR OTHERWISE.

GENERAL NOTES

- A. REFER TO SHEET E1 FOR PROJECT GENERAL NOTES AND ELECTRICAL SYMBOL LEGEND.
- B. REFER TO SHEET E3 FOR POWER RISER DIAGRAMS AND PANEL SCHEDULES.
- C. ALL CONDUIT SHOWN DASHED SHALL BE BURIED A MINIMUM OF 36" BELOW FINISHED GRADE. ANY CONDUIT THAT COMES IN CONTACT WITH THE EARTH SHALL BE PVC, PVC COATED, OR DOUBLE LAPPED WRAPPED WITH SCOTCHWRAP-51.

KEYED NOTES

- 1. REFER TO "POWER RISER DIAGRAM ON SHEET E3 FOR ADDITIONAL INFORMATION.
- 2. NEW OVERHEAD THREE PHASE PRIMARY CONDUCTORS PROVIDED AND INSTALLED BY PNM. CONTRACTOR SHALL COORDINATE ALL REQUIRED WORK WITH PNM PRIOR TO COMMENCEMENT OF WORK.
- 3. NEW UNDERGROUND SERVICE CONDUIT AND CONDUCTORS ROUTED 36" BELOW FINISHED GRADE WITH RED WARNING TAPE BURIED 12" ABOVE CONDUIT. REFER TO "POWER RISER DIAGRAM" ON SHEET E3 FOR CONDUIT AND CONDUCTOR SIZES AND ADDITIONAL INFORMATION.
- 4. 20"x20"x8" NEMA 4X (STAINLESS STEEL) JUNCTION BOX PROVIDED BY PUMP SUPPLIER. JUNCTION BOX INCLUDES TERMINAL STRIPS FOR TERMINATION OF POWER CONDUCTORS AND CONTROL CABLING FOR EACH PUMP. ALL WIRING (INCLUDING CONTROL CABLING) WITHIN THIS JUNCTION BOX SHALL BE RATED FOR 600 VOLT MINIMUM.
- 5. (2) 11 HORSEPOWER SUBMERSIBLE PUMPS AND MOTORS LOCATED WITHIN WETWELL.
- 6. PROVIDE AND INSTALL A 30KW, 277/480V-3Ø, 60HZ, 1800 RPM, STANDBY ENGINE-GENERATOR IN A TYPE 2 SOUND ATTENUATING ENCLOSURE, DIESEL FUEL, COOLANT JACKET HEATER, EMERGENCY STOP SWITCH, AUXILIARY OUTPUT RELAYS, 100A/3P CIRCUIT BREAKER, COLD WEATHER OPTIONS, BATTERY RACK, BATTERY HEATER KIT, BATTERY CHARGER, OVERSIZED ALTERNATOR, AND 24-MONTH WARRANTY. PROVIDE AND INSTALL CONCRETE PAD, GENERATOR SHALL BE RATED FOR SITE ALTITUDE, AMBIENT TEMPERATURES, AND RELATIVE HUMIDITY. AS MANUFACTURED BY CUMMINS OR OWNER AND ENGINEER APPROVED EQUAL. COORDINATE EXACT LOCATION IN THE FIELD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 7. PROVIDE AND INSTALL CONCRETE PAD FOR USE WITH ENGINE-GENERATOR. FINAL DIMENSIONS OF CONCRETE PAD SHALL BE COORDINATED PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ALL REQUIRED PENETRATIONS THROUGH CONCRETE PAD. REFER TO "ENGINE-GENERATOR CONCRETE PAD DETAIL" ON SHEET E4 FOR ADDITIONAL INFORMATION.
- 8. EXTEND A 120V DEDICATED CIRCUIT FROM JACKET HEATER TO PANEL AND CIRCUIT AS INDICATED.
- 9. EXTEND A 120V DEDICATED CIRCUIT FROM BATTERY CHARGER TO PANEL AND CIRCUIT AS INDICATED.
- 10. PROVIDE AND INSTALL A 480V, 100A, 3-POLE, AUTOMATIC TRANSFER SWITCH (ATS) IN A WEATHERPROOF ENCLOSURE, OPEN TRANSITION, MICROPROCESSOR CONTROLLED, AUXILIARY CONTACTS, MANUAL OPERATION HANDLES, LED INDICATORS AND DIGITAL PUSHBUTTON CONTROLS. NON-SWITCHED NEUTRAL, ATS BY CUMMINS OR OWNER AND ENGINEER APPROVED EQUAL. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
- 11. EXTEND ENGINE START SIGNAL FROM ATS TO ENGINE-GENERATOR CONTROL PANEL. PROVIDE AND INSTALL CONTROL CABLE IN CONDUIT. MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.
- 12. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW ELECTRICAL RACK FOR MOUNTING OF ELECTRICAL GEAR. REFER TO "ELECTRICAL RACK DETAIL" ON SHEET E3 FOR ADDITIONAL INFORMATION.
- 13. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW 200 AMP METER SOCKET PER PNM STANDARD METER DRAWING MS-2-6.3. COORDINATE ALL REQUIREMENTS WITH PNM PRIOR TO COMMENCEMENT OF WORK.
- 14. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW HEAVY DUTY, 100 AMP, 600 VOLT, 3-POLE (PLUS SOLID NEUTRAL), GROUND LUG, FUSIBLE DISCONNECT SWITCH IN A NEMA 3R ENCLOSURE. FUSIBLE DISCONNECT SWITCH SHALL BE SERVICE ENTRANCE RATED.
- 15. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW NEMA 5-20 GFCI TYPE RECEPTACLE IN A WEATHERPROOF WHILE IN USE ENCLOSURE. RECEPTACLE SHALL BE MOUNTED TO ELECTRICAL EQUIPMENT RACK.
- 16. PUMP CONTROLLER PROVIDED BY PUMP SUPPLIER. CONTRACTOR IS RESPONSIBLE FOR POWER FEED TO PUMP CONTROLLER, CONTROL CIRCUITING FROM INSTRUMENTATION (PROVIDED BY PUMP SUPPLIER) TO PUMP CONTROLLER. CONTRACTOR IS ALSO RESPONSIBLE FOR EXTENSION OF ALL POWER AND CONTROL CONDUCTORS FROM PUMP CONTROLLER TO JUNCTION BOX LOCATED NEAR WET WELL (KEYED NOTE 4).
- 17. PROVIDE AND INSTALL A NEW WEATHERPROOF TOGGLE SWITCH FOR MANUAL CONTROL OF LIGHT FIXTURE THAT IS MOUNTED TO THE UNDERSIDE OF THE ELECTRICAL RACK. REFER TO "ELECTRICAL RACK DETAIL" ON SHEET E4 FOR ADDITIONAL INFORMATION.
- 18. PROVIDE AND INSTALL (4) NEW CONDUITS BETWEEN THE PUMP CONTROLLER AND THE WET WELL JUNCTION BOX. (2) CONDUITS SHALL BE UTILIZED FOR POWER CONDUCTORS TO THE SUBMERSIBLE PUMPS, AND (2) CONDUITS SHALL BE UTILIZED FOR CONTROL CONDUCTORS. REFER TO "POWER RISER DIAGRAM" ON SHEET E3 FOR ADDITIONAL INFORMATION.
- 19. PROVIDE AND INSTALL A NEW FLOW METER DISPLAY UNIT ON ELECTRICAL EQUIPMENT RACK. EXTEND 3/4" CONDUIT BACK TO PANEL "MPZ" AND CONNECT TO CIRCUIT 5 AS SHOWN ON PANEL SCHEDULE ON SHEET E3. EXTEND 1" CONDUIT TO FLOW METER JUNCTION BOX AND MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO "ELECTRICAL RACK DETAIL" ON SHEET E3 FOR ADDITIONAL INFORMATION.
- 20. WEATHERPROOF JUNCTION BOX FOR CONNECTION TO FLOW METER. CONTRACTOR SHALL MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.
- 21. EXTEND 1" CONDUIT WITH COMMUNICATION CABLING FROM FLOW METER DISPLAY UNIT TO FLOW METER. COMMUNICATION CABLING TO BE SUPPLIED WITH FLOW METER. CONTRACTOR SHALL MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.

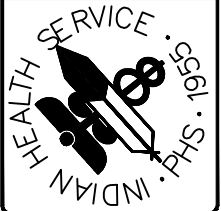


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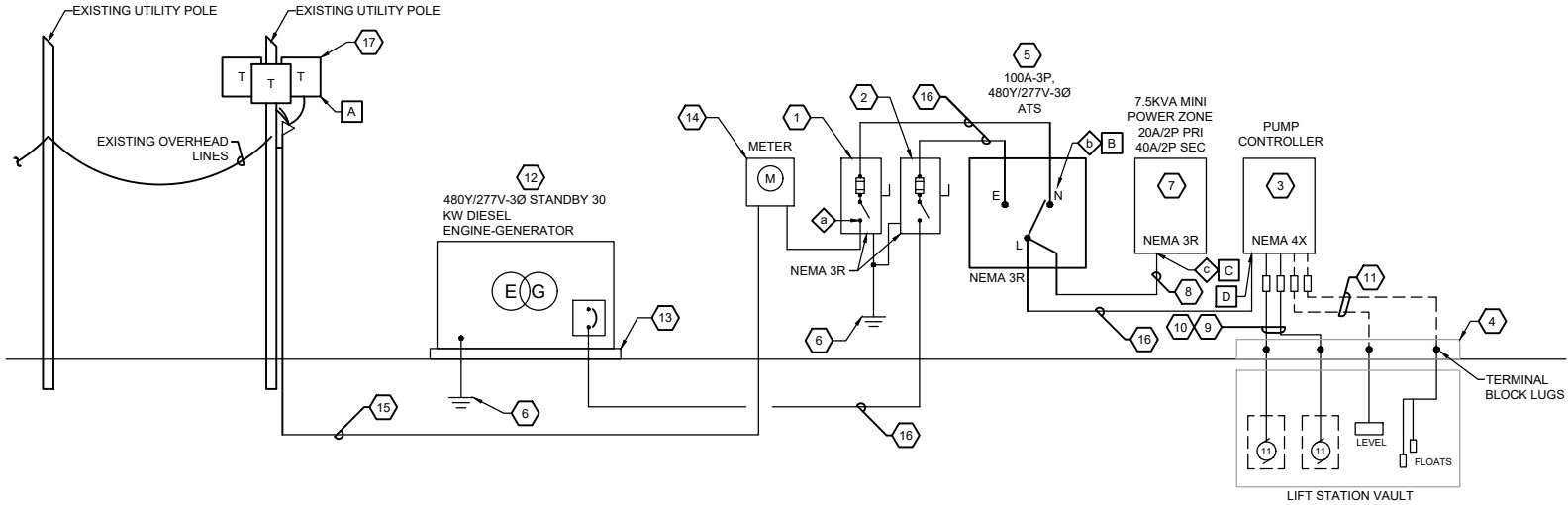
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E2



E2 – ELECTRICAL SITE PLAN EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA			FILE NAME: E2 ELECTRICAL SITE PLAN	SCALE: N. T. S.
			LAYOUT NAME: E2	
			PROJ. ENG: ---	
			DRAWN BY: SL	
CHECKED BY: QH				
APPROVED BY: XB				



POWER RISER DIAGRAM

LOAD SUMMARY - SERVICE DISC		
DESCRIPTION		
100A SERVICE FUSIBLE DISCONNECT SWITCH ESTIMATED DEMAND PER NEC 220		
11HP LIFT PUMP (10.8 KVA AT 125%)	13.5	KVA
11HP LIFT PUMP (10.8 KVA AT 100%)	10.8	KVA
PANEL "MPZ" CALCULATED LOAD	4.9	KVA
TOTAL ESTIMATED LOAD:		29.2 KVA
35 AMPERES AT 277/480V-3Ø-4W		
MINIMUM SERVICE CAPACITY =125% x TOTAL ESTIMATED LOAD	36.5	KVA
44 AMPERES AT 277/480V-3Ø-4W		
∴ MINIMUM RECOMMENDED SERVICE SIZE =	100	AMPS

PANEL / LOAD SCHEDULE - NEW PANELBOARD "MPZ"									
LOCATION: Electrical Rack				VOLTAGE: 120/240V-1P, 3W		AMPACITY: 40 AMPERE		Main: 40A/2P MCB	
FED FROM: AUTOMATIC TRANSFER SWITCH				ENCLOSURE: NEMA 3R		MOUNTING: SURFACE		AIC: 18,000	
BKR SIZE	DESCRIPTION	DEMAND CODE	LOAD (VA)	# Ckt #	LOAD (VA)	# Ckt #	LOAD (VA)	DEMAND CODE	BKR SIZE
20A-1P	GENERATOR JACKET HEATER	EQP	1500	4	1700	2	200	LTG	20A-1P
20A-1P	GENERATOR BATTERY CHARGER	EQP	1500	3	3000	4	1500	REC	20A-1P
20A-1P	FLOW METER	EQP	100	5	100	6			20A-1P
1P	SPACE ONLY			7		8			1P
1P	SPACE ONLY			9		10			1P
Total Phase Loads (VA):					1,800	3,000	Notes: 1. New Panelboard and Transformer Unit 2. 10-Circuit 3. Copper Neutral and Ground Bus Bars		
Total Phase Loads (Amps):					15.0	25.0			
Total Connected Loads (KVA):					4.8				
LOAD CALCULATIONS	Connected (kVA) by Type:			Estimated Demand (kVA) by Load Type			Total Estimated Demand (kVA):		
	LTG	Lighting:	0.2	Lighting at 125% (kVA):	0.3		4.9		
	REC	Receptacles:	1.5	Receptacles:	1.5	Amps at 120/240V-1 Phase (Amps):	20.2		
				10kVA at 100% (kVA):	1.5		Panel Ampacity (Rating):		
				Rest at 50% (kVA):	0.0		40		
	EQP	Equipment:	3.1	Eqp at 100% (kVA):	3.1		Spare Capacity:		
	LMECH	Largest Mech:		Largest at 125% (kVA):			49.5%		
	MECH	Mechanical:		Rest at 100% (kVA):					

KEYED NOTES

- PROVIDE AND INSTALL A NEW 600V, 100A-3P, HEAVY-DUTY, FUSIBLE DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. FUSE AT 100 AMPERES WITH CLASS RK5 FUSES. SERVICE ENTRANCE RATED
- PROVIDE AND INSTALL A NEW 600V, 100A-3P, HEAVY-DUTY, FUSIBLE DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. FUSE AT 100 AMPERES WITH CLASS RK5 FUSES.
- PUMP CONTROLLER PROVIDED BY PUMP SUPPLIER. CONTRACTOR IS RESPONSIBLE FOR POWER FEED TO PUMP CONTROLLER, CONTROL CIRCUITING FROM INSTRUMENTATION (PROVIDED BY PUMP SUPPLIER) TO PUMP CONTROLLER. CONTRACTOR IS ALSO RESPONSIBLE FOR EXTENSION OF ALL POWER AND CONTROL CONDUCTORS FROM PUMP CONTROLLER TO JUNCTION BOX LOCATED NEAR WET WELL (KEYED NOTE 4).
- 20"x20"x8" NEMA 4X (STAINLESS STEEL) JUNCTION BOX PROVIDED BY PUMP SUPPLIER. JUNCTION BOX INCLUDES TERMINAL STRIPS FOR TERMINATION OF POWER CONDUCTORS AND CONTROL CABLING FOR EACH PUMP. ALL WIRING (INCLUDING CONTROL CABLING) WITHIN THIS JUNCTION BOX SHALL BE RATED FOR 600 VOLT MINIMUM.
- PROVIDE AND INSTALL A 480V, 150A, 3-POLE, FUSIBLE, AUTOMATIC TRANSFER SWITCH (ATS) IN A WEATHERPROOF ENCLOSURE. OPEN TRANSITION, MICROPROCESSOR CONTROLLED, AUXILIARY CONTACTS, MANUAL OPERATION HANDLES, LED INDICATORS AND DIGITAL PUSHBUTTON CONTROLS. NON-SWITCHED NEUTRAL. ATS BY CUMMINS OR OWNER AND ENGINEER APPROVED EQUAL. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
- GROUNDING PER GROUNDING RISER DIAGRAM. CONTRACTOR SHALL REFER TO GROUNDING RISER DIAGRAM ON SHEET E4 FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL A 7.5 KVA, MINI POWER ZONE SUBSTATION. 480V-1Ø 20A/2P PRIMARY CIRCUIT BREAKER, 120/240V-1Ø 40A/2P SECONDARY CIRCUIT BREAKER, 10-POLE, NEMA 3R ENCLOSURE. MINI POWER ZONE SHALL BE SQUARE D #MPU7S40F OR ENGINEER AND OWNER APPROVED EQUAL.
- PROVIDE AND INSTALL 2#10 THWN CU AND 1#10 CU GROUND IN 3/4" CONDUIT.
- PUMP CABLE (3 POWER LEADS, GROUND LEAD, GROUND CHECK LEAD, 2 LEADS FOR SEAL LEAK-OVER TEMP SENSORS) SUPPLIED WITH PUMPS. TYPICAL FOR TWO PUMPS. CONNECT PUMP CABLES TO CONTROL BOX CONDUCTS AT TERMINAL BLOCKS LOCATED IN JUNCTION BOX. TYPICAL FOR TWO PUMPS.
- PROVIDE AND INSTALL 1-1/4" CONDUIT FOR PUMP CABLES AS INDICATED IN KEYED NOTE 9. CONTRACTOR SHALL COORDINATE PENETRATIONS IN WET WELL VAULT. COORDINATE ROUTING IN THE FIELD. PROVIDE SEAL-OFFS AS INDICATED ON POWER RISER DIAGRAM.
- PROVIDE AND INSTALL 1" CONDUIT FOR USE WITH FLOATS/SENSORS. CONTRACTOR SHALL COORDINATE PENETRATIONS IN WELL VAULT. COORDINATE ROUTING IN THE FIELD. PROVIDE PERMANENT SEAL-OFF AS INDICATED ON POWER RISER DIAGRAM.
- PROVIDE AND INSTALL A 30kW/38kVA, 277/480V-3Ø, 60HZ, 1800 RPM, DIESEL STANDBY ENGINE-GENERATOR IN A LEVEL 1 SOUND ATTENUATING ENCLOSURE WITH 24 HR DIESEL FUEL BELLY TANK. COOLANT JACKET HEATER, EMERGENCY STOP SWITCH, AUXILIARY OUTPUT RELAYS, 100A/3P CIRCUIT BREAKER, COLD WEATHER OPTIONS, BATTERY RACK, BATTERY HEATER KIT, BATTERY CHARGER, OVERSIZED ALTERNATOR, AND 24-MONTH WARRANTY. PROVIDE AND INSTALL CONCRETE PAD. GENERATOR SHALL BE RATED FOR AMBIENT TEMPERATURES, AND RELATIVE HUMIDITY. AS MANUFACTURED BY CUMMINS OR OWNER AND ENGINEER APPROVED EQUAL. COORDINATE EXACT LOCATION IN THE FIELD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL CONCRETE PAD FOR USE WITH ENGINE-GENERATOR. FINAL DIMENSIONS OF CONCRETE PAD SHALL BE COORDINATED PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ALL REQUIRED PENETRATIONS THROUGH CONCRETE PAD. REFER TO ENGINE-GENERATOR CONCRETE PAD DETAIL, THIS SHEET, FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL METER SOCKET PER LOCAL UTILITY REQUIREMENTS.
- PROVIDE AND INSTALL 4#1/0 XHHW-2 AL IN 2" CONDUIT.
- PROVIDE AND INSTALL 4#1/0 XHHW-2 AL AND 1#4 AL GROUND IN 2" CONDUIT. COORDINATE ROUTING IN THE FIELD.
- CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING 240V THREE PHASE SECONDARY POLE MOUNTED TRANSFORMERS. CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW POLE MOUNTED TRANSFORMERS ON EXISTING UTILITY POLE. NEW POLE MOUNTED TRANSFORMERS SHALL BE 277/480V-3Ø-4W WYE SECONDARY.

SHORT CIRCUIT CALCULATIONS

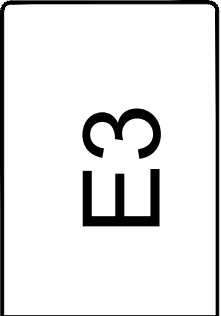
- NOTE:
CONTRACTOR SHALL VERIFY RATING AND IMPEDANCE OF UTILITY TRANSFORMER PRIOR TO INSTALLATION OF EQUIPMENT. ANY DEVIATION SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ASSUMPTION: 45KVA THREE PHASE TRANSFORMER POD WITH AN IMPEDANCE OF 1.4%. THEREFORE MAXIMUM AVAILABLE FAULT CURRENT AT SECONDARY OF TRANSFORMERS ARE 3,800A.
 - APPROXIMATELY 45' OF #1/0 AL CONDUCTORS LIMITS SHORT CIRCUIT CURRENT TO 3,359A AT LINE SIDE TERMINALS OF AUTOMATIC TRANSFER SWITCH.
 - APPROXIMATELY 5' OF #10 Cu CONDUCTORS LIMITS SHORT CIRCUIT CURRENT TO 3,201A. THEREFORE PANEL "IHS" SHALL HAVE A MINIMUM OF 10K AIC RATING.
 - APPROXIMATELY 7' OF 1/0 AL CONDUCTORS LIMITS SHORT CIRCUIT CURRENT TO 3,299A AT PUMP CONTROL PANEL TERMINALS.

VOLTAGE DROP CALCULATIONS

- INCOMING NOMINAL VOLTAGE FROM THE UTILITY PROVIDER IS 277/480V-3Ø-4W WYE SYSTEM.
- APPROXIMATELY 45' OF #1/0 AL CONDUCTORS, WITH A LOAD OF 29.2KVA (35A AT 277/480V-3Ø-4W) CAUSES A VOLTAGE DROP OF APPROXIMATELY 0.67%.
- APPROXIMATELY 5' OF #10 Cu CONDUCTORS, WITH A LOAD OF 4.9KVA (6A AT 277/480V-1Ø-3W) CAUSES A VOLTAGE DROP OF APPROXIMATELY 0.01%.
- APPROXIMATELY 7' OF #1/0 AL CONDUCTORS, WITH A LOAD OF 24.3KVA (29A AT 277/480V-3Ø-4W) CAUSES A VOLTAGE DROP OF APPROXIMATELY 0.01%.



DATE	REVISIONS	INIT.
03/31/2025	ISSUE FOR 100% SUBMITTAL	



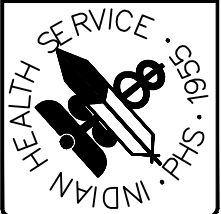
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5350 DTC PKWY SUITE 205

GREENWOOD VILLAGE, CO 80111

PHONE: 720-474-0941



E3 – ELECTRICAL DISTRIBUTION

EAST COCOPAH LIFT STATION RENOVATION

COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: E3 ELECTRICAL DISTRIBUTION

LAYOUT NAME: E3

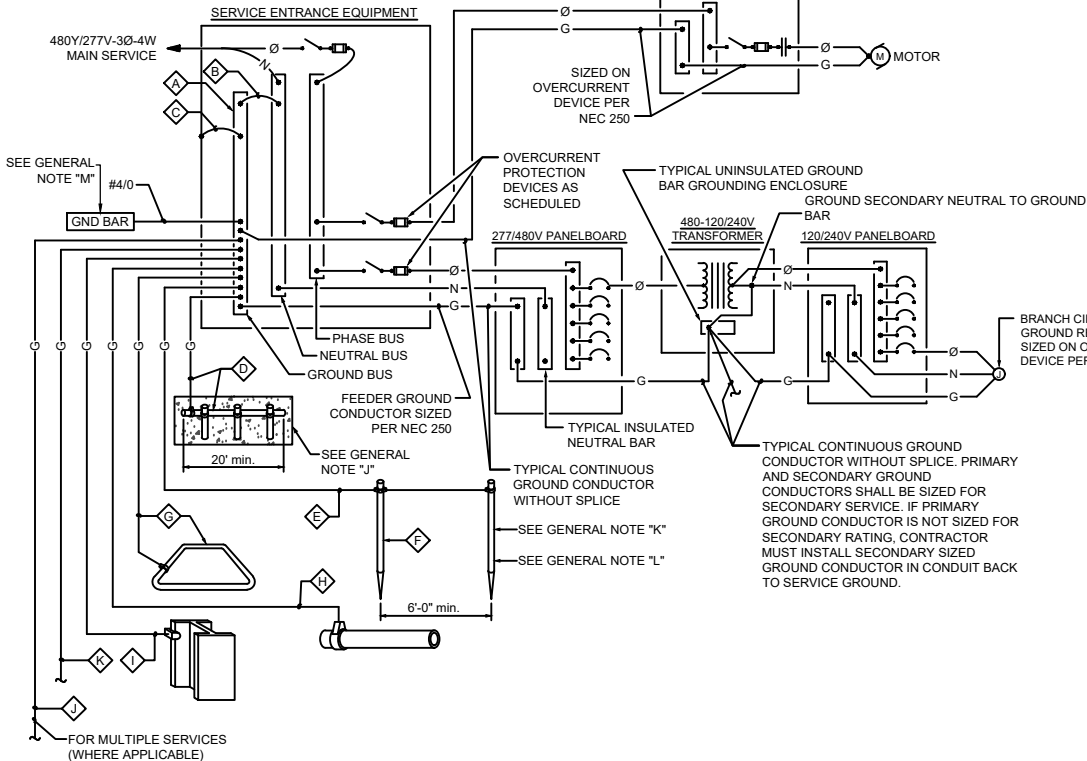
PROJ ENG: --

SCALE: N.T.S.

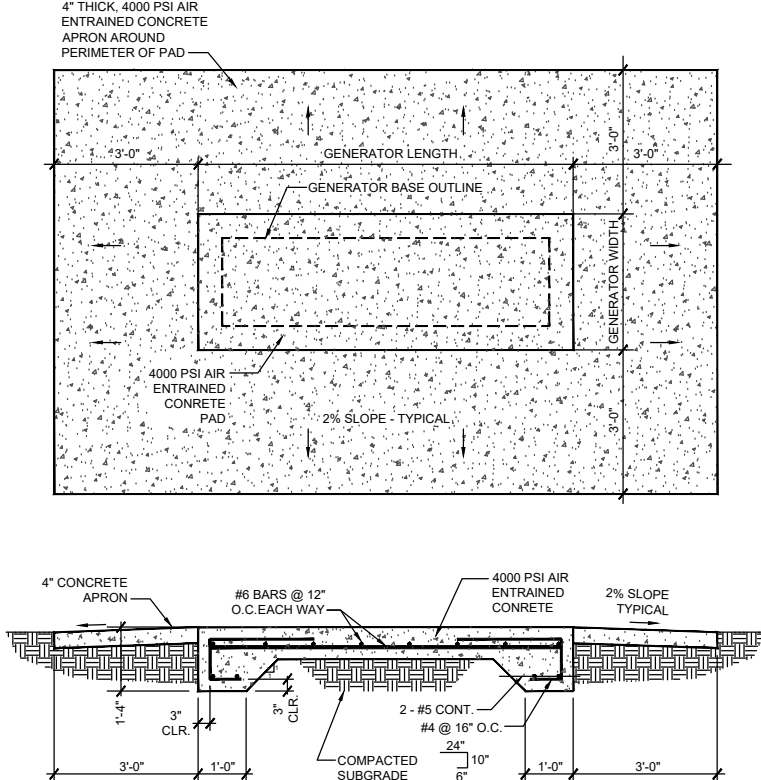
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CHECKED BY: QH

APPROVED BY: XB



NOT TO SCALE



ENGINE-GENERATOR CONCRETE PAD














- KEYED NOTES
-

3. THREE SQUARE HOLLOW STRUCTURAL STEEL. EXTEND 7'-0" ABOVE TOP OF CONCRETE SLAB. HSS3X3X1/4 STEEL POST CAPPED WITH 1/4" THICK PLATE, OR APPROVED EQUAL. (TYPICAL).
2. UNISTRUT P1000 OR EATON B-LINE B22 CHANNEL, OR APPROVED EQUAL. PROVIDE ALL NECESSARY MOUNTING HARDWARE FOR A COMPLETE SYSTEM. (TYPICAL).
3. PROVIDE AND INSTALL A NEW WET LOCATION LISTED, 4 FOOT, VAPOR TIGHT LED FIXTURE, MOUNTED TO STEEL MEMBER ON THE ELECTRICAL RACK. LED LIGHT FIXTURE SHALL BE AUTOMATICALLY CONTROLLED VIA PHOTOCELL (CONTRACTOR PROVIDED AND INSTALLED) MOUNTED 12" ABOVE THE TOP OF THE ELECTRICAL RACK, AND MANUALLY CONTROLLED VIA TOGGLE SWITCH MOUNTED TO THE ELECTRICAL RACK. LUMINAIRE SHALL BE LITHONIA #CSVT-148-500MLM-MVOLT-40K-80CRI OR ENGINEER AND OWNER APPROVED EQUAL.
4. PROVIDE AND INSTALL A COATED CORRUGATED STEEL PLATE TO FUNCTION AS A ROOF FOR THE ELECTRICAL EQUIPMENT RACK. CONTRACTOR SHALL WELD PLATE TO EQUIPMENT RACK AS REQUIRED. THE COATED CORRUGATED STEEL PLATE SHALL BE A MINIMUM OF 20 GAUGE STEEL. CONTRACTOR SHALL INSPECT PLATE AND RE-COAT ALL IMPERFECTIONS AND CUTS TO MAINTAIN CORROSION PROTECTION.
5. PROVIDE AND INSTALL A COATED CORRUGATED STEEL PLATE TO FUNCTION AS A BACK WALL FOR THE ELECTRICAL EQUIPMENT RACK. CONTRACTOR SHALL WELD PLATE TO EQUIPMENT RACK AS REQUIRED. THE BACK WALL SHALL NOT EXTEND TO THE GROUND. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 6" SEPARATION BETWEEN THE COATED CORRUGATED STEEL PLATE AND THE GROUND. THE COATED CORRUGATED STEEL PLATE SHALL BE A MINIMUM OF 20 GAUGE STEEL. CONTRACTOR SHALL INSPECT PLATE AND RE-COAT ALL IMPERFECTIONS AND CUTS TO MAINTAIN CORROSION PROTECTION. MAINTAIN A MINIMUM OF 4" SPACING BETWEEN STEEL WALL AND PANELS. INSTALL HIGH-TEMP RIGID POLYISOCYANURATE FOAM BOARDS OR APPROVED EQUAL INSULATION IF THE 4" SPACING CANNOT BE ACHIEVED.
6. PROVIDE AND INSTALL A NEW FLOW METER DISPLAY UNIT ON ELECTRICAL EQUIPMENT RACK. EXTEND 3/4" CONDUIT BACK TO PANEL "MP2" AND CONNECT TO CIRCUIT 5 AS SHOWN ON PANEL SCHEDULE ON SHEET E3. EXTEND 1" CONDUIT TO FLOW METER JUNCTION BOX AND MAKE ALL REQUIRED CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM. CONTRACTOR SHALL REFER TO MANUFACTURER'S WIRING DIAGRAM FOR ADDITIONAL INFORMATION.
7. TWO SQUARE HOLLOW STRUCTURAL STEEL AT THE END OF 6' ROOF EXTENSION. EXTEND 7'-0" ABOVE TOP OF CONCRETE SLAB. HSS3X3X1/4 STEEL POST CAPPED WITH 1/4" THICK PLATE, OR APPROVED EQUAL. (TYPICAL).
8. THREE SQUARE HOLLOW STRUCTURAL STEEL FOR HORIZONTAL SUPPORT. HSS4X4X1/4 STEEL POST CAPPED WITH 1/4" THICK PLATE, OR APPROVED EQUAL. (TYPICAL).

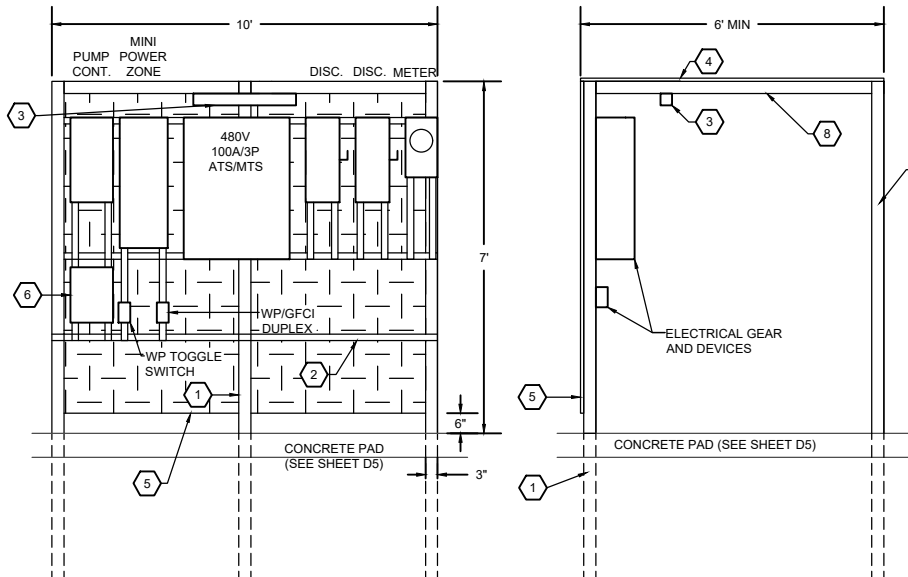
GROUNDING SYSTEM GENERAL NOTES

2018

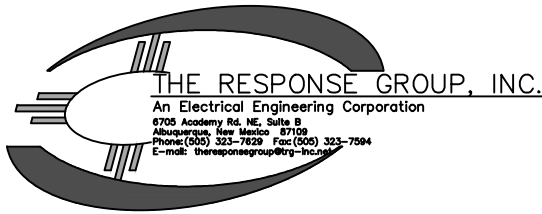
- A. THE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF ITEMS **A**, **B**, **C**, **D**, **E**, **F** AND **G** WHERE APPLICABLE.
- B. ITEMS **H**, **I** AND **J** MUST BE BONDED TOGETHER AND TO THE GROUNDING ELECTRODE SYSTEM WHEN THEY ARE PRESENT.
- C. ITEM **D**, CONCRETE ENCASED ELECTRODE (UFER) SHALL HAVE UFER SUPPORT CONSISTING OF 5/8" x 10' COPPER BOND ROD CUT INTO 2' SECTIONS AND DRIVEN FOR SUPPORT OF UFER CONDUCTOR. ONLY COPPER TO COPPER CONNECTIONS ARE ACCEPTABLE. DO NOT USE RE-BAR FOR UFER SUPPORT. (THIS IS TO AVOID THE HARMFUL EFFECTS OF DISSIMILAR METALS IN CONTACT.) A U.L. LISTED COPPER TO RE-BAR CLAMP (SUCH AS GRAVES "JONES BOND" SYSTEM) IS AN APPROVED ALTERNATIVE.
- D. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ARTICLE 250, PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
- E. ALL SPLICING AND UNDERGROUND CONNECTIONS SHALL BE ACCOMPLISHED VIA EXOTHERMIC WELD (CAD-WELD) ONLY.
- F. ALL CONDUCTOR SIZING INDICATED ON THE GROUNDING SCHEDULE ARE FOR COPPER CONDUCTORS. ALUMINUM IS NOT PERMITTED.
- G. ANY VARIANCES FROM THIS DIAGRAM AND ASSOCIATED SCHEDULE AND NOTES MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
- H. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF N.E.C. ARTICLE 250 (ALL SUBPARAGRAPHS) AND ALL STATE AND LOCAL REQUIREMENTS.
- I. THE GROUNDING SYSTEM SHALL PROVIDE LESS THAN (4) FOUR OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST (FALL-OF-POTENTIAL) AND SUBMITTED TO ELECTRICAL ENGINEER UPON COMPLETION OF PROJECT.
- J. IF A 20'-0" LONG (MINIMUM) CONCRETE ENCASED ELECTRODE IS NOT AVAILABLE, CONTRACTOR MAY INSTALL A 20'-0" (MINIMUM) UFER GROUND 30" BELOW GRADE WITH AT LEAST TWO GROUND RODS (ONE AT EACH END).
- K. PROVIDE SECOND GROUND ROD AT LEAST 6'-0" FROM INITIAL GROUND ROD.
- L. WHEN INDICATED ON DRAWINGS, PROVIDE AND INSTALL HORIZONTAL CHEMICAL GROUND ELECTRODE KIT. 10' COPPER ELECTRODE LENGTH, FACTORY ATTACHED 6" #4/0 COPPER PITGAL, AND HIGH DENSITY POLYETHYLENE INSPECTION WELL & COVER. ERICO #ECRH102Q6U OR APPROVED EQUAL. CONTRACTOR SHALL USE MANUFACTURER RECOMMENDED ELECTROLYTIC SALTS, BENTONITE CLAY BACKFILL MATERIAL, AND GROUND ENHANCEMENT MATERIAL (GEM). CONTRACTOR SHALL INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL MAINTAIN 6'-0" SEPARATION (MINIMUM) BETWEEN GROUNDING ELECTRODES. INSPECTION WELL INSTALLED FLUSH WITH FINAL GRADE.
- M. PROVIDE AND INSTALL 1/4" x 4" x 18" COPPER MAIN GROUNDING BUS BAR WITH BRACKETS AND INSULATORS. CONTRACTOR SHALL COORDINATE PRE-DRILLED (12)-1/4" HOLES REQUIREMENTS WITH PNM (OWNER), ERICO OR APPROVED EQUAL. EXTEND 1/4" CU GROUNDING CONDUCTOR TO MAIN GROUND. COORDINATE EXACT LOCATION AND ROUTING IN THE FIELD. CONTRACTOR SHALL MAKE ALL FINAL TERMINATIONS AS REQUIRED.

GROUNDING SCHEDULE											
											
	FACTORY INSTALLED GROUND BUS BAR	INTEGRATED BUS BAR MAIN BOND JUMPER	INTEGRATED BUS BAR CASE BOND JUMPER	CONCRETE ENCASED ELECTRODE (UFER)	GROUNDING ELECTRODE CONDUCTOR TO ROD, PIPE OR PLATE	CU or CU-CLAD STEEL GROUND ROD	COPPER GROUND RING CONDUCTOR	METALLIC PIPING BONDING CONDUCTOR	BUILDING STEEL BONDING CONDUCTOR	MULTIPLE SERVICE BONDING CONDUCTOR	TELEPHONE SYSTEM GROUNDING CONDUCTOR
		N.E.C. 250.102(C)	N.E.C. 250.102(C)	N.E.C. 250.52(A)(3) 250.66(B)	N.E.C. 250.52(A)(5) 250.52(A)(7) 250.66(A)	N.E.C. 250.52(A)(5)	N.E.C. 250.52(A)(4) 250.66(C)	N.E.C. 250.52(A)(1) 250.66	N.E.C. 250.50(A)(2) 250.66	N.E.C. 250.66	
200 AMP		#4	#4	#4	#6	5/8"x8'	#2	#4	#4	#4	#6

-SHALL BE SIZED TO ACCOMMODATE ALL
GROUND WIRE LUGS AS INDICATED ON
GROUNDING DIAGRAM AND/OR REFERENCED
ELSEWHERE ON PLANS OR SPECIFICATIONS



ELECTRICAL EQUIPMENT RACK DETAIL

[illegible]

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E4 - ELECTRICAL DETAILS

FILE NAME: E4 ELECTRICAL DETAILS

LAYOUT NAME: E4

PROJ ENG: -- SCALE: N.T.S.

SHEET

21 OF 31



BACKPANEL: SPP-4830 (45" X 27") FABRICATED FROM 12 GAUGE STEEL.

△ CUSTOMER SUPPLIED PART.
LAST WIRE NUMBER USED 58.
PANEL IS UL 508A LABELED.

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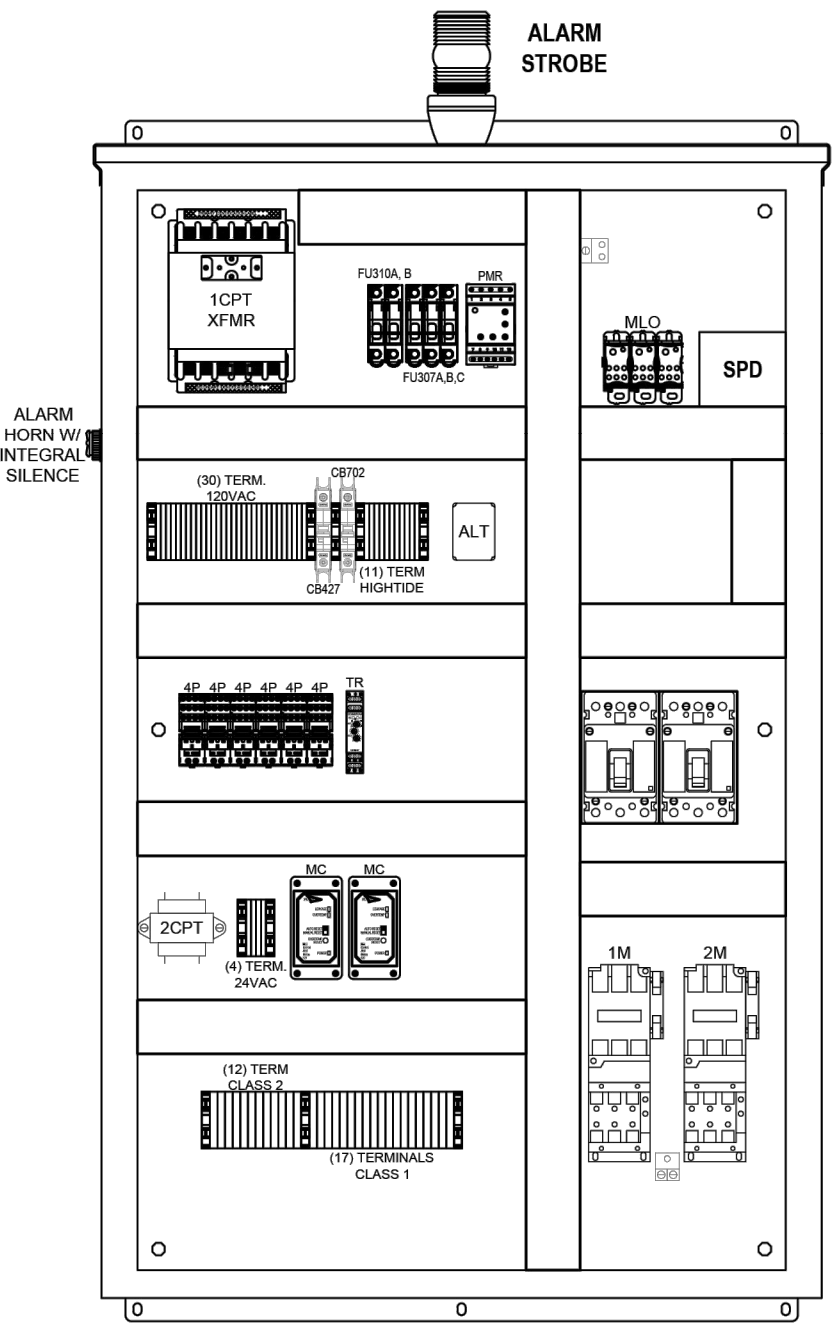


DRAWN BY: SL	FILE NAME: EI-CONTROL
CHECKED BY: QH	LAYOUT NAME: EI-1
APPROVED BY: XB	PROJ ENG: --
	SCALE: 1" = 20'

SHEET
22 OF 31

BILL OF MATERIALS

ITEM	DESCRIPTION	MANUFACTURER	MANUFACTURER PART #	QTY
1	ENCLOSURE, NEMA 3R, PAINTED WHITE	SCHAEFER	SPLRHC-483012	1
2	CIRCUIT BREAKER, PUMP, 3 POLE, 30A	EATON	PDG13F0030TFFJ	2
3	CIRCUIT BREAKER, CONTROL POWER MAIN, 1 POLE,10A	EATON	QC1010	1
4	CIRCUIT BREAKER, 1 POLE, 1A, 10kA	EATON	FAZ-B1-1-NA-L	2
5	STARTER, NEMA SIZE 2	EATON	AN16GN0AB	2
6	OVERLOAD HEATER PACK, 3 POLE	EATON	H2011B-3	2
7	SURGE PROTECTIVE DEVICE	SQUARE D	SDSA3650D	1
8	PHASE MONITOR RELAY	MACROMATIC	PMDU	1
9	TRANSFORMER, 480/120 VOLT, 750VA	EATON	C0750E2A	1
10	TRANSFORMER, 120/24 VOLT, 40VA	TRIAD	TCT40-01E07AB	1
11	FUSE, 600 VOLT, CLASS "CC", TIME DELAY, 4-1/2 AMP, XFMR PRIM	BUSSMAN	FNQ-R-4-1/2	2
12	FUSE, 600 VOLT, CLASS "CC", TIME DELAY, 1 AMP, PMR	BUSSMAN	FNQ-R-1	3
13	ALTERNATOR, 120VAC, DPDT, W/ SWITCH	MACROMATIC	ARP120A3R	1
14	RELAY, LED, PLUG-IN, 4PDT, 120 VAC	FINDER	55.34.8.120.0050	6
15	TIMER, MULIT-FUNCTION, 12-240VAC	MACROMATIC	TE-8812U	1
16	ELAPSED TIME METER, 120VAC	REDINGTON	722-0003	2
17	ALARM STROBE, RED, 120VAC	GRAINGER	2ERP4	1
18	ALARM HORN, 120VAC W/ INTEGRAL SILENCE	FLOYD BELL	OC-19-201-QO	1
19	PROCESS METER, ANALOG	PRECISION DIGITAL	PD6000-6H7	1
20	PRESSURE XDUCER, 23.1', 10PSI, W/ 60FT CABLE (SHIPPED LOOSE)	BLUE RIBBON	01002AA-60FT	1
21	MINI-CAS UNIT, 24VAC 	FLYGT	83-58-57	2
22	REMOTE PUMP MONITORING AND CONTROL SYSTEM 	OMNISITE	CRYSTAL BALL	1
23	FLOW METER, 120VAC 	BADGER	M2000	1



ENCLOSURE - BACKPANEL VIEW
DOOR AND FRONT EDGES REMOVED FOR CLARITY
SCALE : 1/8" = 1"

ENCLOSURE: NEMA 3R, SPLRHC-483012 (48" X 30" X 12") FABRICATED CRS, PAINTED WHITE.
BACKPANEL: SPP-4830 (45" X 27") FABRICATED FROM 12 GAUGE STEEL.

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E-2

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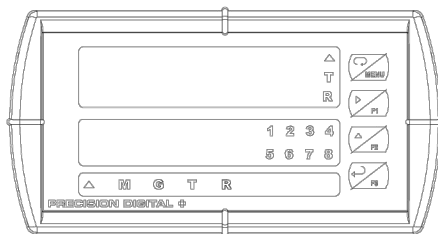
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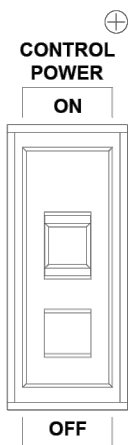
EI2 - BACKPANEL (REFERENCE ONLY)
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

FILE NAME: EI-CONTROL	
LAYOUT NAME: EI-2	
PROJ ENG: --	
DRAWN BY: SL	
CHECKED BY: QH	
APPROVED BY: XB	

SHEET



CONTROL AND ANNUNCIATION LABEL DETAIL



BREAKER LABEL DETAIL

[illegible]

3
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EI3 - LABELS (REFERENCE ONLY)
 EAST COCOPAH LIFT STATION RENOVATION
 COCOPAH INDIAN RESERVATION, ARIZONA

DRAWN BY:	SL	FILE NAME: FI-CONTROL
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CHECKED BY: QH LAYOUT NAME: E|-3

PROJ ENG: -- SCALE: 1" = 20'



REFERENCE ONLY

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E

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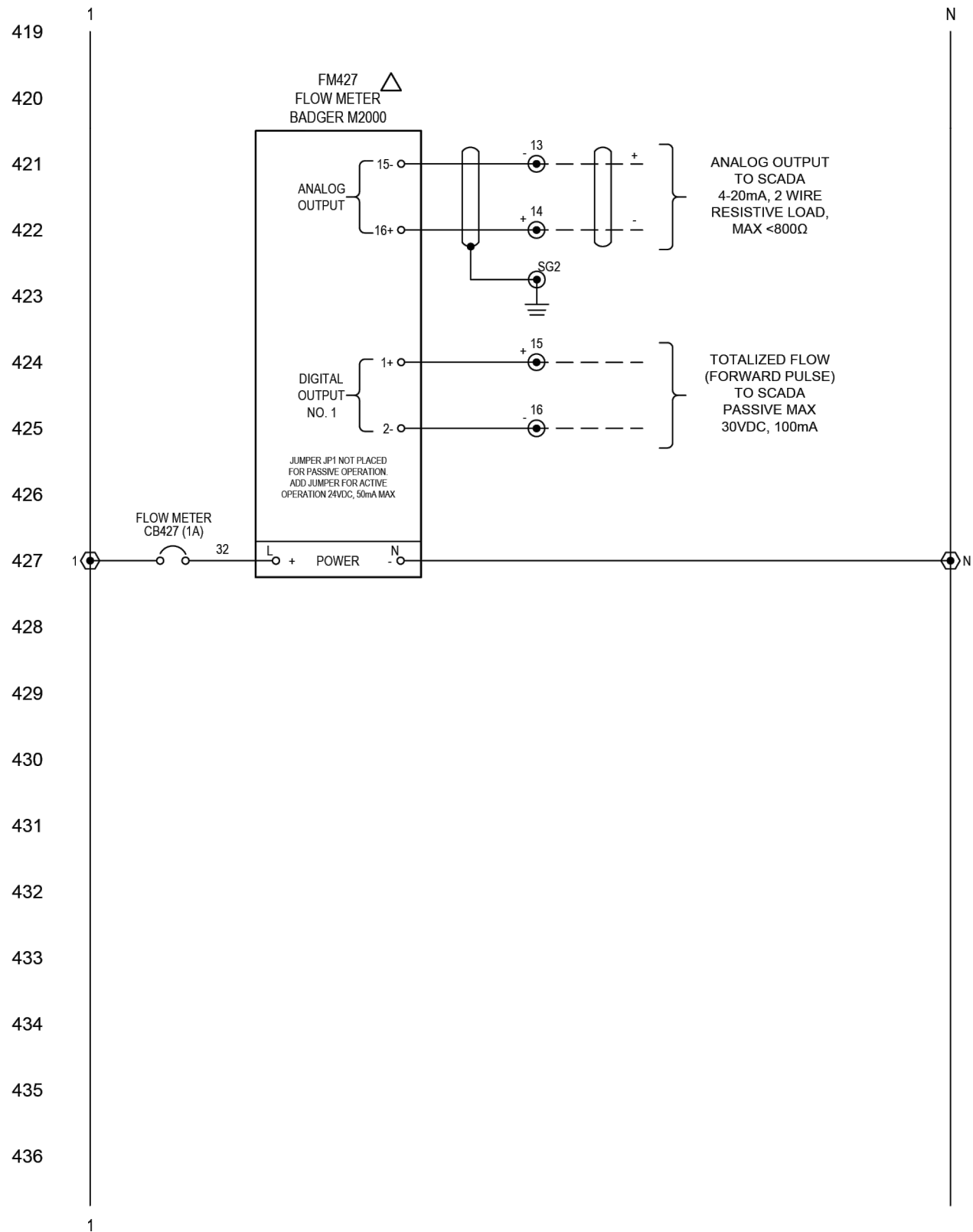
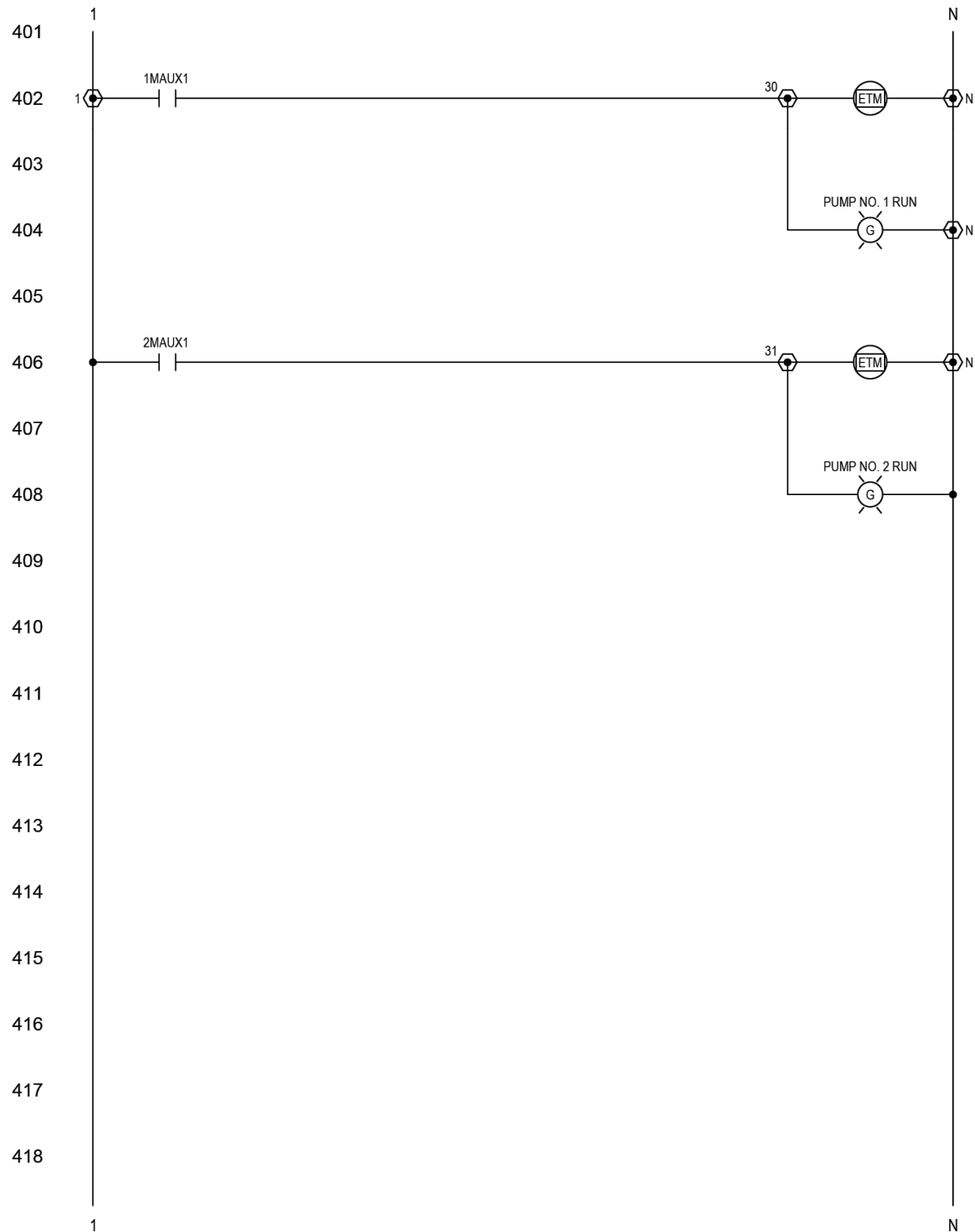
BAI ENGINEERS
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GREENWOOD VILLAGE, CO 80111
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E14 - POWER DIAGRAM (REFERENCE ONLY)
EAST COCOPAH LIFT STATION RENOVATION
COCOPIAH INDIAN RESERVATION, ARIZONA

DRAWN BY: SL	FILE NAME: EI-CONTROL
CHECKED BY: QH	LAYOUT NAME: EI-4
APPROVED BY: XB	PROJ ENG: -- SCALE: 1" = 20'

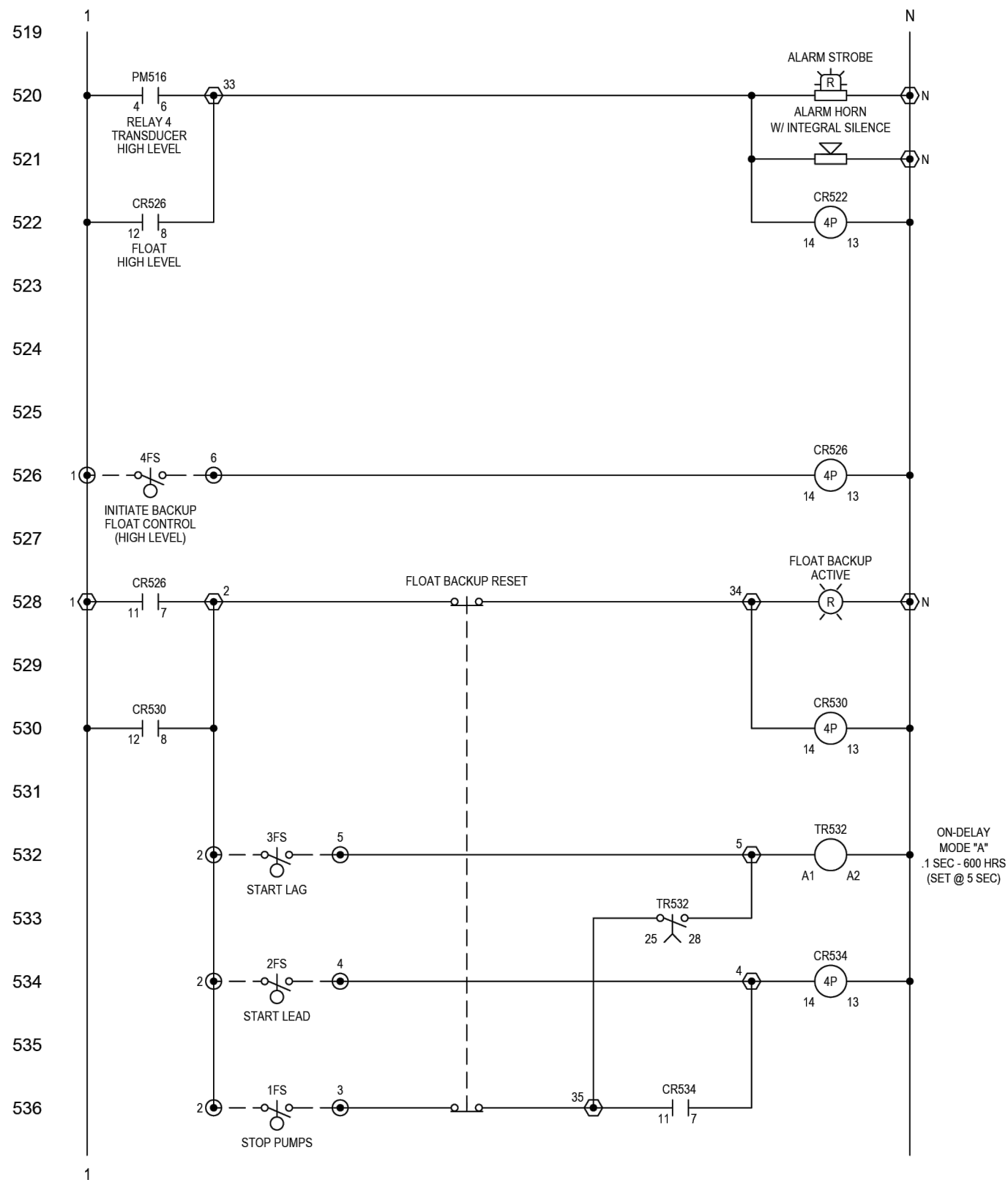
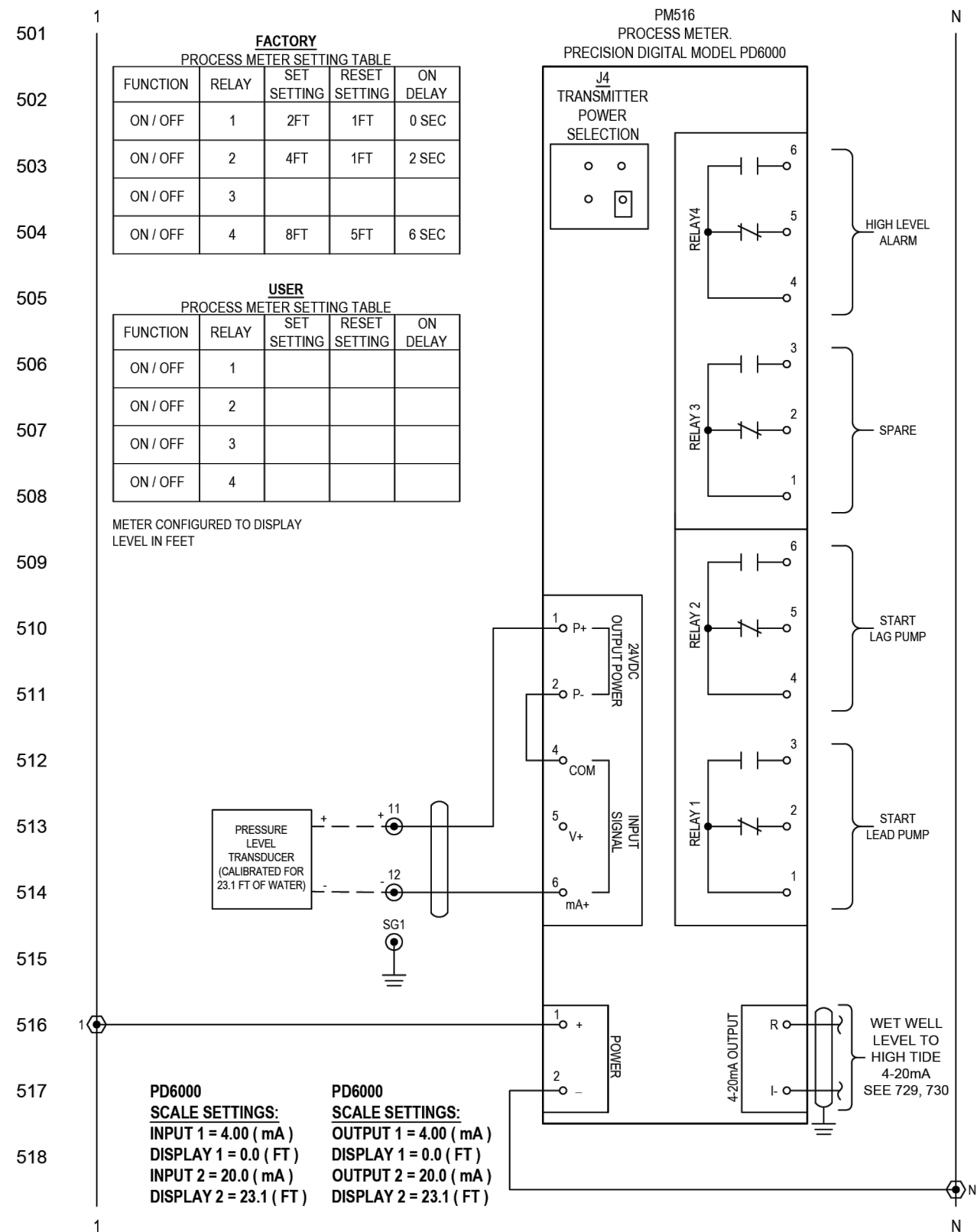
SHEET



REFERENCE ONLY

<div>EI5 - POWER DIAGRAM (REFERENCE ONLY) EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA</div>	DRAWN BY: SL		FILE NAME: EI-CONTROL	PROJ ENG: --	SCALE: 1" = 20'
	CHECKED BY: QH		LAYOUT NAME: EI-5		
	APPROVED BY: XB				
	SHEET				
	26 OF 31				

<div>INDIAN HEALTH SERVICE PHS 16561</div>	<div>BAI ENGINEERS 5550 DTC PKWY SUITE 206 GREENWOOD VILLAGE, CO 80111 PHONE: 720-474-0941</div>	<div>EI-5</div>	DATE	03/31/2005	ISSUE FOR 100% SUBMITTAL	INIT.
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REFERENCE ONLY

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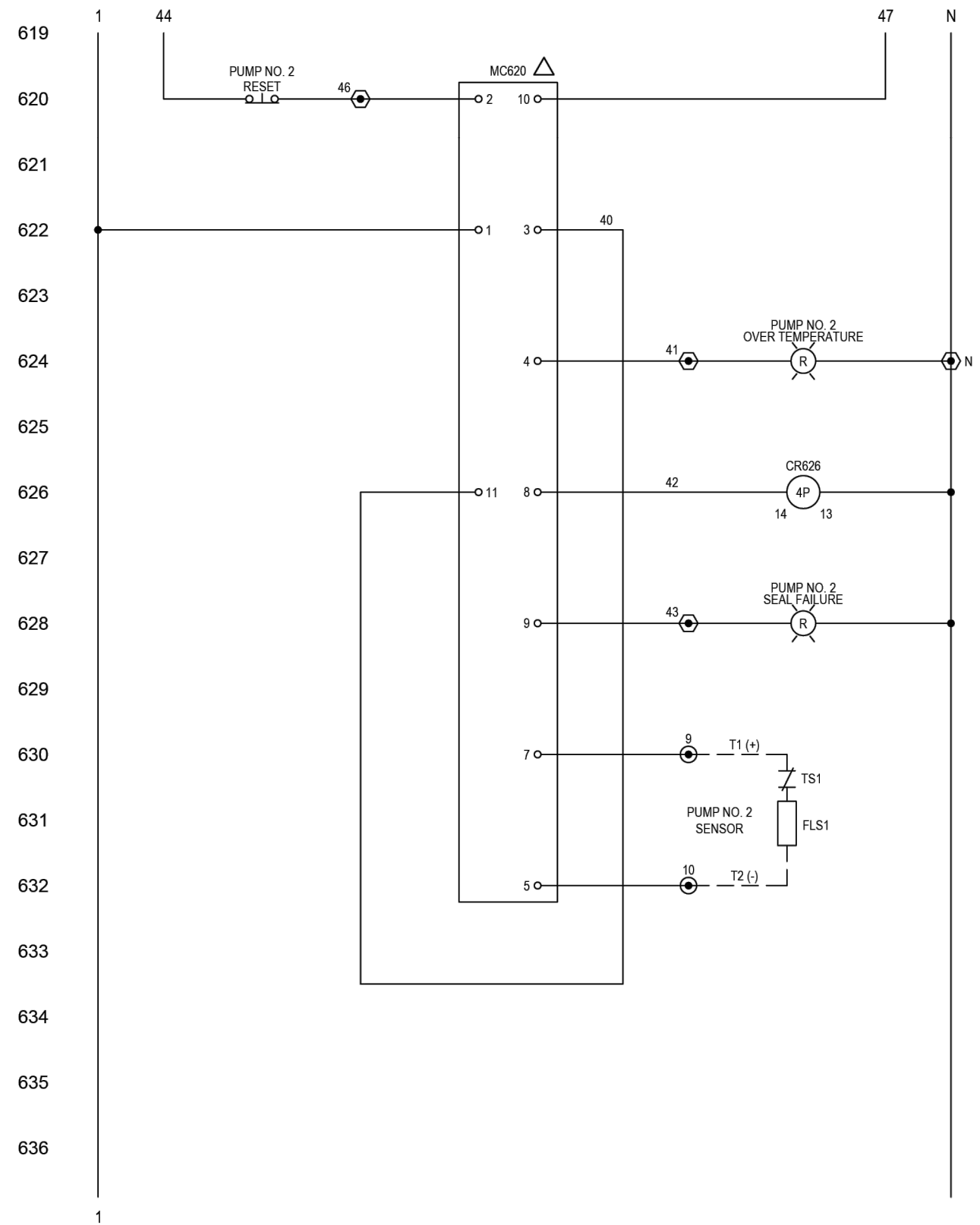
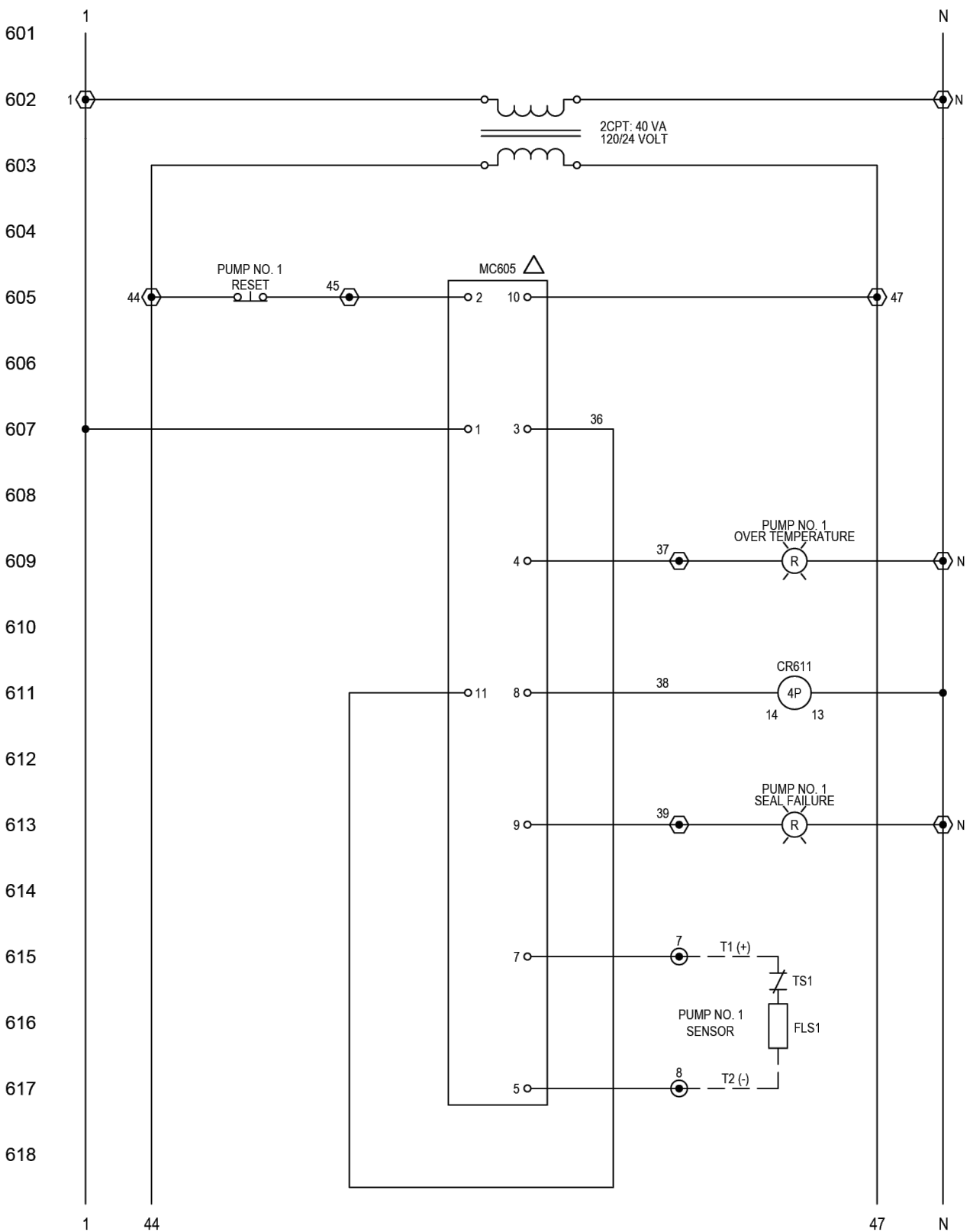
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GREENWOOD VILLAGE, CO 80111
PHONE: 720-474-0941



EI6 - RELAYS (REFERENCE ONLY)
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

DRAWN BY: SL	FILE NAME: EI-CONTROL
CHECKED BY: QH	LAYOUT NAME: EI-6
APPROVED BY: XB	PROJ ENG: -- SCALE: 1" = 20'

SHEET



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EI8 - 12V DC SUPPLY (REFERENCE ONLY)
EAST COCOPAH LIFT STATION RENOVATION
COCOPAH INDIAN RESERVATION, ARIZONA

DRAWN BY: SL	FILE NAME: EI-CONTROL
CHECKED BY: QH	LAYOUT NAME: EI-8
APPROVED BY: XB	PROJ ENG: --
	SCALE: 1" = 20'

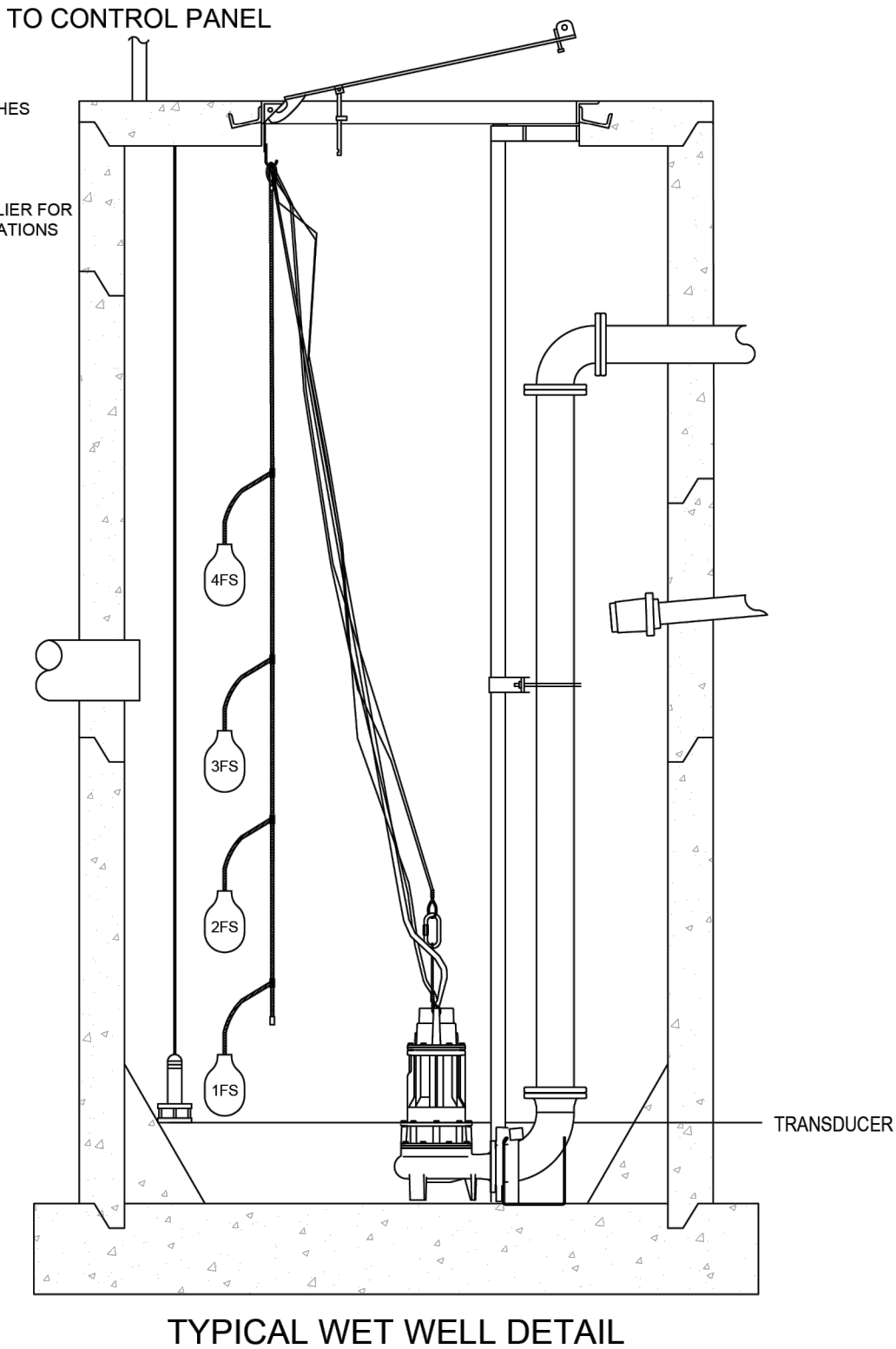
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[illegible]

NOT FOR CONSTRUCTION.
FOR REFERENCE ONLY.



REFERENCE ONLY

<div style="display: flex; justify-content: space-between;"> <div> <p>E110 - TYPICAL WETWELL WIRING (REFERENCE ONLY)</p> <p>EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA</p> </div> <div style="border: 1px solid black; padding: 5px; width: 100%;"> <p>FILE NAME: E1-CONTROL</p> <p>LAYOUT NAME: E1-10</p> <p>PROJ. ENG.: --</p> </div> </div>	<p>SCALE: 1" = 20'</p>	<p>SHEET</p> <div style="display: flex; justify-content: space-between; font-size: 24pt; font-weight: bold;"> 31 OF 31 </div>
<p>E110 - TYPICAL WETWELL WIRING (REFERENCE ONLY)</p> <p>EAST COCOPAH LIFT STATION RENOVATION COCOPAH INDIAN RESERVATION, ARIZONA</p>	<p>SCALE: 1" = 20'</p>	<p>SHEET</p> <div style="display: flex; justify-content: space-between; font-size: 24pt; font-weight: bold;"> 31 OF 31 </div>