

NAVAJO TRIBAL UTILITY AUTHORITY

BOOSTER PUMP STATION

COTTONWOOD



FINAL SUBMITTAL

PROJECT NO: W232520UT

JULY 2024

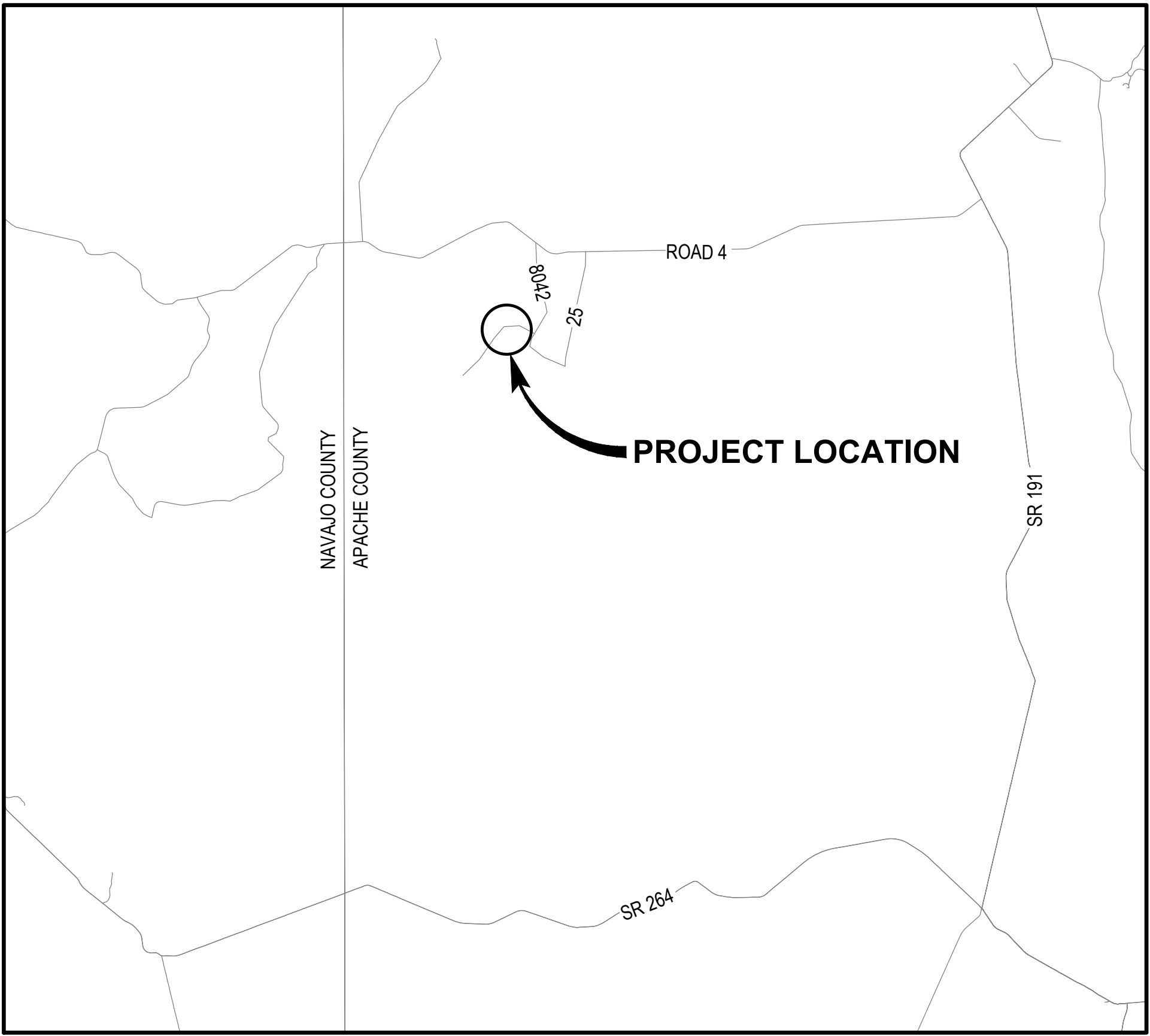


986 WEST 9000 SOUTH
WEST JORDAN, UTAH 84008



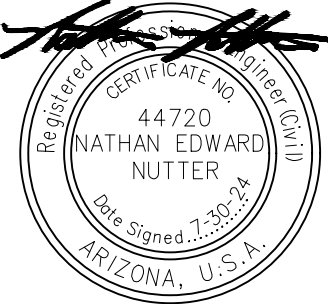
VICINITY MAP

NOT TO SCALE



LOCATION MAP

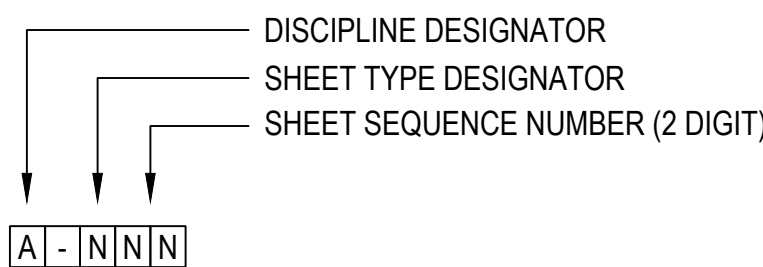
SCALE: 1" = 20000'



Know what's below.
Call before you dig.

D

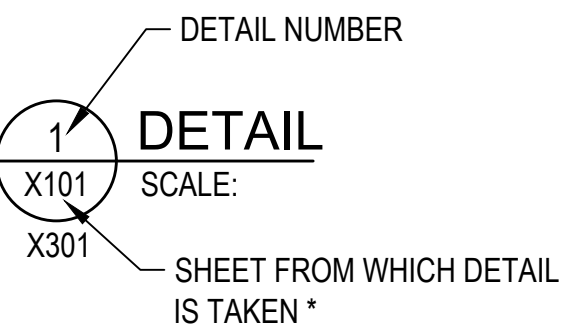
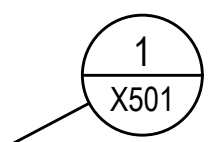
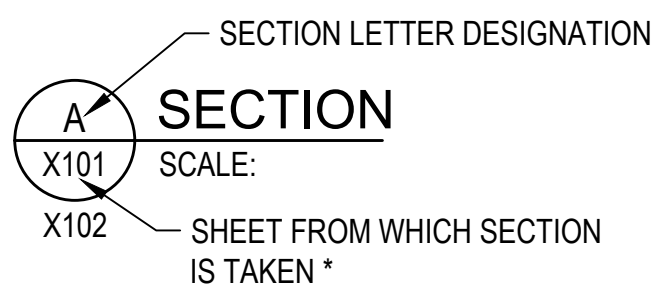
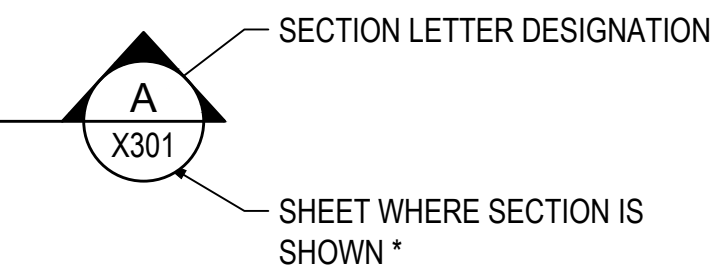
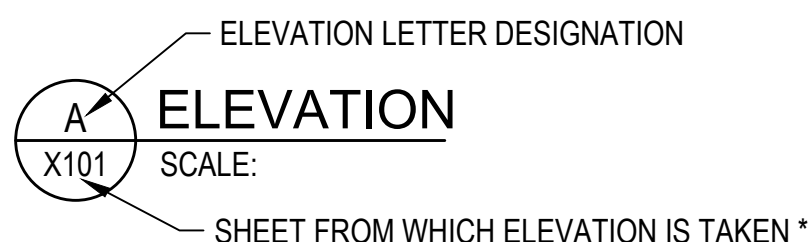
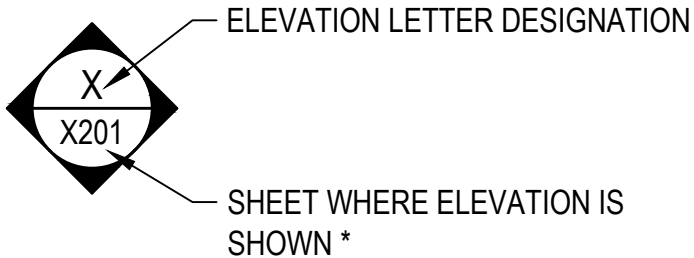
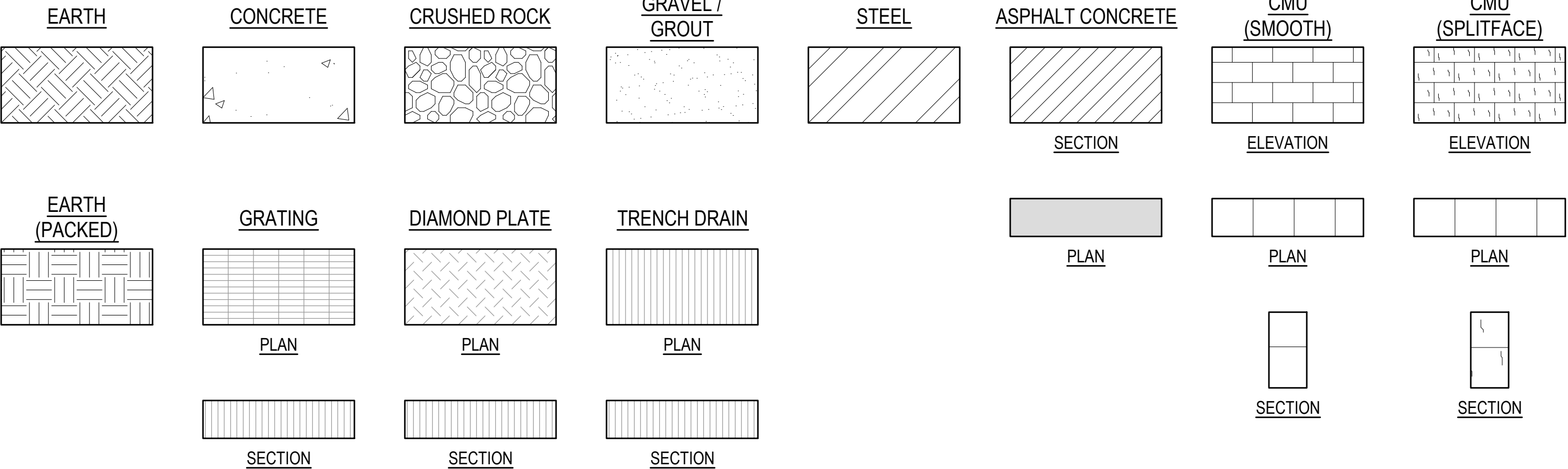
DISCIPLINE DESIGNATORS



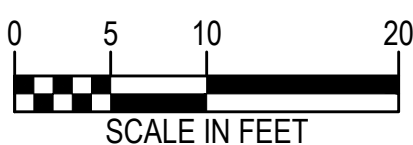
- | | |
|---|---------------------------|
| G | GENERAL |
| C | CIVIL |
| L | LANDSCAPE |
| A | ARCHITECTURAL |
| S | STRUCTURAL |
| D | PROCESS |
| P | PLUMBING |
| M | MECHANICAL (HVAC) |
| F | FIRE PROTECTION |
| E | ELECTRICAL |
| I | INSTRUMENTATION AND P&IDS |

SHEET TYPE DESIGNATORS

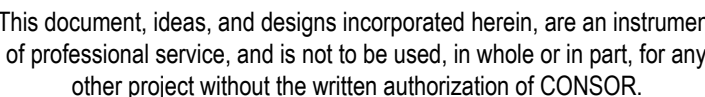
- 0 GENERAL
1 PLANS
2 ELEVATIONS
3 SECTIONS
4 LARGE SCALE VIEWS
5 DETAILS
6 SCHEDULES AND DIAGRAMS
7 USER DEFINED
8 USER DEFINED
9 3D REPRESENTATION

RAVEL /
GROUT

NORTH ARROW AND SCALE BAR

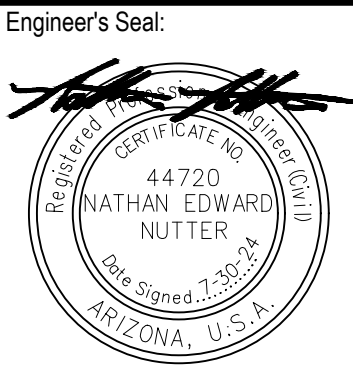


* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.



Consultant:

FINAL SUBMITTAL



Client / Owner:

Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

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COTTONWOOD

SHEET INDEX AND LEGEND

Designed By:

AMB

Drawn By:

RB

Checked By: IM

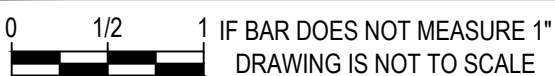
	LP	LP
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CONSOR Project No.: W232520UT

Issued On: **JULY 2024**

Drawing No. :

G-001



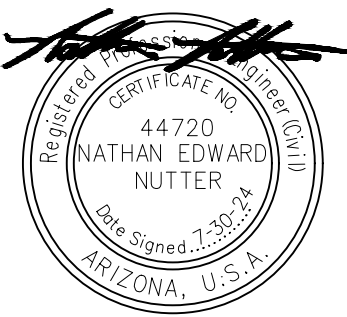
1		2		3		4		5		6		7	
A	@	AT	CMP	CORRUGATED METAL PIPE	FLR	FLOOR	KPL	KICK PLATE	PRESS	PRESSURE	TCE	TEMPORARY CONSTRUCTION EASEMENT	
	AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS	CMU	CONCRETE MASONRY UNIT	FM	FORCE MAIN	KVA	KILOVOLT AMPERE	PRKG	PARKING	TDH	TOTAL DYNAMIC HEAD	
	AB	ANCHOR BOLT	CND	CONDUIT	FO	FIBER OPTIC	KW	KILOWATT	PROP	PROPERTY	TEMP	TEMPERATURE / TEMPORARY	
	ABAN(D)	ABANDON(ED)	CO	CLEANOUT	FOC	FACE OF CONCRETE	KWY	KEYWAY	PRV	PRESSURE REDUCING VALVE	T&G	TONGUE & GROOVE	
	ABS	ACRYLONITRILE BUTADIENE STYRENE	COL	COLUMN	FOF	FACE OF FINISH	L	LENGTH	PS	PUMP STATION	THK	THICK / THICKNESS	
	ABV	ABOVE / ALCOHOL BY VOLUME	COMB	COMBINATION	FOM	FACE OF MASONRY	LAB	LABORATORY	PSIG	POUNDS PER SQUARE INCH GAUGE	THRD	THREAD (ED)	
	AC	ASPHALTIC CONCRETE	CONC	CONCRETE	FOS	FACE OF STUDS	LAV	LAVATORY	PSL	PIPE SLEEVE	THRU	THROUGH	
	ACP	ASPHALTIC CONCRETE PAVING	CONN	CONNECTION	FPM	FEET PER MINUTE	LB	POUND	PSPT	PIPE SUPPORT	TP	TEST PIT / TOP OF PAVEMENT /	
	ADJ	ADJUSTABLE	CONST	CONSTRUCTION	FPS	FEET PER SECOND	LF	LINEAR FOOT	PT	POINT OF TANGENCY		TURNING POINT	
	ADJC	ADJACENT	CONT	CONTINUOUS / CONTINUATION	FRP	FIBERGLASS REINFORCED PLASTIC	LIN	LINEAL	PTVC	POINT OF TANGENCY ON VERTICAL CURVE			
B	AFF	ABOVE FINISHED FLOOR	CONTR	CONTRACT(OR)	FT	FEET / FOOT	LN	LANE	PTW	PUMP TO WASTE	TSP	TRI-SODIUM PHOSPHATE	
	AFG	ABOVE FINISHED GRADE	COORD	COORDINATE	FTG	FOOTING	LOC	LOCATION	PV	PLUG VALVE	TST	TOP OF STEEL	
	AHR	ANCHOR	COP	COPPER	FUT	FUTURE	LONG	LONGITUDINAL	PVC	POLYVINYL CHLORIDE	TW	TOP OF WALL	
	AL	ALUMINUM	CORP	CORPORATION	FXTR	FIXTURE	LP	LOW PRESSURE	PVMT	PAVEMENT	TYP	TYPICAL	
	ALT	ALTERNATE	CORR	CORRUGATED			LPT	LOW POINT	PW	POTABLE WATER	UG	UNDERGROUND	
	AMP	AMPERE	CP	CONTROL POINT	G	GAS	LRG	LARGE	PWR	POWER	UH	UNIT HEATER	
	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	CPLG	COUPLING	GAL	GALLON	LS	LONG SLEEVE / LUMP SUM			UN	UNION	
	APPROX	APPROXIMATE	CPVC	CHLORINATED POLYVINYL CHLORIDE	GALV	GALVANIZED	LT	LEFT	QTY	QUANTITY	UON	UNLESS OTHERWISE NOTED	
	APPVD	APPROVED	CR	CRUSHED ROCK	GC	GROOVED COUPLING	LVL	LEVEL			USGS	UNITED STATES GEOLOGIC SURVEY	
	APWA	AMERICAN PUBLIC WORKS ASSOCIATION	CS	COMBINED SEWER	GFA	GROOVED FLANGE ADAPTER	LWL	LOW WATER LINE					
C	ARCH	ARCHITECTURAL	CSP	CONCRETE SEWER PIPE	GI	GALVANIZED IRON	MAN	MANUAL	RAD	RADIUS	V	VENT / VOLT	
	ARV	AIR RELEASE VALVE	CT	COURT	GIP	GALVANIZED IRON PIPE	MAT	MATERIAL	RCP	REINFORCED CONCRETE PIPE	VAC	VACUUM	
	ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	CTR	CENTER	GJ	GRIP JOINT	MAX	MAXIMUM	RD	ROAD / ROOF DRAIN	VB	VACUUM BREAKER	
			CU	CUBIC	GL	GLASS	MCC	MOTOR CONTROL CENTER	RDCR	REDUCER	VBOX	VALVE BOX	
	ASR	AQUIFER STORAGE & RECOVERY	CULV	CULVERT	GLV	GLOBE VALVE	MCP	MASTER CONTROL PANEL	REF	REFERENCE	VC	VERTICAL CURVE	
	ASSN	ASSOCIATION	CV	CONTROL VALVE	GND	GROUND	MECH	MECHANICAL	REINF	REINFORCE(D)(ING)(MENT)	VERT	VERTICAL	
	ASSY	ASSEMBLY	CW	CLOCKWISE / COLD WATER	GPD	GALLONS PER DAY	MET	METAL	REQ'D	REQUIRED	VFD	VARIABLE FREQUENCY DRIVE	
	ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	CY	CUBIC YARDS	GPH	GALLONS PER HOUR	MFR	MANUFACTURER	RESTR	RESTRAINED	VOL	VOLUME	
			CYL	CYLINDER LOCK	GPM	GALLONS PER MINUTE	MGD	MILLION GALLONS PER DAY	RFC	RESTRAINED FLANGE COUPLING ADAPTER	VCP	VITRIFIED CLAY PIPE	
			D	DRAIN	GPS	GALLONS PER SECOND	MH	MANHOLE	RM	ROOM	VTR	VENT THROUGH ROOF	
D	ATM	ATMOSPHERE	DC	DIRECT CURRENT	GR	GRADE	MIN	MINIMUM	RND	ROUND	W	WATER	
	AUTO	AUTOMATIC	DEFL	DEFLECTION	GR LN	GRADE LINE	MIPT	MALE IRON PIPE THREAD	RO	ROUGH OPENING	W/	WITH	
	AUX	AUXILIARY	DEQ	DEPARTMENT OF ENVIRONMENTAL QUALITY	GRTG	GRATING	MISC	MISCELLANEOUS	R/W	RIGHT-OF-WAY	W/IN	WITHIN	
	AVE	AVENUE	DET	DETAIL	GV	GATE VALVE	MJ	MECHANICAL JOINT	RPBPD	REDUCED PRESSURE BACKFLOW PREVENTION DEVICE	W/O	WITHOUT	
	AVG	AVERAGE	DI	DUCTILE IRON	GRVL	GRAVEL	MON	MONUMENT / MONOLITHIC			WW	WALL TO WALL	
	AWWA	AMERICAN WATER WORKS ASSOCIATION	DIA	DIAMETER	GYP	GYPSUM	MOT	MOTOR	RPM	REVOLUTIONS PER MINUTE	WD	WOOD	
			DIM	DIMENSION			MP	MILEPOST	RR	RAILROAD	WF	WIDE FLANGE	
	B&S	BELL & SPIGOT	DIR	DIRECTION	HB	HOSE BIBB	MSL	MEAN SEAL LEVEL	RST	REINFORCED STEEL	WH	WATER HEATER	
	BC	BOLT CIRCLE	DIST	DISTANCE	HC	HOLLOW CORE	MTD	MOUNTED	RT	RIGHT	WI	WROUGHT IRON	
	BD	BOARD	DN	DOWN	HDPE	HIGH DENSITY POLYETHYLENE					WM	WATER METER	
BETW	BETWEEN	DR	DRIVE	HDR	HEADER	NA	NOT APPLICABLE	SALV	SALVAGE	WP	WORKING POINT / WATERPROOFING		
	BF	BOTH FACE	DS	DOWNSPOUT	HDWE	HARDWARE	NAVD	NORTH AMERICAN VERTICAL DATUM	SAN	SANITARY	WS	WATER SERVICE	
	BFD	BACKFLOW PREVENTION DEVICE	DWG	DRAWING	HGR	HANGER	NC	NORMALLY CLOSED	SC	SOLID CORE	WT	WEIGHT	
	BFILL	BACKFILL	DWL	DOWEL	HGT	HEIGHT	NF	NEAR FACE	SCHED	SCHEDULE	WTP	WATER TREATMENT PLANT	
	BFV	BUTTERFLY VALVE	DWV	DRAIN WASTE AND VENT	HH	HANDHOLD	NIC	NOT IN CONTRACT	SD	STORM DRAIN	WTRT	WATERTIGHT	
	BHP	BRAKE HORSEPOWER	DWY	DRIVEWAY	HM	HOLLOW METAL	NO / NO.	NORMALLY OPEN / NUMBER	SDL	SADDLE	WWF	WELDED WIRE FABRIC	
	BKGD	BACKGROUND			HMAC	HOT MIX ASPHALT CONCRETE	NOM	NOMINAL	SDR	STANDARD DIMENSION RATIO	WWTF	WASTEWATER TREATMENT FACILITY	
	BLDG	BUILDING	E / ELEC	ELECTRICAL	HNDRL	HANDRAIL	NORM	NORMAL	SECT	SECTION	WWTP	WASTEWATER TREATMENT PLANT	
	BLK	BLOCK	EA	EACH	HOA	HAND-OFF-AUTO	NRS	NON-RISING STEM	SHLDR	SHOULDER			
	BLVD	BOULEVARD	ECC	ECCENTRIC	HOR	HAND-OFF-REMOTE	NTS	NOT TO SCALE	SHT	SHEET	X SECT	CROSS SECTION	
	BM	BENCHMARK / BEAM	EF	EACH FACE	HORIZ	HORIZONTAL			SIM	SIMILAR	XFMR	TRANSFORMER	
	BMP	BEST MANAGEMENT PRACTICES	EL	ELEVATION	HP	HIGH PRESSURE / HORSEPOWER	O TO O	OUT TO OUT	SLP	SLOPE	YD	YARD DRAIN / YARD	
	BO	BLOW-OFF	ELB	ELBOW	HPG	HIGH PRESSURE GAS	OC	ON CENTER	SLV	SLEEVE	YH	YARD HYDRANT	
	BOC	BACK OF CURB	ENCL	ENCLOSURE	HPT	HIGH POINT	OD	OUTSIDE DIAMETER	SOLN	SOLUTION	YR	YEAR	
	BS	BOTH SIDES	EOP	EDGE OF PAVEMENT	HR	HOUR	OF	OVERFLOW / OUTSIDE FACE	SP	SOIL PIPE / SEWER PIPE			
	BSMT	BASEMENT	EQ	EQUAL	HSB	HIGH STRENGTH BOLT	OPNG	OPENING	SPCL	SPECIAL			
	BTF	BOTTOM FACE	EQL SP	EQUALLY SPACED	HV	HOSE VALVE	OPP	OPPOSITE	SPEC(S)	SPECIFICATION(S)			
	BTU	BRITISH THERMAL UNIT	EQUIP	EQUIPMENT	HVAC	HEATING, VENTILATION, AIR CONDITIONING	ORIG	ORIGINAL	SPG	SPACING			
	BV	BALL VALVE	ESMT	EASEMENT	HWL	HIGH WATER LINE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	SPL	SPOOL			
	BW	BOTH WAYS	EW	EACH WAY	HWY	HIGHWAY	OVHD	OVERHEAD	SPRT	SUPPORT			
			EXC	EXCAVATE	HYD	HYDRANT			SQ	SQUARE			
	C	CELSIUS	EXIST	EXISTING	HYD	HYDRANT	P&ID	PROCESS & INSTRUMENTATION DIAGRAM	SQ FT	SQUARE FOOT			
	C TO C	CENTER TO CENTER	EXP	EXPANSION	HYDR	HYDRAULIC	PC	POINT OF CURVE	SQ IN	SQUARE INCH			
	CARV	COMBINATION AIR RELEASE VALVE	EXP BT	EXPANSION BOLT	I&C	INSTRUMENTATION & CONTROL	PCC	POINT OF COMPOUND CURVE	SQ YD	SQUARE YARD			
	CATV	CABLE TELEVISION	EXP JT	EXPANSION JOINT	IAW	IN ACCORDANCE WITH	PCVC	POINT OF CURVATURE ON VERTICAL CURVE	SS	SANITARY SEWER			
	CB	CATCH BASIN	EXT	EXTERIOR	ID	INSIDE DIAMETER			SST	STAINLESS STEEL			
	CCP	CONCRETE CYLINDER PIPE			IE	INVERT ELEVATION			ST	STREET			
	CCW	COUNTER CLOCKWISE	F	FAHRENHEIT	IF	INSIDE FACE			STA	STATION			
	CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	F TO F	FACE TO FACE	IMPVT	IMPROVEMENT			STD	STANDARD			
			FAB	FABRICATE	IN	INCH			STL	STEEL			
	CFM	CUBIC FEET PER MINUTE	FB	FLAT BAR	INCC	INCLUDE(D)(ING)	PE	PLAIN END	STOR	STORAGE			
	CFS	CUBIC FEET PER SECOND	FCA	FLANGED COUPLING ADAPTER	INFL	INFLEUNT	PERF	PERFORATED	STR	STRAIGHT			
	CHAN	CHANNEL	FCO	FLOOR CLEANOUT	INJ	INJECTION	PERM	PERMANENT	STRUCT	STRUCTURE / STRUCTURAL			
	CHEM	CHEMICAL			INJ	INJECTION	PERP	PERPENDICULAR	SUBMG	SUBMERGED			
	CHFR	CHAMFER	FD	FLOOR DRAIN	INSTL	INSTALLATION	PG	PRESSURE GAUGE	SUCT	SUCTION			
	CHKV	CHECK VALVE	FON	FOUNDATION	INSUL	INSULATION	PH	PIPE HANGER	SV	SOLENOID VALVE			
	CI	CAST IRON	FEXT	FIRE EXTINGUISHER	INTER	INTERCEPTOR	PI	POINT OF INTERSECTION	S/W	SIDEWALK			
	CIP	CAST IRON PIPE	FF	FINISHED FLOOR / FAR FACE	INTR	INTERIOR	PIVC	POINT OF INTERSECTION ON VERTICAL CURVE	SWD	SIDEWATER DEPTH			
	CIPC	CAST IN PLACE CONCRETE	FGL	FIBERGLASS	INV	INVERT	PL OR P/L	PROPERTY LINE / PLATE / PLASTIC	SWGR	SWITCH GEAR			
	CISP	CAST IRON SOIL PIPE	FH	FIRE HYDRANT	IP	IRON PIPE	PLBG	PLUMBING	SYMM	SYMMETRICAL			
	CJ	CONSTRUCTION JOINT	FIN	FINISH(ED)	IPT	IRON PIPE THREAD	PNL	PANEL	SYS	SYSTEM			
	CL OR C/L	CENTER LINE	FIPT	FEMALE IRON PIPE THREAD	IR	IRON ROD	POC	POINT OF CURVATURE	T OR TEL	TELEPHONE			
	CL2	CHLORINE	FITG	FITTING	IRRIG	IRRIGATION	POLY	POLYETHYLENE	T&B	TOP & BOTTOM			
	CLG	CEILING	FL	FLOOR LINE			PP	POWER POLE / PURPLE PIPE	TAN	TANGENCY			
	CLJ	CONTROL JOINT	FLEX	FLEXIBLE	JT	JOINT	PRC	POINT OF REVERSE CURVATURE	TB	THRUST BLOCK			
	CLR	CLEAR	FLG	FLANGE	JUNC	JUNCTION	PRCST	PRECAST	TBM	TEMPORARY BENCHMARK			
	CLSM	CONTROLLED LOW STRENGTH MATERIAL	FLL	FLOW LINE			PREP	PREPARATION	TC	TOP OF CONCRETE / TOP OF CURB			



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Consultant:

FINAL SUBMITTAL



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY
BOOSTER PUMP STATION

Drawing Title:

GENERAL
COTTONWOOD

ABBREVIATIONS

Designed By:
AMB

Drawn By:
RB

Checked By:
JY

Approved By:
NN

CONSOR Project No.: W232520UT

Issued On: JULY 2024

Drawing No.: G-002

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

Drawing Path and Name: A:_VWP\Projects\UT\NTUA\2023\w232520ut.0012 CAD\12-S sheets\6-2 cottonwood\W232520UT_B-2_G-002.dwg, Plotted Date: July 30, 2024 11:02 AM By: Jeff Bennett

	1	2	3	4	5	6	7	
A	GENERAL NOTES 1. ALL CONSTRUCTION OPERATIONS ARE TO BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE STATUES AND OSHA REGULATIONS. 2. ALL WORK SHALL COMPLY WITH THE CURRENT LOCAL AGENCY STANDARDS AND REQUIREMENTS. 3. THE CONTRACTOR SHALL SCHEDULE WORK IN SUCH A MANNER AS TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR THE PUBLIC. 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTS AND CORNER MARKERS. SURVEY MONUMENTS AND PROPERTY CORNER MARKERS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REESTABLISHED BY A REGISTERED PROFESSIONAL SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS BEING PERFORMED. 5. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT, AND WORKMANLIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED. 6. DIMENSIONS TO STRUCTURES, REFERENCED PIPING, PAVING, AND OTHER IMPROVEMENTS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS 14 DAYS IN ADVANCE OF THE CONSTRUCTION PROGRESS. 7. STRUCTURES SUCH AS CURBS AND GUTTERS, CONCRETE AND ASPHALT DRIVES AND WALKWAYS, PAVING BRICKS, FENCING, RETAINING WALLS, SIGNS, POSTS, MARKERS, ETC., CROSSED BY A UTILITY THAT ARE NOT INDICATED IN THE PLANS SHALL BE RESTORED BY THE CONTRACTOR TO PRECONSTRUCTION CONDITIONS. 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, BUILDINGS, OR OTHER STRUCTURES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO PRECONSTRUCTION CONDITIONS. 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS REQUIRED TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. 10.THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING STAGING AREAS REQUIRED TO PERFORM THE WORK. 11.THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL ADJOINING PROPERTIES ACCESSIBLE TO THE PUBLIC AND EMERGENCY VEHICLES. DESIGNS FOR MAINTAINING ACCESS WILL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CONTROLLING AGENCY FOR THE REVIEW AND APPROVAL. 12.CONTRACTOR SHALL COMPLY WITH THE TRENCH PLATE REQUIREMENTS OF THE GOVERNING JURISDICTION. IF TRENCH PLATE REQUIREMENTS ARE NOT SPECIFIED, THE CONTRACTOR SHALL APPLY SKID RESISTANT COATING ON THE TRENCH PLATES AND COLD MIX ASPHALT CONCRETE TO THE EDGES. THE TRENCH PLATES SHALL BE NOTCHED INTO THE ASPHALT CONCRETE OR TRAVELED SURFACE TO PREVENT SLIPPAGE AND ROCKING UNDER TRAFFIC. 13.THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, COUNTY, AND LOCAL LAWS AND ORDINANCES RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT, AND PERSONNEL. THIS INCLUDES, BUT IS NOT LIMITED TO SHEETING, SHORING, BRACING, VENTILATION, CONFORMANCE WITH TRAFFIC CONTROL AND MAINTENANCE OF BARRICADES AND WARNING DEVICES. 14.CONTRACTOR SHALL KEEP COMPLETE AND ACCURATE RECORD DRAWINGS OF THE WORK, UTILITY POT HOLE DATA, AND EXISTING CONDITIONS THAT HAVE CHANGED OR ARE DIFFERENT THAN SHOWN ON THE PLANS. UPON COMPLETION OF THE WORK, THE CONTRACTORS RECORD DRAWINGS SHALL BE SUBMITTED TO THE OWNER. 15.CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL STORM DRAIN PIPES, STORM WATER FEATURES, OR DRAINAGE FACILITIES FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION. 16.ALL EXISTING PAVEMENT MARKINGS AND SIGNAGE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AT NO EXPENSE TO OWNER. 17.CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE WATER FOR ALL PROJECT-RELATED ACTIVITIES INCLUDING BUT NOT LIMITED TO CONSTRUCTION, DUST CONTROL, TESTING, AND DISINFECTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH OWNER TO TAP EXISTING MAINS AND BRINGING WATER TO THE SITE. 18.CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPMENT OF A CONSTRUCTION STORMWATER POLLUTION PREVENTION PROGRAM. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE CONSTRUCTION PERMIT AND COMPLYING WITH ALL ASPECTS OF THE PERMIT. 19.LIMITED POWER IS CURRENTLY AVAILABLE AT THE SITE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER AND PROVIDING ALL ADDITIONAL POWER NEEDED FOR CONSTRUCTION. 20. THE CONTRACTOR SHALL RESTORE THE SITE GRADING AND DRAINAGE TO PRECONSTRUCTION CONDITIONS.							
	B							
C	EXISTING UTILITY NOTES: 1. UTILITY LOCATIONS SHOWN ON PLANS ARE CONSIDERED APPROXIMATE ONLY. NO ELEVATIONS ARE SHOWN, AND NO INFORMATION WAS AVAILABLE DURING THE DESIGN PERIOD. 2. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF EXISTING UTILITIES BY CONTACTING ALL UTILITIES, AGENCIES, AND SUBSURFACE UTILITY LOCATING SERVICES (811). IN ADVANCE OF EXCAVATION, CONTRACTOR SHALL USE ALL EXISTING UTILITIES AND STRUCTURES ADJACENT TO THE WORK AREA, WHETHER INDICATED ON THE DRAWINGS OR NOT. SURVEY AND ACCURATELY RECORD THE LOCATIONS AND ELEVATIONS OF THE UTILITY CROSSINGS ON THE RECORD DRAWINGS. PREPARE AND SUBMIT THE UTILITY FIELD SURVEY INFORMATION TO THE OWNER FOR REVIEW ON A MONTHLY BASIS DURING THE COURSE OF CONSTRUCTION. SUBMITTAL SHALL INCLUDE UTILITIES SURVEYED THAT MONTH AND ASSOCIATED VERTICAL ELEVATIONS AND HORIZONTAL LOCATIONS (NORTHING AND EASTING COORDINATES) AND A LIST OF UTILITIES SURVEYED TO DATE. ALL COMPILED IN MICROSOFT EXCEL SPREADSHEET FORMAT. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE UTILITY AGENCY THE PROTECTION, REMOVAL, RECONSTRUCTION, AND/OR RECONNECTION OF EXISTING FACILITIES AS REQUIRED TO COMPLETE THE WORK. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY POTENTIAL UTILITY CONFLICTS. 3. SUPPORT ALL EXISTING UTILITIES AT CROSSING LOCATIONS. PROTECT EXISTING UTILITIES RUNNING PARALLEL TO CONSTRUCTED TRENCHES FROM DAMAGE CAUSED BY THE REMOVAL OF ADJACENT MATERIALS. 4. SOME UTILITY SERVICES MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO LOCATE AND PROTECT SERVICE DURING CONSTRUCTION. 5. PRIOR TO CONSTRUCTION OF ANY NEW PIPELINE THAT TIES INTO AN EXISTING UTILITY, EXPOSE AND VERIFY LOCATION AND ELEVATION OF THE TIE-IN POINT. CONFIRM THE EXISTING PIPE MATERIAL AND ANY OTHER INFORMATION REQUIRED BY THE DRAWINGS. SURVEY AND ACCURATELY RECORD THE LOCATION AND ELEVATION OF THE TIE-IN POINT ON THE RECORD DRAWINGS. 6. BEFORE CONSTRUCTION IS STARTED, CONTRACTOR SHALL COORDINATE WITH THE OWNER OF EACH UTILITY AND DEFINE THE REQUIREMENTS AND METHODS TO ACCOMMODATE THE PROTECTION, TEMPORARY SUPPORT, ADJUSTMENT, OR RELOCATION OF ANY UTILITIES AFFECTED BY THE PROPOSED WORK. 7. CONTRACTOR IS RESPONSIBLE FOR COSTS INCURRED AS A RESULT OF UTILITY RELOCATIONS PERFORMED FOR THE CONTRACTOR'S CONVENIENCE.							
	D	GENERAL PIPELINE NOTES: 1. ALL OPEN TRENCHES, WORK AREA, AND SHAFTS SHALL BE SLOPED OR HAVE A SHORING SYSTEM IN ACCORDANCE WITH OSHA, STATE, AND LOCAL REQUIREMENTS. 2. SCHEDULE TIE-INS IN ACCORDANCE WITH THE SEQUENCING REQUIREMENTS OF THE CONTRACT. SCHEDULE AND COORDINATE TIE-INS AROUND THE OWNER'S OPERATIONAL REQUIREMENT AND LIMITATION. 3. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR REQUIRED INSPECTION. THE PRESENCE OR ABSENCE OF THE INSPECTOR WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF THE WORK.						
		OPERATION OF SYSTEM: 1. OPERATION OF VALVES AND ANY OTHER COMPONENTS OF THE PUBLIC WATER SYSTEM SHALL ONLY BE PERFORMED BY THE WATER SYSTEM OWNER.						

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	Designed By: AMB		CONSOR Project No.: W232520UT Issued On: JULY 2024 Drawing No.: G-003									
	Drawn By: RB											
	Checked By: JY											
	Approved By: NN											
IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE												

	1	2	3	4	5	6	7
	TOPOGRAPHIC LEGEND						
	EXISTING		PROPOSED		EXISTING		PROPOSED
	WATERLINE		12"DI W		SS SD W C T		
	ELECTRICITY (UNDERGROUND)		E				
	OVERHEAD UTILITY		OVHD				
	GAS		4"G				
	TELEPHONE/TELEMETRY		T				
	CABLE TELEVISION		COM				
	COMMUNICATION		CATV				
	FIBER OPTIC		FO				
	SANITARY SEWER LINE		8"SS				
	SANITARY SEWER FORCE MAIN		6"FM				
	STORM DRAIN		8"SD				
	DRAIN		D				
	CULVERT		18"SD				
	ABANDONED PIPE		10"W (ABAND)				
	DRAINAGE DITCH						
	BARBWIRE FENCE						
	CHAIN LINK FENCE						
	TEMPORARY SILT FENCE						
	GUARDRAIL						
	ROCK WALL						
	TREE/BUSH LINE						
	CENTERLINE						
	RIGHT-OF-WAY		R/W				
	PROPERTY LINE						
	EASEMENT						
	EDGE OF PAVEMENT/AC						
	EDGE OF GRAVEL						
	CURB						
	SIDEWALK		S/W				
	STRUCTURE OR FACILITY						
	CONTOUR MINOR						
	CONTOUR MAJOR		200				
	MANHOLE						
	CLEAN-OUT						
	CATCH BASIN/FIELD INLET						
	THRUST BLOCK						
	VALVE						
	AIR INJECTION ASSEMBLY						
	BLOW-OFF ASSEMBLY (PERMANENT)						
	BLOW-OFF ASSEMBLY (TEMPORARY)						
	AIR RELEASE ASSEMBLY						
	FIRE HYDRANT ASSEMBLY						
	WATER METER						
	PULL BOX/JUNCTION BOX						
	UTILITY POLE						
	GUY WIRE						
	LIGHT POST						
	STREET LIGHT						
	MAILBOX						
	SIGN						
	TREE DECIDUOUS						
	TREE CONIFEROUS						
	TREE TO BE REMOVED						
	SURFACE ELEVATION		+ 176.63		+ 176.63		
	WETLAND						
	BENCHMARK						
	IRON ROD						
	MONUMENT						
	BORE						
	TEST PIT						
	BOLLARD						
	SCHEMATIC		SCHEMATIC		SCHEMATIC		
	WELDED JOINT		BUTTERFLY VALVE				
	FLANGED JOINT		GATE VALVE				
	GROOVED END JOINT		GLOBE VALVE				
	MECHANICAL JOINT		BALL VALVE				
	PUSH-ON JOINT (RUBBER GASKET)		BALANCING VALVE				
	FLANGED COUPLING ADAPTER		PLUG VALVE (TOP)				
	DOUBLE BALL FLEXIBLE EXTENSION COUPLING		PLUG VALVE (SIDE)				
	FLEXIBLE COUPLING W/ THRUST RING		3-WAY PLUG VALVE				
	90° BEND UP		CHECK VALVE				
	90° BEND DOWN		SWING CHECK VALVE				
	TEE UP		DOUBLE CHECK ASSEMBLY				
	TEE DOWN		BALL SWING CHECK				
	LATERAL UP		SILENT CHECK VALVE				
	LATERAL DOWN		PRESSURE REDUCING VALVE				
	CONCENTRIC REDUCER		ALTITUDE CONTROL VALVE				
	ECCENTRIC REDUCER		SOLENOID VALVE				
	UNION		RELIEF VALVE				
	BLIND FLANGE		NEEDLE VALVE				
	CAP		HOSE VALVE				
	LONG SLEEVE		REDUCED PRESSURE BACKFLOW PREVENTER W/ GATE VALVES				
	FLEXIBLE COUPLING		HOSE BIBB				
	FITTING (45°)						

MISCELLANEOUS PIPING SYMBOLS

	STRAINER
	SIGHT GLASS
	PRESSURE GAUGE W/ COCK
	PRESSURE SWITCH W/ COCK
	METER
	SLIP-ON JOINT PIPE
	RESTRAINED JOINT PIPE

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Consultant:

FINAL SUBMITTAL

Engineer's Seal:

Client / Owner:

Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

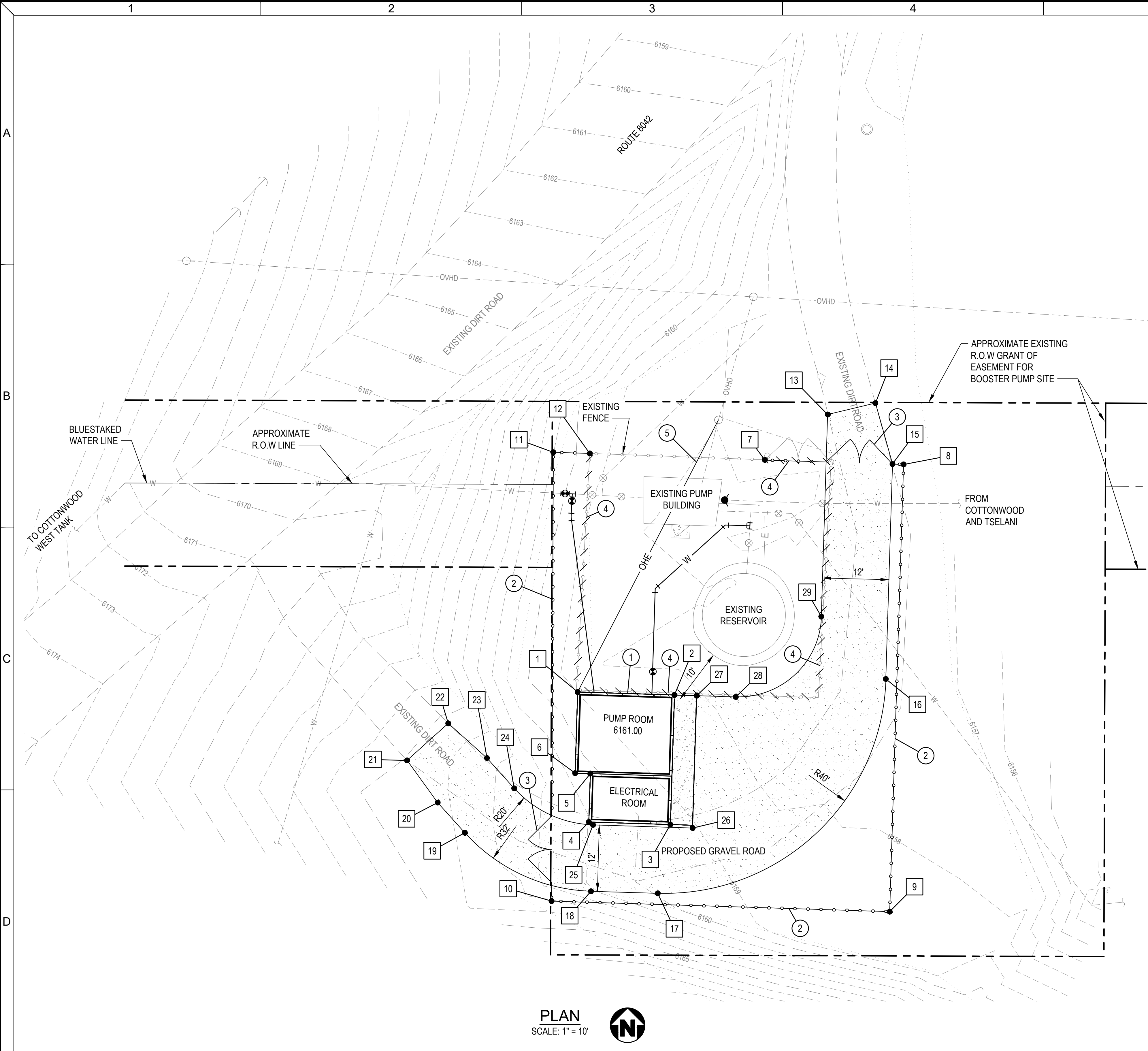
Drawing Title:

CIVIL
COTTONWOOD

LEGEND AND SYMBOLS

Designed By: AMB	CONSOR Project No.: W232520UT
Drawn By: RB	Issued On: JULY 2024
Checked By: JY	Drawing No.: C-001
Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

Drawing Path and Name: A:\VWP\Projects\UT\NTUA\2023\W232520\ut_0012 CADD\12-S sheets\6-2 cottonwood\W232520UT_B-2_C-001.dwg, Plotted Date: July 30, 2024 11:04 AM By: Jeff Bennett



PLAN
SCALE: 1" = 10'



GENERAL NOTES

- 1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
- 2. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES AND POLES.
- 3. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN.
- 4. SEE SHEET S-101 FOR NEW BUILDING STRUCTURAL, AND D-101 FOR PROCESS PIPING IN THE BUILDING.

KEY NOTES

- 1 PROPOSED BOOSTER STATION BUILDING, SEE STRUCTURAL PLANS
- 2 INSTALL 6 FT CHAIN LINK FENCE WITH 2 FT OF BARBED WIRE ON TOP. SEE W-34 ON SHEET C-501.
- 3 INSTALL 12' DOUBLE SWING GATE. SEE W-34 ON SHEET C-501
- 4 REMOVE EXISTING FENCE
- 5 INSTALL NEW OVERHEAD ELECTRIC LINE

SURVEY CONTROL POINTS			
PT NO.	DESCRIPTION	NORTHING	EASTING
1	NW CORNER BLDG	N1841533.90	E783790.77
2	NE CORNER BLDG	N1841533.36	E783808.26
3	SE CORNER BLDG	N1841509.96	E783807.53
4	SW CORNER BLDG	N1841510.41	E783792.79
5	BLDG CORNER	N1841519.16	E783793.06
6	BLDG CORNER	N1841519.24	E783790.32
7	FENCE	N1841575.83	E783824.61
8	FENCE	N1841575.02	E783849.66
9	FENCE	N1841494.22	E783847.15
10	FENCE	N1841496.12	E783786.06
11	FENCE	N1841577.21	E783786.38
12	FENCE	N1841577.00	E783792.96
13	GRAVEL ROAD EDGE	N1841584.05	E783835.97
14	GRAVEL ROAD EDGE	N1841586.09	E783844.57
15	GRAVEL ROAD EDGE	N1841575.08	E783847.66
16	GRAVEL ROAD EDGE	N1841536.26	E783846.46
17	GRAVEL ROAD EDGE	N1841497.52	E783805.24
18	GRAVEL ROAD EDGE	N1841497.90	E783793.18
19	GRAVEL ROAD EDGE	N1841508.47	E783770.39
20	GRAVEL ROAD EDGE	N1841513.93	E783765.47
21	GRAVEL ROAD EDGE	N1841521.55	E783759.96
22	GRAVEL ROAD EDGE	N1841528.24	E783767.39
23	GRAVEL ROAD EDGE	N1841521.96	E783774.39
24	GRAVEL ROAD EDGE	N1841516.50	E783779.31
25	GRAVEL ROAD EDGE	N1841509.89	E783793.55
26	GRAVEL ROAD EDGE	N1841509.33	E783811.55
27	GRAVEL ROAD EDGE	N1841533.23	E783812.30
28	GRAVEL ROAD EDGE	N1841533.02	E783819.35
29	GRAVEL ROAD EDGE	N1841547.54	E783834.81

SURVEY NOTES

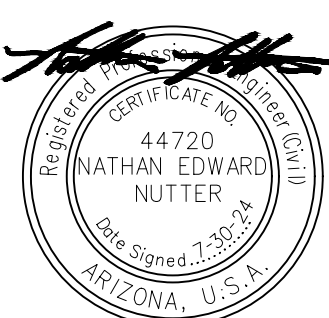
- 1. ARIZONA STATE PLANE COORDINATE SYSTEM 1983, CENTRAL ZONE, INTERNATIONAL FEET.



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Consultant:

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Engineer's Seal:


Client / Owner:

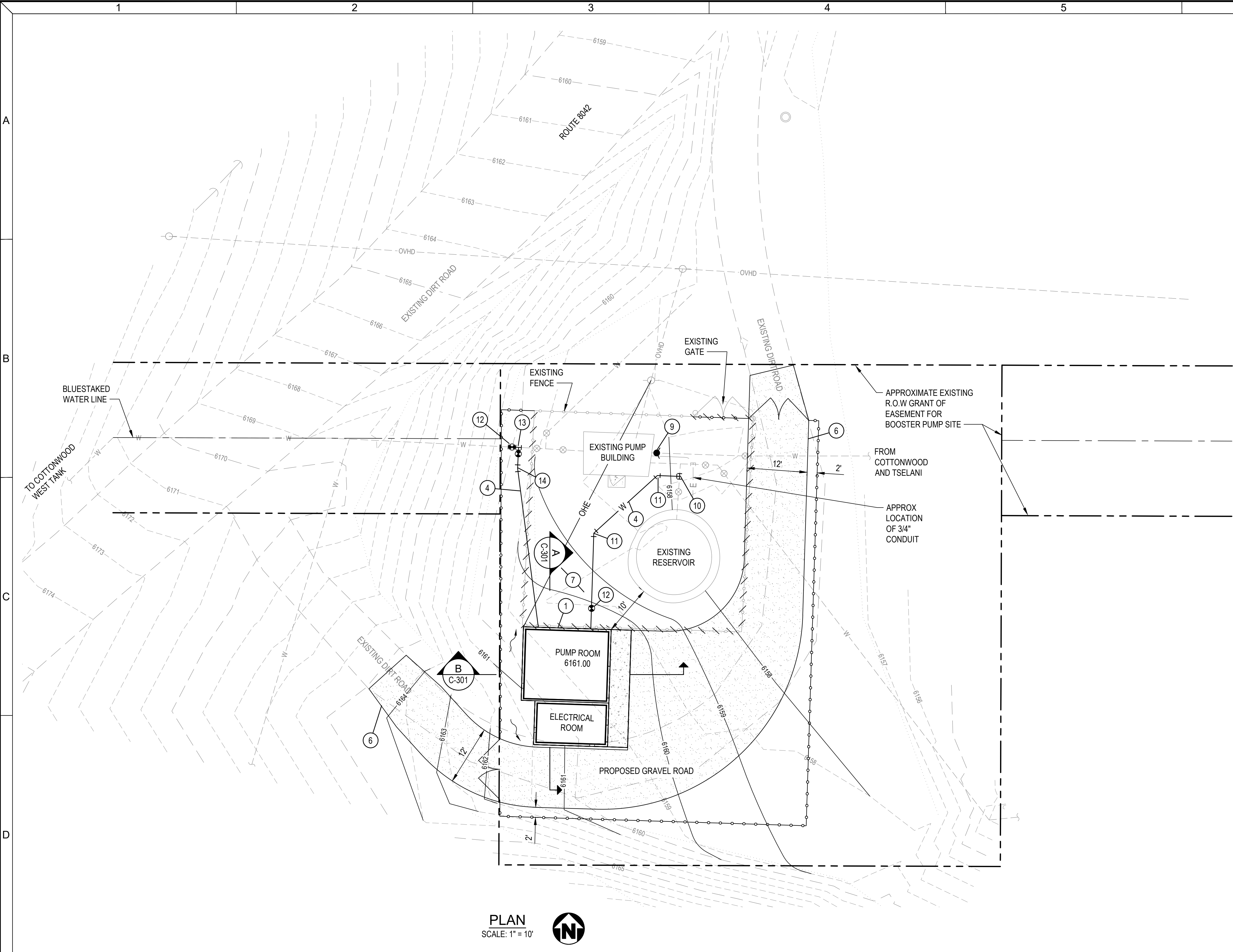

Project Title:
NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

Drawing Title:
CIVIL
COTTONWOOD

OVERALL SITE PLAN
AND SURVEY CONTROL

Designed By:
AMB
Drawn By:
JB, RB
Checked By:
JY
Approved By:
NN

CONSOR Project No.: W232520UT
Issued On: JULY 2024
Drawing No.: C-100
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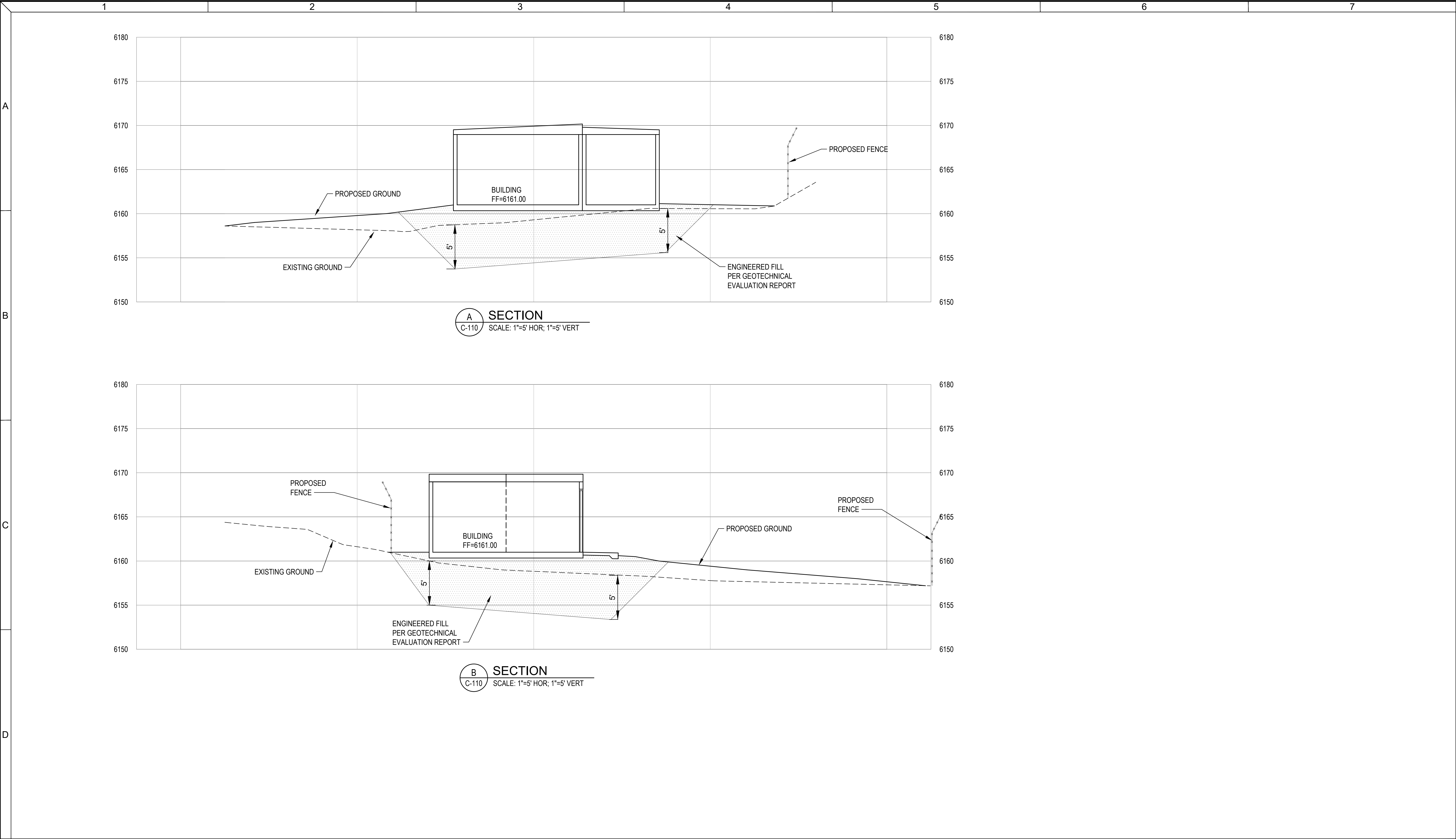
GENERAL NOTES

1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES AND POLES.
3. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN.
4. SEE SHEET S-101 FOR NEW BUILDING STRUCTURAL, AND D-101 FOR PROCESS PIPING IN THE BUILDING.
5. ALL SITE WATER PIPING SHALL BE DUCTILE IRON CLASS 52. ALL JOINTS, FITTINGS AND VALVES SHALL BE RESTRAINED, UNLESS OTHERWISE NOTED. ACTUAL PIPE ALIGNMENT AND DEPTH SHALL BE ADJUSTED IN THE FIELD TO AVOID CONFLICT WITH OTHER UTILITIES, ALL LOCATING ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER.
6. ALL BURIED PIPELINES SHALL MAINTAIN 36 INCHES COVER UNLESS OTHERWISE NOTED. AT UTILITY CROSSINGS, NEW PIPE SHALL BE ROUTED UNDER EXISTING, AND FITTING AS REQUIRED, COORDINATE WITH ENGINEER PRIOR TO PLACEMENT
7. CONTRACTOR SHALL PROVIDE AND INSTALL SLEEVES AND SPOOLS AS NEEDED TO FACILITATE CONNECTIONS TO EXISTING AND NEW YARD PIPING. LONG SLEEVES SHALL BE INSTALLED WITHIN 5-FEET OF NEW STRUCTURE.

KEY NOTES

- 1 PROPOSED BOOSTER STATION BUILDING, SEE STRUCTURAL PLANS
- 4 CONSTRUCT NEW WATERLINE
- 6 GRAVEL ROAD FOR ACCESS
- 7 CLEAR AND GRUB SITE, INSTALL 3/4" GRAVEL WITH GEOTEXTILE FABRIC WITHIN FENCED AREA.
- 9 2-1/8" POST TYPE SINGLE PORT FIRE HYDRANT ASSEMBLY
- 10 (1) 6"x4" MJ TEE
- 11 (1) 4" MJ 45° BEND
- 12 (1) 4" MJ GATE VALVE
- 13 (1) 4" MJ TEE, (2) 4" MJ GATE VALVE, (1) 4" LS
- 14 (1) 4" MJ 11.25° BEND

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							Drawn By: RB	Issued On: JULY 2024
							Checked By: JY	Drawing No.: C-110
							Approved By: NN	1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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							Drawn By: RB	Issued On: JULY 2024
							Checked By: JY	C-301
							Approved By: NN	

A

B

C

D

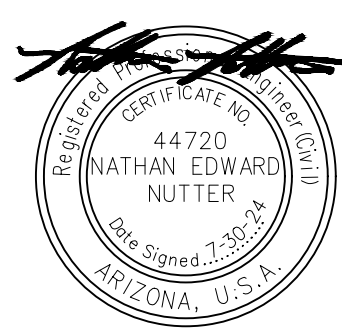


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Consultant:

FINAL SUBMITTAL

Engineer's Seal:



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

Drawing Title:

CIVIL
COTTONWOOD

STANDARD DETAILS

Designed By:

AMB

Drawn By:

RB

Checked By:

JY

Approved By:

NN

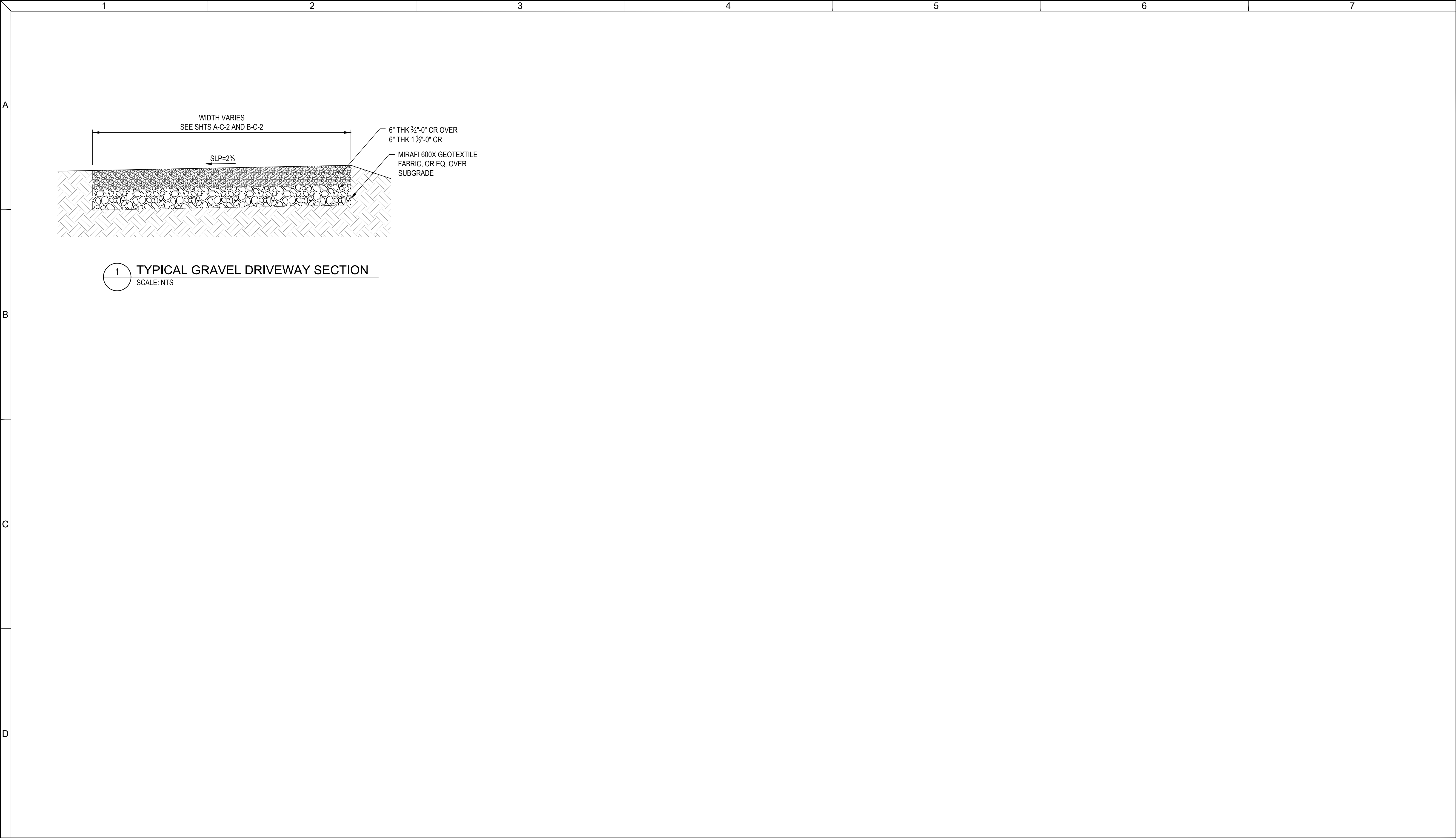
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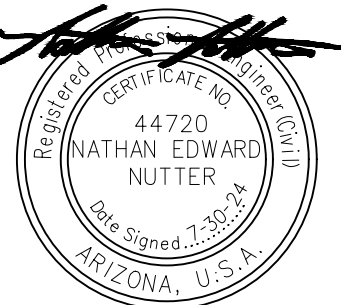
Issued On: JULY 2024

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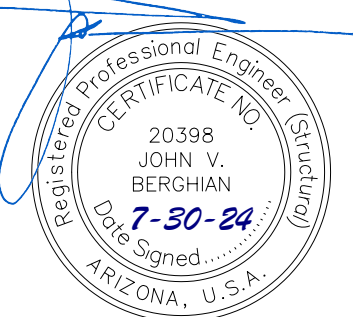
C-501

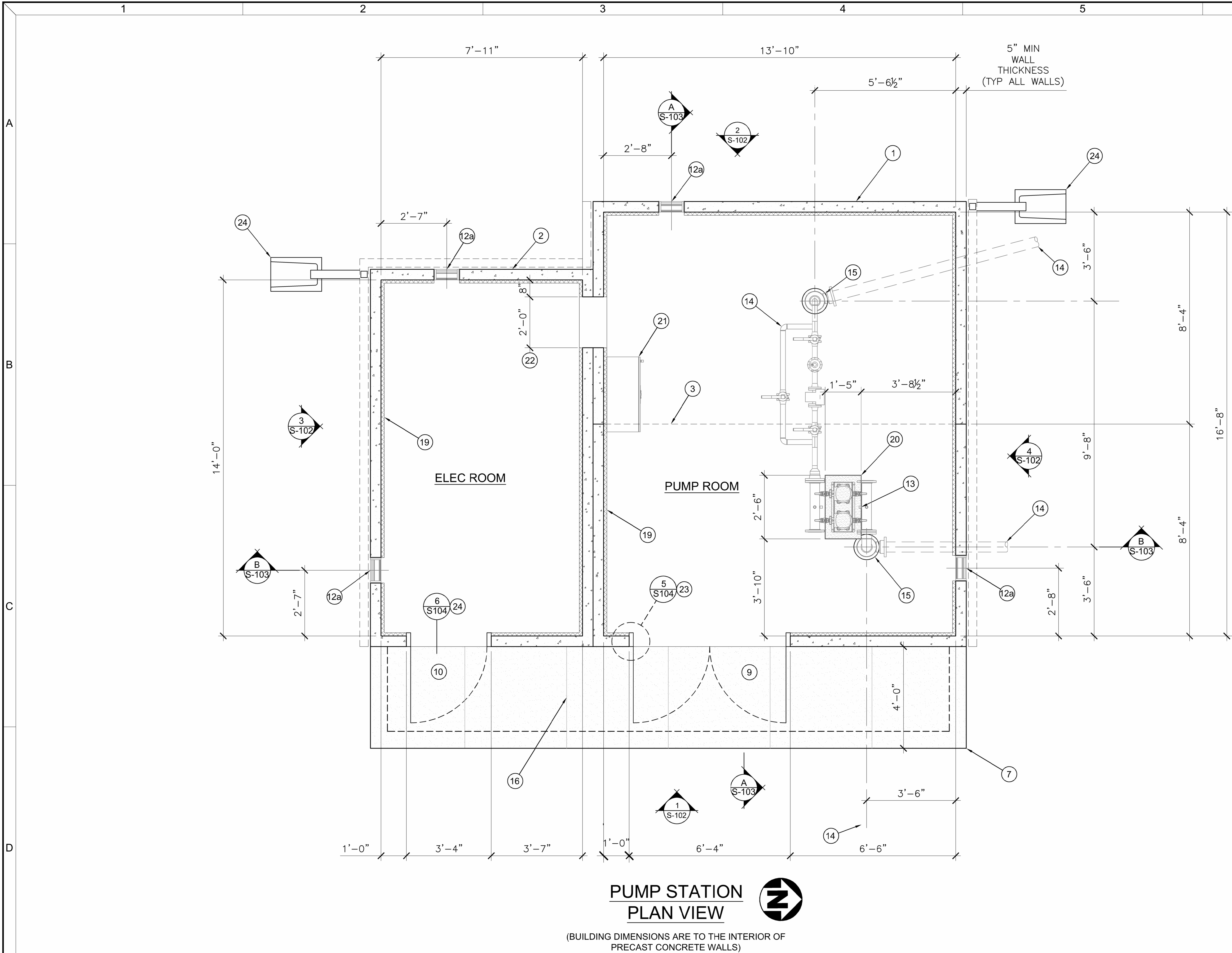
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DRAWING IS NOT TO SCALE



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							Drawn By: RB	Issued On: JULY 2024
							Checked By: JY	Drawing No.: C-502
							Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

	1	2	3	4	5	6	7
	GENERAL STRUCTURAL NOTES (GSN)						
	DIVISION 03 40: PRECAST CONCRETE BOOSTER PUMP STATION (BPS) BUILDING A PRECAST MANUFACTURER REQUIREMENTS FOR PUMP STATION BUILDING: 1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND PLACEMENT OF PRECAST STRUCTURES. 2. CONTRACTOR TO PROTECT IN PLACE EXISTING SITE FEATURES TO REMAIN. 3. CONTRACTOR TO VERIFY ALL PROPOSED UTILITIES PRIOR TO PLACEMENT OF PRECAST STRUCTURES TO ALIGN ALL OPENINGS IN THE STRUCTURES WITH THE PROPOSED UTILITY STUB OUTS. 4. CONTRACTOR SHALL USE CAUTION AROUND OVERHEAD UTILITIES,POLES AND EXISTING SITE FEATURES AND VERIFY CLEARANCES WITH THE CRANE OUTRIGGERS 5. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES. 6. COMPLETE REQUIREMENTS SHALL BE AS OUTLINED IN THE SPECIFICATION SECTION 03 41 10 WHICH ARE INCLUDED AND HEREBY MADE A PART OF THESE CONTRACT DOCUMENTS. 7. PROVIDE COMPLETE SHOP DRAWINGS CONFORMING TO THE INSIDE CLEAR DIMENSIONS OF THE CAST-IN-PLACE STRUCTURES. THIS SHALL INCLUDE REINFORCING, EMBEDS, AND LIFTING REQUIREMENTS. 8. PROVIDE THE SUBGRADE PREPARATION PER DIVISION 31 - EARTHWORK THAT WILL BE REQUIRED FOR THE PROPER INSTALLATION OF THE PRECAST STRUCTURE. 9. PROVIDE SEALED STRUCTURAL CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARIZONA. STRUCTURAL CALCULATIONS SHALL INCLUDE BOTH LIFTING AND IN-PLACE LOADS ON THE STRUCTURE. 10. DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST: PRECAST CONCRETE INSTITUTE (PCI) MANUAL OF STANDARD PRACTICE. CONCRETE REINFORCING INSTITUTE, MANUAL OF STANDARD PRACTICE. 11. ADDITIONAL DESIGN REQUIREMENTS (INCLUDING BUT NOT LIMITED TO SEISMIC AND WIND LOADS). 12. CASTING KEYED JOINTS SHOWN ON THE DRAWINGS ARE TO BE WATERTIGHT AND SHALL BE SEALED ON THE EXTERIOR AND INTERIOR SURFACE. THE PRECAST SUPPLIER SHALL PROVIDE EMBEDS AND FIELD INSTALLATION COMPONENTS AS REQUIRED TO PREVENT THE JOINTS FROM SEPARATING. THE PRECAST SUPPLIER SHALL SUBMIT THE PROPOSED JOINT DETAIL INCLUDING JOINT SEALANT TO THE ENGINEEER FOR REVIEW AND APPROVAL PRIOR TO CASTING. C 13. SUBBASE PREPARATION, BEDDING, AND LEVELING COURSE SHALL BE IN ACCORDANCE WITH ASTM C1675-11. 14. DESIGN SHALL CONFORM TO GOVERNING AGENCY STANDARDS AND REQUIREMENTS. 15. CONCRETE: 28-DAY COMPRESSIVE STRENGTH 4,000 PSI (MIN). 16. STEEL REINFORCING: ASTM A-615, GRADE 60. 17. WWF: ASTM A1064, Fy = 70 KSI. 18. CEMENT: ASTM C858. 19. JOINT SEALANT: DOW CORNING 790 SILICONE SEALANT OR APPROVED EQUAL. B 20. CONTROLLED LOW STRENGTH MATERIAL (CLSM) SHALL BE A SELF-COMPACTING, FLOWABLE, CEMENTITIOUS MATERIAL CONSISTING OF 1/2 SACK OF PORTLAND CEMENT PER CU YARD OF ½" MEDIUM AGGREGATE AND SAND. 21. EXTERIOR WALLS SHALL BE PAINTED WITH (2) FINISH COATS FLAT EXTERIOR GRADE ACRYLIC WALL PAINT. PREPARE AND SEAL THE CONCRETE SUBSTRATE AS RECOMMENDED BY THE PAINT MANUFACTURER. 22. INTERIOR CONCRETE FLOORS SHALL BE TREATED WITH LOW-LUSTER CONCRETE SEALER. PREPARE AND SEAL THE CONCRETE SUBSTRATE AS RECOMMENDED BY THE PAINT MANUFACTURER. 23. HOLLOW METAL DOORS, JAMBS, ACCESSORIES, AND HARDWARE SHALL BE PER THE PROJECT SPECIFICATIONS. 24. FRP CEILING PANELS SHALL BE 0.90" THICK, CLASS A, WHITE PEBBLED TEXTURED WITH MATCHING PVC MOLDINGS. INSTALL PANELS WITH ADHESIVE PER THE MANUFACTURER'S RECOMMENDATIONS OVER ½" GYPSUM BOARD OVER 2x4 FURRING STRIPS (FLAT) INSTALLED AT 24" O.C. 25. 5⁄8" PLYWOOD WALL PANELS SHALL BE GRADE B-C WITH A CLEAR WATER PROOFING SEALANT INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. INSTALL PANELS OVER 2x4 FURRING STRIPS (FLAT) USING #8 STAR DRIVE ZINC PLATED CONSTRUCTION SCREWS (DRYWALL SCREWS NOT PERMITTED) AT 6" O.C. (EDGES) AND 12" O.C. INTERMEDIATE. 26. FURRING STRIPS SHALL BE INSTALLED FLAT AND ATTACHED TO THE CONCRETE USING ¼" DIA x 2 ¾" TAPCON ANCHORS AT 16" O.C. INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. 27. WALL AND CEILING INSULATION SHALL 1½" R-7.5 RIGID POLYSTYRENE PANELS, OWENS CORNING FOARMULAR NGX OR APPROVED EQUAL INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. 28. COMPOSITE CURBING SHALL BE SHIELD-IT CURB 4912C WITH END AND CORNER PIECES INSTALLER PER THE MANUFACTURER'S RECOMMENDATIONS.						
D							

 This document, ideas, and designs incorporated herein, are an instrument of professional service, and is not to be used, in whole or in part, for any other project without the written authorization of CONSOR.	Consultant:	FINAL SUBMITTAL	Engineer's Seal: 	Client / Owner: 	Project Title: NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION	Drawing Title: STRUCTURAL COTTONWOOD PUMP STATION BUILDING GENERAL STRUCTURAL NOTES	Designed By: JVB	CONSOR Project No.: W232520UT
							Drawn By: JVB	Issued On: JULY 2024
							Checked By: RB	Drawing No.: S-002
							Approved By: NN	0121 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

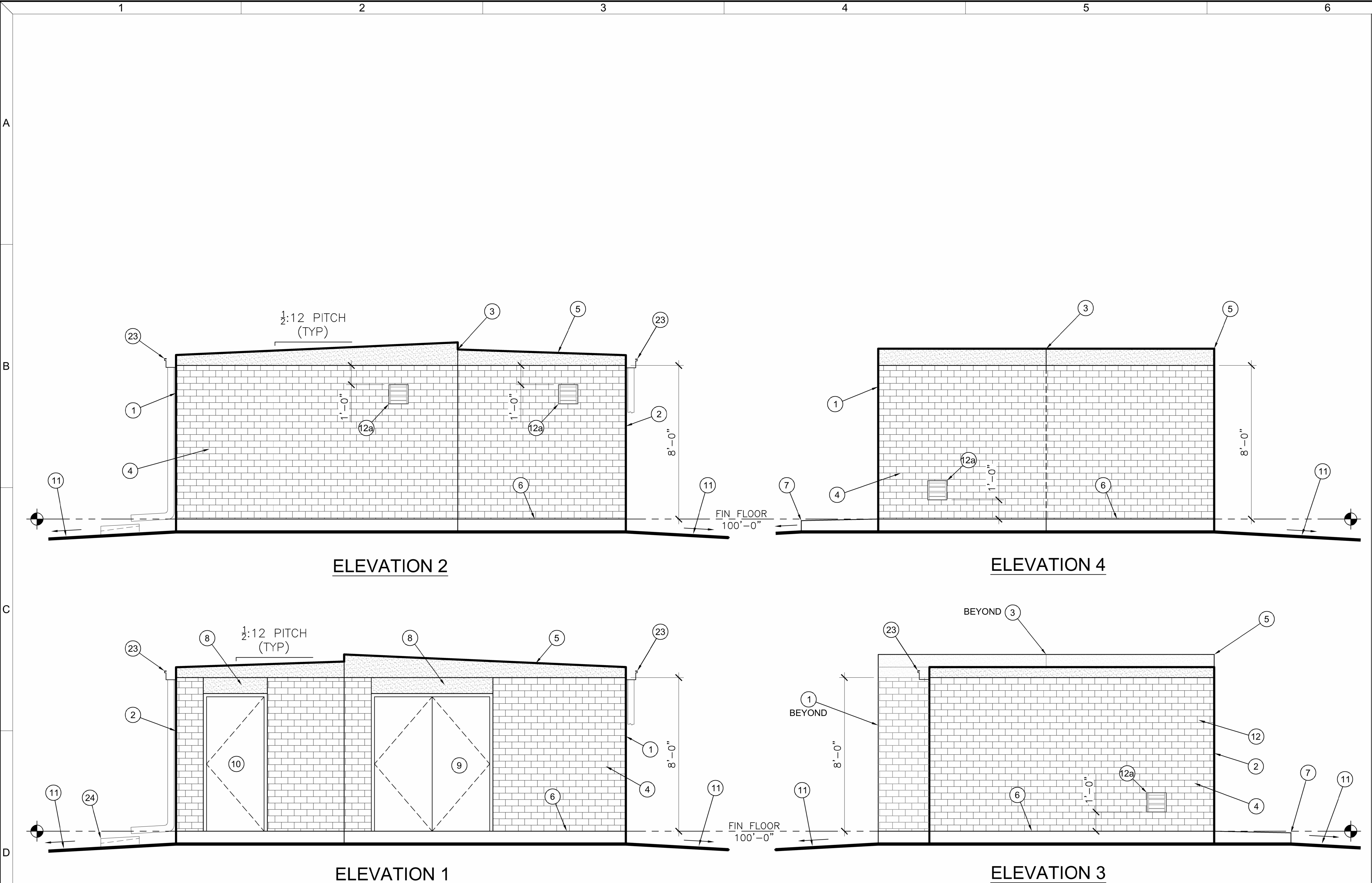


GENERAL NOTES

- SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
- SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

KEY NOTES

- PRECAST REINFORCED CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
- PRECAST REINFORCED CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
- MODULE CASTING JOINT LINE
- CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- SINGLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- WALL LOUVER PER MECHANICAL
 - 12 1/2" x 12 1/2"
 - 18 1/2" x 18 1/2"
 - 30 1/2" x 30 1/2"
- BOOSTER PUMP SKID - SEE PROCESS PLANS
- PIPING - SEE PROCESS PLANS
- 12" DIA OPENING IN FLOOR SLAB FOR PIPING
- TOOLED CONTROL JOINT - LOCATIONS AS SHOWN
- 3/4" PLYWOOD WALL PANEL OVER 1/2" RIGID INSULATION
- REINFORCED CONCRETE PUMP HOUSEKEEPING PAD
- PUMP CONTROL PANEL
- 20" HIGH x 24" WIDE OPENING FOR ELECTRICAL CONDUITS
- DOOR JAMB
- DOOR THRESHOLD

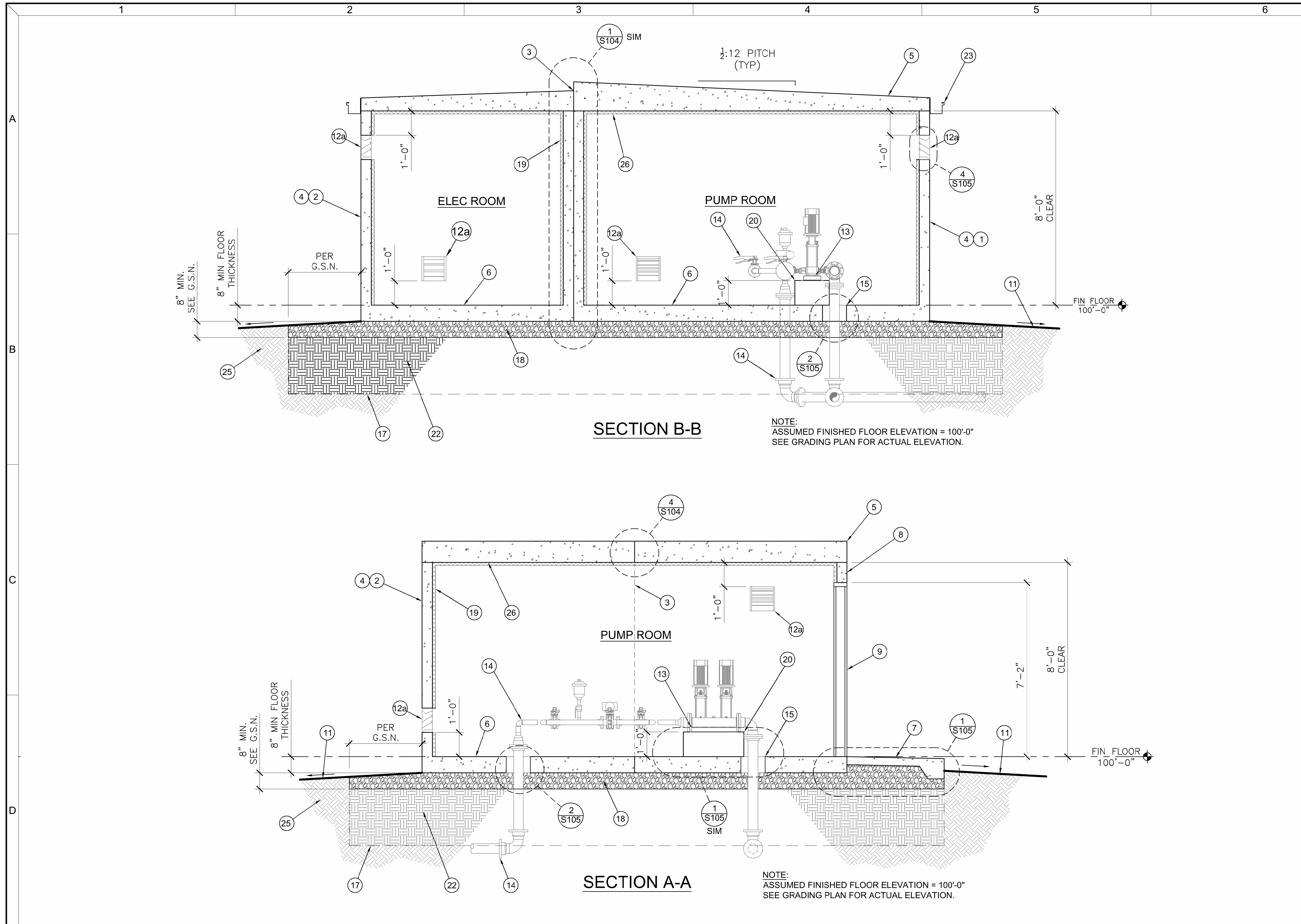


GENERAL NOTES

- 1. SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
- 2. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

KEY NOTES

- 1 PRECAST REINFORCED CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
- 2 PRECAST REINFORCED CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
- 3 MODULE CASTING JOINT LINE
- 4 PRECAST REINFORCED CONCRETE WALLS WITH EXTERIOR WITH SLUMP BLOCK OR BRICK TYPE FINISH
- 5 PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- 6 PRECAST REINFORCED CONCRETE FLOOR SLAB INTEGRALLY CAST WITH WALLS
- 7 CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- 8 PRECAST REINFORCED CONCRETE DOOR TRANSOM INTEGRALLY CAST WITH WALLS
- 9 DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- 10 SINGLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- 11 FINISHED GRADE - SLOPE AWAY FROM BUILDING
- 12 WALL LOUVER PER MECHANICAL
 - a - 12 1/2" x 12 1/2"
 - b - 18 1/2" x 18 1/2"
 - c - 30 1/2" x 30 1/2"
- 23 GUTTER AND DOWNSPOUT - EXACT LOCATION TO BE TO BE DETERMINED IN THE FIELD
- 24 PRECAST SPLASH BLOCK - EXACT LOCATION TO BE DETERMINED IN THE FIELD





KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE
2 MODULE CASTING JOINT LINE
3 2x4 FURRING STRIPS (CONT) AT 24" O.C. (FLAT) - SECURE TO
4 CONCRETE WALL/ROOF PER G.S.N.
5 1-1/2" RIGID INSULATION PER G.S.N.
6 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.
7 BUILDING HALVES TO ABUT AS SHOWN
8 FRP MOLDINGS PER G.S.N.
9 SEAL WATERTIGHT PER PRECAST MANUFACTURER
10 WELD PLATES PER PRECAST MANUFACTURER



KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- 2 PRECAST REINFORCED CONCRETE BUILDING WALL
- 3 2x4 FURRING STRIPS (CONT) AT 24" O.C. (FLAT) - SECURE TO
- 4 CONCRETE WALL/ROOF PER G.S.N.
- 5 1-1/2" RIGID INSULATION PER G.S.N.
- 6 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.
- 7 5/8" PLYWOOD WALL PANELS PER G.S.N.
- 8 FRP MOLDINGS PER G.S.N.



KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE ROOF STRUCTURE
- 2 PRECAST REINFORCED CONCRETE BUILDING WALL -
3 INTEGRAL WITH FLOOR
- 4 PRECAST REINFORCED CONCRETE BUILDING FLOOR STRUCTURE
- 5 WELD PLATES PER PRECAST MANUFACTURER
- 6 STEEL REINFORCING PER PRECAST MANUFACTURER
- 7 2x4 FURRING STRIPS AT 24" O.C. (FLAT)
- 8 FRP CEILING PANEL OVER 1/2" GYP BOARD PER G.S.N.
- 9 5/8" PLYWOOD WALL PANELS PER G.S.N.
- 10 BUILDINGS TO ABUT AS SHOWN
- 11 COMPACTED AB PAD PER G.S.N.
- 12 OVER EXCAVATION PER G.S.N.
- 13 SEALANT PER G.S.N. AROUND ENTIRE BUILDING PERIMETER
- 14 3/4" CHAMFER AND SEALANT ALL AROUND OPENING
- 15 1-1/2" RIGID INSULATION PER G.S.N.
- 16 20" HIGH x 24" WIDE OPENING FOR ELECTRICAL CONDUIT
- 17 16 GA GALV TRIM ALL AROUND OPENING
- 18 COMPOSITE CURBING PER G.S.N.
- 19 2x4 FURRING STRIP (FLAT) FROM WALL CORNER (BEYOND)
- 20 2x4 FURRING STRIP (FLAT) CONTINUOUS
- 21 VINYL BASE BOARD



(DOOR THRESHOLD)

KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE BUILDING FLOOR
2 CAST-IN-PLACE SIDEWALK
3 DOOR THRESHOLD (3 PIECE) PER G.S.N.
4 SECURE TO FLOOR PER G.S.N.
5 1/2" COMPRESSIBLE JOINT MATERIAL AND
6 JOINT SEALANT PER G.S.N.
7 DOOR SWEEP PER G.S.N.
8 SOLID GROUT
9 WEATHER STRIP PLATE PER G.S.N.
10 HOLLOW METAL DOOR PER G.S.N.



(DOOR JAMB)
(HEAD SIMILAR)

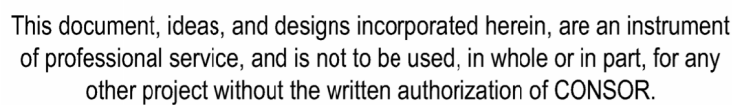
KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE BUILDING WALL
2 2x4 HORIZ FURRING STRIP (CONT) - SECURE TO
3 CONCRETE WALL PER G.S.N.
4 1-1/2" RIGID INSULATION PER G.S.N.
5 5/8" PLYWOOD WALL PANELS PER G.S.N.
6 SEALANT PER G.S.N.
7 3/4 x 3-1/2 WOOD TRIM
8 HOLLOW METAL DOOR FRAME PER G.S.N.
9 METAL CLIPS AND ANCHORAGE PER G.S.N.
10 HOLLOW METAL DOOR PER G.S.N.
COMPOSITE CURBING END PIECE (BELOW)



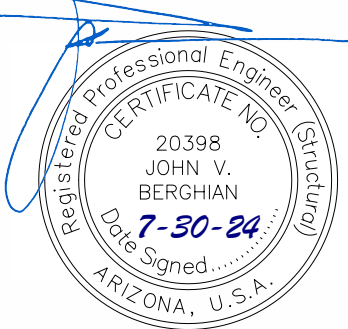
KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE FLOOR STRUCTURE
- 2 PRECAST REINFORCED CONCRETE BUILDING WALL
- 3 2x4 HORIZ FURRING STRIP (CONT) - SECURE TO
CONCRETE WALL PER G.S.N.
- 4 1-1/2" RIGID INSULATION PER G.S.N.
- 5 5/8" PLYWOOD WALL PANELS PER G.S.N.
- 6 SEALANT PER G.S.N.
- 7 COMPOSITE CURBING PER G.S.N.
- 8 U-SHAPED EDGE BINDING PER G.S.N.



Consultant:

Engineer's Seal:



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

Drawing Title:

Title: STRUCTURAL
COTTONWOOD

BOOSTER PUMP STATION
DETAILS

Designed By:

JVB

Drawn By:

JVB

Checked By:

RB

CONSOR Project No.: W2325201IT

Issued On: JULY 2024

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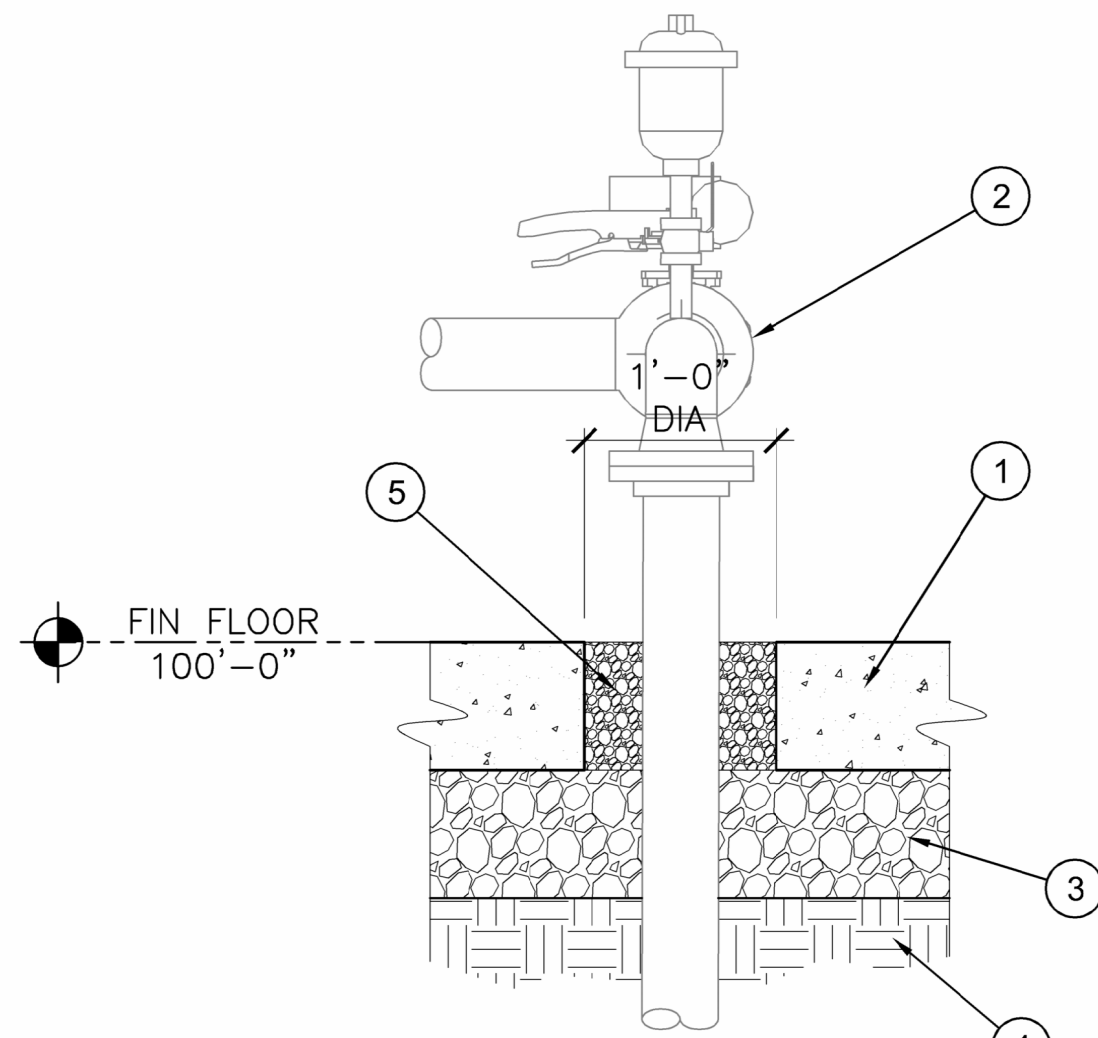
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0 1/2 1 IF BAR DOES NOT MEASURE 1"
DRAWING IS NOT TO SCALE

DETAIL 4

KEYNOTES:

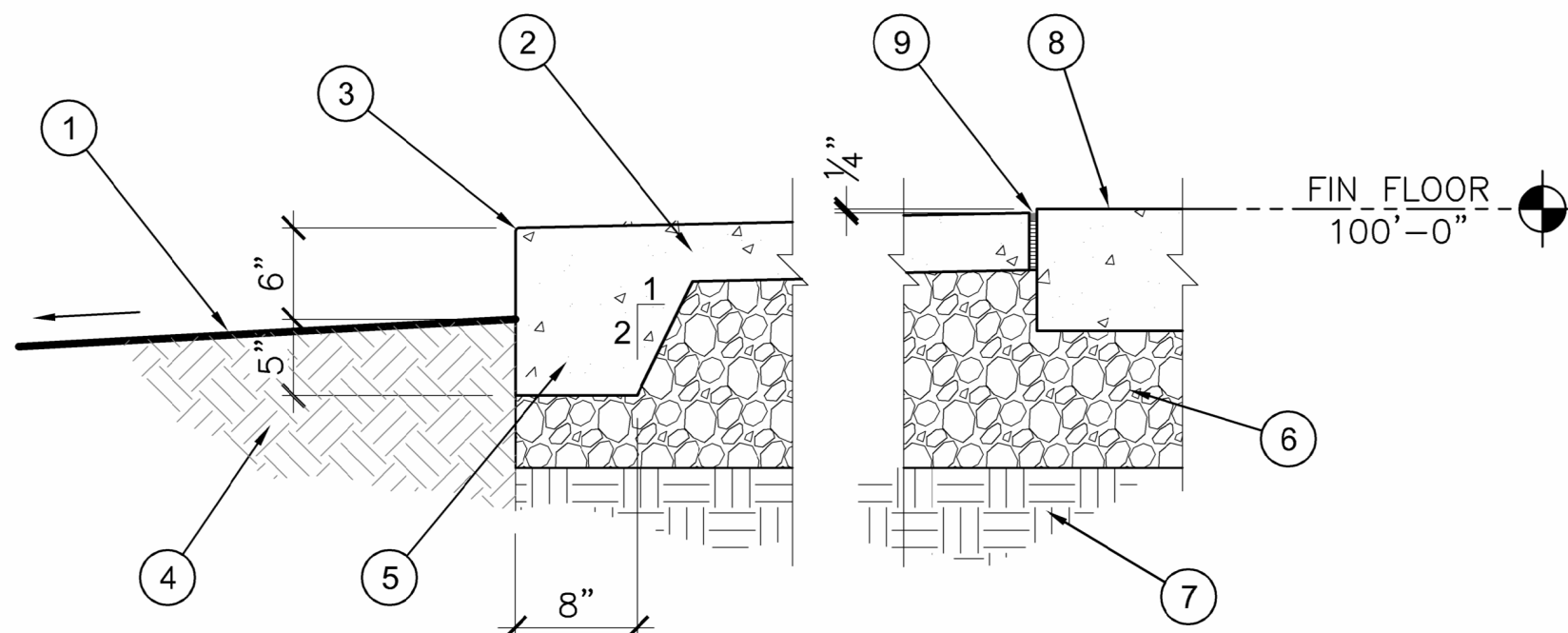
- 1 PRECAST REINFORCED CONCRETE BUILDING WALL
2 2x2 HORIZ FURRING STRIP - SECURE TO
3 CONCRETE WALL PER G.S.N.
4 1-1/2" RIGID INSULATION PER G.S.N.
5 5/8" PLYWOOD WALL PANELS PER G.S.N.
6 SEALANT PER G.S.N.
7 LOUVER - COORDINATE SIZE WITH MECHANICAL
8 16 GA GALV METAL DRIP FLASHING
9 BIRD SCREEN
10 FILL WITH FOAM INSULATION
11 16 GA GALV METAL TRIM ALL AROUND OPENING



DETAIL 2

KEYNOTES:

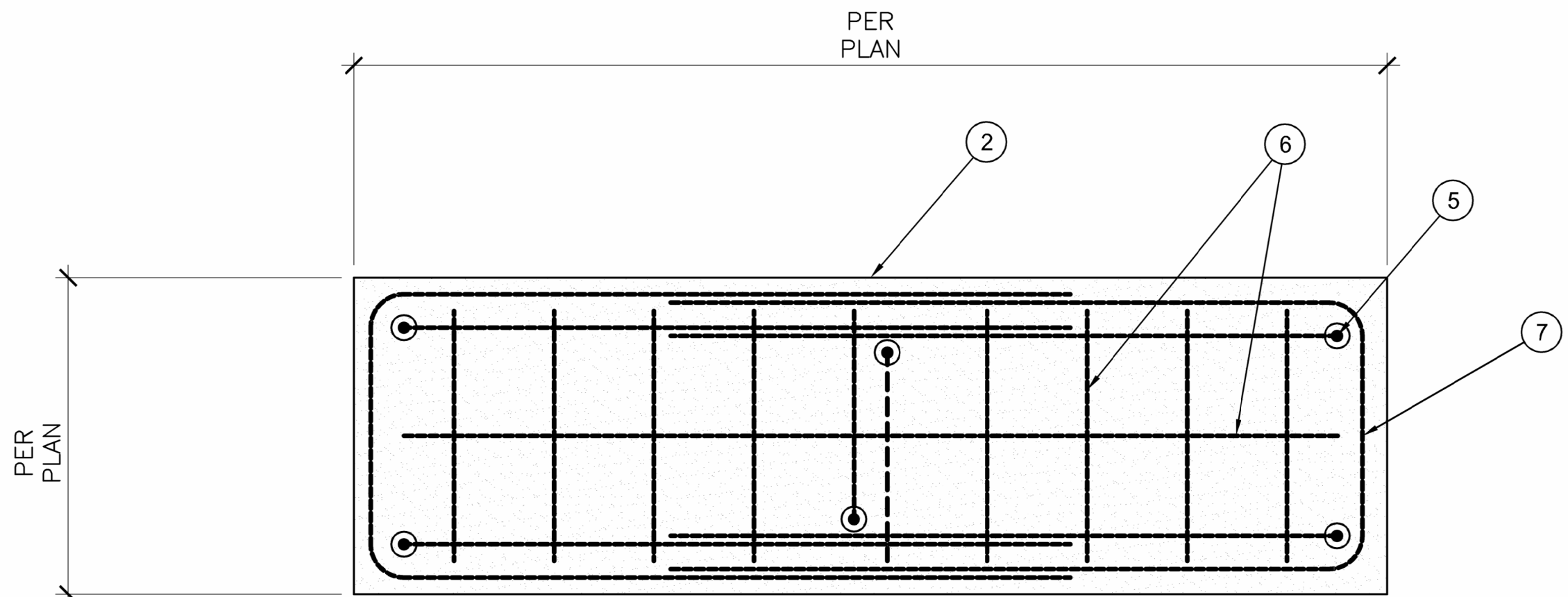
- 1 PRECAST REINFORCED CONCRETE BUILDING FLOOR -
2 REINFORCING NOT SHOWN
3 BOOSTER PUMP PIPING PER MECHANICAL PLANS
4 COMPACTED AB PAD PER G.S.N.
5 OVER EXCAVATION PER G.S.N.
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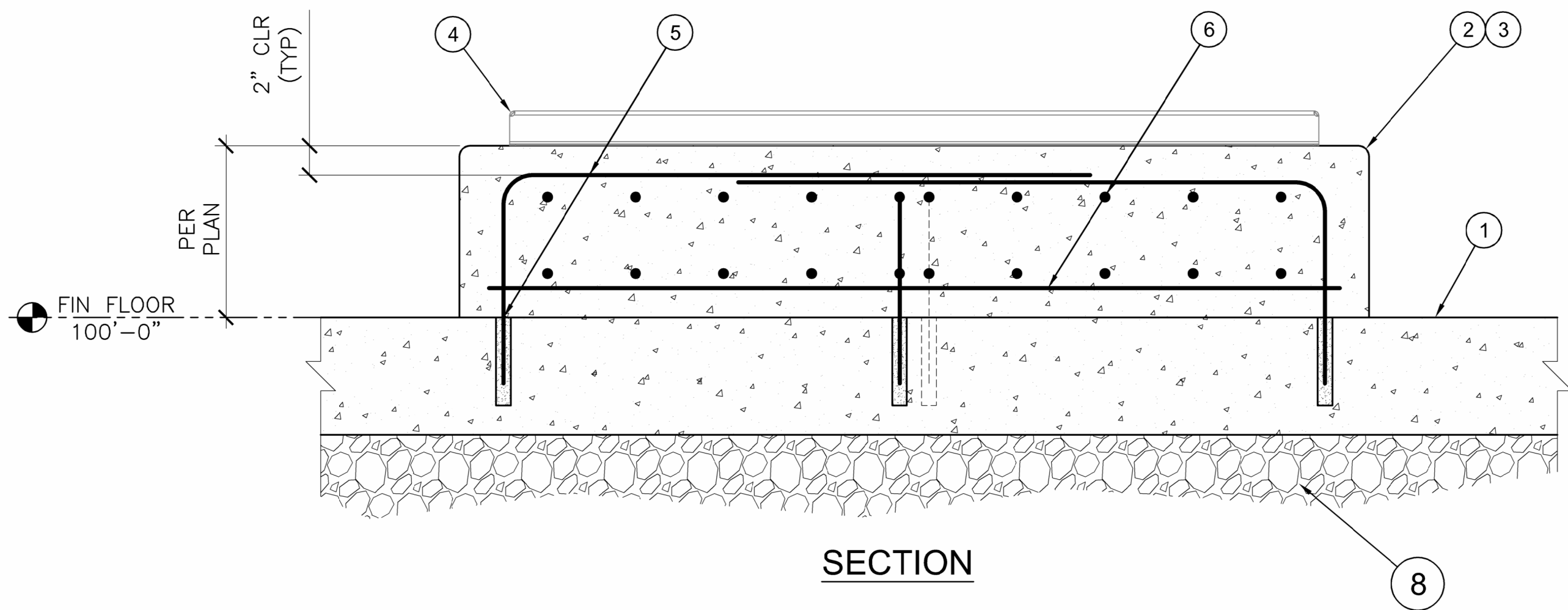
DETAIL 3

KEYNOTES:

- 1 FINISHED GRADE - SLOPE AWAY FROM BUILDING
2 EXTERIOR CONCRETE SLAB OVER COMPACTED A.B.C.
3 TOOLED EDGE
4 UNDISTURBED NATIVE MATERIAL
5 CONCRETE SLAB TURNDOWN AS SHOWN
6 COMPACTED AB PER G.S.N.
7 OVER EXCAVATION PER G.S.N.
8 PRECAST REINFORCED CONCRETE BUILDING FLOOR -
9 REINFORCING NOT SHOWN
1/2" COMPRESSIBLE JOINT MATERIAL AND JOINT SEALANT
PER G.S.N.



PLAN



SECTION

DETAIL 1

KEYNOTES:

- 1 PRECAST REINFORCED CONCRETE BUILDING FLOOR -
2 REINFORCING NOT SHOWN
3 CAST-IN-PLACE REINFORCED CONCRETE PUMP HOUSEKEEPING PAD
4 TOOLED EDGE
5 BOOSTER PUMP SKID PER MECHANICAL PLANS
6 DRILL AND SET #4 BENT BAR IN ADHESIVE ANCHORING SYSTEM PER G.S.N.
7 LOCATE @ PAD CORNERS AND MID-POINTS AS SHOWN
8 #4 REINFORCING @ 6" O.C. BOTH DIRECTIONS
9 #4 PERIMETER BENT BARS (CONT) AS SHOWN
10 COMPACTED AB PAD PER G.S.N.

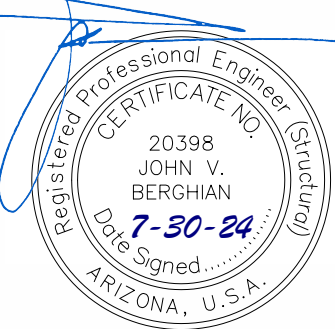


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Consultant:

FINAL SUBMITTAL

Engineer's Seal:



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

Drawing Title:

STRUCTURAL
COTTONWOOD

BOOSTER PUMP STATION
DETAILS

Designed By:

.IVR

Drawn By:

JVB

Checked By:

BB

CONSOR Project No.: W2325201IT

Issued On: 11/11/2023

Issued On:

S-105

0 1/2 1 IF BAR DOES NOT MEASURE 1"
DRAWING IS NOT TO SCALE

A	PIPE SYMBOLS		PIPE FITTINGS		VALVE SYMBOLS				VALVE SYMBOLS				GENERIC PIPING NOTES: 1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. 2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE. 3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED. 4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO A BACKFILL. 5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED. 6. SYMBOLS, LEGENDS AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS COMPONENTS ARE NECESSARILY USED IN THE PROJECT. 7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. 8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT. 9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.
	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	PLAN	SECTION	SINGLE LINE	DESCRIPTION	PLAN	SECTION	SINGLE LINE	
	PROPOSED		90° ELBOW		BALL VALVE				PRESSURE REDUCING VALVE (STRAIGHT)				
	HIDDEN		45° ELBOW		BUTTERFLY VALVE				PRESSURE REDUCING VALVE (ANGLED)				
	BELOW GRADE		22.5° ELBOW		BUTTERFLY VALVE (WAFER / LUGGED)				BACK PRESSURE REGULATOR VALVE (STRAIGHT)				
	EXISTING		11.25° ELBOW		BUTTERFLY VALVE (WAFER / LUGGED)				PRESSURE GAUGE				
	EXISTING HIDDEN		BASE ELBOW		CHECK VALVE (SWING)				AIR VALVE (COMBINATION)				
	DEMOLISH		TEE		CHECK VALVE (BALL)				AIR VALVE (AIR RELEASE)				
	FUTURE		CROSS		DIAPHRAGM VALVE				AIR VALVE (AIR/VACUUM)				
	CENTERLINE		REDUCING 90° ELBOW		GATE VALVE				FLOW METER				
B	PIPE JOINTS												PIPE PENETRATIONS
	DESCRIPTION	SYMBOL											
	FLANGED												
	MECHANICAL JOINT												
	GROOVED												
	PVC												
	STEEL												
	PUSH-ON												
	TAP												
	SERVICE SADDLE												
C													
D													
GENERAL NOTES: 1. THIS IS A STANDARD LEGEND, NOT ALL OF THE INFORMATION MAY BE USED ON THIS PROJECT. 2. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE. OTHER FITTING PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.													

	Consultant:	FINAL SUBMITTAL	Engineer's Seal:	Client / Owner:	Project Title:	Drawing Title:	Designed By:	CONSOR Project No.:
					NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION	PROCESS COTTONWOOD	AMB	W232520UT
							Drawn By:	Issued On:
							JLC	JULY 2024
							Checked By:	Drawing No.:
							AMB	D-001
							Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1"
							----	----- DRAWING IS NOT TO SCALE

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Consultant:

Engineer's Seal:

Client / Owner:

Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
BOOSTER PUMP STATION

Drawing Title:

PROCESS
COTTONWOOD

LEGEND AND NOTES

Designed By:
AMB

Drawn By:
JLC

Checked By:
AMB

Approved By:

CONSOR Project No.: W232520UT

Issued On: JULY 2024

Drawing No.: D-001

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

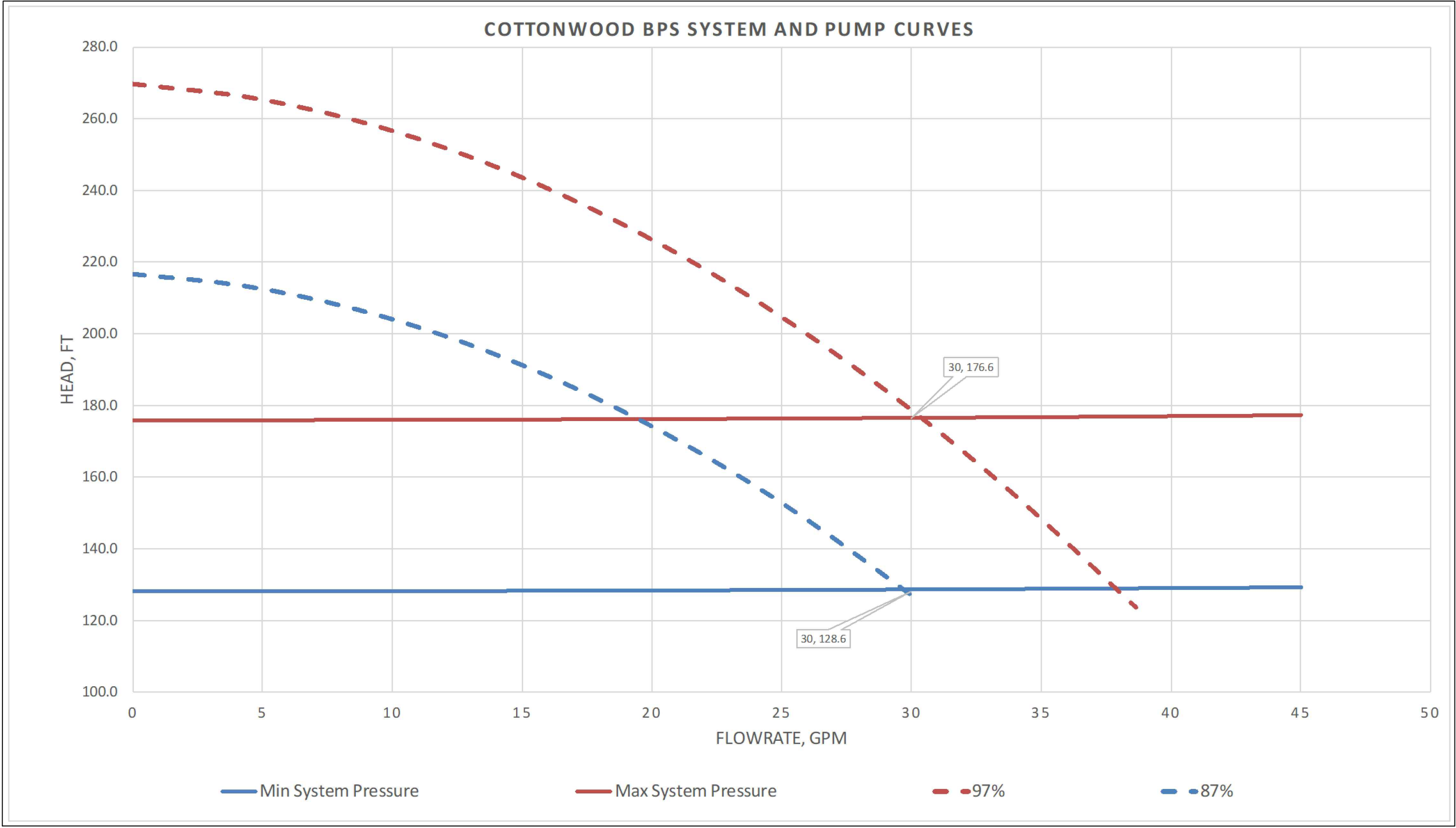
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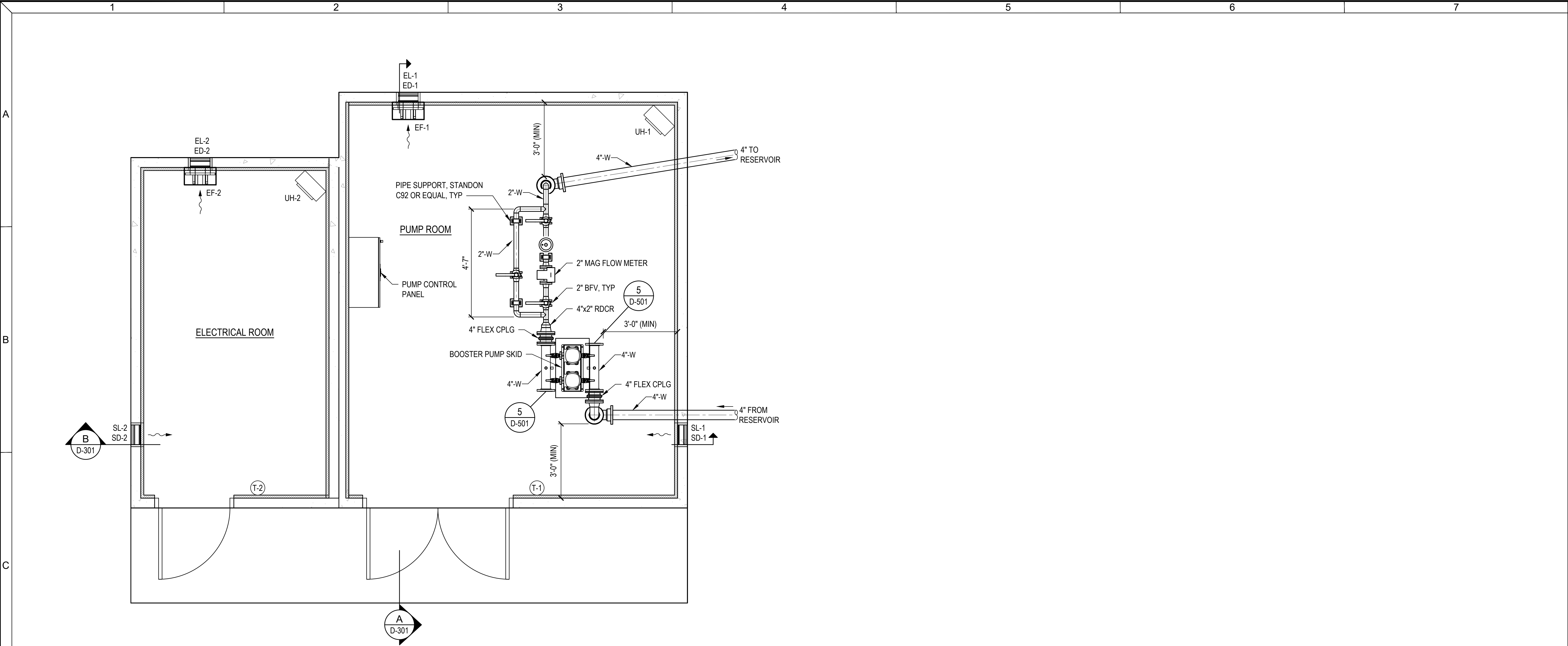
B

C

D

DESIGN CRITERIA		
IDENTIFICATION :		
LOCATION	COTTONWOOD BPS	
PUMP LABEL(S)	PUMP NO. 1, PUMP NO. 2	
QUANTITY	PACKAGE PUMP SKID (2 PUMPS)	
PERFORMANCE REQUIREMENTS AT FULL PUMP SPEED:		
MAXIMUM SHUTOFF HEAD (FT)	300	
MINIMUM SHUTOFF HEAD (FT)	250	
DESIGN FLOW CAPACITY:		
DUTY PT. 1	30 GPM @ 177 FT TDH	
DUTY PT. 2	30 GPM @ 129 FT TDH	
MINIMUM BOWL EFFICIENCY:		
DUTY PT. 1	64%	
DUTY PT. 2	62%	
MAXIMUM PUMP SPEED (RPM)	4000	
MINIMUM MOTOR SIZE (HP)	3	
OPERATING CONDITIONS:		
DUTY DRIVE	CONTINUOUS VARIABLE SPEED	
AMBIENT ENVIRONMENT	INDOOR	
AMBIENT TEMPERATURE	33° - 104° F	
FLUID SERVICE	POTABLE WATER	
FLUID TEMPERATURE	33° - 75° F	
FLUID PH RANGE	6.0 TO 8.5	
FLUID SPECIFIC GRAVITY	1	
FLUID VISCOSITY (ABSOLUTE) (CENTIPOISES AT 60° F)	1.12	
PUMP STATION FLOOR ELEVATION	APPROX. 255 FT	
MAXIMUM NPSHR AT DUTY POINTS	9 FT	
PUMP DIMENSIONS:		
SUCTION MANIFOLD DIAMETER (IN)	4	
SUCTION FLANGE RATING (AWWA)	CLASS D FLANGE	
DISCHARGE MANIFOLD DIAMETER (IN)	4	
DISCHARGE MANIFOLD RATING (AWWA)	CLASS D FLANGE	
ELECTRICAL:		
VOLTAGE/PHASE	480V/3PHASE	
CURRENT	3.8 AMPS	
PUMP MANUFACTURER/BASE MODEL:		
GRUNDFOS	CRE 5-9	

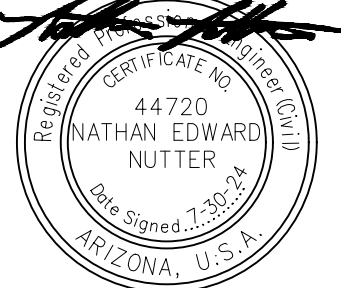


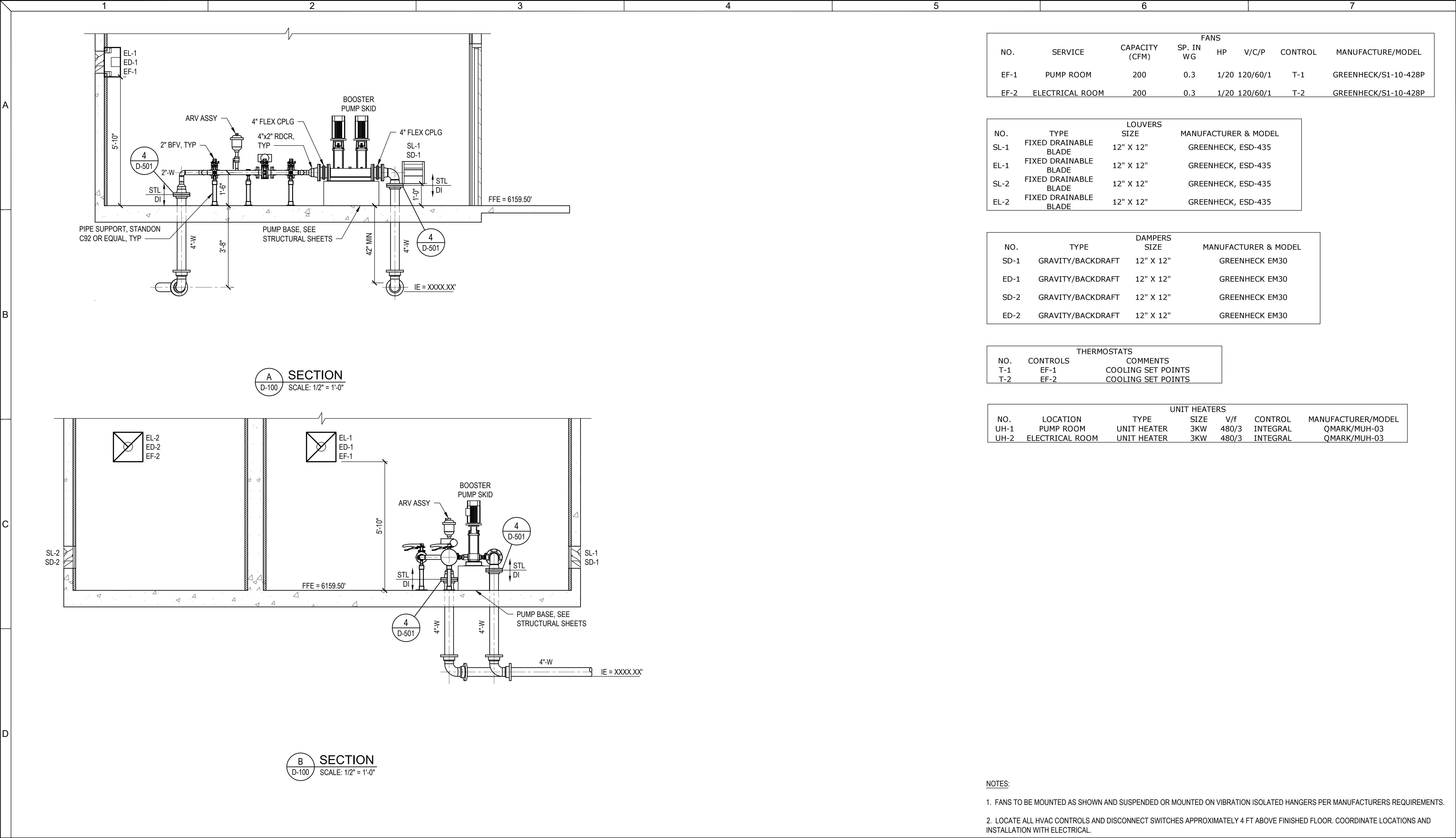


PLAN
SCALE: 1/2" = 1'-0"

NOTES:

1. ALL PIPING SHALL BE RESTRAINED, MATERIAL, DIAMETER AND PIPE ENDS AS SHOWN TO CONNECT WITH RESPECTIVE FITTINGS AND VALVES, SPOOL LENGTHS AS REQUIRED.
2. SPECIAL HANGERS AND SUPPORTS ARE SHOWN IN SOME LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION AND NUMBER OF ALL ADDITIONAL SUPPORTS TO PROPERLY SUPPORT PIPING, VALVES AND EQUIPMENT CONNECTIONS PREVENTING DEFLECTION AND STRESSES.
3. INSTALL FLANGE INSULATING KITS (ISOLATION JOINT) ON ALL MAG METER FLANGES. SEE DETAIL WS-19 AND WS 19A, SHEET C-501.
4. THRUST BLOCKS NOT SHOWN FOR CLARITY. INSTALL THRUST BLOCKS ON ALL BENDS UNDER BUILDING PER NTUA STANDARD DETAIL, SHT C-501.
5. SEE SHEET D-110 FOR HVAC SCHEDULES.
6. SEE SPECIFICATIONS FOR PIPE COATINGS.
7. CONTRACTOR SHALL COORDINATE PRECAST FLOOR PENETRATIONS AND WALL KNOCKOUTS PRIOR TO INSTALLATION TO AVOID CONFLICTS WITH EQUIPMENT.

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							Drawn By: JLC	Issued On: JULY 2024
							Checked By: AMB	Drawing No.: D-100
							Approved By: ----	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



FANS							
NO.	SERVICE	CAPACITY (CFM)	SP. IN WG	HP	V/C/P	CONTROL	MANUFACTURE/MODEL
EF-1	PUMP ROOM	200	0.3	1/20	120/60/1	T-1	GREENHECK/S1-10-428P
EF-2	ELECTRICAL ROOM	200	0.3	1/20	120/60/1	T-2	GREENHECK/S1-10-428P

LOUVERS			
NO.	TYPE	SIZE	MANUFACTURER & MODEL
SL-1	FIXED DRAINABLE BLADE	12" X 12"	GREENHECK, ESD-435
EL-1	FIXED DRAINABLE BLADE	12" X 12"	GREENHECK, ESD-435
SL-2	FIXED DRAINABLE BLADE	12" X 12"	GREENHECK, ESD-435
EL-2	FIXED DRAINABLE BLADE	12" X 12"	GREENHECK, ESD-435

DAMPERS			
NO.	TYPE	SIZE	MANUFACTURER & MODEL
SD-1	GRAVITY/BACKDRAFT	12" X 12"	GREENHECK EM30
ED-1	GRAVITY/BACKDRAFT	12" X 12"	GREENHECK EM30
SD-2	GRAVITY/BACKDRAFT	12" X 12"	GREENHECK EM30
ED-2	GRAVITY/BACKDRAFT	12" X 12"	GREENHECK EM30

THERMOSTATS		
NO.	CONTROLS	COMMENTS
T-1	EF-1	COOLING SET POINTS
T-2	EF-2	COOLING SET POINTS

UNIT HEATERS						
NO.	LOCATION	TYPE	SIZE	V/f	CONTROL	MANUFACTURER/MODEL
UH-1	PUMP ROOM	UNIT HEATER	3KW	480/3	INTEGRAL	QMARK/MUH-03
UH-2	ELECTRICAL ROOM	UNIT HEATER	3KW	480/3	INTEGRAL	QMARK/MUH-03

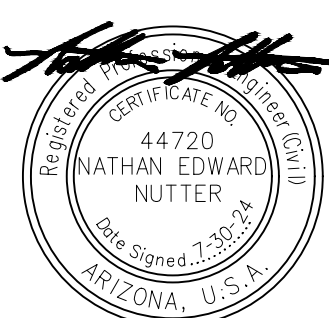
- NOTES:
- FANS TO BE MOUNTED AS SHOWN AND SUSPENDED OR MOUNTED ON VIBRATION ISOLATED HANGERS PER MANUFACTURERS REQUIREMENTS.
 - LOCATE ALL HVAC CONTROLS AND DISCONNECT SWITCHES APPROXIMATELY 4 FT ABOVE FINISHED FLOOR. COORDINATE LOCATIONS AND INSTALLATION WITH ELECTRICAL.



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Consultant:

FINAL SUBMITTAL



Engineer's Seal: 44720 NATHAN EDWARD NUTTER One Signed, 7-30-24 ARIZONA, U.S.A.



Client / Owner: NAVAJO TRIBAL UTILITY AUTHORITY UTILITIES FOR THE NAVAJO NATION

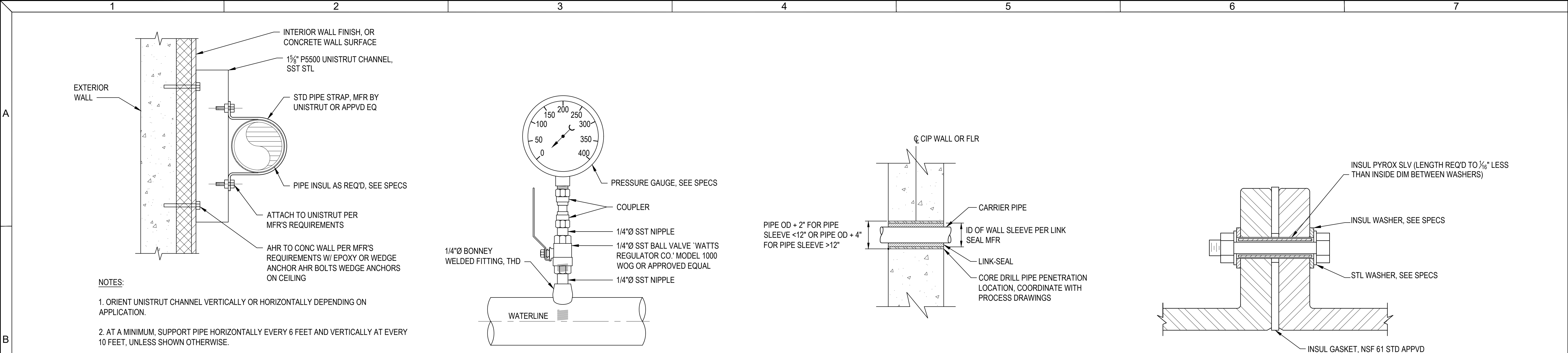
Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

Drawing Title:

PROCESS COTTONWOOD SECTIONS AND HVAC SCHEDULES

Designed By: AMB	CONSOR Project No.: W232520UT
Drawn By: JLC	Issued On: JULY 2024
Checked By: AMB	Drawing No.: D-301
Approved By: ----	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



1 PIPE EQUIPMENT SUPPORT
SCALE: NTS

2 PRESSURE GAUGE ASSEMBLY
SCALE: NTS

3 PIPE PENETRATION
SCALE: NTS

4 FLANGE INSULATING JOINT ASSEMBLY
SCALE: NTS



5 SAMPLE TAP
SCALE: NTS

NOTES:

- SEE ELECTRICAL AND INSTRUMENTATION FOR PRESSURE TRANSMITTER CONNECTION DETAIL.
- SEE ELECTRICAL AND INSTRUMENTATION FOR ADDITIONAL FLANGE GROUNDING DETAILS REQUIRED BY MAGNETIC FLOWMETER.

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							Drawn By: JLC	Issued On: JULY 2024
							Checked By: AMB	Drawing No.: D-501
							Approved By: ----	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

A	ABBREVIATIONS												GENERAL NOTES: 1. THE GENERAL ABBREVIATIONS ARE NOT TO BE CONFUSED WITH EQUIPMENT NUMBERING PREFIXES LISTED ON GENERAL DRAWINGS OR OTHER CONTRACT DOCUMENTS.					
	A	AMP(S), AMPERE(S)	HP	HORSEPOWER	PVC	POLYVINYL CHLORIDE												
	AC	ALTERNATING CURRENT	HTR	HEATER	PWR	POWER												
	AFF	ABOVE FINISHED FLOOR	HV	HIGH VOLTAGE	I/O	INPUT/OUTPUT												
	AIC	AMPS INTERRUPTING CAPACITY, SYMM.	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	IPB	INSTRUMENT PULLBOX												
	AL	ALUMINUM	HZ	HERTZ (CYCLES PER SECOND)	J, JB	JUNCTION BOX												
	ARCH	ARCHITECT(URAL)	ICOM	INTERCOM	KCMIL	1000 CIRCULAR MIL												
	ASYM	ASYMMETRICAL	IMC	INTERMEDIATE METAL CONDUIT	KV	KILOVOLT												
	AUTO	AUTOMATIC	INTLK	INTERLOCK	KVA	KILOVOLT-AMPERE												
	AUX	AUXILIARY	KW	KILOWATT	KVAR	KILOVOLT-AMPERE REACTIVE												
B	AWG	AMERICAN WIRE GAUGE	KWH	KILOWATT-HOUR	RCPT	RECEPTACLE												
	BLDG	BUILDING	LCP	LOCAL CONTROL PANEL	REF	REFERENCE												
	C	CONDUCTOR, CONDUIT	LHH	LOW VOLTAGE HANDHOLE	REQD	REQUIRED												
	CB	CIRCUIT BREAKER	LMH	LOW VOLTAGE MANHOLE	RMS	ROOT MEAN SQUARE												
	CKT	CIRCUIT	LP	LEGEND PLATE	RNG	RUNNING												
	CND	CONDUIT	LTG	LIGHTING	RTD	RESISTANCE TEMPERATURE DETECTOR												
	CNTL	CONTROL	LV	LOW VOLTAGE	RTU	REMOTE TERMINAL UNIT												
	CONC	CONCRETE	M	METER	SA	SURGE ARRESTOR												
	CPT	CONTROL POWER TRANSFORMER	MBS	MANUAL BYPASS SWITCH	SCR	SILICON CONTROLLED RECTIFIER												
	CT	CURRENT TRANSFORMER	MCC	MOTOR CONTROL CENTER	SD	SMOKE DETECTOR												
C	CU	COPPER	MCP	MOTOR CIRCUIT PROTECTOR	SEC	SECONDARY												
	DB	DUCT BANK, DIRECT BURIAL	MECH	MECHANICAL	SEL	SELECTOR												
	DC	DIRECT CURRENT	MFR	MANUFACTURE(R)	SES	SERVICE ENTRANCE SECTION												
	DCU	DISTRIBUTED CONTROL UNIT	MH	MANHOLE	SHH	SIGNAL HANDHOLE												
	DET	DETAIL	MISC	MISCELLANEOUS	SPEC	SPECIFICATION												
	DISC	DISCONNECT	MMH	MEDIUM VOLTAGE MANHOLE	SR	SINGLE RATIO												
	DP	DISTRIBUTION PANEL	MOV	MOTOR OPERATED VALVES	ST	SHORT TIME												
	DWG	DRAWING	MPC	MINI POWER CENTER	SSS	SOLID STATE STARTER												
	EL	ELEVATION	MR	MULTI RATIO	SUB	SUBSTATION												
	ELEC	ELECTRIC(AL)	MTS	MANUAL TRANSFER SWITCH	SW	SWITCH												
D	EMER	EMERGENCY	MV	MEDIUM VOLTAGE	SWBD	SWITCHBOARD												
	EMH	ELECTRICAL MANHOLE	MVMC	MEDIUM VOLTAGE MOTOR CONTROL	SWGR	SWITCHGEAR												
	EMT	ELETRICAL METALLIC TUBING	N/A	NOT APPLICABLE	SYS	SYSTEM												
	ENCL	ENCLOSURE/ENCLOSED	N.C.	NORMALLY CLOSED	TB	TERMINAL BOX, TERMINAL BLOCK												
	EPB	ELECTRICAL PULLBOX	NEUT,N	NEUTRAL	TEL	TELEPHONE												
	EQUIP	EQUIPMENT	NF	NON-FUSED	TEMP	TEMPERATURE												
	(E)	EXISTING	N.O.	NORMALLY OPEN	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR												
	FDR	FEEDER	NO.	NUMBER	TYP	TYPICAL												
	FLA	FULL LOAD AMPS	NP	NAMEPLATE	U/G	UNDERGROUND												
	FLEX	FLEXIBLE CONDUIT	NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED												
SYMBOLS:																		
CIRCUIT AND RACEWAYS:						GROUNDING:						LIGHTING CONTROL AND CIRCUITING:						
— — — — — — — — — — —OHE—OHE— </																		



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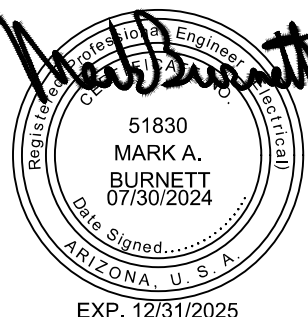
Consultant:



engineering & integration
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CONSTRUCTION SET



Engineer's Seal:


EXP. 12/31/2025

Client / Owner:


Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
B-1 BOOSTER BUMP STATION

Drawing Title:

ELECTRICAL
COTTONWOOD

LEGENDS & SYMBOLS
SHEET - I

Designed By:
RPO

Drawn By:
RPO

Checked By:
MAB

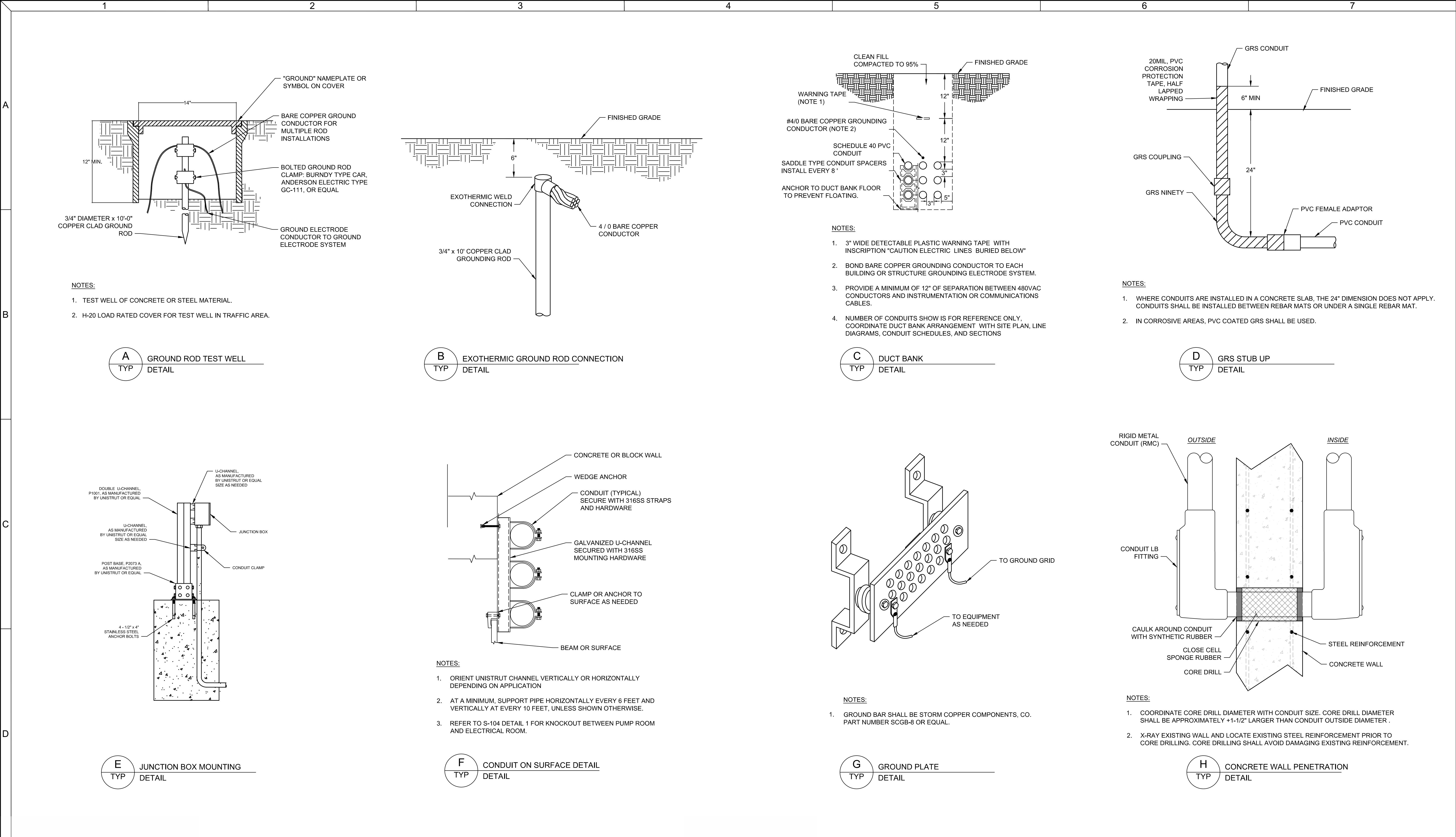
Approved By:
MAB

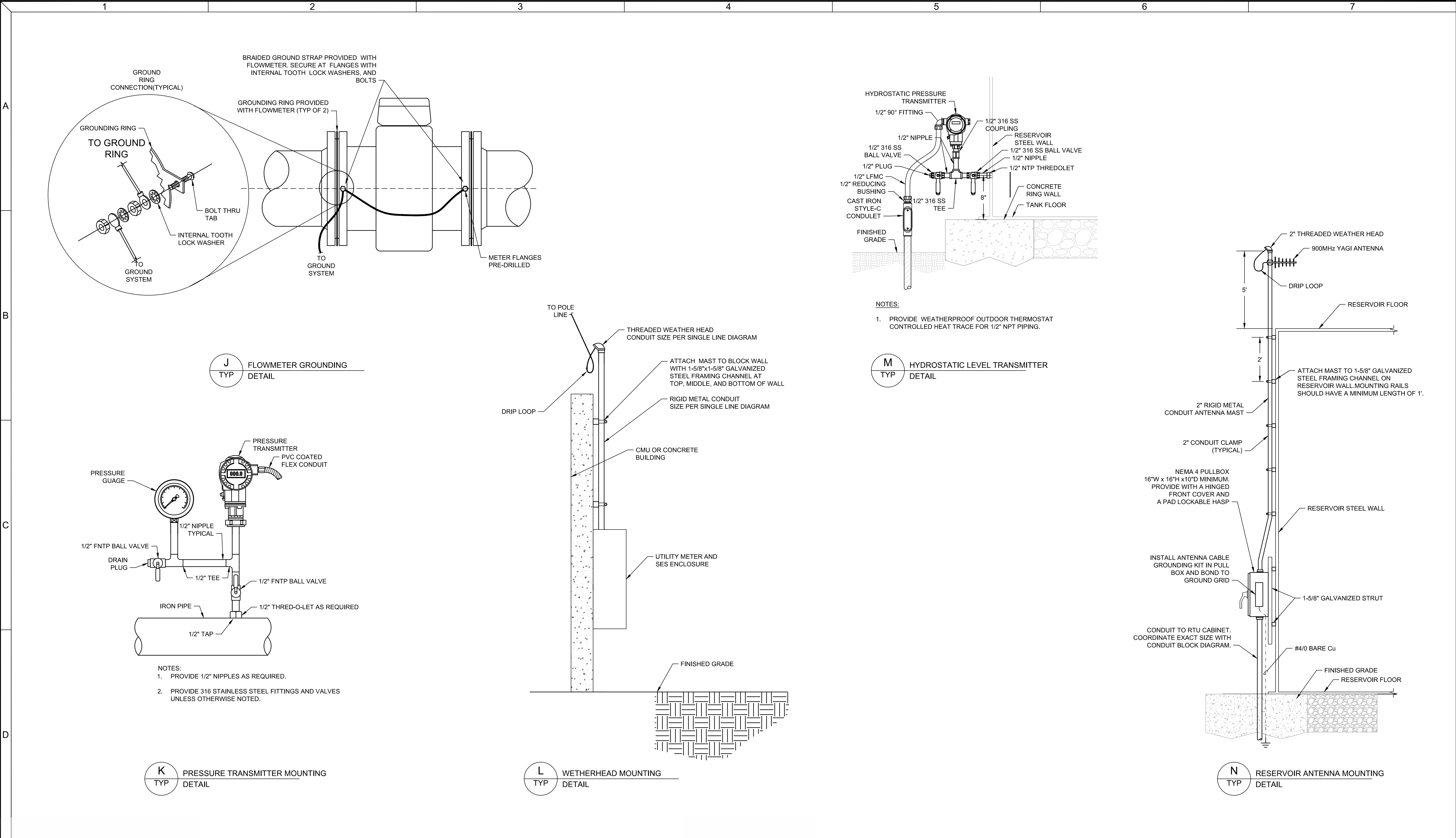
CONSOR Project No.: W23250UT

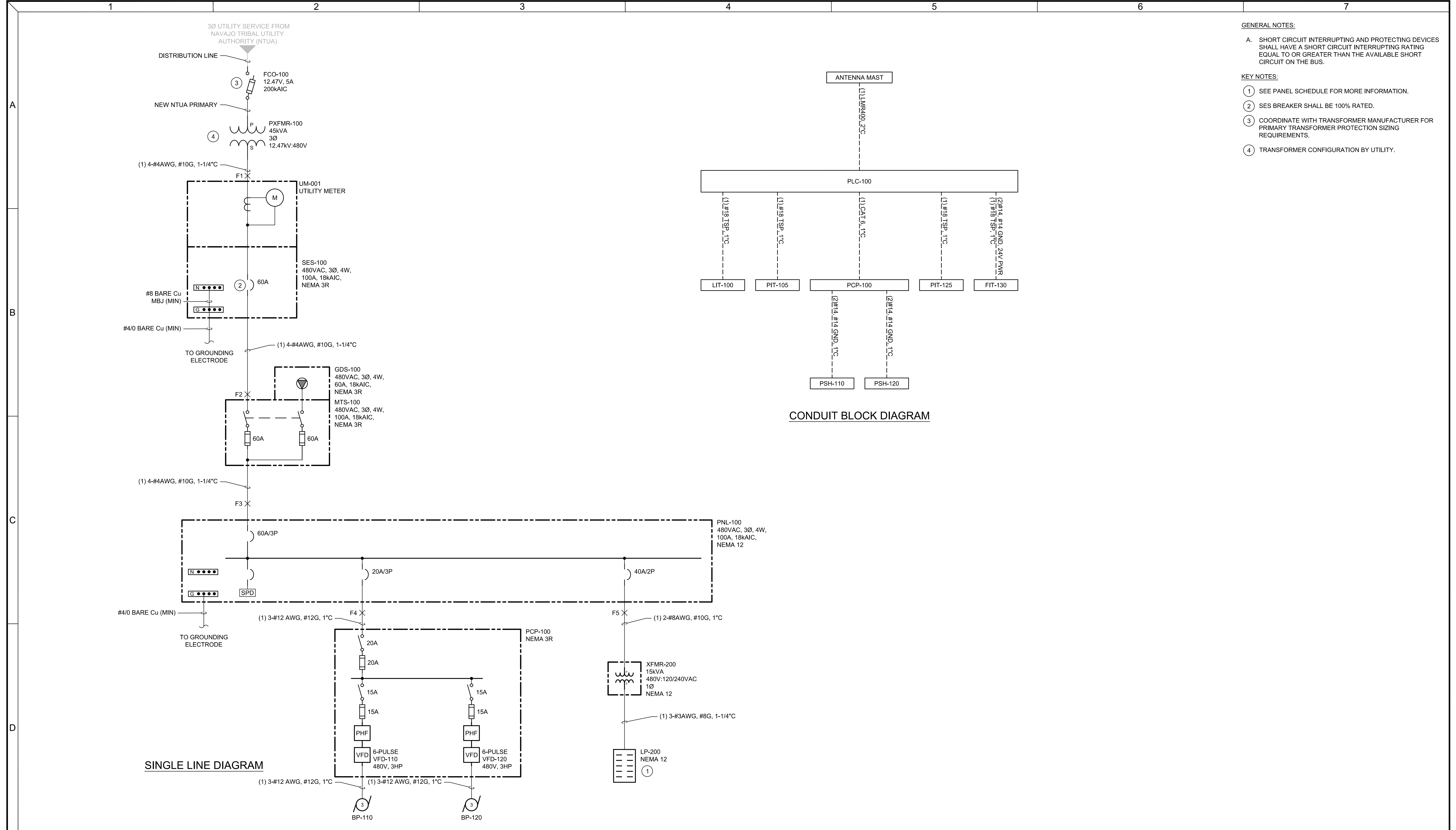
Issued On: JULY 2024

Drawing No.: E001

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE







A

B

C

D

GENERAL NOTES:

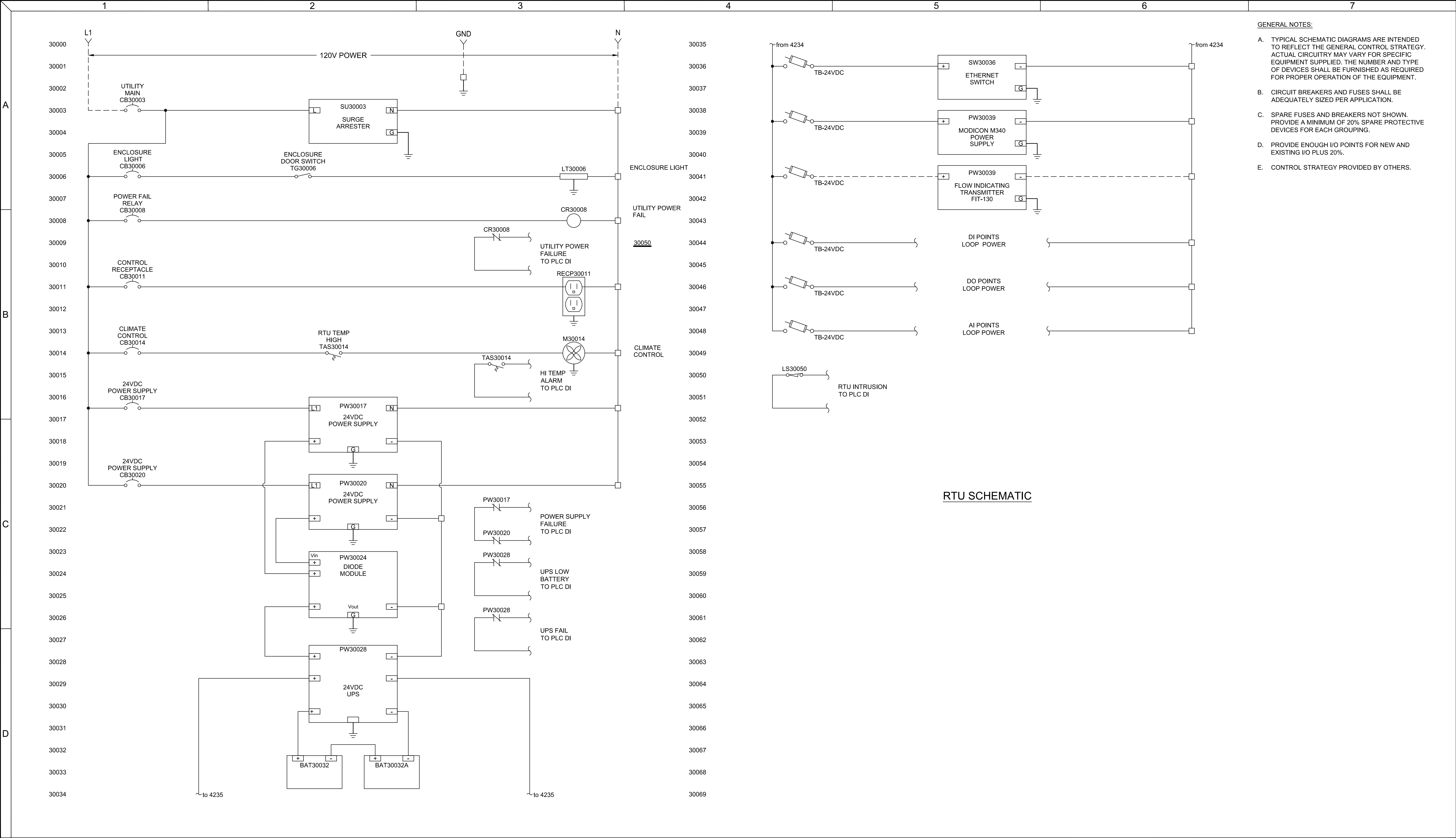
A. SHORT CIRCUIT INTERRUPTING AND PROTECTING DEVICES SHALL HAVE A SHORT CIRCUIT INTERRUPTING RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT ON THE BUS.

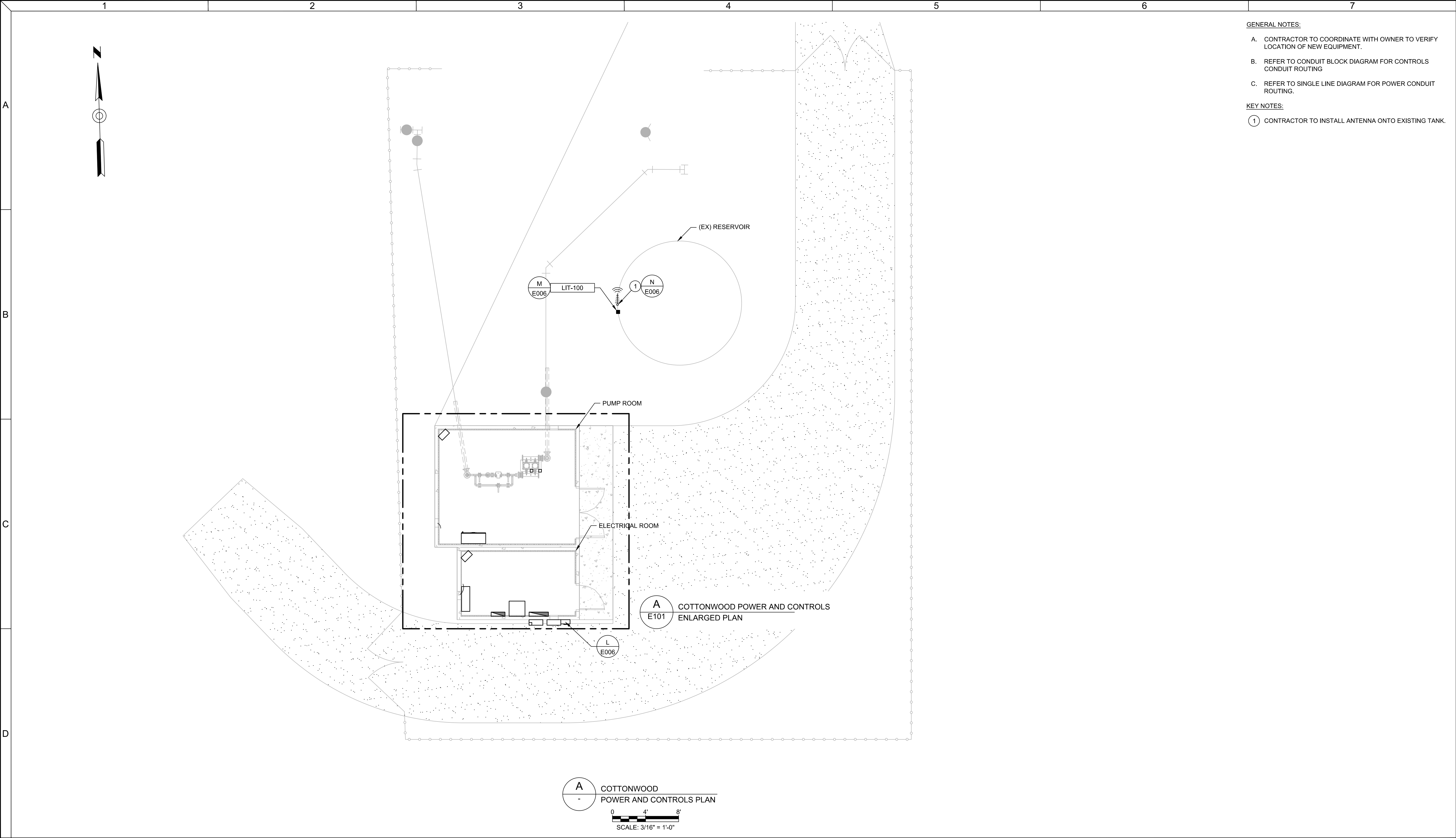
LOAD CALCULATIONS												
						BUS CALCULATIONS			CONNECTED	ADJUSTED	FUTURE	
ID	PNL-100		Notes:			SUBTOTAL (A)			31.8	31.8		
VOLTAGE	480					+25% OF LARGEST MOTOR (A)			1.9	1.9		
PHASE	3					TOTAL AMPS			33.7	33.7		
RATING (A)	60					TOTAL KVA			28.0	28.0		
STATUS	CIRCUIT ID	CIRCUIT DESCRIPTION		SOURCE/ LOAD TYPE	MOTOR (HP)	AMPS	KVA	CONNECTED (A)	DUTY CYCLE FACTOR	DEMAND FACTOR	DEMAND LOAD (A)	FUTURE LOAD (A)
NEW	PCP-100	PUMP CONTROL PANEL		KVA			6.3	7.6	100%	100%	7.6	
NEW	LP-200	LIGHTING PANEL		AMPS		24.2		24.2	100%	100%	24.2	

SHORT CIRCUIT CALCULATIONS														
SOURCE	TO EQUIPMENT	FAULT POINT	AVAILABLE SCA	V (P-P)	COND. SIZE	TYPE	NO. OF RUNS	RUN LENGTH	CONDUIT TYPE	NO. OF COND.	CONSTANT			l(sca)
											C	f	m	
PXFMR-100	SES-001	F1	-	480	4	Cu	1	50	PVC	1/C	3,826	-	-	1,083
SES-100	MTS-100	F2	1,083	480	4	Cu	1	10	PVC	1/C	3,826	0.01	0.99	1,072
MTS-100	PNL-100	F3	1,072	480	4	Cu	1	10	PVC	1/C	3,826	0.01	0.99	1,061
PNL-100	PCP-100	F4	1,061	480	12	Cu	1	10	PVC	1/C	617	0.06	0.94	999
PNL-100	XFMR-200	F5	1,061	480	8	Cu	1	10	PVC	1/C	1,559	0.02	0.98	1,035

LP-200												
VOLTS		120/240	VAC		PH	1	FED FROM		XFMR-200			
MAIN BREAKER		80	A		W	3	LOCATION		E-ROOM			
BUS RATING		100	A		AIC RATING	10	KA	MOUNTING		SURFACE		
LOAD DESCRIPTION	BRK	LOAD TYPE	No	VA			VA		No	LOAD TYPE	BRK	LOAD DESCRIPTION
				A	B		A	B				
ELEC ROOM - LIGHTS	20	CONT	1	80			75		2	CONT	20	EF-100
ELEC ROOM - RECEPT	20	NC	3		360			75	4	CONT	20	EF-200
PUMP ROOM - LIGHTS	20	CONT	5	80			3000		6	CONT	35	UH-100
PUMP ROOM - RECEPT	20	NC	7		360			3000	8	CONT	35	UH-200
OUTSIDE - LIGHTS	20	CONT	9	71			1200		10	CONT	20	RTU-100
OUTSIDE - RECEPITS	20	NC	11		360			0	12	CONT	20	SPARE
LIT HEAT TRACE RECEPTACLES	20	NC	13	180			0		14	CONT	20	SPARE
SPACE			15		0			0	16			SPACE
SPACE			17	0			0		18			SPACE
SPACE			19		0			0	20			SPACE
SPACE			21	0			0		22			SPACE
SPACE			23		0			0	24			SPACE
SPACE			25	0			0		26			SPACE
SPACE			27		0			0	28			SPACE
SPACE			29	0			0		30			SPACE
SPACE			31		0			0	32			SPACE
SPACE			33	0			0		34			SPACE
SPACE			35		0			0	36			SPACE
SPACE			37	0			0		38			SPACE
SPACE			39		0			0	40			SPACE
SPACE			41	0			0		42			SPACE
NON-CONTINUOUS LOADS KVA				0.18	1.08	NOTES:						
CONTINUOUS LOADS KVA				5.63	3.84							
PHASE TOTAL KVA				5.81	4.92							
TOTAL KVA				10.74								
TOTAL AMPS				44.73								

LUMINAIRE SCHEDULE											
TYPE OR MARK	DESCRIPTION	MFR	CATALOG NUMBER		MOUNT	LAMP DATA				VAC	NOTES
						QUAN.	VA	TYPE	LUMENS		
A	4' LED STRIP FOR WET LOCATIONS	LITHONIA	FEM L48 3000LM LPAFL MD MVOLT 30K 80CRI		S	4	29	LED	3,032	120	1
B	WALL PACK IP66 WET LOCATIONS	LITHONIA	WPX0 LED ALO SWW2 MVOLT PE DDBXD M2		E (10')	5	13	LED	1,650	120	2
EX	SINGLE FACE CEILING MOUNT LED EXIT SIGN	LITHONIA	WLTE W 1 R EL		W (10')	1	3	LED		120	
	MOUNTING					LAMP TYPE					
	R - RECESSED		D - DRYWALL			F	FLUORESCENT				
	S - SURFACE		G - GRID			CF	COMPACT FLUORESCENT				
	W - WALL		C - CONDUIT			LED	LIGHT EMITTING DIODE				
	P - PENDANT		PL(x) - POLE			MH	METAL HALIDE				
	E - EXTERIOR		(x') - MOUNT HEIGHT			HPS	HIGH PRESSURE SODIUM				
						LPS	LOW PRESSURE SODIUM				
	GENERAL NOTES:										
	A) REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.										
	B) SUBMIT EQUALS FOR APPROVAL.										
	NOTES:										
	1) FIXTURES WITH EMERGENCY BATTERY PACKS TO BE FULLY SWITCHABLE UNLESS NOTED AS NIGHT LIGHT (NL). PROVIDE UNSWITCHED HOT FOR CHARGER.										
	2) FURNISH FIXTURE WITH BUTTON TYPE PHOTOCELL FOR ON/OFF CONTROL.										

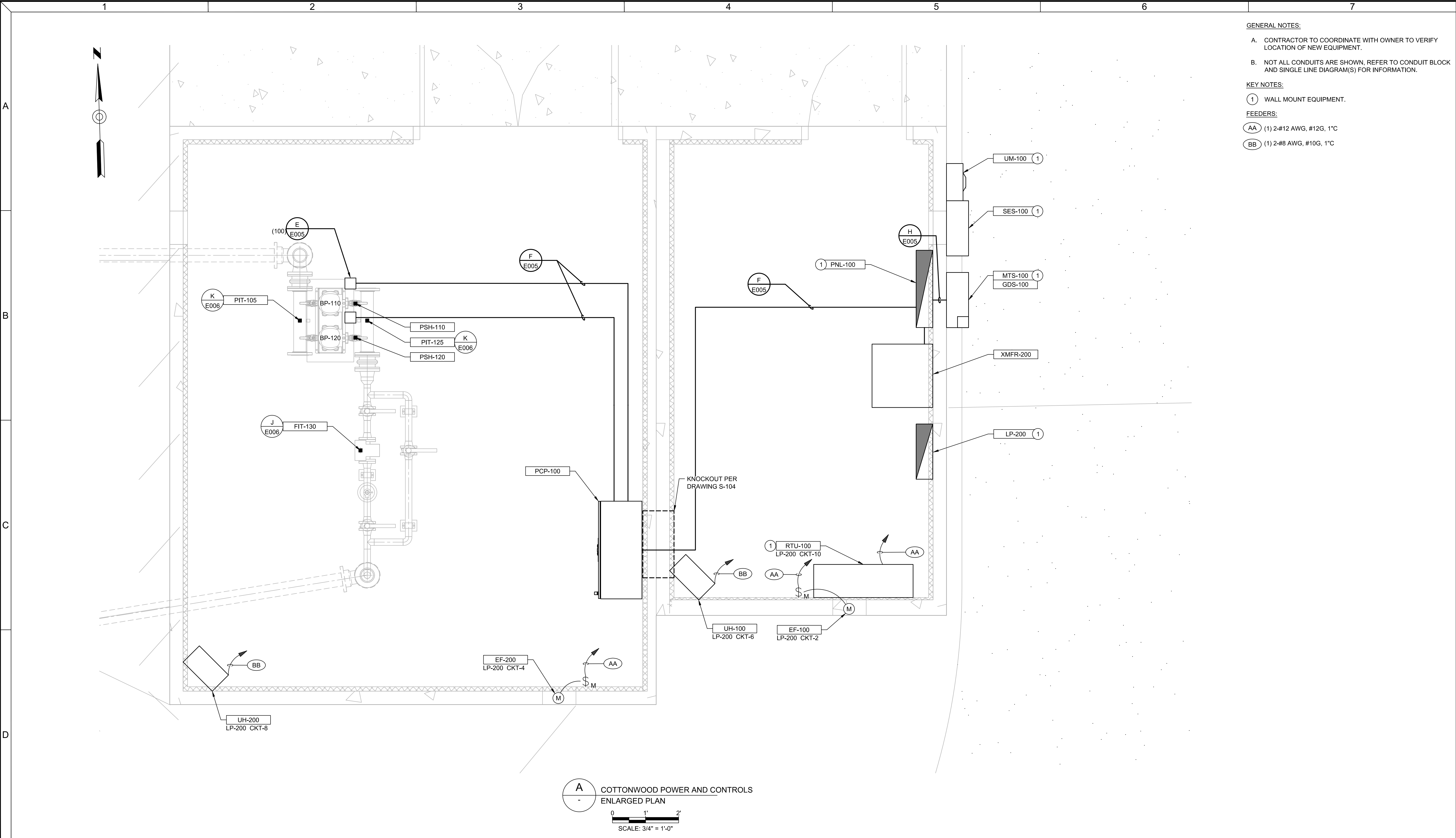




- GENERAL NOTES:
- A. CONTRACTOR TO COORDINATE WITH OWNER TO VERIFY LOCATION OF NEW EQUIPMENT.
 - B. REFER TO CONDUIT BLOCK DIAGRAM FOR CONTROLS CONDUIT ROUTING
 - C. REFER TO SINGLE LINE DIAGRAM FOR POWER CONDUIT ROUTING.
- KEY NOTES:
- ① CONTRACTOR TO INSTALL ANTENNA ONTO EXISTING TANK.

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	 CANFIELD engineering & integration (480) 588-8021, WWW.CANFIELDENGIN.COM			RPO			Issued On: JULY 2024	
				Drawn By:			RPO	Drawing No.:
				Checked By:			MAB	E100
			Approved By:				0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	
			MAB					

Drawing Path and Name: C:\Users\Public\CEI Dropbox\Projects\2023\230073 CON - NTUA Four BFS Elec. Eng\8.0 Design\230073 CON - NTUA COTTONWOOD\E100.dwg, Plotted Date: July 31, 2024 5:34 PM By: Ryan Oliver



GENERAL NOTES:

A. CONTRACTOR TO COORDINATE WITH OWNER TO VERIFY LOCATION OF NEW EQUIPMENT.

B. NOT ALL CONDUITS ARE SHOWN, REFER TO CONDUIT BLOCK AND SINGLE LINE DIAGRAM(S) FOR INFORMATION.

KEY NOTES:

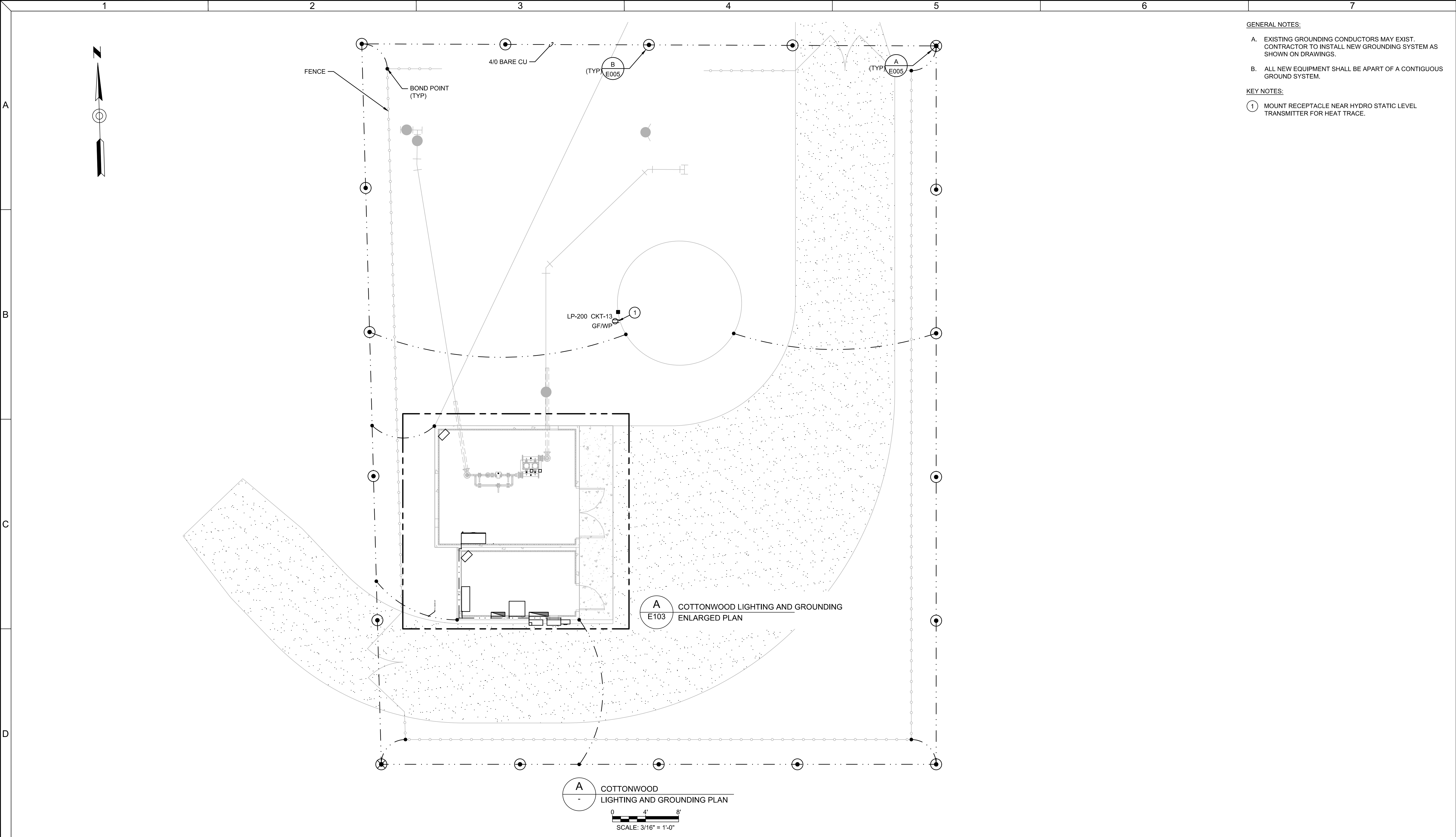
① WALL MOUNT EQUIPMENT.

FEEDERS:

AA (1) 2-#12 AWG, #12G, 1" C

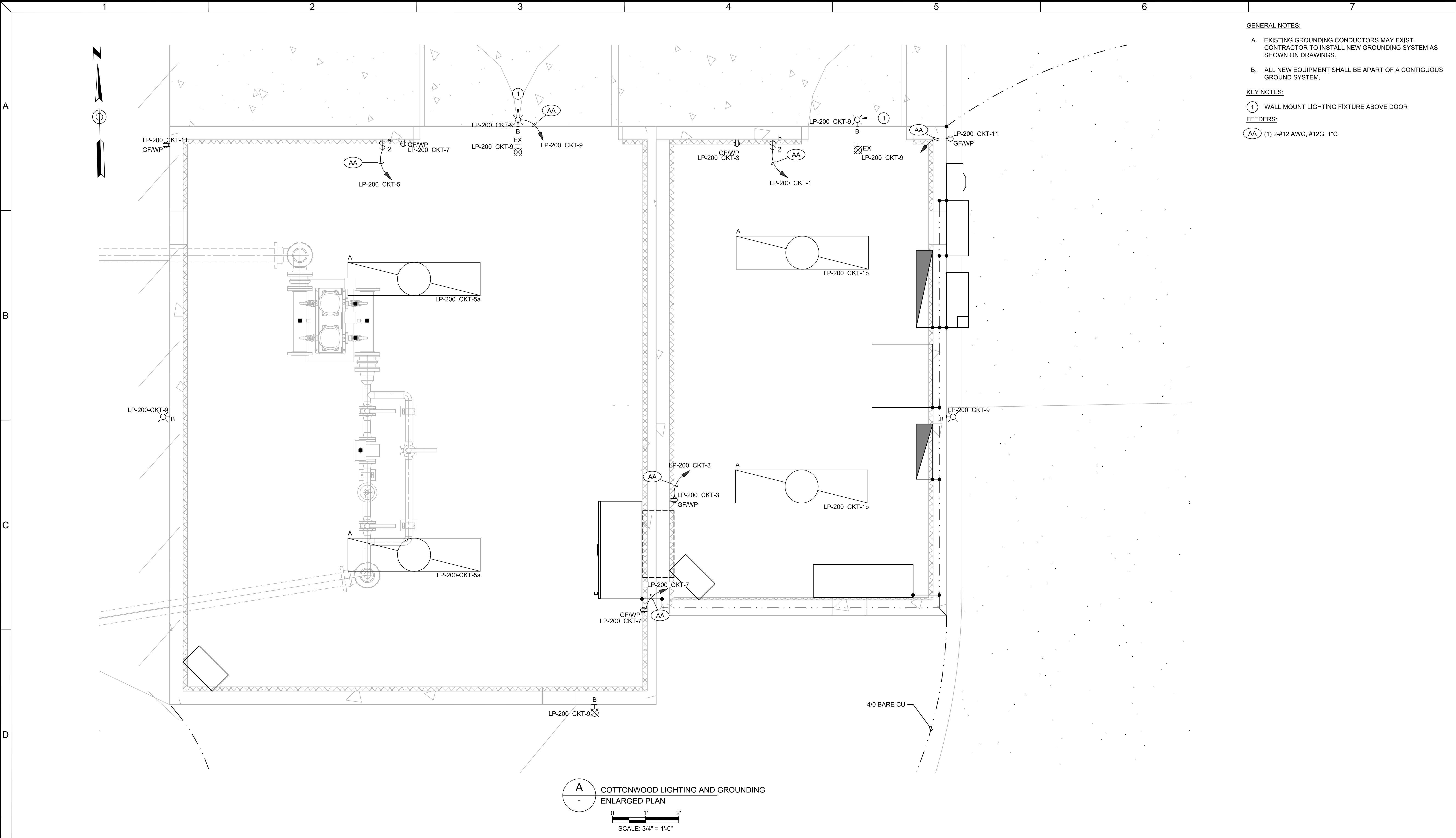
BB (1) 2-#8 AWG, #10G, 1" C

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	 (480) 588-8021, WWW.CANFIELDENGIN.COM				NAVAJO TRIBAL UTILITY AUTHORITY B-1 BOOSTER BUMP STATION	ELECTRICAL COTTONWOOD ENLARGED PLAN POWER & CONTROLS	RPO	W23250UT
							Drawn By:	Issued On:
							Checked By:	Drawing No.:
	MAB	E101						
	Approved By:						0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	
	MAB							



- GENERAL NOTES:
- A. EXISTING GROUNDING CONDUCTORS MAY EXIST. CONTRACTOR TO INSTALL NEW GROUNDING SYSTEM AS SHOWN ON DRAWINGS.
 - B. ALL NEW EQUIPMENT SHALL BE APART OF A CONTIGUOUS GROUND SYSTEM.
- KEY NOTES:
- ① MOUNT RECEPTACLE NEAR HYDRO STATIC LEVEL TRANSMITTER FOR HEAT TRACE.

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	 engineering & integration (480) 588-8021 WWW.CANFIELDENG.COM						RPO	W23250UT
							Drawn By:	Issued On:
							RPO	JULY 2024
Checked By:	Drawing No.:							
MAB	E102							
Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE							
MAB								



- GENERAL NOTES:**
- A. EXISTING GROUNDING CONDUCTORS MAY EXIST. CONTRACTOR TO INSTALL NEW GROUNDING SYSTEM AS SHOWN ON DRAWINGS.
 - B. ALL NEW EQUIPMENT SHALL BE APART OF A CONTIGUOUS GROUND SYSTEM.
- KEY NOTES:**
- ① WALL MOUNT LIGHTING FIXTURE ABOVE DOOR
- FEEDERS:**
- AA (1) 2-#12 AWG, #12G, 1°C

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							Issued On: JULY 2024		
								Drawing No.: E103	
								0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	
							Checked By: MAB		
							Approved By: MAB		

	1	2	3	4	5	6	7	
A	PROCESS AND SIGNAL: MAIN PROCESS FLOW (WITH TYPICAL DIRECTION OF FLOW SHOWN) SECONDARY PROCESS FLOW INSTRUMENT SUPPLY, PROCESS TAPS EQUIPMENT BOUNDARY EXISTING FUTURE PNEUMATIC SIGNAL (ANALOG OR DIGITAL) ELECTRIC SIGNAL (ANALOG OR DIGITAL) MISC. ELECTRICAL CAPILLARY TUBE ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED) ELECTROMAGNETIC OR SONIC SIGNAL (UNGUIDED) SOFTWARE OR DATA LINK MECHANICAL LINK HYDRAULIC PROCESS OR INSTRUMENTATION PIPING CONNECTION. NO. 3 WATER SHOWN. SEE DRAWING G2 FOR PIPING SERVICE SYMBOL. DATA COMMUNICATION		VALVE AND ACTUATOR SYMBOLS: N.O. NORMALLY OPEN N.C. NORMALLY CLOSED GATE VALVE PLUG VALVE BALL VALVE GLOBE VALVE BUTTERFLY VALVE CHECK VALVE CONE VALVE DIAPHRAGM VALVE NEEDLE VALVE RELIEF VALVE FLOAT VALVE BACKFLOW PREFENTER BALL CHECK VALVE KNIFE VALVE GAGE OR ROOT VALVE F.O. FAIL OPEN F.C. FAIL CLOSED THREE WAY VALVE (W/TYPICAL FAIL POSITION) FOUR WAY VALVE PRESSURE REDUCING VALVE BACK PRESSURE REDUCING VALVE SOLENOID OPERATED VALVE PISTON OPERATED VALVE FLAP GATE LSX XXX FLOAT/PROBE TELESCOPIC VALVE AIR RELIEF VALVE		PROCESS DEVICE SYMBOLS: STRAINER - STANDARD OR BASKET REDUCER OR INCREASER DRAIN SEPARATOR FILTER CAP OR PLUG BLIND FLANGE UNION QUICK DISCONNECT COUPLING SPRAY NOZZLES FINE BUBBLE DIFFUSER COARSE BUBBLE DIFFUSER TANK ROTAMETER INJECTOR SLIDE GATE (SLG) (NORMALLY OPEN) SLIDE GATE (SLG) (NORMALLY CLOSED) SLUICE GATE (SG) (NORMALLY OPEN) SLUICE GATE (SG) (NORMALLY CLOSED) SLIDE PLATE (SP) STOP LOG (MME) THREADED CAP FLEX CONNECTION FLEX CONNECTION (STEEL BRAIDED) ORIFACE PLATE PULSATION DAMPENER VENT CALIBRATION COLUMN		MISCELLANEOUS MECHANICAL EQUIPMENT SYMBOLS: CENTRIFUGAL PUMP METERING PUMP VERTICAL INLINE PUMP STATIC MIXER PROGRESSIVE CAVITY PUMP ELECTRIC MOTOR COMPRESSOR DISCONNECT SWITCH SUBMERSIBLE WELL PUMP MIXER TANK LIFT PUMP DAY TANK SUMP PUMP ROTARY PUMP AIR LIFT PUMP PD BLOWER SAND SEPARATOR VARIABLE POSITION MIXER	
B	DRAWING CROSS-REFERENCE SYMBOLOGY FOR PROCESS AND SIGNAL LINES: 6"-CR-01-SSA I101 I100 6"-CR-01-SSA 6" CRUD LINE COMES FROM DRAWING I100 AND WILL CONTINUE ON DRAWING I101 6" CRUD LINE COMES FROM DRAWING I100 AND WILL CONTINUE ON DRAWING I101			PROCESS AND INSTRUMENTATION PIPING IDENTIFICATION: NOMINAL PIPE DIAMETER PROCESS DESIGNATION PIPE IDENTIFICATION NUMBER MATERIAL SPECIFICATION EXISTING PIPE X"-XX-##-XXX-Ex		MECHANICAL EQUIPMENT IDENTIFICATION: CRUD FEED PUMP } EQUIPMENT NAME XX-XXX-### } EQUIPMENT NUMBERS UNIQUE IDENTIFICATION NUMBER EQUIPMENT TYPE PROCESS DESIGNATION		
C								
D								

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CONSTRUCTION SET

Engineer's Seal:

Client / Owner:

Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
B-1 BOOSTER BUMP STATION

Drawing Title:

P&ID
COTTONWOOD

LEGENDS & SYMBOLS
SHEET - I

Designed By:
RPO

Drawn By:
RPO

Checked By:
MAB

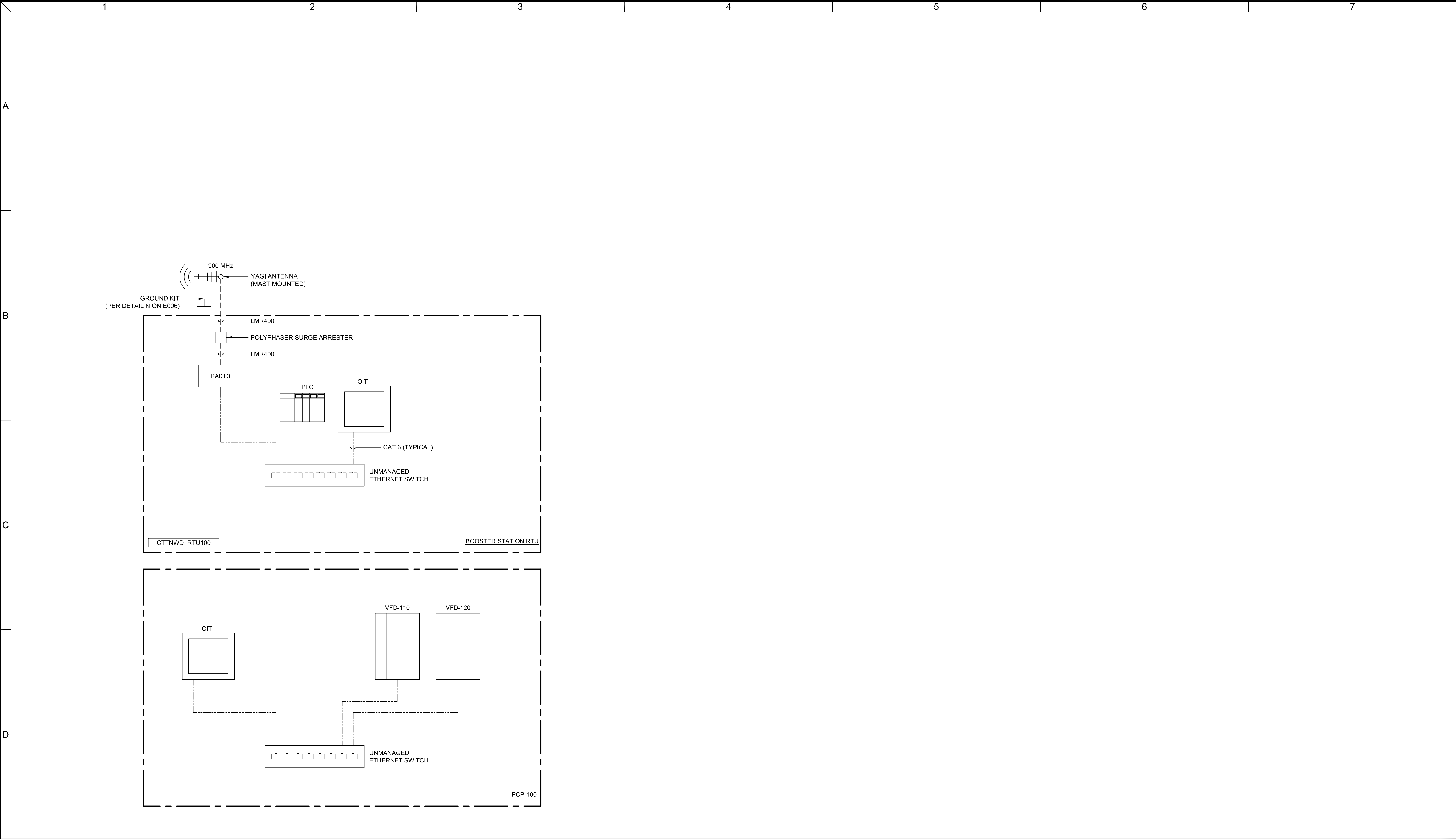
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MAB

CONSOR Project No.: W23250UT

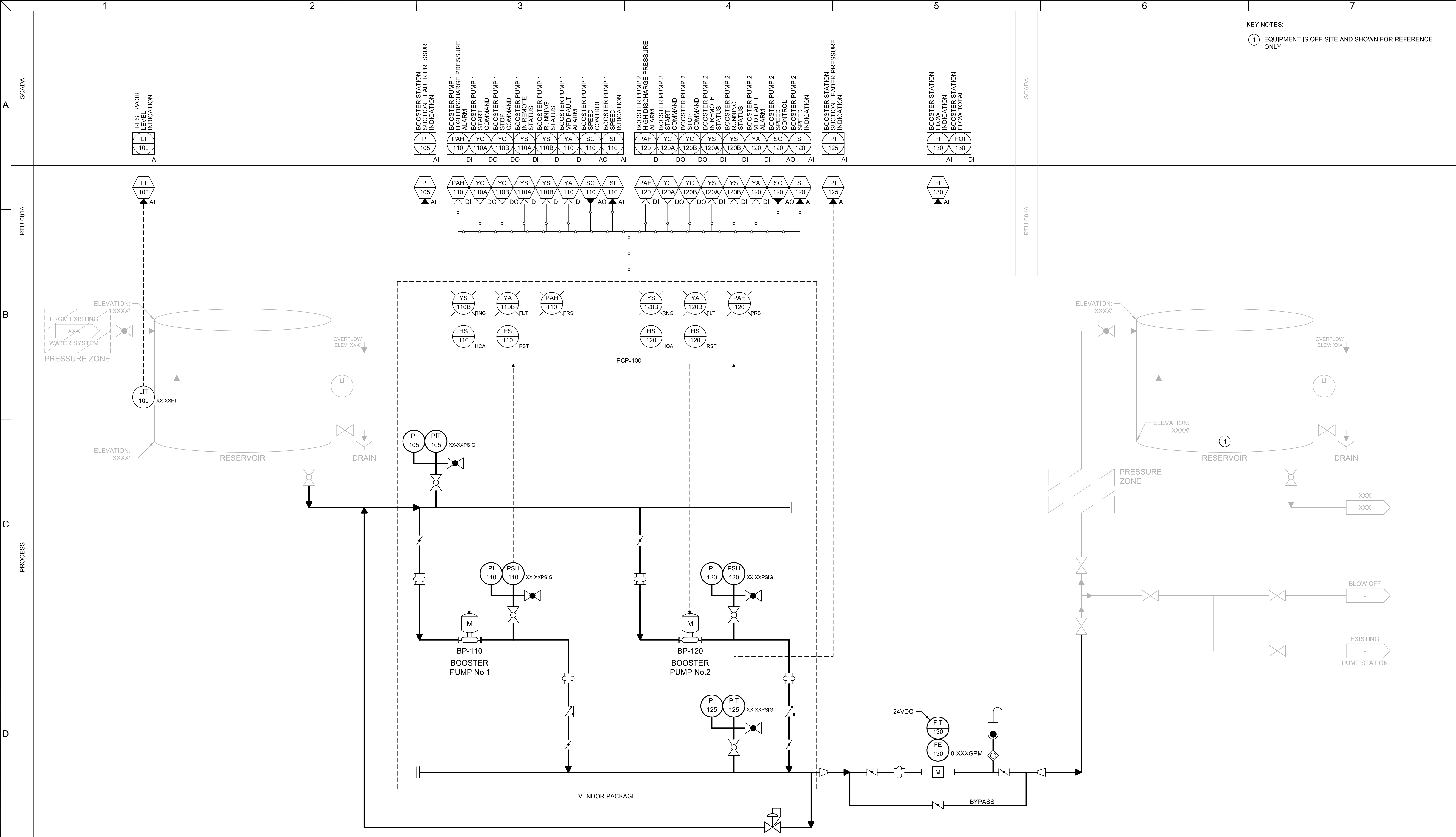
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Drawing No.: I001

0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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							Drawn By: RPO	Issued On: JULY 2024
							Checked By: MAB	Drawing No.: I003
							Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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CONSTRUCTION SET

Engineer's Seal:

Client / Owner:

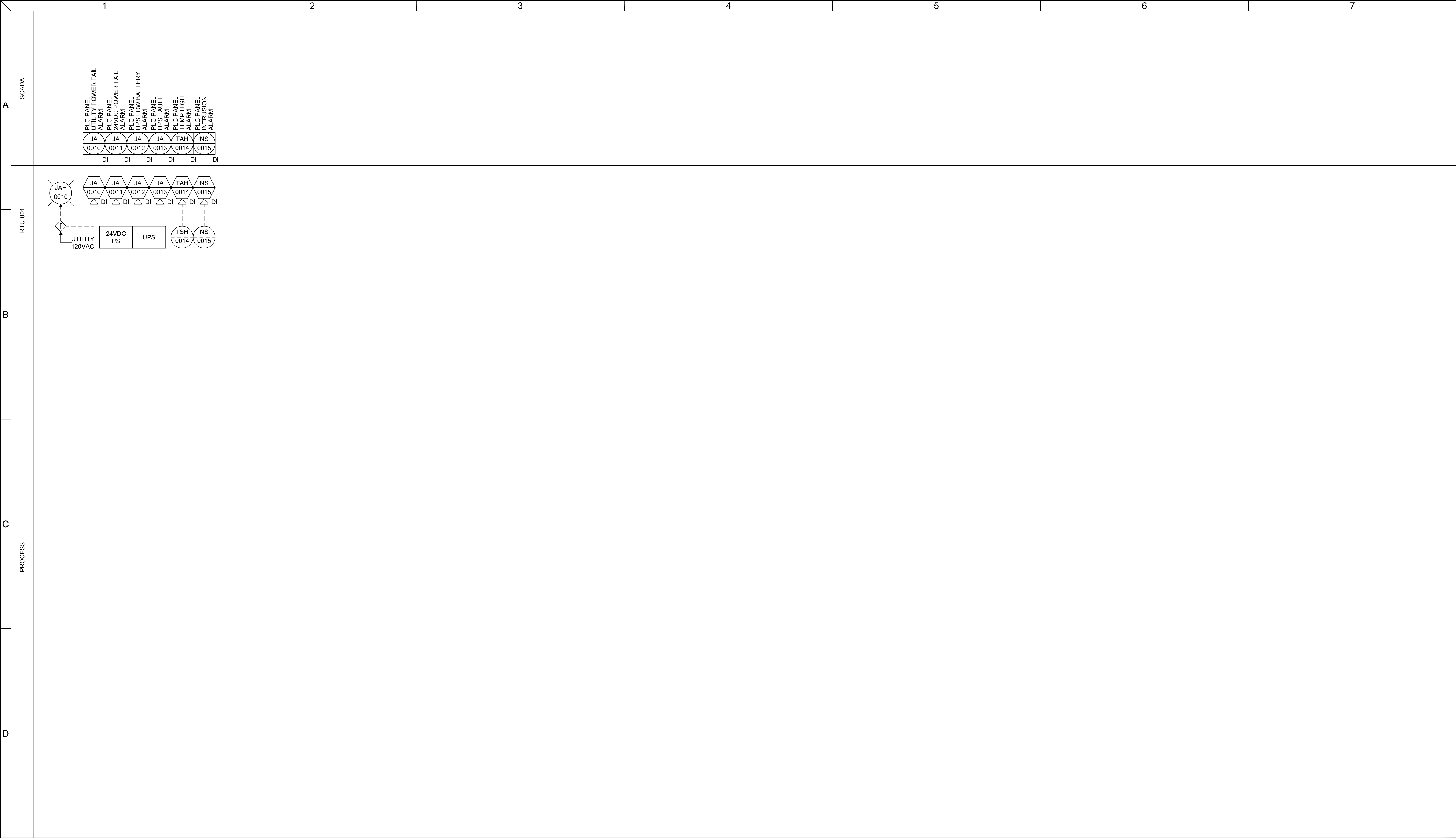
Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY B-1 BOOSTER BUMP STATION

Drawing Title:

P&ID COTTONWOOD BOOSTER STATION

Designed By:	RPO	CONSOR Project No.:	W23250UT
Drawn By:	RPO	Issued On:	JULY 2024
Checked By:	MAB	Drawing No.:	I010
Approved By:	MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1"	DRAWING IS NOT TO SCALE





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CONSTRUCTION SET



Engineer's Seal:



Client / Owner:



Project Title:

NAVAJO TRIBAL UTILITY
AUTHORITY
B-1 BOOSTER BUMP STATION

Drawing Title:

P&ID
COTTONWOOD

SUPPORT EQUIPMENT

Designed By:
RPO

Drawn By:
RPO

Checked By:
MAB

Approved By:
MAB

CONSOR Project No.: W23250UT

Issued On: JULY 2024

Drawing No.: I011

01/2

1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

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