NAVAJO TRIBAL UTILITY AUTHORITY **BOOSTER PUMP STATION** NAZLINI





90% SUBMITTAL

PROJECT NO: W232520UT **APRIL 2024**



LOCATION MAP SCALE: 1" = 20000'





PRELIMINARY **NOT FOR** CONSTRUCTION



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-003	
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SHEET INDEX DESIGNATIONS



3

DISCIPLINE DESIGNATORS

G GENERAL

2

- С CIVIL
- L LANDSCAPE
- ARCHITECTURAL Α STRUCTURAL
- S D PROCESS
- PLUMBING Р
- MECHANICAL (HVAC) Μ
- FIRE PROTECTION F
- ELECTRICAL Е
- INSTRUMENTATION AND P&IDS

SHEET TYPE DESIGNATORS

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

PLAN AND PROFILE

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

PROFILE SCALE: 1"=X' HORIZ, 1"=X' VERT

Consor

Consultant:

Drawing Path and Name: A:_V-W\Projects\UT\NTUA\2023\W232520UT.00\12 CADD\12-5 Sheets\B-3 Nazlini\W232520UT_B-3_G-001.dwg, Plotted Date: April 5, 2024 10:12 AM By: Ryan Ball

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

4



NORTH ARROW AND SCALE BAR

7



- DETAIL NUMBER

- SHEET FROM WHICH DETAIL IS TAKEN *



CENEDAI	Designed By:	CONSOR Project No.: W232520UT		
	AMB	Issued On: APRIL 2024		
	Drawn By:	Drawing No.:		
	Checked By:	G-001		
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	@	AT	CMP	CORRUGATED METAL PIPE	FLR	FLOOR		KPL	KICK PLATE		PRESS	PRESSURE		TCE	TEMPORARY CONSTRUCTIC	ON EASEMENT
	AASHTO	AMERICAN ASSOCIATION OF STATE	CMU	CONCRETE MASONRY UNIT	FM	FORCE MAIN		KVA	KILOVOLT AM	IPERE	PRKG	PARKING		TDH	TOTAL DYNAMIC HEAD	
		HIGHWAY & TRANSPORTATION OFFICIALS	CND		FO	FIBER OPTIC	TE	KW	KILOWATI		PROP	PROPERTY		IEMP		RY
					FOC		IE	r vv r	KEYWAY		PRV			T&G THK		
	ABS	ACRYLONITRILE BUTADIENE STYRENE	COMB	COMBINATION	FOM	FACE OF MASONE	Y		I ENGTH		PSIG	POUNDS PI	ER SQUARE INCH GAUGE	THRD	THREAD (FD)	
	ABV	ABOVE / ALCOHOL BY VOLUME	CONC	CONCRETE	FOS	FACE OF STUDS	•	LAB	LABORATORY	Y	PSL	PIPE SLEE	/E	THRU	THROUGH	
	AC	ASPHALTIC CONCRETE	CONN	CONNECTION	FPM	FEET PER MINUTE		LAV	LAVATORY		PSPT	PIPE SUPP	ORT	TP	TEST PIT / TOP OF PAVEME!	NT /
	ACP	ASPHALTIC CONCRETE PAVING	CONST	CONSTRUCTION	FPS	FEET PER SECON)	LB	POUND		PT	POINT OF 1	ANGENCY		TURNING POINT	
А	ADJ	ADJUSTABLE	CONT	CONTINUOUS / CONTINUATION	FRP	FIBERGLASS REIN	FORCED PLASTIC	LF	LINEAR FOOT	Γ	PTVC	POINT OF T	ANGENCY ON VERTICAL		TRANSTRANSITION	
	ADJC	ADJACENT	CONTR	CONTRACT(OR)	FT	FEET / FOOT		LIN	LINEAL			CURVE		TSP	TRI-SODIUM PHOSPHATE	
	AFF	ABOVE FINISHED FLOOR	COORD	COORDINATE	FTG	FOOTING					PTW	PUMP TO V	VASTE	TST	TOP OF STEEL	
	AFG	ABOVE FINISHED GRADE	COP	COPPER		FUIURE				A1						
			CORP		FAIR	FIATURE								ITP	TTPICAL	
		ALGMINOM	CP	CONTROL POINT	G	GAS			LOW POINT		PW		VATER	UG	UNDERGROUND	
	AMP	AMPERE	CPI G	COUPLING	GA	GAUGE		LRG	LARGE		PWR	POWER		UH	UNIT HEATER	
	ANSI	AMERICAN NATIONAL STANDARDS	CPVC	CHLORINATED POLYVINYL CHLORIDE	GAL	GALLON		LS	LONG SLEEV	E / LUMP SUM				UN	UNION	
		INSTITUTE	CR	CRUSHED ROCK	GALV	GALVANIZED		LT	LEFT		QTY	QUANTITY		UON	UNLESS OTHERWISE NOTE	D
	APPROX	APPROXIMATE	CS	COMBINED SEWER	GC	GROOVED COUPL	ING	LVL	LEVEL					USGS	UNITED STATES GEOLOGIC	SURVEY
	APPVD	APPROVED	CSP	CONCRETE SEWER PIPE	GFA	GROOVED FLANG	E ADAPTER	LWL	LOW WATER	LINE	RAD	RADIUS				
	APWA	AMERICAN PUBLIC WORKS ASSOCIATION	СТ	COURT	GI	GALVANIZED IRON					RC	REINFORCI	ED CONCRETE	V	VENT / VOLT	
	ARCH	ARCHITECTURAL	CTR	CENTER	GIP		PIPE	MAN	MANUAL		RCP	REINFORCI		VAC	VACUUM	
	ARV		CU		GJ	GRIP JOINT					RD	ROAD / RO	OF DRAIN	VB		
	ASCE		CULV		GLV			MAA						VBUX		
	ASR	AOUIEER STORAGE & RECOVERY	CW	CLOCKWISE / COLD WATER				MCP	MASTER CON	JTROL PANEL	REINE	REINFORCI		VERT	VERTICAL	
	ASSN	ASSOCIATION	CY	CUBIC YARDS	GPD	GALLONS PER DA	Y	MECH	MECHANICAL	-	REQ'D	REQUIRED		VER	VARIABLE FREQUENCY DRI	VE
	ASSY	ASSEMBLY	CYL	CYLINDER LOCK	GPH	GALLONS PER HO	UR	MET	METAL		RESTR	RESTRAINE	D	VOL	VOLUME	
	ASTM	AMERICAN SOCIETY FOR TESTING			GPM	GALLONS PER MI	IUTE	MFR	MANUFACTU	RER	RFCA	RESTRAINE	ED FLANGE COUPLING ADAPTER	VCP	VITRIFIED CLAY PIPE	
1		& MATERIALS	D	DRAIN	GPS	GALLONS PER SE	COND	MGD	MILLION GALL	LONS PER DAY	RM	ROOM		VTR	VENT THROUGH ROOF	
	ATM	ATMOSPHERE	DC	DIRECT CURRENT	GR	GRADE		MH	MANHOLE		RND	ROUND				
R	AUTO	AUTOMATIC	DEFL	DEFLECTION	GR LN	GRADE LINE		MIN	MINIMUM		RO	ROUGH OP	ENING	W	WATER	
	AUX	AUXILIARY	DEQ	DEPARTMENT OF ENVIRONMENTAL QUALITY	GRTG	GRATING		MIPT	MALE IRON P	IPE IHREAD	R/W	RIGHT-OF-		W/	WITH	
1			DET		GV						күвүр			W/IN	WITHN WITHOUT	
					GRVL	GRAVEL		MON								
	ΑνννΑ	AMERICAN WATER WORKS ASSOCIATION			GIP	GTPSUM		MOT		MONOEITTIG			JNS PER MINUTE			
	B&S	BELL & SPIGOT	DIR	DIRECTION	HB	HOSE BIBB		MP	MII FPOST		RST	REINFORCI		WE	WIDE ELANGE	
	BC	BOLT CIRCLE	DIST	DISTANCE	HC	HOLLOW CORF		MSL	MEAN SEAL L	EVEL	RT	RIGHT		WH	WATER HEATER	
	BD	BOARD	DN	DOWN	HDPE	HIGH DENSITY PO	LYETHYLENE	MTD	MOUNTED					WI	WROUGHT IRON	
	BETW	BETWEEN	DR	DRIVE	HDR	HEADER					SALV	SALVAGE		WM	WATER METER	
	BF	BOTH FACE	DS	DOWNSPOUT	HDWE	HARDWARE		NA	NOT APPLICA	ABLE	SAN	SANITARY		WP	WORKING POINT / WATERPI	ROOFING
	BFD	BACKFLOW PREVENTION DEVICE	DWG	DRAWING	HGR	HANGER		NAVD	NORTH AMER	RICAN VERTICAL DATUM	SC	SOLID COR	E	WS	WATER SERVICE	
	BFILL	BACKFILL	DWL	DOWEL	HGT	HEIGHT		NC	NORMALLY C	CLOSED	SCHED	SCHEDULE		WT	WEIGHT	
	BFV	BUTTERFLY VALVE	DWV	DRAIN WASTE AND VENT	HH	HANDHOLD		NF	NEAR FACE		SD	STORM DR	AIN	WTP	WATER TREATMENT PLANT	-
	BHP	BRAKE HORSEPOWER	DWY	DRIVEWAY	HM	HOLLOW METAL	0.01100	NIC	NOT IN CONT		SDL	SADDLE		WTRT	WATERTIGHT	
	BKGD				HMAC	HOT MIX ASPHALT	CONCRETE	NO / NO.		PPEN / NUMBER	SDR	STANDARD	DIMENSION RATIO			
	BLDG	BUILDING									SECI	SECTION				
			EA		HOA		E	NRS		STEM	SHLDR	SHOULDER		VVVVIP	WASTEWATER TREATMENT	PLANI
	BM	BENCHMARK / BEAM	FF	FACH FACE	HORIZ		L	NTS	NOT TO SCAL	F	SIM	SIMILAR		X SECT	CROSS SECTION	
	BMP	BEST MANAGEMENT PRACTICES	EL	ELEVATION	HP	HIGH PRESSURE /	HORSEPOWER				SLP	SLOPE		XFMR	TRANSFORMER	
	BO	BLOW-OFF	ELB	ELBOW	HPG	HIGH PRESSURE (GAS	Ο ΤΟ Ο	OUT TO OUT		SLV	SLEEVE				
	BOC	BACK OF CURB	ENCL	ENCLOSURE	HPT	HIGH POINT		OC	ON CENTER		SOLN	SOLUTION		YD	YARD DRAIN / YARD	
	BS	BOTH SIDES	EOP	EDGE OF PAVEMENT	HR	HOUR		OD	OUTSIDE DIA	METER	SP	SOIL PIPE /	SEWER PIPE	YH	YARD HYDRANT	
	BSMT	BASEMENT	EQ	EQUAL	HSB	HIGH STRENGTH I	BOLT	OF	OVERFLOW /	OUTSIDE FACE	SPCL	SPECIAL		YR	YEAR	
	BTF	BOTTOM FACE	EQL SP	EQUALLY SPACED	HV	HOSE VALVE		OPNG	OPENING		SPEC(S)	SPECIFICA	TION(S)	7.1	7110	
	BIU		EQUIP		HVAC	HEATING, VENTILA	ATION, AIR		OPPOSITE		SPG	SPACING		ZN	ZINC	
	BV DW		ESIVIT					OSHA		ΙΔΙ SAFETY ΔΝΟ ΗΕΔΙ ΤΗ	SPL	SPUUL				
1		DOTITIONIO	FXC	FXCAVATE					ADMINISTRAT	TION	SU SU	SOLIVE				
1	С	CELSIUS	EXIST	EXISTING	HYD	HYDRANT		OVHD	OVERHEAD		SQ FT	SQUARE F	тос			
	СТОС	CENTER TO CENTER	EXP	EXPANSION	HYDR	HYDRAULIC					SQ IN	SQUARE IN	CH			
	CARV	COMBINATION AIR RELEASE VALVE	EXP BT	EXPANSION BOLT		~		P&ID	PROCESS & II	NSTRUMENTATION	SQ YD	SQUARE Y	ARD			
	CATV	CABLE TELEVISION	EXP JT	EXPANSION JOINT	I&C	INSTRUMENTATIO	N & CONTROL		DIAGRAM		SS	SANITARY	SEWER			
	СВ	CATCH BASIN	EXT	EXTERIOR	IAW	IN ACCORDANCE	VITH	PC	POINT OF CU	RVE	SST	STAINLESS	STEEL			
	CCP	CONCRETE CYLINDER PIPE			ID	INSIDE DIAMETER		PCC	POINT OF CO		ST	STREET				
1							N	FUVU			SIA etd	STATION				
1			FIUF	FABRICATE	и МР\/Т			PF								
1	CFM	CUBIC FEET PER MINUTE	FB	FLAT BAR	IN	INCH		PERF	PERFORATE		STOR	STORAGE				
1	CFS	CUBIC FEET PER SECOND	FCA	FLANGED COUPLING ADAPTER	INCC	INCLUDE(D)(ING)		PERM	PERMANENT		STR	STRAIGHT				
1	CHAN	CHANNEL	FCO	FLOOR CLEANOUT	INFL	INFLUENT		PERP	PERPENDICU	ILAR	STRUCT	STRUCTUR	E / STRUCTURAL			
1	CHEM	CHEMICAL			INJ	INJECTION		PG	PRESSURE G	GAUGE	SUBMG	SUBMERGE	ED			
1	CHFR	CHAMFER	FD	FLOOR DRAIN	INSTL	INSTALLATION		PH	PIPE HANGER		SUCT	SUCTION				
	CHKV		FDN	FOUNDATION	INSUL	INSULATION		PI DIV(0	POINT OF INT	ERSECTION	SV	SOLENOID	VALVE			
יי			FEXI	FIRE EXTINGUISHER				PIVC			S/W	SIDEWALK				
		CAST IN DLACE CONCRETE	FC			INTERIOR INVEDT				INE / PLATE / PLASTIC	SWD					
		CAST IRON SOIL PIPE	FUL	FIRE HYDRANT	IP			PI BG			SVIGK					
	CJ	CONSTRUCTION JOINT	FIN	FINISH(ED)	 IPT	IRON PIPE THREA)	PNL	PANEL		SYS					
1	CL OR C/L	CENTER LINE	FIPT	FEMALE IRON PIPE THREAD	IR	IRON ROD		POC	POINT OF CU	RVATURE	T OR TEL	TELEPHON	E			
	CL2	CHLORINE	FITG	FITTING	IRRIG	IRRIGATION		POLY	POLYETHYLE	NE	T&B	TOP & BOT	ТОМ			
	CLG	CEILING	FL	FLOOR LINE				PP	POWER POLE		TAN	TANGENCY				
	CLJ	CONTROL JOINT	FLEX	FLEXIBLE	JT	JOINT		PRC	POINT OF RE	VERSE CURVATURE	ТВ	THRUST BL	OCK			
	CLR	CLEAR	FLG	FLANGE	JUNC	JUNCTION		PRCST	PRECAST	N	TBM	TEMPORAF	RY BENCHMARK			
	CLSM	CONTROLLED LOW STRENGTH MATERIAL	FLL	FLOW LINE				PKEP	PKEPARA 110	IN	TC	TOP OF CC	NCRETE / TOP OF CURB			
	1	Consultant:					Engineer's Seal: Client / Ow	ner:		Project Title:		[Drawing Title:		Desianed Bv: C	
								TRIBAL UTILITY	WITTER				GENERAL		AMB -	
								NAVAJO	HORITY		• 		NAZLINI			APRIL 2024
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GENERAL NOTES					
1 ALL CONSTRUCTION OPERATIONS ARE TO BE ACCOMP	I ISHED IN ACCORDANCE WITH APPLICABLE STATE	EXISTING UTILITY 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 POTHOLE 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.

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.

Consultant:

ring Path and Name: A:_V-W\Projects\UT\NTUA\2023\W232520UT.00\12 CADD\12-5 Sheets\B-3 Nazlini\W232520UT_B-3_G-003.dwg, Plotted Date: April 3, 2024 2:17 PM By: Jared Cloud



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90% SUBMITTAL

- CONFLICTS.
- MATERIALS.

- FOR THE CONTRACTOR'S CONVENIENCE.

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

3. SUPPORT ALL EXISTING UTILITIES AT CROSSING LOCATIONS. PROTECT EXISTING UTILITIES RUNNING PARALLEL TO CONSTRUCTED TRENCHES FROM DAMAGE CAUSED BY THE REMOVAL OF ADJACENT

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

PRELIMINARY NOT FOR CONSTRUCTION

Engineer's Seal:



Project Title:

Drawing Title:

	Designed By:	CONSOR Project No.: W232520UT		
	AMB	Issued On: APRIL 2024		
	Drawn By: RB	Drawing No.:		
GENERAL NOTES	Checked By: JY	G-003		
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE		

TOPOGRAPHIC LEGEND

1

	EXISTING	PROPOSED	
WATERLINE	— — — ·10"W · — — —		MANHOLE
ELECTRICITY (UNDERGROUND)	— — — — E — — — — —	——————————————————————————————————————	CLEAN-OUT
OVERHEAD UTILITY	— — — OVHD — — — —	OVHD	CATCH BASIN/FIELD INLET
GAS	— — — - 4"G - — — —	4"G	THRUST BLOCK
TELEPHONE/TELEMETRY	T	———— T ————	VALVE
CABLE TELEVISION	— — — - COM- — — — —	COM	AIR INJECTION ASSEMBLY
COMMUNICATION		CATV	BLOW-OFF ASSEMBLY (PERMAN
FIBER OPTIC	— — — — — FO — — — — —	FO	BLOW-OFF ASSEMBLY (TEMPOR
SANITARY SEWER LINE	— — — -8"SS- — — — —		AIR RELEASE ASSEMBLY
SANITARY SEWER FORCE MAIN	— — — 6"SSFM — — — —	6"FM	FIRE HYDRANT ASSEMBLY
STORM DRAIN	— — — 8"SD — — — —		WATER METER
DRAIN	— — — — D — — — — —	D	PULL BOX/JUNCTION BOX
CULVERT	>	▶ 18"SD	UTILITY POLE
ABANDONED PIPE	— — 10"W (ABAND) — — —	• • • • • • • • • • • • • •	GUY WIRE
DRAINAGE DITCH			LIGHT POST
BARBWIRE FENCE	XXX	XXX	STREET LIGHT
CHAIN LINK FENCE	-0000	-000	MAILBOX
TEMPORARY SILT FENCE		<u> </u>	SIGN
GUARDRAIL	<u>, , , , , , , , , , , , , , , , , , , </u>		TREE DECIDUOUS
ROCK WALL	·		TREE CONIFEROUS
TREE/BUSH LINE			TREE TO BE REMOVED
CENTERLINE			SURFACE ELEVATION
RIGHT-OF-WAY	R/W		WETLAND
PROPERTY LINE			BENCHMARK
EASEMENT			IRON ROD
EDGE OF PAVEMENT/AC			MONUMENT
EDGE OF GRAVEL			BORE
CURB			TEST PIT
SIDEWALK	∠ S/W	S/W	BOLLARD
STRUCTURE OR FACILITY			
CONTOUR MINOR			
CONTOUR MAJOR	200	200	

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Consultant:

Drawing Path and Name: A:_V-W\Projects\UT\NTUA\2023\W232520UT.00\12 CADD\12-5 Sheets\B-3 Nazlini\W232520UT_B-3_C-001.dwg, Plotted Date: April 3, 2024 2:17 PM By: Jared Cloud

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	EXISTING
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SCHEMATIC		<u>SCHEMATIC</u>		
	WELDED JOINT		BUTTERFLY VALV	/E
	FLANGED JOINT		GATE VALVE	
0	GROOVED END JOINT		GLOBE VALVE	
	MECHANICAL JOINT		BALL VALVE	
	PUSH-ON JOINT (RUBBER GASKET)	ø	BALANCING VALV	/E
4	FLANGED COUPLING ADAPTER	—— ki ——	PLUG VALVE (TOF	P)
	DOUBLE BALL FLEXIBLE EXTENSION COUPLING		PLUG VALVE (SID	DE)
	FLEXIBLE COUPLING W/ THRUST RING	Ţ		
0 1	90° BEND UP		3-WAY PLUG VAL	VE
0	90° BEND DOWN		CHECK VALVE	
		₽	SWING CHECK VA	ALVE
	IEE UP		DOUBLE CHECK A	ASSEMBLY
	TEE DOWN	R	BALL SWING CHE	CK
	LATERAL UP		SILENT CHECK VA	ALVE
	LATERAL DOWN	A.		
——————————————————————————————————————	CONCENTRIC REDUCER		PRESSURE REDU	
<u>></u>	ECCENTRIC REDUCER	X	ALTITUDE CONTR	ROL VALVE
	UNION		SOLENOID VALVE	Ξ
	BLIND FLANGE		RELIEF VALVE	
]	CAP			
 	LONG SLEEVE	I ∑ I	NEEDLE VALVE	
	FLEXIBLE COUPLING	\$	HOSE VALVE	
\checkmark	FITTING (45°)		REDUCED PRESS PREVENTER W/ G	SURE BACKFLOW GATE VALVES
		Ø	HOSE BIBB	
MISCELLANEO	US PIPING SYMBOLS			
+	- STRAINER			
	– SIGHT GLASS			
Ø X	PRESSURE GAUGE W/ COCK			
イ ⑤ 文	PRESSURE SWITCH W/ COCK			
子 M	METER			
<u>SP</u>	SLIP-ON JOINT PIPE			
R	RESTRAINED JOINT PIPE			
	Drowing Title			
			Designed By:	

			AMB	:0U
KR)				<u> </u>
	SLIP-ON JOINT PIPE			
	METER			
Ž	PRESSURE SWITCH W/ COCK			
× S	PRESSURE GAUGE W/ COCK			
O Ø	- SIGHT GLASS			
+	- STRAINER			
MISCELLANEOU	JS PIPING SYMBOLS			
		Ø	HOSE BIBB	
$\checkmark \dashv$	FITTING (45°)		PREVENTER W/ GATE VALVES	
	FLEXIBLE COUPLING		HOSE VALVE	
<u> </u>	LONG SLEEVE	IV	NEEDLE VALVE	
]	САР	. . .		
	BLIND FLANGE		RELIEF VALVE	
	UNION		SOLENOID VALVE	
<u>N</u>	ECCENTRIC REDUCER		ALTITUDE CONTROL VALVE	
——∀——	CONCENTRIC REDUCER	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	PRESSURE REDUCING VALVE	
	LATERAL DOWN	, ∱ ,]		
	LATERAL UP	₹	SILENT CHECK VALVE	
	TEE DOWN		BALL SWING CHECK	
	TEE UP	N		
01	90° BEND DOWN		CHECK VALVE	
01	90° BEND UP		3-WAY PLUG VALVE	
#>	FLEXIBLE COUPLING W/ THRUST RING			
	DOUBLE BALL FLEXIBLE EXTENSION COUPLING	\	PLUG VALVE (SIDE)	
ŧ	FLANGED COUPLING ADAPTER		PLUG VALVE (TOP)	
———— — ———————————————————————————————	PUSH-ON JOINT (RUBBER GASKET)	¢	BALANCING VALVE	
	MECHANICAL JOINT		BALL VALVE	
	GROOVED END JOINT	—— >	GLOBE VALVE	
ı 		"" 	GATE VALVE	
	WELDED JOINT		BUTTERFLY VALVE	

NAVAJO TRIBAL UTILITY AUTHORITY

PRELIMINARY NOT FOR CONSTRUCTION

Engineer's Seal:



Project Title:

BOOSTER PUMP STATION

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



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- 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
- 4 REMOVE EXISTING FENCE
- (11) INSTALL NEW OVERHEAD ELECTRIC LINE.

	SURVEY CONTROL POINTS						
PT NO.	DESCRIPTION	NORTHING	EASTING				
1	NW CORNER BLDG	N1781785.18	E914310.34				
2	NE CORNER BLDG	N1781793.86	E914325.53				
3	BLDG CORNER	N1781781.12	E914332.81				
4	BLDG CORNER	N1781779.76	E914330.42				
5	SE CORNER BLDG	N1781772.16	E914334.76				
6	SW CORNER BLDG	N1781764.84	E914321.95				
7	FENCE	N1781783.17	E914300.47				
8	FENCE	N1781744.10	E914323.24				
9	FENCE	N1781758.93	E914349.05				
10	FENCE	N1781797.95	E914326.63				
11	PROP EP	N1781760.80	E914313.39				
12	PROP EP	N1781734.35	E914267.35				
13	PROP EP	N1781693.39	E914256.28				
14	PROP EP	N1781758.42	E914218.92				
15	PROP EP	N1781747.35	E914259.88				
16	PROP EP	N1781773.76	E914305.83				
17	GRAVEL EDGE	N1781753.83	E914271.15				
18	GRAVEL EDGE	N1781781.13	E914278.53				
19	GRAVEL EDGE	N1781807.17	E914263.57				
20	GRAVEL EDGE	N1781814.54	E914236.26				
21	GRAVEL EDGE	N1781831.85	E914264.22				
22	GRAVEL EDGE	N1781835.40	E914270.41				

	Designed By: AMB	CONSOR Project No.: W232520UT	
		Issued On: APRIL 2024	
	Drawn By: RB	Drawing No.:	
ERALL SITE PLAN AND	Checked By: JY	C-100	
SURVET CONTROL	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	



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 JOINT, 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 ADDITIONAL FITTINGS 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
- 3 CONSTRUCT NEW WATERLINE
- 5 CLEAR AND GRUB SITE, INSTALL 3/4" GRAVEL WITH GEOTEXTILE FABRIC WITHIN FENCED AREA.
- 6 REPLACE EXISTING BLOW-OFF WITH 2-1/8" POST TYPE SINGLE PORT FIRE HYDRANT ASSEMBLY
- (7) (1) 4" MJ 90° BEND
- 8 (1) EXIST 4" MJ 90° BEND INSTALL WITH CAP
- 9 (1) 4" MJ TEE, (2) 4" MJ GATE VALVE
- (1) (1) EXIST 4" MJ CROSS, (1) INSTALL MJ GATE VALVE, (1) INSTALL MJ CAP

	Designed By:	CONSOR Project No.: W232520UT
		Issued On: APRIL 2024
	Drawn By:	Drawing No.:
PAVING GRADING AND	Checked By:	C-110
		0-110
	Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE





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Consultant:



PRELIMINARY NOT FOR CONSTRUCTION

Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION Drawing Title:

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	Designed By: AMB	CONSOR Project No.: W232520UT
NAZLINI		Issued On: APRIL 2024
	Drawn By:	Drawing No.:
	Checked By:	C-301
SECTIONS	JY	0.001
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

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Drawing Path and Name: A:_V-W\Projects\UT\NTUA\2023\W232520UT.00\12 CADD\12-5 Sheets\B-3 Nazlini\W232520UT_B-3_C-501.dwg, Plotted Date: April 3, 2024 2:21 PM By: Jared Cloud

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RNER POST DETA		OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING NAVAJO AREA OFFICE, WINDOW ROCK, ARIZONA				
NOT TO SCALE	OFFICE OF NAVAJ					
	DRAWN BY: L.S. DATE: 12/92	CHECKED BY: P.S. DATE: 12/92	APPR. BY: P.S. DATE: 12/92	AUTOCAD DRAWING		
Engineer's Seal:	Client / Owner:		Project Title:			
PRELIMINARY NOT FOR CONSTRUCTION	NNIAJO TRIBAL UTILITY	AUTHORITY NOLLEN OTE	E	NAVA 800S ⁻	JO TRIBAL UTILITY AUTHORITY TER PUMP STATIO	Ń

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Drawing Title:

	Designed By:	CONSOR Project No.: W232520UT
		Issued On: APRIL 2024
ΙΝΑΖΕΙΝΙ	Drawn By: RB	Drawing No.:
STANDARD DETAILS	Checked By: JY	C-501
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

) 雪雪 一			END CAPPED OR PLUG (PLAN VIEW)		(PLAN VIEW)
	90' ELBOW PLAN VIEW)	- VERTIC/	45' ELBOW (PLAN VIEW)		
CIPE SIZE 2" 4" 6" 8" 10" 12" 14" 16" 18"	MINIMUM BEA TEE & PLUG 0.5 1.5 3.0 5.0 8.0 11.0 15.0 19.0 24.0	ARING AREAS 90° ELBOW 0.5 2.0 4.5 7.5 11.0 15.5 21.0 27.0 34.0	(SECTION VIEW) S IN SQUARE FEET 45° OR 22 1/2° ELBOW 0.5 1.5 2.5 4.0 6.5 9.0 12.0 15.5 19.0	CROSS 0.5 1.0 2.0 4.0 5.5 8.0 10.5 13.5 13.5	NOTES: 1. DO NOT COVER GASKETED JOINTS AND NUTS/BOLTS.
18" ONED BY: NTUA VEYED BY: NTUA VEYED BY: NTUA KOVED BY: NTUA LC: NTUA D FUENME: Vaser Sta NO. WS-19.D'	24.0	34.0 NAVAJO TRIBAL UTIL GRAVITY/ BLOCK D	19.0	REVISIONS Brief Revised	SHEET 1 OF 2



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Drawing Title:

CIVIL	Designed By: AMB	CONSOR Project No.: W232520UT
NAZLINI	Drawn By: RB	Drawing No.:
DETAILS	Checked By: JY	C-502
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1"

		GENERAL STRUCTURAL NOTES (GSN)	
	DIVISION 01: GENERAL REQUIREMENTS		DIVISION 05: M
	DESIGN DATA	SUBMITTALS	
A	CODES: LOADS: IBC 2021; ASCE 7-16 CONCRETE: ACI 318-19 STRUCTURAL STEEL: AISC Steel Construction Manual.	1. SHOP DRAWINGS: CONCRETE REINFORCING STEEL CONCRETE MIX DESIGN	MATERIALS PLATES AND BARS: STANDARD STEEL P HSS SECTIONS SHALI
	15th Ed CONSTRUCTION: APWA Manual of Standard Specifications (Latest Edition)	CONCRETE REINFORCING STEEL PRECAST CONCRETE PUMP STATION BUILDING 2 MIX DESIGN / TEST REPORTS	FABRICATION AND EN FABRICATION AND EF STEEL CONSTRUCTION
	SOIL DESIGN VALUES: BORROW MATERIAL UNIT WEIGHT: 135 PCE (SANDY GRAVEL)	CAST-IN-PLACE CONCRETE	DETAILING. COPES, E RADIUS OF AT LEAST
	ALLOWABE SOIL BEARING: 1,500 PSF	COMPONENT FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER.	PAINTING OF METAL S PRIME ALL STEEL FAE
	ACTIVE LATERAL PRESSURE (E.F.P. METHOD): 33 PSF WITH 0.31q SURCHARGE	MIX DESIGNS AND/OR SPECIFICATIONS: CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW A MINIMUM OF ONE WEEK PRIOR TO THE FIRST FIELD DELIVERY	WHERE METAL IS GAI - 'DUNN-EDWARDS' UI
	AT-REST LATERAL PRESSURE (E.F.P. METHOD): 51 PSF WITH 0.47q SURCHARGE		FINISH PAINT STEEL F COLOR AS SELECTEE
	PASSIVE PRESSURE: 350 PSF	DIVISION 03: CONCRETE (Cast-in-Place)	NO PAINT WHERE STF
	COEFF OF SLIDING FRICTION: 0.25	<u>CAST-IN-PLACE CONCRETE</u> CAST-IN-PLACE PORTIONS OF THE WORK SHALL COMPLY WITH ALL APPLICABLE PORTION OF APWA	APPLICATION OF PRIN RECOMMENDATIONS.
в	SEISMIC DESIGN CRITERIA (FROM GEOTECHNICAL INVESTIGATION): SITE CLASS: SITE COEFFICIENT (Fa): SITE COEFFICIENT (Fa): MSRA at 0.2 SEC PERIOD (Ss): MSRS at 1.0 SEC PERIOD (S1): SRA at 0.2 SEC PERIOD (Sup): 0.1870	DIVISION 03, AND AS NOTED BELOW: CONCRETE FORMING: PER APWA 03 11 00 CONCRETE PLACEMENT: PER APWA 03 30 10 CONCRETE FINISHING: PER APWA 03 35 00 CONCRETE CURING: PER APWA 03 39 00 CONCRETE: PER APWA 03 20 14 CLASS 2000	<u>GENERAL WELDING</u> FIELD WELDING IS NO ALL WELDS SHALL BE
	SRA at 1.0 SEC PERIOD (S_{M1}): 0.072g DSRA at 0.2 SEC PERIOD (S_{DS}): 0.124g	REINFORCING: PER APWA 03 20 14, CLASS 3000 REINFORCING: PER APWA 03 20 00, ASTM A615 (S1) GRADE 60 CONCRETE TESTS: PER APWA 03 30 05	DIVISION 31: E
	GENERAL NOTES TO CONTRACTOR	WELDING: PER AWS D1.4. NO WELDING OR GAS CUTTING OF GRADE 60 BARS IS PERMITTED, EXCEPT WITH PRIOR APPROVAL FROM ENGINEER.	1. EARTHWORK, IN AND SITE PREP,
	1. CONSTRUCTION SHALL CONFORM TO THE PROJECT SPECIFICATIONS AND APPLICABLE SECTIONS OF THE MANUAL OF STANDARD SPECIFICATIONS (LATEST EDITION), WITH ADDENDA	BAR LAP: 48 BAR DIAMETERS, U.O.N.	APPLIED GEOTE
	2. ANY CHANGES TO THE STRUCTURE OR THESE DRAWINGS SHALL BE SUBMITTED BY THE	BAR FABRICATION AND PLACING: PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE (LATEST EDITION)	ANY ADDENDUN 2. RETAINING WAL
	CONTRACTOR IN WRITING FOR ENGINEER REVIEW AND APPROVAL 7 DAYS PRIOR TO BEGINNING THE WORK.	REINFORCING IN CONCRETE PLACED AGAINST EARTH WITHOUT FORMS IS TO BE SUPPORTED BY CONCRETE BLOCKS, APPROVED NON-METALLIC CHAIRS, OR ANOTHER METHOD APPROVED BY THE ENGINEER.	BE PER THE GEO APPLICABLE MC
С	 THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS BETWEEN THE CONSTRUCTION DRAWINGS AND GENERAL STRUCTURAL NOTES BEFORE PROCEEDING WITH THE WORK. 	CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE NOTED OTHERWISE.	3. ALL WORK SHAL REGISTERED IN
	4. THE CONTRACTOR SHALL VERIFY ALL EXISTING UNDERGROUND SERVICES THAT INTERFERE WITH THIS WORK. EXISTING UNDERGROUND SERVICES SHALL NOT BE DISTURBED OR REMOVED WITHOUT THE APPROVAL OF THE OWNER OR HIS REPRESENTATIVE, UNLESS NOTED ON THE DRAWINGS.	CONCRETE PROTECTION COVER OF REINFORCING STEEL SHALL BE 2" EXCEPT WHERE NOTED OTHERWISE. CONCRETE FINISHES WALLS: UNFINISHED PLYWOOD FORM FACED (NOT EXPOSED) B-GRADE FINISHED PLYWOOD FORM FACED (EXPOSED) OLARDO MEDIUM PROCEM	 COMPACT BACK ONLY HAND OPE THE BURIED STI
	5. THE REMOVAL, CUTTING, DRILLING, ETC., OF EXISTING CONSTRUCTION SHALL BE PERFORMED WITH GREAT CARE IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE EXISTING CONSTRUCTION.	SLABS: MEDIUM BROOM <u> GROUT</u> GROUT SHALL BE HIGH STRENGTH, NON-SHRINK, NON-METALLIC EQUIVALENT TO 'MASTER BUILDERS' MASTERELOW 713 INSTALLED REPORTS RECOMMENDATIONS	
	 THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE, BUT DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE MEANS, METHODS AND TECHNIQUES OF CONSTRUCTION, AND THE ASSOCIATED SAFETY PRECAUTIONS, ARE THE RESPONSIBILITIES OF THE CONTRACTOR. 	JOINT SEALANT CONCRETE JOINT SEALANT: SILICONE SEALANT AS MANUFACTURED BY DOW CORNING FOR VERTICAL CONTROL JOINTS IN CONCRETE WALLS OR APPROVED EQUAL. PROVIDE BOND BREAKER OR BACK-UP ROD AS RECOMMENDED BY MANUEACTURED. INSTALL SEALANT AS RECOMMENDED BY MANUEACTURED	
	7. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT BUILDING ELEMENTS AND OTHER STRUCTURES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS IMPOSED DURING CONSTRUCTION, INCLUDING CONSTRUCTION EQUIPMENT.	PREMOLDED EXPANSION JOINT 'REFLECTIX' WITH TEAR OFF STRIP (OR APPROVED EQUAL), INSTALLED PER MANUFACTER'S RECOMMENDATIONS.	
D	8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.		
	 OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE CHANGES NECESSARY TO IMPLEMENT THE OPTION, AND SHALL COORDINATE ALL DETAILS. 		
	10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ADDITIONAL DESIGN OR REVIEW WORK BY THE ENGINEER DUE TO SELECTION OF AN OPTION BY THE CONTRACTOR, OR DUE TO ERRORS OR OMISSIONS IN CONSTRUCTION BY THE CONTRACTOR.		
	Consultant:	Engineer's Seal: Client / Owner: Project Title:	Drawing Title:
	Since State	MITTAL PRELIMINARY NOT FOR NOT FOR AUTHORITY	TILITY

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PER ASTM A36 (Fy = 36 KSI) PIPE: PER ASTM A53, GRADE B (Fy = 35 KSI) L COMPLY WITH ASTM A500, GRADE B (Fy = 46 KSI).

6

RECTION RECTION OF STEEL SHAPES AND PLATES SHALL CONFORM TO AISC MANUAL OF ON. DETAILING OF STEEL SHAPES SHALL BE PER AISC STRUCTURAL STEEL BLOCKS, & CUTS: ALL RE-ENTRANT CORNERS SHALL BE SHAPED, NOTCH-FREE, TO A 1/2".

SURFACES BRICATIONS WITH ONE SHOP COAT PRIMER OVER CLEAN METAL.

LVANIZED, PREPARE SURFACE WITH HIGH PERFORMANCE ACRYLIC BONDING PRIMER JLTRASHIELD OR APPROVED EQUAL.

FABRICATIONS WITH TWO SHOP COATS OF ALKYD ENAMEL FINISH OVER PRIMER, D BY THE OWNER. FIELD TOUCH-UP AS REQUIRED.

RUCTURAL STEEL IS TO BE PERMANENTLY IN CONTACT WITH CONCRETE.

DT ALLOWED U.O.N. E PERFORMED IN THE SHOP BY CERTIFIED WELDERS U.O.N.

EARTHWORK

NOT FOR CONSTRUCTION



AUTHORITY **BOOSTER PUMP STATION**

PU GENE

<u>IETALS</u>

MER AND FINISH PAINT SHALL BE PER THE PAINT MANUFACTURER'S

NCLUDING BUT NOT LIMITED TO BACKFILL MATERIAL AND COMPACTION, PARATION FOR THE PRECAST CONCRETE STRUCTURES SHALL BE ER THE RECOMMENDATIONS IN THE FOLLOWING:

ECH' GEOTECHNICAL EVALUATION, DATED FEBRUARY 22, 2024 AND I TO THE EVALUATION.

L BACKFILL MATERIAL, CLEAN GRAVEL, AND COMPACTION SHALL OTECHNICAL INVESTIGATION RECOMMENDATIONS OR WITH ODIFICATIONS FROM APWA 31 05 13 AS APPROVED BY THE ENGINEER.

LL BE REVIEWED BY A SOILS ENGINEER I THE STATE OF ARIZONA.

KFILL IN 8" LIFTS MAXIMUM EXCEPT WHERE NOTED OTHERWISE.

ERATED COMPACTION EQUIPMENT SHALL BE USED WITHIN 36" OF RUCTURES.

STRUCTURAL	Designed By:	CONSOR Project No.: W232520UT
NAZLINI	JVB	Issued On: APRIL 2024
IMP STATION BUILDING	JVB	Drawing No.:
RAL STRUCTURAL NOTES	Checked By: RB	S-001
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

		1		2	3
			'		
	D B	VISION 03 40: PRECA	AST CONCRETE ION (BPS) BUILD	ING	
4	 PF	RECAST MANUFACTURER REQU	JIREMENTS FOR PUMP S	TATION BUILDING:	
	1.	COMPLETE REQUIREMENTS SECTION 03 41 10 WHICH ARE CONTRACT DOCUMENTS.	SHALL BE AS OUTLINED E INCLUDED AND HEREB	IN THE SPECIFICATION Y MADE A PART OF THESE	
	2.	PROVIDE COMPLETE SHOP D DIMENSIONS OF THE CAST-IN REINFORCING, EMBEDS, AND	RAWINGS CONFORMING N-PLACE STRUCTURES. 1 LIFTING REQUIREMENT	TO THE INSIDE CLEAR THIS SHALL INCLUDE S.	
	3.	PROVIDE THE SUBGRADE PR BE REQUIRED FOR THE PROF	EPARATION PER DIVISIO	N 31 - EARTHWORK THAT WILL HE PRECAST STRUCTURE.	
	4.	PROVIDE SEALED STRUCTUF ENGINEER REGISTERED IN TI SHALL INCLUDE BOTH LIFTIN	RAL CALCULATIONS SEAU HE STATE OF ARIZONA. S G AND IN-PLACE LOADS	LED BY A PROFESSIONAL STRUCTURAL CALCULATIONS ON THE STRUCTURE.	
	5.	DESIGN SHALL BE IN ACCORI	DANCE WITH THE LATES	Т:	
		PRECAST CONCRETE INSTITU CONCRETE REINFORCING IN	JTE (PCI) MANUAL OF ST STITUTE, MANUAL OF ST	ANDARD PRACTICE. ANDARD PRACTICE.	
3	6.	ADDITIONAL DESIGN REQUIR WIND LOADS).	EMENTS (INCLUDING BU	T NOT LIMITED TO SEISMIC AND	
	7.	CASTING KEYED JOINTS SHO SHALL BE SEALED ON THE EX SUPPLIER SHALL PROVIDE E REQUIRED TO PREVENT THE SHALL SUBMIT THE PROPOSE ENGINEEER FOR REVIEW AN	OWN ON THE DRAWINGS XTERIOR AND INTERIOR MBEDS AND FIELD INSTA JOINTS FROM SEPARAT ED JOINT DETAIL INCLUD D APPROVAL PRIOR TO (ARE TO BE WATERTIGHT AND SURFACE. THE PRECAST ALLATION COMPONENTS AS ING. THE PRECAST SUPPLIER DING JOINT SEALANT TO THE CASTING.	
	8.	SUBBASE PREPARATION, BEI ACCORDANCE WITH ASTM C ²	DDING, AND LEVELING C 1675-11.	OURSE SHALL BE IN	
	9.	DESIGN SHALL CONFORM TO REQUIREMENTS	GOVERNING AGENCY S	TANDARDS AND	
	10). CONCRETE: 28-DAY COMPRE	ESSIVE STRENGTH 6,000	PSI (MIN).	
	11	1. STEEL REINFORCING: ASTM	A-615, GRADE 60.		
	12	2. WWF: ASTM A1064, Fy = 70 KS	SI.		
•	13	3. CEMENT: ASTM C858.			
,	14	4. JOINT SEALANT: DOW CORNI	NG 790 SILICONE SEALA	NT OR APPROVED EQUAL.	
)					
			Consultant:		

Drawing Path and Name: C:\Users\jberghian\OneDrive - Consor Engineers, LLC\Documents\Job Files (PEC)\UTAH\W232520UT NTUA Booster Pump Station Improvements\dwg\W232520UT Nazlini S-002 (GSN).dwg, Plotted Date: March 18, 2024 10:54 AM By: John Berghian



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GENERAL STRUCTURAL NOTES (GSN)

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Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

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Drawing Title:

rawing Title:	STRUCTURAL	Designed By:	CONSOR Project No.: W232520UT	
	NAZLINI	JVB	Issued On: APRIL 2024	
		Drawn By: JVB	Drawing No.:	
GENERAL STRUCTURA	AL STRUCTURAL NOTES	Checked By: RB	S-002	
		Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	





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GENERAL NOTES

- 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 AND PICK HEIGHT.
- 5. CONTRACTOR TO USE OUTRIGGER CRANE PADS AS REQUIRED.
- 6. SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
- 7. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.

KEY NOTES

- (1) PRECAST CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N. (2) PRECAST CONCRETE ELECTRICAL ROOM BUILDING -PAINT PER G.S.N.
- (3) MODULE CASTING JOINT LINE
- (7) CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
- 9 DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- (10) SINGLE 3' x 7' HOLLOW METAL DOOR AND FRAME
- (12) LOUVER SEE MECHANICAL PLANS
- (13) BOOSTER PUMP SKID SEE PROCESS PLANS
- (14) PIPING SEE PROCESS PLANS
- (15) 12" DIA OPENING IN FLOOR SLAB FOR PIPING
- (16) TOOLED CONTROL JOINT LOCATIONS AS SHOWN
- (19) FRP WALL PANELS OVER RIGID INSULATION
- (20) CONCRETE HOUSEKEEPING PAD
- (21) PUMP CONTROL PANEL

tle: STRUCTURAL	Designed By:	CONSOR Project No.: W232520UT
NAZLINI	JVD	Issued On: APRIL 2024
	Drawn By: JVB	Drawing No.:
PLAN VIEW	Checked By: RB	S-101
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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6	7
	<u>GENERAL NOTES</u> 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.
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	 SEE SHEETS S-001 AND S-002 (GSN) FOR GENERAL STRUCTURAL NOTES.
	7. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR PRECAST CONCRETE STRUCTURES.
	KEY NOTES
	1 PRECAST CONCRETE MODULAR PUMP STATION BUILDING - PAINT PER G.S.N.
	2 PRECAST CONCRETE ELECTRICAL ROOM BUILDING - PAINT PER G.S.N.
	3 MODULE CASTING JOINT LINE
	4 PRECAST CONCRETE WALLS WITH EXTERIOR WITH SLUMP BLOCK EXTERIOR TYPE FINISH
DOR	5 PRECAST CONCRETE ROOF STRUCTURE
0" Y	6 PRECAST CONCRETE FLOOR SLAB INTEGRALLY CAST WITH WALLS
	7 CONCRETE SIDEWALK WITH PERIMETER TURNDOWN
	8 PRECAST 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
	(12) LOUVER - SEE MECHANICAL PLANS
$\frac{OR}{D^{*}}$ Φ	

STRUCTURAL	Designed By: JVB	CONSOR Project No.: W232520UT	
NAZLINI		Issued On: APRIL 2024	
	Drawn By: JVB	Drawing No.:	
ELEVATIONS	Checked By: RB	S-102	
	Approved By: NN	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	





Consultant:

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s\Job Files (PEC)\UTAH\W232520UT NTUA Booster Pump Station Improvements\dwg\W232520UT Nazlini S-103 (Cross Sections).dwg, Plotted Date: March 23, 2024 12:16 PM By: John Berghia

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Project Title:

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Engineer's Seal:



NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION

Drawing Title:

GENERAL NOTES

- 1. CONTRACTOR TO LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION AND PLACEMENT OF PRECAST STRUCTURES.
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KEY NOTES

(1) PRECAST CONCRETE MODULAR PUMP STATION **BUILDING - PAINT PER G.S.N.** (2) PRECAST CONCRETE ELECTRICAL ROOM BUILDING -PAINT PER G.S.N. (3) MODULE CASTING JOINT LINE 4 PRECAST CONCRETE WALLS WITH EXTERIOR WITH SLUMP BLOCK EXTERIOR TYPE FINISH (5) PRECAST CONCRETE ROOF STRUCTURE 6 PRECAST CONCRETE FLOOR SLAB INTEGRALLY CAST WITH WALLS (7)CONCRETE SIDEWALK WITH PERIMETER TURNDOWN 8 PRECAST CONCRETE DOOR TRANSOM INTEGRALLY CAST WITH WALLS 9 DOUBLE 3' x 7' HOLLOW METAL DOOR AND FRAME (11) FINISHED GRADE (12) LOUVER - SEE MECHANICAL PLANS (13) BOOSTER PUMP SKID - SEE PROCESS PLANS (14) PIPING - SEE PROCESS PLANS (15) 12" DIA OPENING IN FLOOR SLAB FOR PIPING (17) SUBGRADE PREPARATION PER G.S.N. (18) COMPACTED AB PAD PER G.S.N. (19) FRP WALL PANELS OVER RIGID INSULATION (20) CONCRETE HOUSEKEEPING PAD (21) PUMP CONTROL PANEL CONSOR Project No.: W232520UT STRUCTURAL Designed By 1\ /D NAZLINI

PUMP STATION BUILDING **CROSS SECTIONS**

JVB	Issued On:	APRIL 2024
Drawn By: JVB	Drawing No.:	
Checked By: RB		S-103
Approved By: NN	0 1/2	1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

$\left \right $							
	PIPE SY	MBOLS	PIPE FI	I TINGS		VALVE S	
	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	PLAN	
	PROPOSED		90° ELBOW				
A	HIDDEN		45° ELBOW		BALL VALVE		
	BELOW GRADE		22.5° ELBOW		BUTTERFLY VALVE		
	EXISTING		11.25° ELBOW				
	EXISTING HIDDEN		BASE ELBOW		BUTTERFLY VALVE (WAFER / LUGGED)		
	DEMOLISH		DAGE ELDOW				
	FUTURE		TEE		CHECK VALVE (SWING)		
В	CENTERLINE	· € –	CROSS				
	PIPE CUT		ΙΔΤΕΡΔΙ		CHECK VALVE (BALL)		
	PIPE BREAK					π	
	PIPE BREAK (SINGLE LINE)	،	REDUCER (CONCENTRIC)		DIAPHRAGM VALVE		
			REDUCER (ECCENTRIC)				
	DESCRIPTION	SYMBOL	REDUCING 90° ELBOW				
	FLANGED		EXPANSION JOINT (RESTRAINED)		GATE VALVE		
С	MECHANICAL JOINT		EXPANSION JOINT (UNRESTRAINED)				
	GROOVED		DISMANTLING JOINT		GLOBE VALVE		
	PVC		FLANGE COUPLING ADAPTER (FCA)				
	STEEL		RESTRAINED FLANGE		KNIFE GATE VALVE		
	PUSH-ON		(RFCA)				
	ТАР		FLANGED x FLARED		PINCH VALVE		
D	SERVICE SADDLE				PLUG VALVE		
	GENERAL NOTES: 1. THIS IS A STANDARE	D LEGEND, NOT ALL OF THE I	NFORMATION MAY BE USED	ON THIS PROJECT.		لككا	
	2. ONLY FLANGED END	CONNECTIONS ARE SHOWN	NHERE. OTHER FITTING PAT	TERNS ARE SHOWN			
	SIMILARLY ON THE CO	INSTRUCTION DRAWINGS. A	LSO SEE PIPING SPECIFICAT	IONS.			
┝		Consultant:					



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		4		5		
YMBOLS	VALVE SYMBOLS				GENERIC	
SECTION	SINGLE LINE	DESCRIPTION	PLAN	SECTION	SINGLE LINE	
	Ø	PRESSURE REDUCING VALVE (STRAIGHT)			Ϋ́Υ.	2. SIZE OF STRAIGHT MATERIAL 3. LOCATIC
	Ø	PRESSURE REDUCING VALVE (ANGLED)				APPROXIM 4. ALL JOIN PIPING PAS 5. ALL FLEX
	Ø	BACK PRESSURE REGULATOR VALVE (STRAIGHT)				THRUST PI PROTECTIO 6. SYMBOL THROUGHO COMPONE
	2	PRESSURE GAUGE				7. ALL BUR WELDED C SPECIFIED 8. NUMBER PROVIDE A
	KQ I	AIR VALVE (COMBINATION)			₩ M	9. WHERE A UNLESS O A STANDA
	¥	AIR VALVE (AIR RELEASE)			<i>₩</i>	WALL S (FLANC
	X	AIR VALVE (AIR/VACUUM)				WALL S
		FLOW METER			Ҥ҄ӍӇ	
	\mathbf{r}	<u>PIPE TAG</u> 100-8"-DI1-PI-100	01 FLOW STREAM IDEN PIPE SERVICE, SEE PIPE MATERIAL, SEE PIPE DIAMETER, INC AREA, SEE AREA IDI	NTIFICATION NUMBER (IF APPLICAB PIPE SERVICE IDENTIFIERS ON SH E PIPE SPECIFICATION IDENTIFIERS CHES ENTIFIERS ON SHEET G002 SHEET	ILE) EETS 1001 P&ID LEGE S ON SHEETS 1001 P8 INDEX (IF APPLICABI	ENDS &ID LEGENDS LE)
		EQUIPMENT & VAL	<u>VE TAG</u>			
	$\overline{\Delta}$	EQUIPMENT & VALVE IDENTIFICATION NUMBER EQUIPMENT & VALVE TYPE, SEE EQUIPMENT & VALVE TAG IDENTIFIERS ON SHEE AREA, SEE AREA IDENTIFIERS ON SHEET G002 SHEET INDEX (IF APPLICABLE)			ON SHEETS 1001 8 BLE)	

 Engineer's Seal:
 Client / Owner:
 Project Title:

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 NOT FOR
 NAVAJO TRIBAL UTILITY

 NOT FOR
 OWNER
 AUTHORITY

 CONSTRUCTION
 Engineer's Seal:
 Project Title:

Drawing Title:

C PIPING NOTES:

E TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.

F FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT T RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING L SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE. 7

ION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY MATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.

INTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER ASSES FROM A STRUCTURE TO A BACKFILL.

EXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST TION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.

ULS, LEGENDS AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED HOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS IENTS ARE NECESSARILY USED IN THE PROJECT.

RIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS D, UNLESS OTHERWISE NOTED.

ER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES CHANICAL EQUIPMENT.

E A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, ARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

PIPE PENTRATIONS

SPOOL GED)	
SPOOL GED x MJ)	
EAL	

1 & I002 P&ID LEGENDS

DDOCESS	Designed By:	CONSOR Project No.: W232520UT	
	AMB	Issued On: APRIL 2024	
INAZLINI	Drawn By: JLC	Drawing No.:	
LEGEND AND NOTES	Checked By: AMB	D-001	
	Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE	

1	2	
DESIGN CRITERI	Α	
IDENTIFICATION :		
LOCATION	COTTONWOOD BPS	300.0
PUMP LABEL(S)	PUMP NO. 1, PUMP NO. 2	
QUANTITY	PACKAGE PUMP SKID (2 PUMPS)	
PERFORMANCE REQUIREMENTS AT FULL PUMP SPE	ED:	280.0
MAXIMUM SHUTOFF HEAD (FT)	300	
MINIMUM SHUTOFF HEAD (FT)	250	
DESIGN FLOW CAPACITY:	200	260.0
DUTY PT 1		
		242.2
	C 40/	240.0
DUTY PL 2	62%	
MAXIMUM PUMP SPEED (RPM)	4000	220.0
MINIMUM MOTOR SIZE (HP)	3	
OPERATING CONDITIONS:		
DUTY	CONTINUOUS	-
DRIVE	VARIABLE SPEED	11 200.0
AMBIENT ENVIRONMENT	INDOOR	
AMBIENT TEMPERATURE	33° - 104° F	
FLUID SERVICE	POTABLE WATER	180.0
FLUID TEMPERATURE	33° - 75° F	
FLUID PH RANGE	6.0 TO 8.5	
FLUID SPECIFIC GRAVITY	1	160.0
FLUID VISCOSITY (ABSOLUTE) (CENTIPOISES AT	-	10010
۲۵۱۵ ۲۱۵۵۵۵۲۲۲ (۲۵۵۵۵۵۲۲۲) (۵۵۵۵۵۲۲۲) ۲۱۵۱۵۵۵ ۲۱ ۲۵۱۵ ۲۱	1 12	
		140.0
	211	
	л — — — — — — — — — — — — — — — — — — —	
		120.0
DISCHARGE MANIFOLD RATING (AWWA)	CLASS D FLANGE	100.0
ELECTRICAL:		0
VOLTAGE/PHASE	480V/3PHASE	
CURRENT	3.8 AMPS	
PUMP MANUFACTURER/BASE MODEL		-
	CRF 5-9	



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Consultant:



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Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION Drawing Title:

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PROCESS	Designed By: AMB	CONSOR Project No.: W232520UT
NAZLINI		APRIL 2024
	JLC	Drawing No.:
MP/SYSTEM CURVES AND	Checked By: AMB	D-010
DESIGN PARAIVIETERS	Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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NAVAJO TRIBAL UTILITY AUTHORITY **BOOSTER PUMP STATION**

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Drawing Title:

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DDOCESS	Designed By:	CONSOR Project No.: W232520UT				
	AMB	Issued On: APRIL 2024				
	Drawn By: JLC	Drawing No.:				
	Checked By: AMB	D-100				
	Approved By:	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE				



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SL-1 SD-1			EI EI	L-1 FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE NO. TYPE SD-1 GRAVITY/BACKDR ED-1 GRAVITY/BACKDR	12" X 12" 12" X 12" 12" X 12" DAMPERS SIZE RAFT 12" X 12" RAFT 12" X 12"	GREENHECK, ESD-4 GREENHECK, ESD-4 GREENHECK, ESD-4 MANUFACTURE GREENHEC GREENHEC	135 135 135 R & MODEL K EM30 K EM30	
				SD-2 GRAVITY/BACKDR ED-2 GRAVITY/BACKDR THERMO NO. CONTROLS T-1 EF-1 T-2 EF-2 NO. LOCATION IH-1 PUMP ROOM IH-2 ELECTRICAL ROOM	AFT 12" X 12" AFT 12" X 12" OSTATS COMMENTS COOLING SET PO COOLING SET PO UNIT HEATER UNIT HEATER UNIT HEATER	GREENHEC GREENHEC INTS INTS UNIT HEATERS SIZE V/f 3KW 208-240/ 3KW 208-240/	K EM30 K EM30 CONTROL 1 INTEGRAL 1 INTEGRAL	MANUFACTURER/MODEL REZNER EUH 3 REZNER EUH 3
L	Engineer's Seal: Cli PRELIMINARY NOT FOR CONSTRUCTION	ent / Owner:	Project Title: NAVAJO TRIBAL UTILITY AUTHORITY BOOSTER PUMP STATION	Drawing Title: SEC	PROCESS NAZLINI CTIONS ANE SCHEDULI	D HVAC ES	Designed By: AMB Drawn By: JLC Checked By: AMB	CONSOR Project No.: W232520UT Issued On: APRIL 2024 Drawing No.: D-301

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NO.	SERVICE	CAPACITY (CFM)	FAN SP. IN WG	IS 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
NO. 5L-1 EL-1 5L-2 EL-2	TYPE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE	LOUVERS SIZE 12" X 12" 12" X 12" 12" X 12" 12" X 12"	MANUFAC GREEN GREEN GREEN GREEN	CTURER & MODE HECK, ESD-435 HECK, ESD-435 HECK, ESD-435 HECK, ESD-435	EL	
NO.	ТҮРЕ	DAMPERS SIZE	MA	NUFACTURER &	MODEL	
SD-1	GRAVITY/BACKDRA	AFT 12" X 12"		GREENHECK E	M30	
ED-1	GRAVITY/BACKDR	AFT 12" X 12"		GREENHECK E	M30	
SD-2	GRAVITY/BACKDR	AFI 12" X 12"		GREENHECK E	M30	
<u>1-2</u>	LOCATION	TYPE	UNIT HE SIZE	ATERS V/f	CONTROL	MANUFACTURER/MODEL
	Drawing Title:				Designed By:	CONSOR Project No.: W/2325201 IT
		PROCESS NAZLINI				Issued On: APRIL 2024
					JLC	Drawing No.:
	I SEC	FIONS AND	HVAC		Checked By:	D-301

		6				7
NO.	SERVICE	CAPACITY (CFM)	FA SP. IN WG	NS 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
IO. L-1 F L-1 F L-2 F L-2 F	TYPE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE FIXED DRAINABLE BLADE	LOUVERS SIZE 12" X 12" 12" X 12" 12" X 12" 12" X 12"	MANUFA GREEN GREEN GREEN	ACTURER & MODE NHECK, ESD-435 NHECK, ESD-435 NHECK, ESD-435 NHECK, ESD-435	E	
NO. SD-1	TYPE GRAVITY/BACKDRA	DAMPERS SIZE AFT 12" X 12"	M	ANUFACTURER & GREENHECK E	MODEL M30	
בח-ז כח-ט		AFI 12" X 12"			טכויין אזח M30	
ED-2	GRAVITY/BACKDRA	AFT 12" X 12"		GREENHFCK F	M30	
NO. JH-1 JH-2	LOCATION PUMP ROOM ELECTRICAL ROOM	TYPE UNIT HEATER UNIT HEATER	UNIT H SIZE 3KW 3KW	EATERS V/f 208-240/1 208-240/1		MANUFACTURER/MODEL REZNER EUH 3
				200 240/1	INTEGRAL	KLZNEK LOH 5
				200 240/1	INTEGRAL	REZINER LOTT 3
					INTEGRAL	
					INTEGRAL	
	Drawing Title:	PROCESS			Designed By: AMB	CONSOR Project No.: W232520UT Issued On: APRII 2024
	Drawing Title:	PROCESS			Designed By: AMB Drawn By: JLC	CONSOR Project No.: W232520UT Issued On: APRIL 2024 Drawing No.:

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

Approved By:





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SCALE: NTS



Consultant:

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4





- /

 $\Lambda \triangleleft$

EXTERIOR

WALL —

1. ORIENT UNISTRUT CHANNEL VERTICALLY OR HORIZONTALLY DEPENDING ON APPLICATION.

2. AT A MINIMUM, SUPPORT PIPE HORIZONTALLY EVERY 6 FEET AND VERTICALLY AT





UNISTRUT OR APPVD EQ - Manuel H SEE SPECS Δ \triangleleft MILLI - PIPE INSUL AS REQ'D, SEE SPECS ATTACH TO UNISTRUT PER MFR'S REQUIREMENTS AHR TO CONC WALL PER MFR'S REQUIREMENTS W/ EPOXY AHR BOLTS



SST STL

⁻ 1⁵/₈" P5500 UNISTRUT CHANNEL,

STD PIPE STRAP, MFR BY

PRESSURE GAUGE ASSEMBLY

PIPE PENETRATION - 3 SCALE: NTS -

5

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Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY **BOOSTER PUMP STATION** Drawing Title:



7

FLANGE INSULATING JOINT ASSEMBLY 4 SCALE: NTS -

	Designed By:	CONSOR Project No.: W232520UT				
	AIVIB	Issued On: APRIL 2024				
	Drawn By: JLC	Drawing No.:				
DETAILS	Checked By: AMB	D-501				
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	1		2			3		4		5			6		7
									I		I		_		GENERAL NOTES
			ABBREVIATIONS	I_		SYMBOLS:									
	A AMP(S), AMPERE(S)	НР цтр	HORSEPOWER									SHTING CONTROL	AND CIRCUITING		TO BE CONFUSED WITH EQUIPMENT
	AFF ABOVE FINISHED FLOOR	HV	HIGH VOLTAGE	I/O	INPUT/OUTPUT								NOTE: CONTRACTOR SHALL PROVIDE ALL CONDU	IT AND	GENERAL DRAWINGS OR OTHER
	AIC AMPS INTERRUPTING CAPACITY, SYMM.	HVAC	HEATING, VENTILATION, AND AIR	IPB	INSTRUMENT PULLBOX		RACEWAY OR WIRING SYSTEM ABOVE FLOO	OR LEVEL					CONDUCTORS REQUIRED FOR A COMPLET OPERATING SYSTEM	EAND	CONTRACT DOCUMENTS.
	AL ALUMINUM	нz	HERTZ (CYCLES PER SECOND)	J, JB	JUNCTION BOX		RACEWAY OR WIRING SYSTEM IN OR UNDE	R FLOOR, OR		GROUNDING CONDUCTOR					
A	ARCH ARCHITECT(URAL)	ІСОМ	INTERCOM	KCMIL	1000 CIRCULAR MIL		CONCEALED IN OR BEHIND STRUCTURE OF OR CONDUIT ROUTED BELOW GRADE IN CO	R EQUIPMENT, ONCRETE		LIGHTNING CONDUCTOR		(PC)			
	ASYM ASYMMETRICAL	IMC		KV	KILOVOLT		ENCASEMENT.		(\bullet)	GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)	LU	MINARIES:			
		INTLK		KVA		-OHE-OHE-	OVERHEAD POWER LINE		$\overline{\mathbf{O}}$	GROUND ROD AND WELL			NOTE: LUMINAIRE SHAPES AND SCALE ARE		
	AUX AUXILIARY AWG AMERICAN WIRE GAUGE	кwн	KILOWATT-HOUR	RCPT		0	RACEWAY OR WIRING SYSTEM TURNED TO	WARD THE	\otimes				EXAMPLES SHOWN BELOW ARE TYPICAL		
	BLDG BUILDING	LCP	LOCAL CONTROL PANEL	REF	REFERENCE		VIEWER (UP ON PLAN DRAWINGS)		(O) _{xx}	AIR TERMINAL (LIGHTNING ROD)		Р	APPLICATIONS.		
	C CONDUCTOR, CONDUIT	LHH	LOW VOLTAGE HANDHOLE	REQD	REQUIRED)	RACEWAY OR WIRING SYSTEM TURNED AW VIEWER (DOWN ON PLAN DRAWINGS)	VAY FROM THE	L	-AIR TERMINAL DETAIL CALLOUT			POLE MOUNTED METAL HALIDE LIGHT		
	CB CIRCUIT BREAKER	LMH	LOW VOLTAGE MANHOLE	RMS	ROOT MEAN SQUARE		CONDUIT STUB AND CAP								
	CKT CIRCUIT	LP		RNG	RUNNING				\bigcirc	GROUNDING COIL		Ъ Т	DOUBLE POLE MOUNTED METAL HALIDE LIGH	-	
	CND CONDUIT	LTG		RTD		CIRCUIT IDENTIFICAT	ION:	DI	TRIBUTION EQU	PMENT:					
	CONC CONCRETE	M	METER	SA	SURGE ARRESTOR			DESIGNATOR		GENERAL: APPROXIMATE SHAPE AND SCA		\square			
	CPT CONTROL POWER TRANSFORMER	MBS	MANUAL BYPASS SWITCH	SCR	SILICON CONTROLLED RECTIFIER					EXACT SIZE AND NUMBER OF SE	ECTIONS IS	\geq	PENDANT/SURFACE MOUNTED TUBE LIGHTING	6.	
	CT CURRENT TRANSFORMER	мсс	MOTOR CONTROL CENTER	SD	SMOKE DETECTOR	YY			BP 01	ESTIMATED 31 EQUIPMENT DESIGNATOR		–			
	CU COPPER	MCP	MOTOR CIRCUIT PROTECTOR	SEC	SECONDARY					+ # #		\bigotimes	EXIT LIGHT		
	DB DUCT BANK, DIRECT BURIAL			SEL		<i>₹</i>	CIRCUIT HOME RUN		4			` <u></u>	WALL SCONCE		
		MH	MANHOLE	SHH	SERVICE ENTRANCE SECTION		A FEEDER INDENTIFICATION					,O,			
	DET DETAIL	MISC	MISCELLANEOUS	SPEC	SPECIFICATION							EXAMPLE:			
R	DISC DISCONNECT	ммн	MEDIUM VOLTAGE MANHOLE	SR	SINGLE RATIO				EQU						
	DP DISTRIBUTION PANEL	MOV	MOTOR OPERATED VALVES	ST	SHORT TIME								LUMINAIRE SCHEDULE		
	DWG DRAWING	MPC		SSS	SOLID STATE STARTER				BP BC	OSTER PUMP					
			MULTI RATIO	SUB		CYY-XXX			СЈВ СС	NTROL JUNCTION BOX		12h-	NUMBER INDICATES CIRCUIT NUMBER		
		MV	MEDIUM VOLTAGE	SWBD	SWITCHBOARD	FYY-XXX	IBER OPTIC		DSC DI	SCONNECT SWITCH			LETTER INDICATES SWITCH		
	EMH ELECTRICAL MANHOLE	м∨мс	MEDIUM VOLTAGE MOTOR CONTROL	SWGR	SWITCHGEAR	NYY-XXX N	IETWORK COMMUNICATIONS		GEN GE	NERATOR	INS	STRUMENT DETAIL	L CALLOUTS:		
	EMT ELETRICAL METALLIC TUBING	N/A	NOT APPLICABLE	SYS	SYSTEM	ZYY-XXX s	PARE								
	ENCL ENCLOSURE/ENCLOSED	N.C.	NORMALLY CLOSED	ТВ	TERMINAL BOX, TERMINAL BLOCK	стүү-ххх с	CABLE TRAY SECTION								
	EPB ELECTRICAL PULLBOX	NEUT,I		TEL	TELEPHONE	CBYY-XXX C	CABLE BUS			OGRAMMABLE LOGIC CONTROLLER		x			
	EQUIP EQUIPMENT	NF	NON-FUSED	TEMP	TEMPERATURE	EXAMPLE 1:			PMP PU	MP		SHT	X = DETAIL IDENTIFIER SHT = DRAWING NUMBER WHERE DETAI	LIS	
	(E) EXISTING	N.O.	NORMALLY OPEN	TVSS	TRANSIENT VOLTAGE SURGE	P101-1: 3-2/0, #6GN	ND, 2"C FOR CIRCUIT P101: THREE 2/ ONE NO. 6 AWG GROUND WI	NE IN A 2"	PNL PA	NELBOARD			LOCATED		
	FDR FEEDER	NO.	NUMBER	TYP	TYPICAL	EXAMPLE 2:	CONDUIT		RTU RE	MOTE TERMINAL UNIT					
	FLA FULL LOAD AMPS	NP	NAMEPLATE	U/G	UNDERGROUND	SES-2: 2[3-1/0, #6G	GND, 1 1/2" C] FOR SES-2: TWO PARALLEL 1/0 CONDUCTORS, ONE NO. 6	RUNGS OF THREE	RVSS RE	DUCED VOLTAGE SOFT STARTER		(XX	SECTION CALLOUT REFERENCE BUBBLE		
	FLEX FLEXIBLE CONDUIT	NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED	EXAMPLE 3:	1 1/2" CONDUIT		SWBD SV	ITCHBOARD	[SHT	XX = SECTION IDENTIFIER SHT = DRAWING NUMBER WHERE DETAIL	IS	
	F.O. FAIL OPEN			V		C111: 2-1 PR #16S,	, 1"C FOR CONTROL CIRCUIT: TWO OF #16 AWG TWISTED SHIELI	O SIGNAL CABLES DED PAIR IN 1" C.	sv sc	LENOID VALVE		- 🗸	LOCATED		
	FUT FUTURE	P	POLE, PHASE	VA	VOLT-AMPERE VOLT-AMPERE REACTIVE										
	GDR GROUNDING RESISTOR	PB	PUSH-BUTTON, PULLBOX	VC	VACUUM CONTRACTOR	WIRING DEVICES:									
	GEC GROUND ELECTRODE CONDUCTOR	PF	POWER FACTOR	XFMR	TRANSFORMER	SWITCHES:				ANSFORMER		ANSI / IEEĘ DEVI			
	GF GROUND FAULT	PH	PHASE	XMTR	TRANSMITTER	\$	SINGLE POLE SWITCH.					\frown			
	GFI GROUND FAULT INTERRUPTER	PLC	PROGRAMMABLE LOGIC CONTROLLER	W	WATT, WIRE, WIDE	<u></u>						(XX)			
				W/O			WALL PLATE								
	HGT HEIGHT	PRI	PRIMARY	WW	WIREWAY		SWITCH SUPERSCRIPT MODIFIER. LOWER	R CASE LETTER.		EQUIPMENT NUMBER (EXAMPL	'LE)		RIPTION: IRCUIT BREAKER		
	HH HANDHOLE	PT	POTENTIAL TRANSFORMER	XP	EXPLOSION PROOF		INDIGATES LUMINAIRE CONTROLLEDa,b, COMBINED WITH CIRCUIT NUMBER. EXAM	,c,etc. MAY BE IPLE: 1a, 4b, etc.		WALL-MOUNTED DISTRIBUTIO SUCH AS PANELBOARD. MOTO	ON ASSEMBLY,	51 AC IN	IVERSE TIME OVERCURRENT RELAY		
				z	IMPEDANCE		- SWITCH SUBSCRIPT MODIFIER. UPPER CA	ASE LETTER OR #:		CENTER, OR TERMINAL CABIN	NET	50 INSTA	ANTANEOUS OVERCURRENT RELAY		
							2 = DOUBLE POLE		- <u></u> P	EQUIPMENT NUMBER (EXAMPI	PLE)	50 GROU	JND INSTANTANEOUS OVERCURRENT RELAY		
							3 = THREE WAY 4 = FOUR WAY				8	B6 LOCK	OUT RELAY		
							K = KEY OPERATED M = HORSEPOWER RATED MANUAL STAR	TER		FLOOR-STANDING DISTRIBUTI	ION ASSEMBLY,	46 PHAS			
							F = FLUSH MOUNTED (DEMOLITION DRAW	/INGS ONLY)		U SUCH AS A SWITCHBOARD, TI OR MOTOR CONTROL CENTER	RANSFURMER,	25 SYNC	RUNIZATION CHECK DEVICE		
						RECEPTACLES			∕M	CC 1100		59 OVER	R VOLTAGE RELAY		
						PNL-##				EQUIPMENT NUMBER (EXAMPI	PLE)	B1U UNDE	R FREQUENCY RELAY		
						Φ GF/WP	20 AMP SIMPLEX RECEPTACLE					810 OVER	R FREQUENCY RELAY		
						PNL-##			VIUTOR AND EQU	IPMENT:		67 AC DI	RECTIONAL OVER CURRENT RELAY		
						Ψ			M	MOTOR	6	62 TIME	DELAY RELAY		
						PNL-## GF/WP	20 AMP QUADPLEX RECEPTACLE		- -	DISCONNECT, NON-FUSED. 30A. 3 PO	DLE UON.	74 ALARI	IVI RELAT		
										100A, 3P RATING INDICATED		BCS BREA	KER CONTROL SWITCH		
							3 = BRANCH CIRCUIT NUMBER					52a BREA	KER CLOSED STATUS		
							GF = GROUND FAULT CIRCUIT INTERRU F = FLUSH MOUNTED (DEMOUTION DPA	PTER WINGS ONLY)	[F]-	FUSED DISCONNECT: CLASS R FUSES	S UON.	52b BREA	KER OPEN STATUS		
							WP = WEATHERPROOF			FIELD INSTRUMENT					
		Consultan	t				Engineer's Seal: Client / Or	wner:	Project T	tle:	Drav	wing Title:	FLECTRICAL	Designed By:	CONSOR Project No.: W23250UT
								NAVAJO TRIBAL UTILITY AUTHORITY					NAZLINI	KPO	Issued On: APRIL 2024
							PRELIMINARY			NAVAJO TRIBAL UTILI	TY			Drawn By:	Drawing No.:





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NOT FOR UB AUTHORITY CONSTRUCTION **B-1 BOOSTER BUMP STATION**

LEGEND & SYMBOLS
SHEET - I

RPU	Issued On:	APRIL 2024					
Drawn By: RPO	Drawing No.:						
Checked By: MAB		E001					
Approved By: MAB	0 1/2	1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE					



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	6				7		
HOWN WITH LOCAT	ION REFERENC	E (OPTIONAL)					
NORMALLY OPEN (NO)	NORMALLY CLOSED (NC)						
LS	LS	LIMIT: FREE					
LS S	LS oto	LIMIT: HELD					
FS	FS S	FLOW					
TAS 《주	TAS ० _२ ०	TEMPERATURE					
PS	PS of to	PRESSURE					
FLT	FLT တွာ	LEVEL					
OS-100	OS-101	FORCE OR TORQUE					
	PB allo	MANUAL: MOMENTAR PUSH-BUTTON	Y				
PB ~ ~~	PB ാ	MANUAL: MUSHROOM MAINTAINED PUSH-BU	I HEAD JTTON				
ss ,`` ox	SS പം ^{OX}	MANUAL: SELECTOR S POSITION MAINTAINED SWITCH POSITION X = CLOSED CONTACT O = OPEN CONTACT	SWITCH 2 D T				
SS ~~~oxo	ss offoox	MANUAL: SELECTOR S POSITION RETURN TO SWITCH POSITION X = CLOSED CONTAC O = OPEN CONTACT	SWITCH 2 RIGHT T				
ss مooox	ss പം ^{xoo}	MANUAL: SELECTOR S POSITION SWITCH POSITION X = CLOSED CONTACT	SWITCH 3 T				
	 00	AUXILARY CONTACT					
ELEC	TRICAL		Designed RP(I By:	CONSOR Project	No.: W23250UT	
NA	ZLINI		Drawn I	 Зу: ```	Drawing No.:	APRIL 2024	
			Checked	By:		E002	
SHE	a stivib) ET - II	013	MA Approved	∃ I By:	0 1/2	1 IF BAR DOES NOT MEA	SURE 1"

MAB

DRAWING IS NOT TO SCALE



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NOTES:

1. TEST WELL OF CONCRETE OR STEEL MATERIAL.

2. H-20 LOAD RATED COVER FOR TEST WELL IN TRAFFIC AREA.



4



Engineer's Seal:



NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION**

Project Title:

G GROUND PLATE TYP DETAIL

Drawing Title:

CONDUIT ON SURFACE DETAIL DETAIL



- CONCRETE OR BLOCK WALL

- WEDGE ANCHOR

- CONDUIT (TYPICAL)

GALVANIZED U-CHANNEL

SECURED WITH 316SS MOUNTING HARDWARE

CLAMP OR ANCHOR TO SURFACE AS NEEDED

- BEAM OR SURFACE

AND HARDWARE

SECURE WITH 316SS STRAPS





PART NUMBER SCGB-8 OR EQUAL.

1. GROUND BAR SHALL BE STORM COPPER COMPONENTS, CO.



EXOTHERMIC GROUND ROD CONNECTION



ARRANGEMENT WITH SITE PLAN, LINE DIAGRAMS, CONDUIT SCHEDULES, AND SECTIONS



NOTES:

- 1. WHERE CONDUITS ARE INSTALLED IN A CONCRETE SLAB, THE 24" DIMENSION DOES NOT APPLY. CONDUITS SHALL BE INSTALLED BETWEEN REBAR MATS OR UNDER A SINGLE REBAR MAT.
- 2. IN CORROSIVE AREAS, PVC COATED GRS SHALL BE USED.



ELECTRICAL NAZLINI	Designed By:	CONSOR Project No.: W23250UT
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Drawing Title:

5

CONDUIT BLOCK DIAGRAM

Project Title:



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.

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B. BREAKERS WITH VOLTAGE 240 SHALL ASSUMED TO BE 80% RATED FOR CALCULATIONS.

KEY NOTES:

1 SEE PANEL SCHEDULE FOR MORE INFORMATION.

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NAZLINI	RPO	Issued On: APRIL 2024			
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DIAGRAMS	Checked By: MAB	E010			
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PNL-100												
VOLTS	120/240	VAC	PH 1						FED FROM	MTS		
MAIN BREAKER	200	A		W	I 3		LOCATION			E-ROOM		
BUS RATING	200	Α			3 22	kA	-	N	OUNTING			SURFACE
		LOAD			VA	_		VA		LOAD		
LOAD DESCRIPTION	BRK	TYPE	No	A	В		A	В	No	TYPE	BRK	LOAD DESCRIPTION
	20	CONT	1	1992			75		2	CONT	20	EF-1
P-110	20	CONT	3		1992			62	4	CONT	20	EF-2
	20	CONT	5	1992			3000		6	CONT	35	UH-1
P-120	20	CONT	7		1992			1200	8	CONT	20	PLC
RECEPTACLES	20	NC	9	180			0		10	CONT	20	SPARE
LIGHTING	20	CONT	11		180			0	12	CONT	20	SPARE
SPARE	20	CONT	13	0			0		14	NC	20	SPARE
SPARE	20	CONT	15		0			0	16	NC	20	SPARE
SPARE	20	CONT	17	0			0		18	NC	20	SPARE
SPACE		CONT	19		0			0	20	CONT		SPACE
SPACE		CONT	21	0			0		22	CONT		SPACE
SPACE		CONT	23		0			0	24	CONT		SPACE
SPACE		CONT	25	0			0		26	CONT		SPACE
SPACE		CONT	27		0			0	28	CONT		SPACE
SPACE		CONT	29	0			0		30	CONT		SPACE
SPACE		CONT	31		0			0	32	CONT		SPACE
SPACE		CONT	33	0			0		34	CONT		SPACE
SPACE		CONT	35		0			0	36	CONT		SPACE
SPACE		CONT	37	0			0		38	CONT		SPACE
SPACE		CONT	39		0			0	40	CONT		SPACE
SPACE		CONT	41	0			0		42	CONT		SPACE
NON-CONTINUOUS LOADS kVA 0.18 0.00 NOTE					NOTES:							
	CON	TINUOUS LO	ADS kVA	8.82	2 6.78							
		PHASE TO	OTAL kVA	9.00	6.78							
		тс	OTAL kVA		15.79							
		тот	AL AMPS		65.78							

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Consultant:

SHORT CIRCUIT CALCULATIONS														
		FAULT	AVAILABLE	V	COND.		NO. OF			NO. OF	CC	ONSTANT		
SOURCE	TO EQUIPMENT	POINT	SCA	(P-P)	SIZE	TYPE	RUNS	RUN LENGTH	CONDUIT TYPE	COND.	С	f	m	l(sca)
PXFMR-100	UM-001	F1	-	240	1/0	Cu	1	50	PVC	1/C	9,317	-	-	31,667
UM-100	SES-100	F2	31,667	240	1/0	Cu	1	10	PVC	1/C	9,317	0.25	0.80	25,430
SES-100	MTS-100	F3	25,430	240	1/0	Cu	1	10	PVC	1/C	9,317	0.20	0.84	21,245
MTS-100	LP-100	F4	21,245	240	1/0	Cu	1	10	PVC	1/C	9,317	0.16	0.86	18,243

	LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	MFR	CATALOG NUMBER	ALOG NUMBER MOUNT LAMP DATA		VAC N		NOTES		
MARK					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
В	WALL PACK IP66 WET LOCATIONS	LITHONIA	WPX0 LED ALO SWW2 MVOLT PE DDBXD M2	E (10')	5	13	LED	1,650	120	2
	MOUNTING			LAMP TYP	<u>E</u>					
	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 HE	IGHT	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 EMERGE	NCY BATTERY P	ACKS TO BE FULLY SWITCHABLE UNLESS N	NOTED AS NI	IGHT LIGHT	(NL). PRO	OVIDE UNS	WITCHED HO	FOR CHA	RGER.
	2) FURNISH FIXTURE WITH E	BUTTON TYPE PH	IOTOCELL FOR ON/OFF CONTROL.							

5

PRELIMINARY NOT FOR CONSTRUCTION

Engineer's Seal:



4

Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION** Drawing Title:

SCHE

6

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.

	Designed By:	CONSOR Project No.: W23250UT			
	RPO	Issued On: APRIL 2024			
	Drawn By: RPO	Drawing No.:			
EDULES & CALCULATIONS	Checked By: MAB	E011			
	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			





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SCHEMATIC	Checked By: MAB	E030			
RTU	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			





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Project Title:

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NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION** Drawing Title:

GENERAL NOTES:

A. TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT.

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- B. CIRCUIT BREAKERS AND FUSES SHALL BE ADEQUATELY SIZED PER APPLICATION.
- C. VFD SHALL BE A SINGLE PHASE TO THREE PHASE CONVERSION TYPE.
- D. CONTROL STRATEGY PROVIDED BY OTHERS.

VFD IO CONFIGURATION:

SUPPLIER SHALL PROVIDE A COMPLETE AND OPERATIONAL SYSTEM CAPABLE OF REMOTE OPERATION AS PER CONSTRUCTION DOCS.

- 1. CONTROL I/O, OVERLOAD VFD STATUSES AND PARAMETERS SHALL BE MADE AVAILABLE TO THE SITE PLC AND SCADA VIA ETHERNET AND HARDWIRE CONNECTION.
- 2. <u>HAND-OFF-AUTO</u> SELECTOR SWITCH:
- 2.1. IN <u>HAND</u> MOTOR SHALL START AND RUN. SPEED VIA KEYPAD
- 2.2. IN OFF MOTOR SHALL NOT RUN.
- 2.3. IN <u>AUTO</u> MOTOR SHALL START/STOP VIA DISCRETE INPUT (DI1). SPEED VIA 4-20mA ANALOG INPUT.
- 3. RUN PERMISSIVE INTERLOCKS. WHEN ACTIVATED THE FOLLOWING SIGNALS SHALL PREVENT MOTOR OPERATION. RUN PERMISSIVE INTERLOCK SHALL REMAIN ACTIVE UNTIL PERMISSIVE CONDITION HAS CLEARED AND LOCAL RESET HAS BEEN ACTIVATED.
- 3.1. VFD FAULT ALARM.
- 3.2. HIGH DISCHARGE PRESSURE/LOW SUCTION PRESSURE/HIGH TEMPERATURE (DI2)

PROTECTION CONFIGURATION:

- a. AT A MINIMUM PROVIDE THE FOLLOWING PARAMETERS FOR MOTOR PROTECTION ON ALL LOAD TYPES.
- a.a. THERMAL OVERLOAD
- a.b. PHASE-LOSS
- a.c. CURRENT IMBALANCE
- a.d. BACKSPIN TIMER 0-30S (PREVENTS EXCESSIVE SPINNING, IMPELLER TO COME TO A CONTROLLED STOP REDUCING WEAR)

CR60025 033 DISCH PRESSURE HIGH ALARM 	LOR SS60014 	PLC

	Designed By:	CONSOR Project No.: W23250UT			
	RPO	Issued On: APRIL 2024			
	Drawn By: RPO	Drawing No.:			
SCHEMATIC	Checked By: MAB	E060			
VFD	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			



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GENERAL NOTES:

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- 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 NEW ANTENNA POLE. REFER TO RADIO PATH STUDIO FOR REQUIRED POLE HEIGHT.

	Designed By:	CONSOR Project No.: W23250UT			
	RPU	Issued On: APRIL 2024			
	Drawn By: RPO	Drawing No.:			
SITE PLAN	Checked By: MAB	E100			
OWER & CONTROLS	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			



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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.

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	RPO	Issued On: APRIL 2024			
	Drawn By: RPO	Drawing No.:			
ENLARGED PLAN	Checked By: MAB	E101			
POWER & CONTROLS	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			





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NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION** GENERAL NOTES:

A. EXISTING GROUNDING CONDUCTORS MAY EXIST. CONTRACTOR TO INSTALL NEW GROUNDING SYSTEM AS SHOWN ON DRAWINGS.

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	Designed By:	CONSOR Project No.: W23250UT			
NAZLINI	RPO	Issued On: APRIL 2024			
	Drawn By: RPO	Drawing No.:			
SITE PLAN	Checked By: MAB	E102			
GHTING & GROUNDING	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE			



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A. EXISTING GROUNDING CONDUCTORS MAY EXIST. CONTRACTOR TO INSTALL NEW GROUNDING SYSTEM AS SHOWN ON DRAWINGS.

- 7

B. ALL NEW EQUIPMENT SHALL BE APART OF A CONTIGUOUS GROUND SYSTEM.

GF/WP

ELECTRICAL NAZLINI	Designed By:	CONSOR Project No.: W23250UT		
	RPO	Issued On: APRIL 2024		
	Drawn By: RPO	Drawing No.:		
ENLARGED PLAN	Checked By: MAB	E103		
GHTING & GROUNDING	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE		

	1	2			3	
	PROCESS AND SIGNAL:	VALVE AND ACTUATOR SYMBOLS:				
	MAIN PROCESS FLOW (WITH TYPICAL DIRECT- ION OF FLOW SHOWN)	N.O. NORMALLY OPEN N.C. NORMALLY CLOS	N SED GATE VALVE	н	GAGE OR VALVE	
A	SECONDARY PROCESS FLOW	OPEN CLOSED		F.O. FAIL OP F.C. FAIL CL	EN DSED	
	PROCESS TAPS		PLUG VALVE	F.0.	THREE W FAIL POSI	
			BALL VALVE	▼		
			GLOBE VALVE		FOUR WA	
			BUTTERFLY VALVE			
	ELECTRIC SIGNAL (ANALOG OR DIGITAL)		CHECK VALVE		PRESSUR REDUCIN	
	MISC, ELECTRICAL					
			CONE VALVE		VALVE	
	ELECTROMAGNETIC OR SONIC SIGNLAL (GUIDED)					
В	\sim \sim ELECTROMAGNETIC OR SONIC SIGNLAL (UNGUIDED)		DIAPHRAGM VALVE		VALVE	
	ooSOFTWARE OR DATA LINK		NEEDLE VALVE	$ \bowtie$	PISTON O	
		Į	RELIEF VALVE		FLAP GAT	
			FLOAT VALVE		FLOAT/PF	
	CONNECTION. NO. 3 WATER SHOWN. SEE DRAWING G2 FOR PIPING SERVICE SYMBOL.		BACKFLOW PREFENTE	R T		
		Kol	BALL CHECK VALVE		TELESCO	
		, Т,	KNIFE VALVE		AIR RELIE	
	DRAWING CR055-REFERENCE 51		PROCESS AND S	IGNAL LINES:		
	6 "-CR-01-SSA I101		I100 6"-C	R-01-SSA 5		
				DWG	NO	
	6" CRUD LINE COMES FROM DRAWING AND WILL CONTINUE ON DRAWING 110 ⁻	1100 I100	6" CRUD LINE COMES I AND WILL CONTINUE C	FROM DRAWING I100 DN DRAWING I101	10.	
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Consultant:

		4		5		
	PROCESS DE	VICE SYMBOLS:			MISCELLANEOU	JS MECHA
ROOT		STRAINER - STANDARD OR BASKET		SLIDE GATE (SLG) (NORMALLY OPEN)		CENTRIFUGAL PUMP
		REDUCER OR INCREASER		SLIDE GATE (SLG) (NORMALLY CLOSED)		METERING PUMP
AY VALVE (W/TYPICAL ITION)				SLUICE GATE (SG) (NORMALLY OPEN)	\square	VERTICAL
YVALVE		SEPARATOR		SLUICE GATE (SG)		INLINE PUMP
RE G VALVE		FILTER		(NORMALLY CLOSED)	\bigcirc	STATIC MIXER
ESSURE G		BLIND FLANGE			$H \longrightarrow \mathbb{W}$	PROGRESSIVI CAVITY PUMP
D OPERATED		UNION QUICK DISCONNECT COUPLING		THREADED CAP	M	ELECTRIC MO
PERATED VALVE		SPRAY NOZZLES	Ю	FLEX CONNECTION		COMPRESSO
Ē	<u> </u>	FINE BUBBLE DIFFUSER	×	FLEX CONNECTION (STEEL BRAIDED)		
ROBE		TANK	∥ ∳	PULSATION DAMPENER		DISCONNECT
PIC VALVE		ROTAMETER		VENT		SUBMERSIBLE WELL PUMP
EF VALVE		INJECTOR		CALIBRATION COLUMN		
PROCESS AN		ATION PIPING IDENTIFICA	TION:	MECHANICAL EQUIPI	MENT IDENTIFICA	TION:
		DIAMETER		CRUD FEED PUMP	EQUIPMENT NAME	
	X"-XX-##-XXX-E	ENTIFICATION NUMBER TERIAL SPECIFICATION – EXISTING PIPE		XX-XXX-### UNIQUE I EQUIPMENT TY PROCESS DESIGNA	EQUIPMENT NUMBER	S

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Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION** Drawing Title:



P&ID NAZLINI	Designed By:	CONSOR Project No.: W23250UT
	RPO	Issued On: APRIL 2024
	Drawn By: RPO	Drawing No.:
LEGEND & SYMBOLS	Checked By: MAB	1001
SHEET - I	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE

PECIAL OR INST	RUMENT FUNCTION	PRIMARY ELEMENT SYMBOLS:	INSTRUMENT AND FUNCTION SYMBOLS:	FUNCTION	IDENTIFICAT					1. PROCESS AND INSTRUMEN PROCESS FLOW AND CON	ITATION DIAGRAMS (P&IDs) TROL GUIDES. THEY DO NO
CONTRACTORS.				MFA		TTER(S)	READOUT OF	SUCCEEDING LETTERS			EACTOAL SPACE RELATION EMS. P&IDs ARE NOT TO BE
ک + + –	BIAS			INITIATI	ING VARIABLE	MODIFIER	PASSIVE FUNCT		MODIFIER		
AVG	AVERAGE			A ANALYSI	IS		ALARM			2. PLANT AREA OR PROCESS FROM DRAWINGS AND CO	VIT PREFIX MAY BE OMIT VERED BY NOTE WHEN ALL
Х	MULTIPLY		SHARED DISPLAY (GRAPHICAL	B BURNER	R (FLAME)			CONTROL		INSTRUMENTS ON DRAWIN	IGS HAVE SAME PREFIX.
<u> 0 </u>	DIVIDE	VENTURI OR FLOW TUBE	OPERATOR INTERFACE)	C CONDUC	CTIVITY					3. REFERENCE CIVIL/MECHA!	VICAL DRAWINGS/SPECS FC
	EXTRACT SQUARE ROOT		COMPUTER FUNCTION	D DENSITY	(DIFFERENTIAL				EQUIPMENT DESIGNATION	S AND ABBREVIATIONS.
X ⁿ OR /	RAISE TO POWER	FLUME		E POTENTI	IAL (ELEC)		PRIMARY			4. DRAWINGS 1001 AND 1002 A SYMBOLS AND IDENTIFICA	.RE GENERAL IN NATURE. S TIONS SHOWN HEREON MA
(K) 1:1				F FLOW RA	ATE	RATIO				USED ON THE CONTRACT	JRAWINGS.
	HIGHEST VALUE SELECTION		AI	G FIRE, SM	IOKE		GLASS			5. EXISTING EQUIPMENT SHA	LL BE SCREENED BACK GR
	LOWEST VALUE SELECTION				IT (FLC)						
REV	REVERSE		ANALOG OUTPUT		()	SCAN		CONTROL STATION			
GAF	GAP ACTION FLOATING	CHEMICAL SEAL WITH ISOLATION VALVE	AO			TIME RATE CHANGE					
S & H	SAMPLE AND HOLD						PILOT LIGHT		LOW		
				M MOISTUF	RE	MOMENTARY			MIDDLE		
(TYPICAL)	USING FOLLOWING SIGNALS:	SPECIFICATION SECTION 15050		N USERS C	CHOICE						
	E - VOLTS			O DISSOLV	/ED OXYGEN		ORIFICE				
	H - HYDRAULIC			P PRESSU'	IRE		TEST CONNECTI	ON			
	I - CURRENT			Q QUANTIT	ΤY	INTEGRATE					
	O - ELECTROMAGNETIC OR SONIC			R RADIATIC	ON		RECORD				
	P - PNEUMATIC	I I I FLOW ELEMENT	CONTROL FUNCTION, SEE INTERLOCK	S SPEED, F	FREQUENCY	SAFETY		SWITCH			
			NOTES.	T TEMPER	RATURE			TRANSMITER			
	D - DIGITAL	METER			ARIABLE		MULTI FUNCTION	MULTI FUNCTION	MULTI FUNCTION		
% OR P	PROPORTIONAL CONTROL ACTION		PROGRAMMABLE CONTROLLER	V VIBRATIC	ON			VALVE, DAMPER			
∫ OR I	INTEGRAL CONTROL ACTION			W WEIGHT,	, FORCE		WELL				
d/dt OR D	DERIVATIVE CONTROL ACTION		NOTE: ANY OF THE ABOVE SYMBOLS MAY BE	X UNCLASS	SIFIED		UNCLASSIFIED	UNCLASSIFIED			
1 - 0	ON - OFF CONTROL ACTION		SHOWN WITH HORIZONTAL BAR(S) TO INDICATE PANEL MOUNTING AND/OR	Y EVENT, S	STATUS			RELAY, COMPUTE			
$\Delta = 1 - 0$	DIFFERENTIAL GAP CONTROL ACTION		OPERATOR ACCESSIBLE		N .			MISC. ACTUATOR			
(TYPICAL)	GAIN OR ATTENUATE			MISCELI	LANEOUS:						
ES	EMERGENCY STOP		OPERATOR ACCESSIBLE								
FR	FORWARD - REVERSE	(ROTAMETER)	\frown	Р		E OR FLUSHING	\square	MAGNETIC FLOW PROBE			
HA	HAND-AUTO SELECTION		() MOUNTED ON/IN PANEL		DEVIC	CE	U				
HOA	HAND-OFF-AUTO SELECTION		OPERATOR INACCESSIBLE		\backslash						
HOR	HAND-OFF-REMOTE SELECTION		FACE MOUNTED ON FIELD PANEL	R		T FOR LATCH-TYPE		SONIC FLOW METER			
LF	LEAD-FOLLOW SELECTION	ROTAMETER	TYPICAL PANEL NUMBER					(DOPPLER OR TRANSIT TIME)			
LOR	LOCAL-OFF-REMOTE SELECTION		\frown	F							
LR	LOCAL-REMOTE SELECTION	V	(===) MOUNTED ON/IN FIELD PANEL OPERATOR INACCESSIBLE		ВОВВ		جلع				
OAC	OPEN-AUTO-CLOSE							MAGNETIC FLOW METER			
00	OPEN-CLOSE			C	солт	FROL UNIT		л Л			
OL			INDICATES DEVICE LOCATED IN FIELD		, \						
SIK	SPEED INDICATION AND COMP. CNTRL.			<r< td=""><td></td><td>RLOCK</td><td>8</td><td>TURBINE FLOW METER</td><td></td><td></td><td></td></r<>		RLOCK	8	TURBINE FLOW METER			
SS	START-STOP	INSTRUMENT SYMBOL DESIGNATION:	INSTRUMENT TAG NUMBERS:								
R	RESET -					K-CONNECT					
*V	VENDOR PACKAGE	ZZZ XX YYY	XX YYY NNNN Z X X X X			NG	~~~~~	DENSITY FLOW METER			
RCS	REMOTE CONTROL STATION										
RDY	READY	LOCATION DESIGNATION T SPECIAL FUNCTION			S-WA	Y PNEUMATIC					
0	OPEN	INSTRUMENT/FUNCTION	PASSIVE AND/OR OUTPUT FUNCTION LETTERS WITH OPTIONAL MODIFIER				I				
C	CLOSE	READILY APPARENT BY (SEE FUNCTION ID TABLE)	(SEE FUNCTION IDENTIFICATION TABLE)				0	BUBBLE LEVEL TUBE			
		SYMBOL MAKE-UP	MEASURED OR INITIATING VARIABLE	ं रेन्द्र		ON OPERATOR	0				
			(SEE FUNCTION IDENTIFICATION TABLE)		↓ w/so	LENOID PILOT					
				⊢t				PILOT TUBE TAP			
					W/PO	SITIONER					
		GDP GRAPHIC DISPLAY PANEL	XX NNNN								
							$\rightarrow \square \times$	AIR SUPPLY			
		MCC MOTOR CONTROL CENTER			7						
		M/S INDIVIDUAL MOTOR STARTER	MEASURED OR INITIATING	L'	SONI	C LEVEL PROBE	\bigcirc				
		MCR MAIN CONTROL ROOM	OPTIONAL MODIFIER (SEE FUNCTION IDENTIFICATION		ک		\mathbf{Y}	CAFACITAINCE LEVEL FROBE			
			TABLE)				I				
			<u> </u>								
	Consultant:		Engineer's Seal: Client / Owner:		Pro	oject Title:		Drawi	ng Title:	Designed By	CONSOR Project No.: \//
										PDO	vv.







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B-1 BOOSTER BUMP STATION

SHEET - II

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Engineer's Seal:



Project Title:

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NAVAJO TRIBAL UTILITY AUTHORITY **B-1 BOOSTER BUMP STATION**

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Drawing Title:

P&ID	Designed By:	CONSOR Project No.: W23250UT
		Issued On: APRIL 2024
	Drawn By: RPO	Drawing No.:
NETWORK DIAGRAM	Checked By: MAB	1003
	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE



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Engineer's Seal:



Project Title:

NAVAJO TRIBAL UTILITY AUTHORITY B-1 BOOSTER BUMP STATION Drawing Title:

חואם	Designed By:	CONSOR Project No.: W23250UT		
	RPU	Issued On: APRIL 2024		
	Drawn By: RPO	Drawing No.:		
SUPPORT EQUIPMENT	Checked By: MAB	I011		
	Approved By: MAB	0 1/2 1 IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE		