

# COOSA VALLEY WATER SUPPLY DISTRICT

## PROPOSED HIGH SERVICE PUMP 3

# PUMP ADDITION

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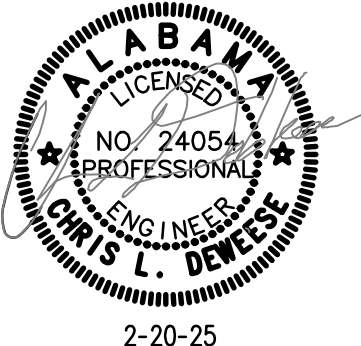
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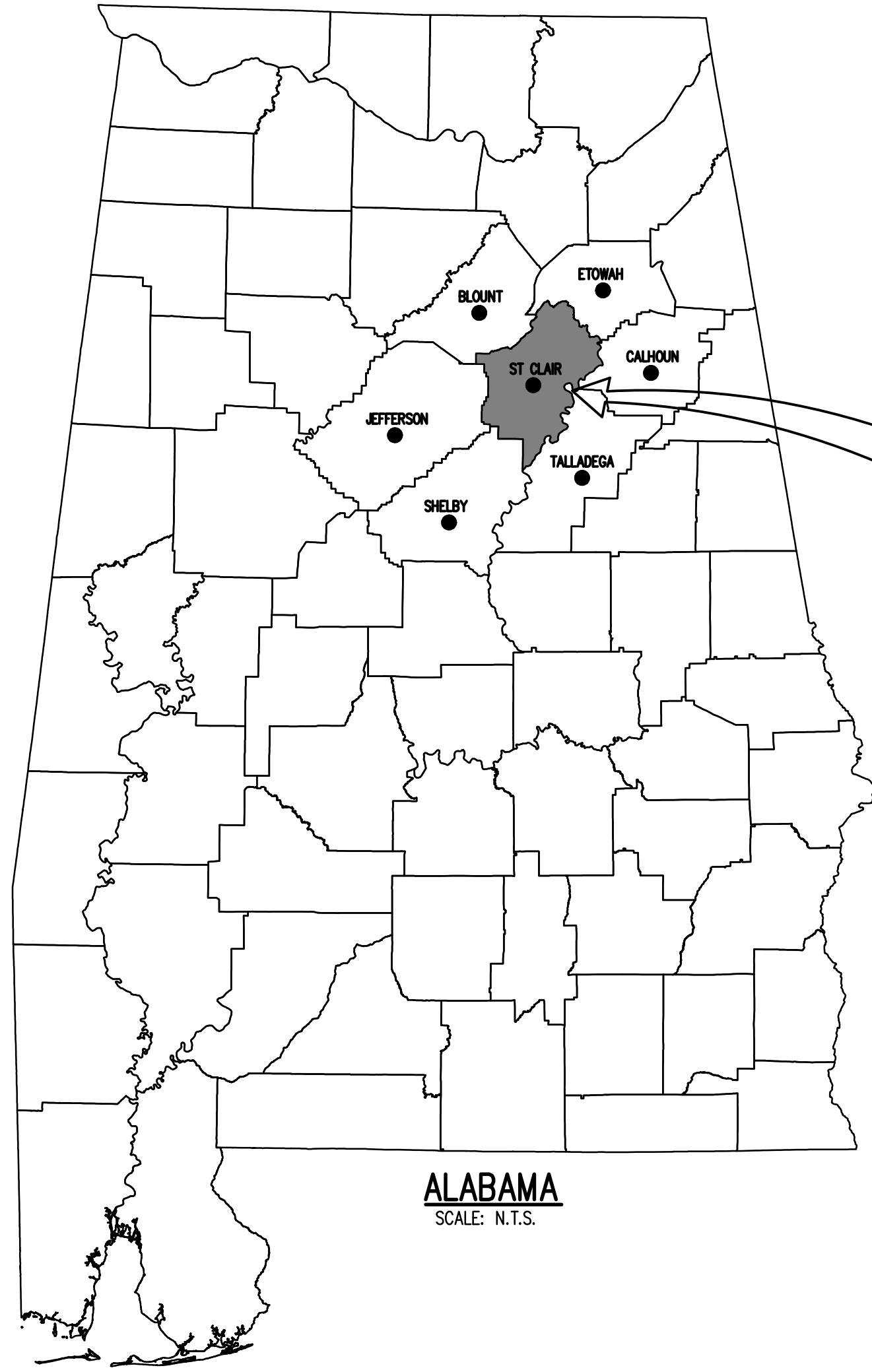
**2025**

Municipal  
Consultants,  
Inc. Birmingham, Alabama

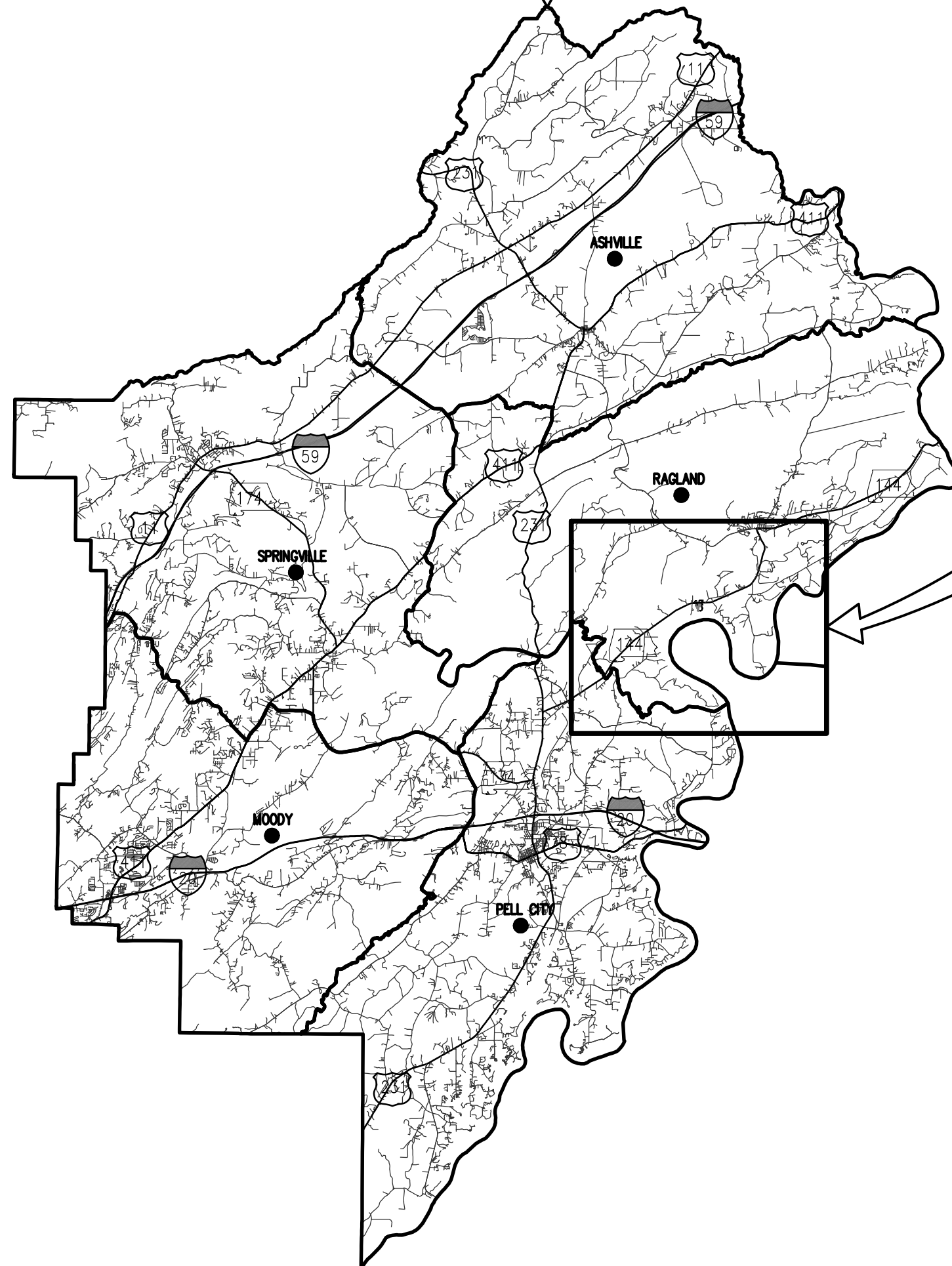


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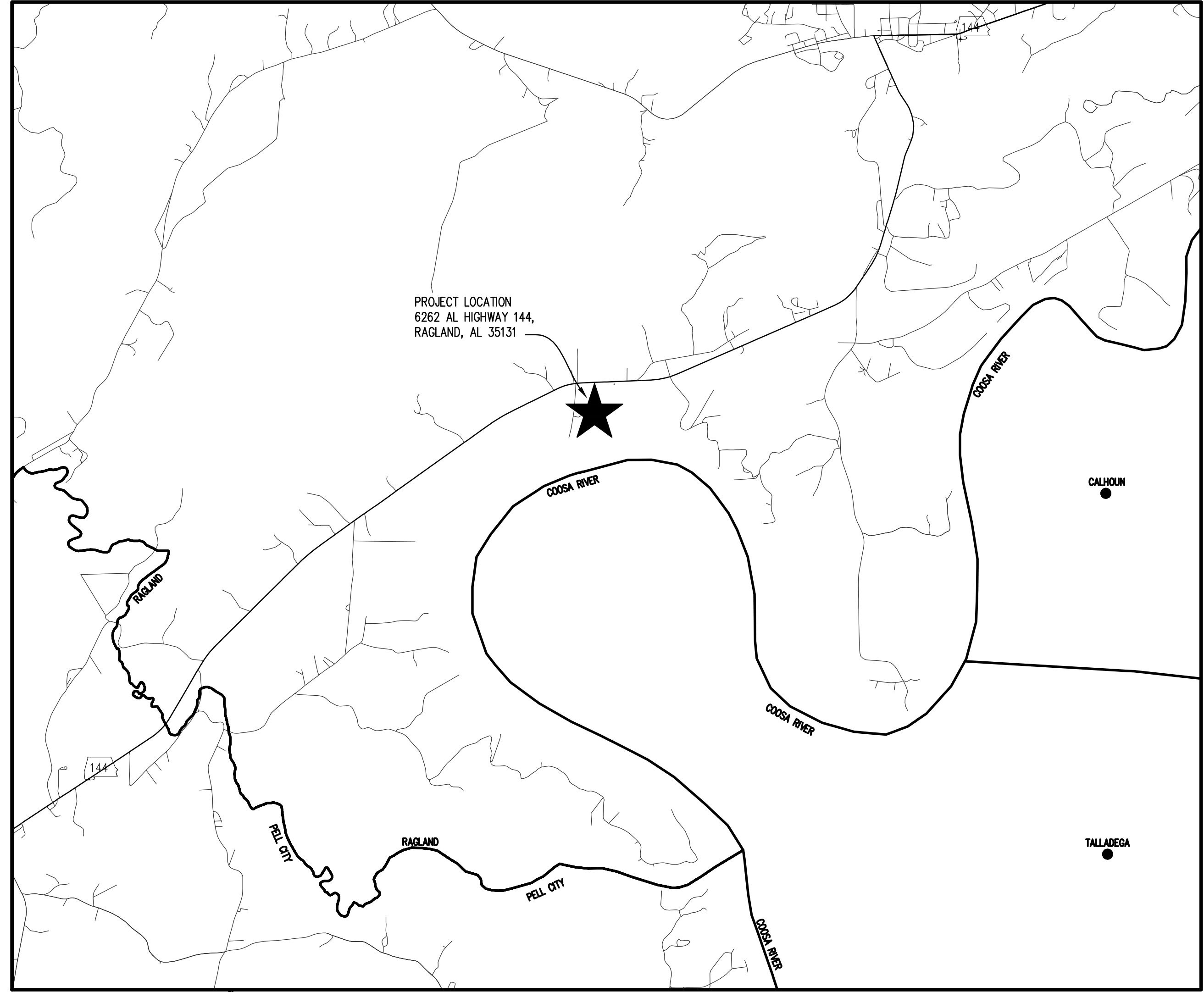
**BID SET**



**ALABAMA**  
SCALE: N.T.S.



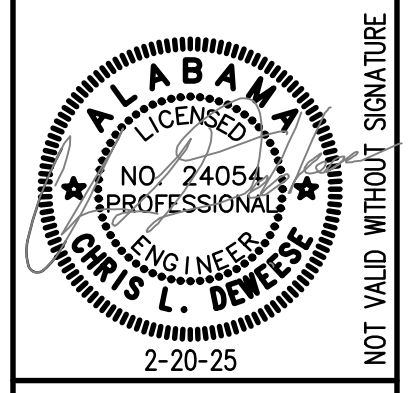
**ST CLAIR COUNTY, ALABAMA**  
SCALE: N.T.S.



**PROJECT LOCATION MAP**  
SCALE: N.T.S.

**Municipal Consultants, Inc.**  
200 Cahoon Park South, Suite 212  
Birmingham, Alabama 35208  
(205) 827-0878

**COOSA VALLEY WATER SUPPLY DISTRICT**  
PROPOSED HIGH SERVICE PUMP 3  
2024



BAR = 1"

Drawing	G-2	Title	LOCATION MAPS	
Project No.	2-2025			
Date	NONE			
Scale	2		BID SET	

NOT VALID WITHOUT SIGNATURE

**GENERAL PROJECT NOTES:**

- THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR SAFETY. THE ENGINEER IS NOT RESPONSIBLE FOR SAFETY. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA STANDARDS AND RECOMMENDATIONS, ETC., APPLICABLE TO ALL WORK AND COMPONENTS ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL CONTINUOUSLY UTILIZE SAFETY PRACTICES THAT MAY BE NEEDED FOR THE FULL PROTECTION OF ALL PERSONS INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION PERSONNEL, OWNER'S PERSONNEL, INSPECTORS, AND THE GENERAL PUBLIC, ETC. WHERE THE TERM "CONTRACTOR" IS UTILIZED, IT SHALL INCLUDE THE CONTRACTOR, INSTALLER, SUBCONTRACTOR, AND SUPPLIERS, ETC.
- WATER TREATMENT PLANTS AND PUMPING STATIONS CONTAIN MANY DANGERS AND HAZARDS. THESE INCLUDE, BUT ARE BY NO MEANS LIMITED TO, SUCH DANGERS AS CONFINED SPACES, ATMOSPHERES WITH DANGEROUSLY LOW OXYGEN LEVELS, TOXIC AND EXPLOSIVE GASES, POTENTIALLY HAZARDOUS GASES AND CHEMICALS STORED AND USED ON-SITE, SEWAGE AND SLUDGE WITH PATHOGENS, ELECTRICAL HAZARDS, FALLING HAZARDS, DROWNING HAZARDS, NATURAL GAS HAZARDS, UNANTICIPATED EQUIPMENT STARTING, AND TRENCH DANGERS, AMONG OTHERS. NOTE THAT POWER IN A PANEL, AN ENCLOSURE, OR AT EQUIPMENT, ETC., MAY ORIGINATE FROM MULTIPLE, DIFFERENT AND INDEPENDENT SOURCES. THE CONTRACTOR SHALL HAVE A THOROUGH UNDERSTANDING OF ALL THE DANGERS AND HAZARDS ASSOCIATED WITH THIS TYPE OF WORK. THE CONTRACTOR SHALL INSURE THAT ALL HIS PERSONNEL AND ALL SUBCONTRACTOR PERSONNEL, ETC., FOLLOW ALL APPROPRIATE SAFETY PRECAUTIONS AT ALL TIMES. CONTINUOUSLY COMPLY WITH ALL OSHA REGULATIONS AND REQUIREMENTS, ETC. AND ALWAYS FOLLOW GOOD SAFETY PRACTICES. THE CONTRACTOR SHALL BE AWARE THAT THIS IS AN OPERATING FACILITY AND THAT PLANT PERSONNEL MUST MAKE THEIR ROUNDS THROUGH ALL AREAS 24-HOURS PER DAY FOR 7-DAYS PER WEEK. AS SUCH, THE CONTRACTOR MUST CAREFULLY PLAN HIS ACTIVITIES AND ALWAYS PROVIDE ADEQUATE SAFETY BARRIERS AND OTHER MEASURES AS DESIRABLE, ETC., TO CONTINUOUSLY PROTECT CITY PERSONNEL, AS WELL AS HIS OWN PERSONNEL. SAFETY IS THE RESPONSIBILITY SOLELY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER HAVE ANY DUTY TO REVIEW THE SAFETY PRACTICES OF THE CONTRACTOR.
- PUMPING STATIONS HAVE MANY HAZARDS FROM WHICH THE GENERAL PUBLIC MUST BE PROTECTED. THE CONTRACTOR SHALL PERFORM AND COORDINATE HIS WORK TO MAINTAIN SECURITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, MAINTAINING SECURE FENCING AROUND THE ENTIRE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SECURING AND MAINTAINING THE SECURITY OF THE ENTIRE CONSTRUCTION SITE THROUGHOUT CONSTRUCTION. TEMPORARY FENCING SHALL BE INSTALLED AS REQUIRED TO SECURE AND ISOLATE AREAS AND/OR CORRECT PROBLEM AREAS. EXISTING FENCING OR TEMPORARY FENCING THAT BECOMES INSECURE DURING CONSTRUCTION SHALL BE CORRECTED OR REPLACED IMMEDIATELY.
- ALL EXISTING PIPING NOT SHOWN. WHERE SHOWN, ALL EXISTING PIPING IS APPROXIMATE AND MUST BE FIELD DETERMINED AS REQUIRED BY THE CONTRACTOR.
- EXISTING ELECTRICAL FACILITIES, WIRING, CONDUIT, DUCT BANKS, AND APPURTENANCES ARE GENERALLY NOT SHOWN. WHERE SHOWN, ALL ELECTRICAL LINES ARE APPROXIMATE AND MUST BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE EXCAVATION IN THE VICINITY OF SUSPECTED OR POSSIBLE ELECTRICAL FACILITIES TO DETERMINE LOCATION. THE CONTRACTOR SHALL CONDUCT HIS WORK CAREFULLY AND USE APPROPRIATE MEASURES AND SAFETY PRECAUTIONS TO AVOID DIGGING INTO ELECTRICAL LINES AND OTHER POTENTIAL ELECTRICAL DANGERS. IF A LINE IS DAMAGED DURING CONSTRUCTION THE CONTRACTOR IS REQUIRED TO WORK CONTINUOUSLY UNTIL IT IS REPAIRED. THE CONTRACTOR SHALL DETERMINE THE INFORMATION REGARDING THE EXISTING LIFT STATION, ELECTRICAL LINES, AND DUCTBANKS THAT AFFECT THE WORK IN A TIMELY MANNER SO AS NOT TO DELAY CONSTRUCTION AND TO ALLOW TIMELY ORDERING OF CORRECT MATERIALS, COORDINATION WITH OTHER PROJECT ELEMENTS, AND EFFICIENT SCHEDULING. THERE SHALL BE NO ADDITIONAL PAYMENT OR TIME IF THE CONTRACTOR FAILS TO DO THIS.
- ALL WORK ACTIVITIES (INCLUDING ELECTRICAL) THAT AFFECT OPERATIONS MUST BE SEQUENCED WITH THE EXISTING OPERATIONS. THESE SHALL BE CAREFULLY PLANNED AND COORDINATED WITH BOTH THE OWNER AND THE ENGINEER TO RESULT IN A MINIMUM OF INTERFERENCE WITH THE EXISTING OPERATIONS. THE CONTRACTOR SHALL SUBMIT A STEP-BY-STEP DETAILED, WRITTEN SEQUENCE FOR EACH SUCH OPERATION. THE CONTRACTOR SHALL PERFORM AS MUCH PRELIMINARY OR ASSEMBLY WORK AS POSSIBLE PRIOR TO INITIATING OPERATIONS REQUIRING SEQUENCING.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL SUBSEQUENT DAMAGES, FINES, PENALTIES, OR OTHER COSTS INCURRED DUE TO ANY BYPASSING, INADEQUATE TREATMENT, PERMIT VIOLATIONS, BACKUPS, OVERFLOWS, OR OTHER COSTS INCURRED THAT ARE DUE TO THE CONTRACTOR'S OPERATIONS, INCLUDING ANY COSTS INCURRED BY THE OWNER.
- ONCE TIE-INS OR OTHER ACTIVITIES INTERRUPT NORMAL OPERATION, WORK EXPEDITIOUSLY TO COMPLETE THE WORK AND RETURN TO NORMAL OPERATIONS AS SOON AS POSSIBLE.
- ALL ANCHOR BOLTS, WEDGE ANCHORS, EPOXY ANCHORS, AND ANY OTHER MISCELLANEOUS FASTENERS/HARDWARE, ETC. AND APPURTENANCES ON THE PROJECT SHALL BE 316 STAINLESS STEEL, UNLESS INDICATED OTHERWISE.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ST. CLAIR COUNTY RULES AND REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES, OBSTRUCTIONS, AND DRAINAGE AND THEIR SATISFACTORY REPAIR OR REPLACEMENT.
- THE ENGINEER MAKES NO WARRANTY FOR THE ACCURATE LOCATION OF UNDERGROUND UTILITIES. ALL PLAN LOCATIONS ARE APPROXIMATE BASED ON MARKINGS BY THE CITY AND/OR ALABAMA ONE CALL (1-800-292-8525) AND REFLECTS ONLY THE LINES PAINTED PRIOR TO SURVEYING. THE DEPTHS OF ALL UTILITIES OR STRUCTURES INDICATED ON THE PROFILES ARE ASSUMED. THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE WORK. LOCATIONS AND DEPTHS WILL VARY AND ADDITIONAL UTILITIES MAY EXIST. CONTRACTOR SHALL REPAIR OR REPLACE ANY SUCH ITEMS THAT ARE DAMAGED BY HIS CREWS DURING CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING EROSION, RUN-OFF, AND SEDIMENT CONTROL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT FOR THE PROJECT AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND IMPLEMENTING ALL APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) FOR THE PREVENTION AND CONTROL OF NONPOINT SOURCES OF POLLUTANTS DURING AND AFTER PROJECT IMPLEMENTATION. THE CONTRACTOR, AT A MINIMUM, MUST IMPLEMENT BMP'S AS PROVIDED IN THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL & STORMWATER MANAGEMENT ON CONSTRUCTION SITES & URBAN AREAS, AS AMENDED, AND ALL APPLICABLE EPA STORMWATER POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES PUBLICATIONS, AS AMENDED. ADDITIONAL DEVICES SHALL BE INSTALLED AS REQUIRED, AT NO ADDITIONAL COST TO THE OWNER, TO PREVENT SILTATION, EROSION, AND OTHER DEGRADATION OR POLLUTION TO THE PROJECT SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, PUBLIC ROADWAYS, ETC.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE TRAFFIC CONTROL AND SIGNAGE AS REQUIRED FOR THE PROJECT AS REQUIRED BY THE NATIONAL MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART V, AND/OR ALL OTHER APPLICABLE GUIDELINES OF THE ALDOT, COUNTY, CITY, OR ANY OTHER AUTHORITIES HAVING JURISDICTION OVER THE PROJECT AREAS.

**ABBREVIATIONS**

AL	ALUM	ALUMINUM	H, HGT, HT	HEIGHT	R, RAD	RADIUS
APPROX		APPROXIMATE	HORIZ	HORIZONTAL	RCP	REINFORCED CONC PIPE
ASPH		ASPHALT	HWL	HIGH WATER LEVEL	RED	REDUCER
ASSY		ASSEMBLY	HWY	HIGHWAY	REINF	REINFORCING
			HZ	HERTZ	REQD	REQUIRED
BLDG		BUILDING	ID	INSIDE DIAMETER	RJ	RESTRAINED JOINT
BLK		BLOCK	IF	INSIDE FACE	ROW, R/W	RIGHT-OF-WAY
BM		BENCHMARK	IN	INCHES	RS	RESILIENT SEAT
BOT, BTM		BOTTOM	INV	INVERT	RT	RIGHT
BS		BOTH SIDES	JT	JOINT	S	SOUTH, SLUDGE
					SCH	SCHEDULE
CRP		CONCRETE REINFORCED PIPE	LEN	LENGTH	SECT	SECTION
CSP		CORRUGATED STEEL PIPE	LIN	LINEAL, LINEAR	SF	SQUARE FEET
CPP		CORRUGATED PLASTIC PIPE	LG	LONG	SHT	SHEET
CI		CAST IRON	LOC	LOCATION	SPECS	SPECIFICATIONS
CIP		CAST IRON PIPE	LT	LEFT	SQ	SQUARE
CJ		CONSTRUCTION JOINT	MANUF	MANUFACTURER	SS	SANITARY SEWER
CL		CENTER LINE	MAX	MAXIMUM	STA	STATION
CMU		CONCRETE MASONRY UNIT	MGD	MILLION GALLONS PER DAY	STD	STANDARD
CL		CLASS	MH	MANHOLE	ST STL,SS	STAINLESS STEEL
CONC		CONCRETE	MIN	MINIMUM	SS	SANITARY SEWER
CONN		CONNECTION	MISC	MISCELLANEOUS	T&B	TOP AND BOTTOM
CONT		CONTINUOUS	MJ	MECHANICAL JOINT	TBM	TEMPORARY BENCHMARK
					TEMP	TEMPORARY, TEMPERED
DIA		DIAMETER	N	NORTH	THK	THICKNESS
DI		DUCTILE IRON	NIC	NOT IN CONTRACT	TOC	TOP OF CURB
DIP		DUCTILE IRON PIPE	NO., #	NUMBER	TOW	TOP OF WALL
DWN		DOWN	NPW	NON POTABLE WATER	TYP	TYPICAL
DWG		DRAWING	NTS	NOT TO SCALE	UH	UNIT HEATER
EA		EACH	OC	ON CENTER	V	VALVE, VENTILATOR, VOLTS
EF		EACH FACE	OD	OUTSIDE DIAMETER	VERT	VERTICAL
ELEC		ELECTRICAL	OF	OUTSIDE FACE	VT	VENTILATOR
EL, ELEV		ELEVATION	OHP	OVERHEAD POWER		
EL		EQUAL	PE	PLAIN END	W	WEST, WIDTH, WINDOW, WATER
EW		EACH WAY	PH	PHASE	W/	WITH
EX, EXIST		EXISTING	PI	POINT OF INTERSECTION	W/O	WITHOUT
EXP		EXPANSION	PL	PROPERTY LINE	WL	WATER LINE
EXT		EXTINGUISHER	PO	PUSH ON	WS	WATERSTOP
					WTM	WATER TRANSMISSION MAIN
FH		FIRE HYDRANT	PP	POWER POLE	WWF	WELDED WIRE FABRIC
FIN GR		FINISH GRADE	PSI	POUNDS PER SQUARE INCH	WTP	WATER TREATMENT PLANT
FL		FLOW LINE	PV	PLUG VALVE	WWTP	WASTEWATER TREATMENT PLANT
FLG		FLANGED	PVC	POLYVINYL CHLORIDE		
FT		FOOT			X	BY
FTG		FOOTING				
GALV		GALVANIZED				
GL		GAS LINE				
GR		GRADE				
GRVL		GRAVEL				
GV		GATE VALVE				

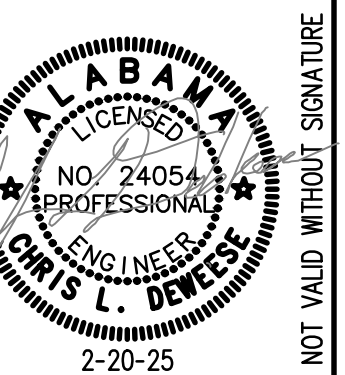
**LEGEND**

— ESS —	EXISTING SANITARY SEWER		TREE LINE		FUEL		WATER VALVE
--- EFM ---	EXISTING FORCE MAIN		MAJOR		SANITARY SEWER		GAS VALVE
--- FM ---	PROPOSED FORCE MAIN		MINOR		STORM SEWER		SEWER VALVE
--- EWM ---	EXISTING WATER MAIN		CREEK		ELECTRICAL		TREE
--- UP ---	UNDERGROUND POWER		DITCH LINE		WATER		FIRE HYDRANT
--- WM ---	PROPOSED WATER MAIN		WOOD FENCE		GAS		AIR RELIEF ASSEMBLY
--- GAS ---	GAS PIPE		METAL FENCE		INTERSTATE ROUTE		POWER POLE
--- FOC ---	FIBER OPTIC CABLE		BARB WIRE FENCE		UNITED STATE ROUTE		GUY WIRE
--- ROW ---	RIGHT OF WAY		TRAIN TRACKS		ALABAMA STATE ROUTE		LIGHT POLE
--- PL ---	PROPERTY LINE		NORTH ARROW		COUNTY ROUTE		SIGN
	CONCRETE						PROPERTY PIN
	RIP RAP						MAIL BOX
	ASPHALT						TELEPHONE PEDESTAL
	GRAVEL/DIRT						SURVEY CONTROL POINT
	BODY OF WATER						
	DEMOLITION						
	CULVERT						

**SECTION AND DETAIL MARKS**

SECTION REFERENCE BETWEEN PAGES		SHEET ON WHICH SECTION APPEARS OR IS FROM	DETAIL MARK BETWEEN PAGES		SHEET ON WHICH DETAIL APPEARS OR IS FROM
SECTION REFERENCE SAME PAGE			DETAIL MARK SAME PAGE		

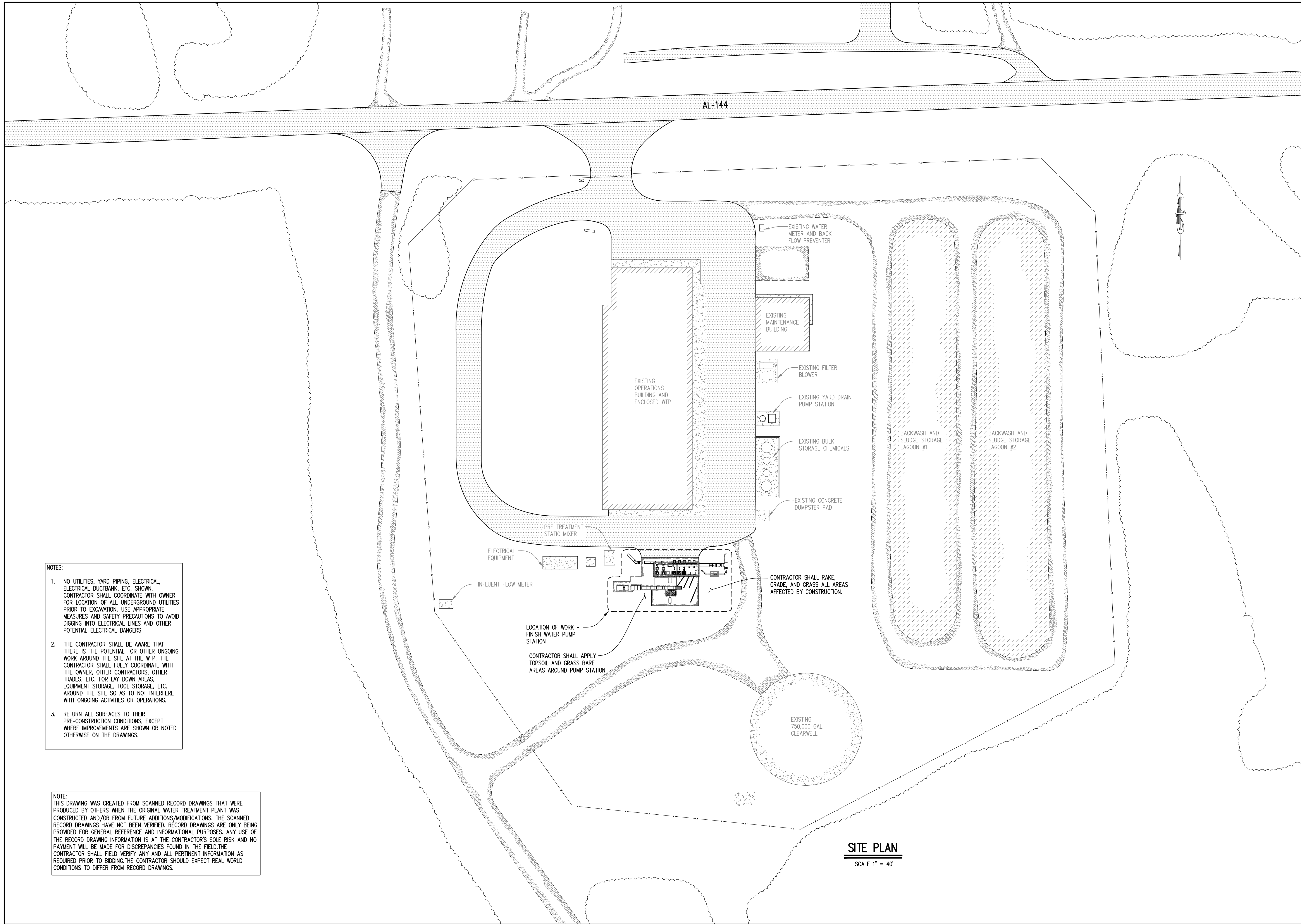
NOTE: DETAILS ALSO REFERENCED BY NAME OR IDENTIFYING MARK SUCH AS "TYPICAL" OR "TYP"



NOT VALID WITHOUT SIGNATURE

BAR = 1"

Drawing	G-3	Title	GENERAL NOTES AND LEGEND
Project No.	2-2025		
Date	NONE		
Scale	3		
Sheet			BID SET



- NOTES:**
1. NO UTILITIES, YARD PIPING, ELECTRICAL, ELECTRICAL DUCTBANK, ETC. SHOWN. CONTRACTOR SHALL COORDINATE WITH OWNER FOR LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION. USE APPROPRIATE MEASURES AND SAFETY PRECAUTIONS TO AVOID DIGGING INTO ELECTRICAL LINES AND OTHER POTENTIAL ELECTRICAL DANGERS.
  2. THE CONTRACTOR SHALL BE AWARE THAT THERE IS THE POTENTIAL FOR OTHER ONGOING WORK AROUND THE SITE AT THE WTP. THE CONTRACTOR SHALL FULLY COORDINATE WITH THE OWNER, OTHER CONTRACTORS, OTHER TRADES, ETC. FOR LAY DOWN AREAS, EQUIPMENT STORAGE, TOOL STORAGE, ETC. AROUND THE SITE SO AS TO NOT INTERFERE WITH ONGOING ACTIVITIES OR OPERATIONS.
  3. RETURN ALL SURFACES TO THEIR PRE-CONSTRUCTION CONDITIONS, EXCEPT WHERE IMPROVEMENTS ARE SHOWN OR NOTED OTHERWISE ON THE DRAWINGS.

**NOTE:**  
THIS DRAWING WAS CREATED FROM SCANNED RECORD DRAWINGS THAT WERE PRODUCED BY OTHERS WHEN THE ORIGINAL WATER TREATMENT PLANT WAS CONSTRUCTED AND/OR FROM FUTURE ADDITIONS/MODIFICATIONS. THE SCANNED RECORD DRAWINGS HAVE NOT BEEN VERIFIED. RECORD DRAWINGS ARE ONLY BEING PROVIDED FOR GENERAL REFERENCE AND INFORMATIONAL PURPOSES. ANY USE OF THE RECORD DRAWING INFORMATION IS AT THE CONTRACTOR'S SOLE RISK AND NO PAYMENT WILL BE MADE FOR DISCREPANCIES FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY ANY AND ALL PERTINENT INFORMATION AS REQUIRED PRIOR TO BIDDING. THE CONTRACTOR SHOULD EXPECT REAL WORLD CONDITIONS TO DIFFER FROM RECORD DRAWINGS.

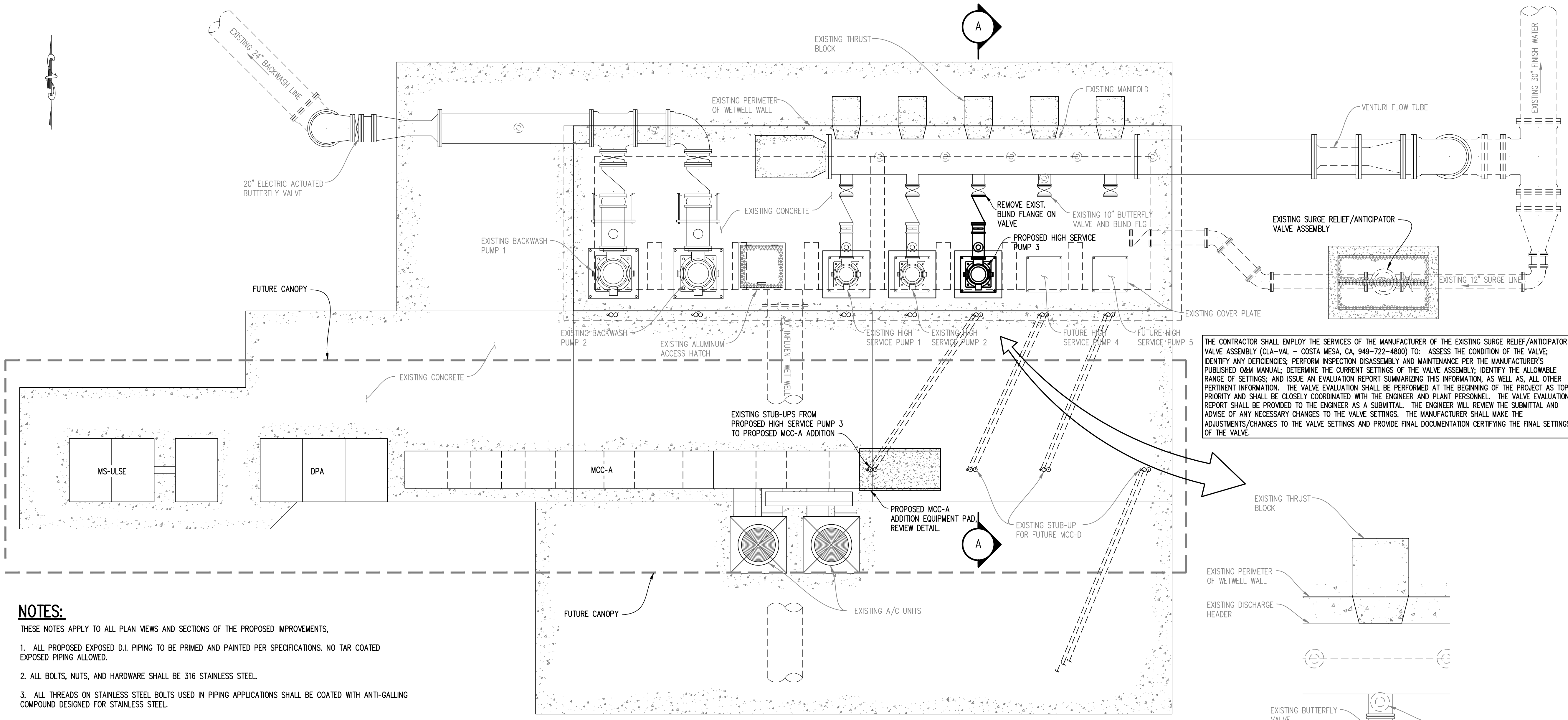
CONTRACTOR SHALL RAKE, GRADE, AND GRASS ALL AREAS AFFECTED BY CONSTRUCTION.

LOCATION OF WORK - FINISH WATER PUMP STATION  
CONTRACTOR SHALL APPLY TOPSOIL AND GRASS BARE AREAS AROUND PUMP STATION

**SITE PLAN**  
SCALE 1" = 40'

<p><b>Municipal Consultants, Inc.</b> 200 Cahoon Park, South, Suite 212 Birmingham, Alabama 35226 (205) 827-0878</p>	
<p><b>COOSA VALLEY WATER SUPPLY DISTRICT</b> PROPOSED HIGH SERVICE PUMP 3 2024</p>	
<p>NOT VALID WITHOUT SIGNATURE</p>	
<p>BAR = 1"</p>	
<p>Drawing Title</p>	<p>ST-1 SITE PLAN</p>
<p>Project No.</p>	<p>2-2025</p>
<p>Date</p>	<p>2-2025</p>
<p>Scale</p>	<p>4</p>
<p>Sheet</p>	<p>4</p>

NOTE:  
PART OF THIS DRAWING WAS CREATED FROM SCANNED RECORD DRAWINGS THAT WERE PRODUCED BY OTHERS WHEN THE ORIGINAL WATER TREATMENT PLANT WAS CONSTRUCTED AND/OR FROM FUTURE ADDITIONS/MODIFICATIONS. THE SCANNED RECORD DRAWINGS HAVE NOT BEEN VERIFIED. RECORD DRAWINGS ARE ONLY BEING PROVIDED FOR GENERAL REFERENCE AND INFORMATIONAL PURPOSES. ANY USE OF THE RECORD DRAWING INFORMATION IS AT THE CONTRACTOR'S SOLE RISK AND NO PAYMENT WILL BE MADE FOR DISCREPANCIES FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY ANY AND ALL PERTINENT INFORMATION AS REQUIRED PRIOR TO BIDDING. THE CONTRACTOR SHALL EXPECT REAL WORLD CONDITIONS TO DIFFER FROM RECORD DRAWINGS.



THE CONTRACTOR SHALL EMPLOY THE SERVICES OF THE MANUFACTURER OF THE EXISTING SURGE RELIEF/ANTICIPATOR VALVE ASSEMBLY (CLA-VAL - COSTA MESA, CA, 949-722-4800) TO: ASSESS THE CONDITION OF THE VALVE; IDENTIFY ANY DEFICIENCIES; PERFORM INSPECTION, DISASSEMBLY AND MAINTENANCE PER THE MANUFACTURER'S PUBLISHED O&M MANUAL; DETERMINE THE CURRENT SETTINGS OF THE VALVE ASSEMBLY; IDENTIFY THE ALLOWABLE RANGE OF SETTINGS; AND ISSUE AN EVALUATION REPORT SUMMARIZING THIS INFORMATION, AS WELL AS, ALL OTHER PERTINENT INFORMATION. THE VALVE EVALUATION SHALL BE PERFORMED AT THE BEGINNING OF THE PROJECT AS TOP PRIORITY AND SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND PLANT PERSONNEL. THE VALVE EVALUATION REPORT SHALL BE PROVIDED TO THE ENGINEER AS A SUBMITTAL. THE ENGINEER WILL REVIEW THE SUBMITTAL AND ADVISE OF ANY NECESSARY CHANGES TO THE VALVE SETTINGS. THE MANUFACTURER SHALL MAKE THE ADJUSTMENTS/CHANGES TO THE VALVE SETTINGS AND PROVIDE FINAL DOCUMENTATION CERTIFYING THE FINAL SETTINGS OF THE VALVE.

**NOTES:**

- THESE NOTES APPLY TO ALL PLAN VIEWS AND SECTIONS OF THE PROPOSED IMPROVEMENTS.
1. ALL PROPOSED EXPOSED D.I. PIPING TO BE PRIMED AND PAINTED PER SPECIFICATIONS. NO TAR COATED EXPOSED PIPING ALLOWED.
  2. ALL BOLTS, NUTS, AND HARDWARE SHALL BE 316 STAINLESS STEEL.
  3. ALL THREADS ON STAINLESS STEEL BOLTS USED IN PIPING APPLICATIONS SHALL BE COATED WITH ANTI-GALLING COMPOUND DESIGNED FOR STAINLESS STEEL.
  4. AREAS DISTURBED OR DAMAGED AS A RESULT OF THE HIGH SERVICE PUMP INSTALLATION SHALL BE REPLACED TO ITS ORIGINAL OR BETTER CONDITION.

**NOTES:**

- CONCRETE SLAB AND PUMP BASE NOTES:
1. INSTALLING THE PROPOSED HIGH SERVICE PUMP BASE WILL REQUIRE THE INSTALLATION OF A NEW CONCRETE BASE.
  2. ALL THREADED RODS, BOLTS, NUTS, WASHERS, AND OTHER ATTACHMENT HARDWARE SHALL BE 316 S.S.
  3. THE CONTRACTOR SHALL REVIEW DETAILS BEFORE TYING INTO EXISTING SLAB(S).
  4. ALL DEMOLISHED AND CONSTRUCTION WASTE SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.
  5. ALL FITTINGS OR COVERINGS REMOVED FOR THE PURPOSES OF INSTALLATION SHALL BE RETURNED TO THE OWNER AT THE LOCATION ON THE PLANT SITE DETERMINED BY THE OWNER.

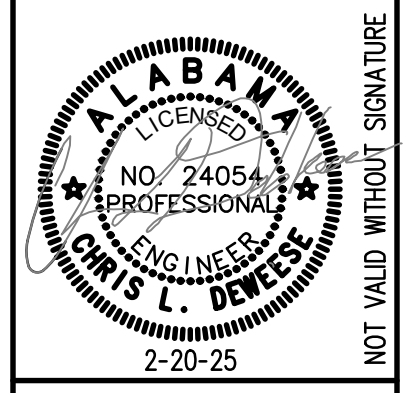
**PROPOSED HIGH SERVICE PUMP PLAN**

SCALE: 1/4" = 1'

NOTE: ALL DIMENSIONS ARE APPROXIMATED. CONTRACTOR SHALL FIELD VERIFY.

**CAP REMOVAL PLAN**

SCALE: 1/2" = 1'



NOT VALID WITHOUT SIGNATURE

BAR = 1"

Drawing	PS-1	Title	PLAN
Project No.	2-2025		
Date	1/4" = 1'		
Scale	5		
Sheet			BID SET

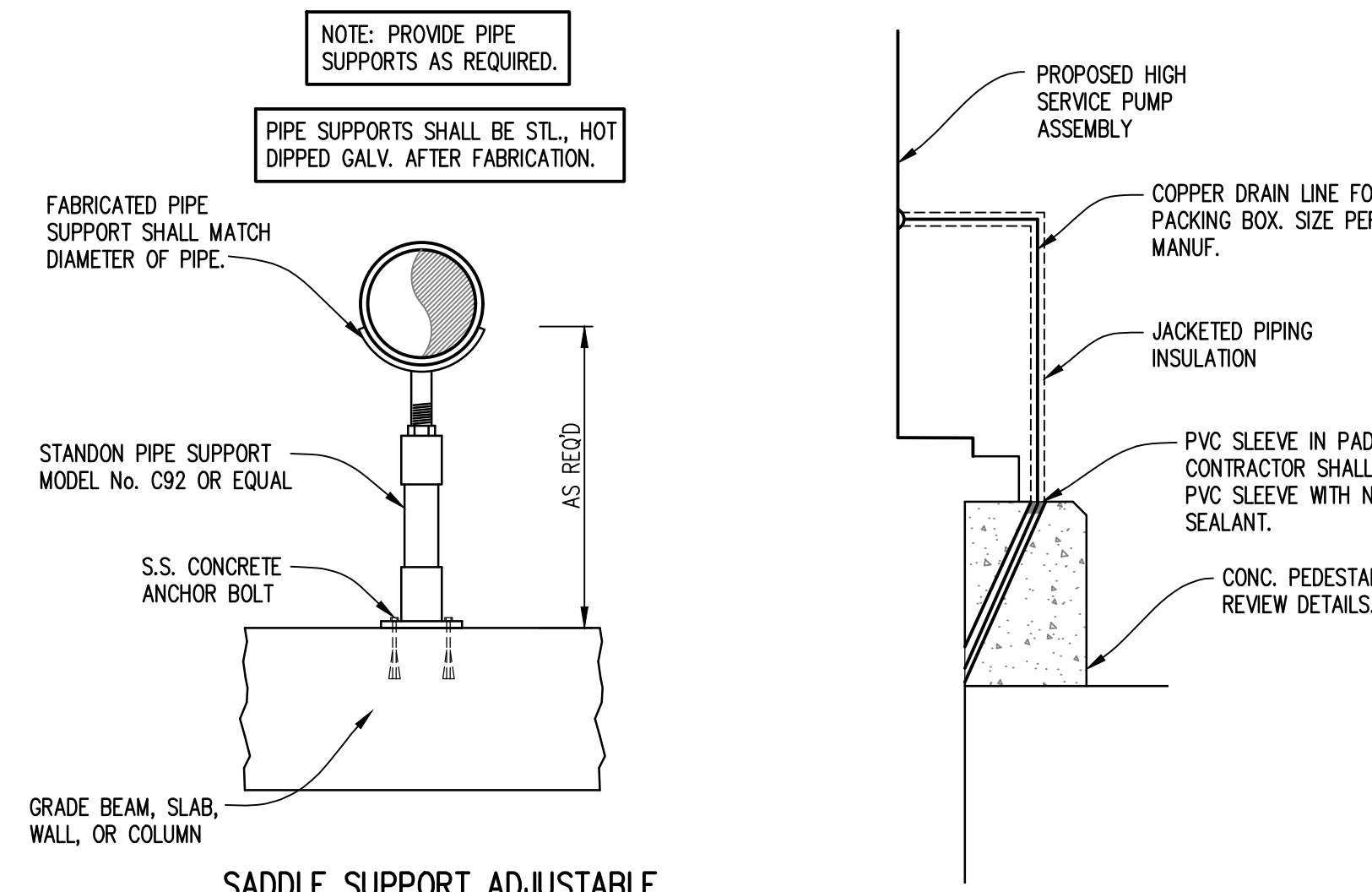
**PARTIAL MATERIAL LIST**

NOTE: ALL COMPONENTS SHALL BE DISINFECTED AND THOROUGHLY FLUSHED PRIOR TO INSTALLATION.

- 1 EXISTING 10" D.I. VALVE, FLG X FLG
- 2 10" D.I. SWING CHECK VALVE, 250 PSI MIN. WORKING PRESSURE RATING, ANSI 150# FLANGES, LINED AND COATED WITH MIN. 8 MILS DFT OF NSF 61 EPOXY COATING, FINISH COATING PER PAINT SPECIFICATIONS, NSF 61 CERTIFIED, CRISPIN MODEL SWL-LW OR EQUAL.
- 3 LARGE LIQUID FILLED 350 PSI S.S. PRESSURE GAUGE (SECONDARY READING IN FT OF WATER) WITH ISO BALL VALVE, GAGE TAPPED INTO D.I. COUPLING
- 4 DRESSER STYLE 131 CARBON STEEL FLANGED DISMANTLING JOINT (OR EQUAL) WITH 3" ANSI 150# FLANGED BOSS, TAP FOR PRESSURE GAUGE, AND ASTM A193 GRADE B7 THE RODS AS SHOWN. ASSEMBLY RATED FOR 250 PSI MIN. WORKING PRESSURE. FLANGE AT PUMP END SHALL MATCH PUMP DISCHARGE FLANGE (E.G., ANSI 150#, OR ANSI 300#, RAISED FACE, OR FLAT FACE, ETC. - COORDINATE DURING SUBMITTAL PROCESS). FLANGE AT CHECK VALVE END SHALL BE ANSI 150# LINED AND COATED WITH MIN. 8 MILS DFT OF NSF 61 EPOXY COATING - FINISH COATING PER PAINT SPECIFICATIONS. ASSEMBLY TO BE NSF 61 CERTIFIED. FIELD VERIFY REQUIRED LENGTH.
- 5 FLOOR MOUNTED PIPE SUPPORT PER DETAIL
- 6 3" FLANGED COMBINATION AIR VALVE ASSEMBLY, NSF 61 APPROVED, ARI MODEL D-060-C HF NS
- 7 3" C.I. APOLLO BALL VALVE MODEL #6PLF-200-01
- 8 VERTICAL TURBINE PUMP ASSEMBLY, SEE SPECS.
- 9 COLUMN PIPE SECTION PER PUMP MANUF.
- 10 COLUMN COUPLING PER PUMP MANUF.
- 11 PUMP TURBINE ASSEMBLY
- 12 3" FLANGED BOSS
- 13 UNDER MOUNTED, BASKET STRAINER/VORTEX SUPPRESSOR

CONTRACTOR TO CONSULT MANUFACTURER ABOUT DISMANTLING JOINT, FLANGES, LIQUID GAUGE, AND BOSS.  
 Marc South  
 Dresser Utility Solutions  
 1(800) 458-2398

NOTE: NEW PUMP ASSEMBLY, PIPING, VALVES, FITTINGS JOINTS, ETC. TO BE PAINTED PER THE PROJECTS PAINTING SPECIFICATIONS. COLOR TO MATCH EXISTING PUMPS AND PIPING. ALSO SEE PUMP SPEC. SEE PUMP SPEC AND PROJECTS PAINTING SPEC.

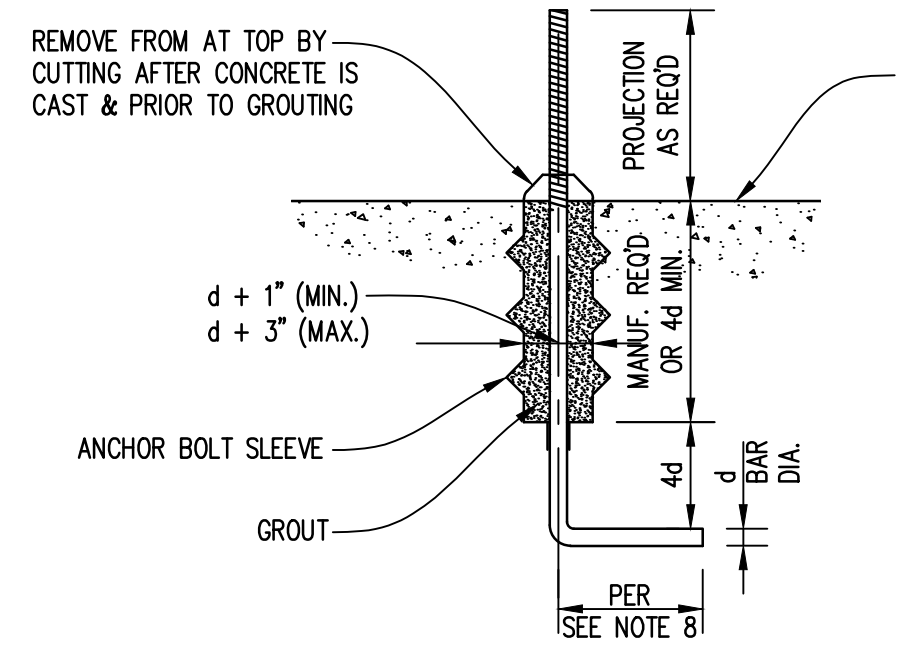


**FLOOR MOUNTED PIPE SUPPORT**  
SCALE: N.T.S.

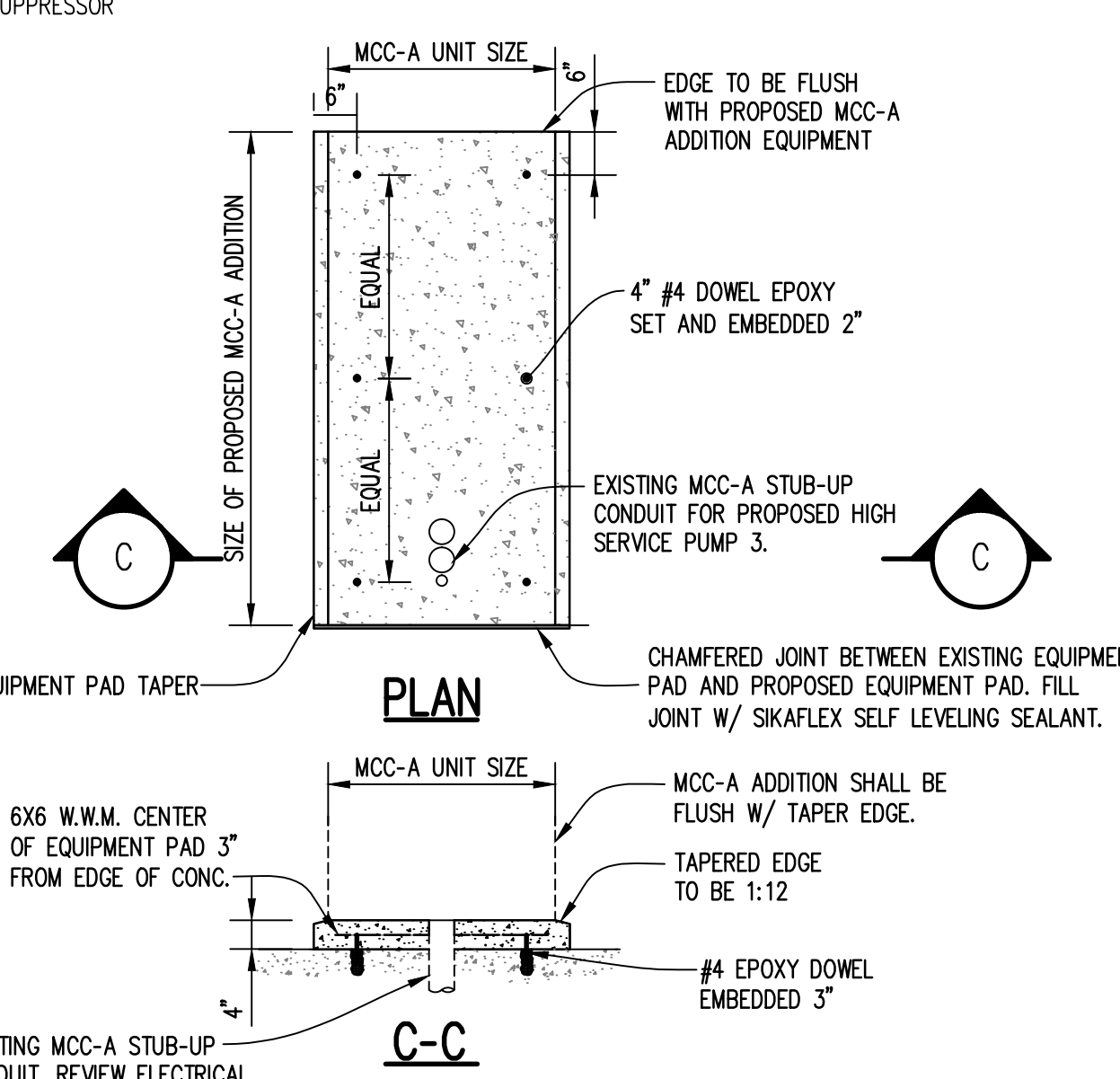
**DRAIN LINE DETAIL**  
SCALE: 1" = 1'

**PUMP PEDESTAL/PAD FOUNDATION NOTES**

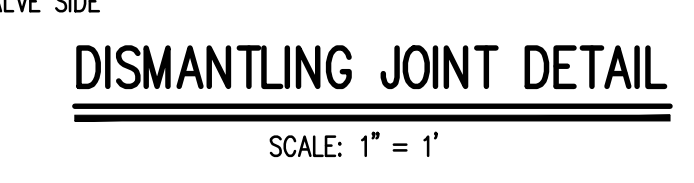
1. CONCRETE PEDESTAL/PAD SIZE (L X W) SHALL BE MINIMUM INDICATED OR AS REQUIRED BY THE PUMP MANUFACTURER AND APPROVED BY THE ENGINEER. PAD HEIGHT SHALL BE DETERMINED DURING CONSTRUCTION AND COORDINATED WITH ENGINEER.
2. CONTRACTOR TO REVIEW PUMP SUBMITTAL AND ENSURE PUMP MANUF. PROVIDES ALL ANCHOR BOLT REQUIREMENTS. CONTRACTOR/PUMP MANUF. SHALL ADVISE ENGINEER OF SELECTED ANCHORAGE AND METHOD OF INSTALLATION.
3. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE PUMP MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A ONE PIECE TEMPLATE, MATCHING THE BASE PLATE, WHILE PAD IS BEING POURED.
4. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE AS SHOWN. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT. SLEEVES SHALL BE AS MANUF. BY WILSON ANCHOR BOLT SLEEVE COMPANY, PORTLAND BOLT & MANUFACTURING CO., OR APPROVED EQUAL.
5. PUMP PEDESTAL SHALL BE INSTALLED LEVEL.
6. WEDGES, SHIMS, OR FORMWORK SHALL BE USED TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. COORDINATE ALL WORK WITH ENGINEER.
7. GROUT SHALL BE HIGH-PRECISION, NON-SHRINK EPOXY GROUT (WITH EXTENDED WORKING TIME) FIVE STAR DP EPOXY GROUT HIGH FLOW OR EQUAL. COORDINATE WITH ENGINEER.
8. ANCHOR BOLT LEG LENGTH SHALL BE AS REQUIRED BY PUMP MANUFACTURER IN NO CASE SHALL THE LEG LENGTH BE LESS THAN 3d.



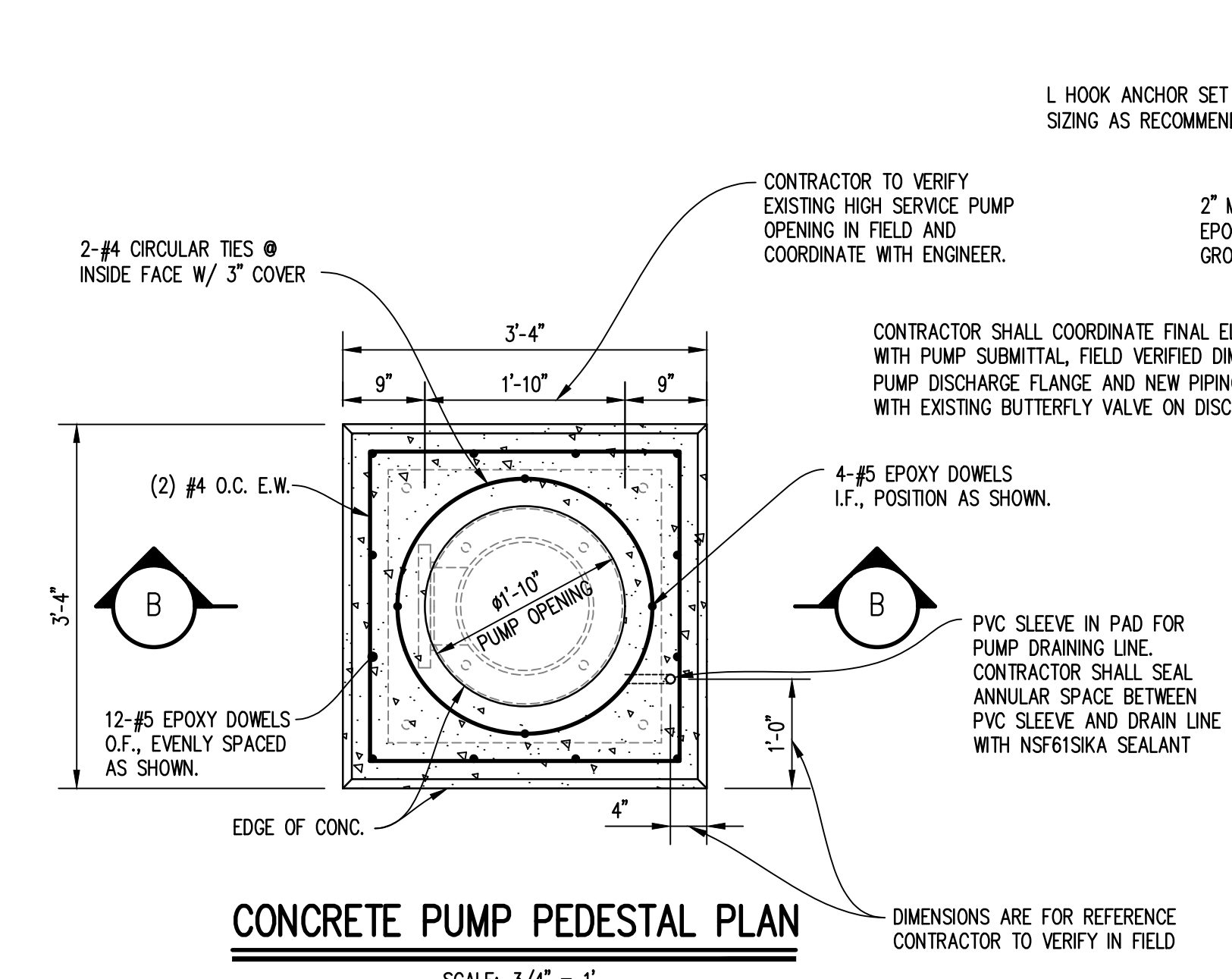
**ANCHOR BOLT DETAIL**  
SCALE: 1/2" = 1'



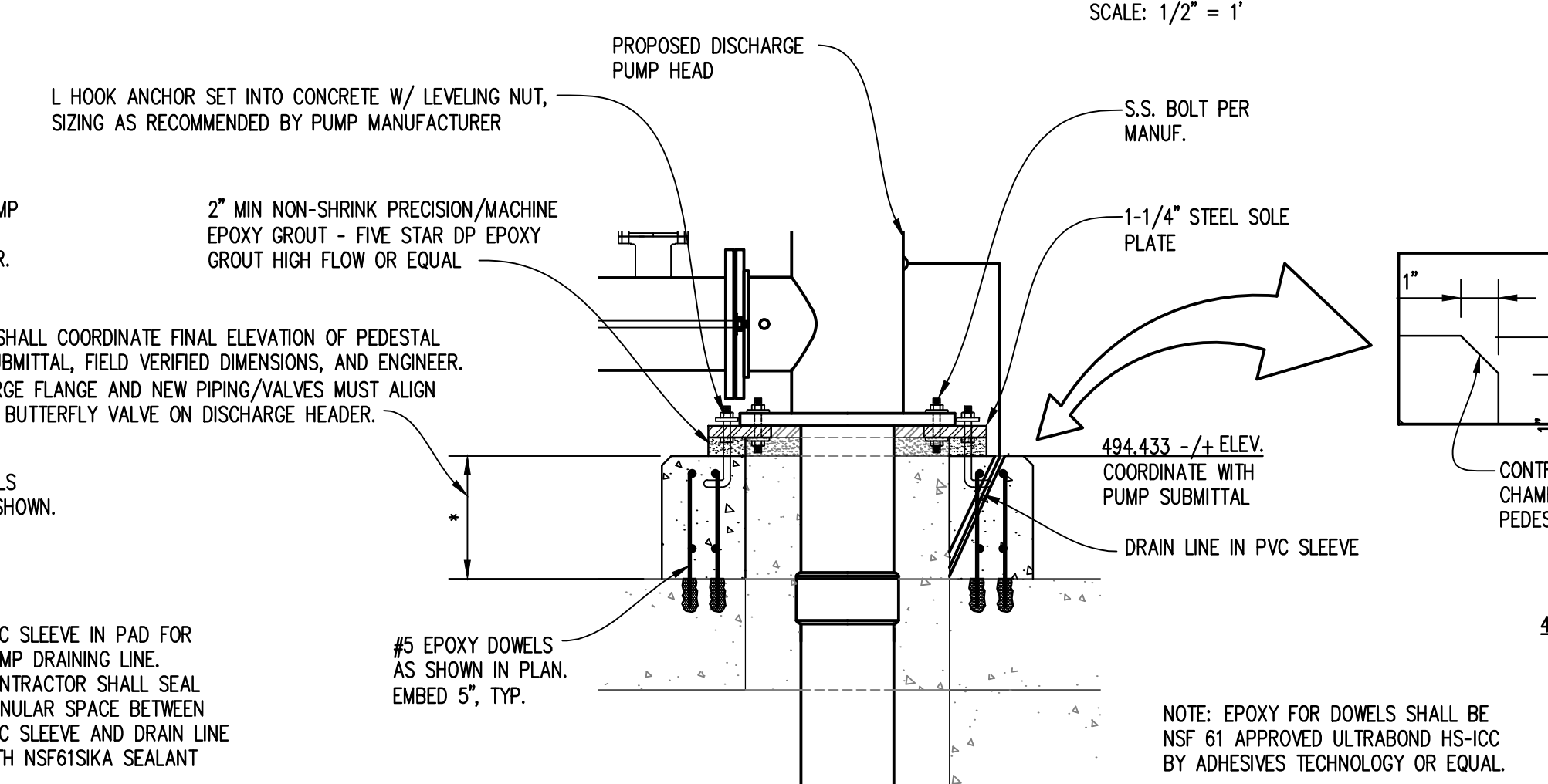
**EQUIPMENT PAD DETAIL**  
SCALE: 1/2" = 1'



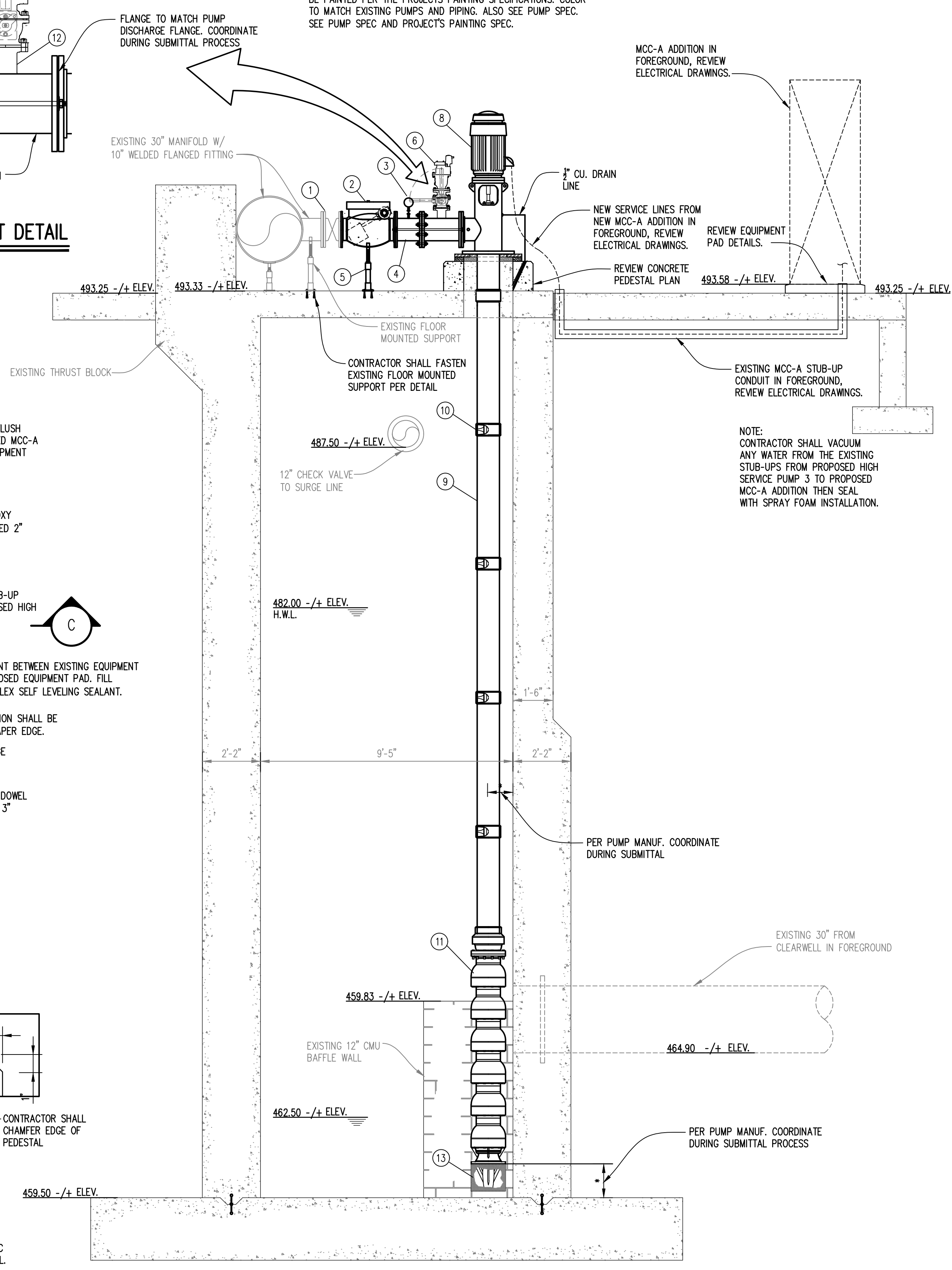
**DISMANTLING JOINT DETAIL**  
SCALE: 1" = 1'



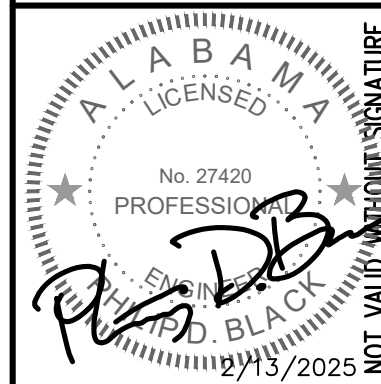
**CONCRETE PUMP PEDESTAL PLAN**  
SCALE: 3/4" = 1'



**CONCRETE PEDESTAL DETAIL B-B**  
SCALE: 3/4" = 1'



**PROPOSED HIGH SERVICE PUMP SECTION A-A**  
SCALE: 3/8" = 1'



BAR = 1"

Drawing	E0-01	Title	BID SET
Project No.	2-2025	ELECTRICAL LEGEND & NOTES	
Date	AS NOTED		
Scale	7		
Sheet			

**GENERAL ELECTRICAL LEGEND**

**NORMAL EMERGENCY**

FIXTURE OUTLET - LINEAR - SURFACE OR PENDANT MOUNTED.

FIXTURE OUTLET DESIGNATIONS:  
 A FIXTURE TYPE "A" - MAY BE USED WITH OTHER TYPES.  
 b SWITCH LEG TO WHICH FIXTURE IS CONNECTED - MAY BE USED WITH OTHER LOWER-CASE LETTERS.  
 2 CIRCUIT NUMBER - MAY BE USED WITH OTHER NUMBERS.

SWITCH OUTLET - S.P.S.T. - 20A - 120-277VAC.

SWITCH OUTLET - CONTROLS OUTLET "a", ETC.

SWITCH OUTLET - WEATHERPROOF WITH PILOT LIGHT (CLEAR LIGHT ON WITH LOAD ON) - S.P.S.T. - 20A - 120-277VAC - HUBBELL #HBL1221PLC TOGGLE SWITCH WITH #HBL179S CLEAR BUBBLE WEATHERPROOF PLATE - LABEL FUNCTION WITH ENGRAVED NAMEPLATE.

PHOTOELECTRIC CONTROL - S.P.S.T. - 120VAC OR 277VAC - 2000W - TORK 2101 FOR 120V CIRCUITS & TORK 2104 FOR 277V CIRCUITS - MOUNT AS DIRECTED ON PLANS.

FLOOR OR SURFACE-MOUNTED OUTLET - JUNCTION BOX.

WALL OUTLET - JUNCTION BOX - FLUSH MOUNTED.

CEILING OUTLET - JUNCTION BOX.

BRANCH/FEEDER CIRCUIT - CONCEALED IN WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT - EXPOSED ON WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT - CONCEALED IN FLOOR SLAB OR DIRT FILL.

BRANCH/FEEDER CIRCUIT - OVERHEAD BETWEEN POLES.

BRANCH/FEEDER CIRCUIT - HOMERUN - CAN BE USED WITH OTHER BRANCH/FEEDER TYPES.

BRANCH/FEEDER CIRCUIT MODIFIERS:  
 :2#12 & 1#12G UNLESS NOTED OTHERWISE.  
 :3#12 & 1#12G, ETC. UNLESS NOTED OTHERWISE (TICK MARKS INDICATE CONDUCTOR QUANTITY NOT INCLUDING GROUND WIRE).  
 :10 :2#10 & 1#10G UNLESS NOTED OTHERWISE (NUMBER INDICATES WIRE AWG).  
 CDS : CABLING AS DIRECTED BY SUPPLIER IN CONDUIT(S) SIZED AT 150% OF N.E.C. MINIMUM SIZE.

CONNECTED PANEL.

INDICATED BREAKER AMPACITY AND NUMBER OF POLES - BREAKER SHALL BE 20/1 IF THIS INFORMATION IS OMITTED OR NOTED OTHERWISE IN HOMERUN MARK.

BREAKER TYPE - BREAKER SHALL BE OF STANDARD TYPE IF THIS INFORMATION IS OMITTED OR NOTED WITH ONE OF THE FOLLOWING DESCRIPTIONS BELOW:  
 GFI GFI-TYPE (5mA TRIP).  
 GFIE GFI-EPD TYPE (30mA TRIP).  
 LOFF WITH LOCK-OFF HARDWARE.  
 LON WITH LOCK-ON HARDWARE.

INDICATES THAT A CIRCUIT SHALL BE CONNECTED TO A "NEW, SPARE OR VACATED" BREAKER OF RATED TYPE AND AMPACITY IN EXISTING PANEL AS SHOWN ABOVE.

TOTAL QUANTITY OF BREAKERS.

SIZE CONDUIT PER N.E.C. UNLESS INDICATED OTHERWISE.

--- OHP --- OVERHEAD PRIMARY POWER SERVICE CABLING (WITH TELECOMMUNICATIONS CABLING WHERE APPLICABLE).  
 --- OHS --- OVERHEAD SECONDARY POWER SERVICE CABLING (WITH TELECOMMUNICATIONS CABLING WHERE APPLICABLE).  
 --- UGP --- UNDERGROUND PRIMARY POWER SERVICE CABLING.

POWER/TELECOMMUNICATIONS POLE WITH GUYING AS REQUIRED.

POWER DISTRIBUTION EQUIPMENT.

LIGHTING PANEL - SURFACE MOUNTED.

TRANSFORMER - POWER.

PLC\* TYPICAL SCADA CONTROL & INSTRUMENTATION WIRING MARK (WHERE \*\*\*\*\* REPRESENTS A UNIQUE IDENTIFIER CONSISTING OF LETTERS AND NUMBERS) - SEE SCADA CONTROL & INSTRUMENTATION WIRING SCHEDULES.

DISCONNECT SWITCH - FUSED.

MOTOR OUTLET - SIZE AS SHOWN.

THERMOSTAT - AIR CONDITIONING - LOW VOLTAGE - LABEL FUNCTION WITH ENGRAVED NAMEPLATE.

LIT LEVEL INDICATING TRANSMITTER.

PIT PRESSURE INDICATING TRANSMITTER.

DETAIL DESIGNATOR - "A" INDICATED DETAIL MARK - "E-1" INDICATED SHEET NUMBER WHERE DETAIL IS LOCATED (TYPICAL).

GENERAL ABBREVIATIONS:  
 (EX) EXISTING TO REMAIN.  
 (EX-R) EXISTING TO BE REMOVED - REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING CONNECTIONS TO OTHER ELECTRICAL ITEMS.  
 (EX-RL) EXISTING TO BE RELOCATED - REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING AT EXISTING LOCATION. RELOCATE ITEM TO NEW LOCATION SHOWN ON ELECTRICAL PLANS.  
 (EX-RP) EXISTING TO BE REPLACED - EXTEND AND RECONNECT EXISTING CONDUIT AND WIRING TO REPLACED ITEM.

DETAIL DESIGNATOR - REFERENCE MARK (WHERE \*\*\*\*\* REPRESENTS A UNIQUE IDENTIFIER CONSISTING OF LETTERS & NUMBERS) - SEE DETAIL SHEETS CONTAINED WITHIN THIS SET OF ELECTRICAL DRAWINGS FOR THE CORRESPONDING DETAIL.

DETAIL DESIGNATOR NOTES:  
 1. DETAIL DESIGNATORS FOUND WITHIN THIS SET OF DRAWINGS ARE TYPICAL (ARE FOR GENERAL REFERENCE ONLY) AND ARE NOT INTENDED TO MARK EVERY INSTANCE WHERE DETAILS ARE APPLICABLE.  
 2. DESIGN DETAILS REPRESENT THE CHARACTER AND NATURE OF WORK REQUIRED THROUGHOUT THE PROJECT. ALL ASSOCIATED WORK SHALL BE IN ACCORDANCE WITH THE DESIGN DETAILS WHETHER THE DETAILS ARE SPECIFICALLY REFERENCED OR NOT.

ELECTRICAL ABBREVIATIONS:  
 A AMPERES.  
 AIC AMPERES INTERRUPTING CAPACITY.  
 AFF ABOVE FINISHED FLOOR.  
 AL ALUMINUM.  
 ATS AUTOMATIC TRANSFER SWITCH.  
 AWG AMERICAN WIRE GAUGE.  
 C CONDUIT.  
 CU COPPER.  
 EC EMPTY CONDUIT, OR ELECTRICAL CONTRACTOR  
 FPN FUSE PER NAMEPLATE.  
 G GROUND CONDUCTOR.  
 KVA KILOVOLT-AMPERES.  
 KW KILOWATT.  
 LV LOW VOLTAGE.  
 MCM THOUSAND CIRCULAR MILS.  
 MV MEDIUM VOLTAGE.  
 N NEUTRAL.  
 NEC NATIONAL ELECTRICAL CODE.  
 NEMA NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION.  
 NIC NOT IN CONTRACT.

NSV NEW, SPARE OR VACATED, ON CENTER.  
 OC ON CENTER.  
 P POLES.  
 PF POWER FACTOR.  
 Ø PHASE.  
 PVC POLYVINYL CHLORIDE.  
 SLD SINGLE LINE DIAGRAM.  
 SS STAINLESS STEEL.  
 UL UNDERWRITERS LABORATORY.  
 UNO UNLESS NOTED OTHERWISE.  
 V VOLTS.  
 W WIRES.  
 CFCI CONTRACTOR FURNISHED, CONTRACTOR INSTALLED.  
 CFOI CONTRACTOR FURNISHED, OWNER INSTALLED.  
 OFOI OWNER FURNISHED, OWNER INSTALLED.  
 OFCI OWNER FURNISHED, CONTRACTOR INSTALLED.

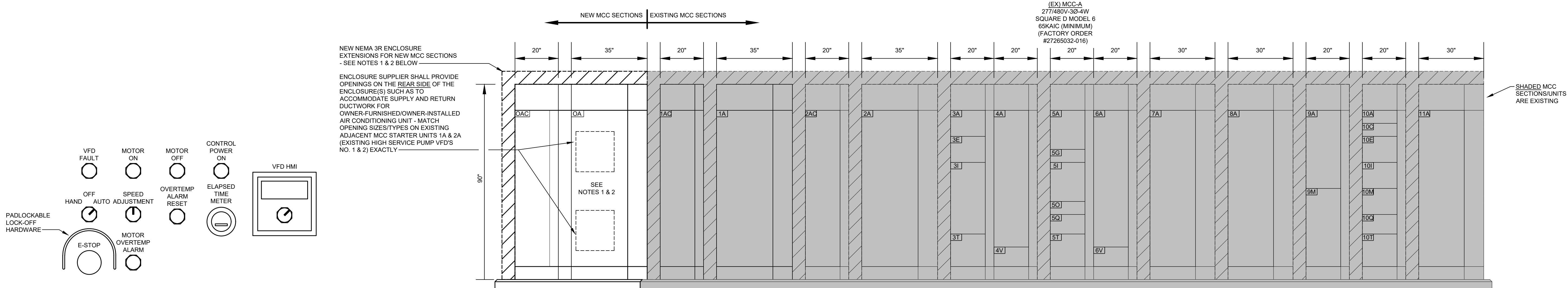
TYPICAL CIRCUITRY DESIGNATIONS:  
 2 SETS OF 4#30 & 1#30G - 2 1/2" C  
 CONDUIT SIZE.  
 GROUND CONDUCTOR WIRE GAUGE.  
 QUANTITY OF GROUND CONDUCTORS (PER SET).  
 PHASE/NEUTRAL CONDUCTOR WIRE GAUGE.  
 QUANTITY OF PHASE/NEUTRAL CONDUCTORS (PER SET).  
 QUANTITY OF PARALLEL SETS OF THE PHASE/NEUTRAL CONDUCTORS, GROUND CONDUCTOR AND CONDUIT SPECIFIED.

MULTI-CONDUCTOR CONTROL 600V TRAY CABLE DESIGNATIONS:  
 (2) 4C#14 W/G - 1 1/4" C  
 CONDUIT SIZE.  
 "W/G" = WITH ADDITIONAL INTEGRAL GROUND CONDUCTOR WITH GREEN INSULATION IN EACH CABLE SHEATH.  
 WIRE GAUGE.  
 QUANTITY OF CONDUCTORS IN EACH CABLE SHEATH (NOT INCLUDING GROUND).  
 QUANTITY OF MULTI-CONDUCTOR CABLES OF THE TYPE SPECIFIED WITHIN THE SPECIFIED CONDUIT.

TWISTED, SHIELDED INSTRUMENTATION CABLE DESIGNATIONS:  
 (2) #16TSP - 1" C  
 CONDUIT SIZE.  
 "TSP" = TWISTED SHIELDED PAIR.  
 WIRE GAUGE.  
 QUANTITY OF INSTRUMENTATION CABLES IN THE SPECIFIED CONDUIT.

**GENERAL ELECTRICAL NOTES**

- SPECIAL ATTENTION IS CALLED TO THE FACT THAT THE REQUIRED WORK IS AT OPERATING FACILITIES, AND AS SUCH, NO UNNECESSARY SHUTDOWNS WILL BE ALLOWED. ANY NECESSARY SHUTDOWNS SHALL BE APPROVED IN WRITING BY THE PLANT MANAGER A MINIMUM OF TWO (2) WEEKS IN ADVANCE, AND SHALL BE SCHEDULED AT SUITABLE TIMES FOR THE PROCESS (WITH LOWER PROCESS FLOWS/ETC.) AS DETERMINED BY OWNER. NO INDIVIDUAL SHUTDOWNS SHALL EXCEED 12 HOURS IN LENGTH. TEMPORARY/PORTABLE PUMPING PROVISIONS (AND OTHER TEMPORARY PROVISIONS AS REQUIRED FOR OPERATION OF THE EXISTING SYSTEMS) SHALL BE PROVIDED BY THE CONTRACTOR IF OWNER-MANDATED MAXIMUM SHUTDOWN PERIODS ARE ANTICIPATED OR ARE POSSIBLE.
- ELECTRICAL PLANS & DETAILS INDICATE TYPICAL WIRING REQUIREMENTS FOR PROCESS EQUIPMENT. VERIFY EXACT WIRING REQUIREMENTS & ALL DEVICE LOCATIONS WITH APPROVED MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN. NO ADDITIONAL COMPENSATION WILL BE PAID FOR MINOR CIRCUITRY ADJUSTMENTS REQUIRED TO COMPLY WITH MANUFACTURERS INSTALLATION DETAILS.
- CONTRACTOR SHALL VISIT THE SITE OF THE WORK PRIOR TO SUBMITTING BID TO EXAMINE CAREFULLY LOCAL CONDITIONS AND DIFFICULTIES TO BE ENCOUNTERED. ANY DISCREPANCY BETWEEN PLANS AND EXISTING CONDITIONS SHALL IMMEDIATELY BE CALLED TO THE ATTENTION OF THE ENGINEER.
- ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC.
- NEW EXPOSED HVAC POWER OR CONTROL CIRCUITRY INSTALLED BY THIS CONTRACTOR SHALL BE INSTALLED TO MEET DIVISION 26 SPECIFICATIONS (EXTERIOR EMT/ETC. WILL NOT BE ALLOWED).
- EXISTING PANEL DIRECTORY CARDS MODIFIED BY THIS RENOVATION SHALL BE RETYPED TO INDICATE CONNECTED CIRCUITS.
- THIS CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR NECESSARY TO EXTEND CIRCUITS AND MAKE RECONNECTIONS TO ANY ACTIVE ELECTRICAL DEVICES ON WHICH THE BRANCH CIRCUIT IS INTERRUPTED BY THIS ALTERATION. CARE SHALL BE TAKEN TO INSURE THAT EXISTING PANEL AND FEEDER RATINGS ARE NOT EXCEEDED.



**HIGH SERVICE PUMP NO. 3 VFD INNER-DOOR-MOUNTED DEVICE LAYOUT**  
 SCALE : NONE

NOTE: THESE DRAWINGS/ELEVATIONS/ETC. SHOW THE PROPOSED BASE BID REQUIREMENTS. THE CONTRACTOR SHALL ALSO PROVIDE AN ALTERNATE PRICE (SEE BID FORM) TO:

A. PROVIDE A SEPARATELY-ENCLOSED VFD PACKAGE (IN LIEU OF AN MCC-MOUNTED VFD PACKAGE). THE VFD PACKAGE SHALL MEET ALL REQUIREMENTS SPECIFIED FOR THE BASE BID UNIT EXCEPT:

1. THE ENCLOSURE SHALL BE SEPARATELY-ENCLOSED NEMA 3R WITH AN INTEGRAL 800A/3P ELECTRONIC TRIP LSIG-TYPE MAIN BREAKER (WITH THRU-DOOR DISCONNECT HANDLE).
2. ADDITIONAL VFD MANUFACTURERS AND ENCLOSED DRIVE SUPPLIERS/INTEGRATORS (BEYOND THOSE SPECIFIED IN THE BASE BID ARRANGEMENT) ARE ALLOWED IN THIS SEPARATELY-ENCLOSED ARRANGEMENT. SEE SPECIFICATION SECTION 26 29 23 ("VARIABLE FREQUENCY DRIVES") FOR THE APPROVED MANUFACTURERS/SUPPLIERS/INTEGRATORS.

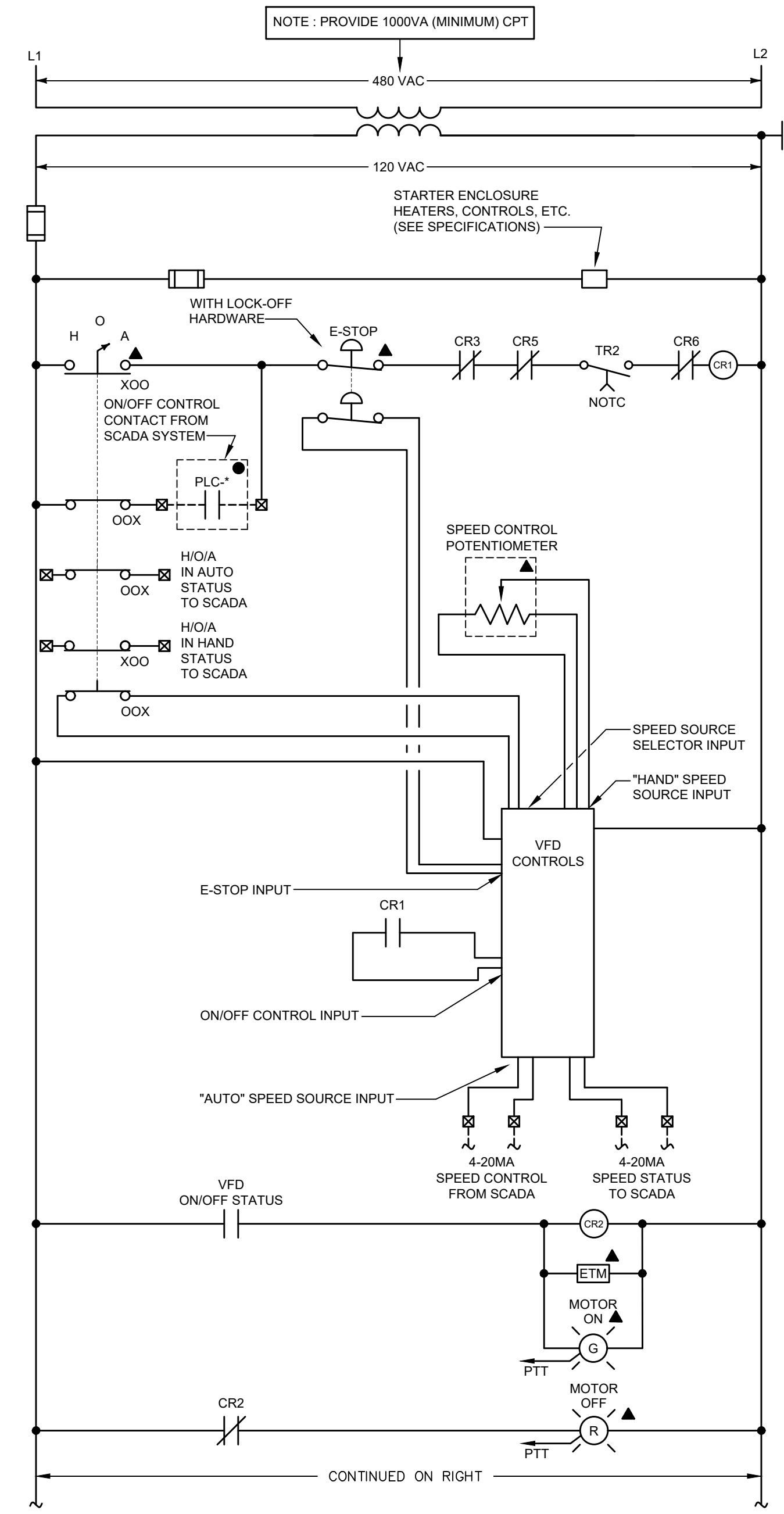
B. FEED POWER TO THE SEPARATELY-ENCLOSED VFD VIA A FEEDER TAP PER N.E.C. 240.21(B)(5) FROM THE EXISTING MCC-A MAIN HORIZONTAL BUS USING THREE (3) SETS OF 3-300MCM & #14/0G - 3'C.

**MCC-A ELEVATION NOTES**

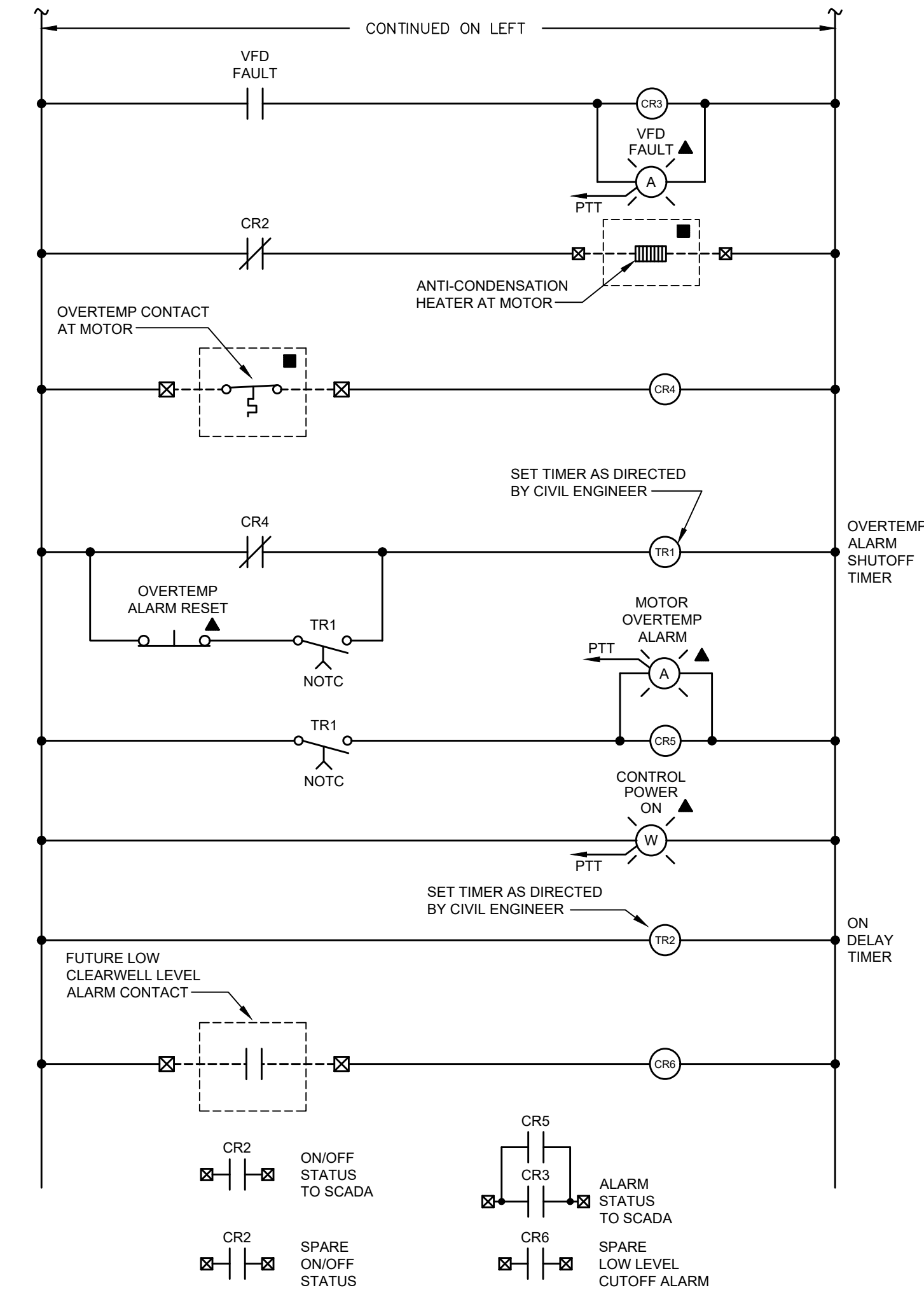
1. FOR THE MCC-UNIT LISTED BELOW, PROVIDE COMBINATION LOW-HARMONIC ACTIVE FRONT END (AFE) VARIABLE TORQUE DERATED VFD WITH MCP, LINE ISOLATION CONTACTOR, SPD, & ACCESSORIES PER SPECS. SEE ELEMENTARY DIAGRAM NO. 1.  
 MCC-A  
 SECTION 0A: HIGH SERVICE PUMP NO. 3  
 414A VFD FOR 300HP-460V-30 MOTOR
2. ALL MCC MODIFICATIONS/ADDITIONS SHALL BE PROVIDED BY THE ORIGINAL MCC SUPPLIER AND SHALL COMPLY WITH ALL APPLICABLE U.L. REQUIREMENTS. MCC HORIZONTAL BUSS SHALL BE EXTENDED AS REQUIRED TO ACCOMMODATE NEW SECTION(S). SEE GENERAL ELECTRICAL NOTE 1 REGARDING SHUTDOWNS.

**(EX) MOTOR CONTROL CENTER MCC-A ELEVATION**  
 SCALE : 1/2" = 1'-0"

ELEMENTARY DIAGRAM LEGEND	
	PUSHBUTTON - START - NORMALLY OPEN - MOMENTARY CONTACT.
	PUSHBUTTON - STOP - NORMALLY CLOSED - MOMENTARY CONTACT.
	PUSHBUTTON - EMERGENCY STOP - NORMALLY CLOSED - MAINTAINED CONTACT - MUSHROOM HEAD.
	SELECTOR SWITCH - HAND-OFF-AUTOMATIC - MAINTAINED CONTACT - "XOO" INDICATES THAT CONTACT IS ONLY CLOSED IN THE FIRST (HAND) POSITION (MAY BE USED WITH OTHER COMBINATIONS OF "X" & "O").
	SELECTOR SWITCH - ON-OFF - MAINTAINED CONTACT - "XO" INDICATES - THAT CONTACT IS ONLY CLOSED IN THE FIRST (ON) POSITION (MAY BE USED WITH OTHER COMBINATIONS OF "X" & "O").
	MOTOR STARTER COIL.
	BYPASS MOTOR STARTER COIL.
	OVERLOAD RELAY CONTACT.
	CONTROL RELAY COIL.
	CONTROL CONTACT - NORMALLY OPEN.
	CONTROL CONTACT - NORMALLY CLOSED.
	INDICATOR LIGHT - COLOR AS SHOWN.
	CONTROL TRANSFORMER.
	ELAPSED TIME METER.
	▲ DEVICE LOCATED ON STARTER DOOR.
	■ DEVICE LOCATED ADJACENT TO MOTOR.
	● DEVICE LOCATED REMOTE - SEE PLAN.
	☒ TERMINAL BLOCK WITHIN STARTER UNIT.
	☒ FLOAT SWITCH - CLOSSES ON RISING LEVEL.
	☒ FLOAT SWITCH - CLOSSES ON FALLING LEVEL.
	☒ PRESSURE SWITCH - CLOSSES ON INCREASE PRESSURE.
	☒ PRESSURE SWITCH - CLOSSES ON DECREASE PRESSURE.
	☒ LIMIT SWITCH - NORMALLY OPEN - HELD CLOSED.
	☒ LIMIT SWITCH - NORMALLY CLOSED - HELD OPEN.
	TR TIME DELAY RELAY COIL.
	☒ TIME DELAY RELAY CONTACT - NORMALLY CLOSED, TIME OPEN.
	☒ TIME DELAY RELAY CONTACT - NORMALLY OPEN, TIME CLOSED.
	☒ TIME DELAY RELAY CONTACT - NORMALLY OPEN, TIME OPEN.
	☒ TIME DELAY RELAY CONTACT - NORMALLY CLOSED, TIME CLOSED.
	☒ SOLENOID VALVE.
	☒ THERMOSTAT - NORMALLY CLOSED, OPENS ON HIGH TEMP.
	☒ THERMOSTAT - NORMALLY OPEN, CLOSSES ON HIGH TEMP.



**ELEMENTARY DIAGRAM NO. 1**  
 HIGH SERVICE PUMP NO. 3 VFD





EXISTING HIGH SERVICE PUMPING STATION RTU SCADA POINT LIST AND CONTROL & INSTRUMENTATION WIRING SCHEDULE							
HOWERLIN MARK	TO	EQUIPMENT DESCRIPTION	PARAMETER	POINT TYPE	WIRING	SHEET	REMARKS
SC-P-303	HSPS RTU	HIGH SERVICE PUMP NO. 3	HIO/A SWITCH IN AUTO STATUS	DI	(1) 10CF14 - 1°C AND	E2-01	
			HIO/A SWITCH IN HAND STATUS	DI	(2) #16TSP - 1°C		
			ALARM	DI			
			ON/OFF STATUS	DI			
			ON/OFF CONTROL	DO			
			SPEED INDICATION	AI			
			SPEED CONTROL	AO			

NOTES:  
1. THIS SCHEDULE ONLY SHOWS NEW SCADA I/O POINTS. EXISTING I/O POINTS ARE NOT SHOWN ABOVE. MODIFY EXISTING PLC AS REQUIRED TO INCORPORATE NEW I/O. INCLUDE COSTS OF ALL MODIFICATION(S) IN BID.

CONTROL & INSTRUMENTATION WIRING SCHEDULES LEGEND & NOTES
<p><b>LEGEND:</b></p> <p>"DI" - DISCRETE INPUT POINT                      "DO" - DISCRETE OUTPUT POINT                      "AI" - ANALOG INPUT POINT                      "AO" - ANALOG OUTPUT POINT</p> <p><b>NOTES:</b></p> <p>1. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS &amp; INFORMATION.                      2. ALL CONTROL CABLING (IDENTIFIED WITH "CI#14" OR SIMILAR DESIGNATIONS) SHALL BE 600V MULTI-CONDUCTOR TRAY CABLE PER SPECIFICATION REQUIREMENTS.                      3. ALL INSTRUMENTATION CABLING (IDENTIFIED WITH "TSP" OR "SHD" DESIGNATIONS) SHALL BE 300V TWISTED, OVERALL-SHELDIED TRAY CABLE.</p>

**Municipal Consultants, Inc.**  
 200 Cahoon Park, South, Suite 212  
 Birmingham, Alabama 35226  
 (205) 822-0387

**COOSA VALLEY WATER SUPPLY DISTRICT**  
 PROPOSED HIGH SERVICE PUMP 3  
 2025

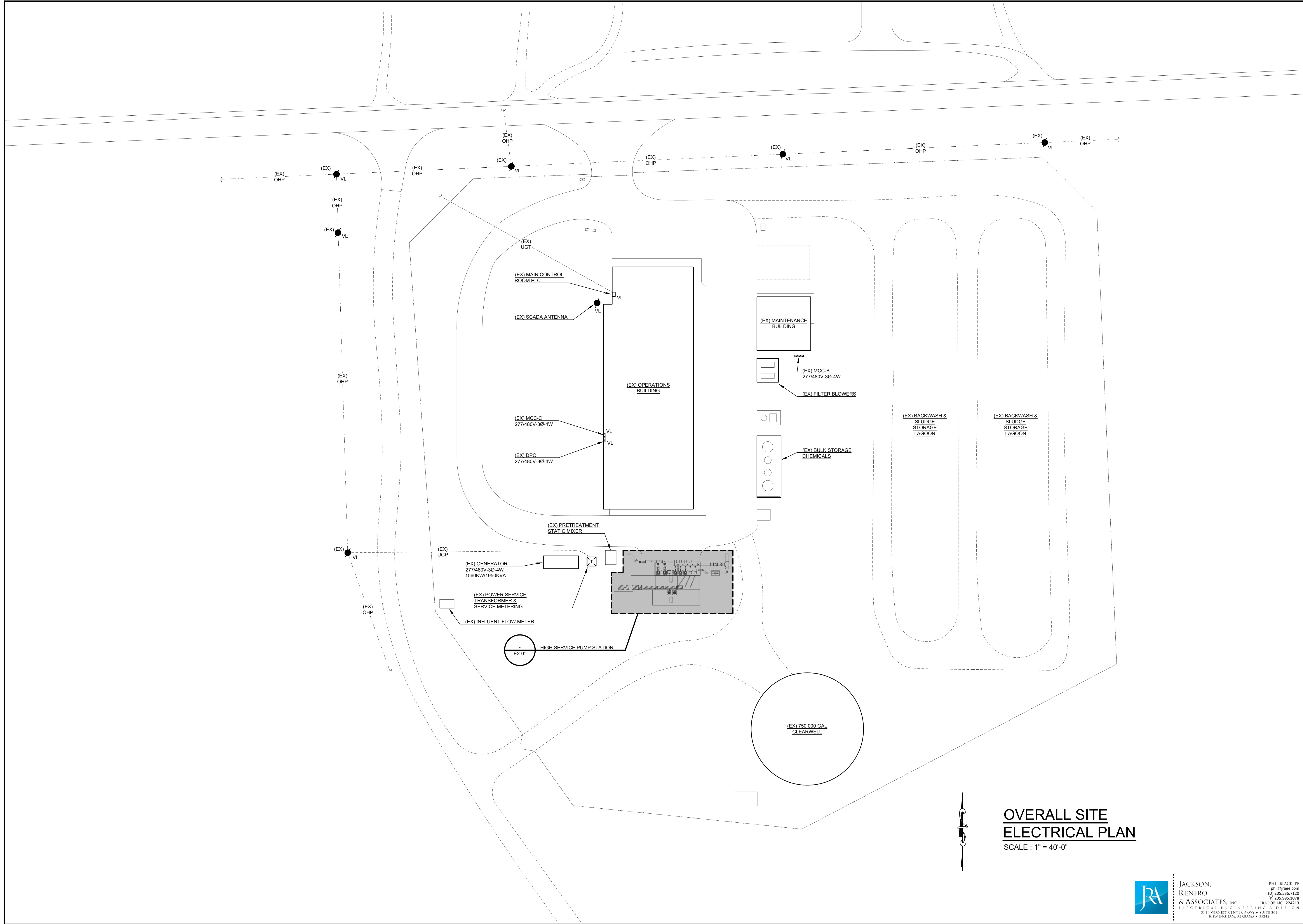


BAR = 1"

Drawing	E0-03	Title	CONTROL & INSTRUMENTATION SCHEDULES
Project No.	2-2025	Scale	AS NOTED
Date	2-2025	Sheet	9
Scale	AS NOTED	BID SET	

**JACKSON, RENFRO & ASSOCIATES, INC.**  
 ELECTRICAL ENGINEERING & DESIGN  
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PHIL BLACK, PE  
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 (205) 995-1078  
 JRA JOB NO. 234213

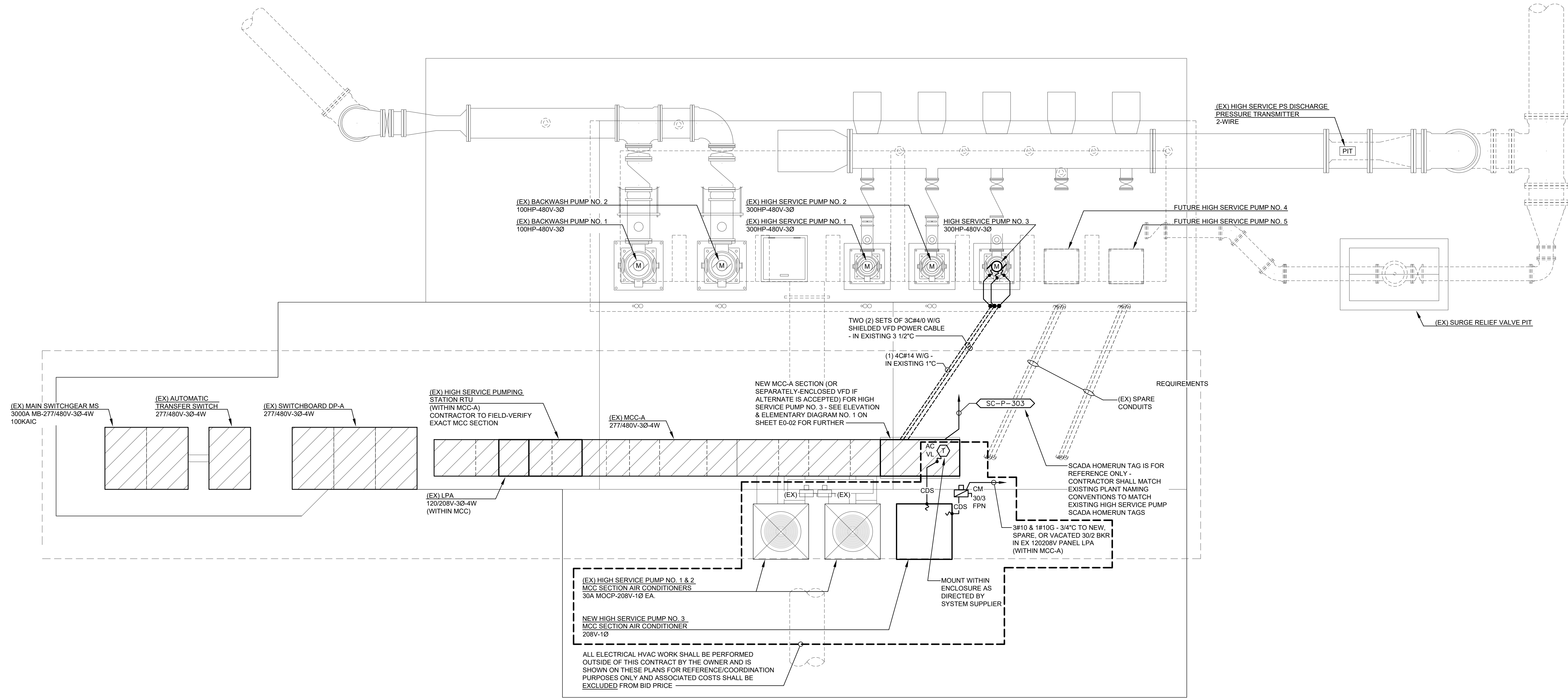


**OVERALL SITE ELECTRICAL PLAN**  
SCALE: 1" = 40'-0"



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IRA JOB NO. 224223

<p><b>Municipal Consultants, Inc.</b> 200 Cahoon Park South, Suite 212 Birmingham, Alabama 35226 (205) 827-0387</p>	
<p><b>COOSA VALLEY WATER SUPPLY DISTRICT</b> PROPOSED HIGH SERVICE PUMP 3 2025</p>	
<p>ALABAMA LICENSED PROFESSIONAL ENGINEER No. 27420 PHIL BLACK 2/13/2025 NOT VALID WITHOUT SIGNATURE</p>	
<p>BAR = 1"</p>	
Drawing	E1-01
Project No.	2-2025
Date	AS NOTED
Scale	10
Sheet	BID SET
<p>Title <b>OVERALL SITE ELECTRICAL PLAN</b></p>	



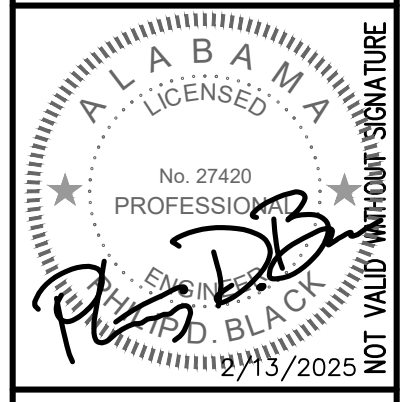
# HIGH SERVICE PUMP STATION ELECTRICAL PLAN

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



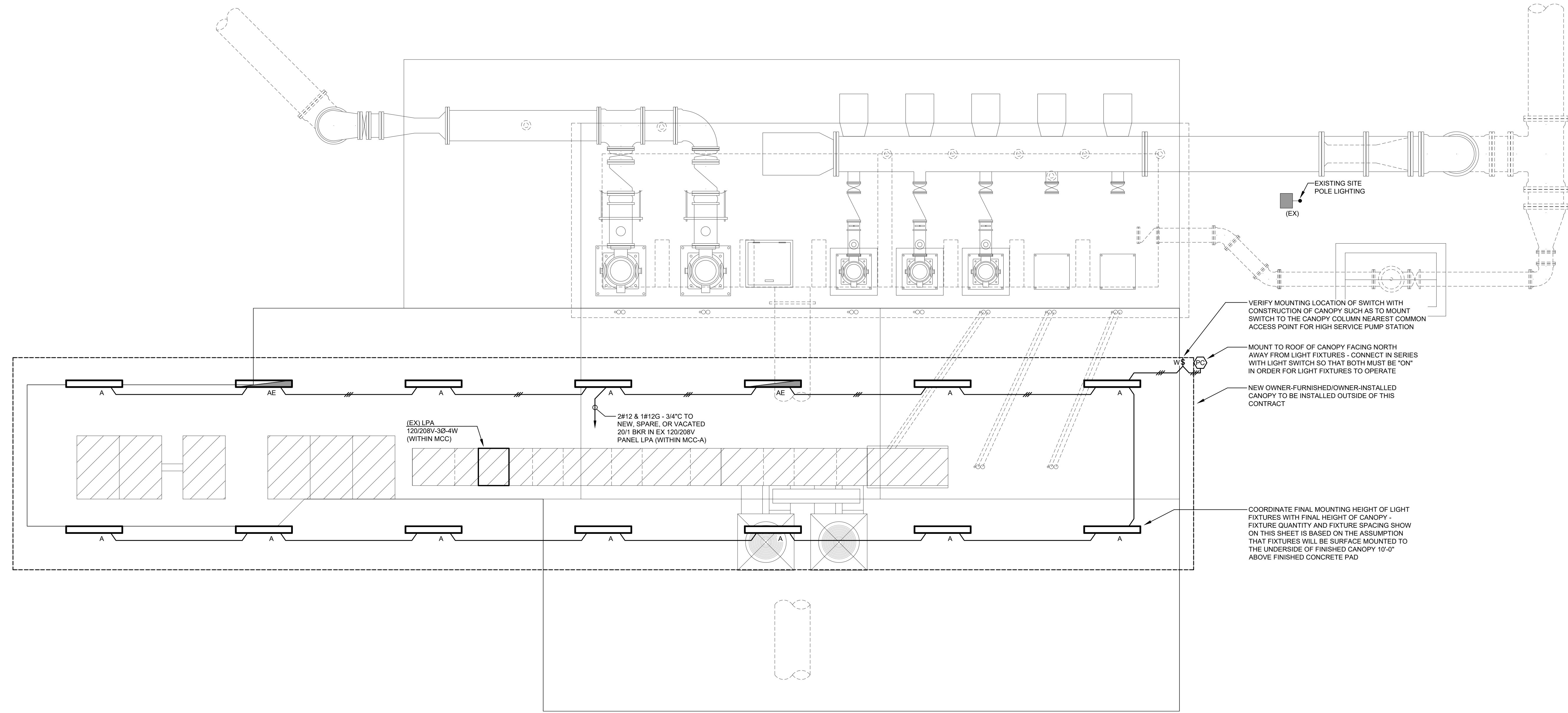
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& ASSOCIATES, INC.  
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JRA JOB NO. 224213



BAR = 1"

Drawing	E2-01	Title	HIGH SERVICE PUMP STATION ELECTRICAL PLAN	
Project No.	2-2025	Scale	AS NOTED	Sheet
Date	2-2025	Scale	AS NOTED	Sheet
Scale	AS NOTED	Sheet	11	BID SET



LIGHTING FIXTURE SCHEDULE									
MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMPS			MOUNTING HEIGHT	MOUNTING TYPE	REMARKS
				WATTS	LUMENS	TYPE			
A	LITHONIA COLUMBIA DAY-BRITE	FEM-L48-6000LM-LPAFL-WD-120-40K-80CRI	120	37.8	5,978	LED 4000K	UNDERSIDE OF CANOPY	STEM OR SURFACE	
AE	LITHONIA COLUMBIA DAY-BRITE	FEM-L48-6000LM-LPAFL-WD-120-40K-80CRI-E10WMCP	120	37.8	5,978	LED 4000K	UNDERSIDE OF CANOPY	STEM OR SURFACE	EM

**LIGHTING FIXTURE SCHEDULE GENERAL NOTES:**  
 1. ALL LIGHT SOURCES SHALL BE 4000K WITH A MINIMUM CRI OF 80 UNLESS NOTED OTHERWISE.  
 2. CONTRACTOR SHALL COORDINATE ALL FIXTURE MOUNTING PROVISIONS WITH THE ASSOCIATED STRUCTURE/CANOPY DESIGN TYPE(S) PRIOR TO ORDERING FIXTURES.  
 3. ALL FIXTURES AND BALLASTS/DRIVERS SHALL BE RATED FOR OPERATION IN AMBIENT TEMPERATURES UP TO 55 DEGREES CELSIUS.

**LIGHTING FIXTURE SCHEDULE KEYED NOTES:**  
 EM EMERGENCY FIXTURE. PROVIDE EMERGENCY BATTERY PACK RATED FOR AT LEAST 500 LUMENS.

### HIGH SERVICE PUMP STATION CANOPY LIGHTING PLAN

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

NOTES THIS SHEET ONLY

ALL IMPROVEMENTS SHOWN ON THIS SHEET SHALL BE PERFORMED OUTSIDE OF THIS CONTRACT AND ARE SHOWN FOR REFERENCE/COORDINATION PURPOSES ONLY AND SHALL BE EXCLUDED FROM BID PRICE.