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CITY of TAMPA



WASTEWATER DEPARTMENT

PLANS FOR
WASTEWATER PUMPING STATION
REHABILITATIONS
PARKE EAST AND IDLEWILD

CONTRACT No.
22-C-00048



7650 West Courtney Campbell Causeway
Waterford Plaza, Suite 700
Tampa, Florida 33607 813.286.1711 tel
Certificate of Authorization No. 8115

BOZHIDAR V. HANDJIEV, P.E.
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
COVER SHEET

SHEET
1

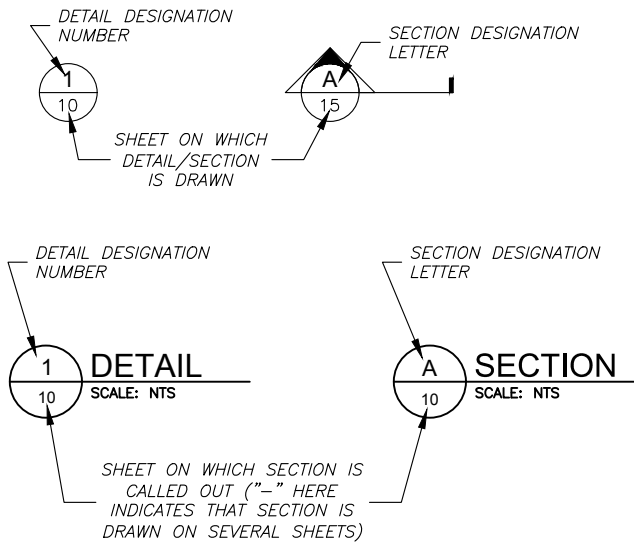
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ABBREVIATIONS:

#	NUMBER	LF	LINEAR FEET
AC	ASBESTOS CEMENT PIPE	MAX	MAXIMUM
ADPT	ADAPTER	MH	MANHOLE
APPROX	APPROXIMATE (LY)	MIN	MINIMUM
ARV	AIR RELEASE VALVE	MISC	MISCELLANEOUS
ASPH	ASPHALT	MJ	MECHANICAL JOINT
ASSY	ASSEMBLY	MM	MILLIMETER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	N	NORTH
AVG	AVERAGE	NAVD	NORTH AMERICAN VERTICAL DATUM
AWWA	AMERICAN WATER WORKS ASSOCIATION	NO	NORMALLY OPENED/NUMBER
		NPT	NATIONAL PIPE THREAD
		NTS	NOT TO SCALE
BFP	BACKFLOW PREVENTER	OC	ON CENTER
BV	BALL VALVE	OD	OUTSIDE DIAMETER
BFV	BUTTERFLY VALVE	O/E	OR EQUAL
BLDG	BUILDING	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CKD	CHECKED	PDF	PORTABLE DOCUMENT FORMAT
CI	CAST IRON	PE	PLAIN END
CLR	CLEAR (ANCE)	PL	PROPERTY LINE
CONC	CONCRETE	PP	POWER POLE
CPLG	COUPLING	PROP	PROPOSED
CPP	CONCRETE POLYMER COATING	PS	PUMP STATION
CTR	CENTER (ED)	PSI	POUNDS PER SQUARE INCH
CV	CHECK VALVE	PSF	POUNDS PER SQUARE FOOT
		PV	PLUG VALVE
D	DRAIN	PVC	POLYVINYL CHLORIDE PIPE
DEMO	DEMOLITION	PVMT	PAVEMENT
DES	DESIGN BY	PW	POTABLE WATER
DI	DUCTILE IRON (PIPE)		
DIA	DIAMETER		
DIPS	DUCTILE IRON PIPE SIZE	R/W	RIGHT-OF-WAY
DR	DIMENSION RATIO	R	RADIUS
DRN	DRAWN BY	RCP	REINFORCED CONCRETE PIPE
		REQ'D	REQUIRED
		RJ	RESTRAINED JOINT
E	EAST OR EASTING	S	SOUTH OR SANITARY
EA	EACH	SAN	SANITARY
ECC	ECCENTRIC	SB	SOIL BORING
EFF	EFFLUENT	SCH	SCHEDULE
EL	ELEVATION	SDR	STANDARD DIMENSION RATIO
ELEV	ELEVATION	SF	SQUARE FOOT
ELL	ELBOW	SFM	SANITARY FORCE MAIN
EOP	EDGE OF PAVEMENT	SHT	SHEET
EPDM	ETHYLENE PROPYLENE DIENE MONOMER	SQR	SQUARE
EQ	EQUAL (LY)	SST	STAINLESS STEEL
ESMT	EASEMENT	STA	STATION
ETC	ETCETERA	STD	STANDARD
EW	EACH WAY		
EX	EXISTING	T&B	TOP AND BOTTOM
EXP	EXPANSION	TDH	TOTAL DYNAMIC HEAD
		THK	THICK (NESS)
FAC	FLORIDA ADMINISTRATIVE CODE	TOP	TOP OF PIPE
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	TYP	TYPICAL
FIN	FINISH (ED)		
FL	FLANGE	UV	ULTRAVIOLET
FLR	FLOOR		
FM	FORCE MAIN/FLOW METER	V	VOLT(S)
FRP	FIBERGLASS REINFORCED PLASTIC	VCP	VITRIFIED CLAY PIPE
FT	FOOT OR FEET		
		W	WEST
GALV	GALVANIZED	W/	WITH
GPM	GALLONS PER MINUTE	WM	WATERMAIN OR WATER METER
GV	GATE VALVE	WW	WETWELL
		WWF	WOVEN WIRE FABRIC
HB	HOSE BIBB		
HDD	HORIZONTAL DIRECTIONAL DRILL	XFMR	TRANSFORMER
HDPE	HIGH DENSITY POLYETHYLENE		
HP	HORSEPOWER		
HZ	HERTZ		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
INF	INFLUENT		
INV	INVERT		

DETAIL & SECTION DESIGNATION



PIPE AND FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		FLANGED JOINT
		MECHANICAL JOINT
		90° BEND
		90° BEND, ROTATED UP
		90° BEND, ROTATED DOWN
		TEE
		45° BEND
		45° BEND, ROTATED UP
		45° BEND, ROTATED DOWN
		FLANGED COUPLING ADAPTER
		CHECK VALVE
		PLUG VALVE
		WYE

LEGEND OF SYMBOLS

	ANTENNA
	CONCRETE LIGHT POLE
	WOODEN POWER POLE
	WOODEN POST
	TELEMETRY TOWER
	BACKFLOW PREVENTOR
	WATER METER
	WATER SERVICE
	WATER VALVE
	VENT PIPE
	SANITARY SEWER MH
	EXISTING VALVE
	TEMPORARY LINE STOP
	REVERSE DEADMAN
	TO BE REMOVED
	CONCRETE
	GROUTED
	RIGHT-OF-WAY LINE
	EASEMENT LINE
	WOODEN FENCE
	CHAIN LINK FENCE
	SANITARY LINE
	EXISTING SANITARY FM
	PROPOSED SANITARY FM
	EXISTING WM
	PROPOSED WM



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CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

LEGEND AND ABBREVIATIONS

SHEET

2

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 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
 INDEX OF SHEETS

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DEMOLITION NOTES

1. SALVAGEABLE MATERIAL, AS DETERMINED BY CITY PERSONNEL, SHALL BE DELIVERED TO THE CITY OF TAMPA’S HOWARD F. CURREN AWWP AT 2700 MARITIME BOULEVARD. NON–SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR’S EXPENSE.
2. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN AS NEAT AND ORDERLY CONDITION AS POSSIBLE DURING CONSTRUCTION OPERATIONS. SITE SHALL BE SECURED WITH TEMPORARY FENCING AND STRUCTURES DURING HOURS WHEN CONTRACTOR IS NOT PRESENT TO ENSURE SAFETY OF CITY EMPLOYEES AND THE PUBLIC.
3. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING, SPRINKLER SYSTEM PIPING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER. CONTRACTOR SHALL SOD ALL UNPAVED AREAS.

GENERAL NOTES

1. ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO NAVD 1988 UNLESS OTHERWISE STATED.
2. EXISTING DIMENSIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT–OF–WAY PERMITS FOR THE PUMPING STATION WORK.
4. THE CITY WILL OBTAIN ALL NECESSARY BUILDING PERMITS AND FDEP WASTEWATER PERMITS.
5. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE CITY.
6. CONTRACTOR SHALL CALL SUNSHINE (1–800–432–4770) AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.
7. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE CITY.
8. FURNISH AND INSTALL SUBMERSIBLE PUMPS AS SHOWN IN THE TABLE BELOW. SUBMERSIBLE PUMPS ARE FLYGT PUMPS WITH FLYGT MIX–FLUSH VALVES AND EXTENDED STAINLESS STEEL LIFTING HANDLES AS SHOWN. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO “OR EQUAL” SUBMITTALS WILL BE CONSIDERED.

PUMP STA	MODEL	DISCHARGE SIZE	IMPELLER SIZE	MOTOR HP	VOLTS	PHASE	FREQUENCY	DESIGN FLOW	TDH
PARKE EAST	NP–3202.095	6–INCH	278 mm	45 HP	460 V	3 PH	60 Hz	550 gpm	113 FT
IDLEWILD	NP–3153.185	4–INCH	176 mm	23 HP	460 V	3 PH	60 Hz	450 gpm	118 FT

9. REMOVAL OF EXISTING PAVEMENT AND BASE MATERIAL, POLES, UNDERGROUND PIPES, STRUCTURES, AND OTHER MISCELLANEOUS ITEMS AS SHOWN ON PLANS SHALL BE INCLUDED IN THE LUMP SUM PRICE AND NO SEPARATE PAYMENT WILL BE MADE.
10. CONTRACTOR SHALL VERIFY QUANTITIES OF ALL NECESSARY PIPES, REDUCERS, FITTINGS, SUPPORTS, AND ANY MISCELLANEOUS BRACKETS.
11. PUMP DISCHARGE PIPING IN WET WELL SHALL BE 6–INCH DIAMETER HDPE (PE4710), SDR–11, GREEN STRIPE, DIPS–OD FOR IDLEWILD. HDPE JOINTS SHALL BE FLANGED WITH 316 SST BACK UP RINGS. HDPE ELECTROFUSION JOINTS WILL BE ALLOWED, BUT ONLY IN THE WET WELL WITHIN 5 FEET FROM THE BOTTOM OF THE TOP SLAB. EXISTING STAINLESS STEEL PIPING IN THE PARKE EAST WET WELL SHALL BE REUSED. NEW PIPING AND FITTINGS SHALL BE 316 SST.
12. DIMENSIONS SHOWN ARE NOT NECESSARILY ACCURATE TO THE DEGREE REQUIRED FOR FABRICATION. EXISTING DIMENSIONS AND VIEWS ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS AND REFLECT THEM ON DETAILED SHOP DRAWINGS FOR APPROVAL BEFORE ANY FABRICATION.
13. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (CLEARLY LEGIBLE). NO FAXED SHEETS OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.
14. PLUG VALVES SHALL BE DEZURIK, PEF 100% PORT, ECCENTRIC PLUG VALVES. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO “OR EQUAL” SUBMITTALS WILL BE CONSIDERED. ALL ABOVE GROUND PLUG VALVES SHALL BE PROVIDED WITH 2” NUTS AND NO HANDWHEELS.
15. CHECK VALVES SHALL BE APCO RUBBER FLAPPER SWING CHECK VALVES, SERIES 100 EQUIPPED WITH HOLD OPEN DEVICES. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO “OR EQUAL” SUBMITTALS WILL BE CONSIDERED.
16. ALL HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.
17. PIPE SUPPORTS SHALL BE CONSTRUCTED AS SHOWN IN THE PIPE SUPPORT DETAIL.
18. ALL CEMENTITIOUS CONCRETE AND GROUT, UNLESS OTHERWISE NOTED, SHALL BE CLASS “B”, 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. ALL REINFORCING STEEL SHALL BE GRADE 60.
19. ALL EXPOSED NON–SST OR NON–HDPE PIPE, FITTINGS, VALVES, ETC. SHALL RECEIVE:
- A. SHOP COAT – ONE COAT, 3–5 MILS (DRY) TNEMEC N140–1211 EPOXY PRIMER.

B. FIELD COAT – ONE COAT, 3–5 MILS (DRY) TNEMEC N69.

C. FIELD COAT:

1. ABOVE GRADE : ONE COAT, 4–6 MILS (DRY) TNEMEC 1074U ENDURASHIELD (WITH FACTORY ADDED UV BLOCKER)

2. BELOW GRADE : ONE COAT, 5–7 MILS (DRY) TNEMEC SERIES 446 PERMA–SHIELD MCU
20. ALL STAINLESS STEEL PARTS TO BE WELDED SHALL BE THE LOW–CARBON VERSION OF THE GRADE OF STAINLESS STEEL THAT IS CALLED FOR, SUCH AS: T–316L OR T–304L.
21. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.

22. CONTRACTOR TO SUBMIT METHOD FOR 100% WATERTIGHT SEALING AT PIPE PENETRATIONS THROUGH STRUCTURES, PROPOSED LINK SEAL OR APPROVED EQUAL.
23. ALL DI PIPE AND FITTING SHALL BE CLASS 53 WITH PROTECTO 401 INTERIOR COATING. ALL ABOVE GRADE DI PIPE, FITTINGS, AND VALVES SHALL BE PAINTED BLACK. ALL DISCHARGE PIPE FLANGE CONNECTIONS SHALL UTILIZE NYLOC NUTS.
24. BACKFILL (NO CLAY OR CLAYEY MATERIAL) SHALL BE COMPACTED IN 6–INCH LAYERS (MAX) TO 98% MAXIMUM DRY DENSITY OF MODIFIED PROCTOR IN CONFORMANCE WITH AASHTO T–180, METHOD A.
25. PVC GRAVITY PIPE AND FITTINGS SHALL BE SDR–26 (HEAVY WALL) IN COMPLIANCE TO ASTM D3034 UNLESS SHOWN OTHERWISE IN THE PLANS. PVC FM PIPE AND FITTINGS SHALL BE C–900 (DR–18).
26. ALL CONCRETE PAVEMENT, UNLESS OTHERWISE NOTED, SHALL BE MINIMUM 6” THICK CONCRETE WITH 4X4 W6XW6 WWR. CONCRETE SHALL BE CONSTRUCTED ON COMPACTED SUB–BASE (MINIMUM 98% MODIFIED PROCTOR) WITH 1.5” DEEP CONTROL JOINTS SAW–CUT AT 15’ MAX, CUT WITHIN 12 HOURS OF CONCRETE PLACEMENT.
27. CONTRACTOR SHALL PROTECT ALL TREES IN THE VICINITY OF THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE. NO TREES SHALL BE PRUNED WITHOUT PRIOR APPROVAL FROM THE CITY OF TAMPA PARKS AND RECREATION DEPARTMENT, NATURAL RESOURCES DIVISION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. ROOT PRUNING MAY BE REQUIRED AT CERTAIN LOCATIONS AND COMPLETED IN ACCORDANCE WITH CHAPTER 13 TECHNICAL MANUAL SPECIFICATIONS.
28. PLANS ARE DESIGNED IN ACCORDANCE WITH THE 7TH EDITION 2020 OF THE FLORIDA BUILDING CODE, THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE AND CHAPTER 5 OF THE CITY OF TAMPA CODE AND SHALL BE INSPECTED BY CITY OF TAMPA ELECTRICAL INSPECTORS AS APPLICABLE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.

BYPASS NOTES

1. SEWER SERVICE TO CUSTOMERS SHALL NOT BE DISRUPTED DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT DETAILED PROPOSAL FOR PUMPING STRATEGY.
2. THE BYPASS PUMPS SHALL BE THE SELF PRIMING QUIET FLOW TYPE PUMP. BYPASS PUMPS NOISE SHALL STRICTLY COMPLY TO ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL. PUMPS SHALL BE SUPPLIED WITH SOUND ATTENUATION ENCLOSURES.
3. CONTRACTOR SHALL SUPPLY (2) SOUND ATTENUATED DIESEL BY–PASS PUMPS (1–PRIMARY AND 1–BACKUP) EACH CAPABLE OF DELIVERING THE FLOW AND HEAD LISTED IN THE TABLE BELOW PLUS ANY LOSSES PRODUCED IN THE TEMPORARY BYPASS PIPING. THE PUMPS SHALL SUCTION FROM AN UPSTREAM MANHOLE AND DISCHARGE INTO THE NEW BYPASS ASSEMBLY. CONTRACTOR SHALL SUBMIT BYPASS PUMPING PLAN TO THE ENGINEER FOR APPROVAL.
4. THE BYPASS ASSEMBLY, VALVES, AND FITTINGS SHALL BE INSTALLED DURING LOW FLOWS AND WITHIN A PUMP STATION SHUT DOWN WINDOW OF 2 HOURS. ONLY CITY PERSONNEL SHALL OPERATE EXISTING VALVES. NOTIFY CITY PUMP STATION OPERATIONS PERSONNEL A MINIMUM OF TWO WEEKS BEFORE COMMENCEMENT OF THIS WORK.
5. THE CONTRACTOR SHALL HAVE ALL NEW EQUIPMENT ON–SITE BEFORE PLACING THE PUMPING STATION ON BYPASS.

PUMP STA	BYPASS PUMP FLOW	TDH
PARKE EAST	550 gpm	113 FT
IDLEWILD	450 gpm	118 FT

AECOM

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GENERAL NOTES - I

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WATER SERVICE CONNECTION NOTES

- ALL POTABLE WATER WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT’S TECHNICAL SPECIFICATIONS, CONSTRUCTION DETAILS, AND THE TAMPA WATER DEPARTMENT TECHNICAL MANUAL (LATEST EDITION). IN THE EVENT OF A DISCREPANCY, THE MOST STRINGENT CRITERIA SHALL APPLY.
- WATER MAIN TAPS SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR AND FOLLOWING ALL WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR SHALL CONDUCT PRESSURE TEST WITNESSED BY THE CITY INSPECTOR. CONTRACTOR SHALL PROVIDE NOTICE TO THE CITY INSPECTOR AT A MINIMUM OF 5 WORKING DAYS NOTICE PRIOR TO NECESSARY WORK.
- VALVES ON EXISTING PUBLIC WATER MAINS TO BE OPERATED BY CITY OF TAMPA PERSONNEL ONLY. PRE VALVE/SHUTDOWN REQUEST MUST BE SUBMITTED 2 WEEKS PRIOR TO SHUT DOWN DATE NEEDED.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTRAINING ALL EXISTING PIPE NECESSARY TO MAINTAIN A SAFE CONSTRUCTION AREA AND PERFORM THE WORK IN THE PLANS. EXISTING PIPE REQUIRING RESTRAINTS SHALL UTILIZE EXTERIOR BELL RESTRAINTS.
- WATER MAIN SHALL CROSS ABOVE OTHER PIPES. WHEN WATER MUST BE BELOW, PROVIDE 12” MINIMUM VERTICAL SEPARATION UNLESS OTHERWISE NOTED.
- CENTER ONE FULL JOINTS OF PIPE UNDER/OVER ALL SANITARY, STORM, OR RECLAIMED PIPE CROSSINGS.
- ALL VALVES SHALL BE RIGHT HAND OPEN.
- POLYWRAP ALL DUCTILE IRON PIPE (D.I.P.) FITTINGS AND APPURTENANCES.
- ALL HARDWARE SHALL BE 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- ALL BELOW GROUND BENDS SHALL BE MECHANICAL JOINT (MJ).
- RESTRAIN ALL JOINTS AND FITTINGS.
- CONCRETE THRUST BLOCKS SHALL NOT BE USED TO PROVIDE THRUST RESTRAINTS. RESTRAINT OF PUSH-ON D.I.P. (OTHER THAN FOR FITTINGS AND VALVES) SHALL BE WITH APPROVED PUSH-ION "GRIPPER-TYPE" RESTRAINTS. FITTINGS AND VALVES SHALL BE CONNECTED TO PIPE WITH MEGALUGS, OR APPROVED EQUAL.
- ALL POTABLE WATER SERVICE LATERAL, AIR RELEASE VALVES, AND TEMPORARY SAMPLE POINTS SHALL BE CONSTRUCTED OF BLUE SDR-9 HIGH DENSITY POLYETHYLENE (HDPE) TUBING SHALL BE INSTALLED WITHIN A CASING AS DEFINED IN THE SPECIFICATIONS AND DETAILS.
- ALL COMPONENTS OF THE WATER SYSTEM SHALL BE PROPERLY PRESSURE TESTED, WITNESSED AND ACCEPTED BY THE CITY. PRESSURE TESTS TO BE PERFORMED IN ACCORDANCE WITH WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR SHALL PRESSURE TEST WATER SERVICE LINE AT A MINIMUM OF 150 PSI FOR A PERIOD OF 2 HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS.
- ALL SAMPLE, PRESSURE TEST, AND CHLORINATION POINTS PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CLOSED AND PLUGGED AT THE MAIN.
- CONTRACTOR SHALL PERFORM CHLORINATION AND HIRE INDEPENDENT FIRM TO CONDUCT BACTERIOLOGICAL TESTING AS DEFINED IN F.A.C. 62-555.340. CONTRACTOR TO SUPPLY THE CITY WITH AS-BUILTS AND SAMPLE RESULTS.
- CONTRACTOR SHALL PROVIDE A REDUCED PRESSURE BACKFLOW-PREVENTION DEVICE IN WATER SERVICE LINE, AS SHOWN IN DETAILS, AT A PLACE TO BE SPECIFIED DURING CONSTRUCTION. BACKFLOW PREVENTION DEVICE SHALL BE 3/4" WILKINS, MODEL #975 XL, OR EQUAL. PIPING SHALL BE 1" IN DIAMETER UNLESS SHOWN OTHERWISE IN THE PLANS.
- METER BOX SHALL BE FURNISHED BY THE CITY OF TAMPA WATER DEPARTMENT AND INSTALLED BY THE CONTRACTOR (CONTRACTOR TO ARRANGE WITH THE DEPARTMENT’S CONSTRUCTION ENGINEER FOR PICK-UP OF METER BOX FROM THE WATER DEPARTMENT DISTRIBUTION YARD). WATER METER SHALL BE INSTALLED IN THE METER BOX, BY THE WATER DEPARTMENT, SUBSEQUENT TO WATER SERVICE LINE PASSING ACCEPTANCE TESTS.
- ALL BRASS FITTINGS SHALL BE MANUFACTURED OF BRASS, CAST AND MACHINED IN ACCORDANCE WITH AWWA STANDARD C-800, LATEST REVISION. THE BRASS FITTINGS SHALL BE DOMESTICALLY MANUFACTURED BY MUELLER COMPANY, FORD METER BOX COMPANY, A.Y. MCDONALD MFG. COMPANY, OR APPROVED EQUAL. ALL STOPS SHALL BE FULL PORT AND HAVE A FLOW PASSAGE AREA EQUIVALENT TO THE FITTING OUTLET FLOW AREA. THE INLET CONNECTION SHALL BE THE AWWA TAPER THREAD. THE OUTLET CONNECTION SHALL BE A PACK-JOINT OUTLET FOR COPPER OR PLASTIC TUBING.

- CORPORATION STOPS SHALL BE MANUFACTURED FROM CAST BRONZE WITH MACHINED FITTING SURFACES, AND IN ACCORDANCE WITH AWWA C-800, IN SIZES UP TO AND INCLUDING 2-INCHES. CORPORATION STOPS WITH COMPRESSION JOINT OUTLETS FOR COPPER OR PLASTIC TUBING SHALL BE TYPE F1000, FOR SIZES UP TO 1-¼" AND TYPE FB1000 FOR 1-½" AND 2" SIZES, AS MANUFACTURED BY FORD METER BOX COMPANY, OR APPROVED EQUAL.
- CURB STOPS SHALL BE BALL VALVE, ROUNDWAY, WITH CHECK, WITH LOCK WING CAST ON STOP BODY AND OPERATING TEE CAP TO PROVIDE FOR LOCKING THE STOP IN CLOSED POSITION. CURB STOPS FOR USE WITH COPPER OR PLASTIC SERVICE SHALL HAVE AN INLET CONNECTION WITH A COMPRESSION JOINT AND AN OUTLET CONNECTION WITH FEMALE IRON PIPE THREAD, AS MANUFACTURED BY FORD METER BOX COMPANY B41WR OR KV43WR FOR 2-INCH SERVICE LINE WITH PADLOCK WINGS, OR APPROVED EQUAL.
- SERVICE SADDLES SHALL BE CONSTRUCTED FROM BRONZE, DUCTILE IRON IN ACCORDANCE WITH ASTM A536, OR STAINLESS STEEL AND SHALL SEAL TO THE DISTRIBUTION PIPE BY AN EPDM RUBBER GASKET. THREADS SHALL BE AWWA CC IN ACCORDANCE WITH AWWA C-800. SERVICE SADDLE BODIES SHALL BE PROTECTED WITH A HEAVY COATING OF CORROSION RESISTANT, METAL PRIMER. SADDLE ASSEMBLY SHOULD BE CAPABLE OF PRESSURE UP TO 150 PSI WITHOUT RUPTURE AND FAILURE. STRAPS AND BOLTS SHALL BE CARBON STEEL CONFIRMING TO ASTM A108, ELECTROGALVANIZED WITH DICHROMATE SEAL.
- SERVICE SADDLES SHALL BE AS FOLLOWS:
 - 2-INCH OR LESS: 2" PVC (OD 2.375), 2" MCWANE ENAMEL CI (OD2.50"), OR 2.25" MCWANE ENAMEL CI (OD 2.75"):
 - CLOW 3401;
 - FORD S70/S90;
 - JCM 402/403/405 (DI);
 - JONES J-995;
 - ROCKWELL 313/317;
 - MUELLER H-13420/H-10475/H-10476;
 - OR APPROVED EQUAL.
 - 3-INCH OR GREATER: 3" PIPE (OD 3.80), 4" PIPE (OD 4.80"), 6" PIPE (OD 6.9"), 8" PIPE (OD 9.05"), 10" PIPE (OD 11.1"), 12" PIPE (OD 13.2"):
 - CASCADE C-522/CD52/CB52/CN52;
 - FORD FS- OR FC-202 SERIES;
 - JCM 406 CORTIN STRAP (FOR PVC);
 - MUELLER H-105XX SERIES;
 - ROCKWELL 313 (DI) /317/323;
 - CLOW 3408/3410;
 - JCM 402 CORTIN STRAP (FOR DI);
 - OR APPROVED EQUAL.



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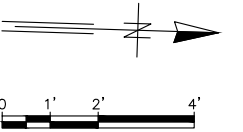
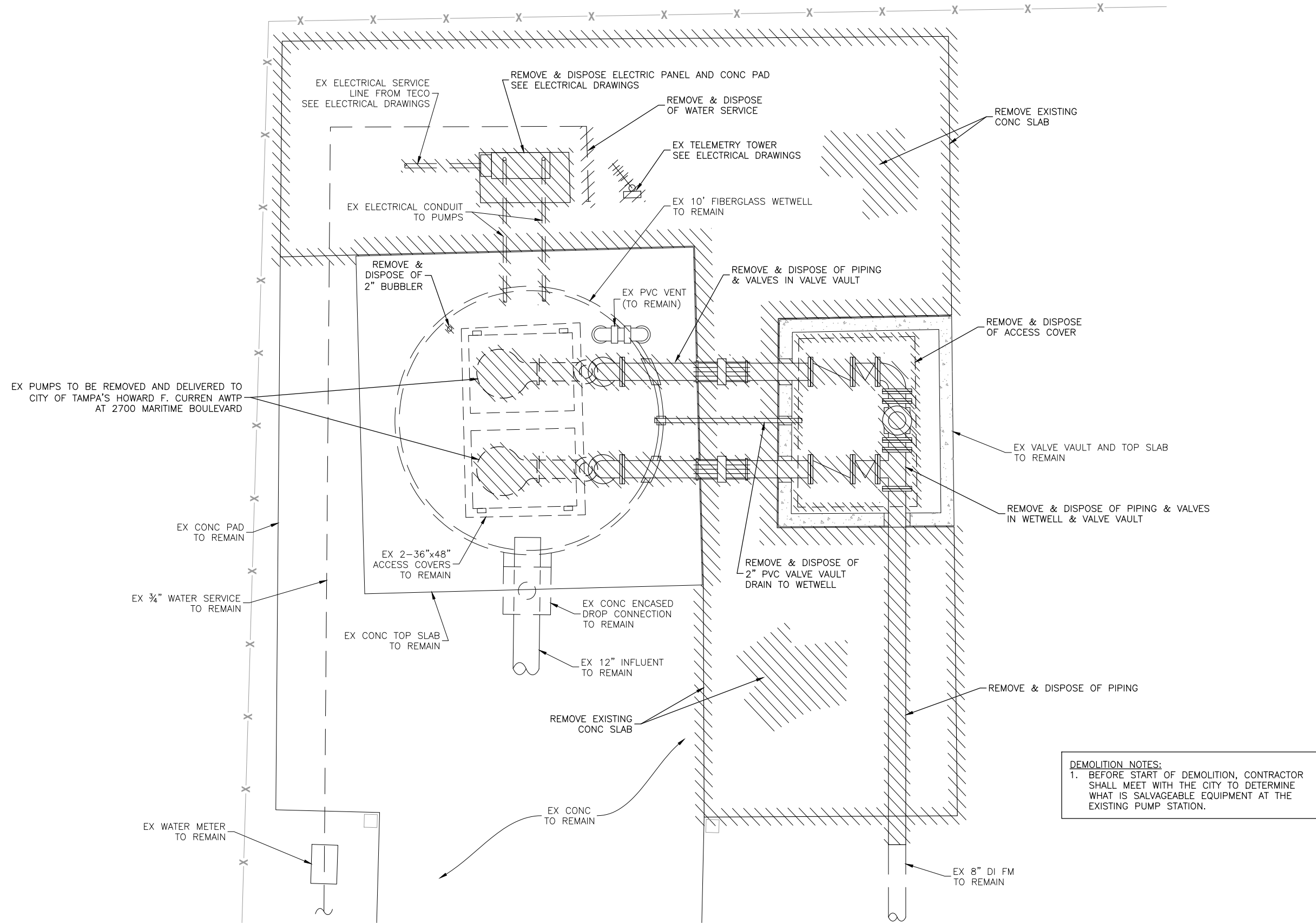
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DES: BVH
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 CKD: BVH
 DATE: 10/27/2022

CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
 GENERAL NOTES - 2

PLOTTED BY: Sonnenberg, Terence DRAWING FILE L:\DCS\Projects\WTR\60651648_Tampa_WWPS\Sheets\900_CAD_GIS\910_CAD_IDev\id_Parke-E\Sheets\7 PARKE EAST DEMOLITION PLAN.dwg
LAST SAVED BY: terence.sonnenberg CIB - AECOM-11117.CIB
PLOT DATE: Thursday, October 27, 2022 10:57:14 AM



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CITY of TAMPA
WASTEWATER DEPARTMENT

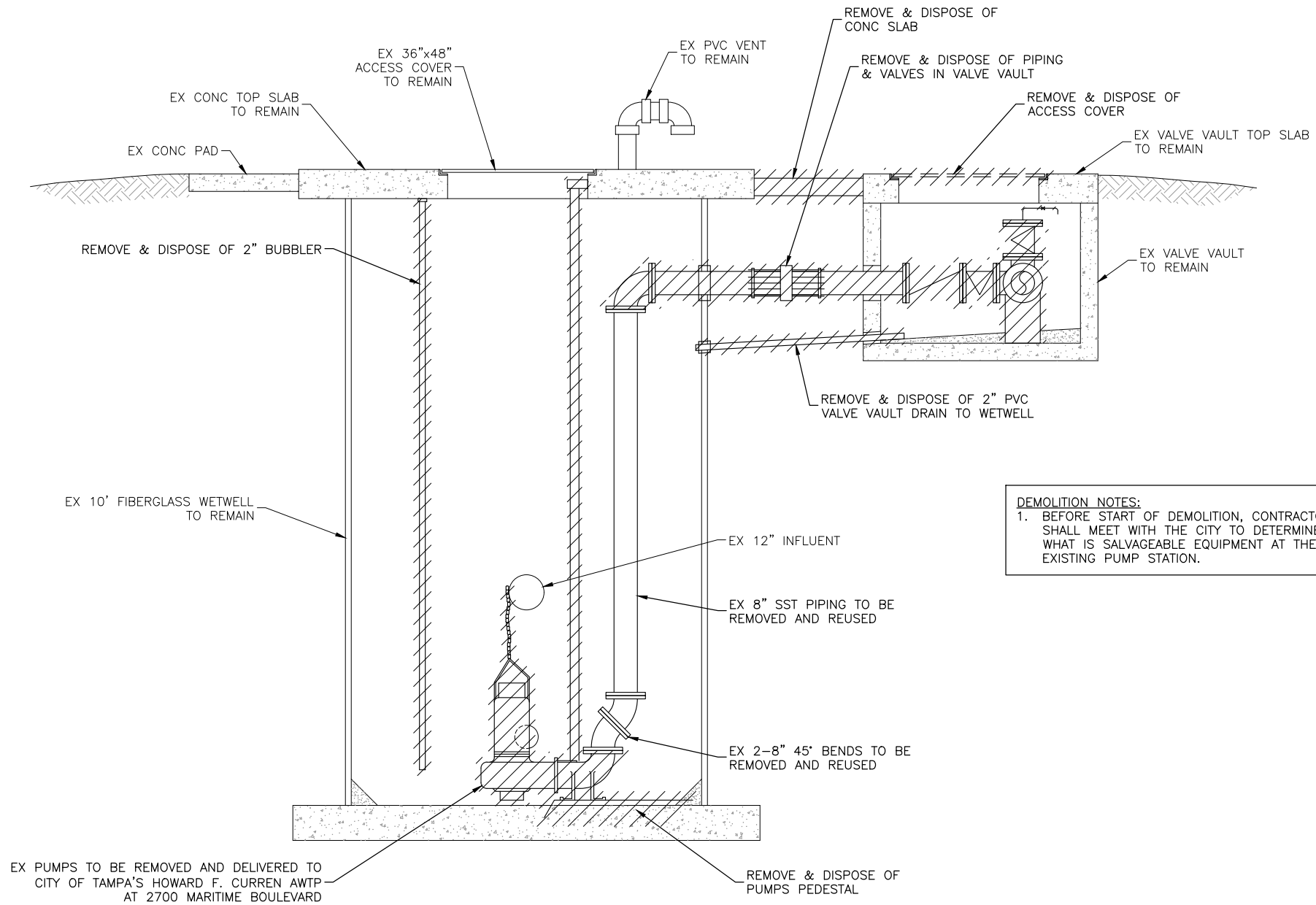
WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST DEMOLITION PLAN

SHEET

7

PLOTTED BY: Sonenberg, Terence DRAWING FILE L:\DCS\Projects\WTR\60651648_Tampa_WWPS\Rehab\900_CAD_GIS\910_CAD_ID\Rebid_Parke-E\Sheets\8 PARKE EAST DEMOLITION SECTION.dwg
LAST SAVED BY: Terence Sonenberg CIB - AECOM-11117.CIB
PLOT DATE: Thursday, October 27, 2022 10:57:26 AM



DEMOLITION NOTES:
1. BEFORE START OF DEMOLITION, CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE WHAT IS SALVAGEABLE EQUIPMENT AT THE EXISTING PUMP STATION.

PARKE EAST
SECTION

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



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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

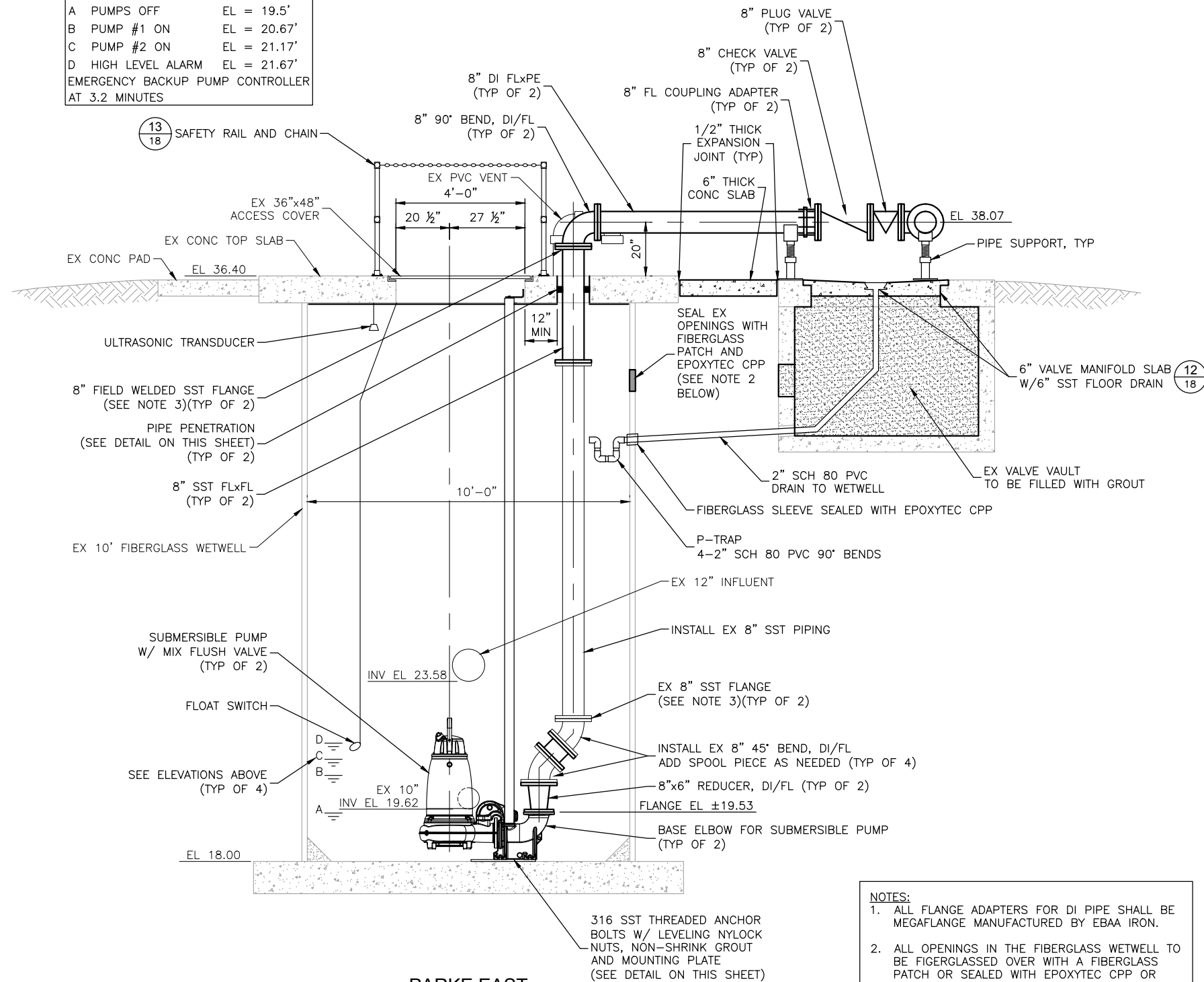
PARKE EAST DEMOLITION SECTION

SHEET

8

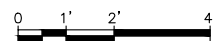
RECOMMENDED OPERATING ELEVATIONS:	
A PUMPS OFF	EL = 19.5'
B PUMP #1 ON	EL = 20.67'
C PUMP #2 ON	EL = 21.17'
D HIGH LEVEL ALARM	EL = 21.67'

EMERGENCY BACKUP PUMP CONTROLLER
AT 3.2 MINUTES



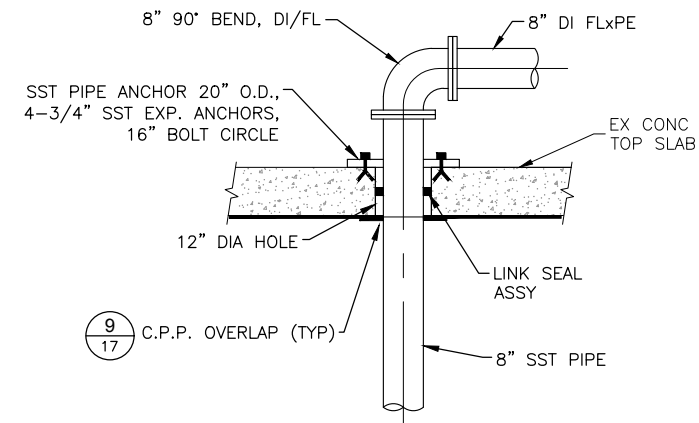
PARKE EAST
SECTION

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



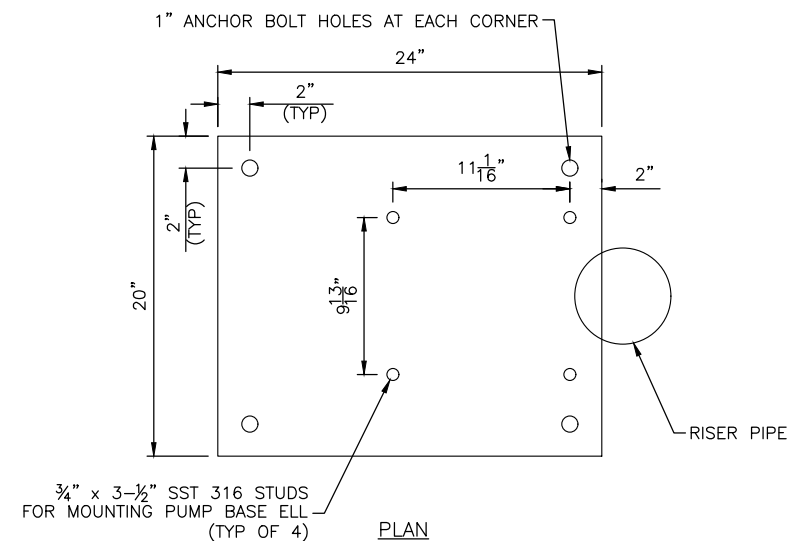
- NOTES:

1. ALL FLANGE ADAPTERS FOR DI PIPE SHALL BE MEGAFLANGE MANUFACTURED BY EBAA IRON.
2. ALL OPENINGS IN THE FIBERGLASS WETWELL TO BE FIBERGLASSED OVER WITH A FIBERGLASS PATCH OR SEALED WITH EPOXYTEC CPP OR APPROVED EQUAL RESILIENT WATERPROOF SEALANT INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL INSTALL GPT LINEBACKER ISOLATION GASKET OR APPROVED EQUAL AT ALL FLANGES WITH DISSIMILAR METALS.

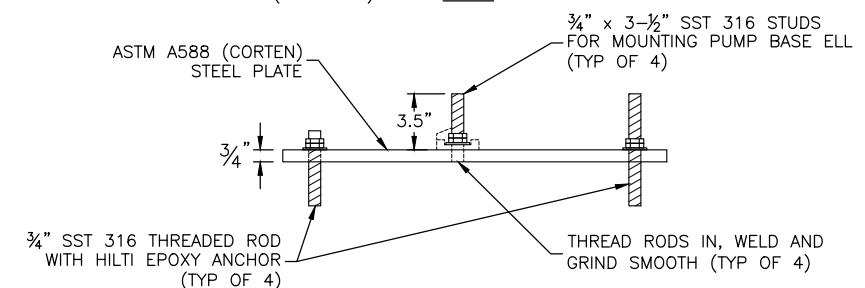


PIPE PENETRATION DETAIL

SCALE: NTS



PLAN



PROFILE

- NOTES:

1. INSTALL DOUBLE NUTS ON ALL EIGHT (8) THREADED RODS.
2. THE PLATE EDGES AND ALL HOLES SHALL BE GROUND SMOOTH TO REMOVE ALL BURRS.
3. ALIGNMENT OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY PUMP MANUFACTURER.

MOUNTING PLATE DETAIL

SCALE: NTS

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No.	DATE	REVISIONS
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DES: BVH
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CKD: BVH
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CITY of TAMPA
WASTEWATER DEPARTMENT

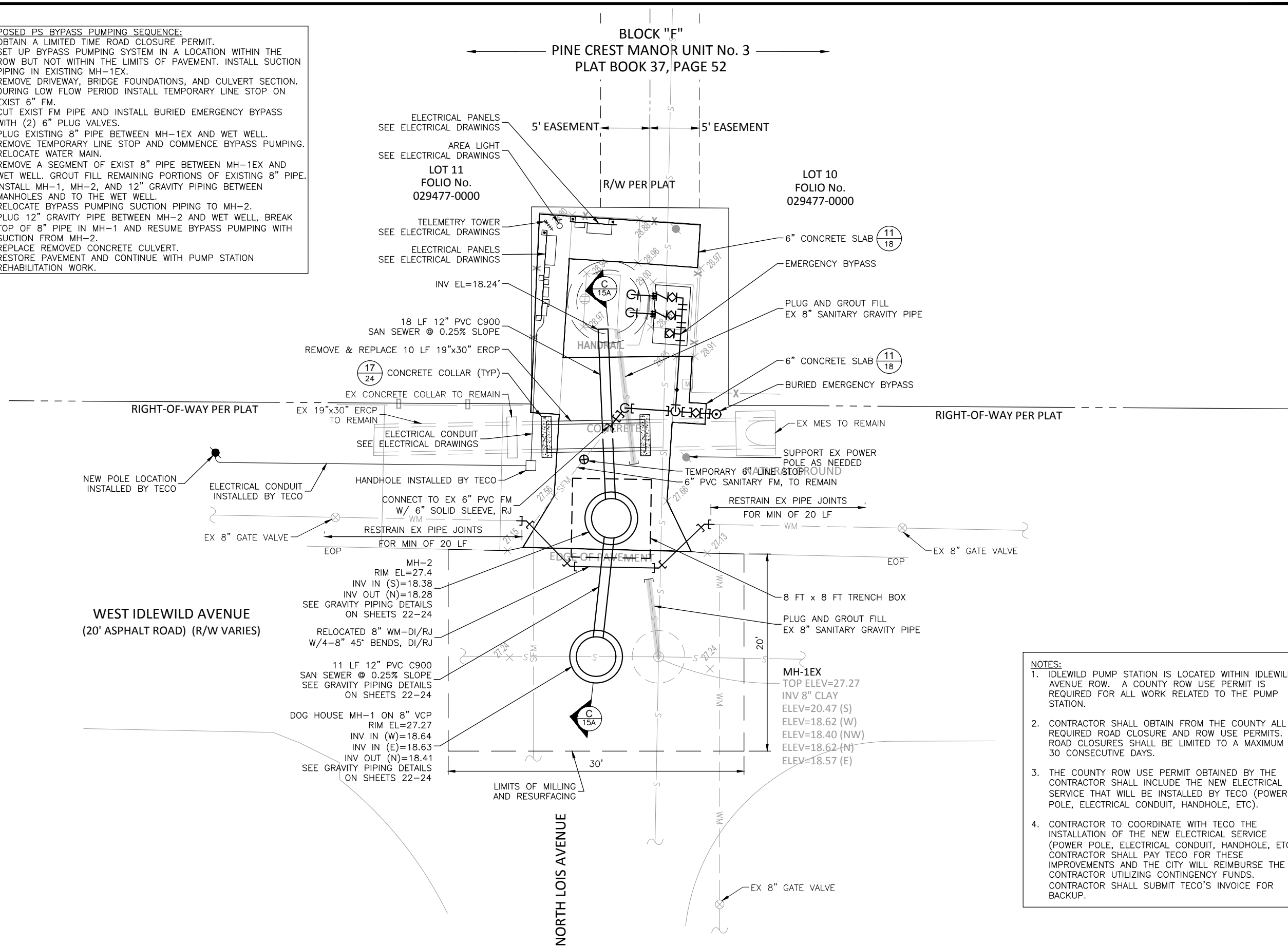
WASTEWATER PUMPING STATION REHABILITATIONS
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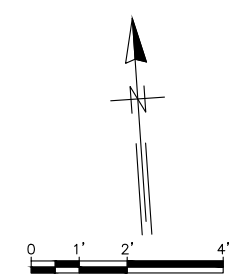
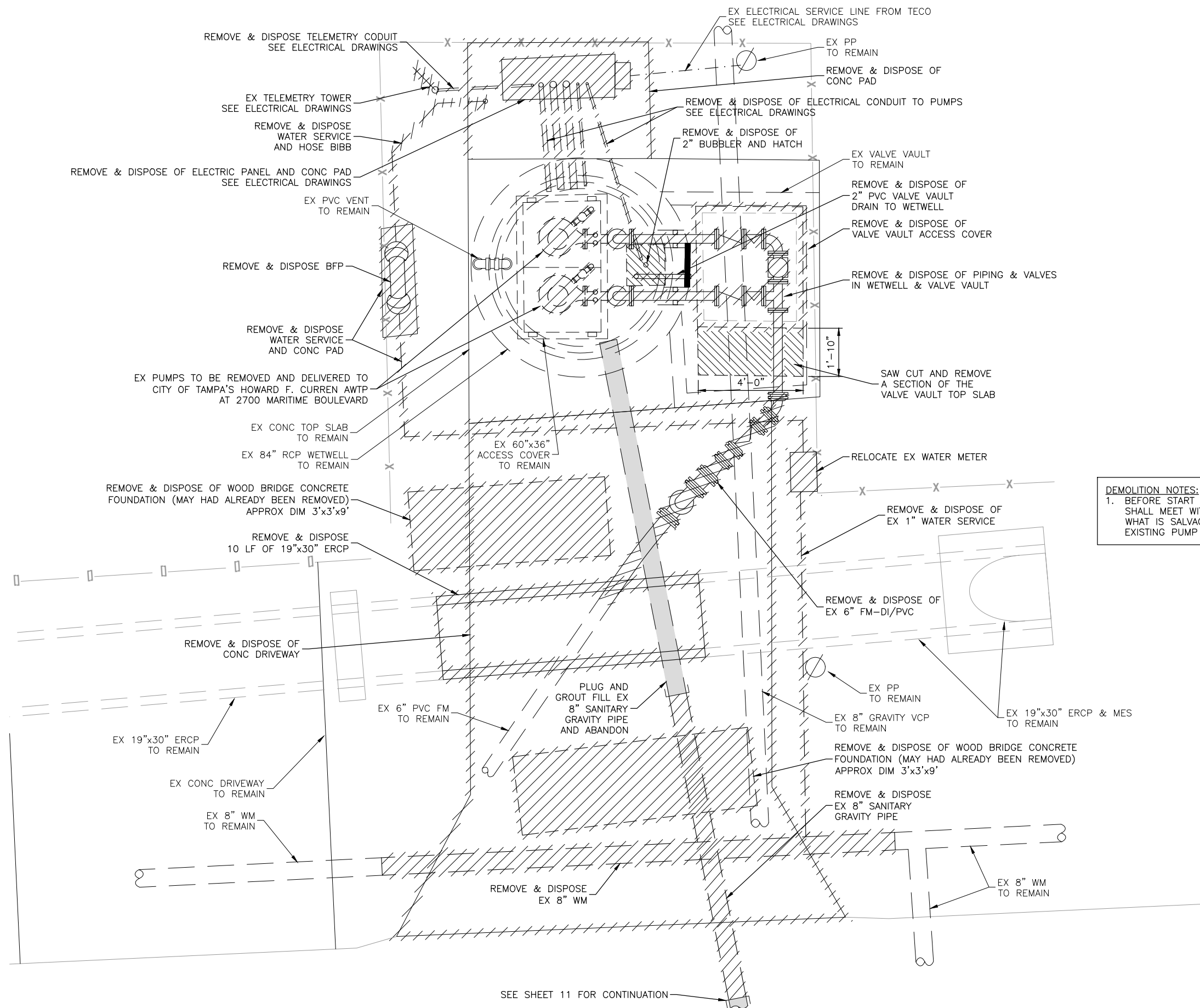
PARKE EAST PROPOSED SECTION

SHEET

10

- PROPOSED PS BYPASS PUMPING SEQUENCE:**
1. OBTAIN A LIMITED TIME ROAD CLOSURE PERMIT.
 2. SET UP BYPASS PUMPING SYSTEM IN A LOCATION WITHIN THE ROW BUT NOT WITHIN THE LIMITS OF PAVEMENT. INSTALL SUCTION PIPING IN EXISTING MH-1EX.
 3. REMOVE DRIVEWAY, BRIDGE FOUNDATIONS, AND CULVERT SECTION.
 4. DURING LOW FLOW PERIOD INSTALL TEMPORARY LINE STOP ON EXIST 6" FM.
 5. CUT EXIST FM PIPE AND INSTALL BURIED EMERGENCY BYPASS WITH (2) 6" PLUG VALVES.
 6. PLUG EXISTING 8" PIPE BETWEEN MH-1EX AND WET WELL. REMOVE TEMPORARY LINE STOP AND COMMENCE BYPASS PUMPING.
 7. RELOCATE WATER MAIN.
 8. REMOVE A SEGMENT OF EXIST 8" PIPE BETWEEN MH-1EX AND WET WELL. GROUT FILL REMAINING PORTIONS OF EXISTING 8" PIPE.
 9. INSTALL MH-1, MH-2, AND 12" GRAVITY PIPING BETWEEN MANHOLES AND TO THE WET WELL.
 10. RELOCATE BYPASS PUMPING SUCTION PIPING TO MH-2.
 11. PLUG 12" GRAVITY PIPE BETWEEN MH-2 AND WET WELL, BREAK TOP OF 8" PIPE IN MH-1 AND RESUME BYPASS PUMPING WITH SUCTION FROM MH-2.
 12. REPLACE REMOVED CONCRETE CULVERT.
 13. RESTORE PAVEMENT AND CONTINUE WITH PUMP STATION REHABILITATION WORK.





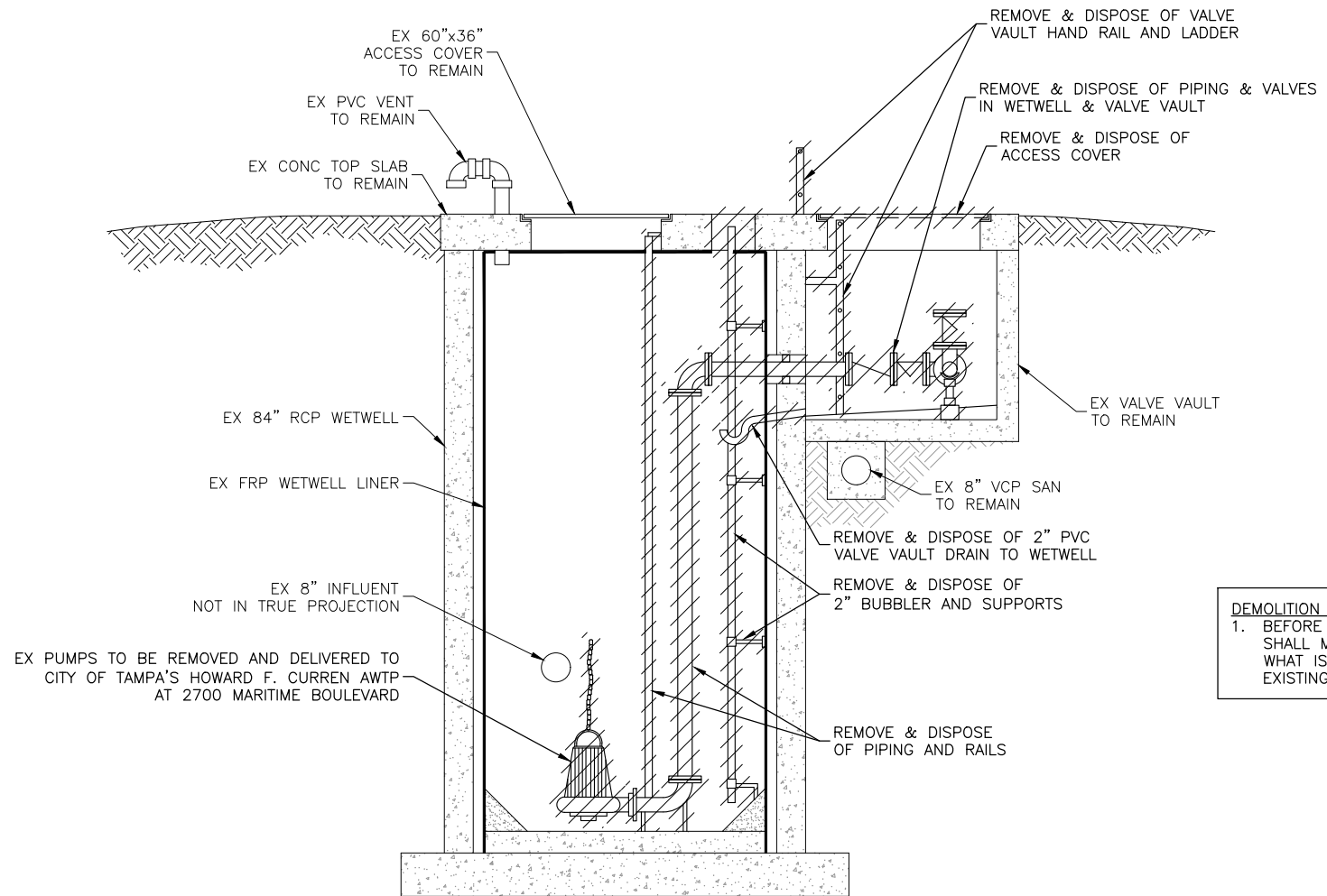
DEMOLITION NOTES:
 1. BEFORE START OF DEMOLITION, CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE WHAT IS SALVAGEABLE EQUIPMENT AT THE EXISTING PUMP STATION.

SEE SHEET 11 FOR CONTINUATION

<div><div><div>AECOM</div><div>7650 West Courtney Campbell Causeway Waterford Plaza, Suite 700 Tampa, Florida 33607 813.286.1711 tel Certificate of Authorization No. 8115</div></div><div><div>BOZHIDAR V. HANDJIEV, P.E. FL. P.E. LICENSE NO. 67573</div></div></div>	No.	DATE	REVISIONS	DES: BVH DRN: TRS CKD: BVH DATE: 10/27/2022	<div>CITY of TAMPA</div> <div>WASTEWATER DEPARTMENT</div>	WASTEWATER PUMPING STATION REHABILITATIONS		<div>SHEET</div> <div>12</div>
	3					IDLEWILD DEMOLITION SITE PLAN		
	2							
	1							

PLOTTED BY: Sonnenberg, Terence DRAWING FILE: L:\DCS\Projects\WTR\60651648_Tampa_WWPS\Rehab\900_CAD_GIS\910_CAD_Idlewild_Park-E\Sheets\12 IDLEWILD DEMOLITION SITE PLAN.dwg
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 PLOT DATE: Thursday, October 27, 2022 10:58:46 AM LAST SAVED BY: terence.sonnenberg CIB - AECOM-11117.CIB



DEMOLITION NOTES:
 1. BEFORE START OF DEMOLITION, CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE WHAT IS SALVAGEABLE EQUIPMENT AT THE EXISTING PUMP STATION.

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



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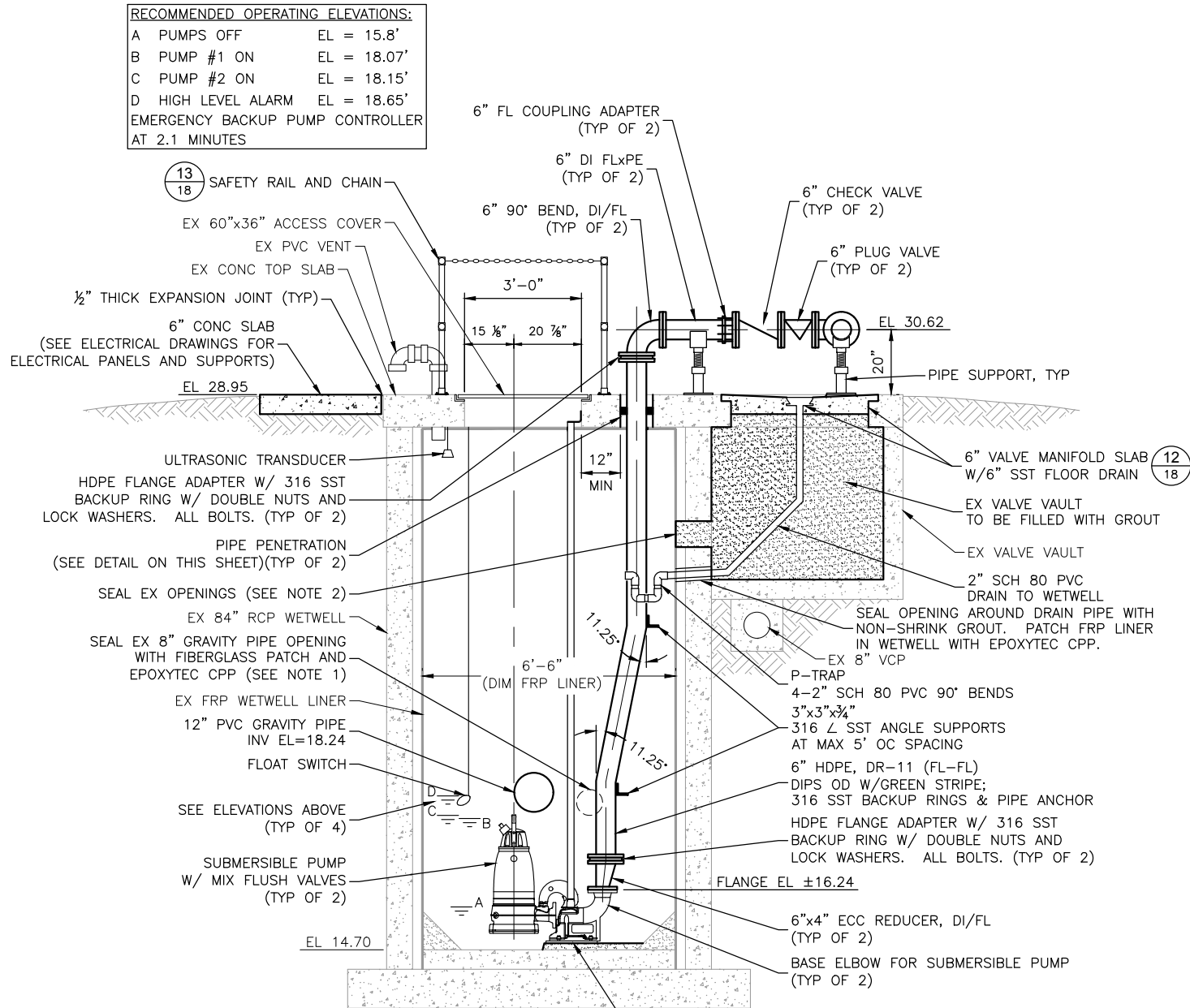
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No.	DATE	REVISIONS
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CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD DEMOLITION SECTION



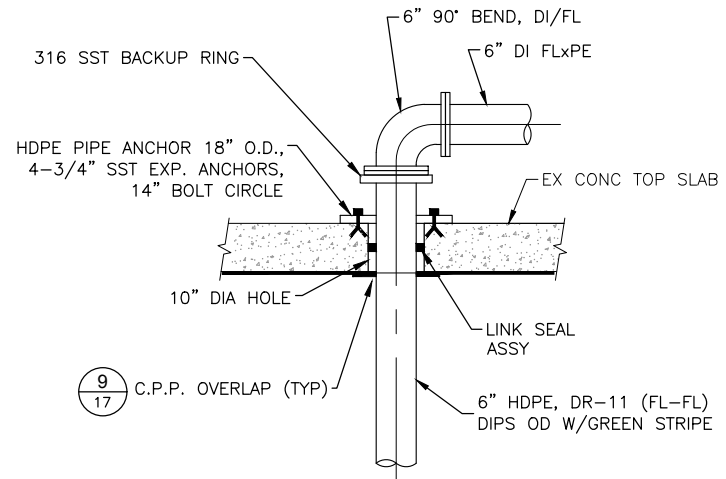
IDLEWILD SECTION

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



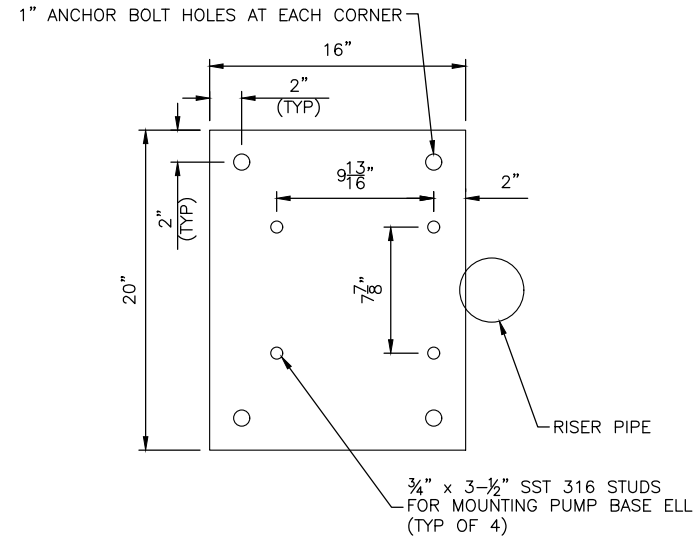
NOTES:

- ALL FLANGE ADAPTERS FOR DI PIPE SHALL BE MEGAFRANGE MANUFACTURED BY EBAA IRON.
- ALL OPENINGS IN THE FIBERGLASS WETWELL TO BE FIBERGLASSED OVER WITH A FIBERGLASS PATCH OR SEALED WITH EPOXYTEC CPP OR APPROVED EQUAL RESILIENT WATERPROOF SEALANT INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL INSTALL GPT LINEBACKER ISOLATION GASKET OR APPROVED EQUAL AT ALL FLANGES WITH DISSIMILAR METALS.

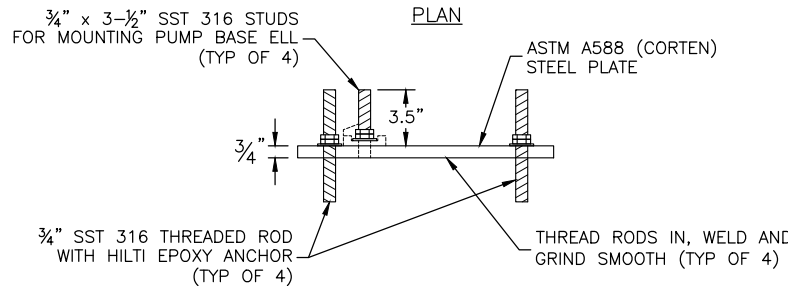


PIPE PENETRATION DETAIL

SCALE: NTS



PLAN



PROFILE

NOTES:

- INSTALL DOUBLE NUTS ON ALL EIGHT (8) THREADED RODS.
- THE PLATE EDGES AND ALL HOLES SHALL BE GROUND SMOOTH TO REMOVE ALL BURRS.
- ALIGNMENT OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY PUMP MANUFACTURER.

MOUNTING PLATE DETAIL

SCALE: NTS

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

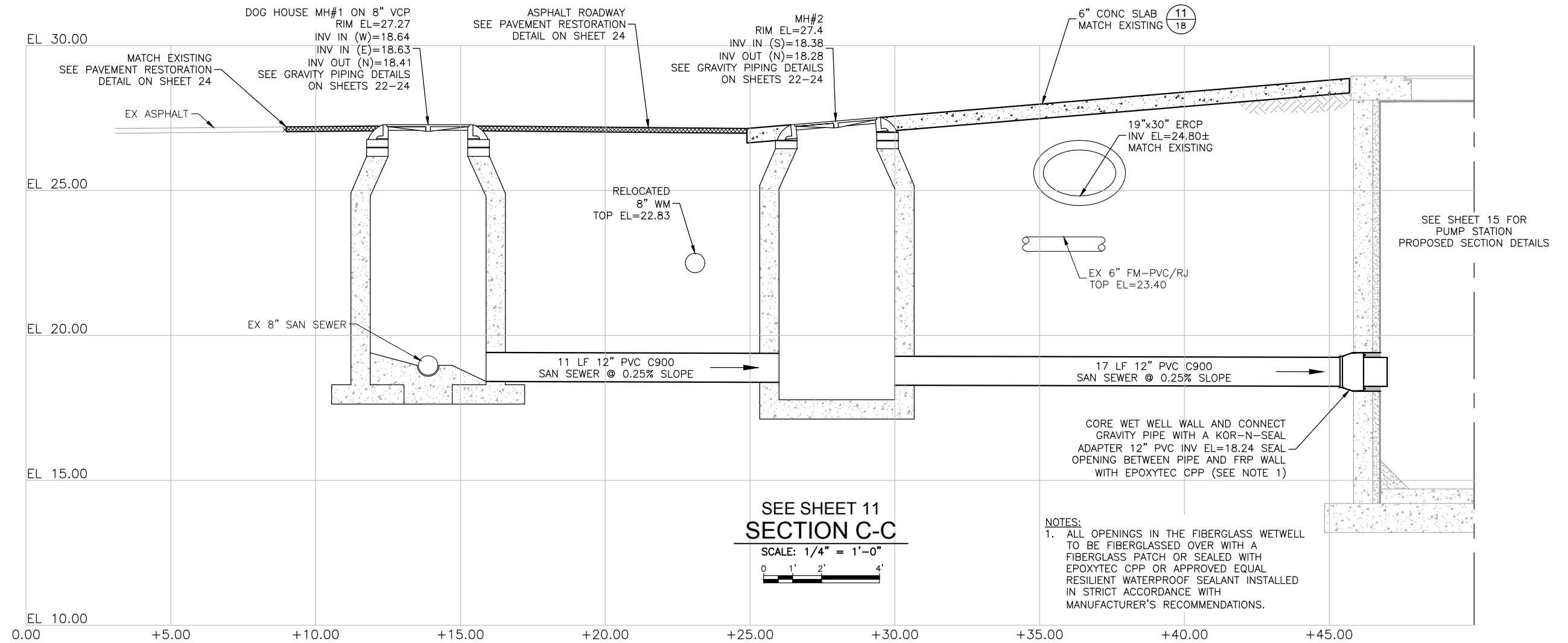
IDLEWILD PROPOSED SECTION

SHEET

15

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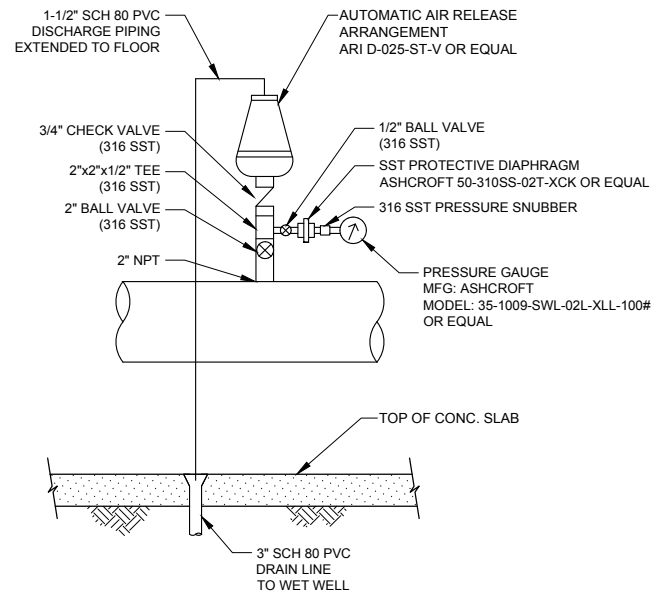
CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

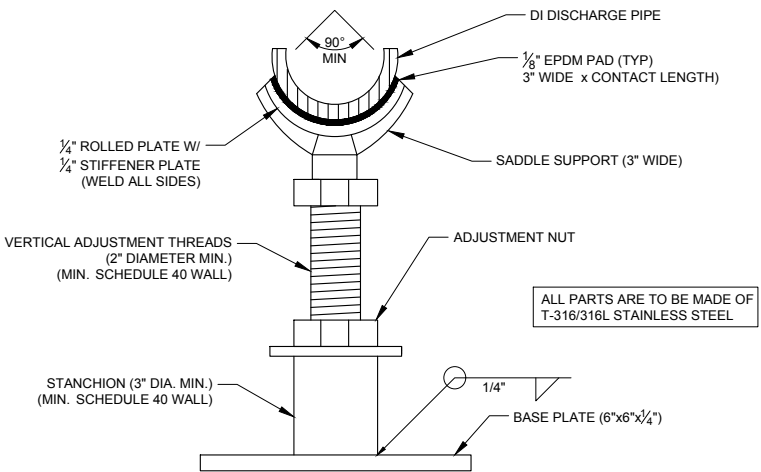
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SHEET

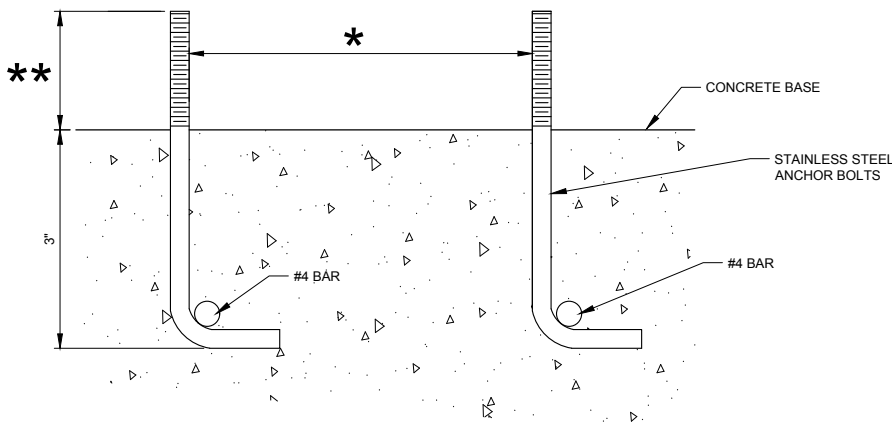
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AIR RELEASE VALVE ASSEMBLY
1 DETAIL
 SCALE: NTS

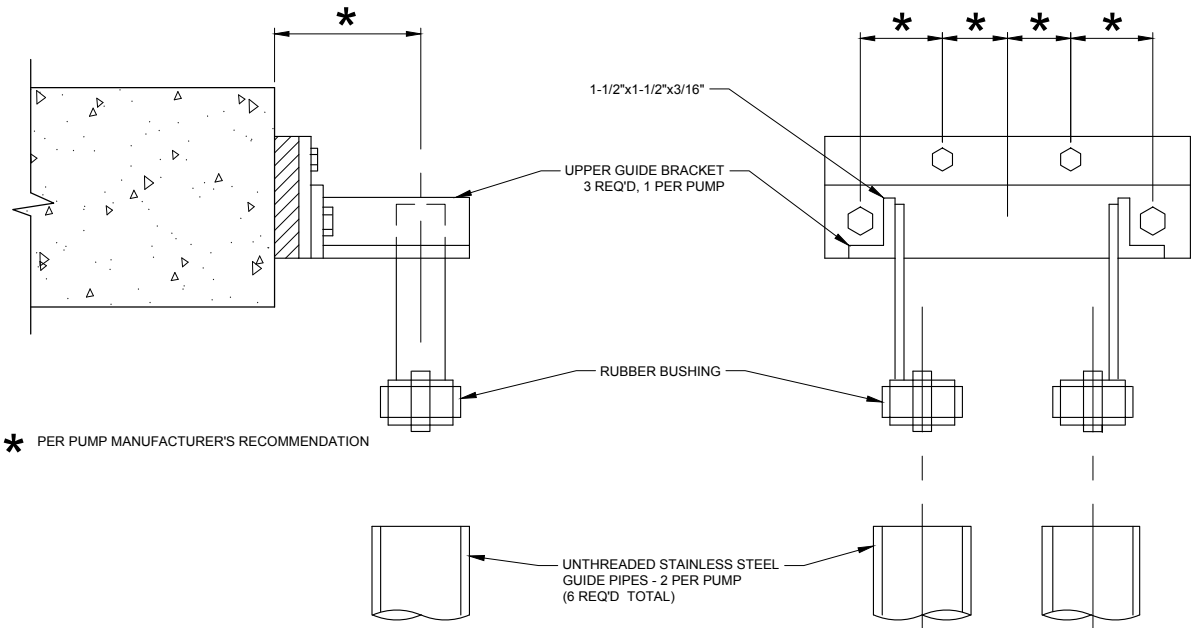


STAINLESS STEEL STANCHION SADDLE SUPPORT
2 DETAIL
 SCALE: NTS

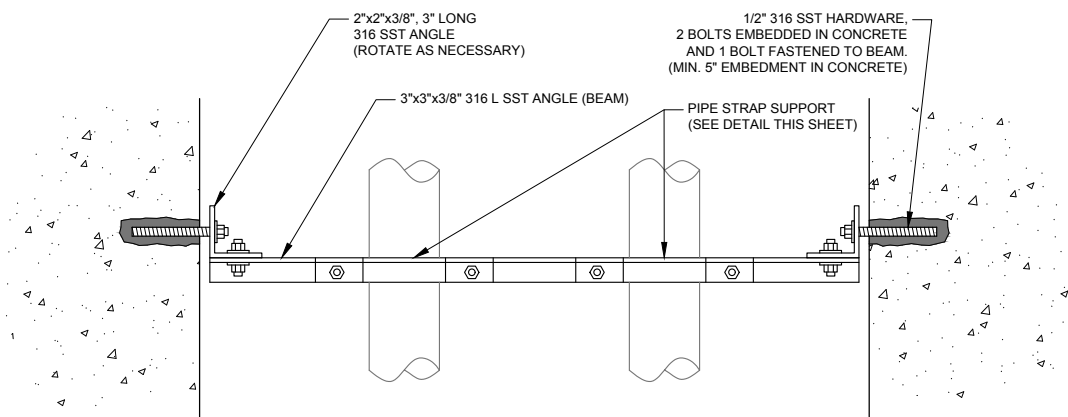


* ALIGNMENT OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY PUMP MANUFACTURER.
 ** CONTRACTOR SHALL PROVIDE A MINIMUM 1/2 INCH BOLT PROTRUSION ABOVE THE FINAL NUT LOCATION AFTER THE NUT IS TIGHTENED TO MANUFACTURER'S RECOMMENDATION.

ANCHOR BOLT
3 DETAIL
 SCALE: NTS



GUIDE BRACKET (SUPPLIED WITH PUMPS)
4 DETAIL
 SCALE: NTS



PIPE SUPPORT ASSEMBLY (TYP OF 2)
5 DETAIL
 SCALE: NTS

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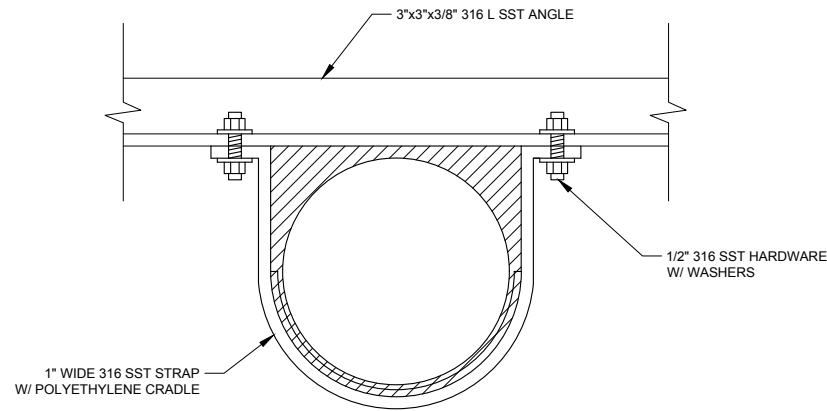
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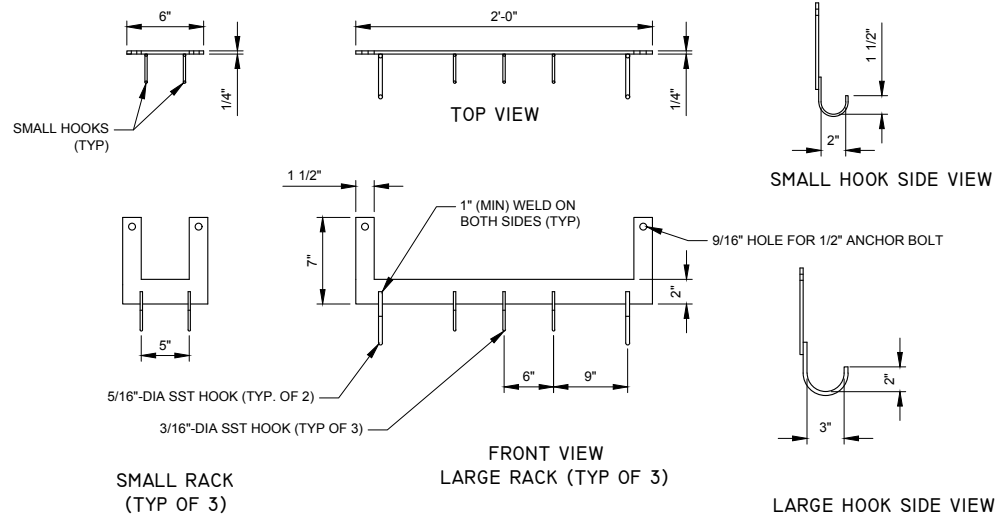
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 DRN: TRS
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CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
 PUMP STATION DETAILS - I

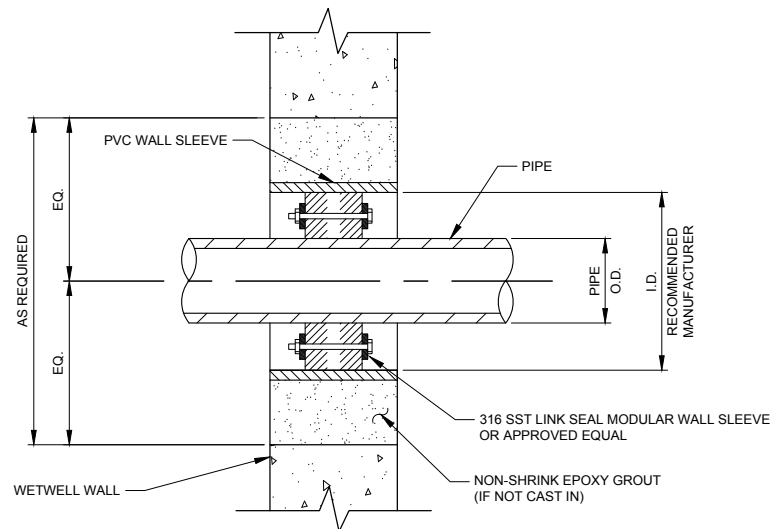


PIPE STRAP SUPPORT
6 DETAIL
 SCALE: NTS

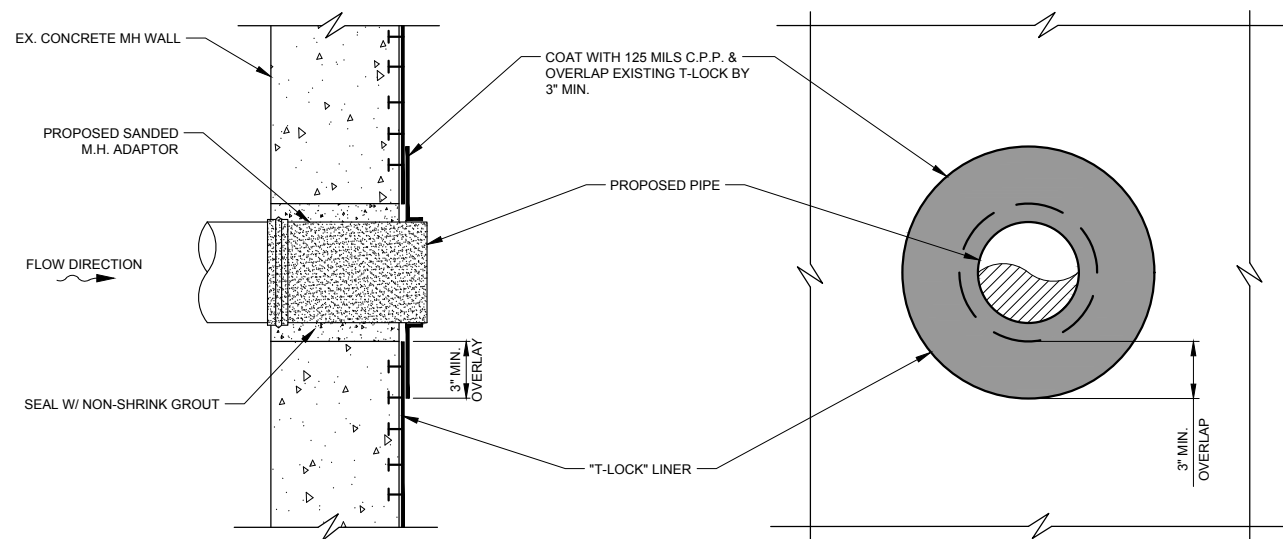


STAINLESS STEEL HOOK RACKS
7 DETAIL
 SCALE: NTS

NOTE:
 INSTALL FLOATS IN A MANNER TO MAINTAIN PROPER
 OPERATIONAL CLEARANCE AND TO REDUCE TANGLING.



LINK SEAL ASSEMBLY
8 DETAIL
 SCALE: NTS



NOTE:
 CONTRACTOR SHALL UTILIZE CONCRETE POLYMER COATING (CPP).
 TROWEL EPOXY FOR ALL AS MANUFACTURED BY EPOXYTEC OR EQUAL.
 ALTERNATE PRODUCT SHALL MEET THE PUBLISH PHYSICAL PROPERTIES
 FOR THE SPECIFIED ITEM.

PIPE TO LINED STRUCTURE
9 DETAIL
 SCALE: NTS

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CITY of TAMPA
 WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
 PUMP STATION DETAILS - 2

SHEET
17

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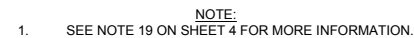
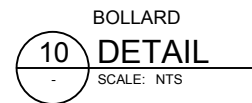
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CKD: BVH
DATE: 10/27/2022

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WASTEWATER DEPARTMENT

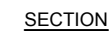
WASTEWATER PUMPING STATION REHABILITATIONS

PUMP STATION DETAILS - 3

SHEET
18

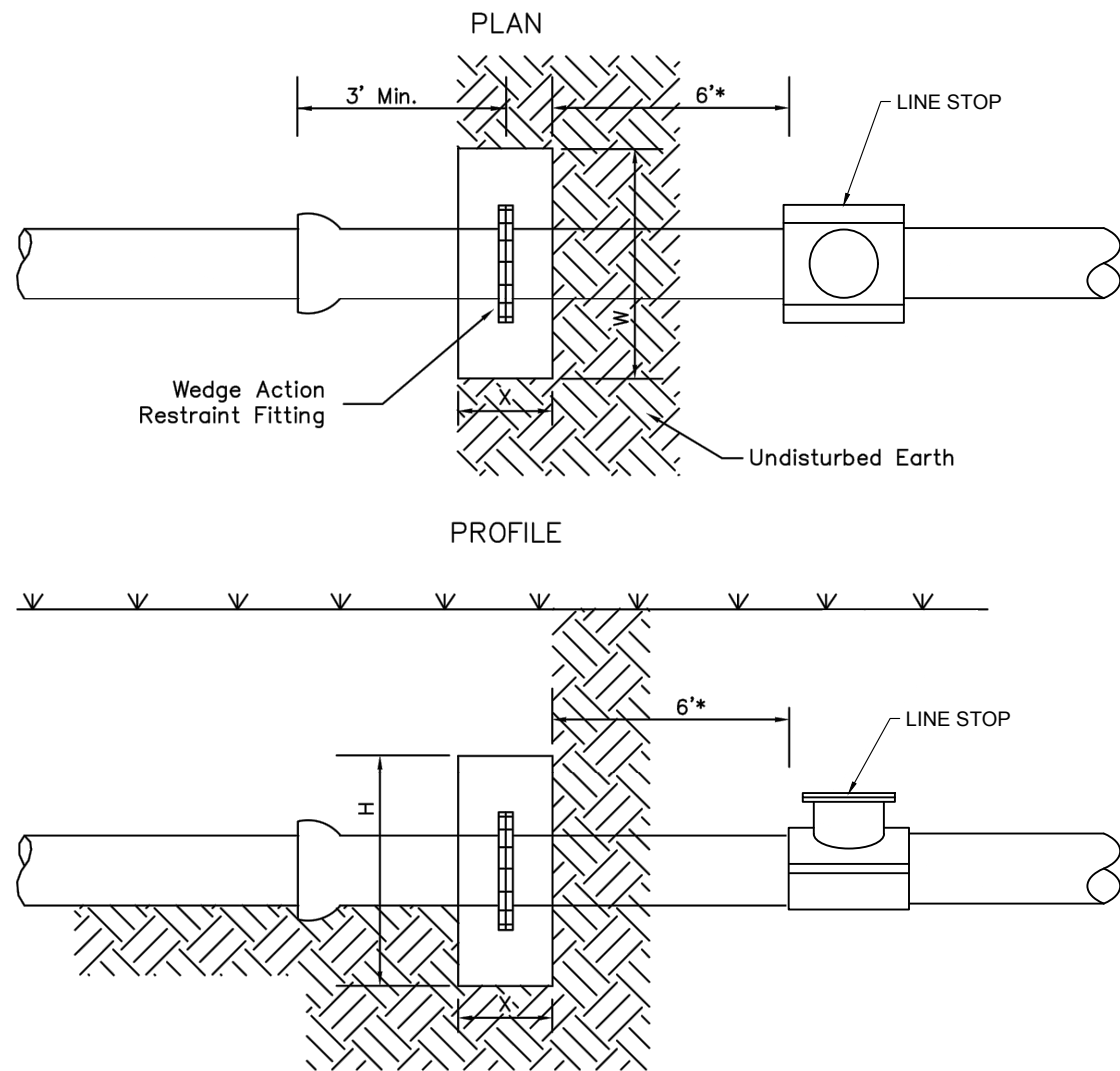


CONCRETE SLAB
11 DETAIL
- SCALE: NTS



- NOTES:
1. SAFETY RAILS AND PARTS SHALL BE STANDARD YELLOW, ULTRAVIOLET RESISTANT AND MANUFACTURED BY IDEAL SHIELD OR APPROVED EQUAL.
 2. SAFETY CHAINS SHALL BE 1/4" DIAMETER WELDED YELLOW, ULTRAVIOLET RESISTANT, VINYL COATED STEEL WITH WORKING LOAD LIMIT OF 1,300 LBS WITH TWO 316 SST SPRING LOADED END SNAPHOOKS.
 3. FINAL ARRANGEMENT SHALL BE DETERMINED IN THE FIELD AND SUBMITTED AND APPROVED BY ENGINEER.

SAFETY RAIL & CHAIN
13 DETAIL
- SCALE: NTS



SIZE (D)	4"	6"	8"	12"	16"	20"	24"
THRUST (lbs.)	3439	7104	12,223	26,002	45,180	69,624	99,330
BEARING AREA (ft. ²)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
CONCRETE (yds. ³)	0.15	0.31	0.71	1.51	3.29	5.07	7.23
H (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
W (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
X (ft.)	1.5 Min.	1.5 Min.	2.0 Min.	2.0 Min.	2.5 Min.	2.5 Min.	2.5 Min.

- NOTES:
- Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
 - All bearing surfaces to be carried to undisturbed soil.
 - This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi. Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains.
 - Poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks, as directed by the Engineer.
 - Fittings shall be completely polywrapped prior to pouring thrust blocks.
 - Closest distance to Line Stop for Deadman to remain effective.

DEADMAN THRUST BLOCK



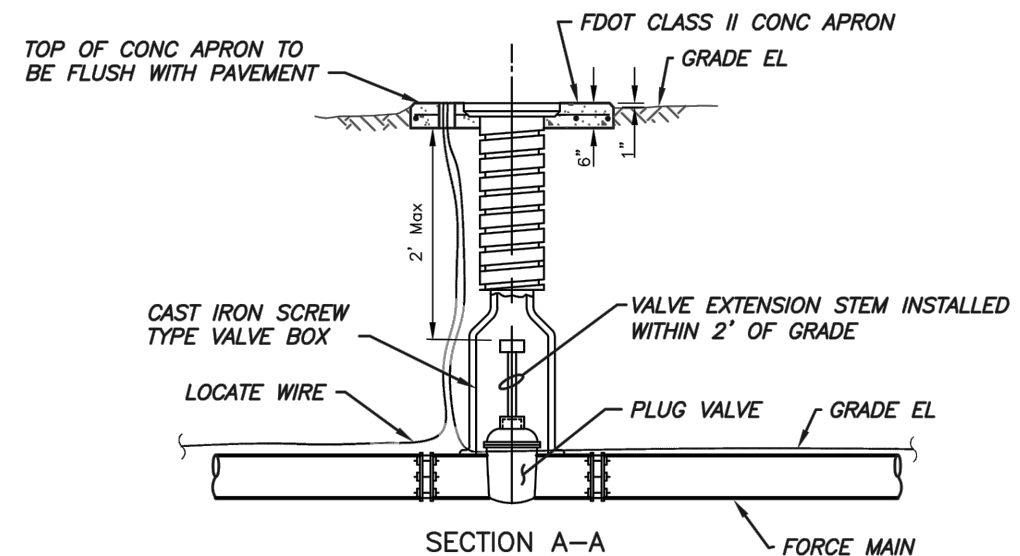
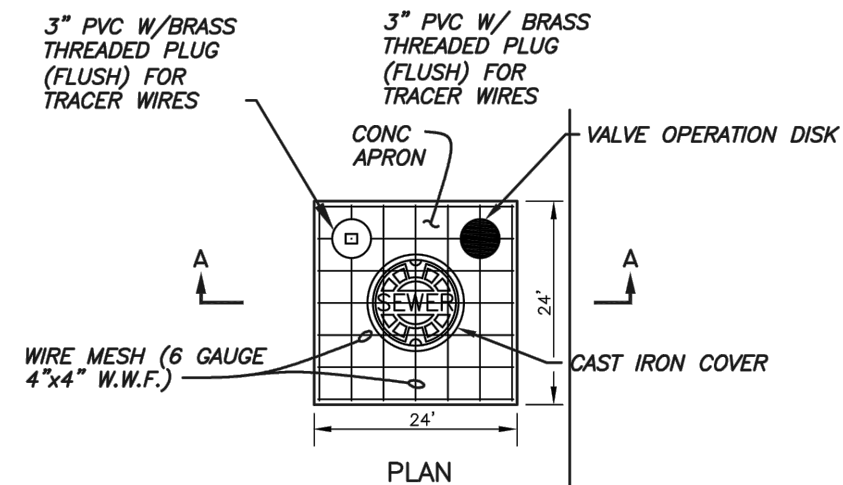
IMPORTANT - FOR EACH OPERABLE VALVE:

PROVIDE A BRASS IDENTIFICATION TAG ANCHORED TO THE CONCRETE APRON THAT IS A MINIMUM 2" IN DIAMETER AND 1/8-INCH THICK. THE TAG SHALL BE ENGRAVED WITH "SEWER", SIZE OF VALVE, TYPE OF VALVE, AND DIRECTION AND NUMBER OF TURNS TO OPEN.

FOR EXAMPLE, A 4-INCH PLUG VALVE ON A WASTEWATER FORCE MAIN THAT REQUIRES 1/4 TURNS TO THE LEFT (COUNTERCLOCKWISE) TO BE FULLY OPEN WOULD REQUIRE THE FOLLOWING ON AN IDENTIFICATION TAG:

SEWER
4" P.V.
1/4 T.O.L.

VALVE OPERATION DISK
Not To Scale



VALVE BOX DETAIL
Not To Scale

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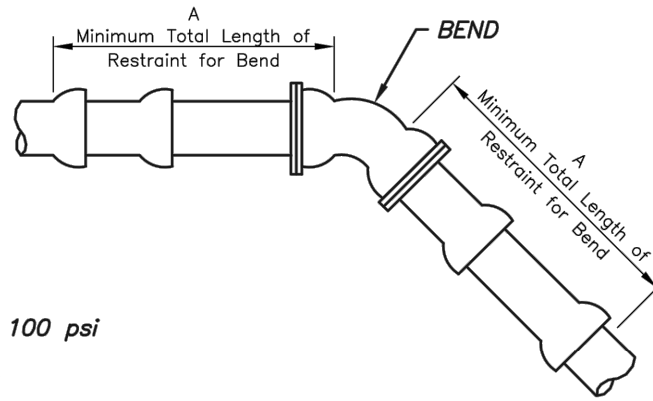
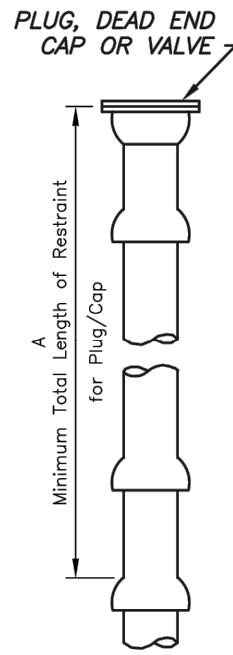
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WASTEWATER PUMPING STATION REHABILITATIONS
MISCELLANEOUS FORCE MAIN DETAILS - I

SHEET
19

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NOTES:

- These tables are based on:
 - Maximum test pressure of 100 psi
 - Class "C" pipe bedding
 - Poor soil conditions
 - PVC pipe
 - For vertical offsets, shallower vertical fitting has a minimum cover of 3 feet.
- Restraining devices for PVC pipe shall be by Megalug (Series 2000 PV) or equal, meeting ASTM F1674.
- Any additional fittings within the restrained section shall be restrained accordingly.
- One standard length of PVC pipe (20 feet) shall be laid on either side of the fitting where possible.

HORIZONTAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *								
	4"	6"	8"	10"	12"	16"	18"	20"	24"
11-1/4"	1*	2*	2*	2*	3*	3*	3*	4*	4*
22-1/2"	2*	3*	3*	4*	5*	6*	6*	7*	8*
45°	4*	5*	7*	8*	9*	11*	13*	14*	16*
90°	9*	12*	15*	18*	21	27	29	32	37
PLUG / CAP / ISOLATION VALVE	26	36	47	56	66	85	94	102	119

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

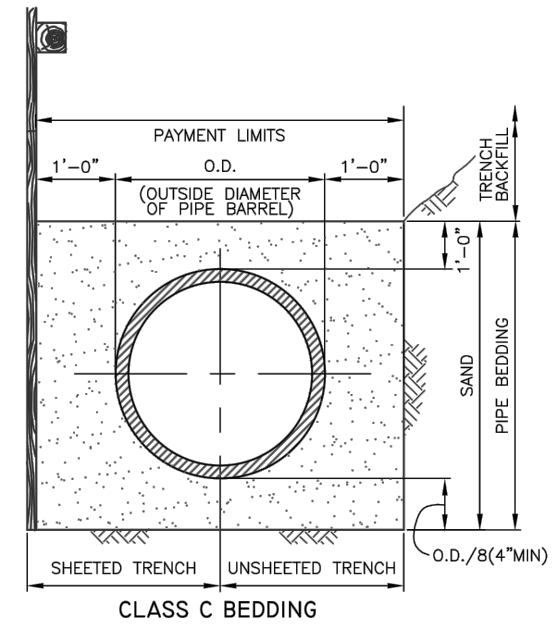
VERTICAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *								
	4"	6"	8"	10"	12"	16"	18"	20"	24"
11-1/4"	3*	4*	5*	6*	7*	9*	10*	11*	12*
22-1/2"	5*	8*	10*	12*	14*	17*	19*	21	24
45°	11*	15*	20	23	28	35	39	43	50

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

FITTING RESTRAINT DETAIL



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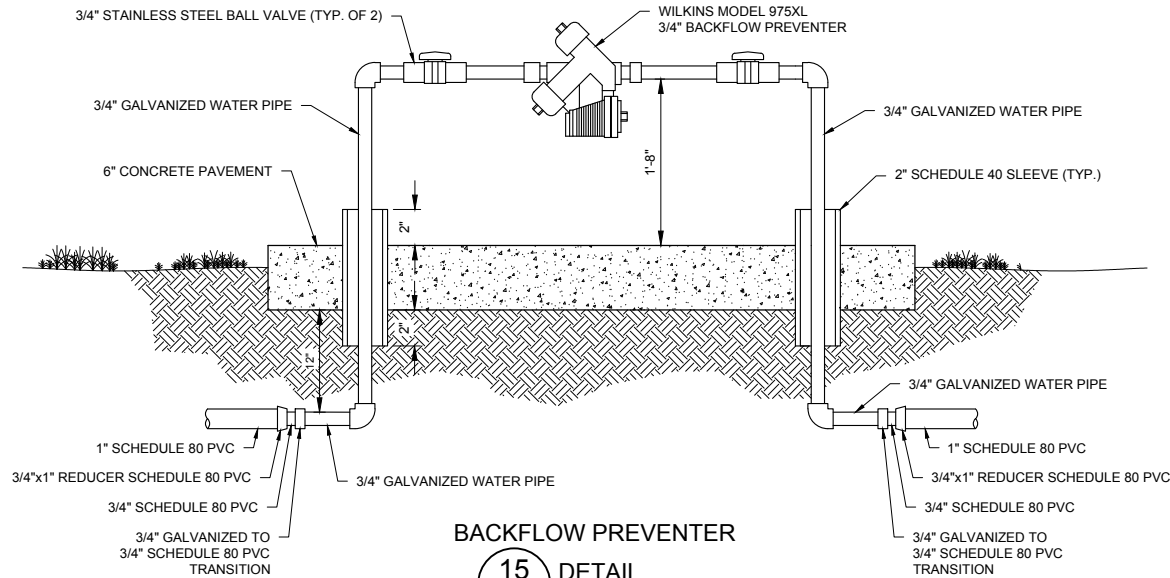
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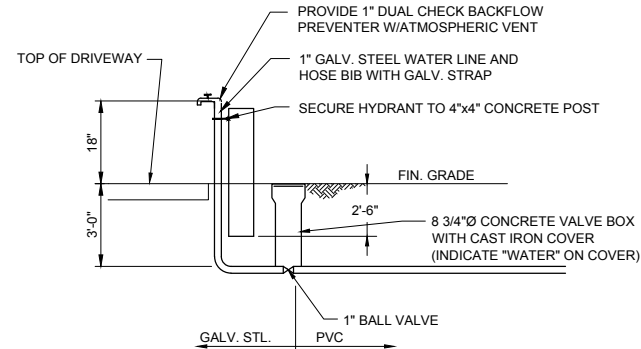
WASTEWATER PUMPING STATION REHABILITATIONS
MISCELLANEOUS FORCE MAIN DETAILS - 2

SHEET
20



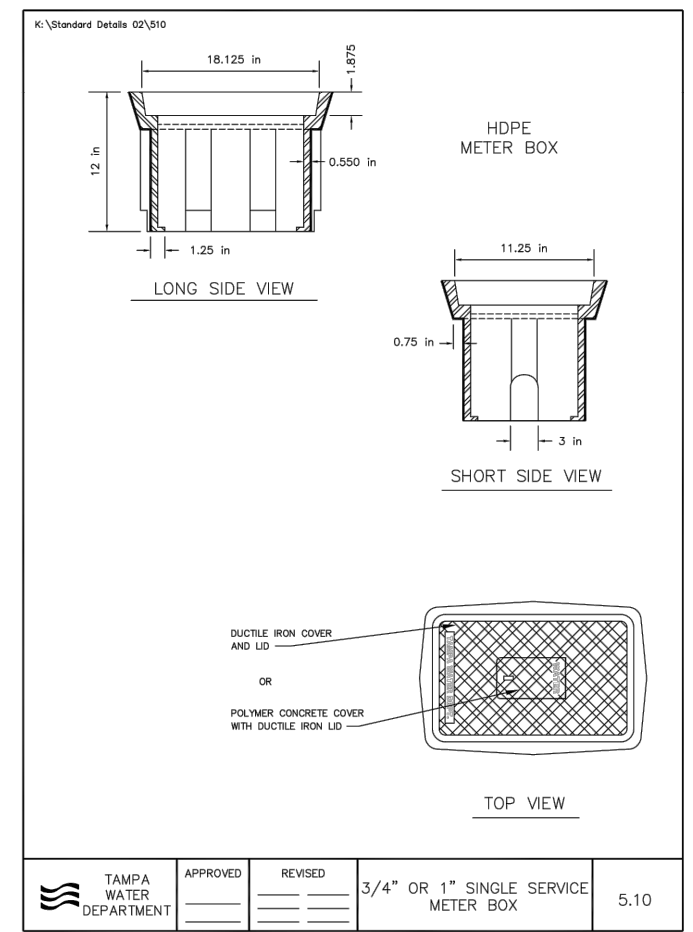
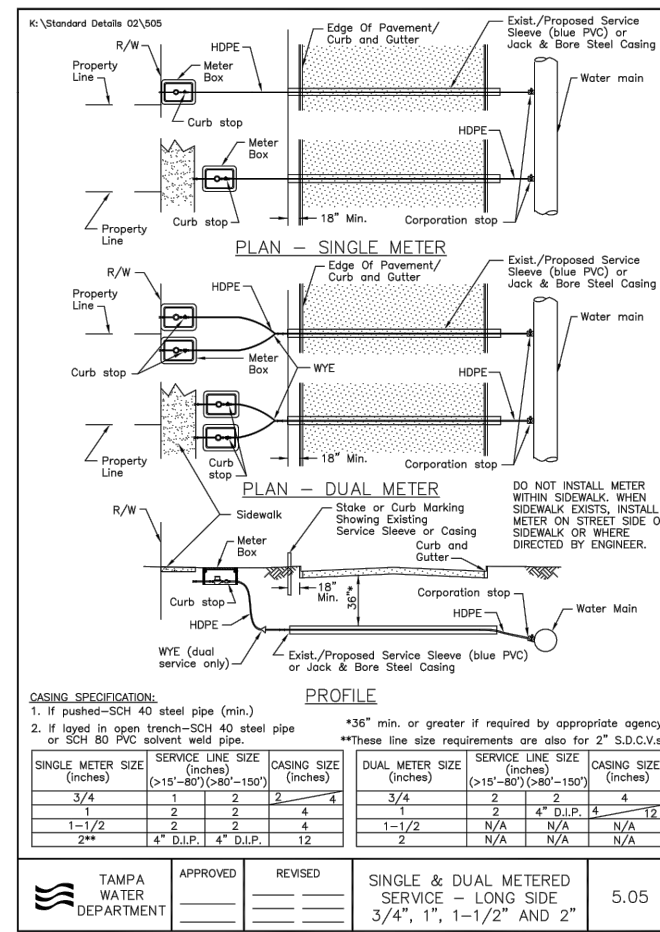
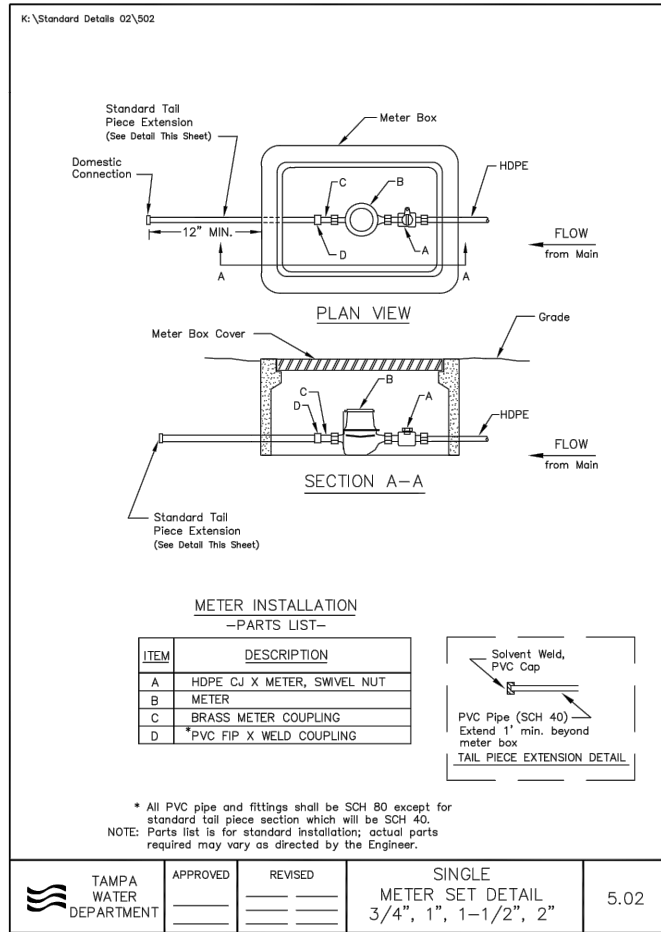
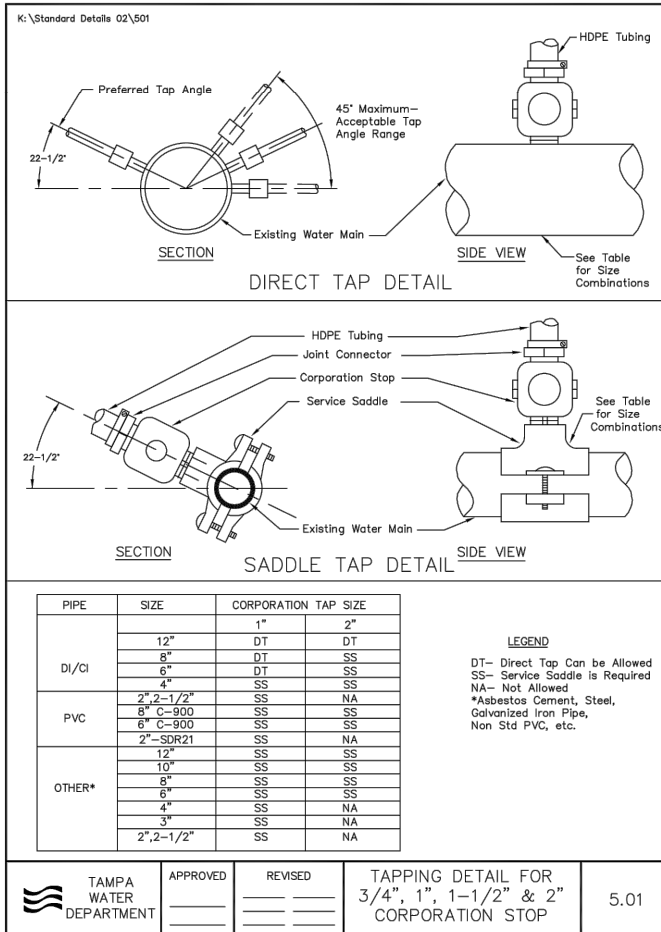
BACKFLOW PREVENTER

15
SCALE: NTS



HOSE BIB

16
SCALE: NTS



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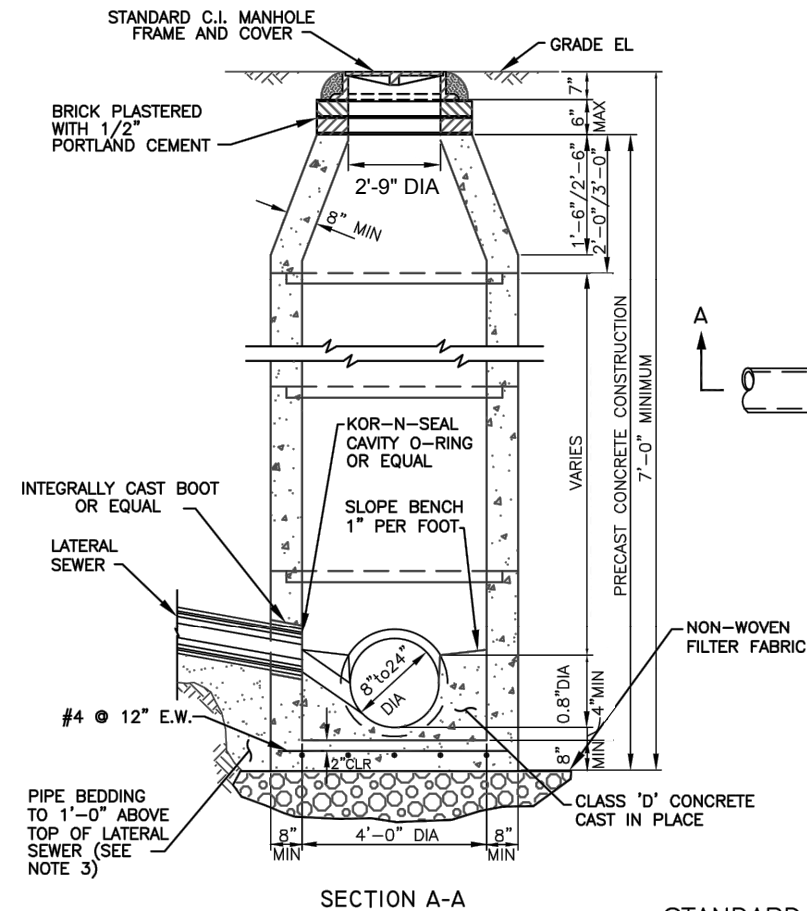
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WASTEWATER PUMPING STATION REHABILITATIONS

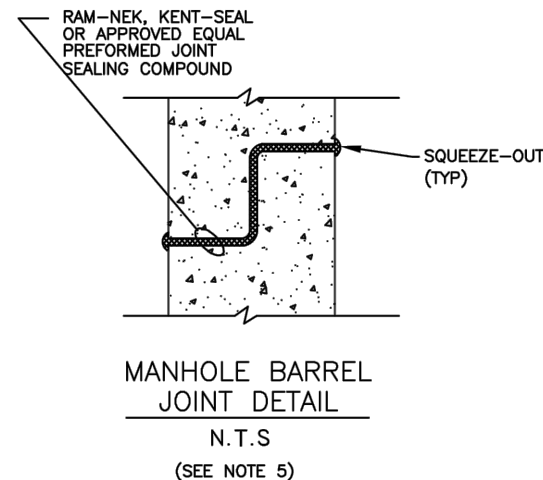
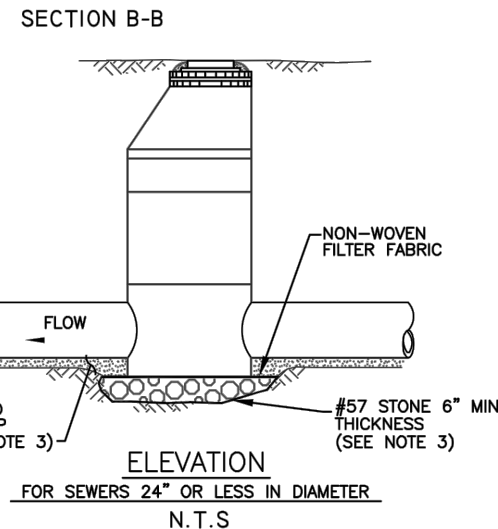
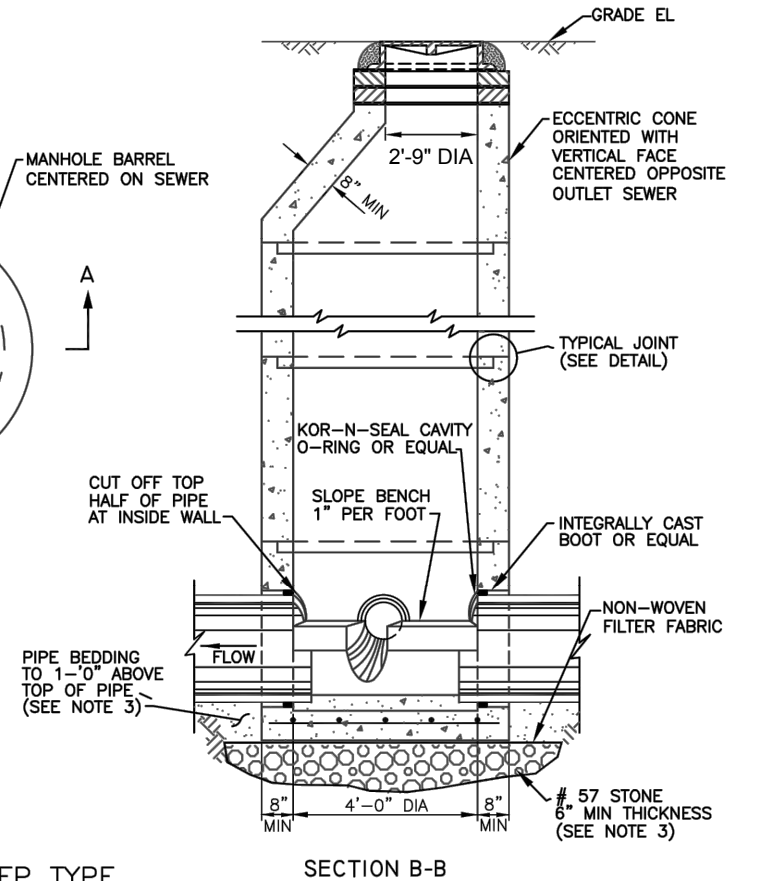
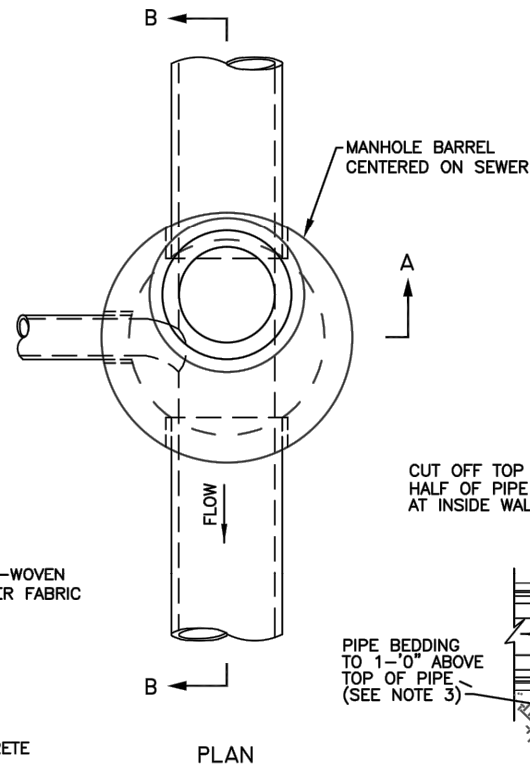
POTABLE WATER DETAILS

SHEET
21

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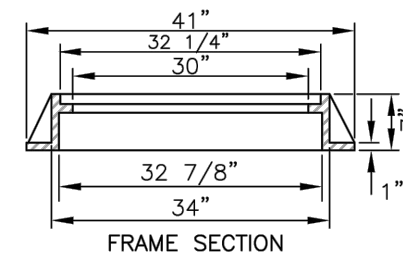
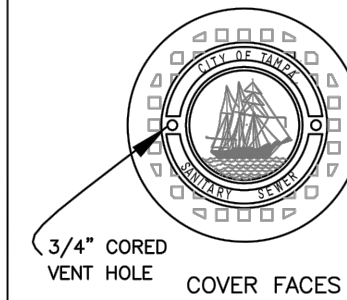
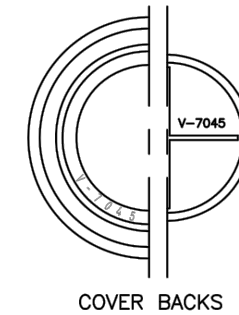
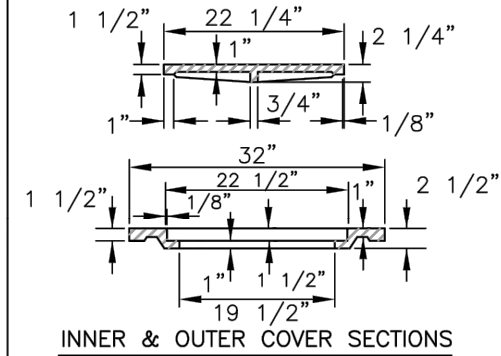


SECTION A-A
STANDARD MANHOLE - DEEP TYPE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S.



NOTES

1. REINFORCING STEEL FOR ALL MANHOLES SHALL CONFORM TO ASTM-C478 AND PLACED AS DESCRIBED IN THE SPECIFICATIONS.
2. ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
3. SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENTS AND COMPACTION OF PIPE AND STRUCTURE BEDDING.
4. STANDARD SHALLOW-TYPE MANHOLES WITH DEPTHS BETWEEN A MAXIMUM OF 7'-0" AND A MINIMUM OF 5'-0" MUST HAVE A CONCRETE CONE FOR THE TOP SECTION.
5. ALL MANHOLE JOINTS MUST BE SEALED WITH AN ACCEPTABLE JOINT SEALING COMPOUND REGARDLESS OF WHETHER AN O-RING GASKET IN A PREFORMED GROOVE IS USED.
6. FILTER FABRIC SHALL BE NON-WOVEN FABRIC PER D.O.T. SPECIFICATION SECTIONS 514 AND 985 AND SHALL BE WRAPPED ENTIRELY AROUND THE #57 STONE.



EJ SERIES 1670 (PART#00167029A01)
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

HEAVY DUTY CAST IRON MANHOLE
FRAME & COVER DETAILS
N.T.S.

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FL. P.E. LICENSE NO. 67573

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DATE: 10/27/2022

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WASTEWATER DEPARTMENT

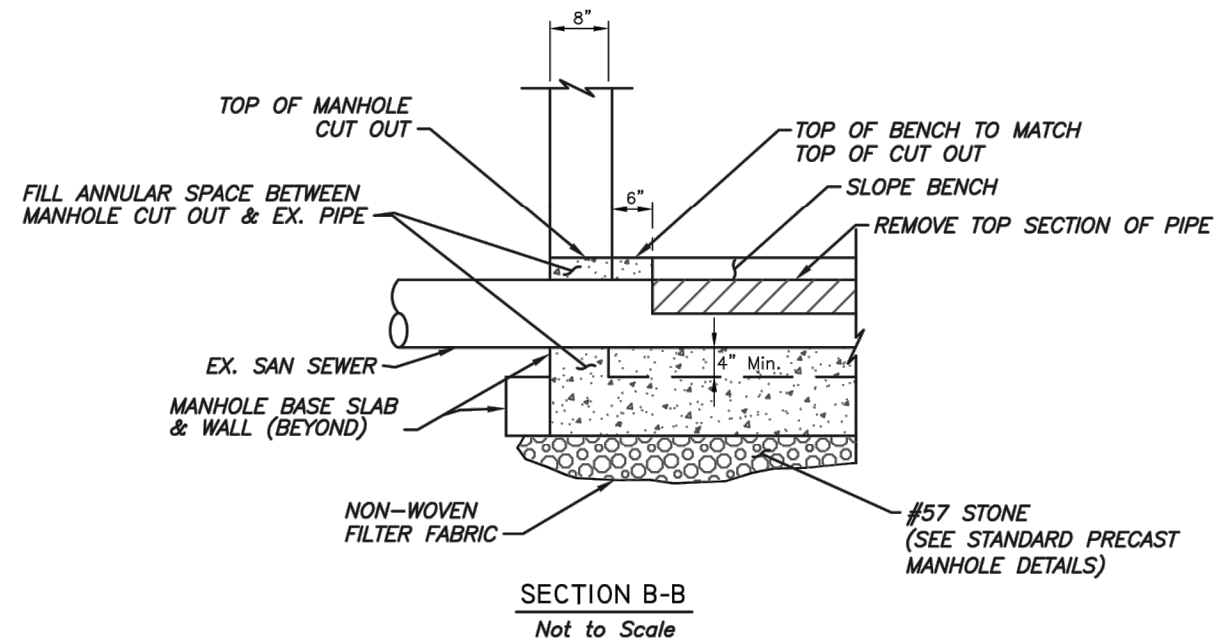
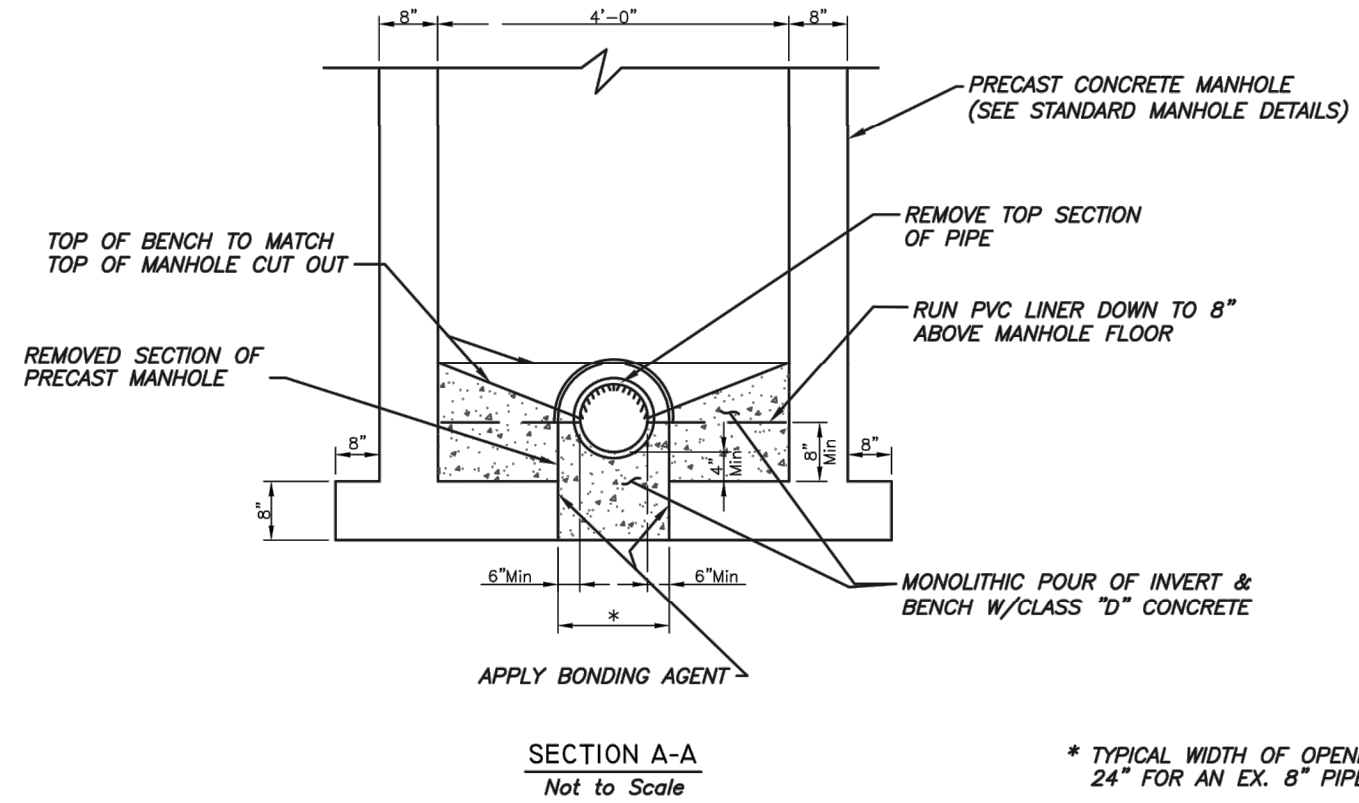
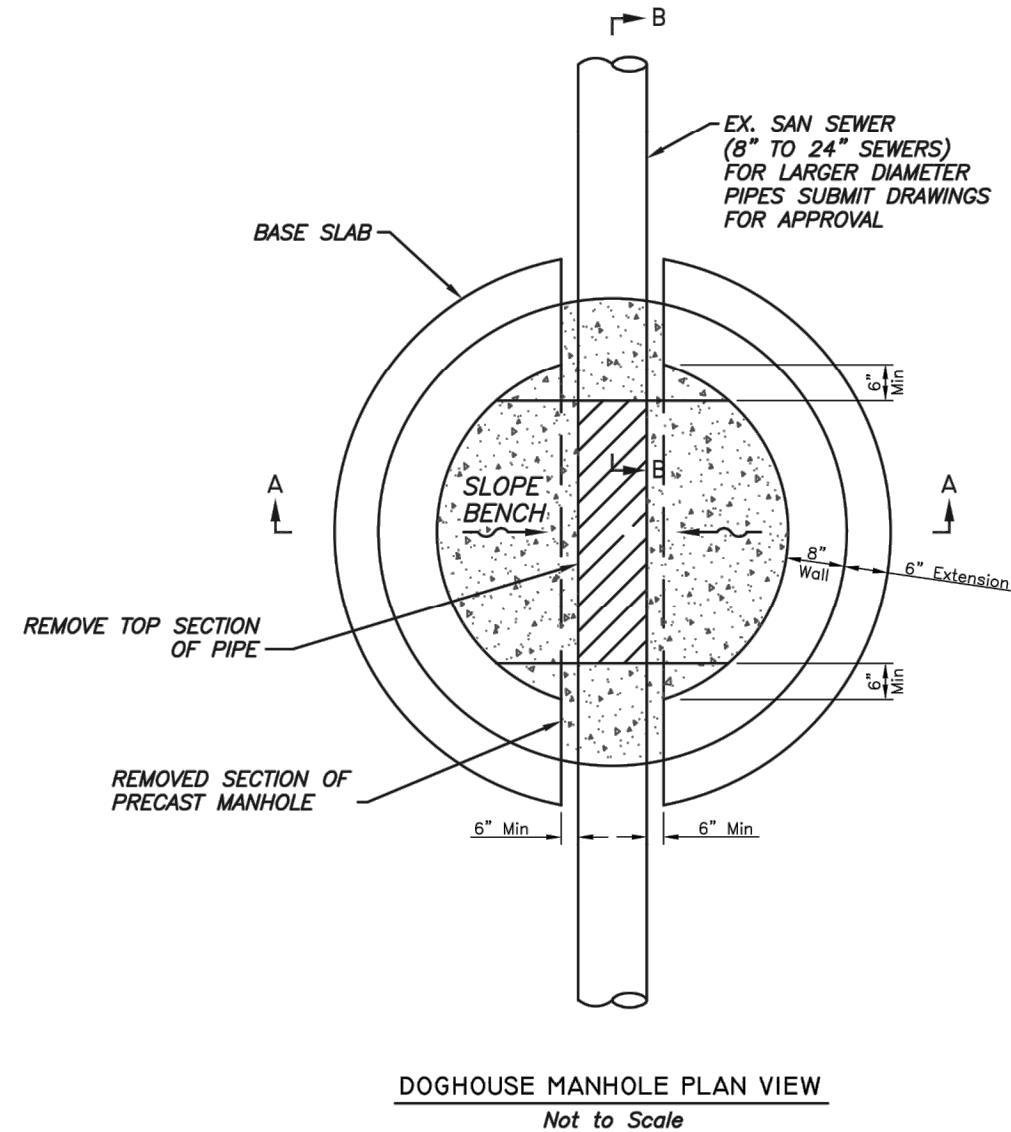
WASTEWATER PUMPING STATION REHABILITATIONS

GRAVITY PIPING DETAILS - I

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22

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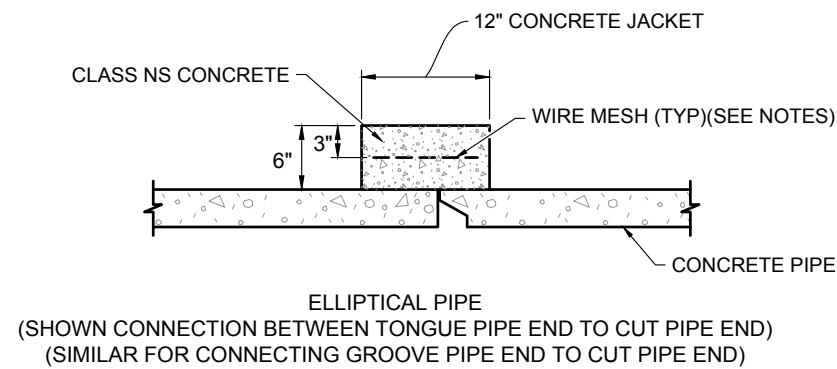
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WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
GRAVITY PIPING DETAILS - 2

SHEET
23

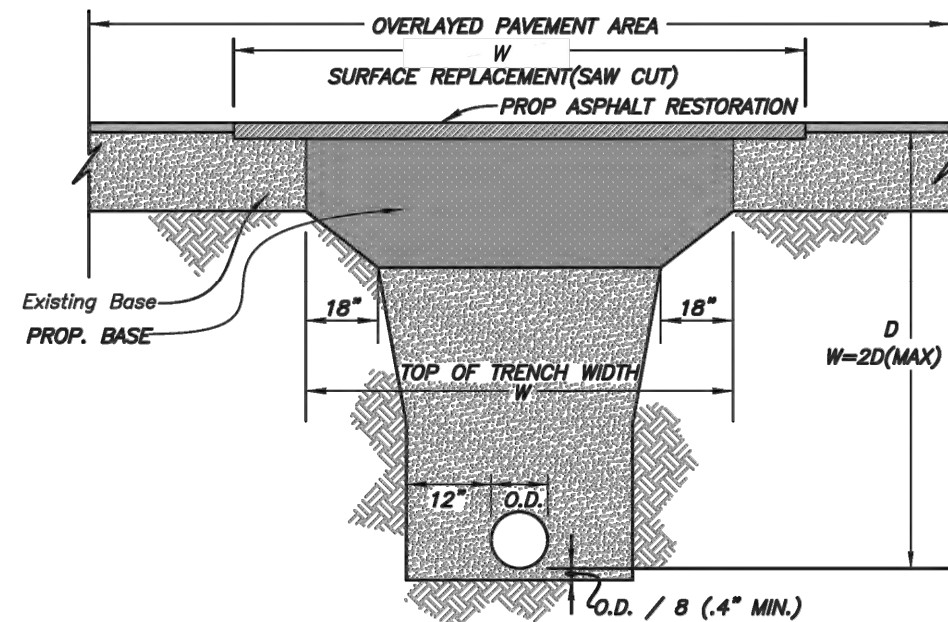
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NOTES:

1. ANY WIRE MESH ARRANGEMENT WHICH PROVIDES 0.126 SQUARE INCHES OF STEEL AREA PER LINEAR FOOT BOTH WAYS MAY BE USED, PROVIDED THE WIRES ARE SPACED A MINIMUM OF 2" AND/OR A MAXIMUM OF 6" ON CENTERS.

CONCRETE COLLAR FOR CONNECTING
DISSIMILAR CONCRETE DRAINAGE PIPE JOINTS



STANDARD DETAILS FOR ROADWAY RESTORATION
FOR A PERPENDICULAR UTILITY CROSSING

NOT TO SCALE

PAVEMENT RESTORATION NOTES

1. BACKFILL FOR PAVED AND NON-PAVED AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY A.A.S.H.T.O. T-180-57.
2. PROPOSED CRUSHED CONCRETE BASE SHOULD BE TWICE THE THICKNESS OF EXISTING BASE OR 8" (WHICHEVER IS GREATER).
3. SURFACE COURSE SHALL BE F.D.O.T. SUPERPAVE ASPHALT SP 9.5 WITH A THICKNESS EQUAL TO THE EXISTING COURSE OR 2" (WHICHEVER IS GREATER WITHIN TRENCH LIMITS).
4. MILL AND OVERLAY WITH 1.5" OF SUPERPAVE ASPHALT SP 9.5. MILL AND OVERLAY LIMITS SHALL BE AS SHOWN ON SHEET 11.

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WASTEWATER PUMPING STATION REHABILITATIONS

GRAVITY PIPING DETAILS - 3

SHEET

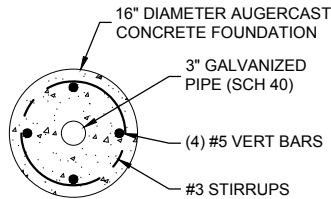
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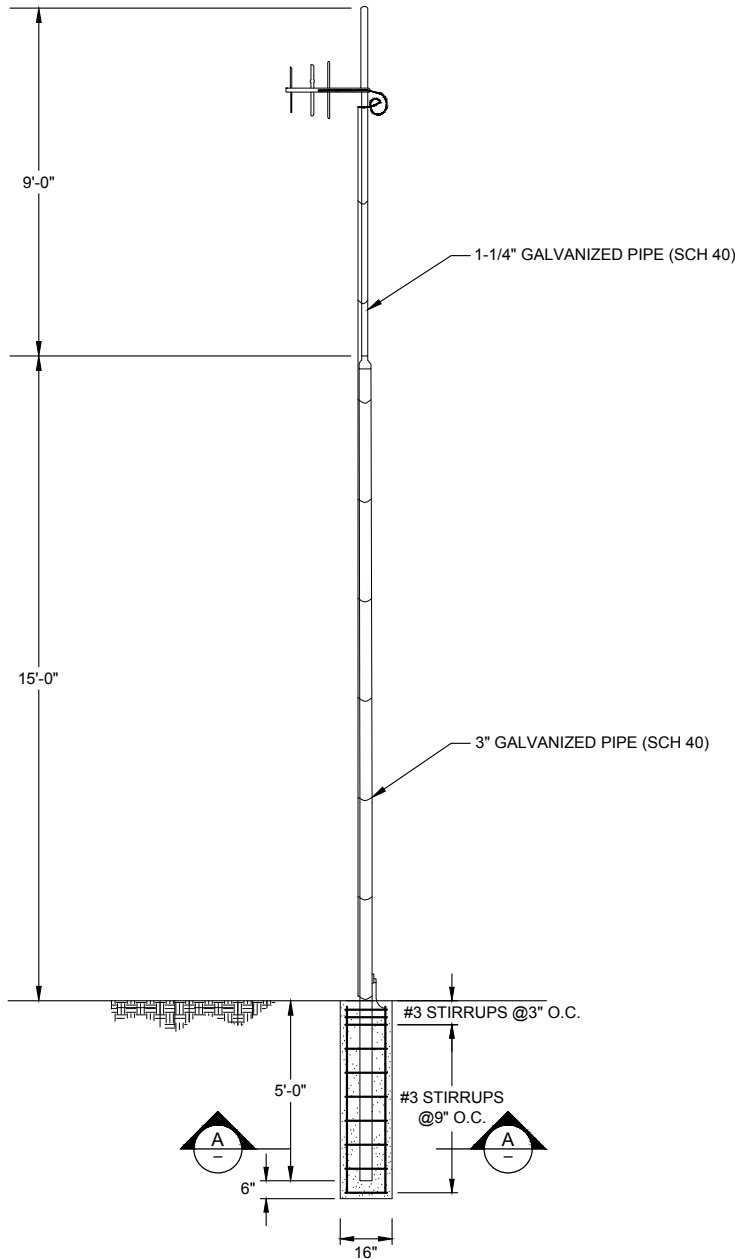
CODE: FLORIDA BUILDING CODE 2020, 7TH EDITION AND ASCE/SEI 7-16

BASIC WIND SPEED(V_{ult}): 152 MPH
NOMINAL WIND SPEED (V_{asd}): 118 MPH
CATEGORY (RISK): III
WIND EXPOSURE: C

DESIGN WIND PRESSURE (PSF): 55.7 PSF



PROPOSED SECTION A-A
SCALE: NOT TO SCALE



STRUCTURAL ANTENNA DETAIL



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FL. P.E. LICENSE NO. 76303

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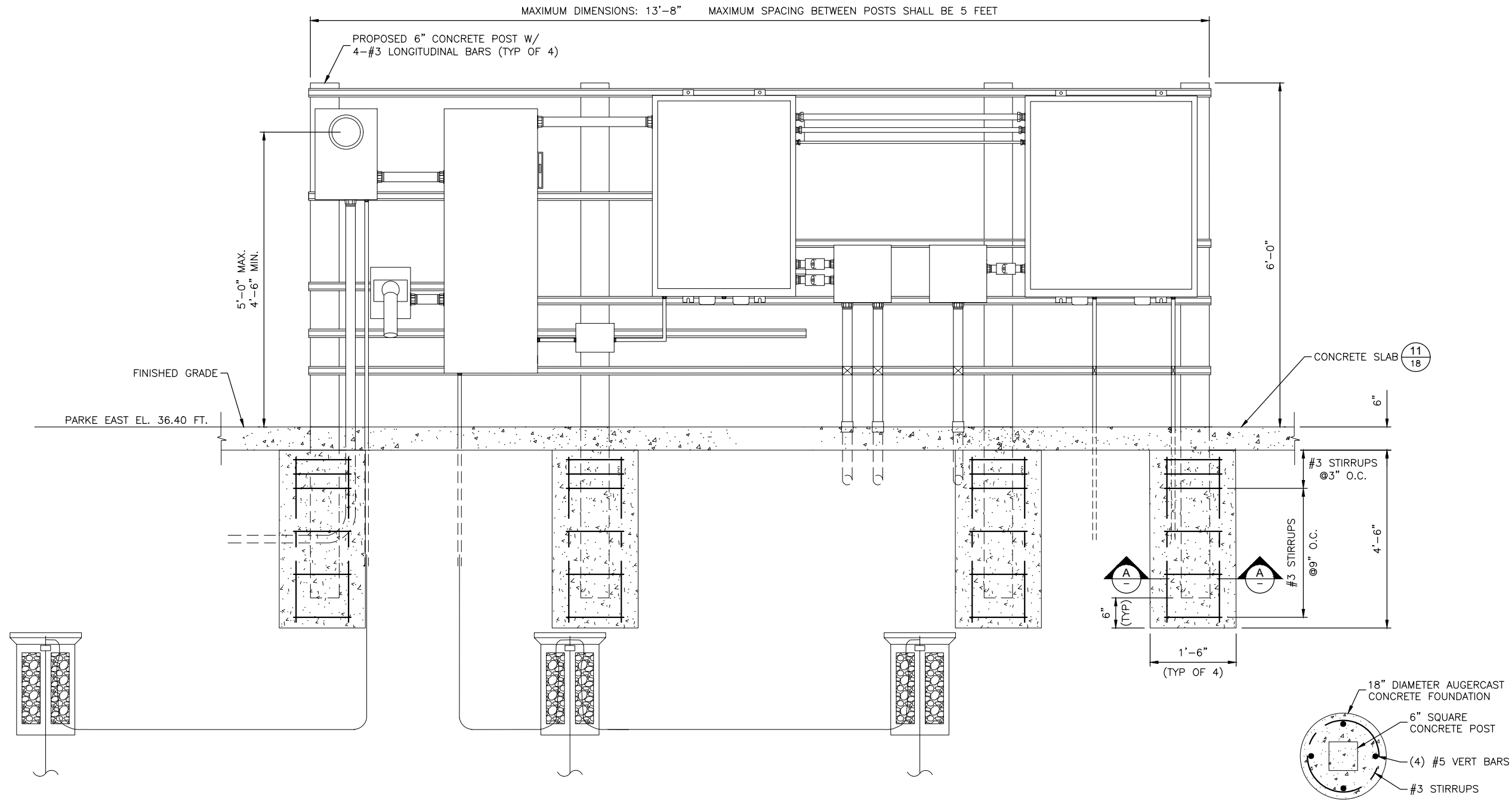
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WASTEWATER PUMPING STATION REHABILITATIONS

STRUCTURAL DETAILS - I

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PARKE EAST ELECTRICAL PANEL STRUCTURAL DETAIL

SCALE: NOT TO SCALE

PROPOSED SECTION A-A

SCALE: NOT TO SCALE

STRUCTURAL GENERAL NOTES:

1. THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 318-14 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER.
2. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A614, GRADE 60.
3. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAY UNLESS OTHERWISE NOTED.
4. ALL STIRRUPS AND TIES SHALL BE CLOSED TYPE WITH 135 DEGREE HOOKS, UNLESS NOTED OTHERWISE.
5. CONCRETE COVER OVER REINFORCEMENT SHALL BE 2 INCHES MINIMUM, UNLESS NOTED OTHERWISE, AND 3-INCHES MINIMUM WHERE CAST AGAINST EARTH.
6. POST FOUNDATIONS WERE DESIGNED USING CONSTRAINED CRITERIA.
7. CONTRACTOR TO VERIFY UNISTRUT SIZING AND FASTENER CAPACITY BASED ON FINAL EQUIPMENT SIZE AND WEIGHT SELECTED.

WIND DESIGN DATA:

CODE: FLORIDA BUILDING CODE 2020, 7TH EDITION AND ASCE/SEI 7-16

BASIC WIND SPEED(V_{ult}): 152 MPH
NOMINAL WIND SPEED (V_{asd}): 118 MPH
CATEGORY (RISK): III
WIND EXPOSURE: C

DESIGN WIND PRESSURE (PSF): 55.7 PSF

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WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

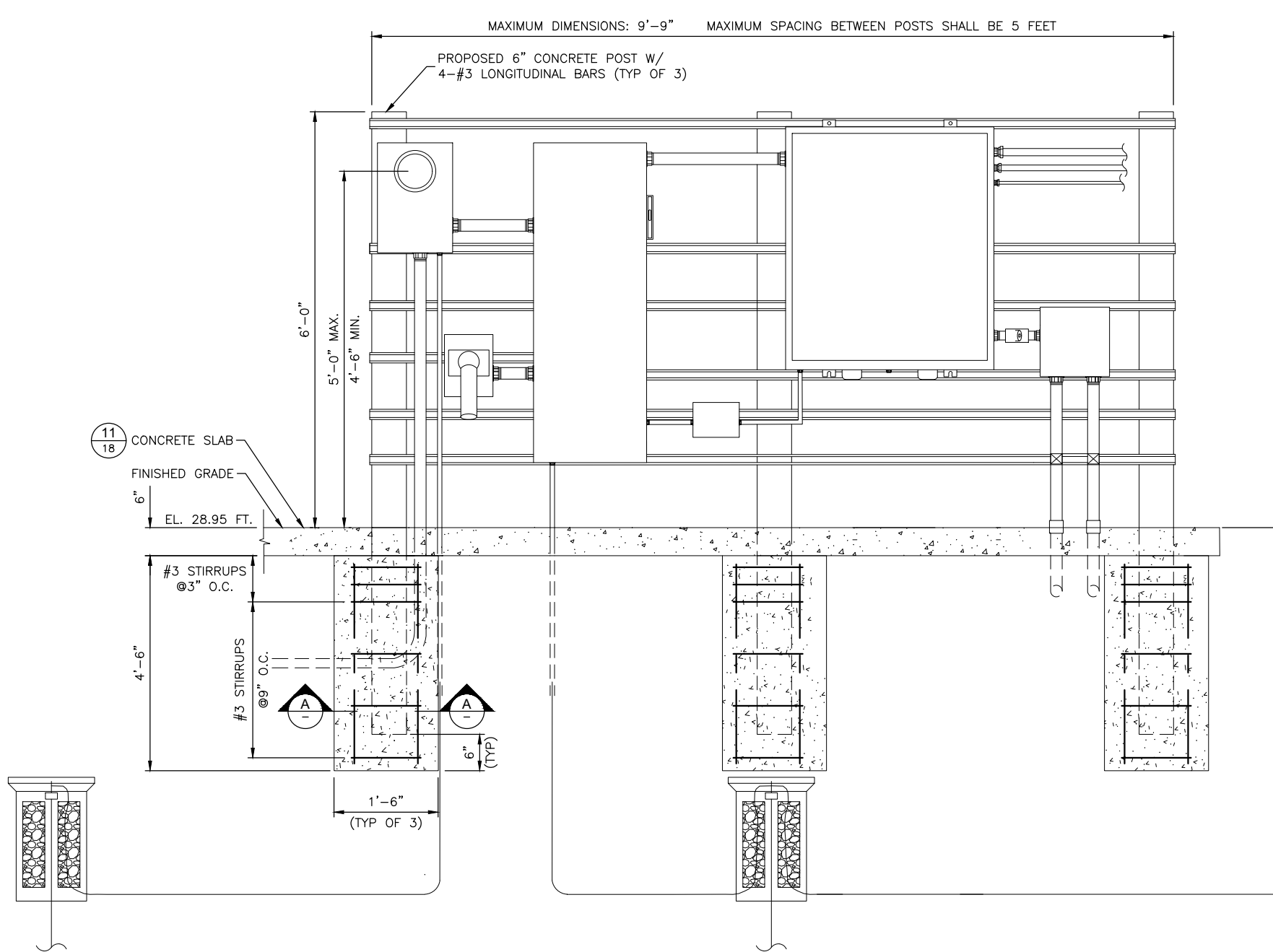
STRUCTURAL DETAILS - 2

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LAST SAVED BY: terence.sonnenberg
CIB - AECOM-11117.CIB



IDLEWILD ELECTRICAL PANEL STRUCTURAL DETAIL

SCALE: NOT TO SCALE

STRUCTURAL GENERAL NOTES:

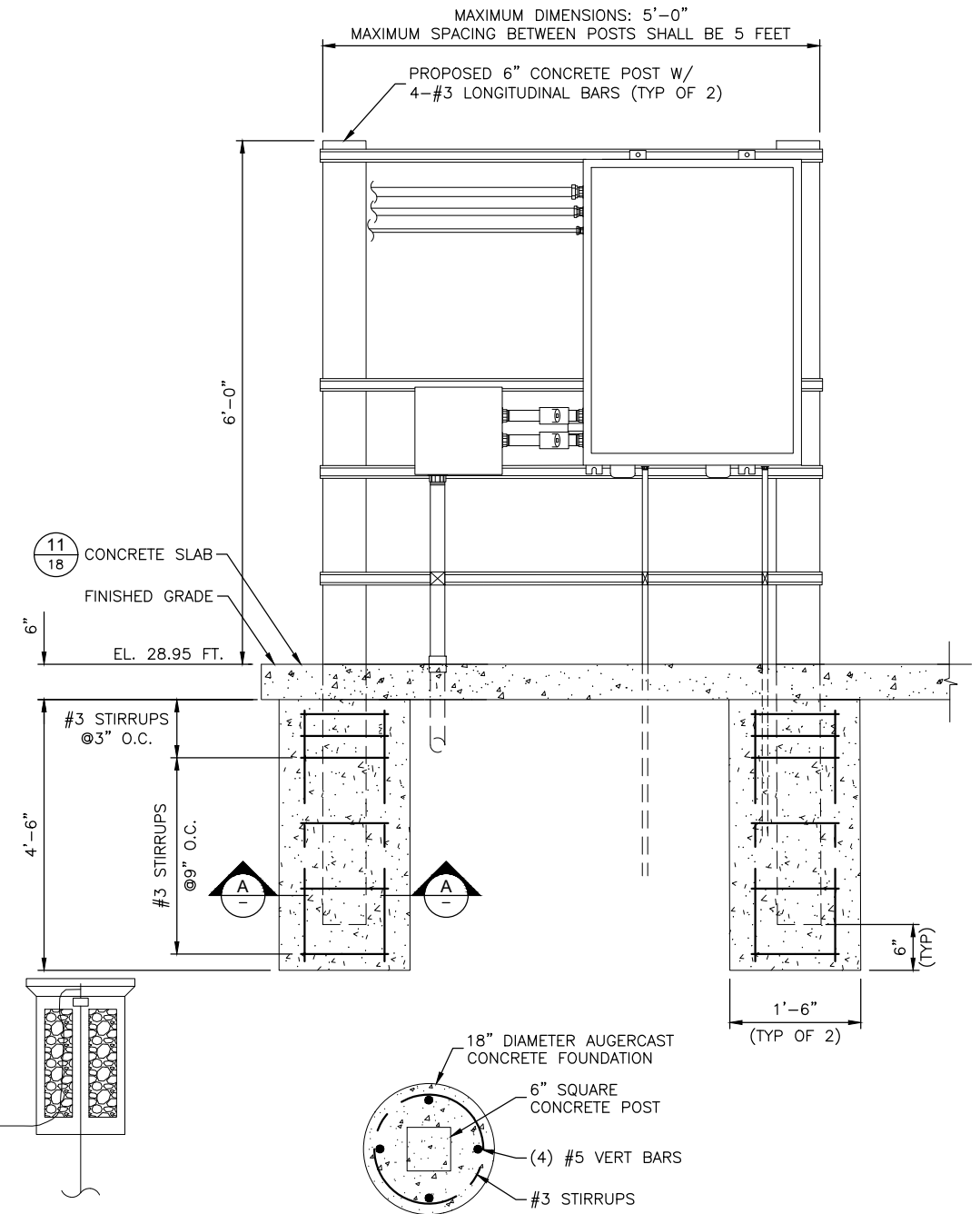
1. THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 318-14 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER.
2. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A614, GRADE 60.
3. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAY UNLESS OTHERWISE NOTED.
4. ALL STIRRUPS AND TIES SHALL BE CLOSED TYPE WITH 135 DEGREE HOOKS, UNLESS NOTED OTHERWISE.
5. CONCRETE COVER OVER REINFORCEMENT SHALL BE 2 INCHES MINIMUM, UNLESS NOTED OTHERWISE, AND 3-INCHES MINIMUM WHERE CAST AGAINST EARTH.
6. POST FOUNDATIONS WERE DESIGNED USING CONSTRAINED CRITERIA.
7. CONTRACTOR TO VERIFY UNISTRUT SIZING AND FASTENER CAPACITY BASED ON FINAL EQUIPMENT SIZE AND WEIGHT SELECTED.

WIND DESIGN DATA:

CODE: FLORIDA BUILDING CODE 2020, 7TH EDITION AND ASCE/SEI 7-16

BASIC WIND SPEED (V_{ult}): 152 MPH
NOMINAL WIND SPEED (V_{asd}): 118 MPH
CATEGORY (RISK): III
WIND EXPOSURE: C

DESIGN WIND PRESSURE (PSF): 55.7 PSF



PROPOSED SECTION A-A

SCALE: NOT TO SCALE

AECOM

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Tampa, Florida 33607 813.286.1711 tel
Certificate of Authorization No. 8115

SEAN DOUGLAS FREDERICK, P.E.
FL. P.E. LICENSE NO. 76303

No.	DATE	REVISIONS
3		
2		
1		

DES: BVH
DRN: TRS
CKD: SDF
DATE: 10/27/2022

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

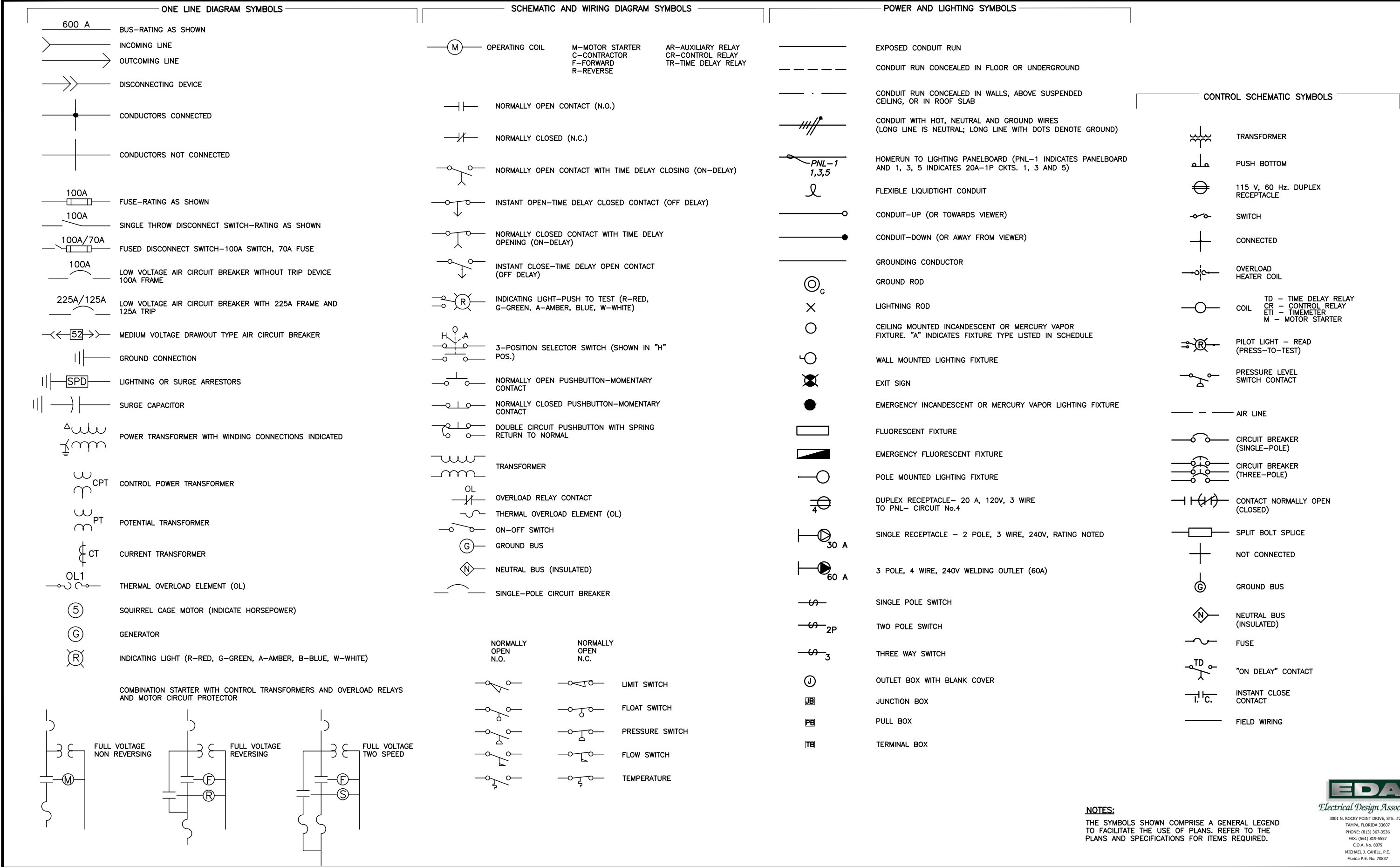
STRUCTURAL DETAILS - 3

SHEET

27

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PLOTTED BY: Sandy Reyes, DRAWING FILE: C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 1\07_IFB Parke East & Idlewild\DWGs\E-1 ELEC SYMBOLS.dwg, PLOT DATE: Thursday, October 27, 2022 12:17:01 PM, LAST SAVED BY: Sreyes, CTB - 11x17 IN-HOUSE TOSHIBA.CTB



POWER AND LIGHTING SYMBOLS

EXPOSED CONDUIT RUN

CONDUIT RUN CONCEALED IN FLOOR OR UNDERGROUND

CONDUIT RUN CONCEALED IN WALLS, ABOVE SUSPENDED
CEILING, OR IN ROOF SLAB

CONDUIT WITH HOT, NEUTRAL AND GROUND WIRES
(LONG LINE IS NEUTRAL; LONG LINE WITH DOTS DENOTE GROUND)

PNL-1
1,3,5

HOMERUN TO LIGHTING PANELBOARD (PNL-1 INDICATES PANELBOARD
AND 1, 3, 5 INDICATES 20A-1P CKTS. 1, 3 AND 5)

FLEXIBLE LIQUIDTIGHT CONDUIT

CONDUIT-UP (OR TOWARDS VIEWER)

CONDUIT-DOWN (OR AWAY FROM VIEWER)

GROUNDING CONDUCTOR

GROUND ROD

LIGHTNING ROD

CEILING MOUNTED INCANDESCENT OR MERCURY VAPOR
FIXTURE. "A" INDICATES FIXTURE TYPE LISTED IN SCHEDULE

WALL MOUNTED LIGHTING FIXTURE

EXIT SIGN

EMERGENCY INCANDESCENT OR MERCURY VAPOR LIGHTING FIXTURE

FLUORESCENT FIXTURE

EMERGENCY FLUORESCENT FIXTURE

POLE MOUNTED LIGHTING FIXTURE

4

DUPLEX RECEPTACLE- 20 A, 120V, 3 WIRE
TO PNL- CIRCUIT No.4

30 A

SINGLE RECEPTACLE - 2 POLE, 3 WIRE, 240V, RATING NOTED

60 A

3 POLE, 4 WIRE, 240V WELDING OUTLET (60A)

SINGLE POLE SWITCH

2P

TWO POLE SWITCH

3

THREE WAY SWITCH

OUTLET BOX WITH BLANK COVER

JB

JUNCTION BOX

PB

PULL BOX

TB

TERMINAL BOX

CONTROL SCHEMATIC SYMBOLS

TRANSFORMER

PUSH BOTTOM

115 V, 60 Hz. DUPLEX
RECEPTACLE

SWITCH

CONNECTED

OVERLOAD
HEATER COIL

TD - TIME DELAY RELAY
CR - CONTROL RELAY
ETI - TIMEMETER
M - MOTOR STARTER

COIL

PILOT LIGHT - READ
(PRESS-TO-TEST)

PRESSURE LEVEL
SWITCH CONTACT

AIR LINE

CIRCUIT BREAKER
(SINGLE-POLE)

CIRCUIT BREAKER
(THREE-POLE)

CONTACT NORMALLY OPEN
(CLOSED)

SPLIT BOLT SPLICE

NOT CONNECTED

GROUND BUS

NEUTRAL BUS
(INSULATED)

FUSE

"ON DELAY" CONTACT

INSTANT CLOSE
CONTACT

FIELD WIRING

NOTES:

THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND
TO FACILITATE THE USE OF PLANS. REFER TO THE
PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

EDA

Electrical Design Associates

















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<div><div>AECOM</div><div>7650 West Courtney Campbell Causeway Waterford Plaza, Suite 700 Tampa, Florida 33607 813.286.1711 tel Certificate of Authorization No. 8115</div></div>	<div><div>MICHAEL J. CAHILL, P.E.</div><div>FL. P.E. LICENSE NO. 70837</div></div>	No.	DATE	REVISIONS	DES: MJC DRN: SJT CKD: WCN DATE: 10/27/2022	<div><div>CITY of TAMPA</div><div>WASTEWATER DEPARTMENT</div></div>	WASTEWATER PUMPING STATION REHABILITATIONS		<div><div>SHEET</div><div>E-I</div></div>	
		3					ELECTRICAL SYMBOLS & ABBREVIATIONS			
		2								
		1								

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GENERAL SYMBOLS

	START-STOP PUSHBUTTON
	ON-OFF MAINTAINED CONTACT PUSHBUTTON WITH LOCK ATTACHMENT
	INDICATING LIGHT AND START-STOP PUSHBUTTON WITH LOCK ATTACHMENT ON STOP
	PUSH/PULL BUTTON WITH STOP LOCK. (PULL TO RESUME- PUSH TO STOP)
	SELECTOR SWITCH ("HOA" INDICATES HAND, OFF, AND AUTO; "MOR" INDICATES MANUAL, OFF, AND REMOTE; ETC.)
	ON-OFF SWITCH WITH LOCK ATTACHMENT ON OFF POSITION
	FLOW SWITCH
	LIMIT SWITCH
	PRESSURE SWITCH
	SOLENOID OPERATED VALVE
	TEMPERATURE SWITCH
	FLOAT SWITCH
	LEVEL TRANSMITTER (PRESSURE ANALOG TYPE)
	LEVEL TRANSMITTER (FLOAT TYPE)
	TEMPERATURE TRANSMITTER
	FLOW TRANSMITTER
MH	DESIGNATES MOUNTING HEIGHT
WP	DESIGNATES WATERPROOF EQUIPMENT
XP	DESIGNATES EXPLOSIONPROOF EQUIPMENT
MOV	DESIGNATES MOTOR OPERATED VALVE
EX.	DESIGNATES EXISTING EQUIPMENT
PROP.	DESIGNATES PROPOSED EQUIPMENT
MCP	MOTOR CONTROL PANEL
PCP	PUMP CONTROL PANEL
PCSR	PUMP CONTROLLER/SCADA/RADIO

NOTE:
THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND
TO FACILITATE THE USE OF PLANS. REFER TO THE
PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

GENERAL NOTES

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
- ALL POWER CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. W/XHHW-2 INSULATION, UNLESS OTHERWISE NOTED.
- ALL WIRING SHALL BE IDENTIFIED W/ NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
- VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
- FIELD VERIFY ALL MECHANICAL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
- PLANS ARE DESIGNED IN ACCORDANCE WITH THE 6TH EDITION 2017 OF THE FLORIDA BUILDING CODE AND THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE.
- ALL THREADED CONNECTIONS SHALL BE COATED W/ ALUMA-SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS AND BETTS (T & B) OR EQUAL.
- ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVERPLATES SHALL BE LABELED W/ NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
- ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
- ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT W/ POWER CONDUCTORS.
- ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNED IN THE DRAWINGS.
- NEATLY COIL ALL SPARE CONDUCTORS & TAPE W/ VINYL ELECTRICAL TAPE (SCOTCH 33+)
- PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE W/ ARTICLE 110 OF THE NEC FOR PARKE EAST AND IDLEWILD.
- ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316-STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
- EXPOSED CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, UNLESS OTHERWISE NOTED (UON). INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL, UNLESS OTHERWISE NOTED (UON).
- DIRECT BURIED AND CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED, TRANSITIONS FROM ABOVE-GRADE RIGID ALUMINUM CONDUIT TO NONMETALLIC CONDUIT SHALL BE ACCOMPLISHED WITH A THREADED ADAPTER. RIGID ALUMINUM CONDUIT INSTALLED ABOVE GRADE AND EXTENDING BELOW GRADE SHALL INCLUDE THE FIRST 90° ELBOW. ALL RIGID ALUMINUM CONDUITS EXTENDING BELOW GRADE SHALL BE COATED WITH TWO COATS OF ASPHALTUM-TYPE PAINT ALONG ITS ENTIRE LENGTH BELOW GRADE AND EXTENDING 6" ABOVE GRADE OR ABOVE THE TOP OF THE FINISHED SLAB.
- ABOVE GRADE INDOOR, AND NON-WASHDOWN AREAS, RIGID ALUMINUM CONDUIT CONNECTIONS TO CONTROL BOXES, ETC. SHALL BE MADE WITH ALUMINUM DOUBLE LOCKNUTS AND BUSHINGS. TURN DOWN ON THREADS TO SOLIDLY CONNECT RACEWAY TO BOX OR ENCLOSURE.
- ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, BELOW GRADE OR WASHDOWN AREAS.
- A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316-STAINLESS STEEL MOUNTING HARDWARE.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
- ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTOR'S REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
- PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.
- THE WET WELL CLASSIFICATION IS CLASS 1, DIVISION 1, GROUP D (HAZARDOUS AREA), NEC CHAPTER 5 IS APPLICABLE FOR INTERFACING WET WELL AND THE CONTROL ENCLOSURE.
- CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK SHALL BE PERFORMED WITHIN 2017 NEC, ALL APPLICABLE LOCAL ORDINANCES, AND SHALL BE INSPECTED BY CITY OF TAMPA/HILLSBOROUGH COUNTY ELECTRICAL INSPECTORS, AS APPLICABLE.
- ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED AND AS SPECIFIED, OR AS APPROVED BY THE CITY. THE PANEL BUILDER SHALL BE UL-508A CERTIFIED AND A UL LABEL SHALL BE ATTACHED TO THE INSIDE OF THE ENCLOSURE. THE DOUBLE THROW DISCONNECT MUST BE LABELED "SUITABLE FOR USE AS SERVICE EQUIPMENT."

- THE ENCLOSURES SHALL BE NEMA 4X, THEY SHALL BE CONSTRUCTED OF MINIMUM 14 GAUGE 316SS, THEY SHALL HAVE RAL 9003 WHITE POWDER COAT AND THE CLOSING SURFACES SHALL HAVE ROLLED LIPS, PROVIDE HINGED DOORS WITH 3-POINT LATCHED AND LOCKABLE HANDLES.
- ALL COMPONENTS TO BE MOUNTED ON PANEL USING TAPPED HOLES.
- ALL CONTROL WIRING SHALL BE STRANDED XHHW-2 COPPER, MINIMUM AWG #14. INSTALL FERRULES FOR ALL WIRE TERMINATIONS SMALLER THAN #8 AWG.
- ALARM FLOAT SWITCH WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "*" TO BE DETERMINED AFTER EQUIPMENT SELECTION.
- ALL MECHANICAL CONNECTORS SHALL BE TORQUED PER NEC, UL OR MANUFACTURER'S SPECIFICATIONS.
- INSTALL LAMINATED SCHEMATIC, LAMINATED DATA SHEET AND LAMINATED SOFT STARTER SETUP PARAMETERS ON BACK FACE OF THE DOOR INSIDE THE ENCLOSURE.
- ENSURE THAT LINE CONNECTIONS TO METER SOCKET PROVIDE CORRECT MOTOR ROTATION.
- CONDUCTORS WITHIN THE ENCLOSURE AND NOT ROUTED IN WIREWAYS, SHALL BE SECURED TO THE BACK PANEL WITH MECHANICAL FASTENERS, FASTENERS SECURED WITH ADHESIVE ARE NOT ACCEPTABLE.
- ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.
- THE PUMP CONTROL PANEL ENCLOSURE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE PANEL SHALL BE MOTOROLA ACE 3600 PACKAGE AS DISTRIBUTED BY STAR CONTROLS, AUTOMATED CONTROLS, CURRY CONTROLS, ROCHA CONTROLS, OR CAYZO CONSULTING INC. THE PUMPING STATION CONTRACTOR SHALL COORDINATE HIS EFFORTS WITH STAR CONTROLS, AUTOMATED CONTROLS, CURRY CONTROLS, ROCHA CONTROLS, OR CAYZO CONSULTING INC. TO ENSURE SYSTEM COMPATIBILITY.
- THE CONTRACTOR SHALL SCHEDULE A PUMP STATION PRE-STARTUP DATE AND PUMP STATION STARTUP DATE. THE SCADA PROGRAMMER SHALL PROVIDE TEMPORARY POWER TO THE CONTROL PANEL PLC, PLACE THE NEW PLC ON LINE WITH THE CITY'S VT SCADA SYSTEM, AND PERFORM ANY NEEDED TROUBLESHOOTING OR DEBUGGING. THE CONTRACTOR SHALL PROVIDE REQUIRED ADDRESSING FOR TESTING. AFTER THE SCADA PROGRAMMER DETERMINES THAT THE NEW PLC AND THE VT SCADA ARE PROPERLY COMMUNICATING WITHOUT ISSUE, THE CONTRACTOR SHALL SCHEDULE AN ONSITE PLC WITNESS TEST BETWEEN THE CITY, SCADA PROGRAMMER, AND ANY OTHER REQUIRED PARTIES. DURING THE PLC WITNESS TEST, THE SCADA PROGRAMMER MUST DEMONSTRATE THAT THE NEW PLC IS ONLINE, COMMUNICATING WITH VT SCADA, AND ALL LEVEL AND STATUS INDICATIONS ARE FREE FROM ERROR. ONCE THE SCADA TESTING HAS BEEN WITNESSED AND APPROVED, THE CONTRACTOR SHALL SCHEDULE A PRE-STARTUP AND START UP DATE. THE CITY RESERVES THE RIGHT TO CANCEL THE PRE-STARTUP DATE, IF IT DEEMS THE PRE-STARTUP DATE IS NOT NECESSARY. THE CONTRACTOR SHALL PROVIDE THE REQUIRED MANPOWER AND HARDWARE TO SUPPORT STARTUP AND TESTING OF PUMP STATION.
- THE CONTROL PANELS SHALL BE FACTORY TESTED. THE PANEL BUILDER SHALL PROVIDE A CERTIFIED TESTING REPORT DETAILING ALL I/O POINTS, CONNECTION AND EQUIPMENT ARE IN WORKING ORDER. A COPY OF THE REPORT SHALL BE PROVIDED TO THE CITY PRIOR TO DELIVERY AND A COPY SHALL BE INCLUDED WITH THE CONTROL PANELS AT THE TIME OF THE DELIVERY. CONTRACTOR WILL ASSIST IN THE DELIVERY.
- A WET WELL LEVEL DETECTION SYSTEM SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE OUTPUT SHALL BE A LINEAR 4-20MA SIGNAL WITH RANGE AND CALIBRATION SUITABLE FOR THIS APPLICATION. THE SYSTEM SHALL BE OF THE ULTRASONIC TYPE-PULSAR, INC. MODEL DB10 W/ ULTRA 4 TRANSMITTER. THE CITY WILL ASSIST THE CONTRACTOR WITH SPECIFYING THE TRANSDUCER MOUNTING LOCATION AND CALIBRATION. THE DB10 TRANSDUCER SHALL BE MOUNTED USING A 2 1/2" X 1/4" S.S. BRACKET, SEE DB10 MOUNTING BRACKET DETAIL.
- PROVIDE FINGER-SAFE POWER DISTRIBUTION BLOCKS.
- XHHW-2 CONDUCTORS SHALL EXTEND FROM THE JUNCTION BOX. PROVIDE SEAL-OFF BETWEEN MOTOR CONTROL PANEL TO PUMP MOTOR CONNECTION AND JUNCTION BOX AS INDICATED. THE SHOWN SEAL-OFFS SHALL BE ALUMINUM BODY, CROUSE-HINDS, OR EQUIVALENT.
- ALUMINUM CONDUIT SURFACES THAT ARE IN CONTACT WITH SOIL OR CONCRETE SHALL BE COATED WITH TWO COATS ASPHLAT VARNISH (FED. SPEC. TT-V-51) EXTENDING 4" BEYOND FINAL CONTACT POINT.
- STAINLESS STEEL HANGERS TO SUPPORT THE EXCESS LENGTH OF MOTOR CABLES SHALL BE INSTALLED IN THE WET WELL. THESE HANGERS SHALL BE LOCATED IN A SEPARATE AREA FROM THE HANGERS SUPPORTING THE PUMP CHAINS.



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No.	DATE	REVISIONS
3		
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DES: MJC
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

GENERAL NOTES AND SYMBOLS

SHEET

E-2



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C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 1\07_IFB Parke East & Idlewild\DWGs\E-3 PARK EAST SCOPE OF WORK.dwg, 10/27/2022 12:17:11 PM

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PARKE EAST PS PUMP MOTOR DATA

MAKE: FLYGT

MODEL: NP 3202 HT 3~462

HP: 45 HP

260V, 3-PHASE, 52 FLA

TOTAL PUMP LOAD: 104 AMPS, 86.5 KVA

PARKE EAST PS
SHORT CIRCUIT CALCULATIONS

UTILITY SERVICE: 480 VOLT, 3 PHASE
SERVICE ADDRESS: 6304 ORIENT ROAD
METER NUMBER: 1000851097
TECO CONTACT: ADDISON LUGO (813) 352-9674

POINT-TO-POINT CIRCUIT CALCULATION METHOD
AVAILABLE SHORT CIRCUIT CURRENT AT UTILITY SERVICE: 9,021 AMPS
SERVICE CONDUCTOR LENGTH: 180 FEET, PVC RACEWAY
SERVICE CONDUCTORS: #3/0, XHHW-2, COPPER
PHASE CONDUCTOR CONSTANT: 13,923

SHORT CIRCUIT CURRENT AVAILABLE AT THE LINE SIDE OF THE FUSED
DOUBLE THROW TRANSFER SWITCH: 6,350 AMPS

$$1 + \left[\frac{1}{\frac{(1.732)(180)(9,021)}{(13,923)(480)}} \right] * 9,021 = 6,350$$

PARKE EAST PS ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3Ø, 4W

LOAD	CONNECTED	DEMAND	APPROX. PHASE CURRENTS		
			L1	L2	L3
PROP. PUMP #1	43.2 KVA	43.2 KVA	52.0 A	52.0 A	52.0 A
PROP. PUMP #2	43.2 KVA	43.2 KVA	52.0 A	52.0 A	52.0 A
SINGLE PHASE LOADS	2.0 KVA	2.0 KVA	4.2 A	0 A	4.2 A
TOTAL	88.4 KVA	88.4 KVA	108.2 A	104.0 A	108.2 A

SCOPE OF WORK:

- EXISTING AND NEW SERVICE VOLTAGE FOR EACH FACILITY:
-PARKE EAST PS EXISTING SERVICE: 480V, 3-PHASE, 4-WIRE
-PARKE EAST PS NEW SERVICE: 480V, 3-PHASE, 4-WIRE
- REMOVE THE EXISTING METER SOCKET, LIGHTNING ARRESTOR, CONTROL PANEL, CONCRETE PEDESTAL, AND ALL ASSOCIATED CONDUIT AND CONDUCTORS, AS SHOWN ON PLANS.
- CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING DCR SCADA RTU CABINET MOUNTED ON THE EXISTING SCADA ANTENNA. DELIVER THIS RTU PACKAGE TO THE CITY FOR MAINTENANCE INVENTORY.
- ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE CITY, SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE HOWARD F. CURREN AWTP. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL OTHER REMOVED EQUIPMENT.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEW ELECTRICAL METER SOCKET, LIGHTNING ARRESTOR AND GROUNDING, AS SHOWN ON PLANS.
- CONTRACTOR TO PREPARE THE SITE FOR THE INSTALLATION OF THE PROPOSED CONTROL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE AND INSTALL DUPLEX PUMP CONTROL PANEL. THE PUMP CONTROL PANEL WILL CONTAIN CONTROL COMPONENTS, INDICATOR LIGHTS, AND SCADA RTU AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS
- CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X 316 SS WET WELL ISOLATION JUNCTION BOX FOR PUMP MOTOR CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL SUPPLIED DUPLEX MOTOR CONTROL PANEL. THE MOTOR CONTROL PANEL SHALL CONTAIN CIRCUIT BREAKERS AND MOTOR STARTERS, AS SHOWN ON PLANS AND DETAILED IN SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS WET WELL ISOLATION BOX FOR INSTRUMENTATION AND CONTROL CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS, SERVICE ENTRANCE RATED, FUSED DOUBLE THROW SWITCH, AS SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS, EMERGENCY POWER CONNECTOR, AS SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL NEW SCADA ANTENNA MAST AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL RADIO ANTENNA AND WET WELL LEVEL SENSING DEVICES
- CONTRACTOR SHALL PROVIDE AND INSTALL AREA LIGHT, AS SHOWN ON PLANS.
- CONTRACTOR SHALL ASSIST PUMP AND CONTROL SYSTEM SUPPLIER IN THE CALIBRATION, START UP, AND ADJUSTMENT OF EQUIPMENT. CALIBRATION AND SETPOINTS SHALL BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS, AS SHOWN, SPECIFIED AND REQUIRED.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRIC CODE AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
- REFER TO CIVIL/MECHANICAL SHEETS FOR BYPASS PUMPING REQUIREMENTS. IF ELECTRICALLY DRIVEN BYPASS PUMPS ARE UTILIZED, THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY ELECTRICAL SERVICE REQUIREMENTS WITH TAMPA ELECTRIC COMPANY (TECO). ANY COSTS ASSOCIATED WITH TEMPORARY ELECTRIC POWER ARE TO BE INCLUDED IN THE LUMP SUM PRICE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TEMPORARY POWER TO THE SITE.



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WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST SCOPE OF WORK

SHEET

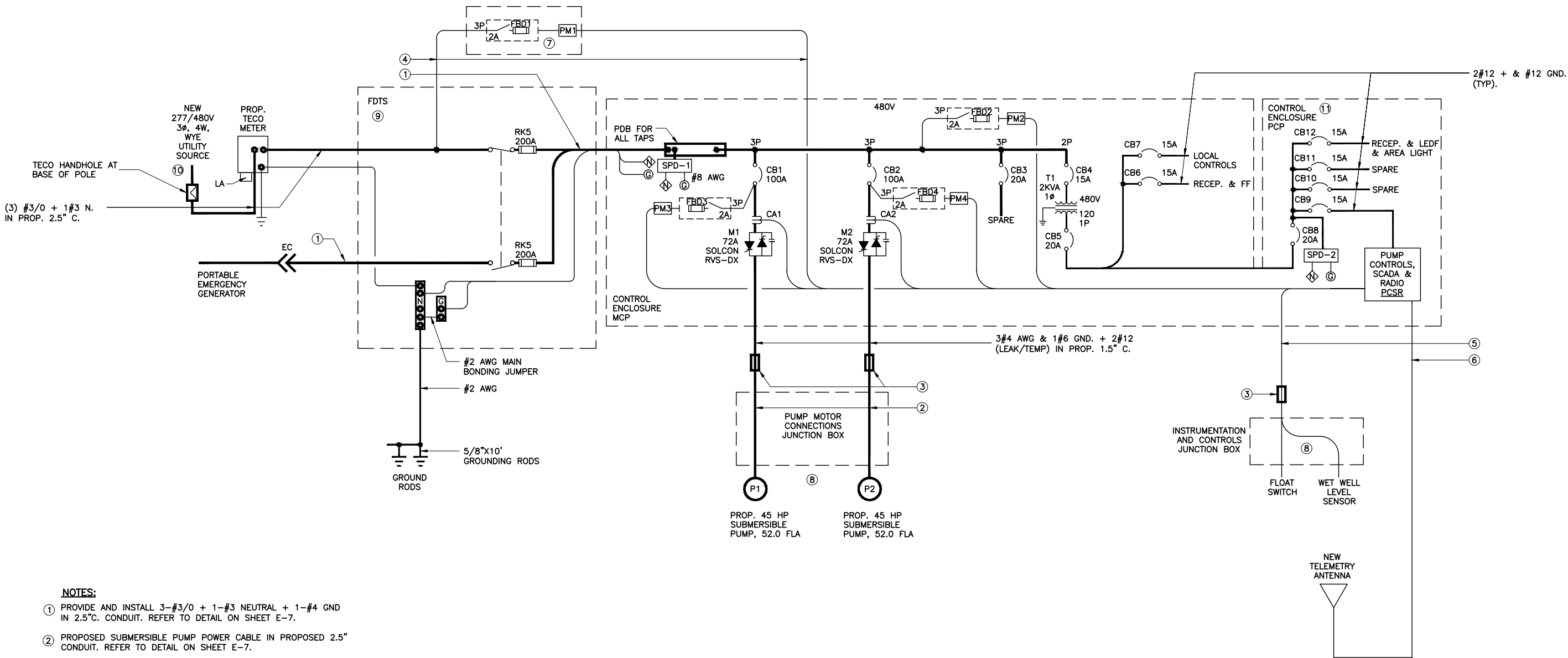
E-3



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NOTES:

- 1 PROVIDE AND INSTALL 3-#3/0 + 1-#3 NEUTRAL + 1-#4 GND IN 2.5"C. CONDUIT. REFER TO DETAIL ON SHEET E-7.
- 2 PROPOSED SUBMERSIBLE PUMP POWER CABLE IN PROPOSED 2.5" CONDUIT. REFER TO DETAIL ON SHEET E-7.
- 3 PROVIDE CONDUIT SEAL OFF FITTING. REFER TO DETAIL ON SHEET E-7.
- 4 PROVIDE AND INSTALL 3-#12 + 1-#12 GND. IN 3/4" CONDUIT. REFER TO DETAIL ON SHEET E-7.
- 5 PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO I&C JUNCTION BOX FOR FLOAT SWITCH AND LEVEL SENSOR CABLES. REFER TO DETAIL ON SHEET E-7.
- 6 PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO EXISTING ANTENNA MAST FOR NEW COAX CABLE. REFER TO DETAIL ON SHEET E-19.
- 7 PM1 JUNCTION BOX. REFER TO DETAIL ON SHEET E-20.
- 8 REFER TO DETAIL ON SHEET E-17.
- 9 SERVICE ENTRANCE RATED, FUSED DOUBLE THROW SWITCH.
- 10 AVAILABLE FAULT CURRENT AT THE SECONDARY LUGS FOR THE POLE-MOUNTED TRANSFORMER BANK IS ON THE SCOPE OF WORK, SEE SHEET E-3. THE INTERRUPTING RATING, IR, OF THE FDTS CURRENT LIMITING FUSE IS 200KA RMS, SYMMETRICAL.

PARKE EAST SINGLE LINE DIAGRAM

SCALE: N.T.S.

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST SINGLE LINE DIAGRAM

SHEET

E-4

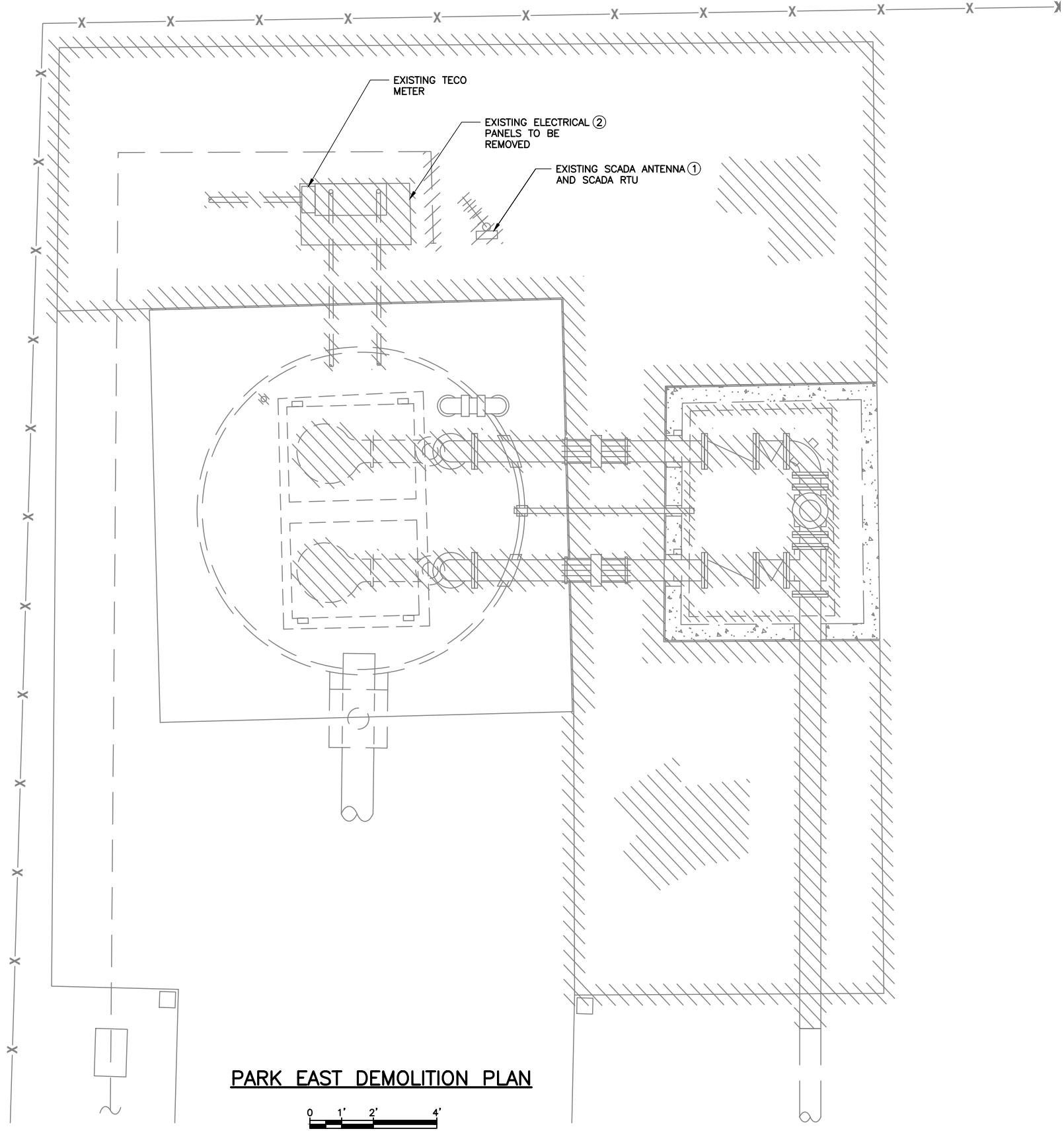
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- NOTES:**
- ① THE EXISTING SCADA ANTENNA AND DCR SCADA RTU CABINET SHALL REVERT TO CITY OF TAMPA FOR MAINTENANCE.
 - ② COORDINATE ALL EQUIPMENT INTENDED FOR SALVAGE WITH CITY OF TAMPA PRIOR TO DEMOLITION. ANY ITEMS NOT REQUIRED FOR SALVAGE SHALL BE DEMOLISHED BY THE CONTRACTOR. SEE CIVIL DEMOLITION SHEETS.
 - ③ REMOVE ALL ELECTRICAL EQUIPMENT EXPOSED CONDUIT, CABLES, BOXES, AND APPURTENANCES. CUT CONCEALED CONDUITS 6" BELOW GRADE AND CAP

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CITY of TAMPA
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WASTEWATER PUMPING STATION REHABILITATIONS

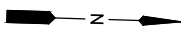
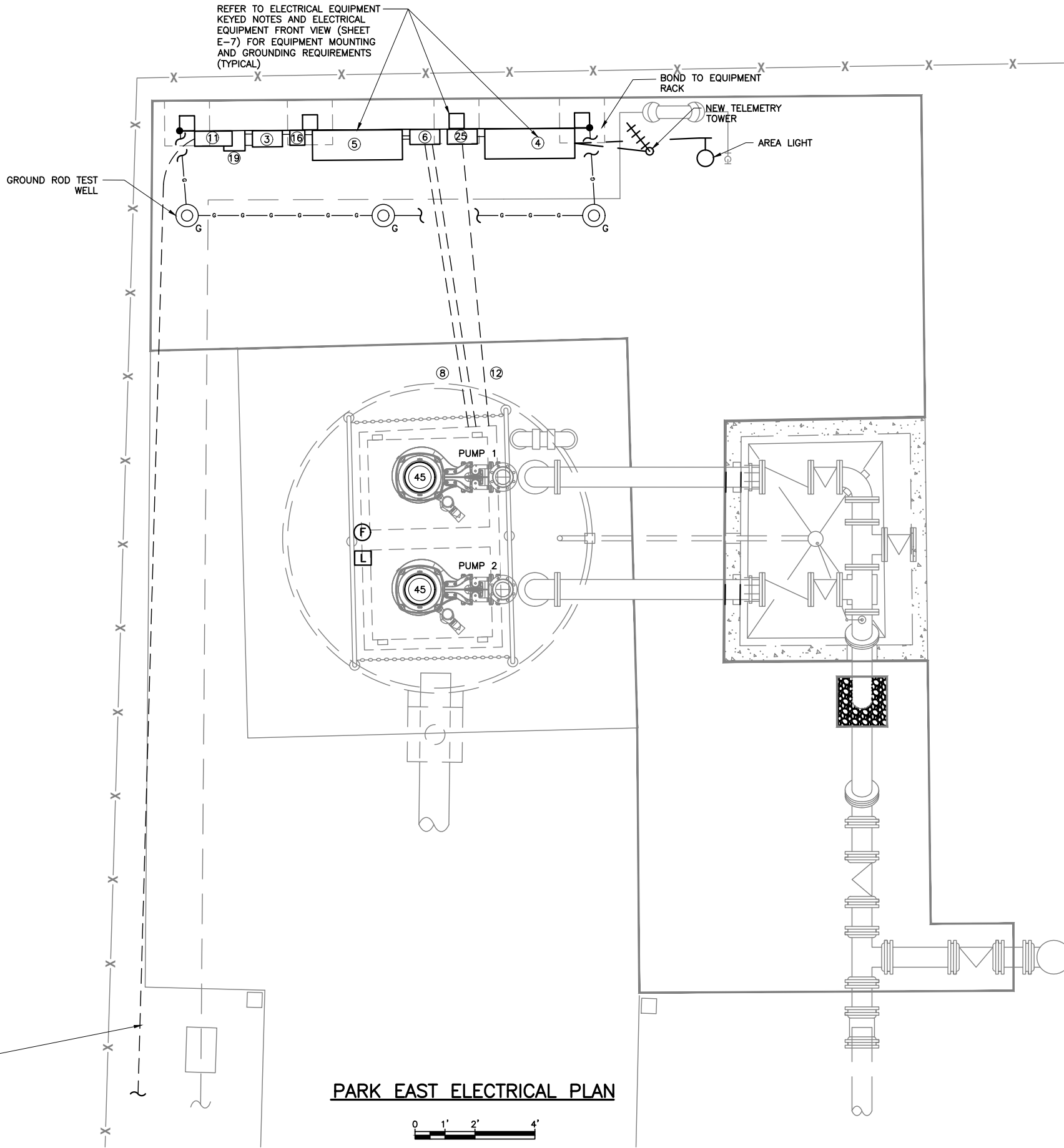
PARKE EAST DEMOLITION PLAN

SHEET

E-5

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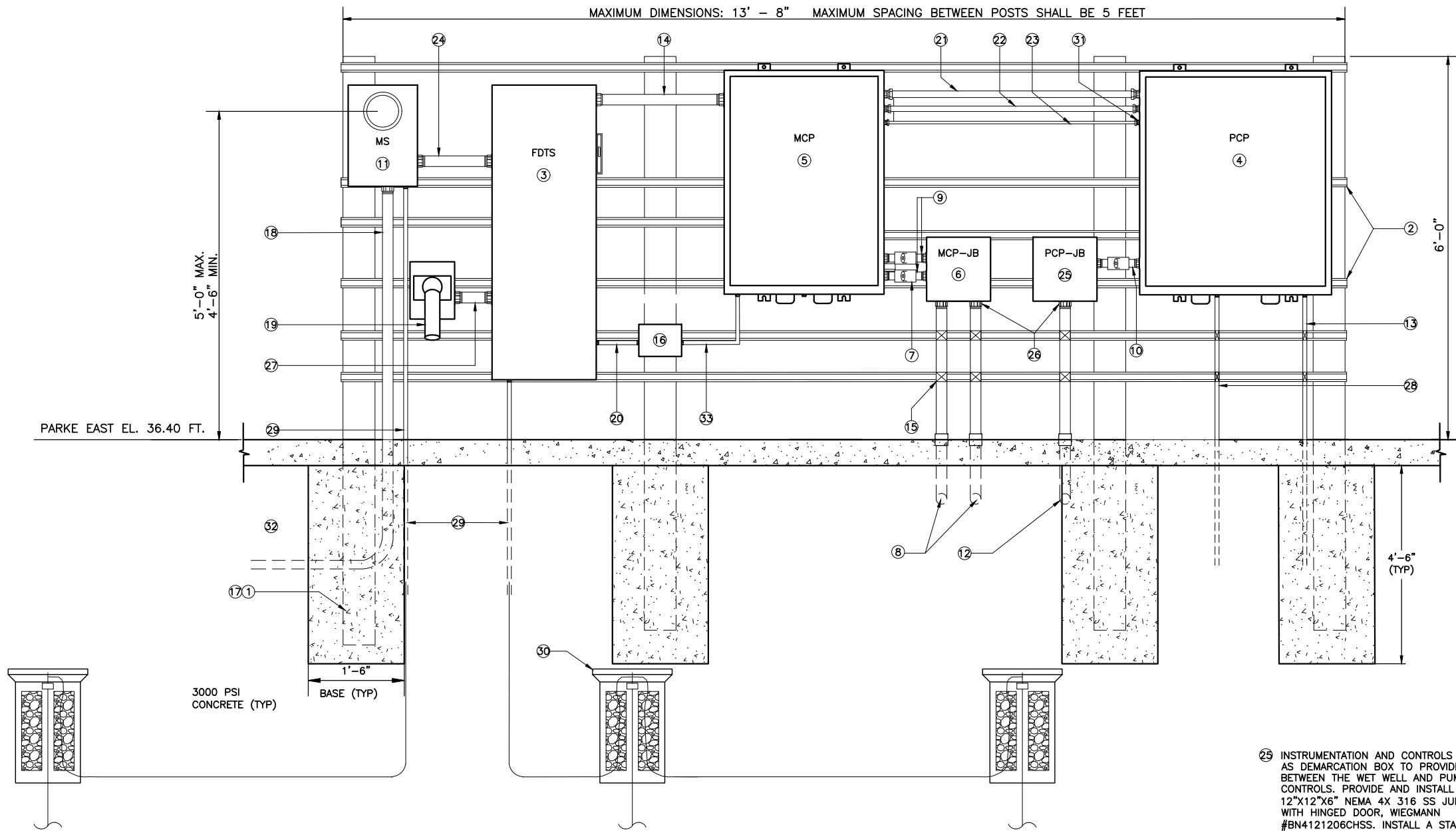
CITY of TAMPA
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WASTEWATER PUMPING STATION REHABILITATIONS
PROPOSED PARKE EAST ELECTRICAL PLAN

SHEET
E-6

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PARKE EAST ELECTRICAL EQUIPMENT LINE UP

NOT TO SCALE

KEYED NOTES:

- ① PROVIDE AND INSTALL 6" X 6" X 9' REINFORCED SQUARE CONCRETE POSTS. MAXIMUM SPACING BETWEEN POSTS SHALL BE 5 FEET.
- ② PROVIDE AND INSTALL 1-5/8" X 1-5/8" 316 STAINLESS STEEL UNISTRUT WITH 316 STAINLESS STEEL HARDWARE. NOTE: INSTALL ALL BOLTS FOR UNISTRUT COMPLETELY THROUGH CONCRETE POSTS.
- ③ PROVIDE AND INSTALL HEAVY DUTY, DOUBLE THROW, FUSIBLE SWITCH, 3-POLE, 600 VAC, 200 AMP IN NEMA 4X TYPE ENCLOSURE, 600 VOLT, DUAL-ELEMENT, TIME-DELAY CLASS RK5 FUSES; SWITCH--EATON DT364FWK, DT200NK--NEUTRAL KIT, DS200GK--GROUND LUG KIT, DS46FK--"R" FUSE ADAPTER KIT.
- ④ PUMP CONTROL CABINET. REFER TO DETAIL ON SHEET E-10.
- ⑤ MOTOR CONTROL CABINET. REFER TO DETAIL ON SHEET E-8.

- ⑥ PUMP MOTOR CONNECTIONS J.B.--USED AS A DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 12"x12"x6" NEMA 4X 316 SS JUNCTION BOX WITH HINGED DOOR, WIEGMANN #BN4121206CHSS. INSTALL A STAINLESS STEEL LOUVER PLATE KIT (4.75"x4.5") ON SIDE OF BOX TO PROVIDE NATURAL ASPIRATION, WIEGMAN #WAVK0304SSA. SEE SHEET E-17 FOR TERMINATION DETAILS.
- ⑦ PROVIDE AND INSTALL CROUSE-HINDS EYS TYPE SEALS W/CHICO COMPOUNDS.
- ⑧ PROPOSED PVC COATED ALUMINUM CONDUITS FOR MOTOR CONDUCTORS. CORE DRILL WET WELL WALLS AS REQUIRED TO INSTALL CONDUIT, SEE CIVIL SHEETS FOR PIPE PENETRATION INTO WET WELL DETAIL.

- ⑨ PROVIDE AND INSTALL CONDUITS AND XHHW-2 CU CABLES FOR SUBMERSIBLE PUMP POWER. SEE SHEET E-4, FOR CONDUIT AND CONDUCTOR SIZES.
- ⑩ PROVIDE AND INSTALL (3)--#14 XHHW-2 CU + (1)--#14 XHHW-2 CU GND + (1)-3/C--#18 TWISTED SHIELDED CABLE IN 1" CONDUIT FOR FLOAT AND WET WELL LEVEL TRANSMITTER.
- ⑪ PROVIDE AND INSTALL METER SOCKET IN ALUMINUM ENCLOSURE.
- ⑫ MANUFACTURER SUPPLIED CABLES FOR FLOAT SWITCH AND WET WELL LEVEL TRANSMITTER INSTALL IN 2" PVC COATED CONDUIT TO WET WELL FROM JUNCTION BOX. CORE DRILL WET WELL AS NEEDED TO INSTALL, PATCH SEAL WITH APPROVED PRODUCT. SEE CIVIL SHEETS FOR PIPE PENETRATION INTO WET WELL DETAIL.
- ⑬ PROVIDE AND INSTALL 1" CONDUIT FOR ANTENNA COAXIAL CABLE.

- ⑭ PROVIDE AND INSTALL CONDUIT AND WIRE PER SINGLE LINE DIAGRAM. SEE SHEET E-4, FOR CONDUIT AND CONDUCTOR SIZES.
- ⑮ PROVIDE AND INSTALL ALUMINUM CONDUIT STRAPS (TYPICAL).
- ⑯ PROVIDE AND INSTALL A 3-PHASE POWER MONITOR RELAY W/ LINE INPUT-ALARM ON PHASE LOSS, UNDERVOLTAGE, OR WRONG ROTATION. SEE SHEET E-20 FOR DETAILS.
- ⑰ OPEN CUT EXISTING CONCRETE PAD AS NECESSARY TO INSTALL NEW CONDUIT. REPLACE CONCRETE SLAB PER CIVIL DRAWINGS.
- ⑱ PROVIDE AND INSTALL CONDUIT TO BE EXTENDED TO EXISTING TECO POWER POLE AND HANDHOLE.
- ⑲ PROVIDE AND INSTALL AN EMERGENCY GENERATOR RECEPTACLE IN ACCORDANCE WITH CITY OF TAMPA STANDARDS.

- ⑳ PROVIDE AND INSTALL (3)--#12 XHHW-2 CU + (1)#12 XHHW-2 CU GND. IN 3/4" C.
- ㉑ PROVIDE AND INSTALL (30)--#12 XHHW-2 CU + (1)#12 XHHW-2 CU GND. IN 1-1/4" C. FOR 120VAC CONTROL SIGNALS. REFER TO MCP TO PCP INTERCONNECTIONS WIRING DIAGRAM ON ONE LINE DIAGRAMS.
- ㉒ PROVIDE AND INSTALL (17)--#14 XHHW-2 CU + (1)--#14 XHHW-2 CU GND. IN 1" C. FOR 24V DC CONTROL SIGNALS, REFER TO MCP TO PCP INTERCONNECTION WIRING DIAGRAM SHEET E-13.
- ㉓ PROVIDE AND INSTALL (3)--#12 XHHW-2 CU H. + (1)--#12 XHHW-2 CU NEU. + (1)#12 XHHW-2 CU GND. IN 3/4" CONDUIT FROM MOTOR CONTROLS PANEL TO PUMP CONTROL PANEL FOR 120V POWER CIRCUIT.
- ㉔ PROVIDE AND INSTALL CONDUIT AND WIRE PER ONE LINE DIAGRAM. SEE SHEET E-4, FOR CONDUIT AND CONDUCTOR SIZES.

- ㉕ INSTRUMENTATION AND CONTROLS J.B.--USED AS DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 12"x12"x6" NEMA 4X 316 SS JUNCTION BOX WITH HINGED DOOR, WIEGMANN #BN4121206CHSS. INSTALL A STAINLESS STEEL LOUVER PLATE KIT (4.75"x4.5") ON SIDE OF BOX TO PROVIDE NATURAL ASPIRATION, WIEGMANN #WAVK0304SSA. SEE SHEET E-17 FOR TERMINATION DETAILS.

- ㉖ PROVIDE DUCT SEALING COMPOUND IN ALL CONDUITS EXTENDING TO THE WET WELL.
- ㉗ PROVIDE AND INSTALL CONDUIT AND WIRE PER ONE LINE DIAGRAM FOR EMERGENCY GENERATOR CONNECTOR.
- ㉘ PROVIDE AND INSTALL A 3/4" CONDUIT TO PROPOSED AREA LIGHT.
- ㉙ PROVIDE AND INSTALL A 3/4" SCHEDULE 80 PVC CONDUIT FOR #2 AWG GROUNDING CONDUCTOR.
- ㉚ PROPOSED GROUNDING CONDUCTOR. APPROVED GROUND CLAMPS SHALL BE ATTACHED TO TWO APPROVED GROUNDING RODS (MINIMUM SPACING 6'-0") GROUNDING CONDUCTOR SHALL BE AWG #2 MIN. BARE STRANDED TINNED-COPPER.
- ㉛ PROVIDE AND INSTALL WATER-TIGHT/DUST-TIGHT (TYP.) MYERS HUB AND UNION (TYP.).

- ㉜ EQUIPMENT--LINE UP IS FOR INFORMATIONAL PURPOSES; CONTRACTOR SHALL VERIFY IF CONDUIT CAN BE INSTALLED AS SHOWN. MAKE MODIFICATIONS TO INSTALLATION AS NEEDED.
- ㉝ PROVIDE AND INSTALL (2) #14 XHHW-2 CU + (1) #14 XHHW-2 CU GND. IN 3/4" C.

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CITY of TAMPA
WASTEWATER DEPARTMENT

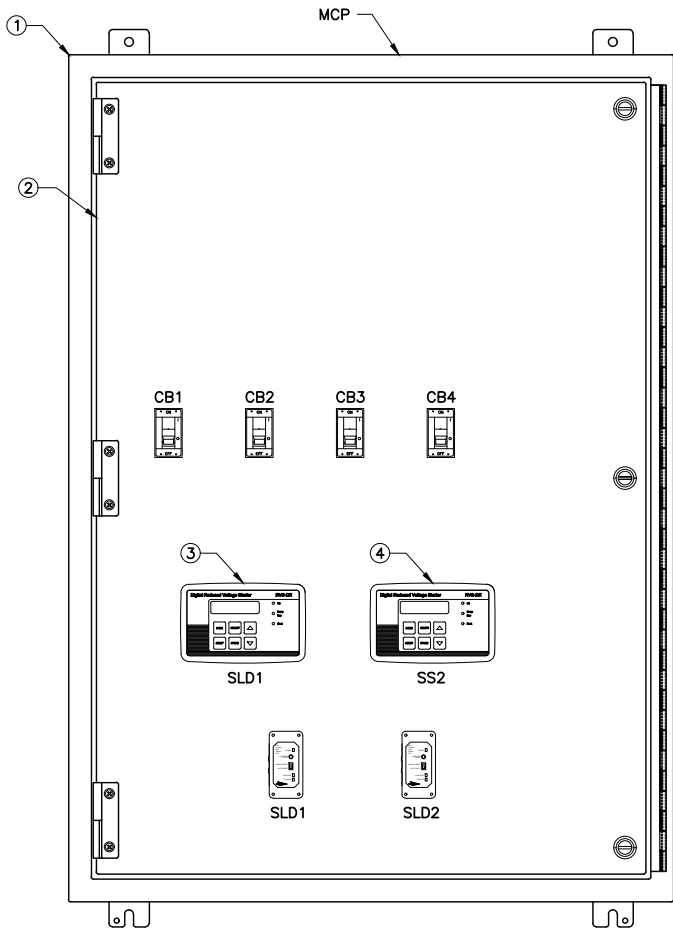
WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST ELECTRICAL EQUIPMENT
FRONT VIEW & KEYED NOTES

SHEET
E-7

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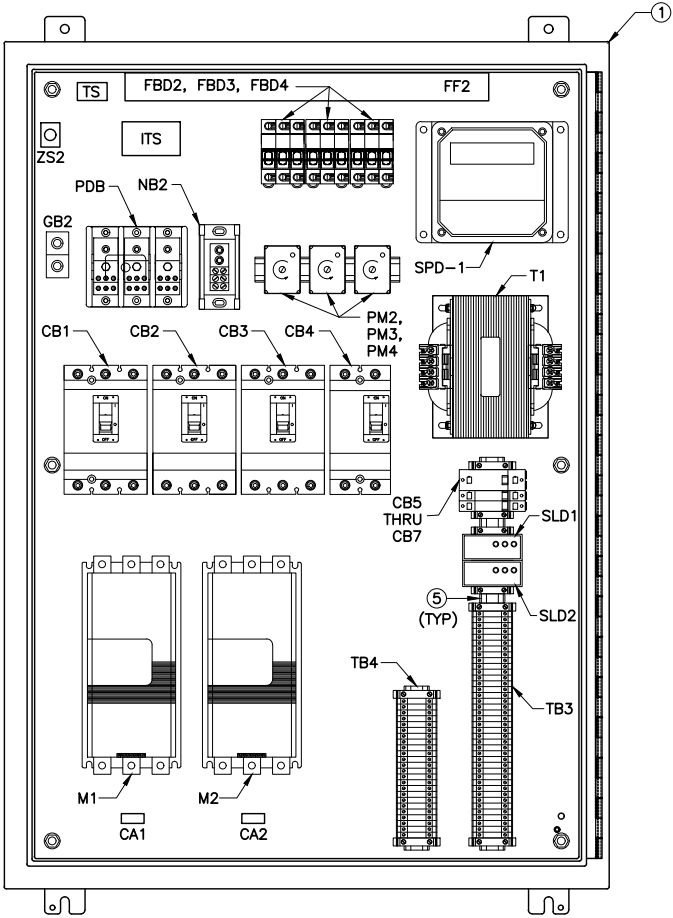
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MOTOR CONTROL PANEL DETAILS

SCALE: N.T.S.



PANEL INTERIOR DETAILS

SCALE: N.T.S.

PARKE EAST

NOTE:

1. FOR INFORMATIONAL PURPOSED ONLY. EXACT DEVICES, MOUNTING EQUIPMENT SIZES, ETC., TO BE DETERMINED BY THE MOTOR CONTROL PANEL MANUFACTURER.

LEGEND PLATE SCHEDULE		
SYMBOL	DEVICE	LEGEND
CB1	CIRCUIT BREAKER	PUMP NO. 1 CIRCUIT BREAKER
CB2	CIRCUIT BREAKER	PUMP NO. 2 CIRCUIT BREAKER
CB3	CIRCUIT BREAKER	SPARE
CB4	CIRCUIT BREAKER	TRANSFORMER 'T1' 480V FEEDER
SS1	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 1 KEYPAD
SS2	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 2 KEYPAD

KEYED NOTES:	
①	MOTOR CONTROL CABINET. 42" X 30" X 12" NEMA 4X SS, POWDER COAT WHITE. THE MCP ENCLOSURE SHALL BE SIZED TO COMPLY WITH UL508A REQUIREMENTS. BEST PRACTICES SHALL BE USED TO AVOID EXCESSIVE OVERSIZING.
②	PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
③	PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #1.
④	PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #2.
⑤	PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST
MOTOR CONTROL PANEL DETAILS

SHEET

E-8

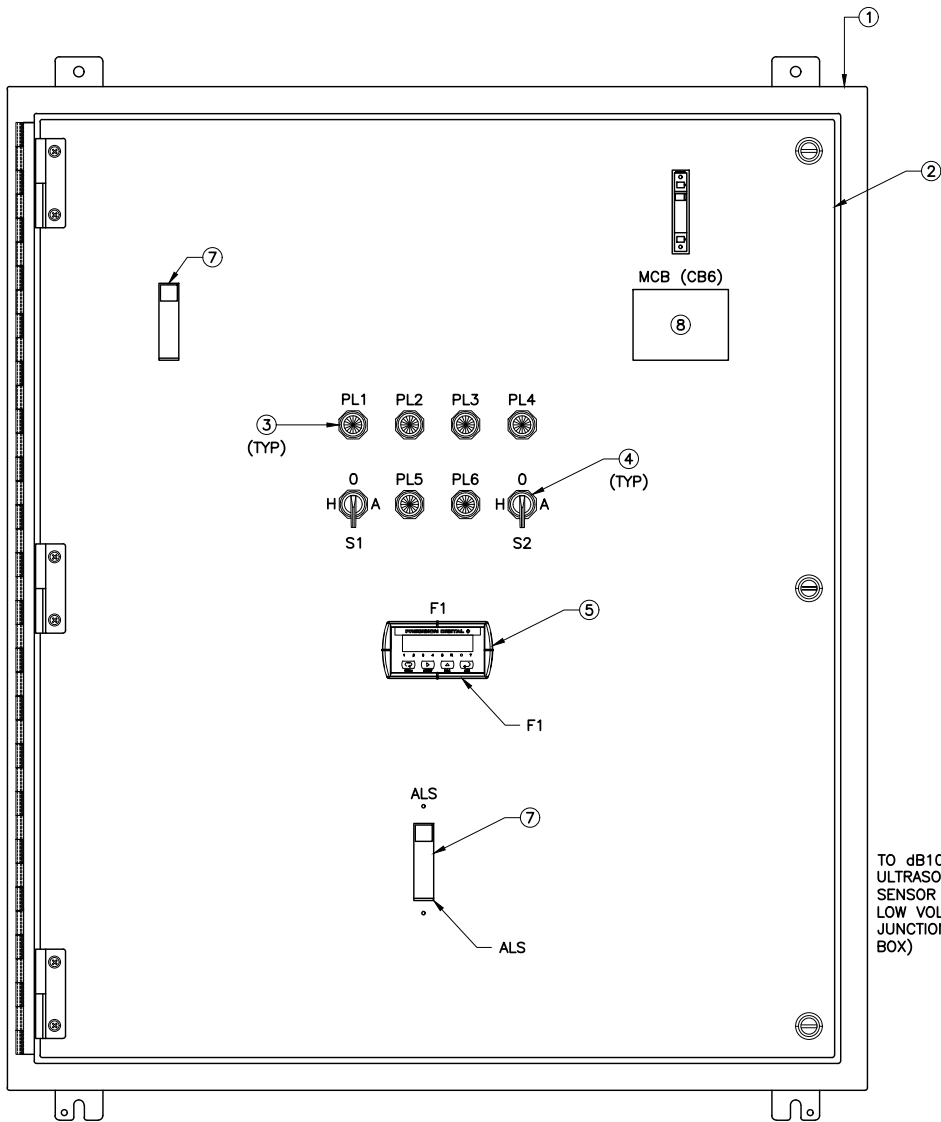
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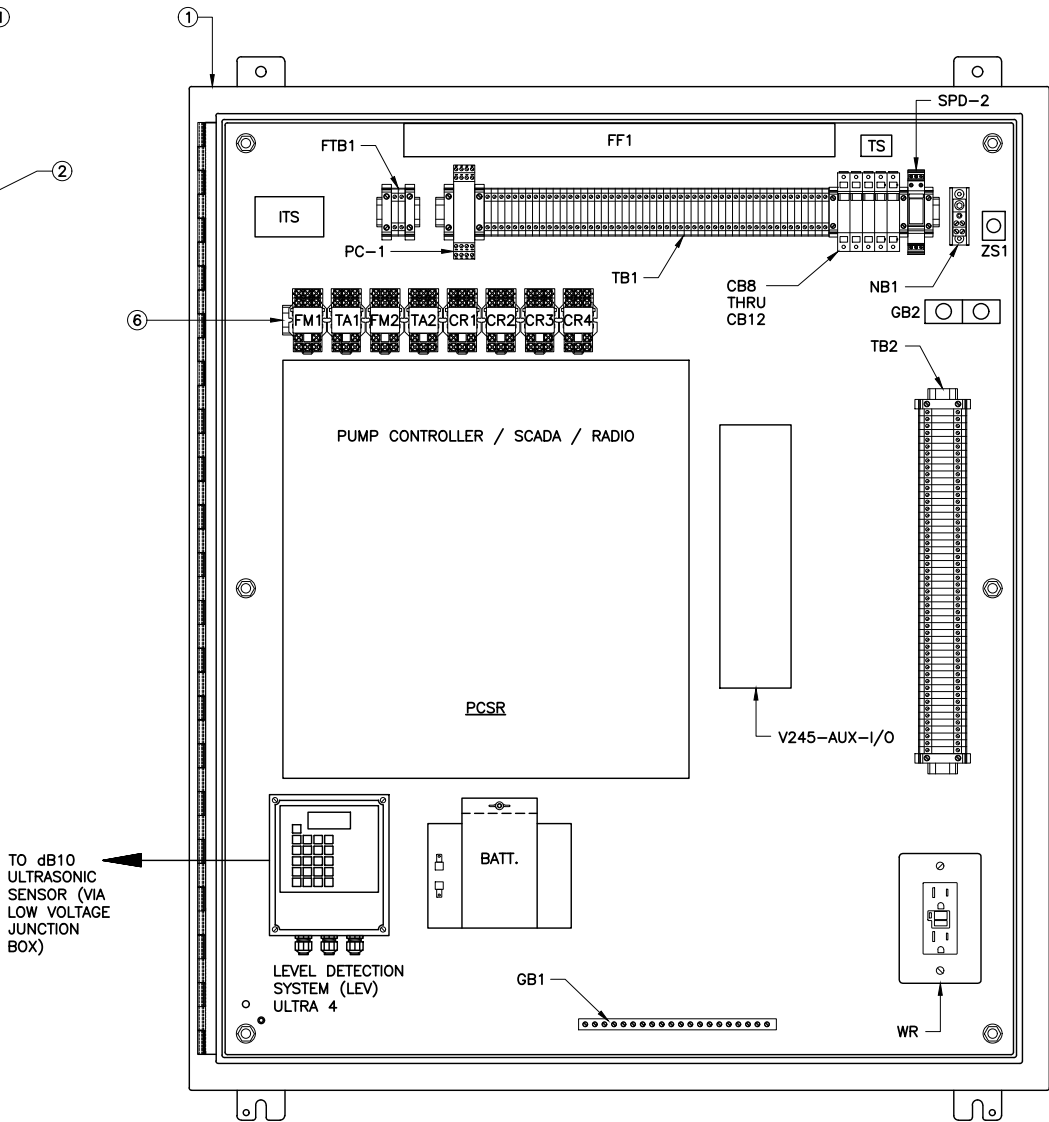
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PUMP CONTROL PANEL DETAILS

N.T.S.

NOTE: FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY



PANEL INTERIOR

N.T.S.

NOTE:

1. FOR INFORMATIONAL PURPOSED ONLY. EXACT DEVICES, MOUNTING EQUIPMENT SIZES, ETC., TO BE DETERMINED BY THE PUMP CONTROL PANEL MANUFACTURER.

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
ETM1	ELAPSED TIME METER	PUMP NO. 1 HOURS
ETM2	ELAPSED TIME METER	PUMP NO. 2 HOURS
PL1	YELLOW PILOT LIGHT	PUMP NO. 1 ON
PL2	RED ILLUMINATED PUSH BUTTON	PUMP NO. 1 TEMP. ALARM
PL3	RED ILLUMINATED PUSH BUTTON	PUMP NO. 2 TEMP. ALARM
PL4	YELLOW PILOT LIGHT	PUMP NO. 2 ON
PL5	RED PILOT LIGHT	PUMP NO. 1 SEAL LEAK ALARM
PL6	RED PILOT LIGHT	PUMP NO. 2 SEAL LEAK ALARM
S1	3 POSITION SWITCH	PUMP NO. 1 HAND-OFF-AUTO
S2	3 POSITION SWITCH	PUMP NO. 2 HAND-OFF-AUTO
MCB	PUMP CONTROL PANEL MAIN CIRCUIT BREAKER	MAIN CIRCUIT BREAKER
F1	DIGITAL PROCESS METER	WET WELL LEVEL
ALS	TOGGLE SWITCH	AREA LIGHT SWITCH

KEYED NOTES:

- ① PUMP CONTROL CABINET. 42" X 36" X12" NEMA 4X SS, POWDER COAT WHITE.
- ② PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
- ③ PROVIDE AND INSTALL NEW PILOT LIGHT.
- ④ PROVIDE AND INSTALL NEW SELECTOR SWITCH.
- ⑤ PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6R3-10 WITH 4-20mA OUTPUT.
- ⑥ PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
- ⑦ PROVIDE AND INSTALL NEW SINGLE-POLE 120/277V, 20A LIGHT SWITCH TO CONTROL AREA LIGHT. REFER TO SHEET E-28 FOR DETAIL.
- ⑧ PROVIDE WARNING LABEL ABOVE OR BELOW CB6. LABEL TO READ:
"WARNING: THE 120VAC SUPPLY FOR THIS PUMP CONTROL PANEL (PCP) IS FED FROM MOTOR CONTROL PANEL MCP AND WILL BE PRESENT AT THE LINE SIDE OF MCB (CB-6) LOCATED IN THIS PANEL. LOCK AND TAG OUT THE MOTOR CONTROL PANEL DISCONNECT PRIOR TO OPENING DEAD FRONT DOOR."

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CITY of TAMPA
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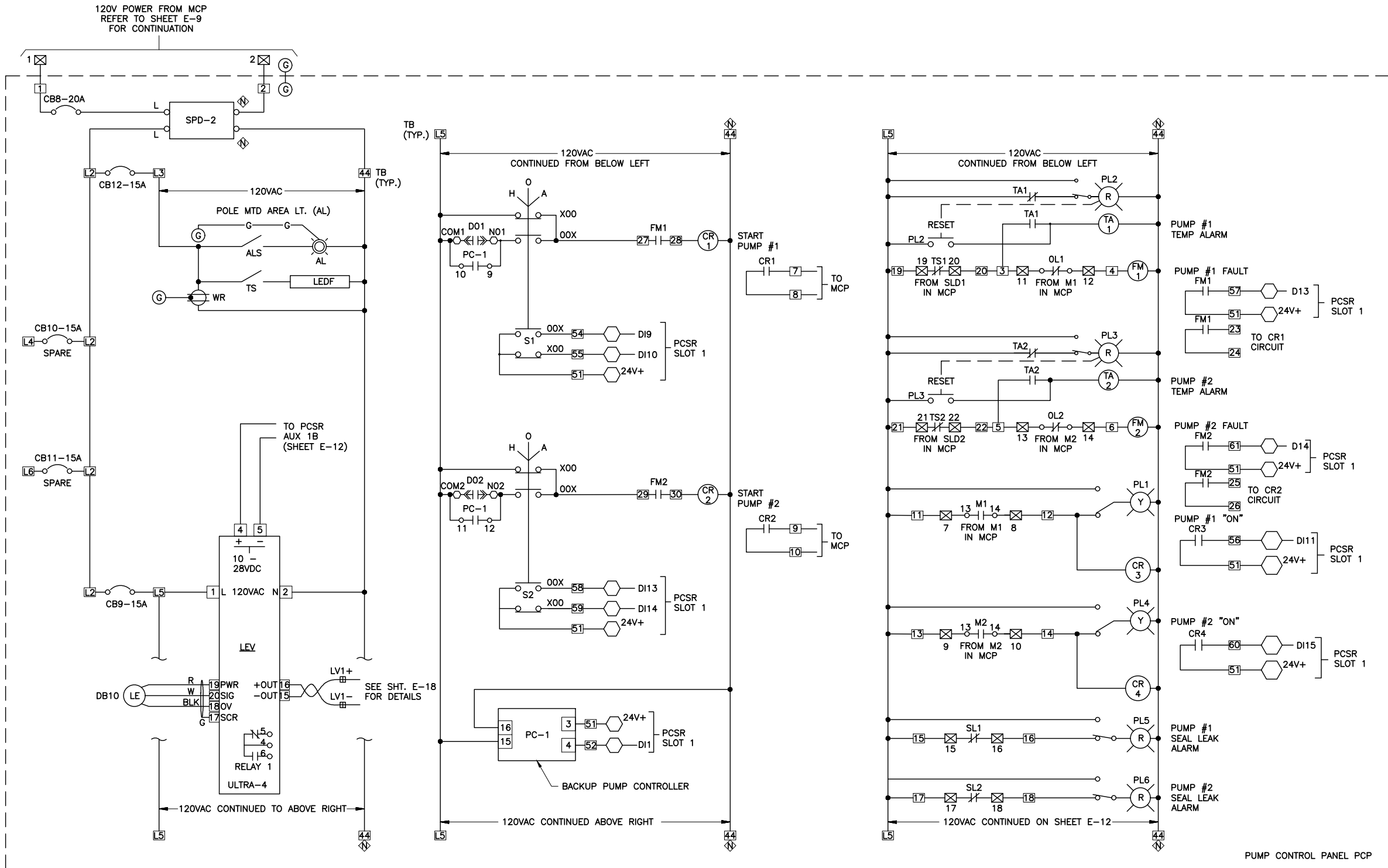
WASTEWATER PUMPING STATION REHABILITATIONS
**PARKE EAST PUMP CONTROL
PANEL DETAILS**

SHEET
E-10

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ELECTRICAL SCHEMATIC
SCALE: N.T.S.

- TERMINALS ON ACE I/O MODULE (GENERAL)
- TERMINALS IN PUMP CONTROL PANEL (PCP)
- ⊗ TERMINALS IN MOTOR CONTROL PANEL (MCP)

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST PUMP CONTROL PANEL
ELECTRICAL SCHEMATIC (1 OF 2)

SHEET
E-II

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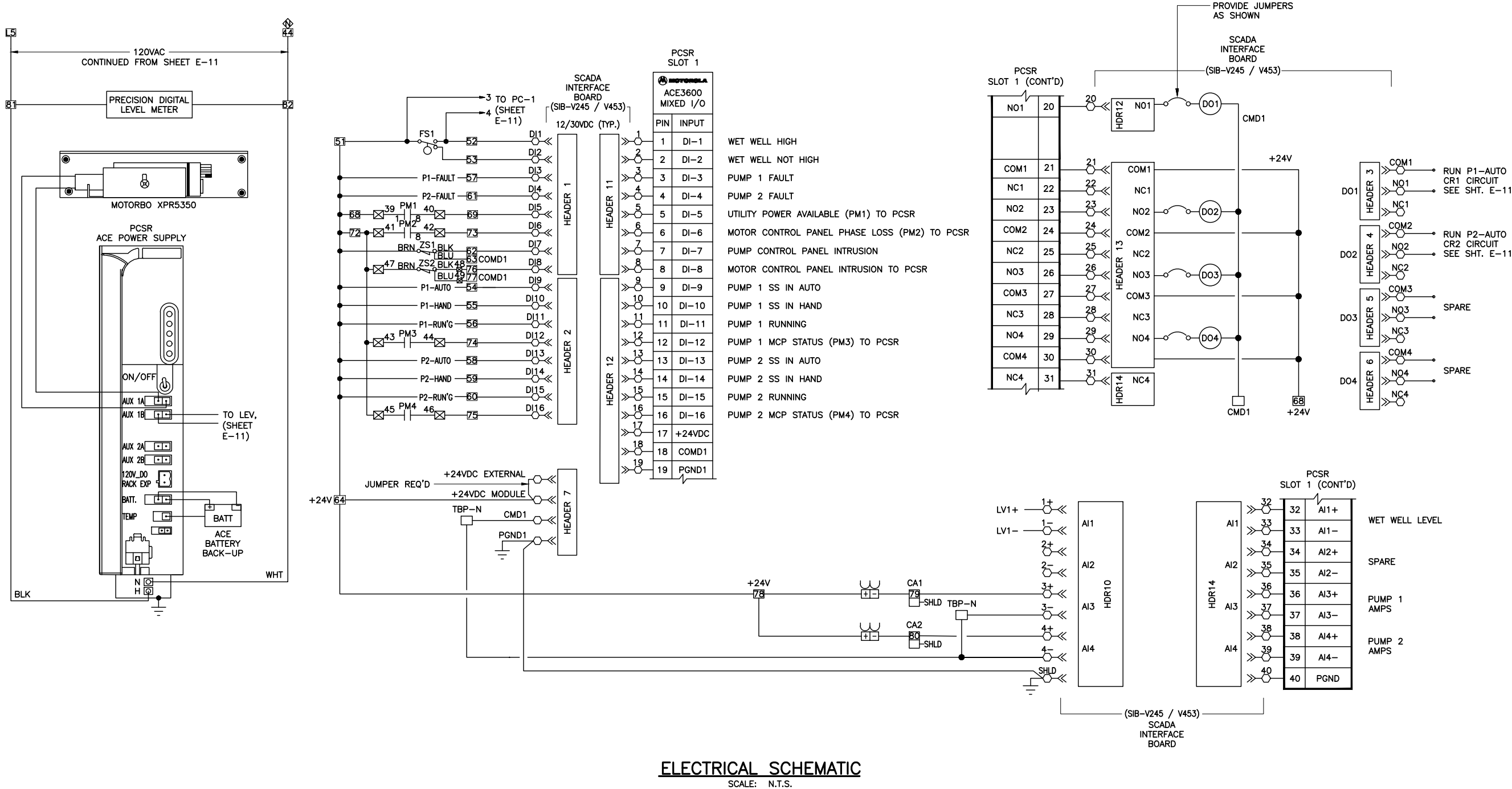
DES: MJC
DRN: SJT
CKD: WCN
DATE: 10/27/2022

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST PUMP CONTROL PANEL
ELECTRICAL SCHEMATIC (2 OF 2)

SHEET
E-12

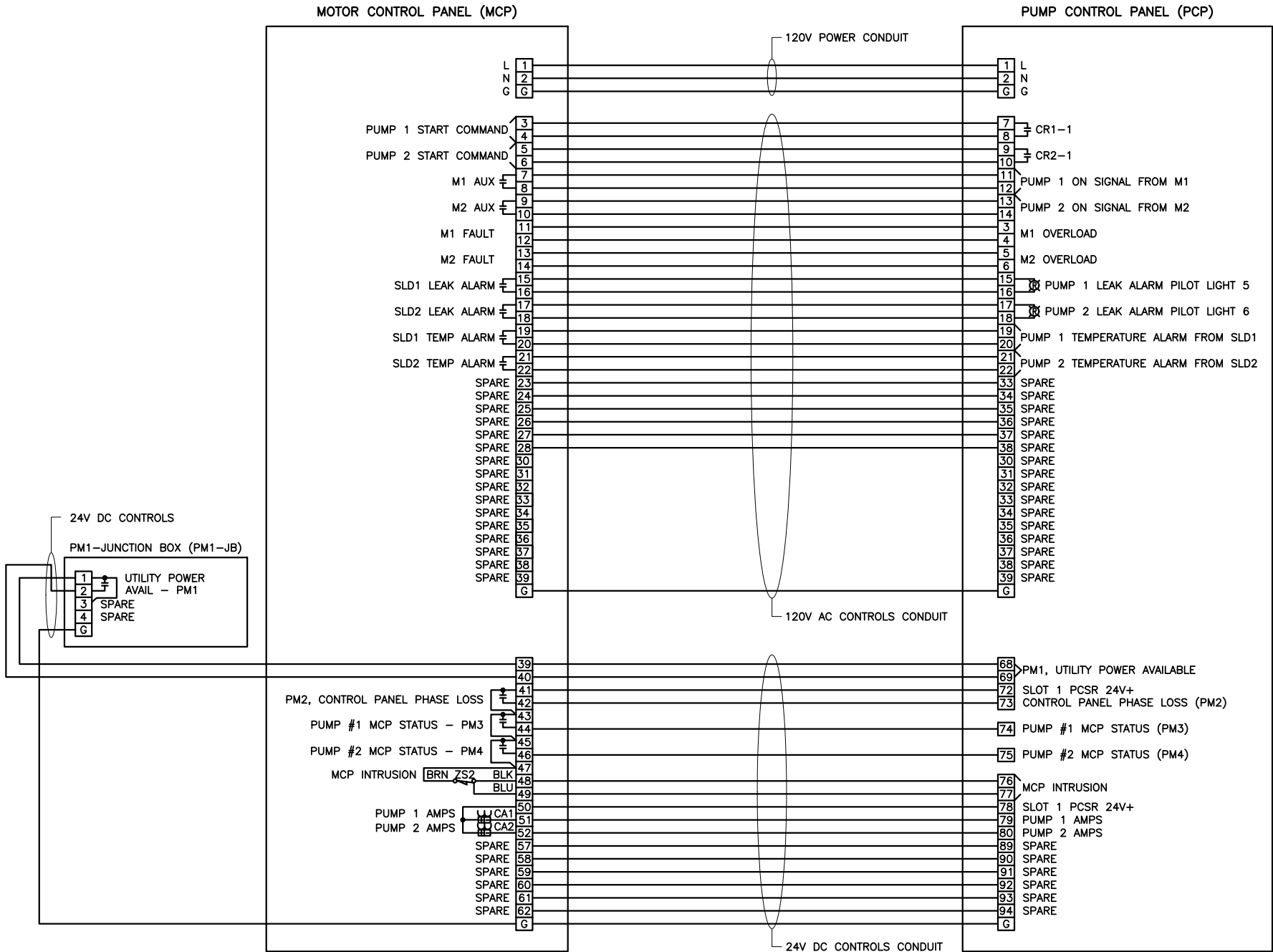
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ELECTRICAL SCHEMATIC
SCALE: N.T.S.

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INTERCONNECTION WIRING DIAGRAM
SCALE: N.T.S.

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
**PARK EAST INTERCONNECTION WIRING
DIAGRAM**

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TB1(□)(120V AC) MOUNTED ON PUMP CONTROL PANEL (PCP)		TB2(□)(24V DC) MOUNTED ON PUMP CONTROL PANEL (PCP)		TB3(⊞)(120V AC) MOUNTED ON MOTOR CONTROL PANEL (MCP)		TB4(⊞)(24V DC) MOUNTED ON MOTOR CONTROL PANEL (MCP)		TB5(△)(24V YOC) MOUNTED ON PM1-JUNCTION BOX (PM1-JB)	
TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION
1	120V FROM MOTOR CONTROL PANEL	51	SLOT 1 PCSR 24V+	1	120V TO PUMP CONTROL PANEL	39	PM1, UTILITY POWER AVAILABLE	1	SLOT 1 PCSR 24V+
2	NEUTRAL FROM MOTOR CONTROL PANEL	52	WET WELL HIGH	2	NEUTRAL (CONTINUED TO PUMP CONTROL PANEL	40	PM1, UTILITY POWER AVAILABLE	2	UTIL POWER AVAILABLE (PM1) TO PCSR
3	SOFTSTARTER NO. 1 FAULT FROM M1	53	WET WELL NOT HIGH	3	PUMP 1 START COMMAND FROM CR1-1 (IN PCP)	41	SLOT 1 PCSR 24V+	3	SPARE
4	SOFTSTARTER NO. 1 FAULT FROM M1	54	PUMP 1 "AUTO" TO PCSR	4	PUMP 1 START COMMAND FROM CR1-1 (IN PCP)	42	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR	4	SPARE
5	SOFTSTARTER NO. 2 FAULT FROM M2	55	PUMP 1 "HAND" TO PCSR	5	PUMP 2 START COMMAND FROM CR2-1 (IN PCP)	43	SLOT 1 PCSR 24V+	5	SPARE
6	SOFTSTARTER NO. 2 FAULT FROM M2	56	PUMP 1 "ON" TO PCSR	6	PUMP 2 START COMMAND FROM CR2-1 (IN PCP)	44	PUMP #1 MCP STATUS PHASE LOSS (PM3) TO PCSR		
7	PUMP 1 START COMMAND TO M1 (IN MCP)	57	PUMP 1 "FAULT" TO PCSR	7	PUMP 1 'ON' SIGNAL TO CR3 (IN PCP)	45	SLOT 1 PCSR 24V+		
8	PUMP 1 START COMMAND TO M1 (IN MCP)	58	PUMP 2 "AUTO" TO PCSR	8	PUMP 1 'ON' SIGNAL TO CR3 (IN PCP)	46	PUMP #2 MCP STATUS PHASE LOSS (PM4) TO PCSR		
9	PUMP 2 START COMMAND TO M2 (IN MCP)	59	PUMP 2 "HAND" TO PCSR	9	PUMP 2 'ON' SIGNAL TO CR4 (IN PCP)	47	SLOT 1 PCSR 24V+		
10	PUMP 2 START COMMAND TO M2 (IN MCP)	60	PUMP 2 "ON" TO PCSR	10	PUMP 2 'ON' SIGNAL TO CR4 (IN PCP)	48	} MOTOR CONTROL PANEL INTRUSION		
11	P1 "ON" SIGNAL FROM M1 (IN MCP)	61	PUMP 2 "FAULT" TO PCSR	11	M1 FAULT SIGNAL TO PCP	49			
12	P1 "ON" SIGNAL FROM M1 (IN MCP)	62	} PUMP CONTROL PANEL INTRUSION	12	M1 FAULT SIGNAL TO PCP	50	SLOT 1 PCSR 24V+		
13	P2 "ON" SIGNAL FROM M2 (IN MCP)	63		13	M2 FAULT SIGNAL TO PCP	51	PUMP 1 AMPS		
14	P2 "ON" SIGNAL FROM M2 (IN MCP)	64	SLOT 1 PCSR 24V+	14	M2 FAULT SIGNAL TO PCP	52	PUMP 2 AMPS		
15	PUMP 1 LEAK ALARM FROM MCP	65	SPARE	15	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)	53	PUMP 1 SEAL LEAK DETECTOR PROBE		
16	PUMP 1 LEAK ALARM FROM MCP	66	SLOT 1 PCSR 24V+	16	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)	54	PUMP 1 SEAL LEAK DETECTOR PROBE		
17	PUMP 2 LEAK ALARM FROM MCP	67	SLOT 1 PCSR 24V+	17	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)	55	PUMP 1 SEAL LEAK DETECTOR PROBE		
18	PUMP 2 LEAK ALARM FROM MCP	68	SLOT 1 PCSR 24V+	18	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)	56	PUMP 1 SEAL LEAK DETECTOR PROBE		
19	PUMP 1 TEMPERATURE ALARM FROM MCP	69	UTIL POWER AVAILABLE (PM1) TO PCSR	19	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)	57-66	SPARE		
20	PUMP 1 TEMPERATURE ALARM FROM MCP	70	SPARE	20	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)				
21	PUMP 2 TEMPERATURE ALARM FROM MCP	71	SPARE	21	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)				
22	PUMP 2 TEMPERATURE ALARM FROM MCP	72	SLOT 1 PCSR 24V+	22	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)				
23	PUMP 1 FAULT RELAY CONTACT	73	MOTOR CONTROL PANEL PHASE LOSS (PM2)	23-37	SPARE				
24	PUMP 1 FAULT RELAY CONTACT	74	PUMP #1 MCP STATUS (PM3) TO PCSR	H1	CB11 OUT MOTOR CONTROL PANEL POWER				
25	PUMP 2 FAULT RELAY CONTACT	75	PUMP #2 MCP STATUS (PM4) TO PCSR						
26	PUMP 2 FAULT RELAY CONTACT	76	} MOTOR CONTROL PANEL INTRUSION						
27-43	SPARE	77							
44	SPD-2 NEUTRAL OUT	78	SLOT 1 PCSR 24V+						
L1	SPD-2 NEUTRAL OUT	79	PUMP 1 AMPS						
L2	MAIN BREAKER CB6	80	PUMP 2 AMPS						
L3	CB12 RECEP. & AREA LIGHT	81	PROCESS METER FOR LEVEL 120V-POWER						
L4	CB7 OUT (SPARE)	82	PROCESS METER FOR LEVEL 120V-NEUTRAL						
L5	CB9 PUMP CONTROLS	83	SPARE SLOT 1 TERMINALS						
L6	CB8 OUT (SPARE)	84	SPARE SLOT 1 TERMINALS						
		85	SLOT 2 PCSR 24V+						
		86	SLOT 2 PCSR 24V+						
		87	SLOT 2 PCSR 24V+						
		91	LEVEL TRANSDUCER						
		92							
		93							
		94	SPARE						
		95							
		96							
		88-100	SPARE						

- X-Y
⊞
- TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR)
-
-
- TERMINAL POINT ON PCSR
-
-
- TERMINAL POINT IN PUMP CONTROL PANEL (PCP)
-
- ⊞
- TERMINAL POINT IN MOTOR CONTROL PANEL (MCP)
-
- △
- TERMINAL POINT IN PM1 JUNCTION BOX (PM1-JB)

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CITY of TAMPA

WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST MOTOR/PUMP CONTROL PANEL

TERMINAL DETAILS

SHEET

E-14

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PARKE EAST MOTOR CONTROL PARTS SCHEDULE						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
CB1, CB2	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36100	600 V, 100A	18KAIC @ 480V
CB3	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36020	600 V, 20A	18KAIC @ 480V
CB4	CIRCUIT BREAKER	SQUARE D	TWO POLE	HDL 26015	600 V, 15A	18KAIC @ 480V
M1, M2	MOTOR SOFT STARTER	SOLCON	SOFT STARTER	RVS-DX-72-480-115-8D-U-S	480V, 72A, 120V CONTROLS	PROVIDE REMOTE KEYPAD
CB6, CB7	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
CB5	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-120	120 V, 20A	
CA1, CA2	CIRCUIT SENSOR	ENERCORP INSTRUMENTS	4-20mA OUTPUT	SC200-2	0-10A, 0-150A, 0-200A	SELECTABLE RANGE
T1	TRANSFORMER	SQUARE D	OPEN TYPE	9070T2000D31	480V PRI, 120/240 V SEC.	2KVA
ZS2	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
LEDf & TS	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
SPD-1	SURGE PROTECTIVE DEVICE TYPE 1	ASCO	MOTOR CONTROL PANEL SPD	TE04XDS104X	480/277 V, 3ø, 4W	
TB3, TB4	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	50 CONTACTS (MIN)
ITS	INSULATED TERMINAL STRIP	ALLEN-BRADLEY	STYLE AA	1492-15-T	600 V AC NEUTRAL BLOCK	4 CONTACTS (MIN) W/ SHORTING BARS
MCP	MOTOR CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 42"x30"x12"	42"x30"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
MP	ENCLOSURE PANEL	HOFFMAN	39" X 27", STEEL	A42P30	STEEL, 12 GAUGE	
PM2, PM3, PM4	3-PHASE POWER MONITOR	ATC DIVERSIFIED ELECTRONICS	8 PIN PLUG-IN	SUA-440-ASA	480 VAC	W/ OPTIONAL 5-SEC RELEASE AND DIN RAIL SOCKET-RB08PC
PDB	PWR DIST. BLOCK	BUSSMANN/EATON	THREE POLE	PDBFS220	600 V, 175 AMP	FINGER-SAFE TERMINAL BLOCKS
FBD 2, 3, 4	FUSE BLOCK / DISCONNECT	ALLEN BRADLEY	THREE PHASE- HIGH INTER. CAP.	1492-FB3C30-L	600 VAC, 200KAIC	W/ BUSSMANN KTK-R-2 FAST ACTING, REJECTION FUSES
FL	FLOAT SWITCH	ANCHOR SCIENTIFIC	SPDT	S20NONC	10 A @ 120 V	PROVIDED BY THE CITY INSTALLED BY CONTRACTOR
FTB2	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5-HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
SLD1, SLD2	PUMP MONITORING UNIT	XYLEM		MINI-CAS 120	10A AT 240V AC	
GB2	GROUNDING BLOCK	ILSCO	AS REQUIRED	AS REQUIRED		
NB2	NEUTRAL DISTRIBUTION BLOCK	BUSSMAN	SINGLE POLE	16220-1	600V, 175A	

PARTS SCHEDULE (MISCELLANEOUS)						
PM1- JUNCTION BOX						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
PM1	3-PHASE POWER MONITOR	ATC DIVERSIFIED ELECTRONICS	8 PIN PLUG-IN	SUA-440-ASA	480 VAC	W/ OPTIONAL 5-SEC RELEASE AND DIN RAIL SOCKET-RB08PC
FBD1	FUSE BLOCK / DISCONNECT	ALLEN BRADLEY	THREE PHASE- HIGH INTER. CAP.	1492-FB3C30-L	600 VAC, 200KAIC	W/ BUSSMANN KTK-R-2 FAST ACTING, REJECTION FUSES
PM1-JB	PHASE MONITOR JUNCTION BOX	HAMMOND MANUFACTURING	NEMA 4X, 8"x6"x6"	EJ866S16	316 S.S.	INSTALL DIN RAILS TO MOUNT PM1 AND FBD1
TB5	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	5 CONTACTS (MIN)
EXTERNAL ELECTRICAL						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
FDTs	FUSED DOUBLE THROW DISCONNECT SWITCH	EATON	SERVICE ENTRANCE RATED, HEAVY DUTY	DT364WK	200A, 600V NEMA 4X, S/S	TIME DELAY CLASS RK5 FUSES (6) EDISON ESCR 200 (PROVIDE (3) SPARES)
				DH200NK NEUTRAL KIT DS200GK GROUND KIT DS46FK R FUSE ADAPTOR KIT		
MS	METER SOCKET	MILBANK	7 TERMINAL	UAP9701-X-QG-HSP	600 VAC, 200 AMP	ALUMINUM CONSTRUCTION
EC	EMERGENCY CONNECTOR	CROUSE & HINDS	ARKTITE	AREA10415-S22 W/ BACK BOX, ANGLE ADAPTER, 1-1/2" HUB AND SPRING COVER	600V 100 AMP	
LA SPD 1	LIGHTNING ARRESTER	SQUARE D	THREE POLE, 4 WIRE	SDS A3650	40 KA, 600 V MAX	
MCP-JB	MOTOR CONTROL PANEL JUNCTION BOX	WIEGMANN	NEMA 4X, 12"x12"x6"	BN4121206CHSS	304 S.S.	INSTALL S.S. LOUVER PLATE KIT WIEGMANN #WAVK0304SSA
PCP-JB	PUMP CONTROL PANEL JUNCTION BOX	WIEGMANN	NEMA 4X, 12"x12"x6"	BN4121206CHSS	304 S.S.	INSTALL S.S. LOUVER PLATE KIT WIEGMANN #WAVK0304SSA
PDB	PWR DIST. BLOCK	BUSSMANN/EATON	THREE POLE	PDBFS220	600 V, 175 AMP	FINGER-SAFE TERMINAL BLOCKS
	SEAL FITTING	CROUSE-HINDS	COPPER-FREE ALUMINUM	AS REQUIRED		



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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

PARKE EAST PARTS SCHEDULE (SHT.I OF 2)

SHEET

E-15

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PARTS SCHEDULE (PUMP CONTROL PANEL)						
SYMBOL	NAME	PART				REMARKS
		PCSR PARTS LIST				
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PCSR	PLC BASED PUMP CONTROLLER, SCADA, AND RADIO SYSTEM	MOTOROLA CORP.	DUPLEX PUMP CONTROLLER BASED ON ACE 3600 PROGRAM CONTROLLER	PART #7509	BASIC MODEL	PROVIDE (1) SPARE
		MOTOROLA CORP.	MOTORBO ANALOG RADIO INSTALLATION KIT	VA00194 (PART #FLN1059)		
		MOTOROLA CORP.	MOTORBO XPR5350 RADIO	VA00161 (PART #UE1078A)	UHF RI: 403-470MHZ	
		MOTOROLA CORP.	METAL CHASIS	PART #V214	MEDIUM 14" x 14"	
		MOTOROLA CORP.	AC POWER SUPPLY 85-264V	PART #V261	100-240 VAC W/ 12V SMART CHARGER	PROVIDE (1) SPARE
		MOTOROLA CORP.	BACKUP BATTERY	PART #V328	10.0 Ah SEALED LEAD-ACID	FITS IN SEPARATE LOCATION FROM METAL CHASSIS; INCLUDE: FKN8376 BATTERY POWER CABLE, FHN601 MOUNTING BRACKET, AND FNN7898 10 AH BACKUP BATTERY
		MOTOROLA CORP.	3-I/O SLOT FRAME	PART #V103		
		MOTOROLA CORP.	20 PIN TB HOLDER KIT	PART #V158		
		MOTOROLA CORP.	I/O SLOT COVER	PART #V20	BLANK MODULE	UTILIZE WHERE NEEDED
		MOTOROLA CORP.	16 DI + 4 DO (EE) + (4)± 20 mA AI	PART #V245	PART #V245	MIXED I/O, PROVIDE (2) SPARES
		MOTOROLA CORP.	24 VDC PLUG-IN POWER SUPPLY	PART #V260 (FPN1653A)	24V FLOATING MAX, 150 mA OUTPUT	FLOATING POWER SUPPLY
		WILKERSON	SCADA INTERFACE BOARD	PART #SIB-V 245/V453		PROVIDE (2) SPARES
SYMBOL	NAME	PART				REMARKS
		REMAINING PARTS LIST				
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PC-1	BACKUP PUMP CONTROLLER	WILKERSON	DUPLEX LIFT STATION	DR1920	10 AMP CONTACTS	DIN RAIL MOUNTING
FTB1	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5-HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
F1	PROCESS METER	PRECISION DIGITAL	4 DIGIT, 1.2" DISPLAY	PD765-6R3-10		PROVIDE 4-20 mA OUTPUT
CB8	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-120	120 V, 20A	
CB9, CB10, CB11, CB12	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
PL1, PL4	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LYA9	120 V, LED TYPE	YELLOW LENS & PRESS TEST
PL2, PL3	ILLUM. PUSH BUTTON	SQUARE D	CLASS 9001	SK2L38LRRH13	120 V, LED TYPE	RED LENS & 1 N.O., 1 N.C.
PL5, PL6	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
S1, S2	HOA SWITCH ASSEMBLY	SQUARE D	OIL-TIGHT CLASS 9001	SKS - 43B H2	10A @ 120V	
ZS1	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
LEDF & TS	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
WR	WALL RECEPTACLE	HUBBELL	DUPLEX W/GFI	GF5262	120V AC, 15A GFI	W/ALUMINUM OUTLET BOX AND COVER
TB1, TB2	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	50 CONTACTS (MIN)
ITS	INSULATED TERMINAL STRIP	ALLEN-BRADLEY	STYLE AA	1492-15-T	600 V AC NEUTRAL BLOCK	4 CONTACTS (MIN) W/ SHORTING BARS
GB1	GROUND BAR SYSTEM	PANDUIT	12 PORT WITH MAIN LUG	UGB2/0-414-12		COPPER CONSTRUCTION
GB2	GROUNDING BLOCK	ILSCO	AS REQUIRED	AS REQUIRED		
TA1, TA2	CONTROL RELAY	POTTER & BRUMFIELD	8 PIN PLUG-IN	KRPA-11AG-120	120V AC COIL, 10A CONTACTS	DPDT W/ SOCKET AND HOLD DOWN SPRING
FM1, FM2, CR3, CR4	CONTROL RELAY	POTTER & BRUMFIELD	11 PIN PLUG-IN	KRPA-14AG-120	120V AC COIL, 10A CONTACTS	3PDT W/ SOCKET AND HOLD DOWN SPRING
LEV	WET WELL LEVEL SENSOR	PULSAR, INC.	ULTRASONIC	dB10 TRANSDUCER W/ ULTRA 4	1 TD 32.8 FT RANGE 115VAC/24VDC POWERED W/ 4-20MA AND (2) RELAY OUT W/ KEY PAD, DISPLAY, AND TROPICALIZATION	CITY FORCES WILL PROVIDE ASSISTANCE WITH MOUNTING AND CALIBRATION
CR1, CR2	CONTROL RELAY	POTTER & BRUMFIELD	14-BLADE SQUARE PLUG-IN	KUP-L7A19-120	120V AC COIL, 10A CONTACTS	4PDT W/ SOCKET AND HOLD DOWN SPRING
PCP	PUMP CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 42"x36"x12"	42"x36"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
PP	ENCLOSURE PANEL	HOFFMAN	39" X 33", STEEL	A42P36	STEEL, 12 GAUGE	
NB1	NEUTRAL DISTRIBUTION BLOCK	BUSSMAN	SINGLE POLE	16220-1	600V, 175A	
ALS	AREA LIGHT SWITCH	HUBBELL	SINGLE POLE	HBL1221	277V, 20A	
SPD-2	SURGE PROTECTION DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L, N, G)	2856812	120V, 25A	

EDA

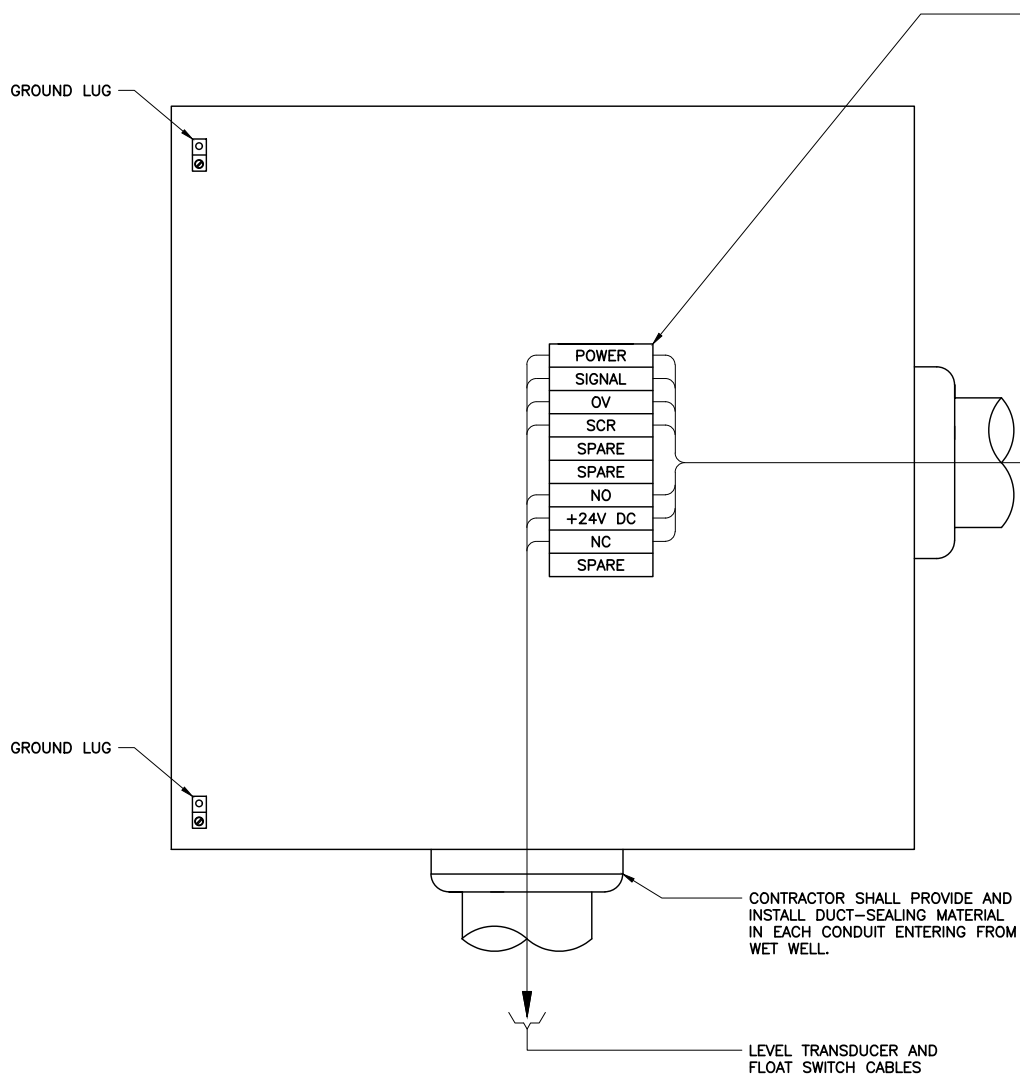
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MICHAEL J. CAHILL, P.E.
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<div><div>AECOM</div><div>7650 West Courtney Campbell Causeway Waterford Plaza, Suite 700 Tampa, Florida 33607 813.286.1711 tel Certificate of Authorization No. 8115</div></div>	<div>MICHAEL J. CAHILL, P.E. FL. P.E. LICENSE NO. 70837</div>	No.	DATE	REVISIONS	DES: MJC DRN: SJT CKD: WCN DATE: 10/27/2022	<div><div>CITY of TAMPA</div><div>WASTEWATER DEPARTMENT</div></div>	WASTEWATER PUMPING STATION REHABILITATIONS	SHEET
		3					PARKE EAST PARTS SCHEDULE	E-16
		2					(SHT. 2 OF 2)	
		1						

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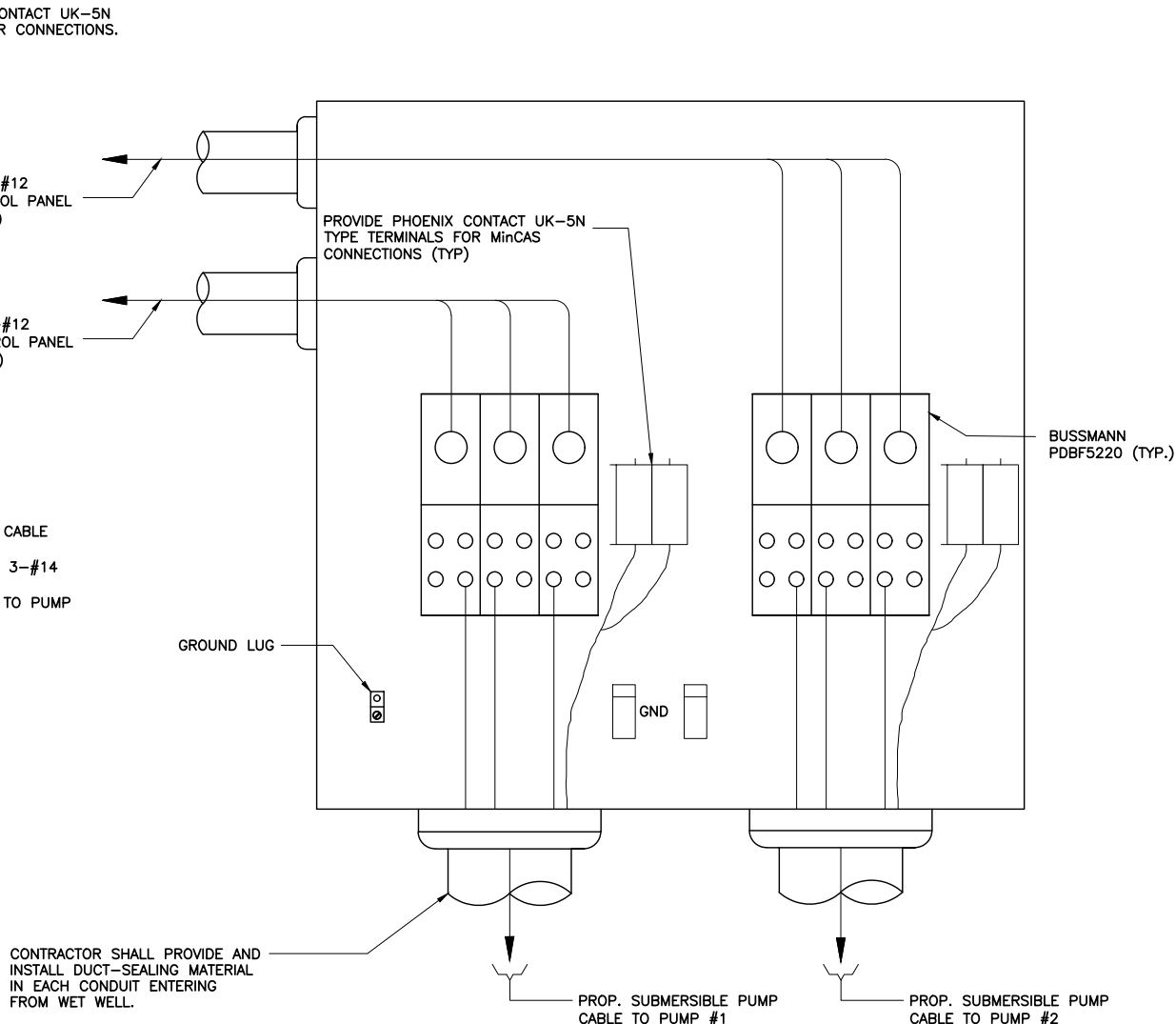


NOTES:

- COVER NOT SHOWN FOR CLARITY.
- BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
- ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.

INSTRUMENTATION AND CONTROLS JUNCTION BOX DETAIL (LABEL PCP-JB)

SCALE: N.T.S.



NOTES:

- COVER NOT SHOWN FOR CLARITY.
- BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
- ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.

PUMP MOTOR CONNECTIONS JUNCTION BOX DETAIL (LABEL MCP-JB)

SCALE: N.T.S.

NOTES:

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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST ELECTRICAL DETAILS
(SHT. 1 OF 4)

SHEET
E-17

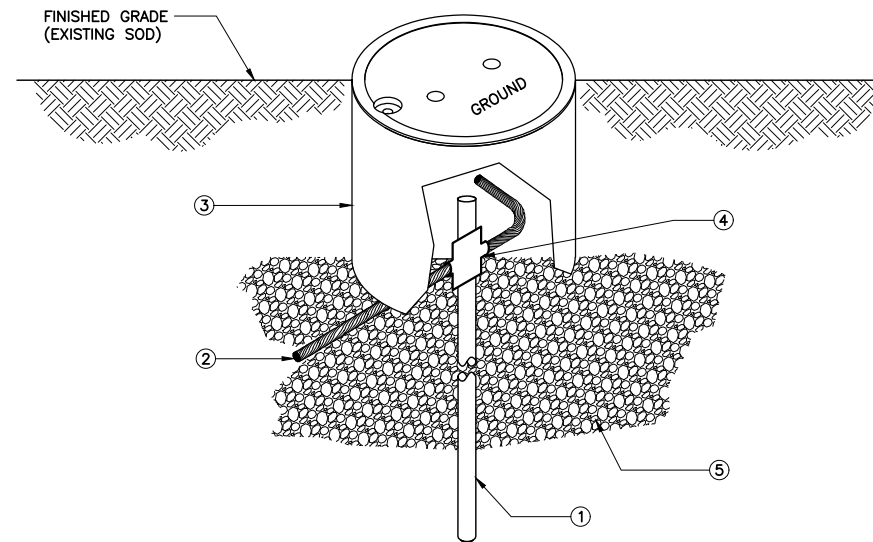
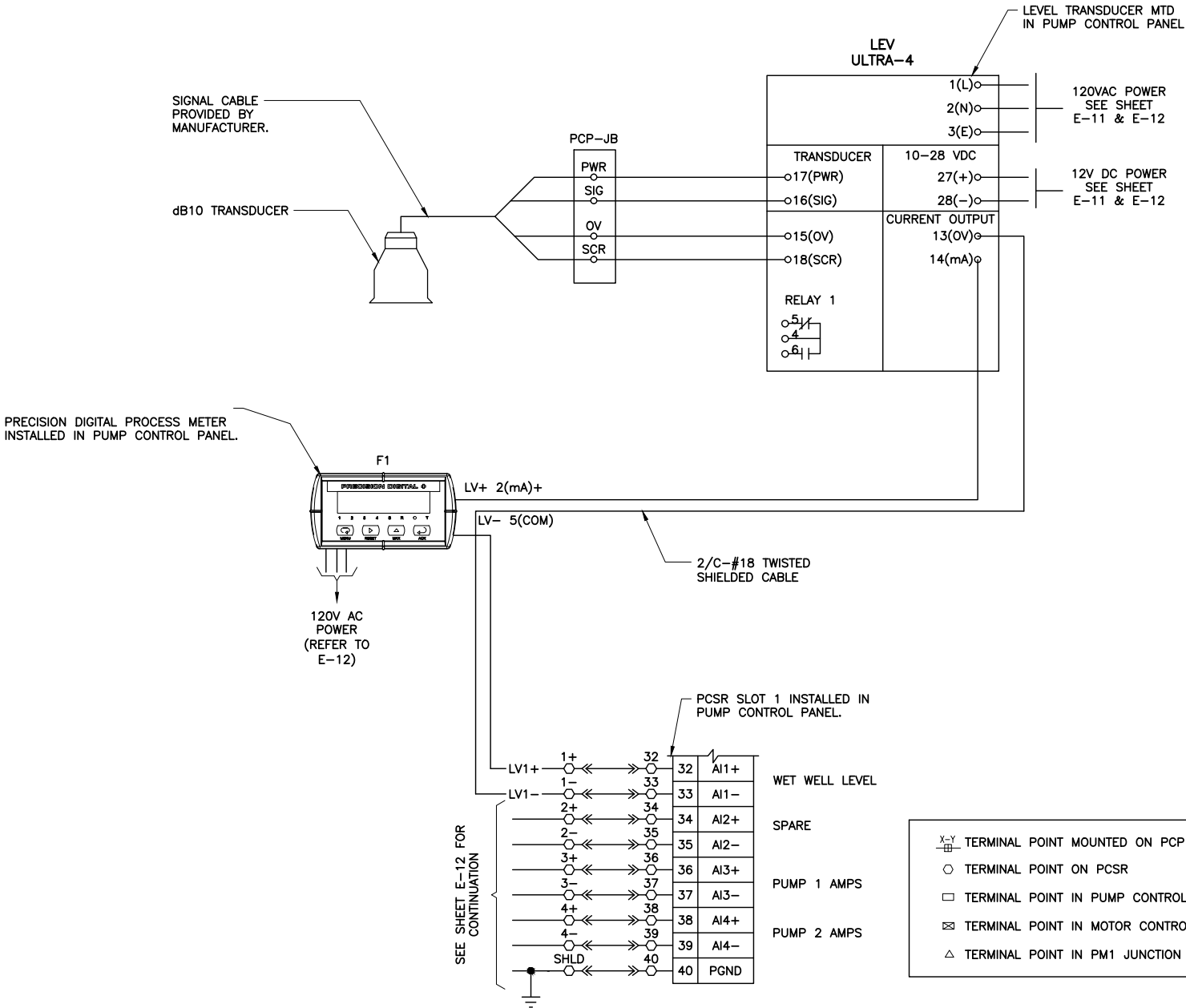
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GROUND TEST WELL DETAIL KEYED NOTES:	
①	NEW GROUND ROD, STAINLESS STEEL, 5/8" X 10'-0" (TYP).
②	#4 BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR (TYP).
③	PROVIDE AND INSTALL OLDCASTLE PRECAST ENCLOSURE SOLUTIONS #F08 BOX WITH #F08C CAST IRON LID MARKED "GROUND".
④	EXOTHERMIC WELD.
⑤	PROVIDE 6" MINIMUM OF CRUSHED STONE.

SCALE: N.T.S.

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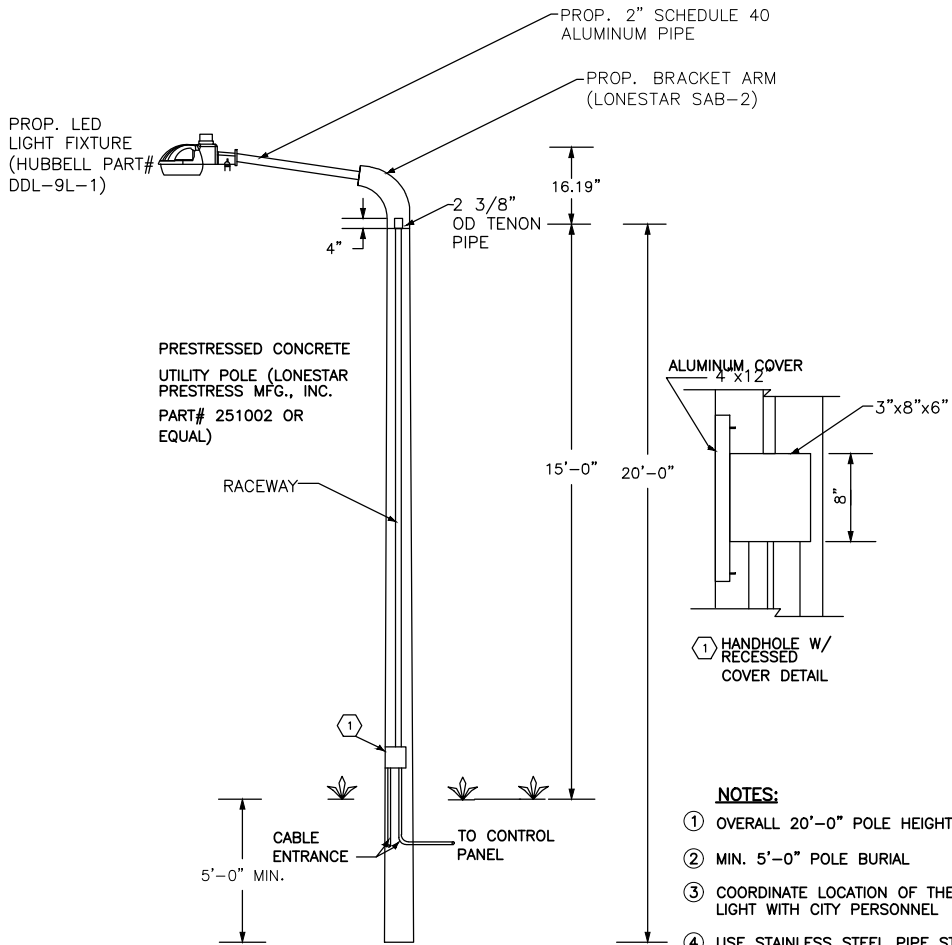
WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST ELECTRICAL DETAILS
(SHT. 2 OF 4)

SHEET
E-18

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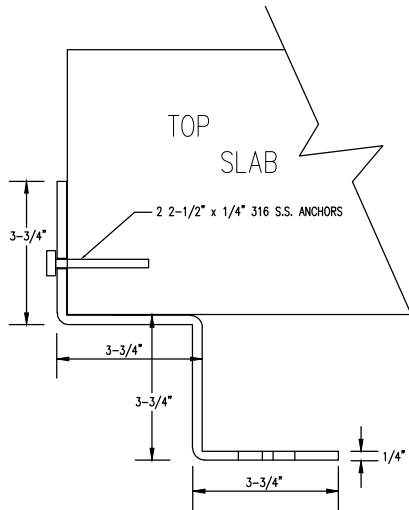
AREA LIGHT (AL) DETAIL

SCALE: N.T.S.

WIND DESIGN DATA:
CODE: FLORIDA BUILDING CODE 2020, 7TH EDITION
AND ASCE/SEI 7-16

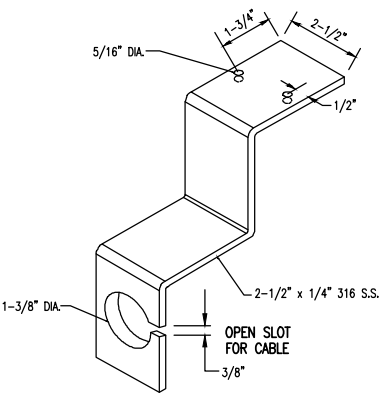
BASIC WIND SPEED(Vult)	152 MPH
NOMINAL WIND SPEED(Vasd)	118 MPH
CATEGORY (RISK)	111
WIND EXPOSURE	C
DESIGN WIND PRESSURE (PSF)	55.7 PSF

- NOTES:**
- ① OVERALL 20'-0" POLE HEIGHT
 - ② MIN. 5'-0" POLE BURIAL
 - ③ COORDINATE LOCATION OF THE AREA LIGHT WITH CITY PERSONNEL
 - ④ USE STAINLESS STEEL PIPE STRAPS SPACED 2'-0" APART TO MOUNT CONDUIT
 - ⑤ THE LIGHT POLE SHALL BE DESIGNED TO MEET THE SPECIFIED WIND LOAD CRITERIA AND THE LIGHT POLE SUBMITTAL SHALL INCLUDE THE LIGHT POLE CALCULATIONS MEETING THE WIND LOAD CRITERIA AND SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.
 - ⑥ 10'-0" FOR MAIN PANEL SITE

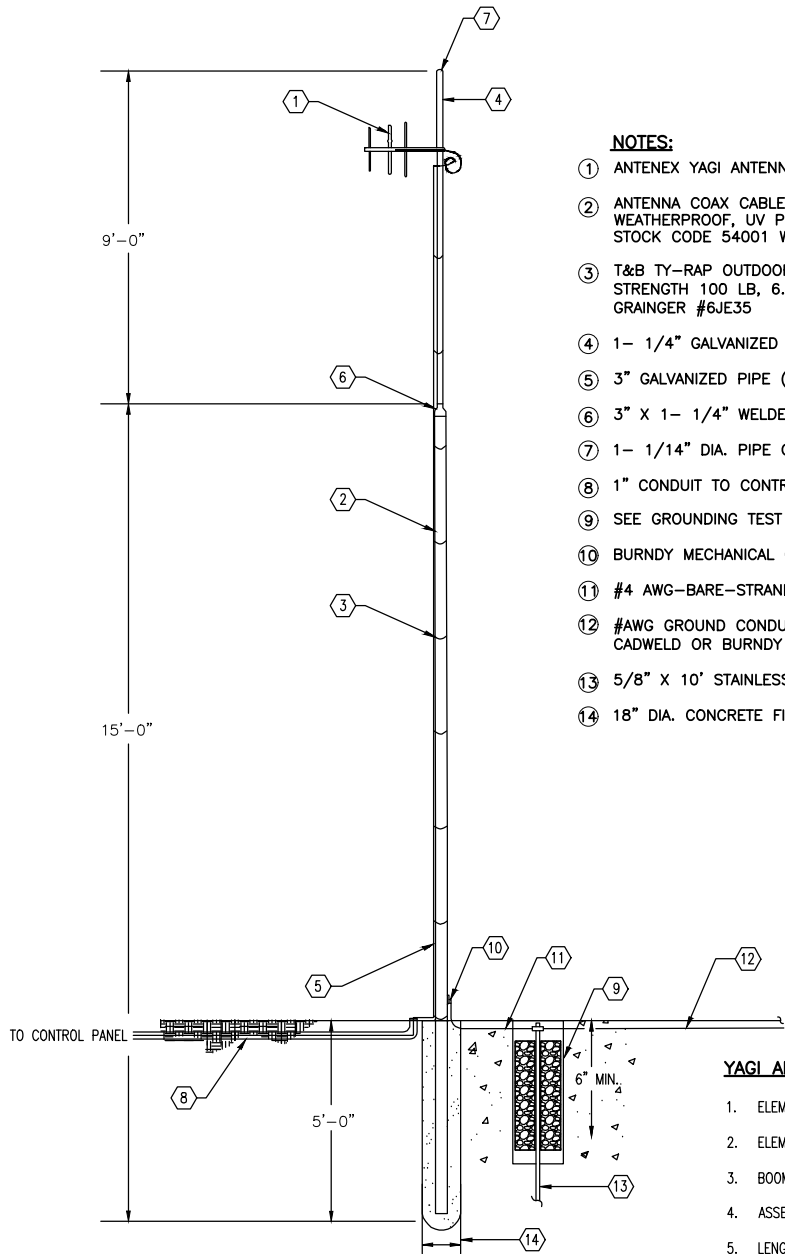


DBIO OR PULSAR
MOUNTING BRACKET DETAIL

SCALE: N.T.S.



NOTE:
ROUND OVER ALL EDGES,
RADIUS ALL CORNERS



ANTENNA DETAIL

SCALE: N.T.S.

- NOTES:**
- ① ANTENEX YAGI ANTENNA MODEL Y4503 (DIRECTIONS POINT UP, AS SHOWN)
 - ② ANTENNA COAX CABLE-RG-8/9913; AIR-DIELECTRIC TYPE, LOW LOSS, WEATHERPROOF, UV PROTECTED. TIMES MICROWAVE SYSTEMS LMR-400 STOCK CODE 54001 WITH REQUIRED CONNECTORS.
 - ③ T&B TY-RAP OUTDOOR CABLE TIES, 304 STAINLESS STEEL, TENSILE STRENGTH 100 LB, 6.5" LONG, UL LISTED- MODEL SS7-180-10 GRAINGER #6JE35
 - ④ 1- 1/4" GALVANIZED PIPE (SCHEDULE 40)
 - ⑤ 3" GALVANIZED PIPE (SCHEDULE 40)
 - ⑥ 3" X 1- 1/4" WELDED BELL REDUCER
 - ⑦ 1- 1/14" DIA. PIPE CAP.
 - ⑧ 1" CONDUIT TO CONTROL PANEL
 - ⑨ SEE GROUNDING TEST WELL DETAIL, SHEET E-18
 - ⑩ BURNDY MECHANICAL CONNECTOR #KA25-4-1/0
 - ⑪ #4 AWG-BARE-STRANDED GROUNDED CONDUCTOR
 - ⑫ #AWG GROUND CONDUCTOR TO CONTROL PANEL GROUNDING SYSTEM, USE CADWELD OR BURNDY MECHANICAL CONNECTOR #VT2525
 - ⑬ 5/8" X 10' STAINLESS STEEL GROUND ROD
 - ⑭ 18" DIA. CONCRETE FILLED HOLE

YAGI ANTENNA SPECIFICATIONS

- | | |
|---------------------------|--|
| 1. ELEMENTS: | 3 |
| 2. ELEMENT MATERIAL: | 3/8" DIAMETER SOLID 6061-T6 ALUMINUM ROD |
| 3. BOOM ELEMENT: | HEAT TREATED 6061-T6 ALUMINUM |
| 4. ASSEMBLY: | FULLY WELDED |
| 5. LENGTH: | 20 3/16 INCHES |
| 6. WEIGHT: | 5 LBS. |
| 7. SHIPPING: | ALL MODELS ARE UPS SHIPPABLE |
| 8. MOUNTING: | UP TO 2 INCH MAST |
| 9. HARDWARE: | STAINLESS STEEL |
| 10. TERMINATION TYPE: | N FEMALE |
| 11. LIGHTNING PROTECTION: | DC GROUNDED |
| 12. RATE WIND VELOCITY | 150 MPH |
| 13. LATERAL THRUST | 12.2 LBS. |

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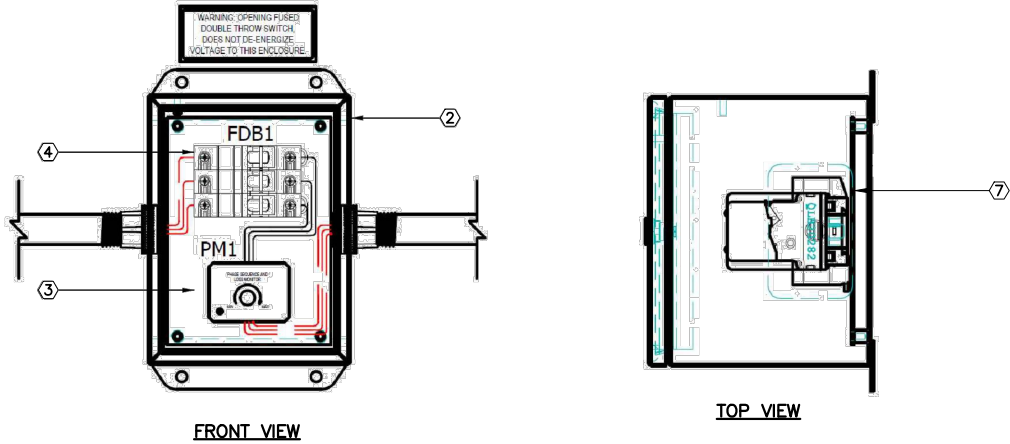
CITY of TAMPA
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WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST ELECTRICAL DETAILS
(SHT. 3 OF 4)

SHEET
E-19

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PHASE MONITOR (PM1) JUNCTION BOX
SCALE: N.T.S.

KEYED NOTES:	
①	8 PIN OCTAL SOCKET, DIN RAIL MOUNTED OT08.
②	NEMA 4X 316 STAINLESS STEEL, 8 X 6 X 6 ENCLOSURE PART NUMBER EJ866S16.
③	3-PHASE POWER MONITOR, PM1.
④	FUSE DISTRIBUTION BLOCK, FDB1.
⑤	BACK OF ENCLOSURE.
⑥	PROVIDE WARNING LABEL ON ENCLOSURE DOOR. LABEL TO READ: "WARNING – OPENING FUSED DOUBLE THROW SWITCH DOES NOT DE-ENERGIZE VOLTAGE TO THIS ENCLOSURE."
⑦	INNER PANEL PROVIDED WITH ENCLOSURE

PARKE EAST

PM1 JUNCTION BOX		
EJ866S16	ENCLOSURE, NEMA 4X, 316SS 8"x6"x6"	HAMMOND
RB08-PC	RELAY SOCKET, 8-PIN, 600V	MPE
SUA-440-ASA	PHASE MONITOR RELAY, 440V, SPDT,	ATC-DIVERSIFIED
1492-FB3C30-L	FUSE BLOCK/DISCONNECT	ALLEN BRADLEY



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WASTEWATER PUMPING STATION REHABILITATIONS
PARKE EAST ELECTRICAL DETAILS
(SHT. 4 OF 4)

SHEET
E-20



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C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 1\07_IFB Parke East & Idlewild\DWGs\E-21 IDLEWILD SCOPE OF WORK.dwg, 10/27/2022 12:18:37 PM
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IDLEWILD PS PUMP MOTOR DATA

MAKE: FLYGT

MODEL: NP 3153 SH 3~468

HP: 23 HP

460V, 3-PHASE, 26 FLA

TOTAL PUMP LOAD: 52 AMPS, 43.3 KVA

IDLEWILD PS
SHORT CIRCUIT CALCULATIONS

UTILITY SERVICE: 480 VOLT, 3 PHASE
SERVICE ADDRESS: INTERSECTION OF W IDLEWILD AVE & N LOIS AVE
METER NUMBER: 1000776808
TECO CONTACT: DIANA TORRES (813) 442-9948

POINT-TO-POINT SHORT CIRCUIT CALCULATION METHOD
AVAILABLE SHORT CIRCUIT CURRENT AT UTILITY SERVICE: 9,021 AMPS
SERVICE CONDUCTOR LENGTH: 30 FEET, PVC RACEWAY
SERVICE CONDUCTORS: #3 XHHW-2 COPPER
PHASE CONDUCTOR CONSTANT: 4,811

SHORT CIRCUIT CURRENT AVAILABLE AT THE LINE SIDE OF THE FUSED
DOUBLE THROW TRANSFER SWITCH: 7,499 AMPS

$$1 + \left[\frac{1}{\frac{(1.732)(30)(9,021)}{(4,811)(480)}} \right] * 9,021 = 7,499$$

IDLEWILD PS ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3Ø, 4W

LOAD	CONNECTED	DEMAND	APPROX. PHASE CURRENTS		
			L1	L2	L3
PROP. PUMP #1	21.6 KVA	21.6 KVA	26.0 A	26.0 A	26.0 A
PROP. PUMP #2	21.6 KVA	21.6 KVA	26.0 A	26.0 A	26.0 A
SINGLE PHASE LOADS	2.0 KVA	2.0 KVA	4.2 A	0 A	4.2 A
TOTAL	45.2 KVA	45.2 KVA	56.2 A	52.0 A	56.2 A

SCOPE OF WORK:

- EXISTING AND NEW SERVICE VOLTAGE FOR EACH FACILITY:
-IDLEWILD PS EXISTING SERVICE: 240V, 3 PHASE, 4WIRE
-IDLEWILD PS NEW SERVICE: 480V, 3-PHASE, 4-WIRE
- REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND APPURTENANCES INCLUDING BUT NOT LIMITED TO BOXES, GROUNDING, METER SOCKET, LIGHTNING ARRESTOR, CONTROL PANELS, CONCRETE PEDESTAL, EQUIPMENT RACKS, AND ALL ASSOCIATED CONDUIT AND CONDUCTORS. COORDINATE WITH THE LOCAL UTILITY (TECO) THE REMOVAL OF EXISTING ELECTRICAL HARDWARE AT THE NEAREST UTILITY POLE TO THE SITE. REQUEST NEW POLE MOUNTED DISTRIBUTION EQUIPMENT INCLUDING NEW FEEDERS TO PROPOSED TECO HAND HOLE AT BASE OF POLE.
- CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING DCR SCADA RTU CABINET MOUNTED ON THE EXISTING SCADA ANTENNA. DELIVER THIS RTU PACKAGE TO THE CITY FOR MAINTENANCE INVENTORY.
- ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE CITY, SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE HOWARD F. CURREN AWTP. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL OTHER REMOVED EQUIPMENT.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEW ELECTRICAL METER SOCKET, LIGHTNING ARRESTOR AND GROUNDING, AS SHOWN ON PLANS.
- CONTRACTOR TO PREPARE THE SITE FOR THE INSTALLATION OF THE PROPOSED CONTROL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE AND INSTALL DUPLEX PUMP CONTROL PANEL. THE PUMP CONTROL PANEL WILL CONTAIN CONTROL COMPONENTS, INDICATOR LIGHTS, AND SCADA RTU AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS
- CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X 316 SS WET WELL ISOLATION JUNCTION BOX FOR PUMP MOTOR CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL DUPLEX MOTOR CONTROL PANEL. THE MOTOR CONTROL PANEL SHALL CONTAIN CIRCUIT BREAKERS AND MOTOR STARTERS, AS SHOWN ON PLANS AND DETAILED IN SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS WET WELL ISOLATION BOX FOR INSTRUMENTATION AND CONTROL CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS, SERVICE ENTRANCE RATED, FUSED DOUBLE THROW SWITCH, AS SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS, EMERGENCY POWER CONNECTOR, AS SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL NEW SCADA ANTENNA MAST AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL PROVIDE AND INSTALL RADIO ANTENNA AND WET WELL LEVEL SENSING DEVICES
- CONTRACTOR SHALL PROVIDE AND INSTALL AREA LIGHT, AS SHOWN ON PLANS.
- CONTRACTOR SHALL ASSIST PUMP AND CONTROL SYSTEM SUPPLIER IN THE CALIBRATION, START UP, AND ADJUSTMENT OF EQUIPMENT. CALIBRATION AND SETPOINTS SHALL BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS, AS SHOWN, SPECIFIED AND REQUIRED.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2017 EDITION OF THE NATIONAL ELECTRIC CODE AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
- REFER TO CIVIL/MECHANICAL SHEETS FOR BYPASS PUMPING REQUIREMENTS. IF ELECTRICALLY DRIVEN BYPASS PUMPS ARE UTILIZED, THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY ELECTRICAL SERVICE REQUIREMENTS WITH TAMPA ELECTRIC COMPANY (TECO). ANY COSTS ASSOCIATED WITH TEMPORARY ELECTRIC POWER ARE TO BE INCLUDED IN THE LUMP SUM PRICE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TEMPORARY POWER TO THE SITE.



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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

IDLEWILD SCOPE OF WORK

SHEET

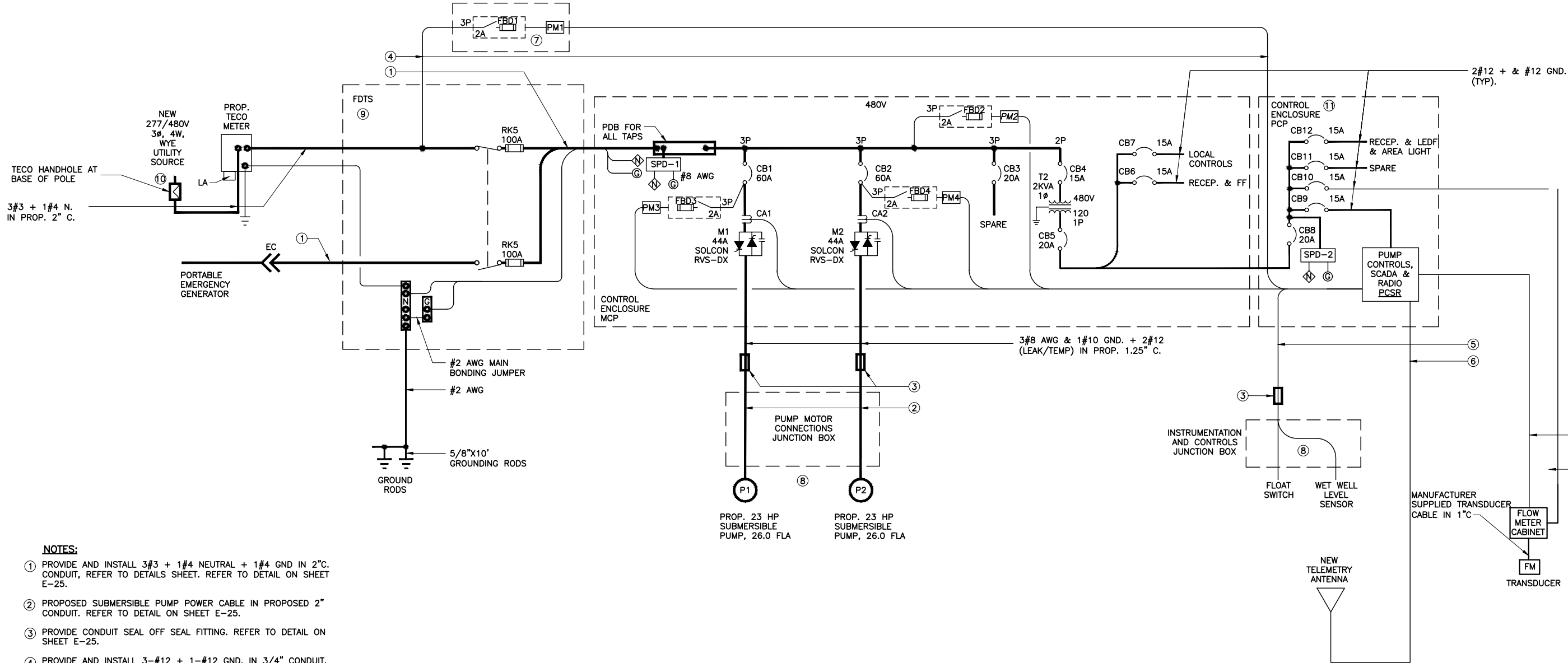
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NOTES:

- 1 PROVIDE AND INSTALL 3#3 + 1#4 NEUTRAL + 1#4 GND IN 2" CONDUIT, REFER TO DETAILS SHEET. REFER TO DETAIL ON SHEET E-25.
- 2 PROPOSED SUBMERSIBLE PUMP POWER CABLE IN PROPOSED 2" CONDUIT. REFER TO DETAIL ON SHEET E-25.
- 3 PROVIDE CONDUIT SEAL OFF SEAL FITTING. REFER TO DETAIL ON SHEET E-25.
- 4 PROVIDE AND INSTALL 3-#12 + 1-#12 GND. IN 3/4" CONDUIT. REFER TO DETAIL ON SHEET E-25 AND E-38.
- 5 PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO I&C JUNCTION BOX FOR FLOAT SWITCH AND LEVEL SENSOR CABLES. REFER TO DETAIL ON SHEET E-25.
- 6 PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO EXISTING ANTENNA MAST FOR NEW COAX CABLE, REFER TO DETAIL ON SHEET E-37.
- 7 PM1 JUNCTION BOX. REFER TO DETAIL ON SHEET E-38.
- 8 REFER TO DETAIL ON SHEET E-35.
- 9 SERVICE ENTRANCE RATED, FUSED DOUBLE THROW SWITCH.
- 10 AVAILABLE FAULT CURRENT AT THE SECONDARY LUGS FOR THE POLE-MOUNTED TRANSFORMER BANK IS SHOWN ON THE SCOPE OF WORK, SEE SHEET-E-3. THE INTERRUPTING RATING, IR, OF THE FDTS CURRENT LIMITING FUSE IS 200KA RMS.

IDLEWILD SINGLE LINE DIAGRAM

SCALE: N.T.S.

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CKD: WCN
DATE: 10/27/2022

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

IDLEWILD SINGLE LINE DIAGRAM

SHEET

E-22

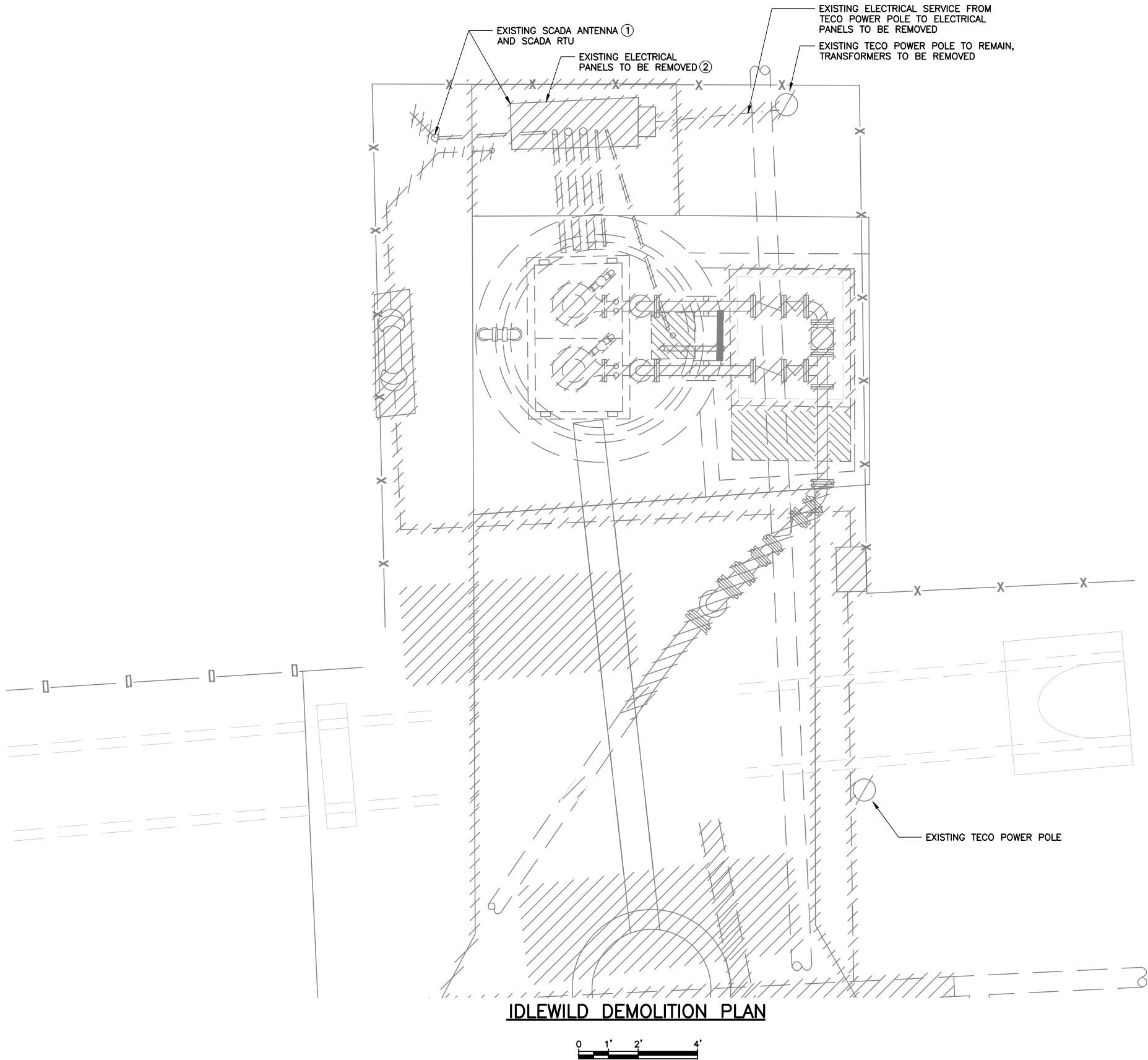
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C.O.A. No. 80079
MICHAEL J. CAHILL, P.E.
Florida P.E. No. 70837

C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 1\07_Parke East & Idlewild\DWGs\E-23 IDLEWILD DEMOLITION PLAN.dwg, 10/27/2022 12:18:48 PM

PLOTTED BY: Sandy Reyes, DRAWING FILE: C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 1\07_Parke East & Idlewild\DWGs\E-23 IDLEWILD DEMOLITION PLAN.dwg, PLOT DATE: Thursday, October 27, 2022 12:18:48 PM, LAST SAVED BY: Sreyes, CTB - 11x17 IN-HOUSE TOSHIBA.CTB



NOTES:

- ① THE EXISTING SCADA ANTENNA AND DCR SCADA RTU CABINET SHALL REVERT TO CITY OF TAMPA FOR MAINTENANCE.
- ② COORDINATE ALL EQUIPMENT INTENDED FOR SALVAGE WITH CITY OF TAMPA PRIOR TO DEMOLITION. ANY ITEMS NOT REQUIRED FOR SALVAGE SHALL BE DEMOLISHED BY THE CONTRACTOR. SEE CIVIL DEMOLITION SHEET.
- ③ REMOVE ALL ELECTRICAL EQUIPMENT EXPOSED CONDUIT, CABLES, BOXES, AND APPURTENANCES. CUT CONCEALED CONDUITS 6" BELOW GRADE AND CAP.

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CITY of TAMPA
WASTEWATER DEPARTMENT

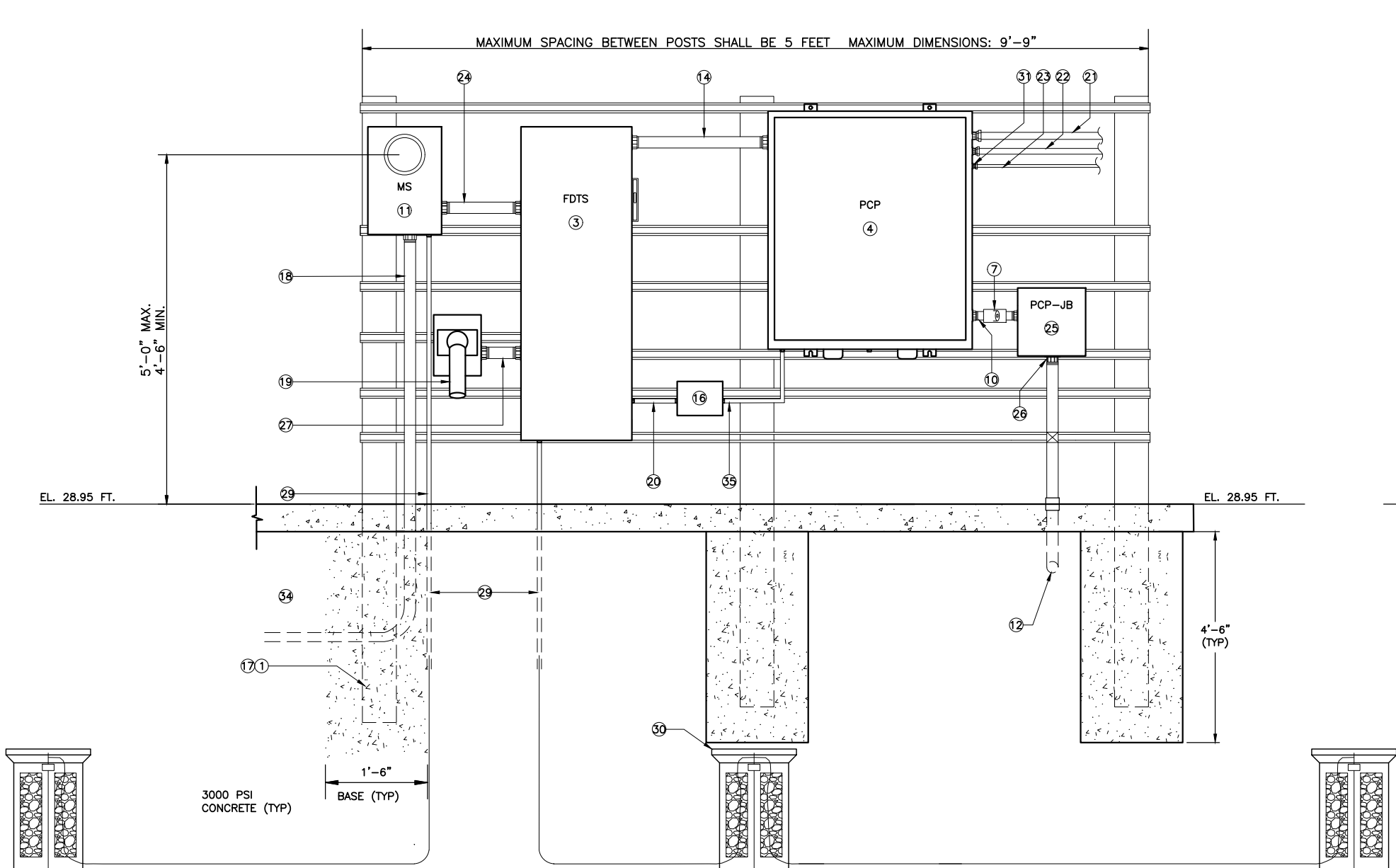
WASTEWATER PUMPING STATION REHABILITATIONS

IDLEWILD DEMOLITION PLAN

SHEET

E-23

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IDLEWILD ELECTRICAL EQUIPMENT LINE UP

NOT TO SCALE

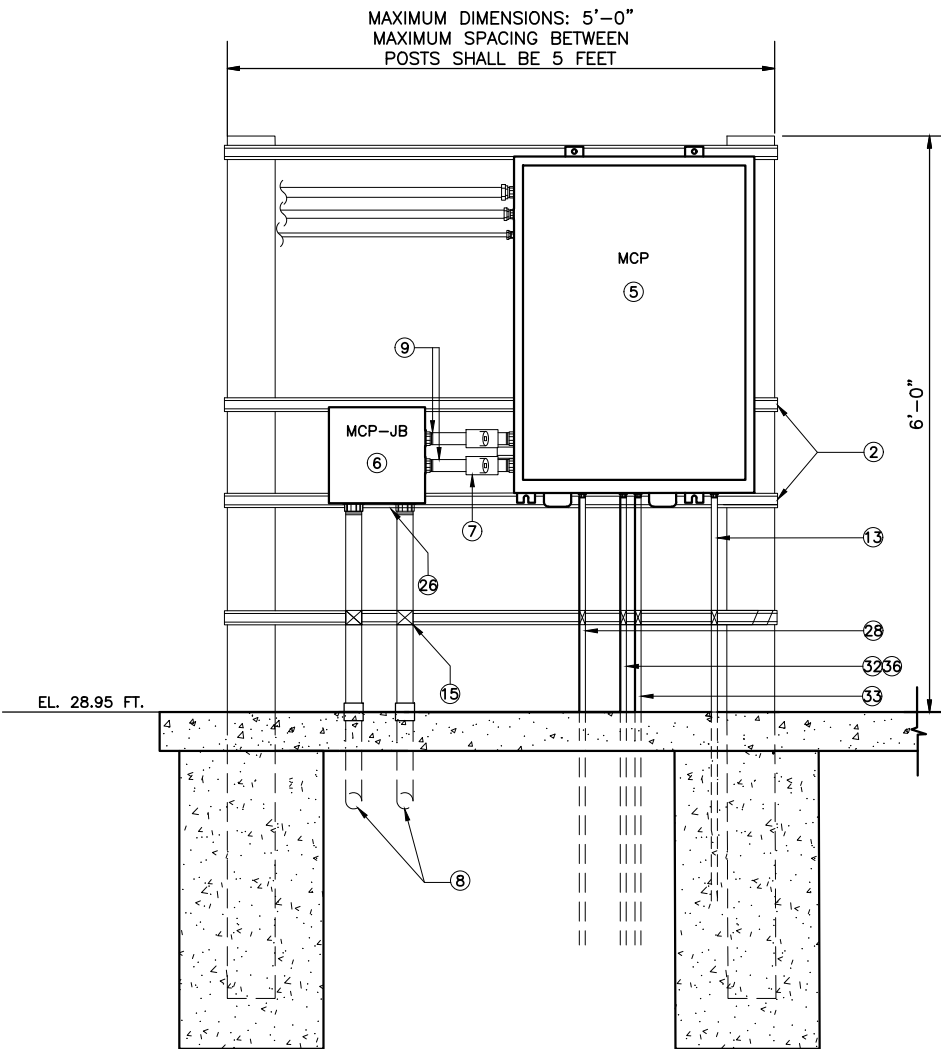
KEYED NOTES:

- 1 PROVIDE AND INSTALL 6" X 6" X 9' REINFORCED SQUARE CONCRETE POSTS. MAXIMUM SPACING BETWEEN POSTS SHALL BE 5 FEET.
- 2 PROVIDE AND INSTALL 1-5/8" X 1-5/8" 316 STAINLESS STEEL UNISTRUT WITH 316 STAINLESS STEEL HARDWARE. NOTE: INSTALL ALL BOLTS FOR UNISTRUT COMPLETELY THROUGH CONCRETE POSTS.
- 3 PROVIDE AND INSTALL HEAVY DUTY, DOUBLE THROW, FUSIBLE SWITCH, 3-POLE, 600 VAC, 100 AMP IN NEMA 4X TYPE ENCLOSURE, 600 VOLT, DUAL-ELEMENT, TIME-DELAY CLASS RK5 FUSES; SWITCH--DT363FWK DT100NK - NEUTRAL LUG KIT, DS100GK - GROUND LUG KIT, DS36FR - "R" FUSE ADAPTER KIT.
- 4 PUMP CONTROL CABINET. REFER TO DETAIL ON SHEET E-28.
- 5 MOTOR CONTROL CABINET. REFER TO DETAIL ON SHEET E-26.
- 6 PUMP MOTOR CONNECTIONS J.B.--USED AS A DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 12"x12"x6" NEMA 4X 316 SS JUNCTION BOX WITH HINGED DOOR, WIEGMANN #BN4121206CHSS. INSTALL A STAINLESS STEEL LOUVER PLATE KIT (4.75"x4.5") ON SIDE OF BOX TO PROVIDE NATURAL ASPIRATION, WIEGMANN #WAVK0304SSA. SEE SHEET E-35 FOR TERMINATION DETAILS.
- 7 PROVIDE AND INSTALL CROUSE-HINDS EYS TYPE SEALS W/CHICO COMPOUNDS.
- 8 PROPOSED PVC COATED ALUMINUM CONDUITS FOR MOTOR CONDUCTORS. CORE DRILL WET WELL WALLS AS REQUIRED TO INSTALL CONDUIT, SEE CIVIL SHEETS FOR PIPE PENETRATION INTO WET WELL DETAIL.

- 9 PROVIDE AND INSTALL CONDUITS AND WIRE PER SINGLE LINE DIAGRAM. SEE SHEETS E-22 FOR CONDUIT AND CONDUCTOR SIZES.
- 10 PROVIDE AND INSTALL (3)--#14 XHHW-2 CU + (1)--#14 XHHW-2 CU GND + (1)-3/C--#18 TWISTED SHIELDED CABLE IN 1" CONDUIT FOR FLOAT AND WET WELL LEVEL TRANSMITTER.
- 11 PROVIDE AND INSTALL METER SOCKET IN ALUMINUM ENCLOSURE.
- 12 MANUFACTURER SUPPLIED CABLES FOR FLOAT SWITCH AND WET WELL LEVEL TRANSMITTER INSTALL IN 2" PVC COATED CONDUIT TO WET WELL FROM JUNCTION BOX. CORE DRILL WET WELL AS NEEDED TO INSTALL, PATCH SEAL WITH APPROVED PRODUCT. SEE CIVIL SHEETS FOR PIPE PENETRATION INTO WET WELL DETAIL.
- 13 PROVIDE AND INSTALL 1" CONDUIT FOR ANTENNA COAXIAL CABLE.
- 14 PROVIDE AND INSTALL CONDUIT AND WIRE PER SINGLE LINE DIAGRAM. SEE SHEETS E-22 FOR CONDUIT AND CONDUCTOR SIZES.
- 15 PROVIDE AND INSTALL ALUMINUM CONDUIT STRAPS (TYPICAL).
- 16 PROVIDE AND INSTALL A 3-PHASE POWER MONITOR RELAY W/ LINE INPUT-ALARM ON PHASE LOSS, UNDERVOLTAGE, OR WRONG ROTATION. SEE SHEET E-38 FOR DETAILS.
- 17 OPEN CUT EXISTING CONCRETE PAD AS NECESSARY TO INSTALL NEW CONDUIT. REPLACE CONCRETE SLAB PER CIVIL DRAWINGS.
- 18 PROVIDE AND INSTALL CONDUIT TO BE EXTENDED TO EXISTING TECO POWER POLE AND HANDHOLE.
- 19 PROVIDE AND INSTALL AN EMERGENCY GENERATOR RECEPTACLE IN ACCORDANCE WITH CITY OF TAMPA STANDARDS.

- 20 PROVIDE AND INSTALL (3)--#12 XHHW-2 CU + (1)#12 XHHW-2 CU GND. IN 3/4" C.
- 21 PROVIDE AND INSTALL (30)--#12 XHHW-2 CU + (1)#12 XHHW-2 CU GND. IN 1-1/4" C. FOR 120VAC CONTROL SIGNALS. REFER TO MCP TO PCP INTERCONNECTIONS WIRING DIAGRAM ON ONE LINE DIAGRAMS.
- 22 PROVIDE AND INSTALL (17)--#14 XHHW-2 CU + (1)--#14 XHHW-2 CU GND. IN 1" C. FOR 24V DC CONTROL SIGNALS, REFER TO MCP TO MOTOR CONTROLS PANEL TO PUMP CONTROL SHEET E-31.
- 23 PROVIDE AND INSTALL (3)--#12 XHHW-2 CU H. + (1)--#12 XHHW-2 CU NEU. + (1)#12 XHHW-2 CU GND. IN 3/4" CONDUIT FROM MOTOR CONTROLS PANEL TO PUMP CONTROL PANEL FOR 120V POWER CIRCUIT.
- 24 PROVIDE AND INSTALL CONDUIT AND WIRE PER ONE LINE DIAGRAM. SEE SHEET E-22 FOR CONDUIT AND CONDUCTOR SIZES.
- 25 INSTRUMENTATION AND CONTROLS J.B.--USED AS DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 12"x12"x6" NEMA 4X 316 SS JUNCTION BOX WITH HINGED DOOR, WIEGMANN #BN4121206CHSS. INSTALL A STAINLESS STEEL LOUVER PLATE KIT (4.75"x4.5") ON SIDE OF BOX TO PROVIDE NATURAL ASPIRATION, WIEGMANN #WAVK0304SSA. SEE SHEET E-35 FOR TERMINATION DETAILS.
- 26 PROVIDE DUCT SEALING COMPOUND IN ALL CONDUITS EXTENDING TO THE WET WELL.
- 27 PROVIDE AND INSTALL CONDUIT AND WIRE PER ONE LINE DIAGRAM FOR EMERGENCY GENERATOR CONNECTOR.
- 28 PROVIDE AND INSTALL A 3/4" CONDUIT TO PROPOSED AREA LIGHT.
- 29 PROVIDE AND INSTALL A 3/4" SCHEDULE 80 PVC CONDUIT FOR #2 AWG GROUNDING CONDUCTOR.
- 30 PROPOSED GROUNDING CONDUCTOR. APPROVED GROUND CLAMPS SHALL BE ATTACHED TO TWO APPROVED GROUNDING RODS (MINIMUM SPACING 6'-0") GROUNDING CONDUCTOR SHALL BE AWG #2 MIN. BARE STRANDED TINNED-COPPER.
- 31 PROVIDE AND INSTALL WATER-TIGHT/DUST-TIGHT (TYP.) MYERS HUB AND UNION (TYP.).

- 32 PROVIDE AND INSTALL NEW FLOW METER TRANSMITTER 4-20MA SIGNAL CABLE (BELDEN 8719) IN 1" C. TO FLOW METER.
- 33 PROPOSED AND INSTALL 2#12 XHHW-2 CU + 1#12 XHHW-2 CU GND IN 3/4" C. TO FLOW METER.
- 34 EQUIPMENT--LINE UP IS FOR INFORMATIONAL PURPOSES; CONTRACTOR SHALL VERIFY IF CONDUIT CAN BE INSTALLED AS SHOWN. MAKE MODIFICATIONS TO INSTALLATION AS NEEDED.
- 35 PROVIDE AND INSTALL (2) #14 XHHW-2 CU + (1) #14 XHHW-2 CU GND. IN 3/4" C.
- 36 CONTRACTOR SHALL PROVIDE AND INSTALL NEW FLOW METER. FLOW METER SHALL BE PULSAR 130D110000X4-XOP WITH OPTION SP2. PROVIDE 2/C #16 TWISTED SHIELDED PAIR CABLE BETWEEN FLOW METER AND PUMP CONTROL CABINET. RACK MOUNT FLOW METER ADJACENT TO PIPE.



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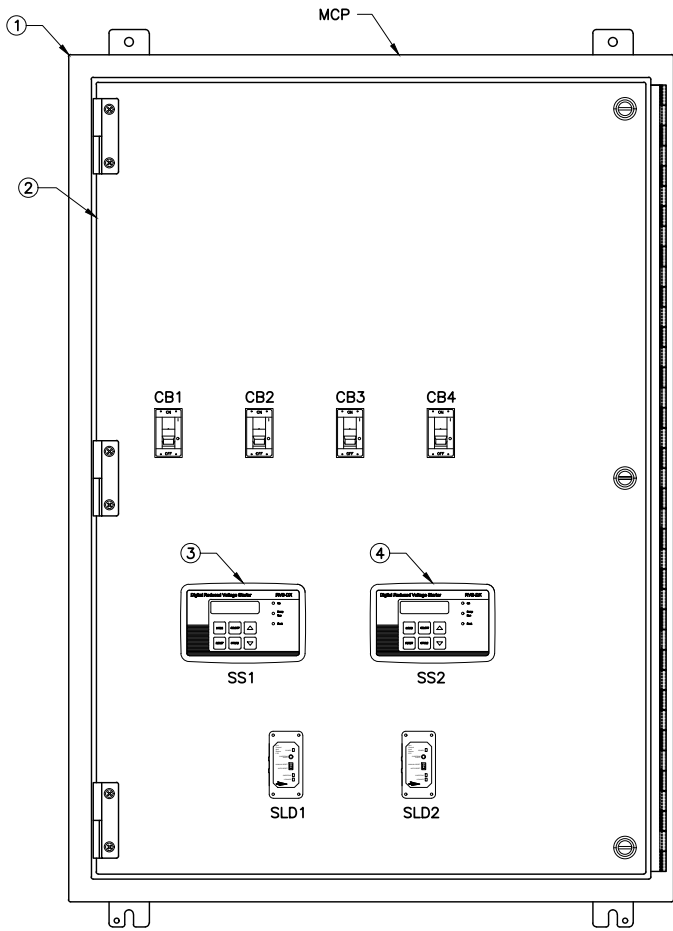
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WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD ELECTRICAL EQUIPMENT
FRONT VIEW & KEYED NOTES

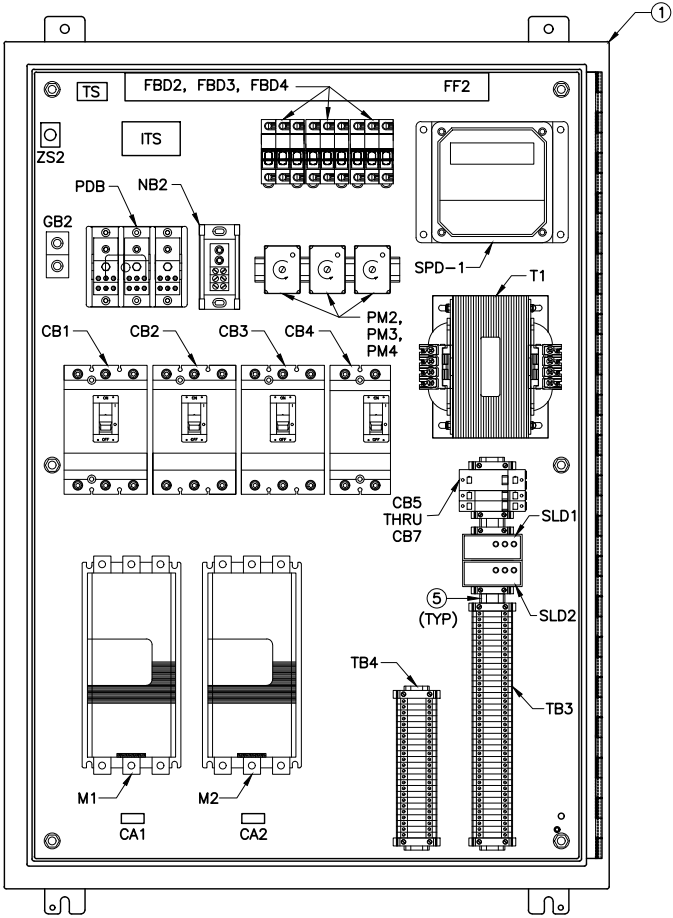
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MOTOR CONTROL PANEL DETAILS
SCALE: N.T.S.



PANEL INTERIOR DETAILS
SCALE: N.T.S.

LEGEND PLATE SCHEDULE		
SYMBOL	DEVICE	LEGEND
CB1	CIRCUIT BREAKER	PUMP NO. 1 CIRCUIT BREAKER
CB2	CIRCUIT BREAKER	PUMP NO. 2 CIRCUIT BREAKER
CB3	CIRCUIT BREAKER	SPARE
CB4	CIRCUIT BREAKER	TRANSFORMER 'T1' 480V FEEDER
SS1	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 1 KEYPAD
SS2	SOFTSTARTER KEYPAD	SOFTSTARTER NO. 2 KEYPAD

KEYED NOTES:	
①	MOTOR CONTROL CABINET. 42" X 30" X 12" NEMA 4X SS, POWDER COAT WHITE. THE MCP ENCLOSURE SHALL BE SIZED TO COMPLY WITH UL508A REQUIREMENTS. BEST PRACTICES SHALL BE USED TO AVOID EXCESSIVE OVERSIZING.
②	PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
③	PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #1.
④	PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #2.
⑤	PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.

IDLEWILD

NOTE:
1. FOR INFORMATIONAL PURPOSED ONLY. EXACT DEVICES, MOUNTING EQUIPMENT SIZES, ETC., TO BE DETERMINED BY THE MOTOR CONTROL PANEL MANUFACTURER.

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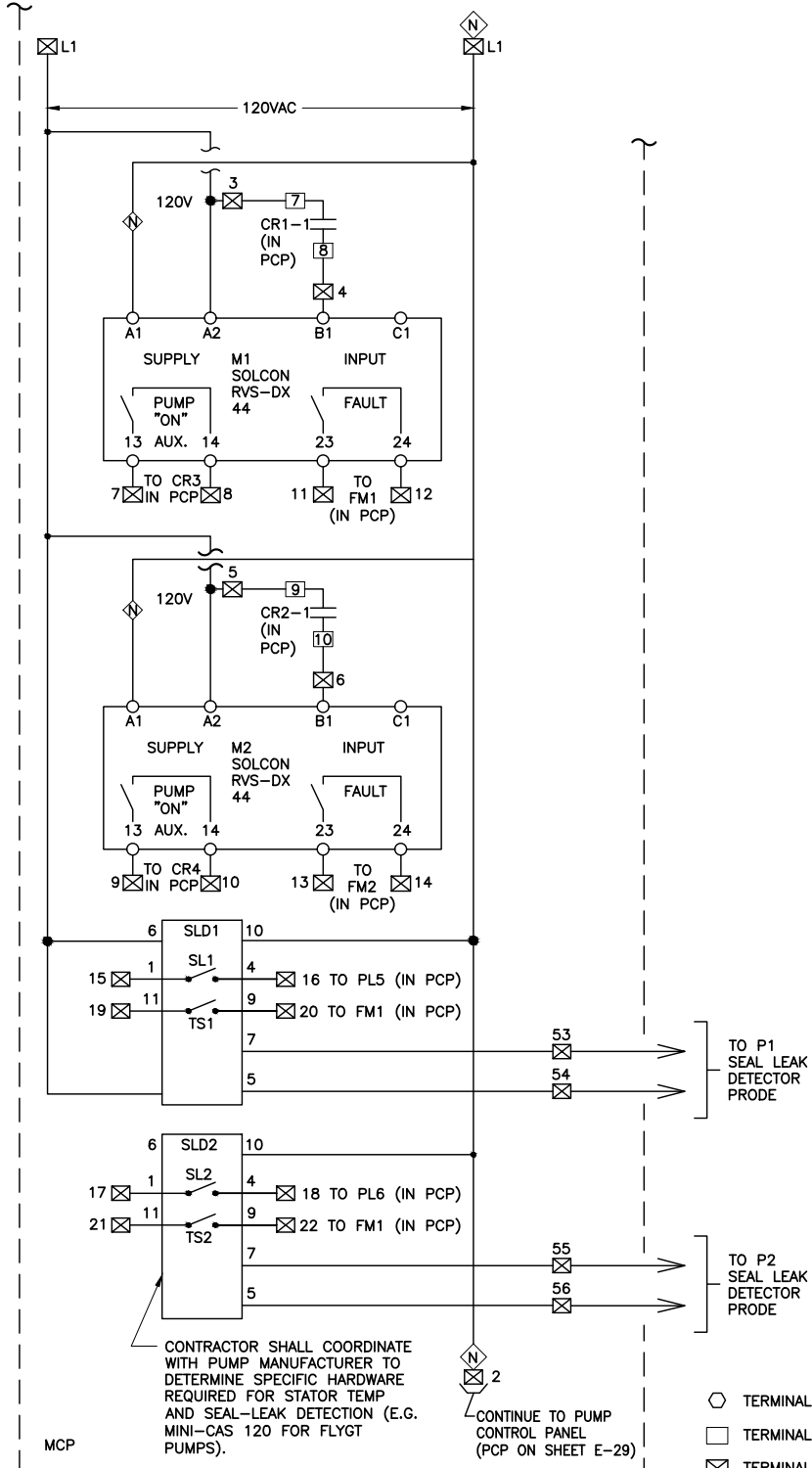
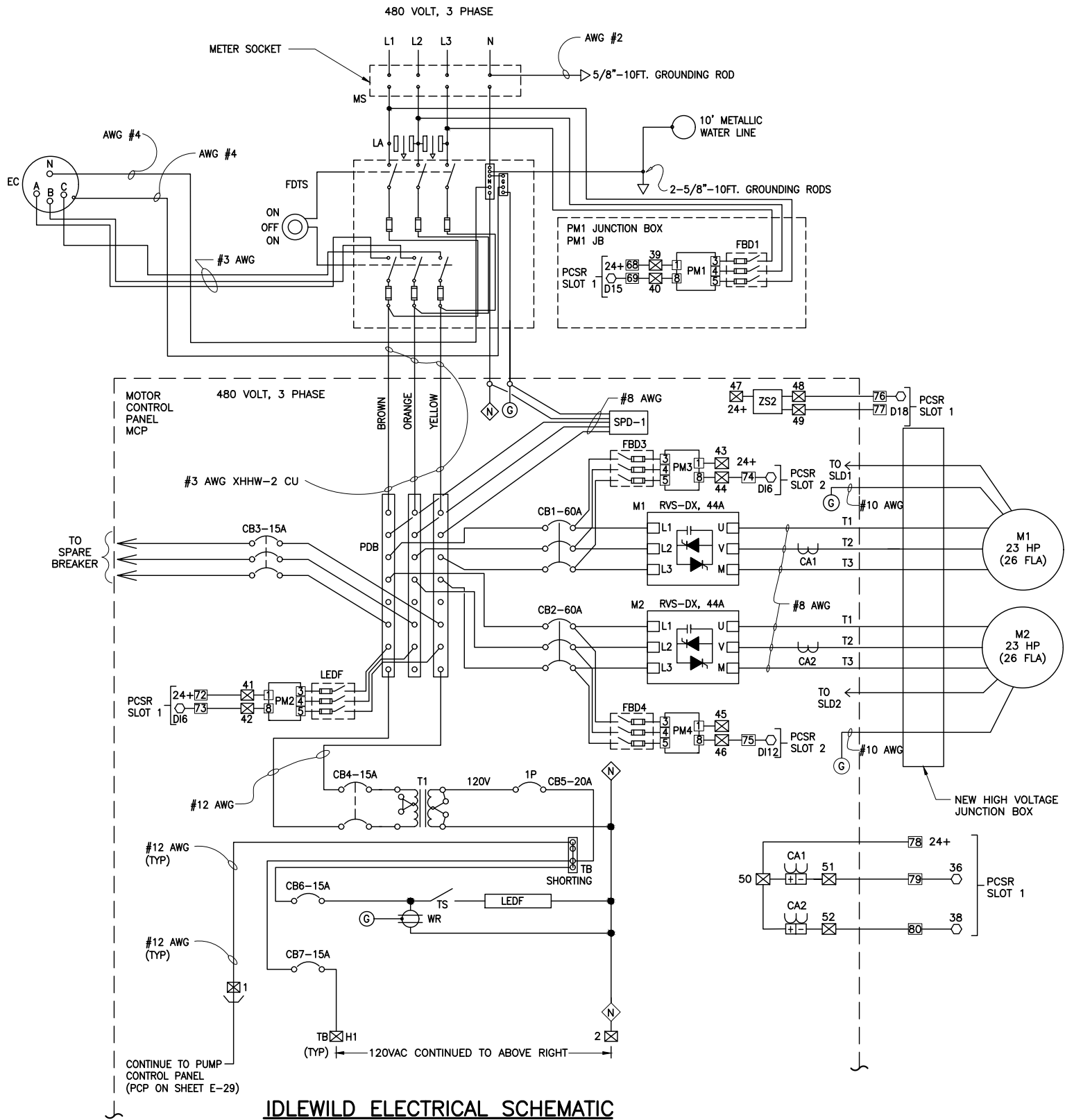
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CITY of TAMPA
WASTEWATER DEPARTMENT

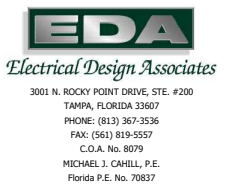
WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD
MOTOR CONTROL PANEL DETAILS

SHEET
E-26

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- TERMINALS ON ACE I/O MODULE (GENERAL)
- TERMINALS IN PUMP CONTROL PANEL
- ⊠ TERMINALS IN MOTOR CONTROL PANEL
- △ TERMINALS IN PM1 JUNCTION BOX



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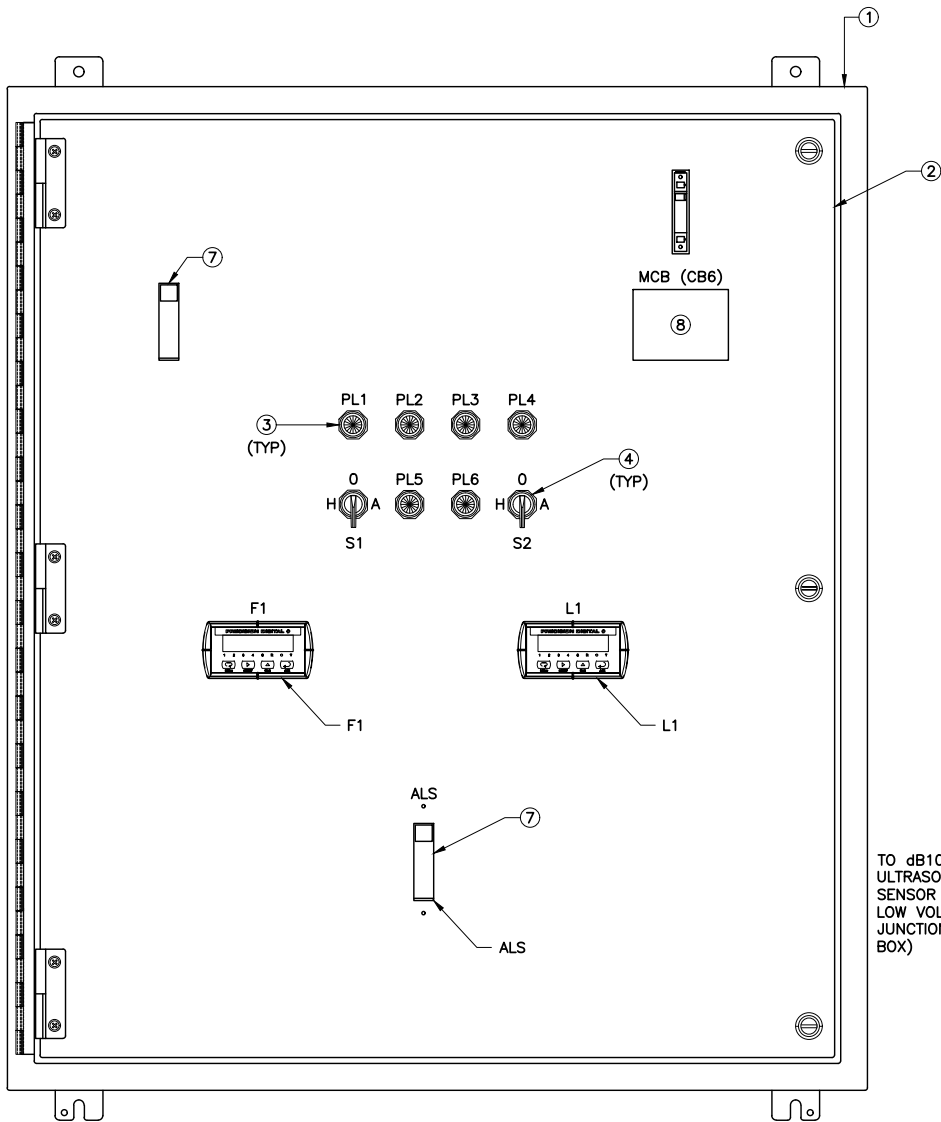
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WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD MOTOR CONTROL PANEL
ELECTRICAL SCHEMATIC

SHEET
E-27

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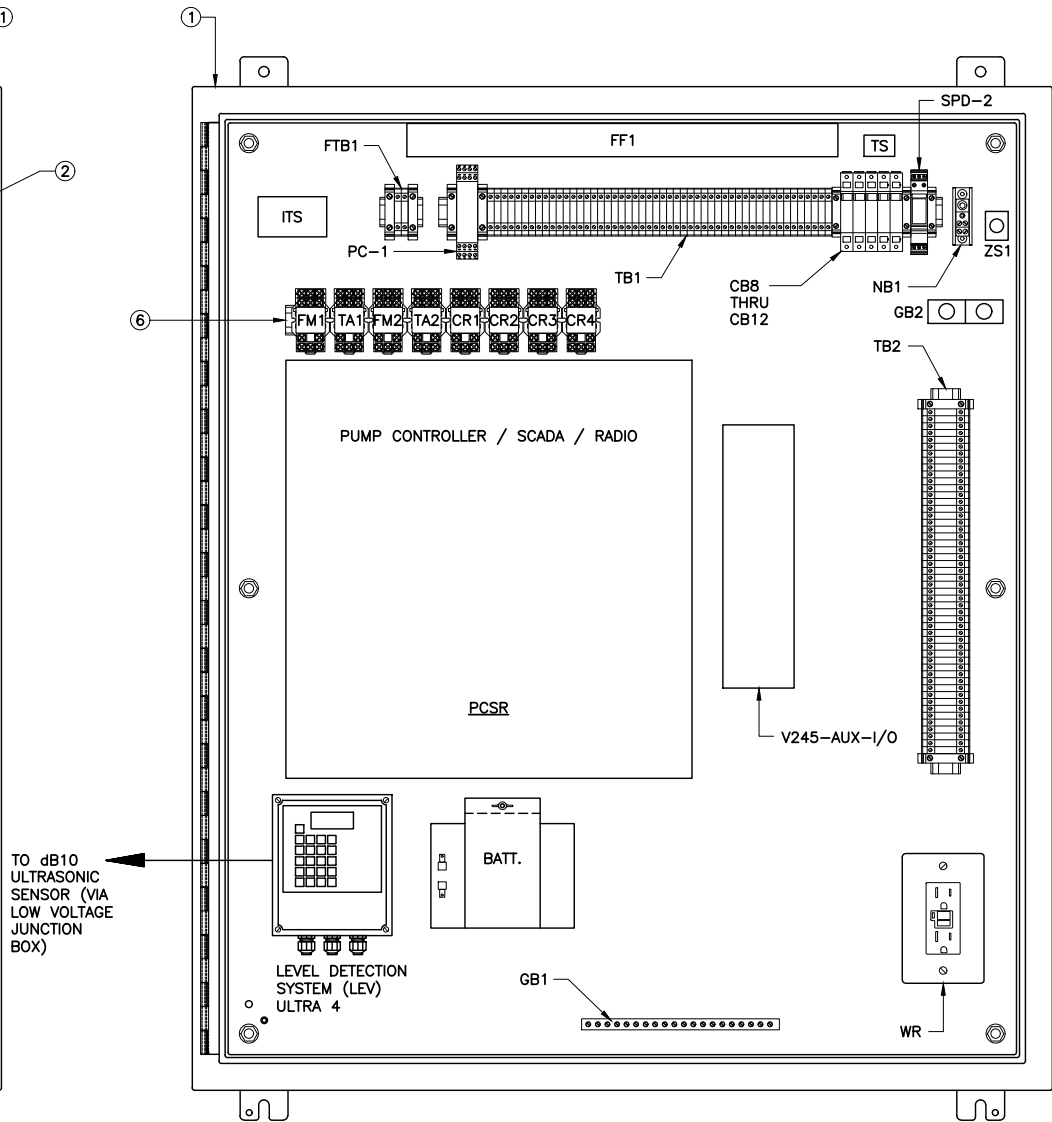
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PUMP CONTROL PANEL DETAILS

N.T.S

NOTE: FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY



PANEL INTERIOR

N.T.S

NOTE:

1. FOR INFORMATIONAL PURPOSES ONLY. EXACT DEVICES, MOUNTING EQUIPMENT SIZES, ETC., TO BE DETERMINED BY THE PUMP CONTROL PANEL MANUFACTURER.

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
ETM1	ELAPSED TIME METER	PUMP NO. 1 HOURS
ETM2	ELAPSED TIME METER	PUMP NO. 2 HOURS
PL1	YELLOW PILOT LIGHT	PUMP NO. 1 ON
PL2	RED ILLUMINATED PUSH BUTTON	PUMP NO. 1 TEMP. ALARM
PL3	RED ILLUMINATED PUSH BUTTON	PUMP NO. 2 TEMP. ALARM
PL4	YELLOW PILOT LIGHT	PUMP NO. 2 ON
PL5	RED PILOT LIGHT	PUMP NO. 1 SEAL LEAK ALARM
PL6	RED PILOT LIGHT	PUMP NO. 2 SEAL LEAK ALARM
S1	3 POSITION SWITCH	PUMP NO. 1 HAND-OFF-AUTO
S2	3 POSITION SWITCH	PUMP NO. 2 HAND-OFF-AUTO
MCB	PUMP CONTROL PANEL MAIN CIRCUIT BREAKER	MAIN CIRCUIT BREAKER
F1	DIGITAL PROCESS METER	WET WELL LEVEL
ALS	TOGGLE SWITCH	AREA LIGHT SWITCH

KEYED NOTES:

- ① PUMP CONTROL CABINET. 42" X 36" X 12" NEMA 4X SS, POWDER COAT WHITE.
- ② PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
- ③ PROVIDE AND INSTALL NEW PILOT LIGHT.
- ④ PROVIDE AND INSTALL NEW SELECTOR SWITCH.
- ⑤ PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6R3-10 WITH 4-20mA OUTPUT.
- ⑥ PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
- ⑦ PROVIDE AND INSTALL NEW SINGLE-POLE 120/277V, 20A LIGHT SWITCH TO CONTROL AREA LIGHT. REFER TO SHEET E-37 FOR DETAIL.
- ⑧ PROVIDE WARNING LABEL ABOVE OR BELOW CB6. LABEL TO READ:
"WARNING: THE 120VAC SUPPLY FOR THIS PUMP CONTROL PANEL (PCP) IS FED FROM MOTOR CONTROL PANEL MCP AND WILL BE PRESENT AT THE LINE SIDE OF MCB (CB-6) LOCATED IN THIS PANEL. LOCK AND TAG OUT THE MOTOR CONTROL PANEL DISCONNECT PRIOR TO OPENING DEAD FRONT DOOR."

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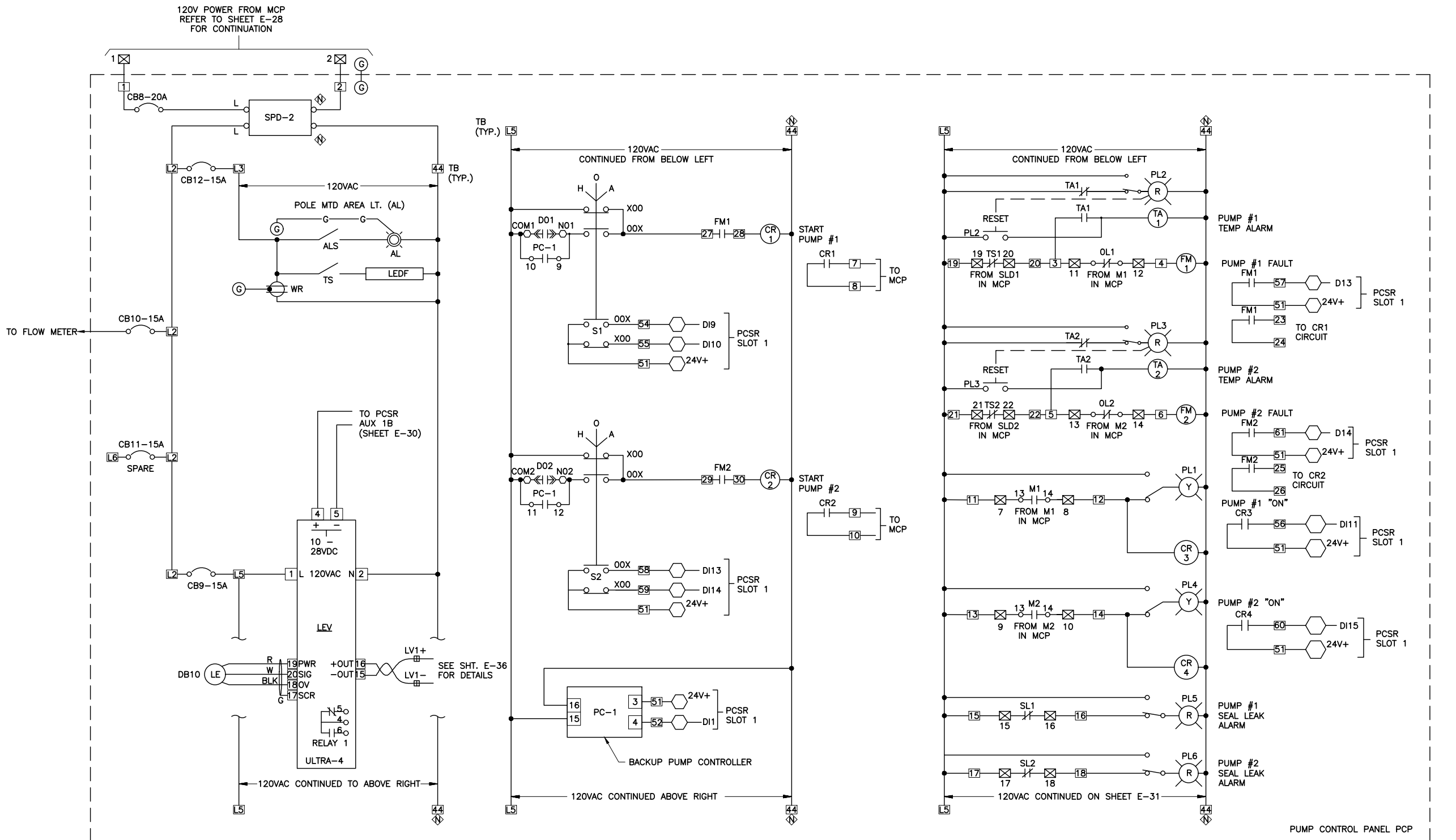
CITY of TAMPA
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WASTEWATER PUMPING STATION REHABILITATIONS
**IDLEWILD PUMP CONTROL
PANEL DETAILS**

SHEET
E-28

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ELECTRICAL SCHEMATIC
SCALE: N.T.S.

- TERMINALS ON ACE I/O MODULE (GENERAL)
- TERMINALS IN PUMP CONTROL PANEL (PCP)
- ⊗ TERMINALS IN MOTOR CONTROL PANEL (MCP)



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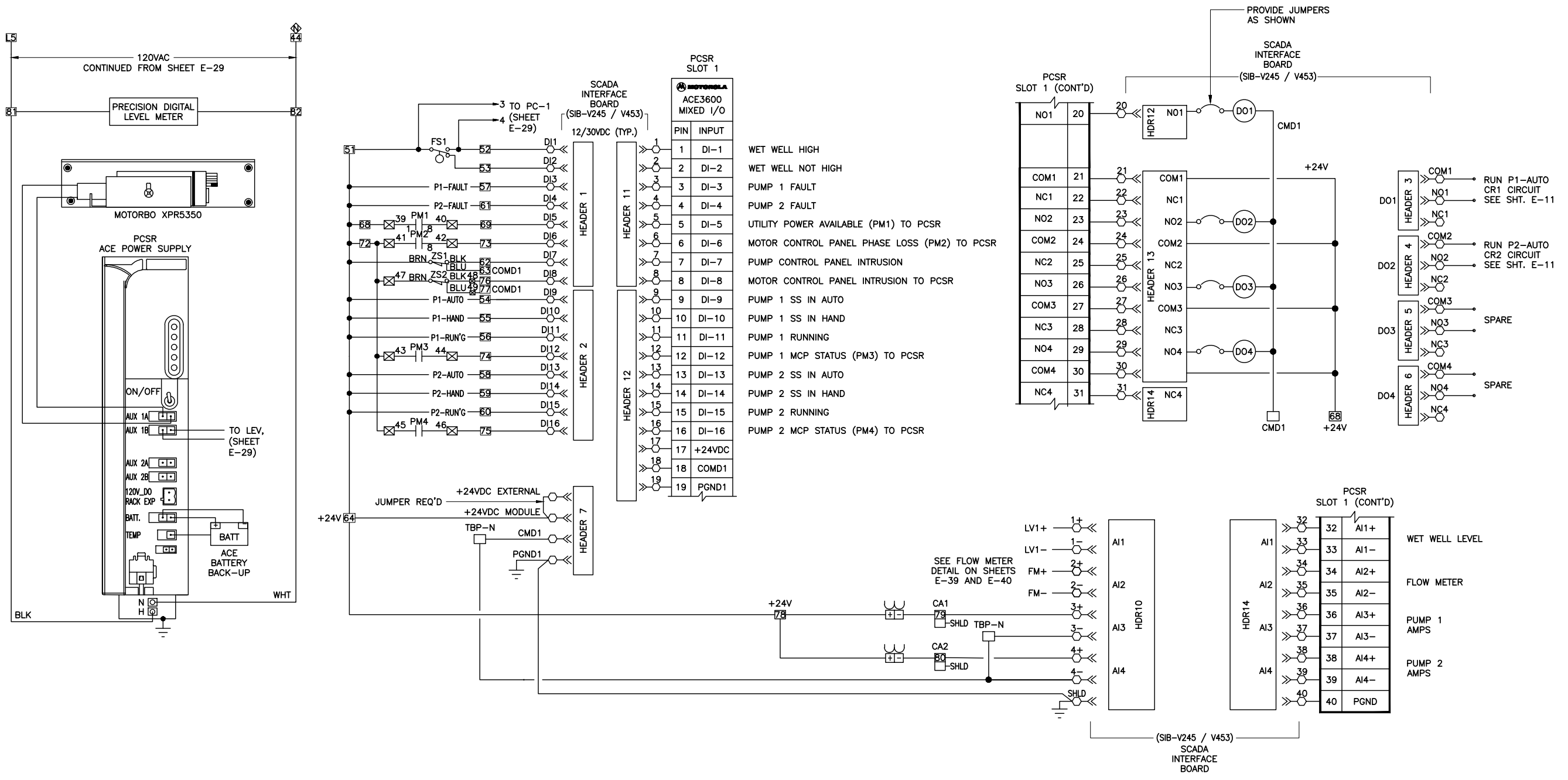
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD TYPICAL PUMP CONTROL PANEL
ELECTRICAL SCHEMATIC (1 OF 2)

SHEET
E-29

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ELECTRICAL SCHEMATIC
SCALE: N.T.S.

- TERMINALS ON ACE I/O MODULE (GENERAL)
- TERMINALS IN PUMP CONTROL PANEL
- ⊗ TERMINALS IN MOTOR CONTROL PANEL
- △ TERMINALS IN PM1 JUNCTION BOX

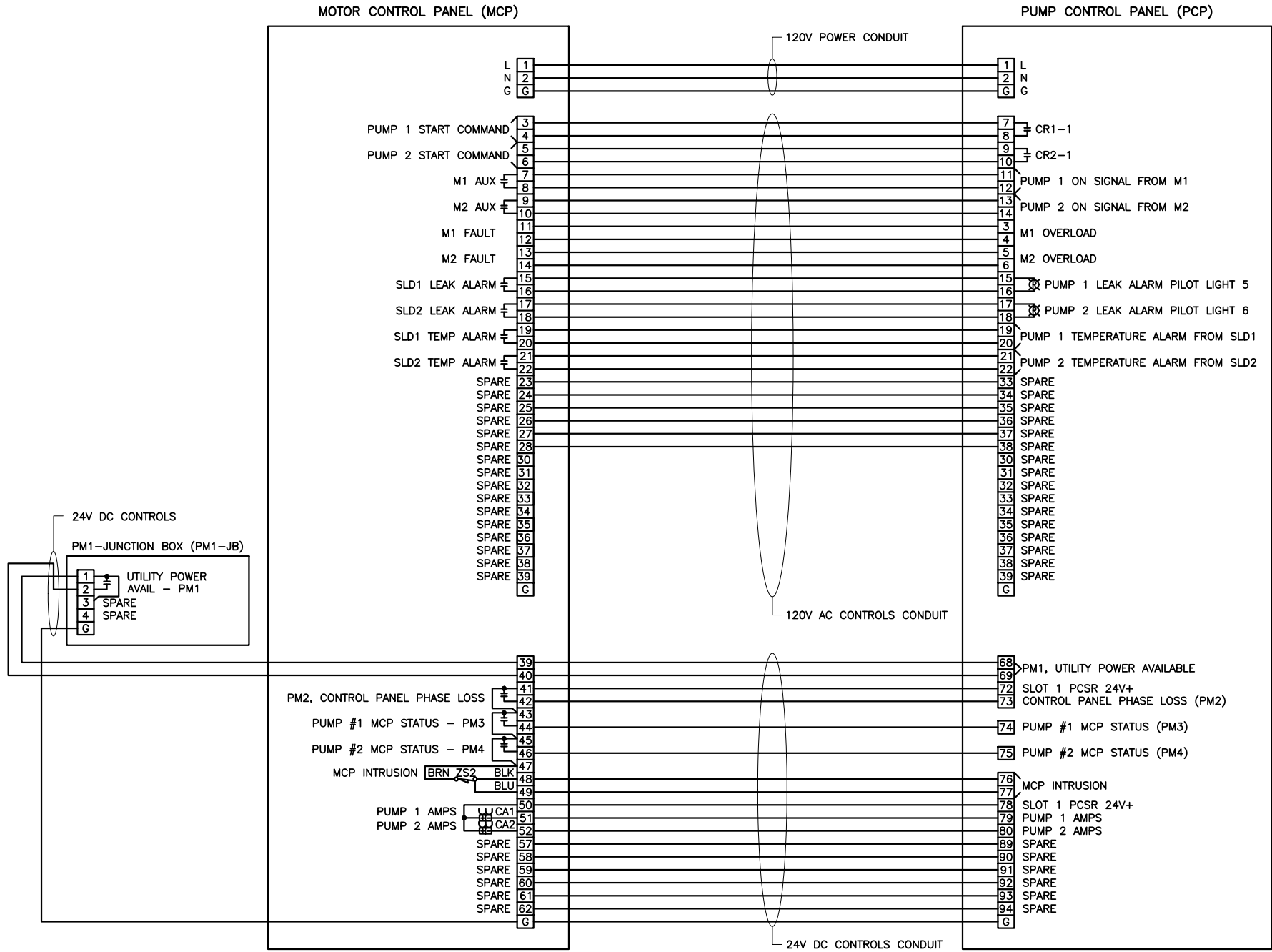
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<div>AECOM 7650 West Courtney Campbell Causeway Waterford Plaza, Suite 700 Tampa, Florida 33607 813.286.1711 tel Certificate of Authorization No. 8115</div>	<div>MICHAEL J. CAHILL, P.E. FL. P.E. LICENSE NO. 70837</div>	No.	DATE	REVISIONS	DES: MJC DRN: SJT CKD: WCN DATE: 10/27/2022	<div>CITY of TAMPA WASTEWATER DEPARTMENT</div>	WASTEWATER PUMPING STATION REHABILITATIONS		<div>SH E-</div>
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INTERCONNECTION WIRING DIAGRAM
SCALE: N.T.S.

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DES: MJC
DRN: SJT
CKD: WCN
DATE: 10/27/2022

CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
**IDLEWILD INTERCONNECTION WIRING
DIAGRAM**

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TB1(□)(120V AC) MOUNTED ON PUMP CONTROL PANEL (PCP)		TB2(□)(24V DC) MOUNTED ON PUMP CONTROL PANEL (PCP)		TB3(⊞)(120V AC) MOUNTED ON MOTOR CONTROL PANEL (MCP)		TB4(⊞)(24V DC) MOUNTED ON MOTOR CONTROL PANEL (MCP)		TB5(△)(24V YOC) MOUNTED ON PM1-JUNCTION BOX (PM1-JB)	
TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION	TERM.	DESCRIPTION
1	120V FROM MOTOR CONTROL PANEL	51	SLOT 1 PCSR 24V+	1	120V TO PUMP CONTROL PANEL	39	PM1, UTILITY POWER AVAILABLE	1	SLOT 1 PCSR 24V+
2	NEUTRAL FROM MOTOR CONTROL PANEL	52	WET WELL HIGH	2	NEUTRAL (CONTINUED TO PUMP CONTROL PANEL	40	PM1, UTILITY POWER AVAILABLE	2	UTIL POWER AVAILABLE (PM1) TO PCSR
3	SOFTSTARTER NO. 1 FAULT FROM M1	53	WET WELL NOT HIGH	3	PUMP 1 START COMMAND FROM CR1-1 (IN PCP)	41	SLOT 1 PCSR 24V+	3	SPARE
4	SOFTSTARTER NO. 1 FAULT FROM M1	54	PUMP 1 "AUTO" TO PCSR	4	PUMP 1 START COMMAND FROM CR1-1 (IN PCP)	42	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR	4	SPARE
5	SOFTSTARTER NO. 2 FAULT FROM M2	55	PUMP 1 "HAND" TO PCSR	5	PUMP 2 START COMMAND FROM CR2-1 (IN PCP)	43	SLOT 1 PCSR 24V+	5	SPARE
6	SOFTSTARTER NO. 2 FAULT FROM M2	56	PUMP 1 "ON" TO PCSR	6	PUMP 2 START COMMAND FROM CR2-1 (IN PCP)	44	PUMP #1 MCP STATUS PHASE LOSS (PM3) TO PCSR		
7	PUMP 1 START COMMAND TO M1 (IN MCP)	57	PUMP 1 "FAULT" TO PCSR	7	PUMP 1 'ON' SIGNAL TO CR3 (IN PCP)	45	SLOT 1 PCSR 24V+		
8	PUMP 1 START COMMAND TO M1 (IN MCP)	58	PUMP 2 "AUTO" TO PCSR	8	PUMP 1 'ON' SIGNAL TO CR3 (IN PCP)	46	PUMP #2 MCP STATUS PHASE LOSS (PM4) TO PCSR		
9	PUMP 2 START COMMAND TO M2 (IN MCP)	59	PUMP 2 "HAND" TO PCSR	9	PUMP 2 'ON' SIGNAL TO CR4 (IN PCP)	47	SLOT 1 PCSR 24V+		
10	PUMP 2 START COMMAND TO M2 (IN MCP)	60	PUMP 2 "ON" TO PCSR	10	PUMP 2 'ON' SIGNAL TO CR4 (IN PCP)	48	} MOTOR CONTROL PANEL INTRUSION		
11	P1 "ON" SIGNAL FROM M1 (IN MCP)	61	PUMP 2 "FAULT" TO PCSR	11	M1 FAULT SIGNAL TO PCP	49			
12	P1 "ON" SIGNAL FROM M1 (IN MCP)	62	} PUMP CONTROL PANEL INTRUSION	12	M1 FAULT SIGNAL TO PCP	50	SLOT 1 PCSR 24V+		
13	P2 "ON" SIGNAL FROM M2 (IN MCP)	63		13	M2 FAULT SIGNAL TO PCP	51	PUMP 1 AMPS		
14	P2 "ON" SIGNAL FROM M2 (IN MCP)	64	SLOT 1 PCSR 24V+	14	M2 FAULT SIGNAL TO PCP	52	PUMP 2 AMPS		
15	PUMP 1 LEAK ALARM FROM MCP	65	SPARE	15	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)	53	PUMP 1 SEAL LEAK DETECTOR PROBE		
16	PUMP 1 LEAK ALARM FROM MCP	66	SLOT 1 PCSR 24V+	16	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)	54	PUMP 1 SEAL LEAK DETECTOR PROBE		
17	PUMP 2 LEAK ALARM FROM MCP	67	SLOT 1 PCSR 24V+	17	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)	55	PUMP 1 SEAL LEAK DETECTOR PROBE		
18	PUMP 2 LEAK ALARM FROM MCP	68	SLOT 1 PCSR 24V+	18	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)	56	PUMP 1 SEAL LEAK DETECTOR PROBE		
19	PUMP 1 TEMPERATURE ALARM FROM MCP	69	UTIL POWER AVAILABLE (PM1) TO PCSR	19	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)	57-66	SPARE		
20	PUMP 1 TEMPERATURE ALARM FROM MCP	70	SPARE	20	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)				
21	PUMP 2 TEMPERATURE ALARM FROM MCP	71	SPARE	21	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)				
22	PUMP 2 TEMPERATURE ALARM FROM MCP	72	SLOT 1 PCSR 24V+	22	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)				
23	PUMP 1 FAULT RELAY CONTACT	73	MOTOR CONTROL PANEL PHASE LOSS (PM2)	23-37	SPARE				
24	PUMP 1 FAULT RELAY CONTACT	74	PUMP #1 MCP STATUS (PM3) TO PCSR	H1	CB11 OUT MOTOR CONTROL PANEL POWER				
25	PUMP 2 FAULT RELAY CONTACT	75	PUMP #2 MCP STATUS (PM4) TO PCSR						
26	PUMP 2 FAULT RELAY CONTACT	76	} MOTOR CONTROL PANEL INTRUSION						
27-43	SPARE	77							
44	SPD-2 NEUTRAL OUT	78	SLOT 1 PCSR 24V+						
L1	SPD-2 NEUTRAL OUT	79	PUMP 1 AMPS						
L2	MAIN BREAKER CB6	80	PUMP 2 AMPS						
L3	CB12 RECEP. & AREA LIGHT	81	PROCESS METER FOR LEVEL 120V-POWER						
L4	CB7 OUT (SPARE)	82	PROCESS METER FOR LEVEL 120V-NEUTRAL						
L5	CB9 PUMP CONTROLS	83	SPARE SLOT 1 TERMINALS						
L6	CB8 OUT (SPARE)	84	SPARE SLOT 1 TERMINALS						
		85	SLOT 2 PCSR 24V+						
		86	SLOT 2 PCSR 24V+						
		87	SLOT 2 PCSR 24V+						
		91	LEVEL TRANSDUCER						
		92							
		93							
		94	FLOW METER						
		95							
		96							
		88-100	SPARE						

- X-Y
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- △
- TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR)
- TERMINAL POINT ON PCSR
- TERMINAL POINT IN PUMP CONTROL PANEL (PCP)
- TERMINAL POINT IN MOTOR CONTROL PANEL (MCP)
- TERMINAL POINT IN PM1 JUNCTION BOX (PM1-JB)



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DRN: SJT
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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD MOTOR/PUMP CONTROL PANEL
TERMINAL DETAILS

SHEET
E-32

EDA
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IDLEWILD MOTOR CONTROL PARTS SCHEDULE						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
CB1, CB2	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36060	600 V, 60A	18KAIC @ 480V
CB3	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36020	600 V, 20A	18KAIC @ 480V
CB4	CIRCUIT BREAKER	SQUARE D	TWO POLE	HDL 26015	600 V, 15A	18KAIC @ 480V
M1, M2	MOTOR SOFT STARTER	SOLCON	SOFT STARTER	RVS-DX-44-480-115-8D-U-S	480V, 44A, 120V CONTROLS	PROVIDE REMOTE KEYPAD
CB6, CB7	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
CB5	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-120	120 V, 20A	
CA1, CA2	CIRCUIT SENSOR	ENERCORP INSTRUMENTS	4-20mA OUTPUT	SC200-1	0-10A, 0-20A, 0-50A	SELECTABLE RANGE
T1	TRANSFORMER	SQUARE D	OPEN TYPE	9070T2000D31	480V PRI, 120/240 V SEC.	2KVA
ZS2	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
LEDF & TS	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
SPD-1	SURGE PROTECTIVE DEVICE TYPE 1	ASCO	MOTOR CONTROL PANEL SPD	TE04XDS104X	480/277 V, 3ø, 4W	
TB3, TB4	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	50 CONTACTS (MIN)
ITS	INSULATED TERMINAL STRIP	ALLEN-BRADLEY	STYLE AA	1492-15-T	600 V AC NEUTRAL BLOCK	4 CONTACTS (MIN) W/ SHORTING BARS
MCP	MOTOR CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 42"x30"x12"	42"x30"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
MP	ENCLOSURE PANEL	HOFFMAN	3ø" X 27", STEEL	A42P30	STEEL, 12 GAUGE	W/ OPTIONAL 5-SEC RELEASE AND DIN RAIL SOCKET-RB08PC
PM2, PM3, PM4	3-PHASE POWER MONITOR	ATC DIVERSIFIED ELECTRONICS	8 PIN PLUG-IN	SUA-440-ASA	480 VAC	FINGER-SAFE TERMINAL BLOCKS
PDB	PWR DIST. BLOCK	BUSSMANN/EATON	THREE POLE	PDBFS220	600 V, 175 AMP	W/ BUSSMANN KTK-R-2 FAST ACTING, REJECTION FUSES PROVIDED BY THE CITY
FBD 2, 3, 4	FUSE BLOCK / DISCONNECT	ALLEN BRADLEY	THREE PHASE- HIGH INTER. CAP.	1492-FB3C30-L	600 VAC, 200KAIC	INSTALLED BY CONTRACTOR
FL	FLOAT SWITCH	ANCHOR SCIENTIFIC	SPDT	S20NONC	10 A @ 120 V	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
FTB2	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5-HESI	PROVIDE 1, 2, & 5A FUSES	
SLD1, SLD2	PUMP MONITORING UNIT	XYLEM		MINI-CAS 120	10A AT 240V AC	
GB2	GROUNDING BLOCK	ILSCO	AS REQUIRED	AS REQUIRED		
NB2	NEUTRAL DISTRIBUTION BLOCK	BUSSMAN	SINGLE POLE	16220-1	600V, 175A	

PARTS SCHEDULE (MISCELLANEOUS)						
PM1- JUNCTION BOX						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
PM1	3-PHASE POWER MONITOR	ATC DIVERSIFIED ELECTRONICS	8 PIN PLUG-IN	SUA-440-ASA	480 VAC	W/ OPTIONAL 5-SEC RELEASE AND DIN RAIL SOCKET-RB08PC
FBD1	FUSE BLOCK / DISCONNECT	ALLEN BRADLEY	THREE PHASE- HIGH INTER. CAP.	1492-FB3C30-L	600 VAC, 200KAIC	W/ BUSSMANN KTK-R-2 FAST ACTING, REJECTION FUSES
PM1-JB	PHASE MONITOR JUNCTION BOX	HAMMOND MANUFACTURING	NEMA 4X, 8"x6"x6"	EJ866S16	316 S.S.	INSTALL DIN RAILS TO MOUNT PM1 AND FBD1
TB5	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	5 CONTACTS (MIN)
EXTERNAL ELECTRICAL						
SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
FDT5	FUSED DOUBLE THROW DISCONNECT SWITCH	EATON	SERVICE ENTRANCE RATED, HEAVY DUTY	DT363FWK SWITCH DT100 NK NEUTRAL KIT DS100 GK GROUND KIT DS36FK R FUSE ADAPTOR KIT	480 VAC, 100 AMP	TIME DELAY CURRENT LIMITING CLASS RK5 FUSES
			PROVISIONS FOR PADLOCKING IN ALL THREE POSITIONS			(6) EDISON ECSR100 (PROVIDE (6) SPARES)
MS	METER SOCKET	MILBANK	7 TERMINAL	UAP9701-X-QG-HSP	600 VAC, 200 AMP	ALUMINUM CONSTRUCTION
EC	EMERGENCY CONNECTOR	CROUSE & HINDS	ARKTITE	AREA10415-S22 W/ BACK BOX, ANGLE ADAPTER, 1-1/2" HUB AND SPRING COVER	600V 100 AMP	
LA SPD 1	LIGHTNING ARRESTER	SQUARE D	THREE POLE, 4 WIRE	SDS A3650	40 KA, 600 V MAX	
MCP-JB	MOTOR CONTROL PANEL JUNCTION BOX	WIEGMANN	NEMA 4X, 12"x12"x6"	BN4121206CHSS	304 S.S.	INSTALL S.S. LOUVER PLATE KIT WIEGMANN #WAVK0304SSA
PCP-JB	PUMP CONTROL PANEL JUNCTION BOX	WIEGMANN	NEMA 4X, 12"x12"x6"	BN4121206CHSS	304 S.S.	INSTALL S.S. LOUVER PLATE KIT WIEGMANN #WAVK0304SSA
PDB	PWR DIST. BLOCK	BUSSMANN/EATON	THREE POLE	PDBFS220	600 V, 175 AMP	FINGER-SAFE TERMINAL BLOCKS
	SEAL FITTING	CROUSE-HINDS	COPPER-FREE ALUMINUM	AS REQUIRED		
FT/FLOW METER	FLOW METER	PULSAR	FLOW METER	DFM 6.1-A-2-A-2-A-1-C-1-A		25' CABLE MOUNT ON EQUIPMENT RACK ADJACENT TO PIPE



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CITY of TAMPA
WASTEWATER DEPARTMENT

WASTEWATER PUMPING STATION REHABILITATIONS

IDLEWILD PARTS SCHEDULE (SHT.1 OF 2)

SHEET

E-33

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PARTS SCHEDULE (PUMP CONTROL PANEL)						
SYMBOL	NAME	PART				REMARKS
		PCSR PARTS LIST				
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PCSR	PLC BASED PUMP CONTROLLER, SCADA, AND RADIO SYSTEM	MOTOROLA CORP.	DUPLEX PUMP CONTROLLER BASED ON ACE 3600 PROGRAM CONTROLLER	PART #7509	BASIC MODEL	PROVIDE (1) SPARE
		MOTOROLA CORP.	MOTORBO ANALOG RADIO INSTALLATION KIT	VA00194 (PART #FLN1059)		
		MOTOROLA CORP.	MOTORBO XPR5350 RADIO	VA00161 (PART #UE1078A)	UHF RI: 403-470MHZ	
		MOTOROLA CORP.	METAL CHASIS	PART #V214	MEDIUM 14" x 14"	
		MOTOROLA CORP.	AC POWER SUPPLY 85-264V	PART #V261	100-240 VAC W/ 12V SMART CHARGER	PROVIDE (1) SPARE
		MOTOROLA CORP.	BACKUP BATTERY	PART #V328	10.0 Ah SEALED LEAD-ACID	FITS IN SEPARATE LOCATION FROM METAL CHASSIS; INCLUDE: FKN8376 BATTERY POWER CABLE, FHN601 MOUNTING BRACKET, AND FNN7898 10 AH BACKUP BATTERY
		MOTOROLA CORP.	3-I/O SLOT FRAME	PART #V103		
		MOTOROLA CORP.	20 PIN TB HOLDER KIT	PART #V158		
		MOTOROLA CORP.	I/O SLOT COVER	PART #V20	BLANK MODULE	UTILIZE WHERE NEEDED
		MOTOROLA CORP.	16 DI + 4 DO (EE) + (4)± 20 mA AI	PART #V245	PART #V245	MIXED I/O, PROVIDE (2) SPARES
		MOTOROLA CORP.	24 VDC PLUG-IN POWER SUPPLY	PART #V260 (FPN1653A)	24V FLOATING MAX, 150 mA OUTPUT	FLOATING POWER SUPPLY
		WILKERSON	SCADA INTERFACE BOARD	PART #SIB-V 245/V453		PROVIDE (2) SPARES
SYMBOL	NAME	PART				REMARKS
		REMAINING PARTS LIST				
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PC-1	BACKUP PUMP CONTROLLER	WILKERSON	DUPLEX LIFT STATION	DR1920	10 AMP CONTACTS	DIN RAIL MOUNTING
FTB1	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5-HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
F1, L1	PROCESS METER	PRECISION DIGITAL	4 DIGIT, 1.2" DISPLAY	PD765-6R3-10		PROVIDE 4-20 mA OUTPUT
CB8	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-120	120 V, 20A	
CB9, CB10, CB11, CB12	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
PL1, PL4	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LYA9	120 V, LED TYPE	YELLOW LENS & PRESS TEST
PL2, PL3	ILLUM. PUSH BUTTON	SQUARE D	CLASS 9001	SK2L38LRRH13	120 V, LED TYPE	RED LENS & 1 N.O., 1 N.C.
PL5, PL6	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT - 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
S1, S2	HOA SWITCH ASSEMBLY	SQUARE D	OIL-TIGHT CLASS 9001	SKS - 43B H2	10A @ 120V	
ZS1	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
LEDF & TS	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
WR	WALL RECEPTACLE	HUBBELL	DUPLEX W/GFI	GF5262	120V AC, 15A GFI	W/ALUMINUM OUTLET BOX AND COVER
TB1, TB2	TERMINALS	PHOENIX CONTACT		UK5N TERMINALS	30 A W/ ALUM. DIN RAIL	50 CONTACTS (MIN)
ITS	INSULATED TERMINAL STRIP	ALLEN-BRADLEY	STYLE AA	1492-15-T	600 V AC NEUTRAL BLOCK	4 CONTACTS (MIN) W/ SHORTING BARS
GB1	GROUND BAR SYSTEM	PANDUIT	12 PORT WITH MAIN LUG	UGB2/0-414-12		COPPER CONSTRUCTION
GB2	GROUNDING BLOCK	ILSCO	AS REQUIRED	AS REQUIRED		
TA1, TA2	CONTROL RELAY	POTTER & BRUMFIELD	8 PIN PLUG-IN	KRPA-11AG-120	120V AC COIL, 10A CONTACTS	DPDT W/ SOCKET AND HOLD DOWN SPRING
FM1, FM2, CR3, CR4	CONTROL RELAY	POTTER & BRUMFIELD	11 PIN PLUG-IN	KRPA-14AG-120	120V AC COIL, 10A CONTACTS	3PDT W/ SOCKET AND HOLD DOWN SPRING
LEV	WET WELL LEVEL SENSOR	PULSAR, INC.	ULTRASONIC	dB10 TRANSDUCER W/ ULTRA 4	1 TD 32.8 FT RANGE 115VAC/24VDC POWERED W/ 4-20MA AND (2) RELAY OUT W/ KEY PAD, DISPLAY, AND TROPICALIZATION	CITY FORCES WILL PROVIDE ASSISTANCE WITH MOUNTING AND CALIBRATION
CR1, CR2	CONTROL RELAY	POTTER & BRUMFIELD	14-BLADE SQUARE PLUG-IN	KUP-L7A19-120	120V AC COIL, 10A CONTACTS	4PDT W/ SOCKET AND HOLD DOWN SPRING
PCP	PUMP CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 42"x36"x12"	42"x36"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
PP	ENCLOSURE PANEL	HOFFMAN	39" X 33", STEEL	A42P36	STEEL, 12 GAUGE	
NB1	NEUTRAL DISTRIBUTION BLOCK	BUSSMAN	SINGLE POLE	16220-1	600V, 175A	
ALS	AREA LIGHT SWITCH	HUBBELL	SINGLE POLE	HBL1221	277V, 20A	
SPD-2	SURGE PROTECTION DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L, N, G)	2856812	120V, 25A	

EDA

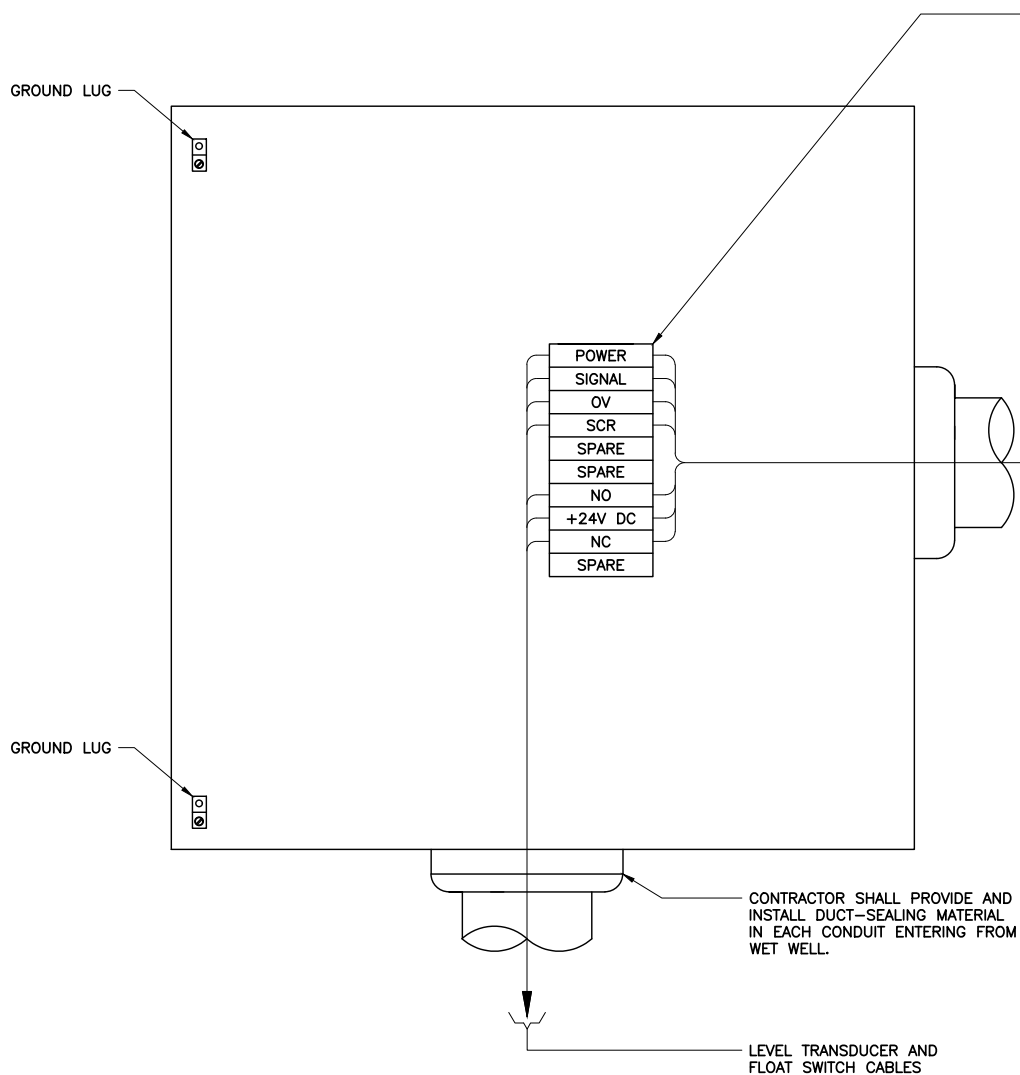
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<div><div><div>AECOM</div><div>7650 West Courtney Campbell Causeway Waterford Plaza, Suite 700 Tampa, Florida 33607 813.286.1711 tel Certificate of Authorization No. 8115</div></div><div><div>MICHAEL J. CAHILL, P.E.</div><div>FL. P.E. LICENSE NO. 70837</div></div></div>	No.	DATE	REVISIONS	DES: MJC DRN: SJT CKD: WCN DATE: 10/27/2022	<div>CITY of TAMPA</div> <div>WASTEWATER DEPARTMENT</div>	WASTEWATER PUMPING STATION REHABILITATIONS		SHEET	
	3						IDLEWILD PARTS SCHEDULE		E-34
	2								
	1						(SHT. 2 OF 2)		

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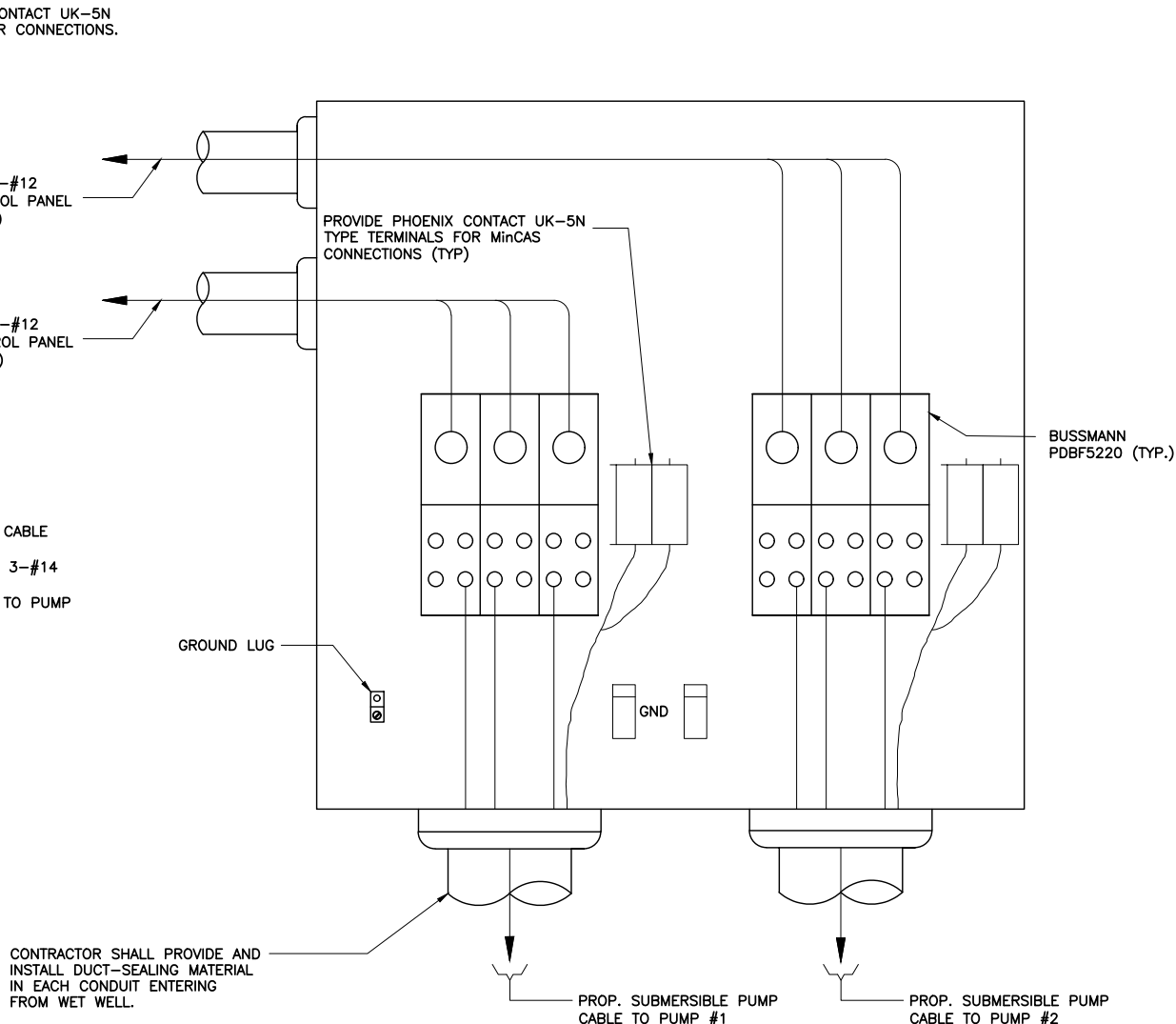


NOTES:

- COVER NOT SHOWN FOR CLARITY.
- BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
- ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.

INSTRUMENTATION AND CONTROLS JUNCTION BOX DETAIL (LABEL PCP-JB)

SCALE: N.T.S.



NOTES:

- COVER NOT SHOWN FOR CLARITY.
- BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
- ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.

PUMP MOTOR CONNECTIONS JUNCTION BOX DETAIL (LABEL MCP-JB)

SCALE: N.T.S.

NOTES:

ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.

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CITY of TAMPA
WASTEWATER DEPARTMENT

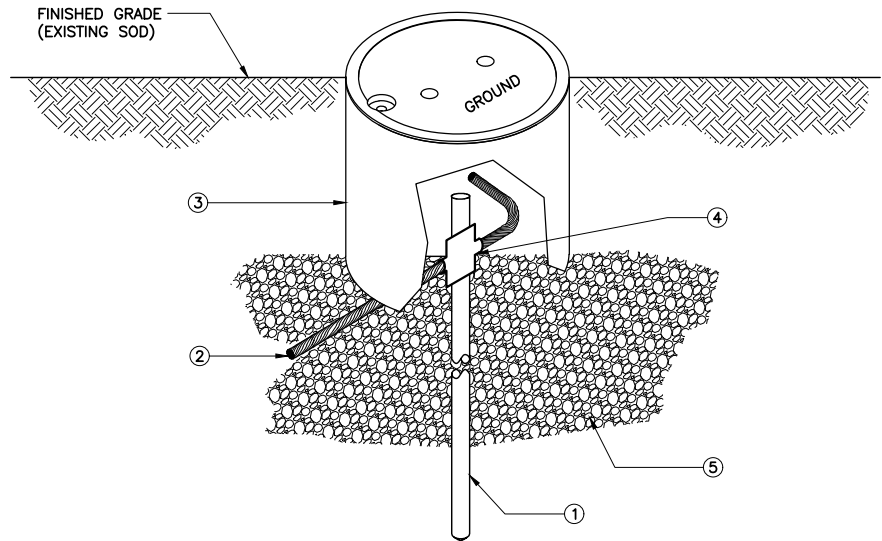
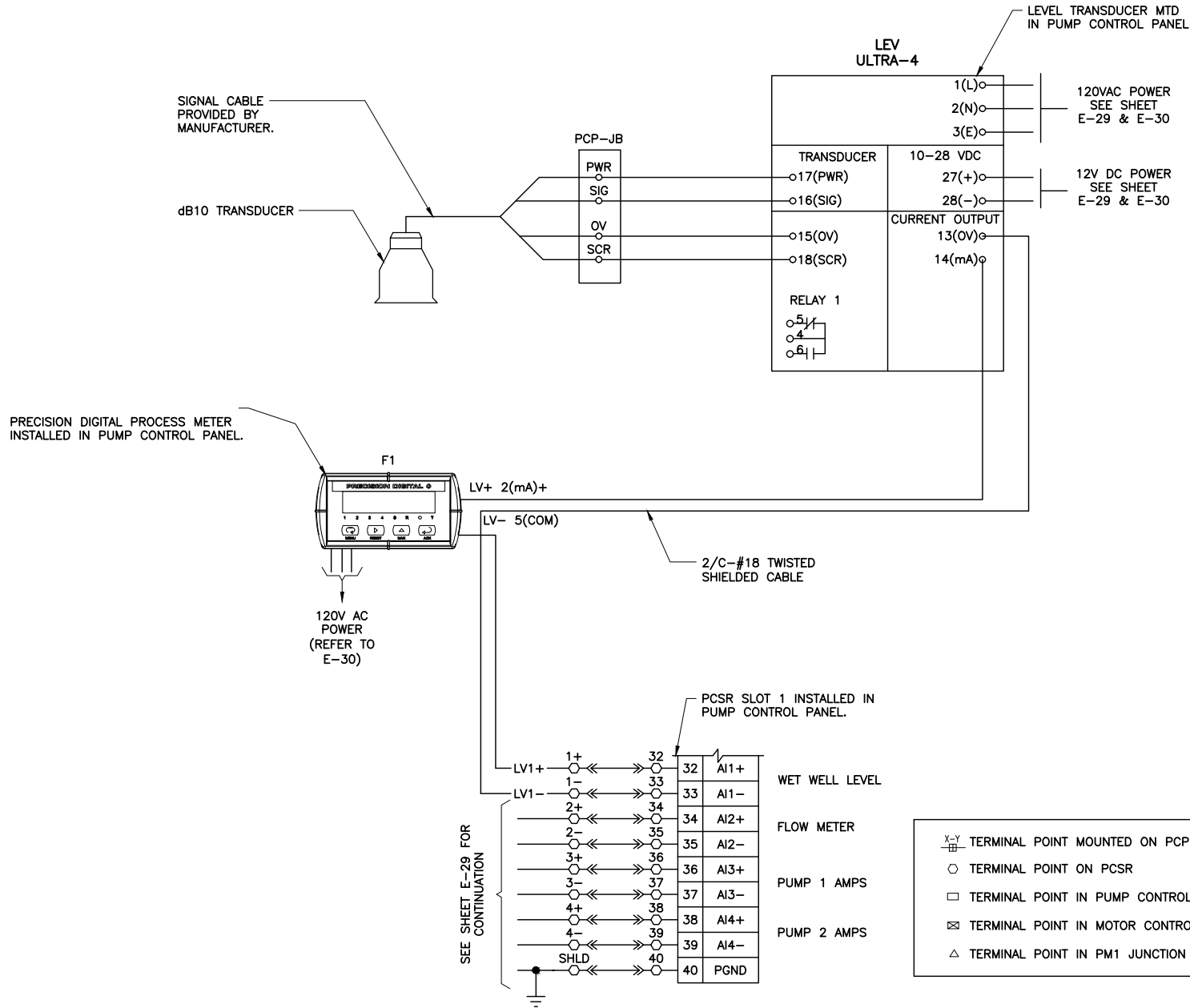
WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD ELECTRICAL DETAILS
(SHT. 1 OF 6)

SHEET
E-35

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GROUNDING TEST WELL DETAIL

SCALE: N.T.S.

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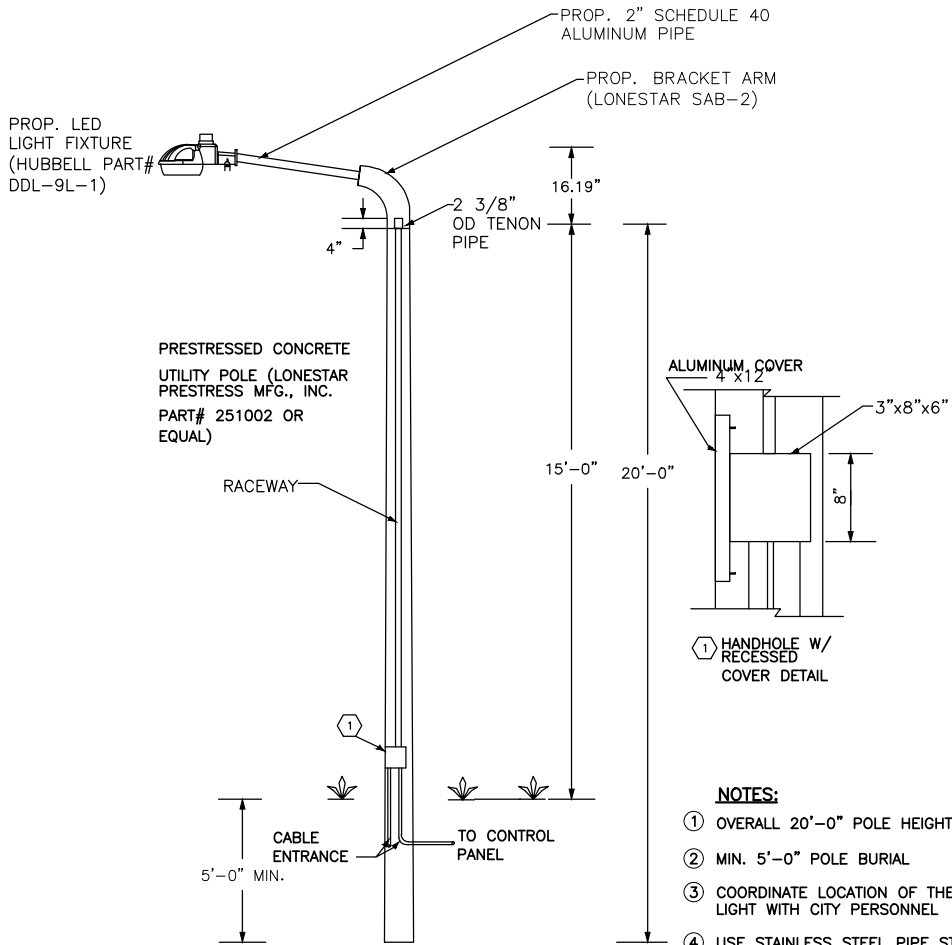
WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD ELECTRICAL DETAILS
(SHT. 2 OF 6)

SHEET
E-36

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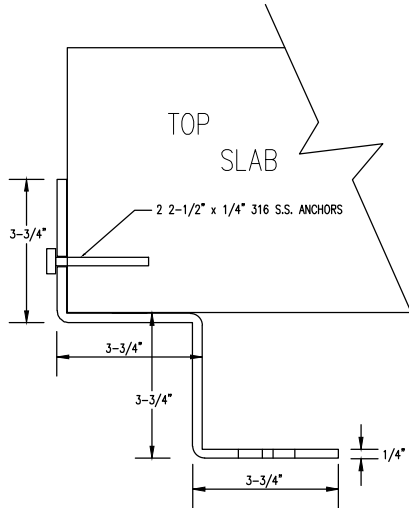
AREA LIGHT (AL) DETAIL

SCALE: N.T.S.

WIND DESIGN DATA:
CODE: FLORIDA BUILDING CODE 2020, 7TH EDITION
AND ASCE/SEI 7-16

BASIC WIND SPEED(Vuit)	152 MPH
NOMINAL WIND SPEED(Vasd)	118 MPH
CATEGORY (RISK)	111
WIND EXPOSURE	C
DESIGN WIND PRESSURE (PSF)	55.7 PSF

- NOTES:**
- OVERALL 20'-0" POLE HEIGHT
 - MIN. 5'-0" POLE BURIAL
 - COORDINATE LOCATION OF THE AREA LIGHT WITH CITY PERSONNEL
 - USE STAINLESS STEEL PIPE STRAPS SPACED 2'-0" APART TO MOUNT CONDUIT
 - THE LIGHT POLE SHALL BE DESIGNED TO MEET THE SPECIFIED WIND LOAD CRITERIA AND THE LIGHT POLE SUBMITTAL SHALL INCLUDE THE LIGHT POLE CALCULATIONS MEETING THE WIND LOAD CRITERIA AND SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.
 - 10'-0" FOR MAIN PANEL SITE

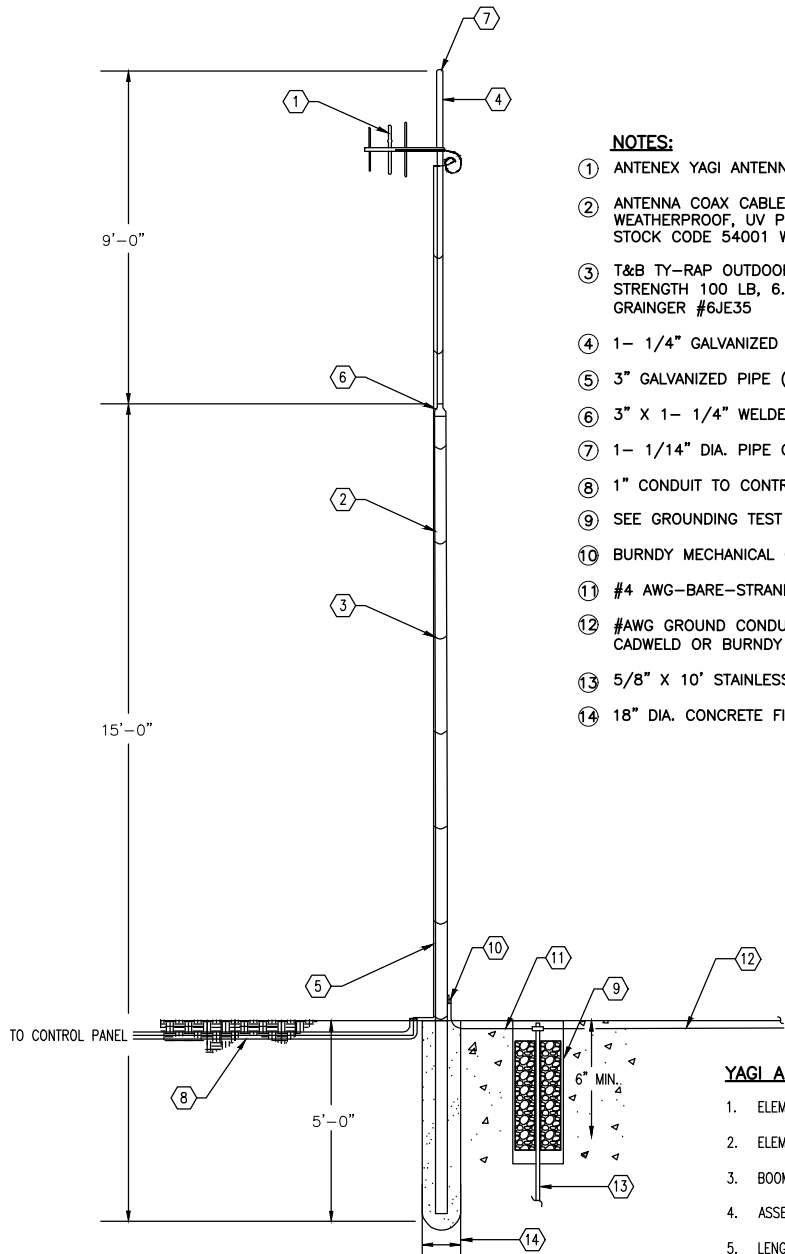


DBIO OR PULSAR
MOUNTING BRACKET DETAIL

SCALE: N.T.S.

NOTE:

ROUND OVER ALL EDGES,
RADIUS ALL CORNERS



ANTENNA DETAIL

SCALE: N.T.S.

NOTES:

- ANTENEX YAGI ANTENNA MODEL Y4503 (DIRECTIONS POINT UP, AS SHOWN)
- ANTENNA COAX CABLE-RG-8/9913; AIR-DIELECTRIC TYPE, LOW LOSS, WEATHERPROOF, UV PROTECTED. TIMES MICROWAVE SYSTEMS LMR-400 STOCK CODE 54001 WITH REQUIRED CONNECTORS.
- T&B TY-RAP OUTDOOR CABLE TIES, 304 STAINLESS STEEL, TENSILE STRENGTH 100 LB, 6.5" LONG, UL LISTED- MODEL SS7-180-10 GRAINGER #6JE35
- 1- 1/4" GALVANIZED PIPE (SCHEDULE 40)
- 3" GALVANIZED PIPE (SCHEDULE 40)
- 3" X 1- 1/4" WELDED BELL REDUCER
- 1- 1/14" DIA. PIPE CAP.
- 1" CONDUIT TO CONTROL PANEL
- SEE GROUNDING TEST WELL DETAIL, SHEET E-36
- BURNDY MECHANICAL CONNECTOR #KA25-4-1/0
- #4 AWG-BARE-STRANDED GROUNDED CONDUCTOR
- #AWG GROUND CONDUCTOR TO CONTROL PANEL GROUNDING SYSTEM, USE CADWELD OR BURNDY MECHANICAL CONNECTOR #VT2525
- 5/8" X 10' STAINLESS STEEL GROUND ROD
- 18" DIA. CONCRETE FILLED HOLE

YAGI ANTENNA SPECIFICATIONS

- | | |
|---------------------------|--|
| 1. ELEMENTS: | 3 |
| 2. ELEMENT MATERIAL: | 3/8" DIAMETER SOLID 6061-T6 ALUMINUM ROD |
| 3. BOOM ELEMENT: | HEAT TREATED 6061-T6 ALUMINUM |
| 4. ASSEMBLY: | FULLY WELDED |
| 5. LENGTH: | 20 3/16 INCHES |
| 6. WEIGHT: | 5 LBS. |
| 7. SHIPPING: | ALL MODELS ARE UPS SHIPPABLE |
| 8. MOUNTING: | UP TO 2 INCH MAST |
| 9. HARDWARE: | STAINLESS STEEL |
| 10. TERMINATION TYPE: | N FEMALE |
| 11. LIGHTNING PROTECTION: | DC GROUNDED |
| 12. RATE WIND VELOCITY | 150 MPH |
| 13. LATERAL THRUST | 12.2 LBS. |

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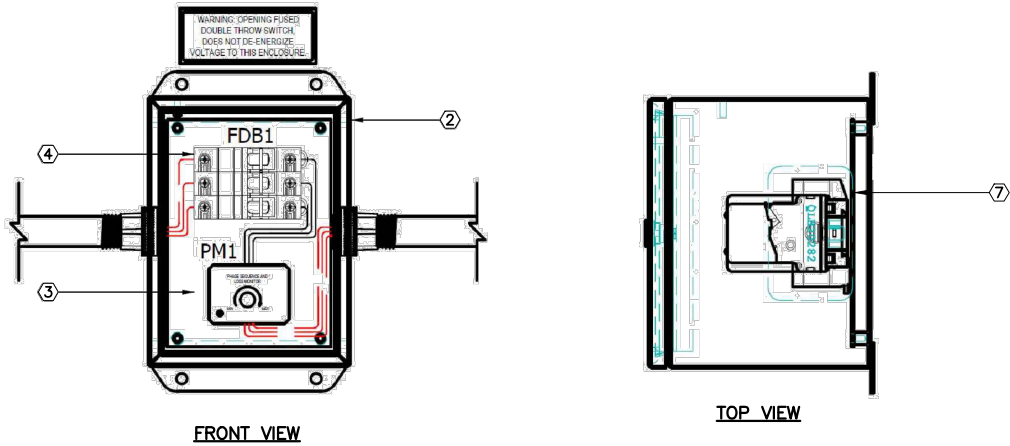
WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD ELECTRICAL DETAILS
(SHT. 3 OF 6)

SHEET

E-37

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PHASE MONITOR (PM1) JUNCTION BOX

SCALE: N.T.S.

KEYED NOTES:	
①	8 PIN OCTAL SOCKET, DIN RAIL MOUNTED OT08.
②	NEMA 4X 316 STAINLESS STEEL, 8 X 6 X 6 ENCLOSURE PART NUMBER EJ866S16.
③	3-PHASE POWER MONITOR, PM1.
④	FUSE DISTRIBUTION BLOCK, FDB1.
⑤	BACK OF ENCLOSURE.
⑥	PROVIDE WARNING LABEL ON ENCLOSURE DOOR. LABEL TO READ: "WARNING - OPENING FUSED DOUBLE THROW SWITCH DOES NOT DE-ENERGIZE VOLTAGE TO THIS ENCLOSURE."
⑦	INNER PANEL PROVIDED WITH ENCLOSURE

IDLEWILD

PM1 JUNCTION BOX		
EJ866S16	ENCLOSURE, NEMA 4X, 316SS 8"x6"x6"	HAMMOND
RB08-PC	RELAY SOCKET, 8-PIN, 600V	MPE
SUA-440-ASA	PHASE MONITOR RELAY, 440V, SPDT,	ATC-DIVERSIFIED
1492-FB3C30-L	FUSE BLOCK/DISCONNECT	ALLEN BRADLEY



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WASTEWATER PUMPING STATION REHABILITATIONS
IDLEWILD ELECTRICAL DETAILS
(SHT. 4 OF 6)

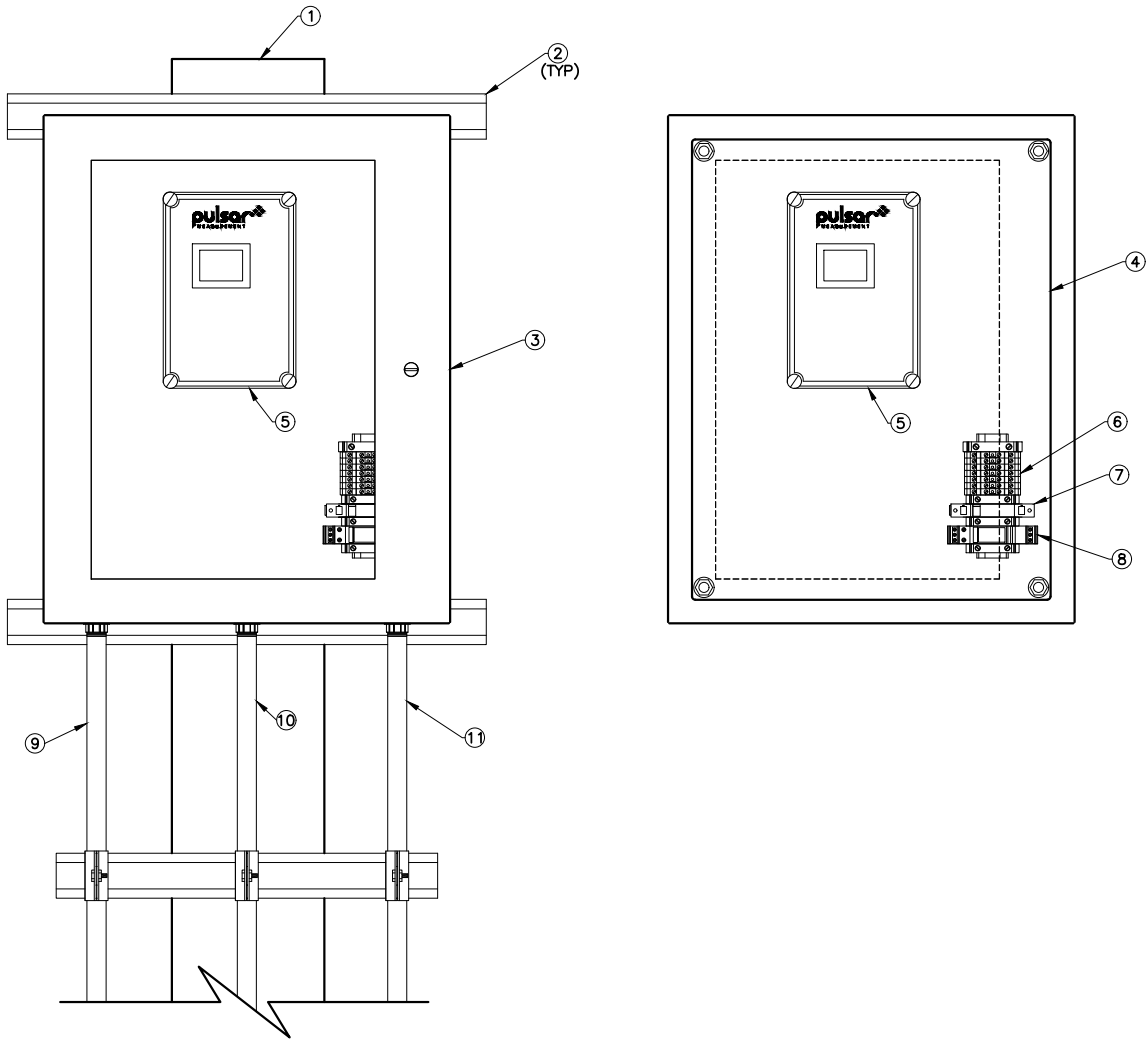
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SHEET

E-38

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FLOW TRANSMITTER CABINET DETAILS

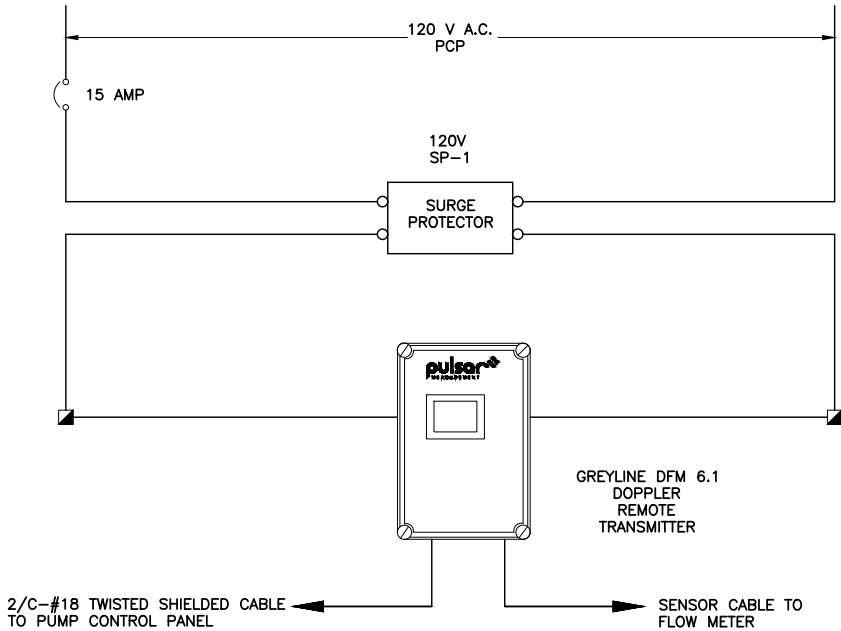
SCALE: 1/8" = 1'-0"

NOTE: FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY.

GENERAL NOTES:	
1.	REFER TO SHEET E-40 FOR FLOW TRANSMITTER WIRING SCHEMATIC WHICH INCLUDES CONNECTIONS TO FLOW METER ELEMENT, PROCEESS METER AND PCSR (IN PUMP CONTROL PANEL).

KEYED NOTES:

- ① 6" X 6" X 9' REINFORCED SQUARE CONCRETE POST INSTALLED FOR FLOW METER TRANSMITTER. MATCH CONSTRUCTION SHOWN ON SHEET E-25.
- ② PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE. NOTE: INSTALL ALL BOLTS FOR UNISTRUT COMPLETELY THROUGH CONCRETE POSTS.
- ③ PROVIDE AND INSTALL NEW FLOW TRANSMITTER CABINET. 20" X 16" X 8" NEMA 4X STAINLESS STEEL WITH STAINLESS STEEL STOP KIT AND WINDOW. HOFFMAN CSD201608SS6.
- ④ PROVIDE AND INSTALL HOFFMAN CP2016G BACKPLATE.
- ⑤ TRANSMITTER TO BE LOCATED IN FLOW TRANSMITTER CABINET. DFM 6.1-A-2-B-2-A-1-B-1-A
- ⑥ PROVIDE AND INSTALL TERMINAL BLOCKS WITH ALUMINUM DIN RAIL. PHOENIX CONTACT UK5N.
- ⑦ PROVIDE AND INSTALL SINGLE-POLE CIRCUIT BREAKER. 120V, 15A. SQUARE D QOU-115.
- ⑧ PROVIDE AND INSTALL INCOMING 120V POWER SURGE PROTECTION DEVICES. PHOENIX CONTACT #2905228.
- ⑨ PROVIDE AND INSTALL (2) #12 XHHW-2 CU + (1) #12 XHHW-2 CU GND IN 3/4" CONDUIT FROM PUMP CONTROL PANEL PCP TO FLOW TRANSMITTER FOR 120V POWER. REFER TO SHEET E-24 AND E-25 FOR PUMP CONTROL PANEL LOCATION.
- ⑩ PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE IN 3/4"C. TO PUMP CONTROL PANEL FOR FLOW TRANSMITTER 4-20mA SIGNAL. REFER TO SHEET E-24 AND E-25 FOR PUMP CONTROL PANEL LOCATION.
- ⑪ CONTRACTOR SHALL PROVIDE AND INSTALL 3/4" CONDUIT FOR MANUFACTURER SUPPLIED SENSOR CABLE (CONTRACTOR TO VERIFY CONDUIT SIZE REQUIREMENTS WITH MANUFACTURER). PROVIDE NON-METALLIC, WEATHERPROOF, FLEXIBLE CONNECTION TO THE FLOW METER SENSOR. INSTALL CONDUIT/CABLE FROM FLOW METER SENSOR TO FLOW TRANSMITTER. REFER TO SHEET E-24 AND E-25 FOR TRANSMITTER LOCATION.



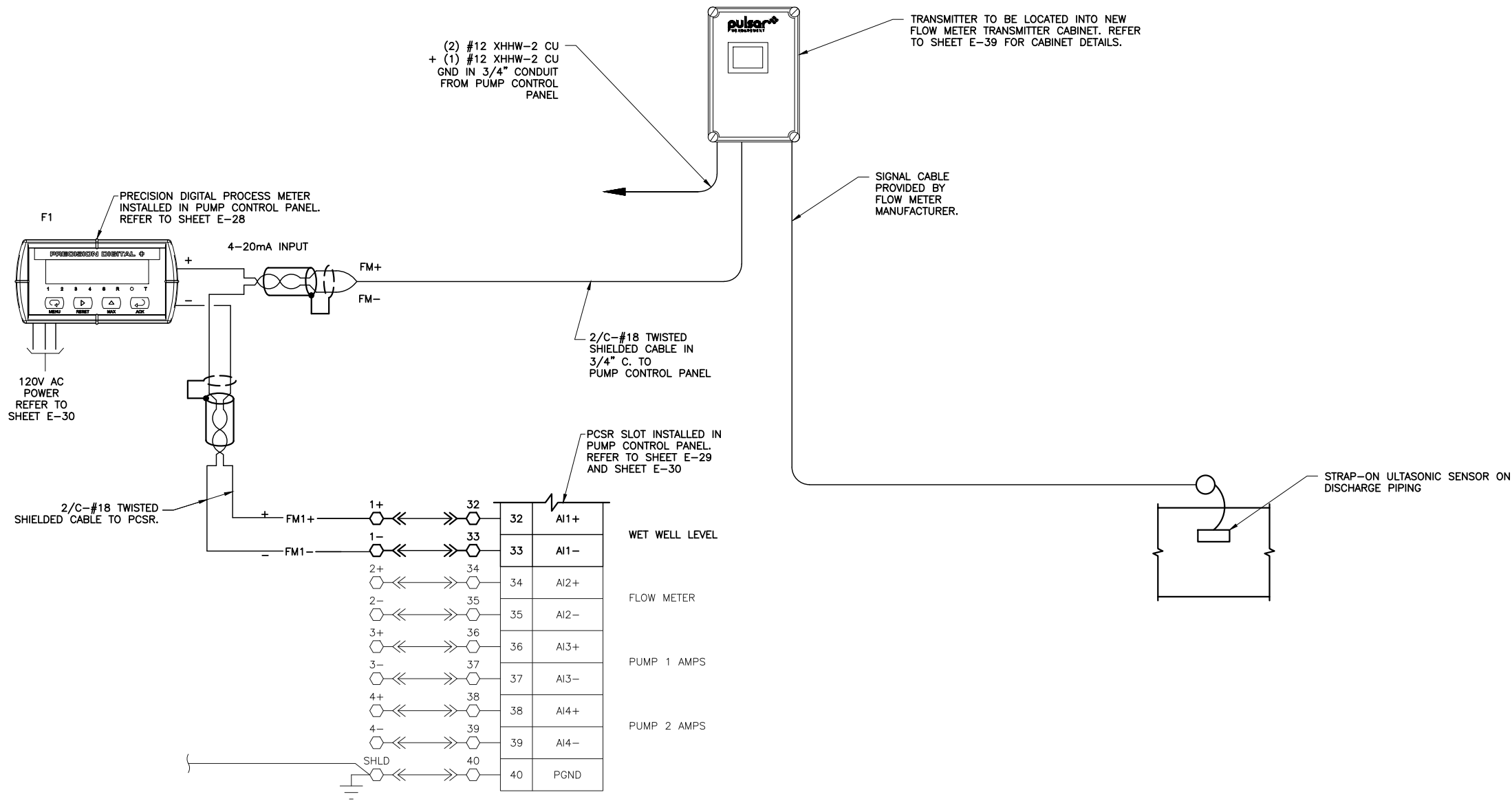
FLOW TRANSMITTER CABINET WIRING SCHEMATIC

ALL WIRING TO BE VERIFIED/CONFIRMED WITH MANUFACTURER PRIOR TO INSTALLATION

No.	DATE	REVISIONS
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FLOW TRANSMITTER WIRING SCHEMATIC

ALL WIRING TO BE VERIFIED/CONFIRMED WITH MANUFACTURER PRIOR TO INSTALLATION



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(SHT. 6 OF 6)

SHEET

E-40