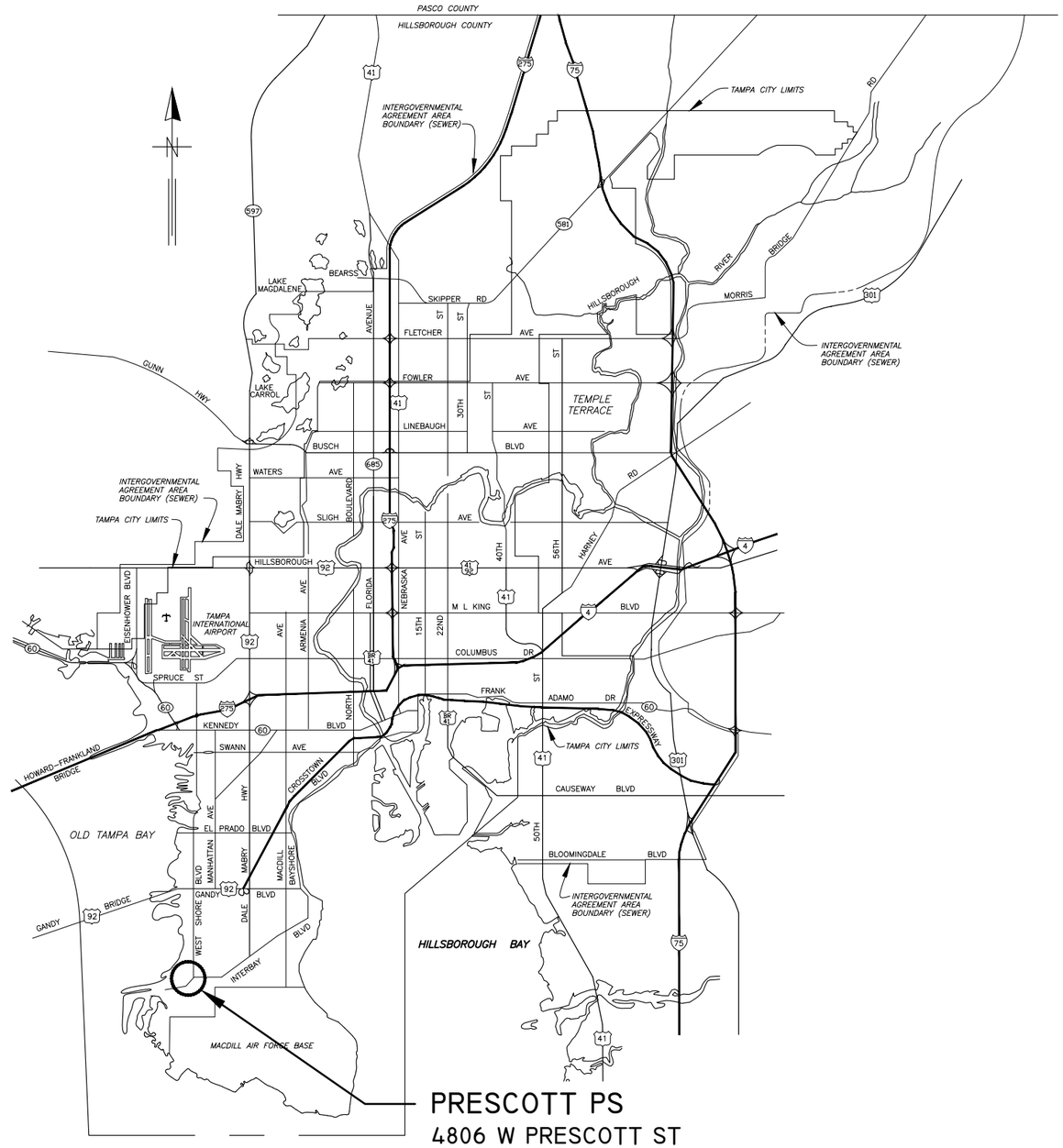
LOCATION MAP



PRESCOTT PS
4806 W PRESCOTT ST
TAMPA, FL 33616

NOTE:
ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

CITY of TAMPA

CITY OF TAMPA FLORIDA
MASCOTTE
ORGANIZED JULY 15 1887

WASTEWATER DEPARTMENT

PLANS FOR

PRESCOTT PUMP STATION REHABILITATION

CONTRACT No.
23-C-00002

AECOM
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.
FL. P.E. LICENSE NO. 67573

No.	DATE	REVISIONS
3		
2		
1		

DES: BVH
DRN: TRS
CKD: BVH
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

COVER SHEET

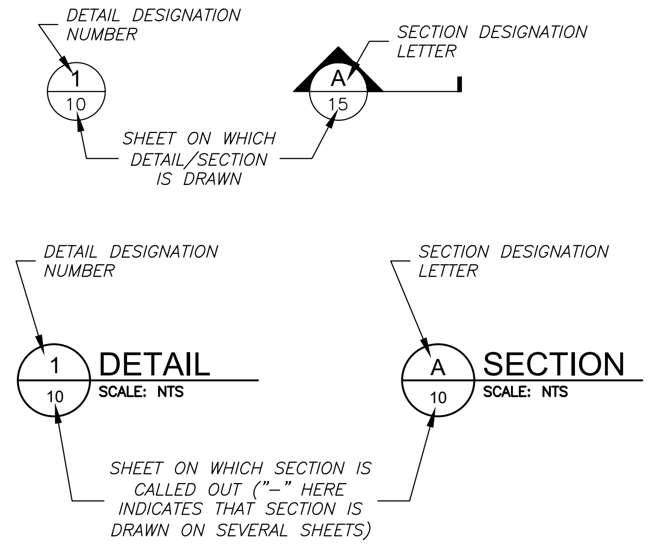
SHEET
I

PLOTTED BY: Sonnenberg, Terence DRAWING FILE: L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\1 COVER SHEET.dwg
PLOT DATE: Wednesday, March 1, 2023 10:10:08 AM LAST SAVED BY: terencesonnenberg CTB = AECOM 11x17.ctb

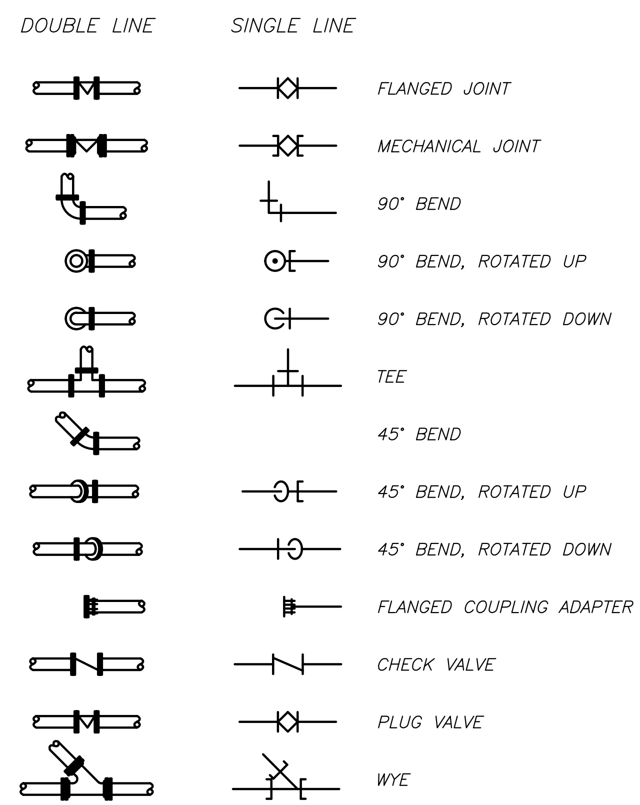
ABBREVIATIONS:

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

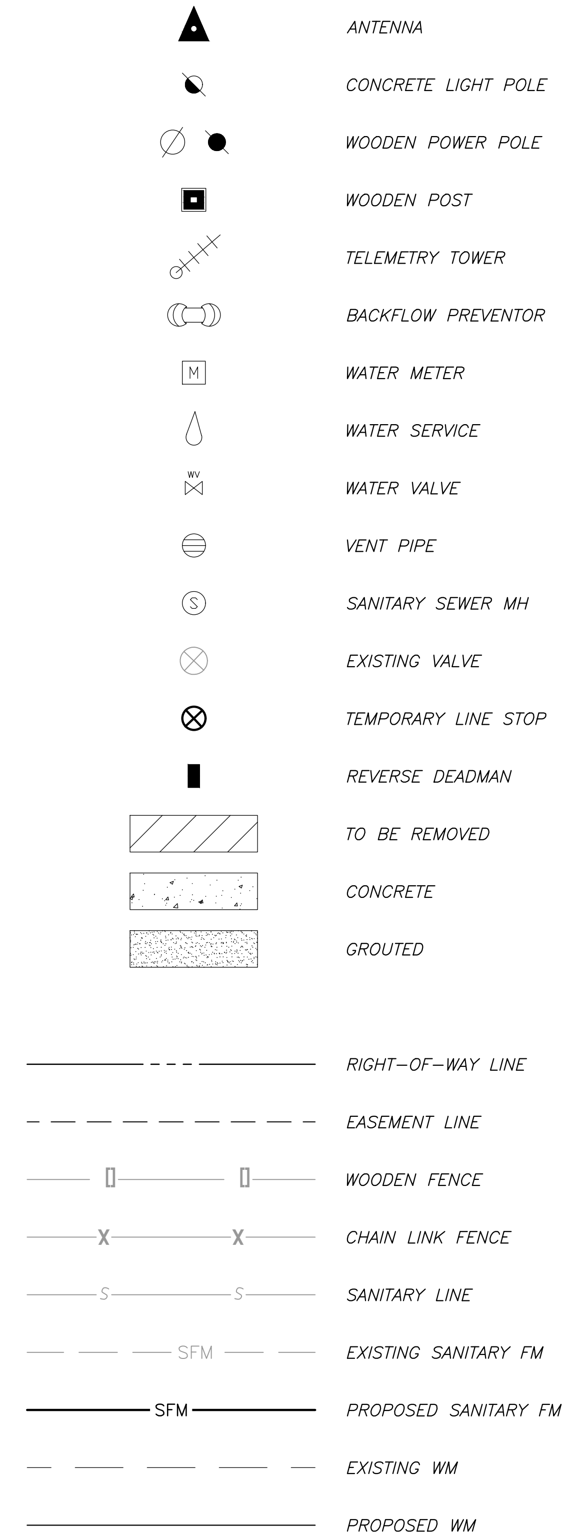
DETAIL & SECTION DESIGNATION



PIPE AND FITTING SYMBOLS



LEGEND OF SYMBOLS



INDEX OF SHEETS

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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

LEGEND, ABBREVIATIONS & INDEX

SHEET
2

DEMOLITION NOTES

1. SALVAGEABLE MATERIAL, AS DETERMINED BY CITY PERSONNEL, SHALL BE DELIVERED TO THE CITY OF TAMPA'S HOWARD F. CURREN AWTP 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. THREE NEW SUBMERSIBLE PUMPS SHALL BE SUPPLIED FOR THIS PROJECT. PROPOSED PUMPS ARE (3) FLYGT PUMPS, MODEL NP 3301.185 MT, 85 HP (404 MM IMPELLER OPERATING AT 1,380 GPM @ 101'). PUMPS SHALL BE SUPPLIED WITH FLYGT MIX-FLUSH VALVES AND EXTENDED STAINLESS STEEL LIFTING HANDLES AS SHOWN. ALL PROPOSED PUMP BASES SHALL BE 10-INCH DIAMETER DISCHARGE ELBOWS. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO "OR EQUAL" SUBMITTALS WILL BE CONSIDERED.
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 10-INCH DIAMETER 316L SCH 40 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 4" & 6" PLUG VALVES SHALL BE PROVIDED WITH 2" NUTS AND NO HANDWHEELS. ALL ABOVE GROUND PLUG VALVES 8" AND LARGER SHALL BE PROVIDED WITH HAND WHEELS. THE HAND WHEELS WILL BE SUPPLIED WITH CHAINS AND PADLOCKS.
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. CONTRACTOR SHALL POUR A NEW CONCRETE FILLET, AT THE BOTTOM OF THE WET WELL, AS SHOWN IN THE PLANS WITH CLASS "D" (2,000 PSI @ 28-DAYS) CONCRETE.
22. HATCHES SHALL BE SUPPLIED BY THE FRP WET WELL MANUFACTURER. ALUMINUM ACCESS COVERS SHALL BE DESIGNED FOR A PEDESTRIAN LIVE LOADING OF 300 PSF WITH 316 STAINLESS STEEL HARDWARE, HINGES AND AUTOMATIC HOLD-OPEN ARM AS MANUFACTURED BY US FOUNDRY AND MANUFACTURING CORPORATION OR APPROVED EQUAL. THE PUMP ACCESS COVER SHALL BE A TRIPLE DOOR ARRANGEMENT WITH AN ANGLE FRAME. EACH DOOR SHALL HAVE CLEAR OPENING DIMENSIONS OF 3 FT 6 IN BY 4 FT 2 IN AND OPEN/CLOSE INDEPENDENTLY TO THE OTHER DOORS. THE ACCESS DOORS SHALL ALSO BE EQUIPPED WITH A FLUSH LIFTING HANDLE, TAMPERPROOF FASTENERS AND EXPOSED PADLOCK STAPLES. ACCESS COVER DOORS SHALL NOT BE EQUIPPED WITH SLAM-LOCK OR SIMILAR LATCHING DEVICE.
23. THE ACCESS COVER SHALL CLOSE FLUSH WITH THE FRAME. ALL ALUMINUM SURFACES THAT CONTACT CONCRETE SHALL BE COATED WITH TWO COATS OF COAL TAR EPOXY OR BITUMINOUS COATING OR EQUAL. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE INSTALLATION AND CONFIGURATION OF THE ACCESS COVERS.
24. 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.
25. 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.
26. PVC GRAVITY PIPE AND FITTINGS SHALL BE SDR-26 (HEAVY WALL) IN COMPLIANCE TO ASTM D3034. PVC FM PIPE AND FITTINGS SHALL BE C-900 (DR-18).
27. 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.
28. 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.
29. 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.
30. 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.

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) SETS OF SOUND ATTENUATED DIESEL BY-PASS PUMPS. EACH PUMP SET SHALL HAVE 1-PRIMARY AND 1-BACKUP PUMP. EACH PUMP SET SHALL BE CAPABLE OF DELIVERING THE PUMPING RATE AND TDH LISTED IN THE TABLE BELOW PLUS ANY LOSSES PRODUCED IN THE TEMPORARY BYPASS PIPING. THE PUMPS SHALL SUCTION FROM UPSTREAM MANHOLES AS SHOWN IN THE PLANS, THROUGH THE PROPOSED BURIED SUCTION PIPES AND DISCHARGE INTO THE NEW BYPASS ASSEMBLY. CONTRACTOR SHALL SUBMIT BYPASS PUMPING PLAN TO THE ENGINEER FOR APPROVAL.
4. ONLY CITY PERSONNEL SHALL OPERATE EXISTING VALVES. NOTIFY THE CITY 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.

BYPASS PUMPING SET	# OF PUMPS	FROM	TO	MIN PUMPING RATE	TDH
SET #1	1 PRIMARY, 1 BACKUP	MH-2EX	EMERGENCY BYPASS	2,000 GPM	105 Ft
SET #2	1 PRIMARY, 1 BACKUP	MH-3EX	EMERGENCY BYPASS	800 GPM	105 Ft
COMBINED SET	2 PRIMARY, 1 BACKUP	MH-1	EMERGENCY BYPASS	2,800 GPM	105 Ft

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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

GENERAL NOTES

SHEET 3

PLOTTED BY Sonnenberg, Terence DRAWING FILE L:\DCS\Projects\WTR\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\3 GENERAL NOTES.dwg
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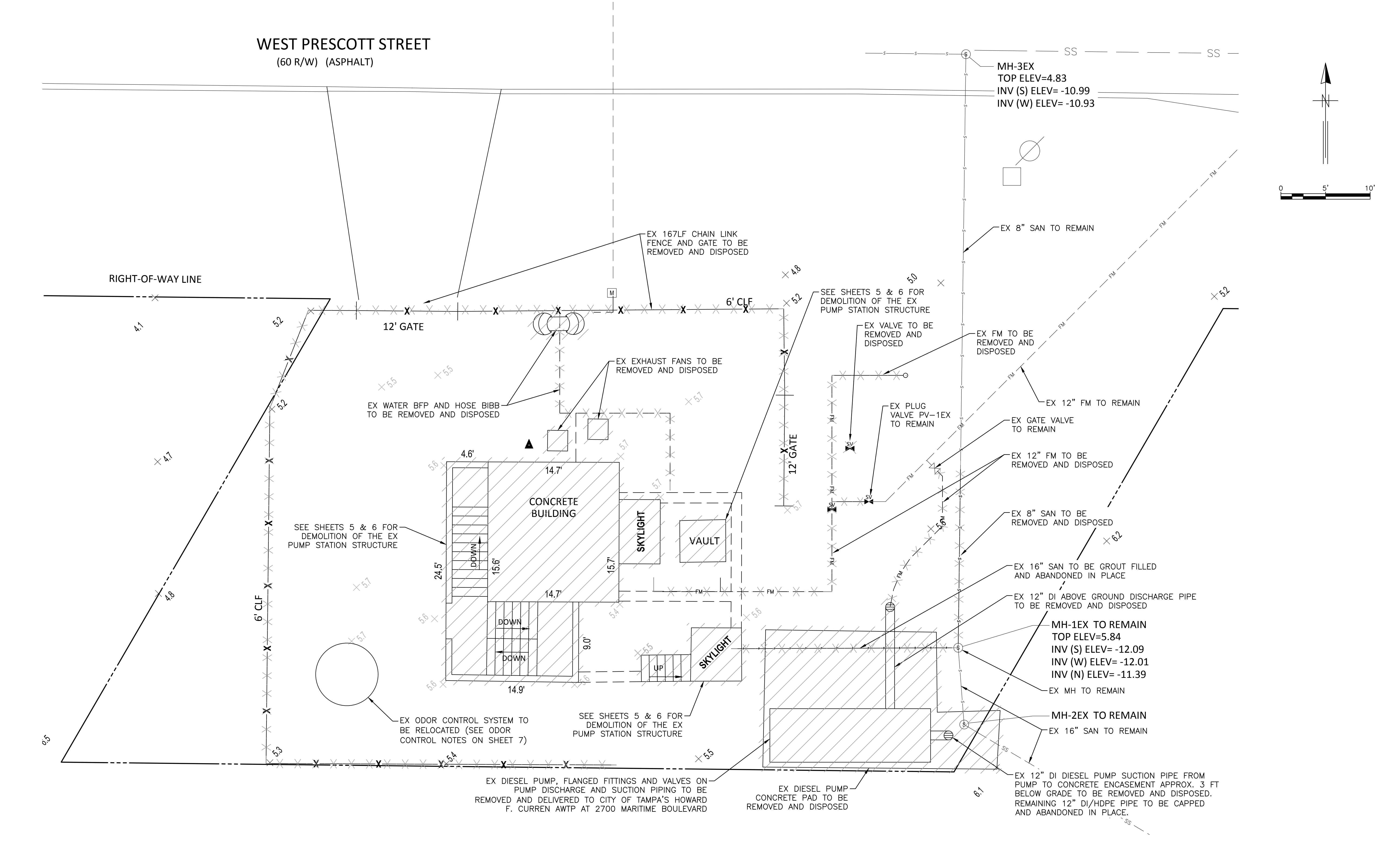
WEST PRESCOTT STREET
(60 R/W) (ASPHALT)
MH-3EX
TOP ELEV=4.83
INV (S) ELEV= -10.99
INV (W) ELEV= -10.93
SS
RIGHT-OF-WAY LINE
EX 167LF CHAIN LINK FENCE AND GATE TO BE REMOVED AND DISPOSED
12' GATE
6' CLF
SEE SHEETS 5 & 6 FOR DEMOLITION OF THE EX PUMP STATION STRUCTURE
EX VALVE TO BE REMOVED AND DISPOSED
EX FM TO BE REMOVED AND DISPOSED
EX 8" SAN TO REMAIN
EX EXHAUST FANS TO BE REMOVED AND DISPOSED
EX WATER BFP AND HOSE BIBB TO BE REMOVED AND DISPOSED
EX 12" FM TO REMAIN
EX PLUG VALVE PV-1EX TO REMAIN
EX GATE VALVE TO REMAIN
EX 12" FM TO BE REMOVED AND DISPOSED
12' GATE
4.6'
14.7'
CONCRETE BUILDING
SKYLIGHT
VAULT
DOWN
15.6'
15.7'
24.5'
14.7'
EX 8" SAN TO BE REMOVED AND DISPOSED
SEE SHEETS 5 & 6 FOR DEMOLITION OF THE EX PUMP STATION STRUCTURE
EX 16" SAN TO BE GROUT FILLED AND ABANDONED IN PLACE
EX 12" DI ABOVE GROUND DISCHARGE PIPE TO BE REMOVED AND DISPOSED
6' CLF
DOWN
DOWN
9.0'
UP
SKYLIGHT
14.9'
MH-1EX TO REMAIN
TOP ELEV=5.84
INV (S) ELEV= -12.09
INV (W) ELEV= -12.01
INV (N) ELEV= -11.39
EX MH TO REMAIN
MH-2EX TO REMAIN
EX 16" SAN TO REMAIN
EX ODOR CONTROL SYSTEM TO BE RELOCATED (SEE ODOR CONTROL NOTES ON SHEET 7)
SEE SHEETS 5 & 6 FOR DEMOLITION OF THE EX PUMP STATION STRUCTURE
EX DIESEL PUMP, FLANGED FITTINGS AND VALVES ON PUMP DISCHARGE AND SUCTION PIPING TO BE REMOVED AND DELIVERED TO CITY OF TAMPA'S HOWARD F. CURREN AWTP AT 2700 MARITIME BOULEVARD
EX DIESEL PUMP CONCRETE PAD TO BE REMOVED AND DISPOSED
EX 12" DI DIESEL PUMP SUCTION PIPE FROM PUMP TO CONCRETE ENCASEMENT APPROX. 3 FT BELOW GRADE TO BE REMOVED AND DISPOSED. REMAINING 12" DI/HDPE PIPE TO BE CAPPED AND ABANDONED IN PLACE.
N
0 5' 10'

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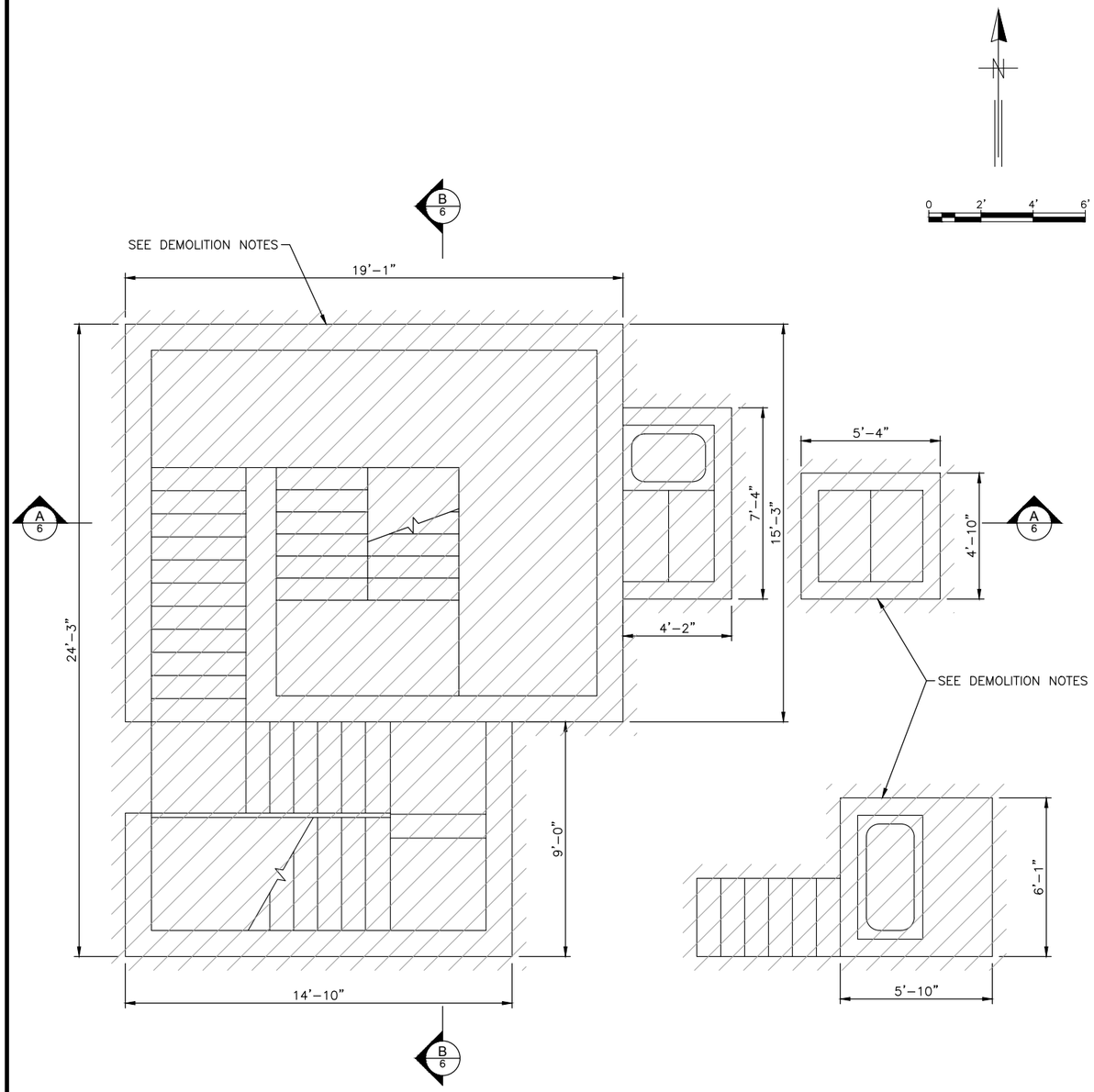
PRESCOTT PUMP STATION REHABILITATION

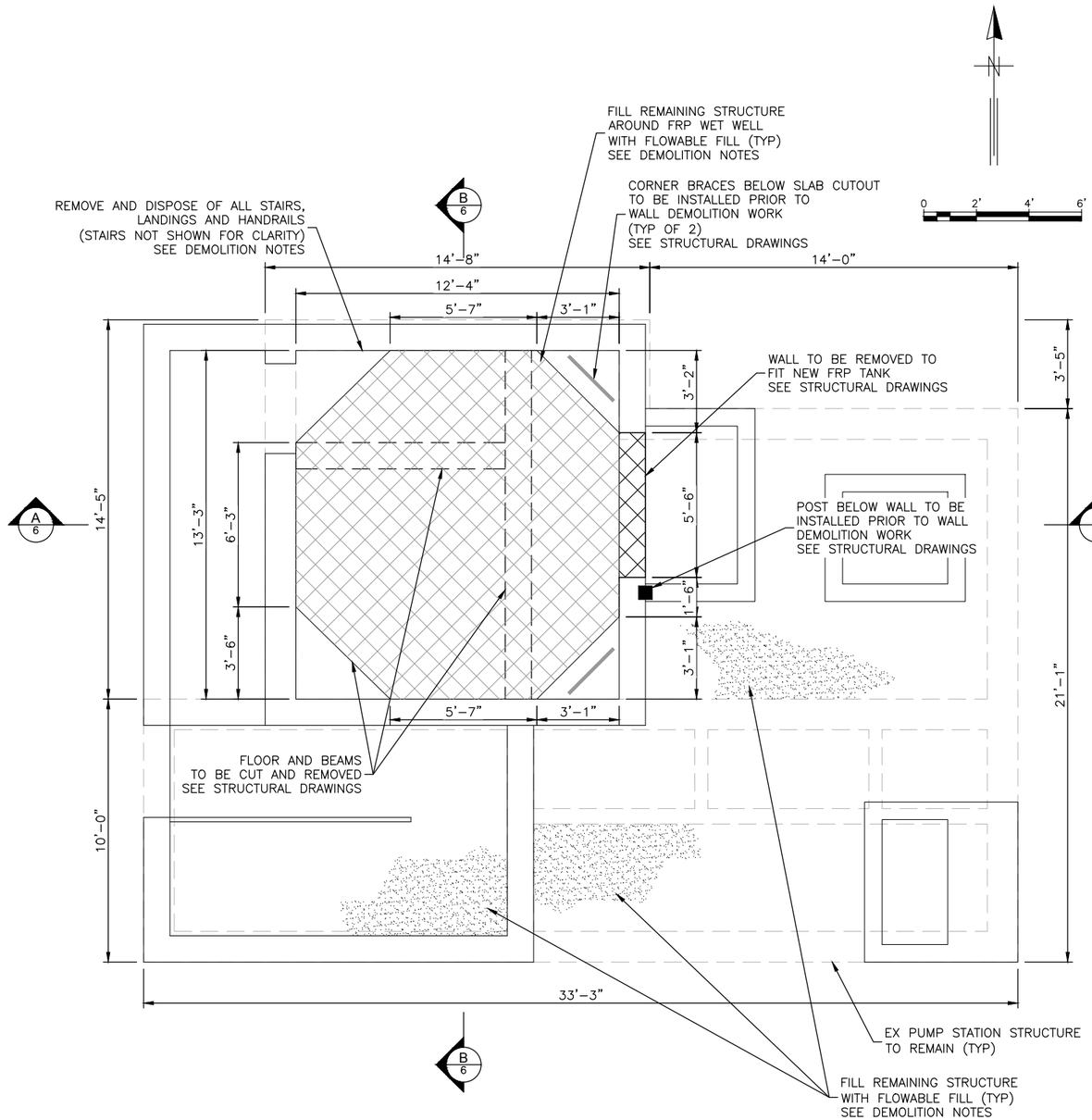
DEMOLITION SITE PLAN

SHEET
4



PLAN VIEW - TOP

SCALE: 3/16" = 1'-0"



PLAN VIEW - AT ELEV 0.0

SCALE: 3/16" = 1'-0"

DEMOLITION NOTES:

1. BEFORE START OF DEMOLITION, CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE WHAT IS SALVAGEABLE EQUIPMENT AT THE EXISTING PUMP STATION.
2. REMOVE & DISPOSE ALL PIPING, VALVES, PUMPS & EQUIPMENT.
3. DEMOLISH ALL ITEMS DOWN TO TOP OF EXISTING SLAB AT EL ± (-0.1).
4. AFTER INSTALLATION OF PROPOSED WET WELL AND PIPING, FILL REMAINING STRUCTURE WITH FDOT FLOWABLE FILL.
5. USE CONCRETE, MASONRY, METAL OR OTHER NON-DEGRADABLE MATERIAL AS A FILLER IN THE FLOWABLE FILL IS ACCEPTABLE EXCEPT IN THE VICINITY OF PROPOSED STRUCTURES AND PIPING.
6. BACKFILL WITH CLEAN, COMPACTED EARTH FILL TO MATCH EXISTING GROUND ELEVATIONS.

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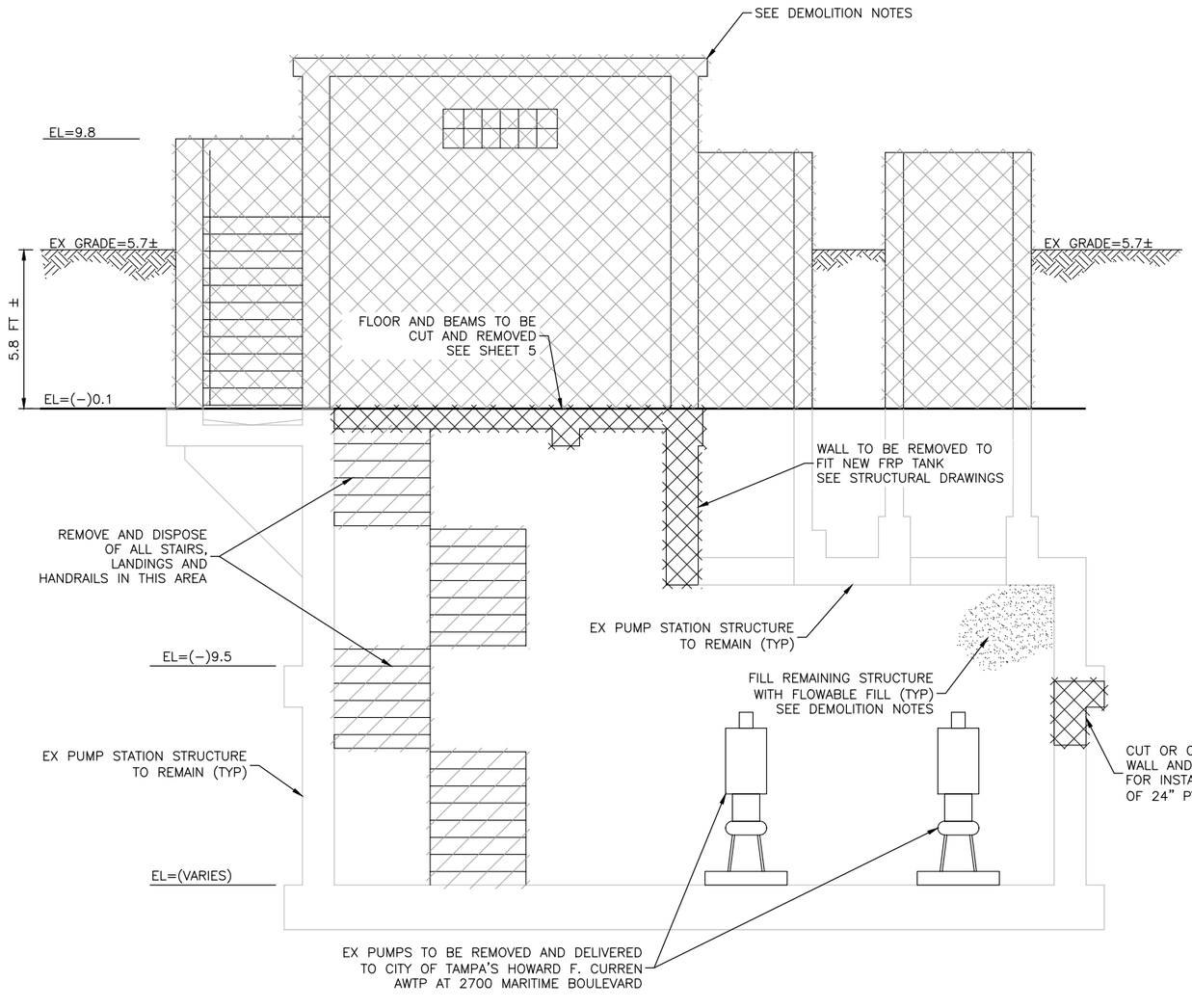
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

DEMOLITION DETAIL PLANS

SHEET 5

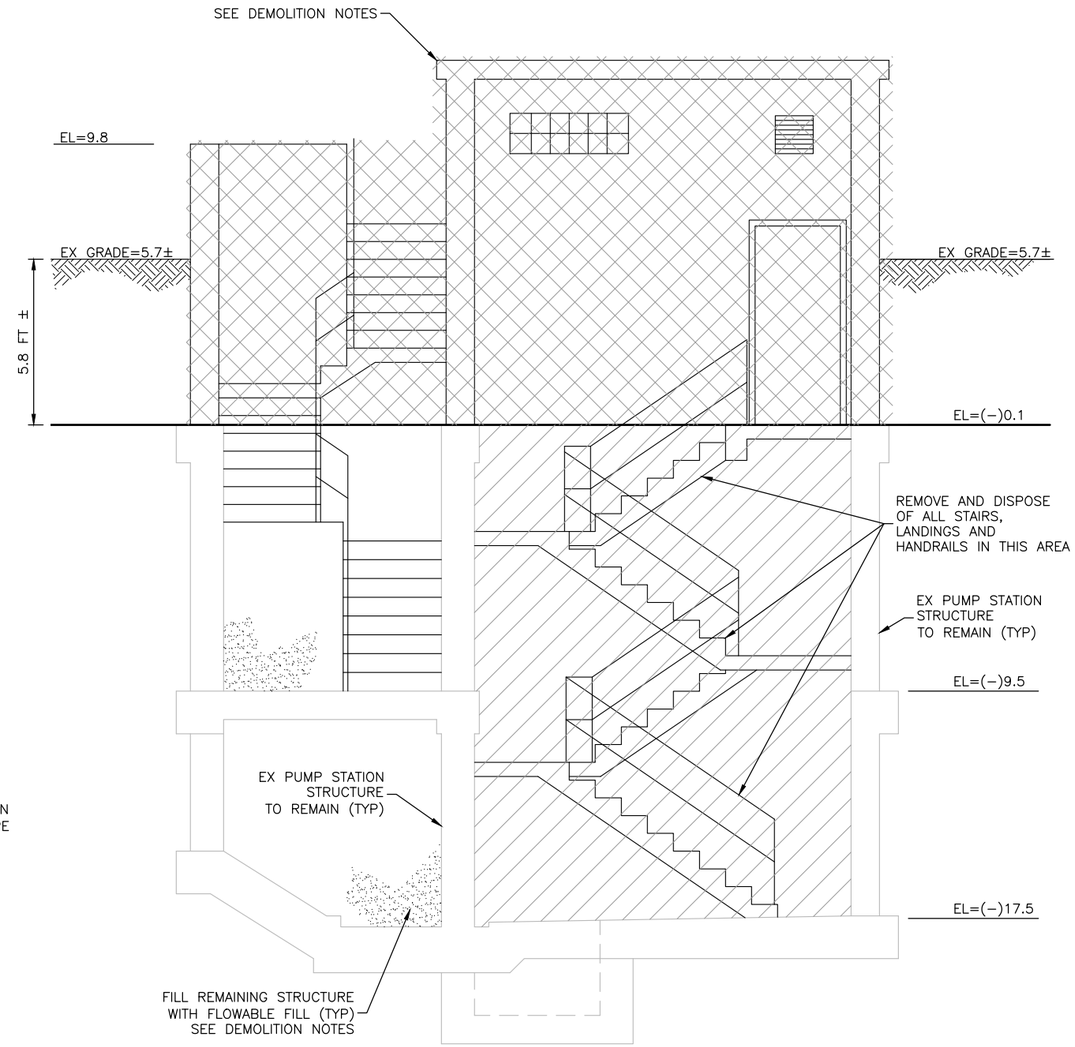
PLOTTED BY: Sommerberg, Terence DRAWING FILE L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\5 DEMOLITION DETAIL PLANS.dwg
PLOT DATE: Wednesday, March 1, 2023 10:17:36 AM LAST SAVED BY: terence.sommerberg CTB: ACOM-11X17.CTB



SECTION A-A

SCALE: 3/16" = 1'–0"

0 2' 4' 6'



SECTION B-B

SCALE: 3/16" = 1'–0"

0 2' 4' 6'

DEMOLITION NOTES:

1. BEFORE START OF DEMOLITION, CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE WHAT IS SALVAGEABLE EQUIPMENT AT THE EXISTING PUMP STATION.
2. REMOVE & DISPOSE ALL PIPING, VALVES, PUMPS & EQUIPMENT.
3. DEMOLISH ALL ITEMS DOWN TO TOP OF EXISTING SLAB AT EL ± (–0.1).
4. AFTER INSTALLATION OF PROPOSED WET WELL AND PIPING, FILL REMAINING STRUCTURE WITH FDOT FLOWABLE FILL.
5. USE CONCRETE, MASONRY, METAL OR OTHER NON–DEGRADABLE MATERIAL AS A FILLER IN THE FLOWABLE FILL IS ACCEPTABLE EXCEPT IN THE VICINITY OF PROPOSED STRUCTURES AND PIPING.
6. BACKFILL WITH CLEAN, COMPACTED EARTH FILL TO MATCH EXISTING GROUND ELEVATIONS.

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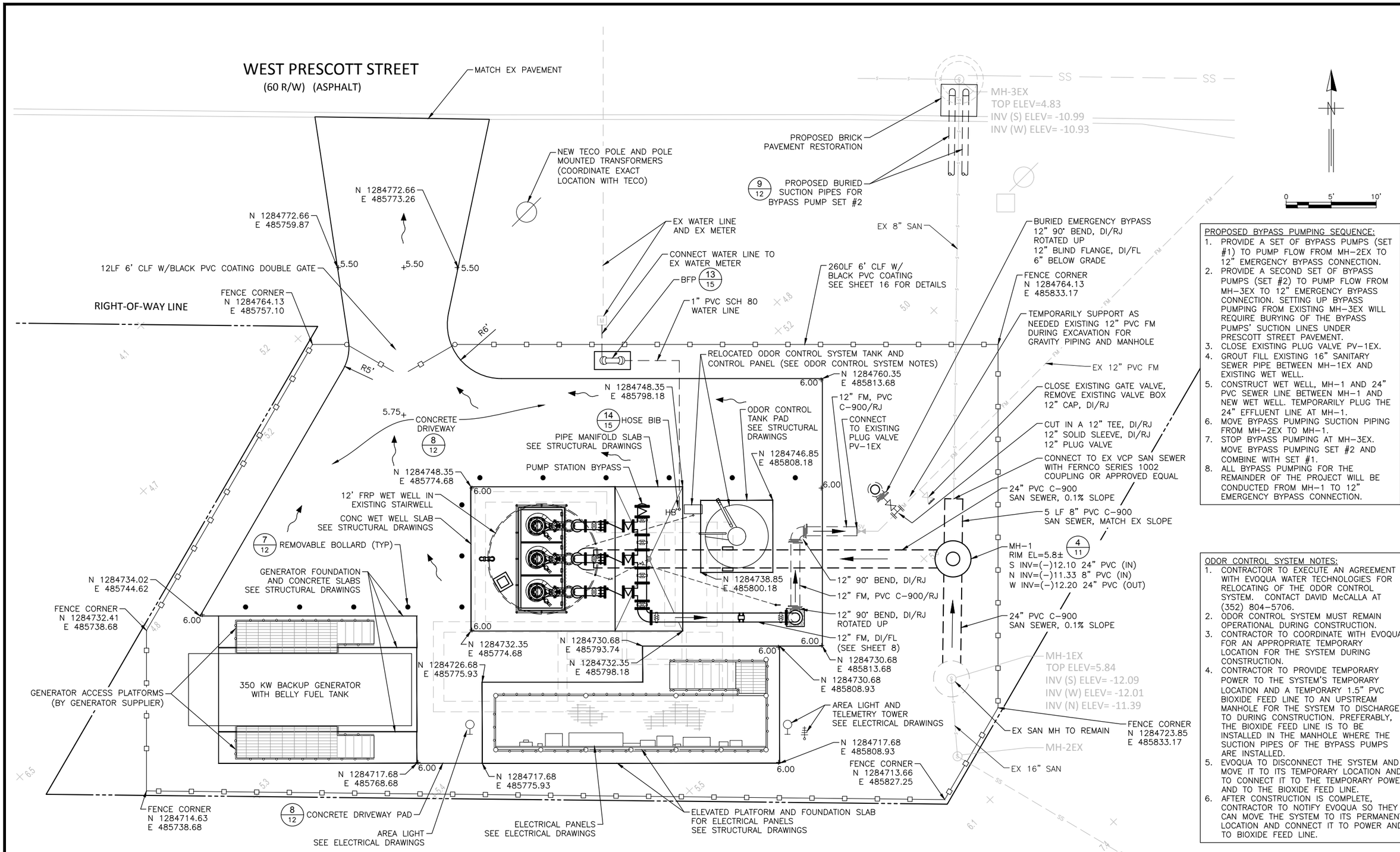
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

DEMOLITION DETAIL SECTIONS

SHEET 6

PLOTTED BY: Sommerberg, Terence - DRAWING FILE L:\DCS\Projects\WPI\ 60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\6 DEMOLITION DETAIL SECTIONS.dwg
PLOT DATE: Wednesday, March 1, 2023 10:12:02 AM LAST SAVED BY: terence.sommerberg CTB - AECOM-1.1X1.2.CTB



PROPOSED BYPASS PUMPING SEQUENCE:

1. PROVIDE A SET OF BYPASS PUMPS (SET #1) TO PUMP FLOW FROM MH-2EX TO 12" EMERGENCY BYPASS CONNECTION.
2. PROVIDE A SECOND SET OF BYPASS PUMPS (SET #2) TO PUMP FLOW FROM MH-3EX TO 12" EMERGENCY BYPASS CONNECTION. SETTING UP BYPASS PUMPING FROM EXISTING MH-3EX WILL REQUIRE BURYING OF THE BYPASS PUMPS' SUCTION LINES UNDER PRESCOTT STREET PAVEMENT.
3. CLOSE EXISTING PLUG VALVE PV-1EX.
4. GROUT FILL EXISTING 16" SANITARY SEWER PIPE BETWEEN MH-1EX AND EXISTING WET WELL.
5. CONSTRUCT WET WELL, MH-1 AND 24" PVC SEWER LINE BETWEEN MH-1 AND NEW WET WELL. TEMPORARILY PLUG THE 24" EFFLUENT LINE AT MH-1.
6. MOVE BYPASS PUMPING SUCTION PIPING FROM MH-2EX TO MH-1.
7. STOP BYPASS PUMPING AT MH-3EX. MOVE BYPASS PUMPING SET #2 AND COMBINE WITH SET #1.
8. ALL BYPASS PUMPING FOR THE REMAINDER OF THE PROJECT WILL BE CONDUCTED FROM MH-1 TO 12" EMERGENCY BYPASS CONNECTION.

ODOR CONTROL SYSTEM NOTES:

1. CONTRACTOR TO EXECUTE AN AGREEMENT WITH EVOQUA WATER TECHNOLOGIES FOR RELOCATING OF THE ODOR CONTROL SYSTEM. CONTACT DAVID McCALLA AT (352) 804-5706.
2. ODOR CONTROL SYSTEM MUST REMAIN OPERATIONAL DURING CONSTRUCTION.
3. CONTRACTOR TO COORDINATE WITH EVOQUA FOR AN APPROPRIATE TEMPORARY LOCATION FOR THE SYSTEM DURING CONSTRUCTION.
4. CONTRACTOR TO PROVIDE TEMPORARY POWER TO THE SYSTEM'S TEMPORARY LOCATION AND A TEMPORARY 1.5" PVC BIOXIDE FEED LINE TO AN UPSTREAM MANHOLE FOR THE SYSTEM TO DISCHARGE TO DURING CONSTRUCTION. PREFERABLY, THE BIOXIDE FEED LINE IS TO BE INSTALLED IN THE MANHOLE WHERE THE SUCTION PIPES OF THE BYPASS PUMPS ARE INSTALLED.
5. EVOQUA TO DISCONNECT THE SYSTEM AND MOVE IT TO ITS TEMPORARY LOCATION AND TO CONNECT IT TO THE TEMPORARY POWER AND TO THE BIOXIDE FEED LINE.
6. AFTER CONSTRUCTION IS COMPLETE, CONTRACTOR TO NOTIFY EVOQUA SO THEY CAN MOVE THE SYSTEM TO ITS PERMANENT LOCATION AND CONNECT IT TO POWER AND TO BIOXIDE FEED LINE.

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PRESCOTT PUMP STATION REHABILITATION

PROPOSED SITE PLAN

SHEET 7

PLOTTED BY: Sonnenberg, Terence DRAWING FILE: L:\DCS\Projects\WPI 60651648_Tampa_WWPS#shots\900_CAD_GIS\912_CAD_Prescott_Sheets\7 PROPOSED SITE PLAN.dwg
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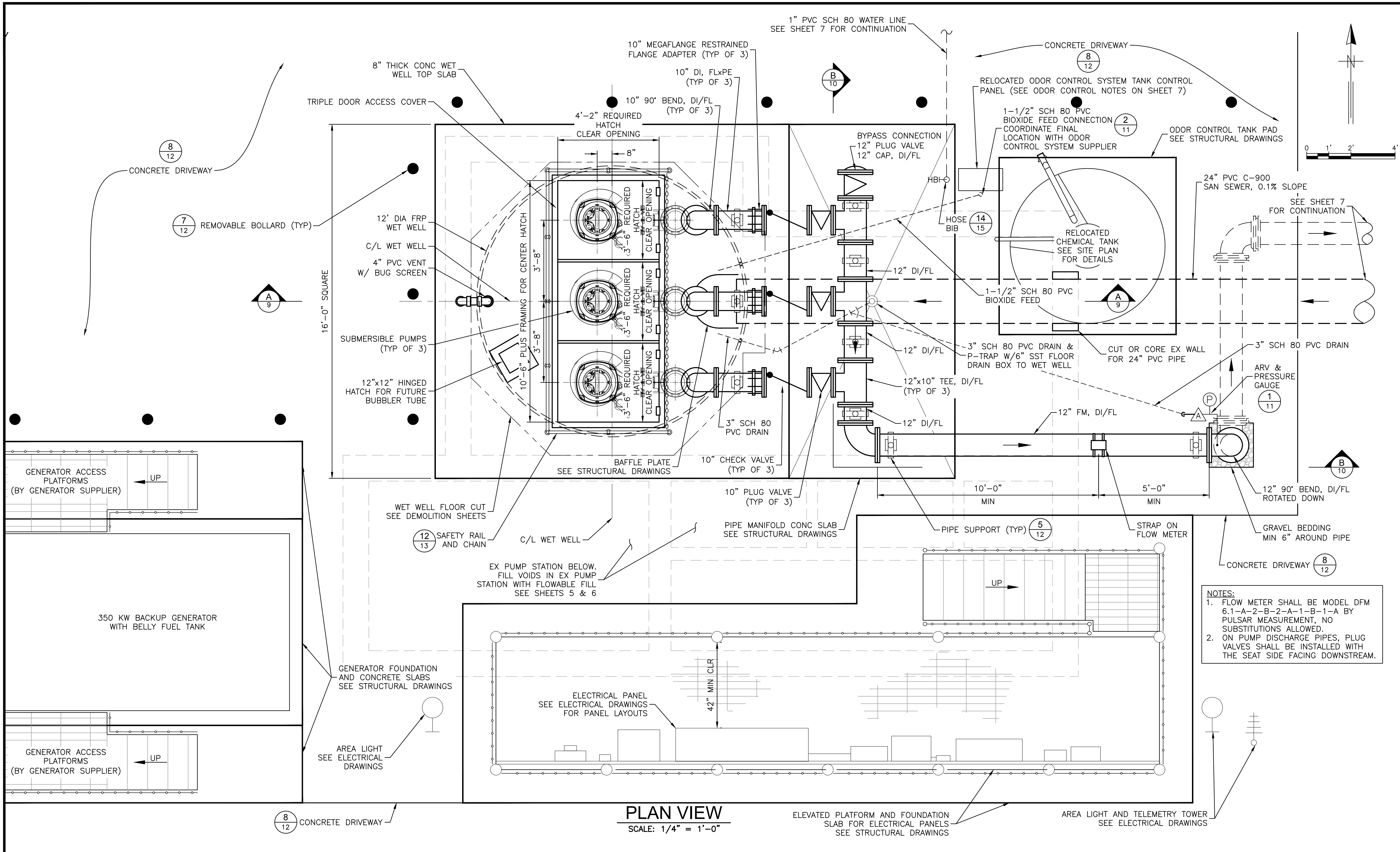

NOTES:
1. FLOW METER SHALL BE MODEL DFM 6.1-A-2-B-2-A-1-B-1-A BY PULSAR MEASUREMENT, NO SUBSTITUTIONS ALLOWED.
2. ON PUMP DISCHARGE PIPES, PLUG VALVES SHALL BE INSTALLED WITH THE SEAT SIDE FACING DOWNSTREAM.

PLAN VIEW

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

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PRESCOTT PUMP STATION REHABILITATION

PROPOSED DETAIL PLAN

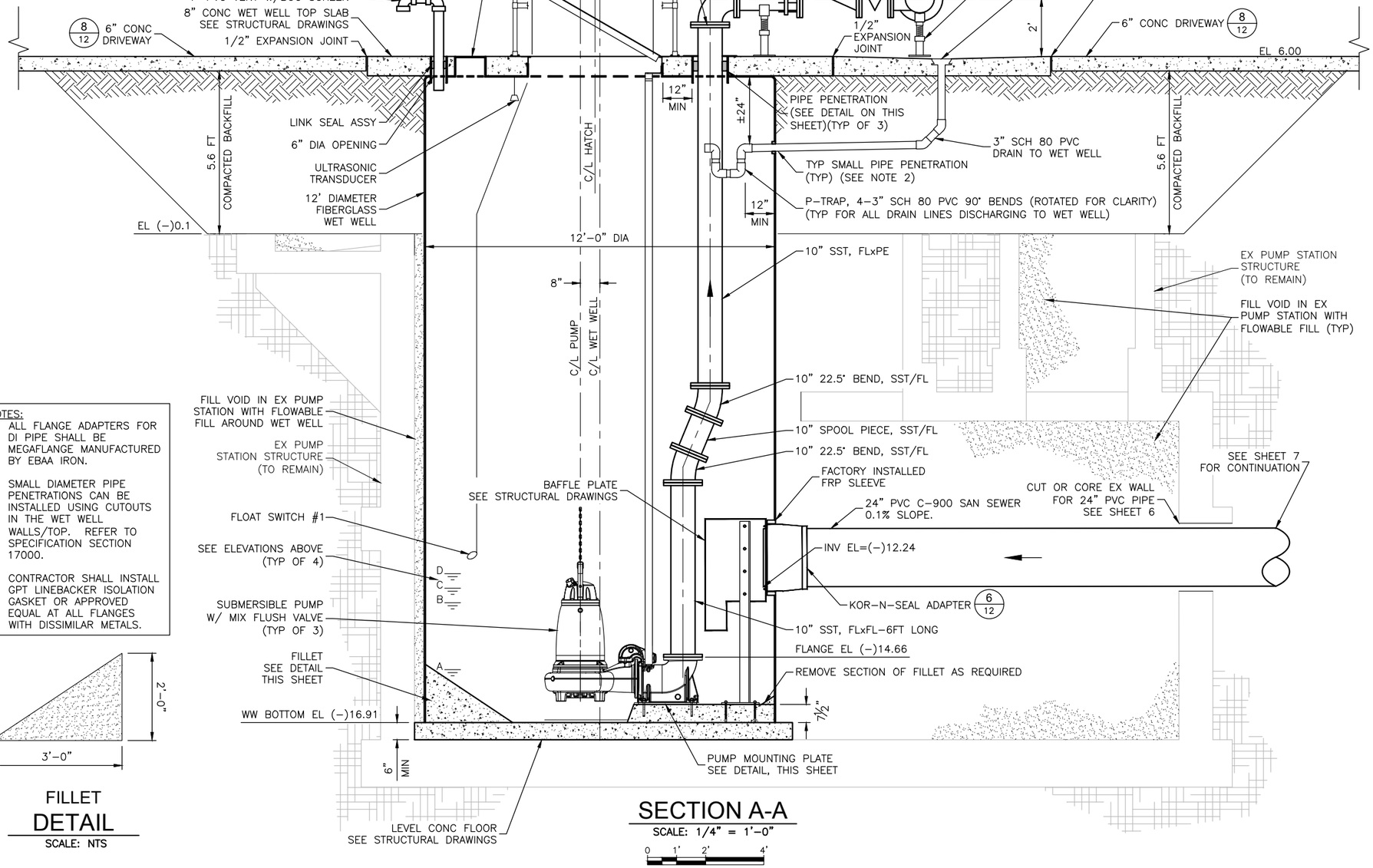
PLOTTED BY Sonnenberg, Terence DRAWING FILE L:\DCS\Projects\WTR\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\8 PROPOSED DETAIL PLAN.dwg
PLOT DATE: Wednesday, March 1, 2023 10:13:15 AM LAST SAVED BY terence.sonnenberg CTB - AECOM-11X17.CTB

RECOMMENDED OPERATING ELEVATIONS:

A	PUMPS OFF	EL = (–)15.09'
B	PUMP #1 ON	EL = (–)12.79'
C	PUMP #2 ON	EL = (–)12.29'
D	PUMP #3 ON	EL = (–)11.79'
E	FLOAT #1 HIGH LEVEL ALARM	EL = (–)11.29'

WILKERSON BACK–UP CONTROLLER TIMING:

1. PUMP #1 STARTS WITH HIGH LEVEL ALARM FLOAT (ALSO STARTS WILKERSON TIMER #1)
2. PUMP #2 STARTS AT END OF WILKERSON TIMER #1 (1 MIN) IF STILL H/L (ALSO STARTS EXTERNAL TDR)
3. PUMP #3 STARTS AT END OF EXTERNAL TIMER TDR (30 SEC) (SHOWN ON SHT E–12) IF STILL H/L
4. ALL PUMPS STOP AT END OF WILKERSON TIMER #2 (2.9 MIN) (TIMER #2 STARTED BY CLEARING H/L)



SECTION A-A

SCALE: 1/4" = 1'–0"

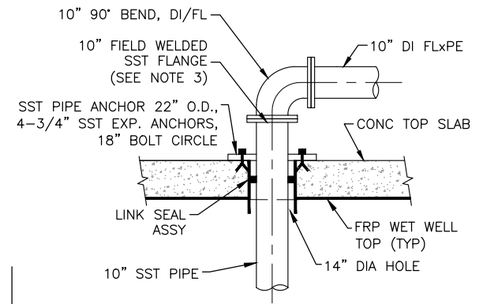
0 1' 2' 4'

NOTES:

1. ALL FLANGE ADAPTERS FOR DI PIPE SHALL BE MEGAFLANGE MANUFACTURED BY EBAA IRON.
2. SMALL DIAMETER PIPE PENETRATIONS CAN BE INSTALLED USING CUTOUTS IN THE WET WELL WALLS/TOP. REFER TO SPECIFICATION SECTION 17000.
3. CONTRACTOR SHALL INSTALL GPT LINEBACKER ISOLATION GASKET OR APPROVED EQUAL AT ALL FLANGES WITH DISSIMILAR METALS.

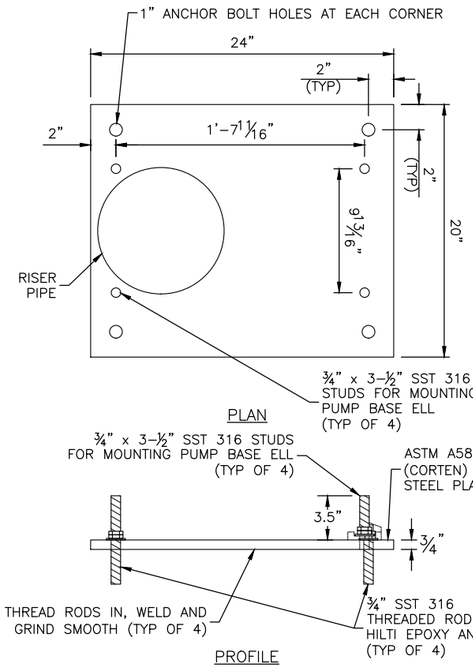
FILLET DETAIL

SCALE: NTS



PIPE PENETRATION DETAIL

SCALE: NTS



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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PRESCOTT PUMP STATION REHABILITATION

PROPOSED DETAIL SECTION - 1

SHEET 9

PLOTTED BY: Sonnenberg, Terrence DRAWING FILE: L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott\L_Sheets\9 PROPOSED DETAIL SECTION - 1.dwg
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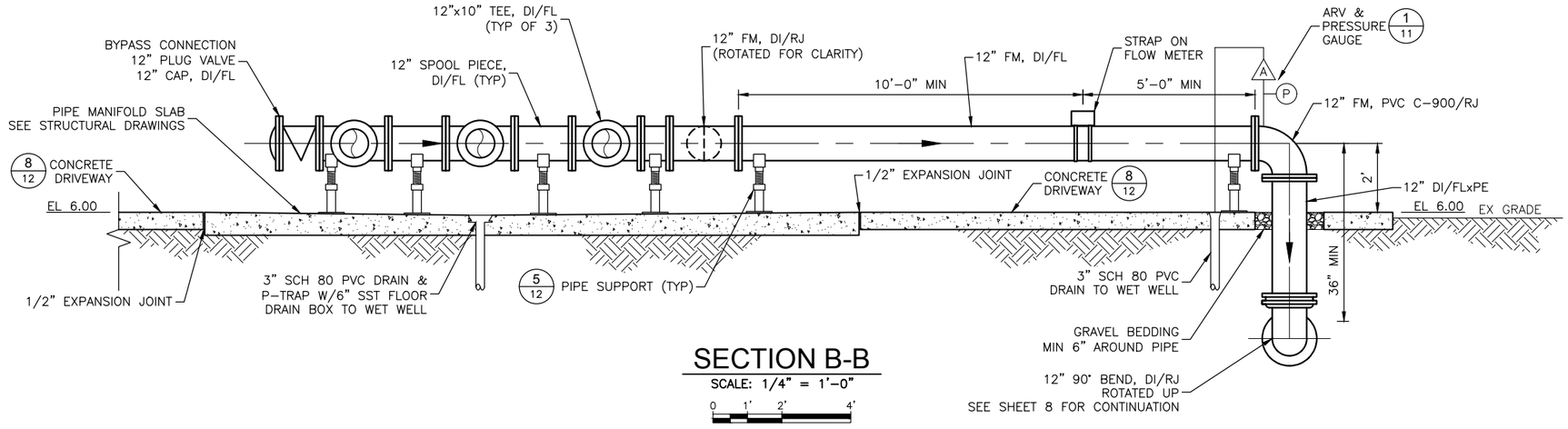

SECTION B-B

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

0 1' 2' 4'

PLOTTED BY: Sommerberg, Terence DRAWING FILE L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\10 PROPOSED DETAIL SECTION - 2.dwg
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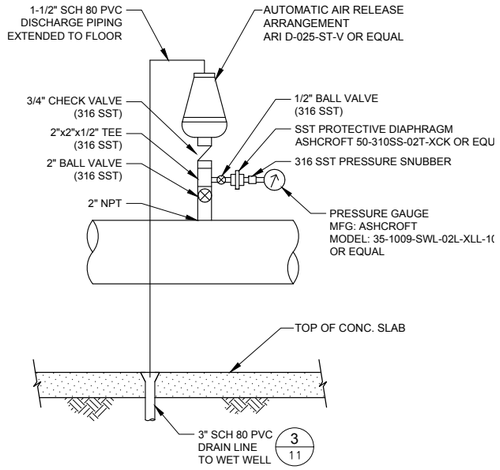
PRESCOTT PUMP STATION REHABILITATION

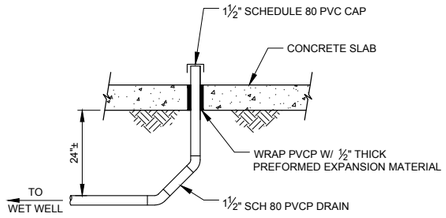
PROPOSED DETAIL SECTION - 2

SHEET
10



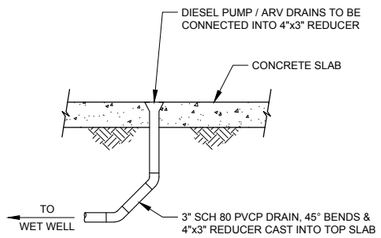
AIR RELEASE VALVE ASSEMBLY

1 DETAIL
SCALE: NTS



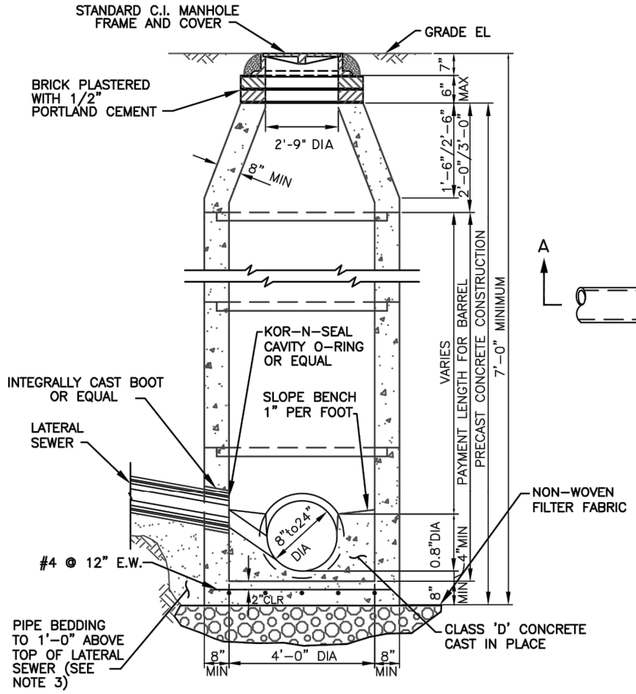
BIOXIDE TANK SLAB

2 DETAIL
SCALE: NTS

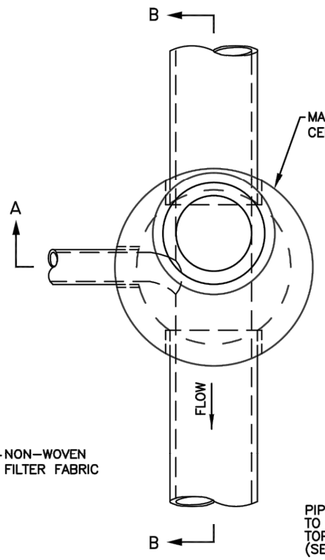


DRAIN ASSEMBLY

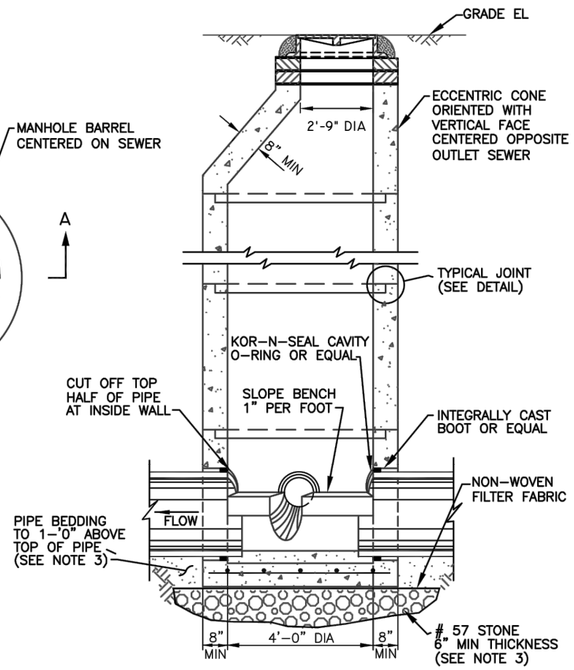
3 DETAIL
SCALE: NTS



SECTION A-A



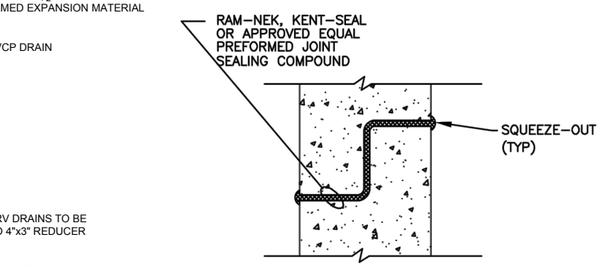
PLAN



SECTION B-B

STANDARD MANHOLE – DEEP TYPE

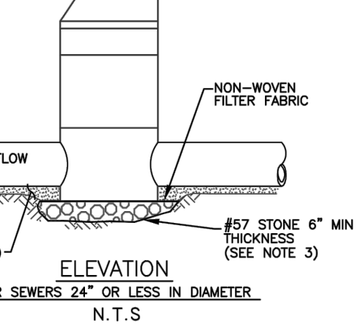
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S



MANHOLE BARREL JOINT DETAIL

N.T.S

(SEE NOTE 5)



ELEVATION

FOR SEWERS 24" OR LESS IN DIAMETER

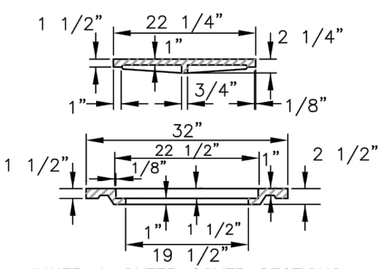
N.T.S

NOTES

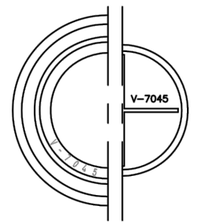
1. REINFORCING STEEL FOR ALL MANHOLES SHALL CONFORM TO ASTM–C478 AND PLACED AS DESCRIBED IN THE SPECIFICATIONS.
2. ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
3. SEE SPECIFICATIONS FOR MATERIALS 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.

STANDARD MANHOLE FRAME & COVER

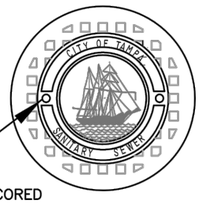
4 DETAIL
SCALE: NTS



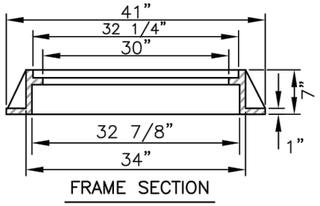
INNER & OUTER COVER SECTIONS



COVER BACKS



COVER FACES



FRAME SECTION

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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PRESCOTT PUMP STATION REHABILITATION

PUMP STATION DETAILS - I

SHEET
11

PLOTTED BY: Sommerberg, Terence DRAWING FILE: L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\11 PUMP STATION DETAILS - 1.dwg
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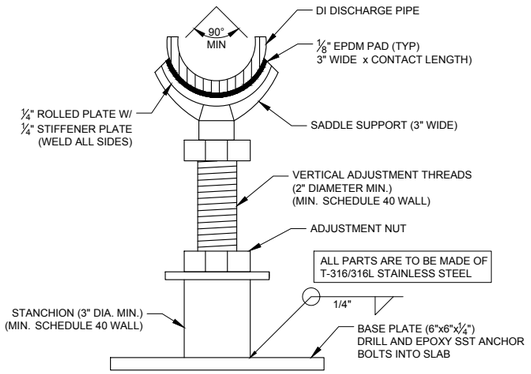
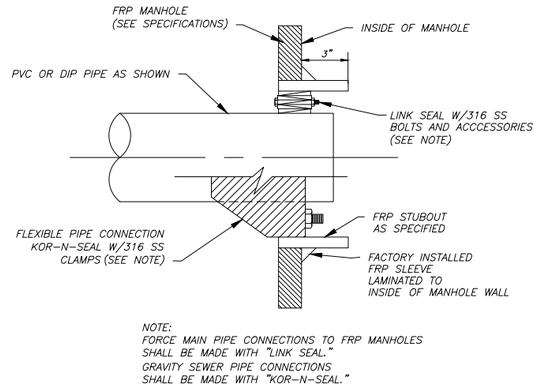


STAINLESS STEEL STANCHION SADDLE SUPPORT

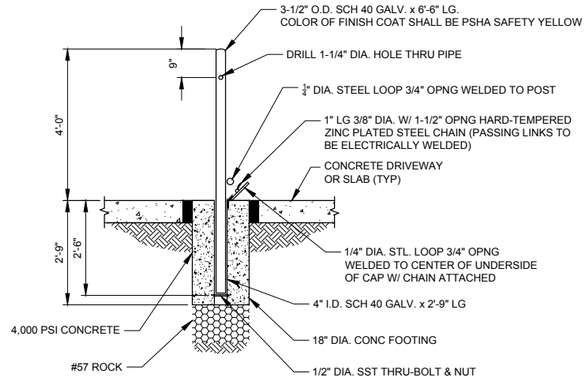
5 DETAIL
- SCALE: NTS



NOTE:
FORCE MAIN PIPE CONNECTIONS TO FRP MANHOLES SHALL BE MADE WITH "LINK SEAL."
GRAVITY SEWER PIPE CONNECTIONS SHALL BE MADE WITH "KOR-N-SEAL."

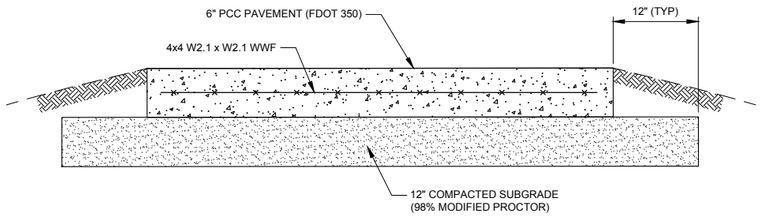
FRP PIPE CONNECTION

6 DETAIL
- SCALE: NTS



REMOVABLE BOLLARD

7 DETAIL
- SCALE: NTS

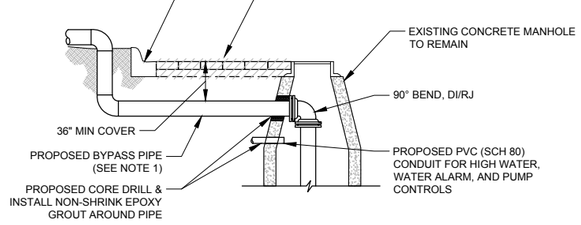


NOTE:

1. SEE NOTE 19 ON SHEET 3 FOR MORE INFORMATION.

PUMP STATION CONCRETE DRIVEWAY

8 DETAIL
- SCALE: NTS



NOTES:

1. BYPASS PIPE AND FITTINGS UNDER THE ROADWAY AND INSIDE THE MANHOLE SHALL BE HDPE C-906, MIN. DR-17 PIPE. ALL JOINTS SHALL BE BUTT-FUSED. ALTERNATE PIPE MATERIALS CAPABLE OF WITHSTANDING A H-20 LIVE LOAD MAY BE SUBMITTED FOR CONSIDERATION.
2. BYPASS PIPE SHALL BE EXTENDED TO THE MANHOLE BOTTOM AND SECURED TO THE MANHOLE. CONTRACTOR SHALL SUBMIT SHOP DRAWING ON PROPOSED INSTALLATION METHOD FOR APPROVAL.
3. UPON COMPLETION OF THE BYPASS OPERATION, CONTRACTOR SHALL COMPLETELY REMOVE BYPASS PIPE AND CONDUIT FROM INSIDE MANHOLE, AND CUT PIPE AT FACE OF WALL. PIPE UNDER ROADWAY SHALL REMAIN AND BE PLUGGED AT ENDS.
4. CONTRACTOR SHALL CALL SUNSHINE TO LOCATE UTILITIES IN EXCAVATION AREA.
5. EXISTING MANHOLE IS A CONCRETE MANHOLE.

BURIED BYPASS PIPE DETAIL

9 DETAIL
- SCALE: NTS

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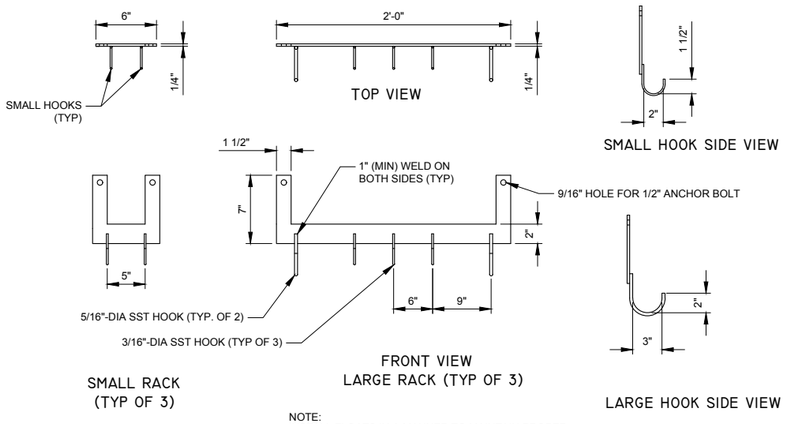
PRESCOTT PUMP STATION REHABILITATION

PUMP STATION DETAILS - 2

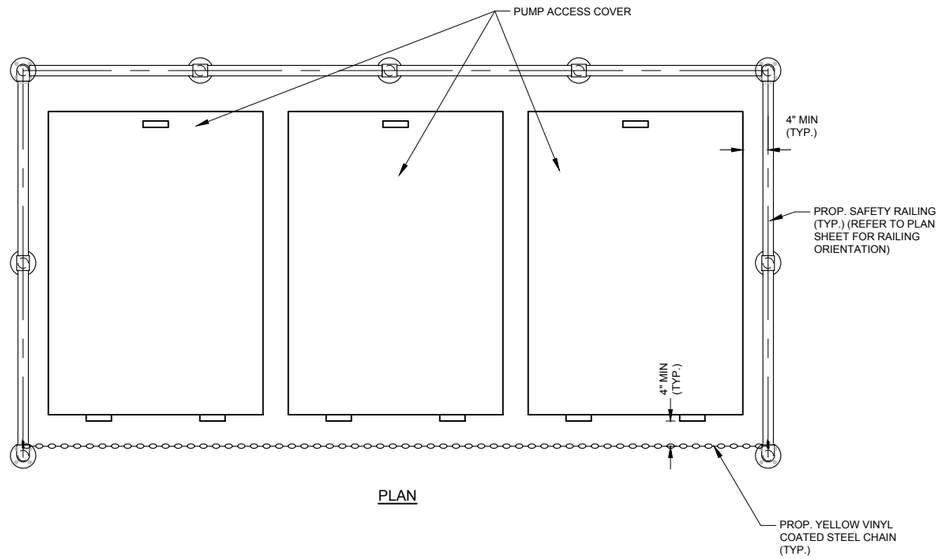
SHEET 12



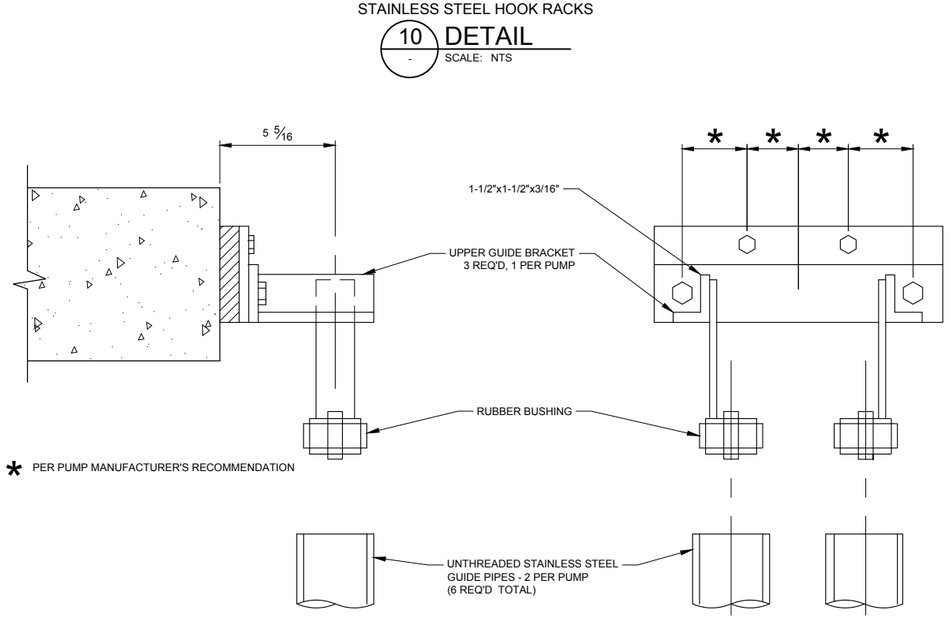
NOTE:
INSTALL FLOATS IN A MANNER TO MAINTAIN PROPER OPERATIONAL CLEARANCE AND TO REDUCE TANGLING.

STAINLESS STEEL HOOK RACKS

10 DETAIL
SCALE: NTS

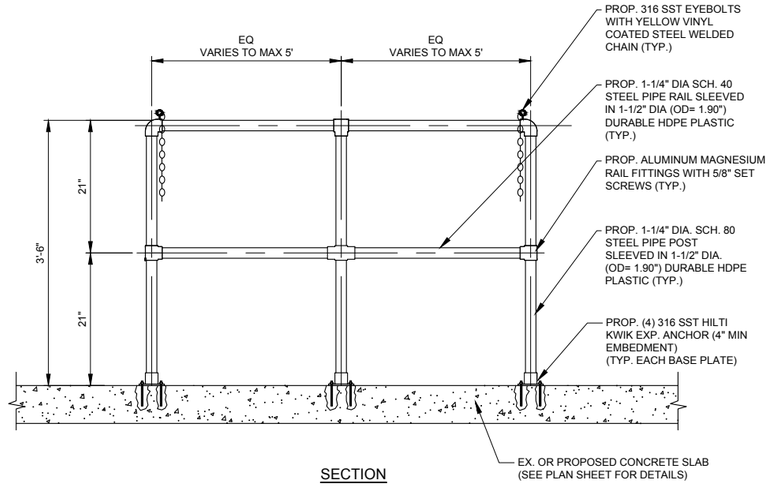


PLAN



GUIDE BRACKET (SUPPLIED WITH PUMPS)

11 DETAIL
SCALE: NTS



SECTION

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 THE CITY.

SAFETY RAIL & CHAIN

12 DETAIL
SCALE: NTS

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FL. P.E. LICENSE NO. 67573

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DRN: TRS
CKD: BVH
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

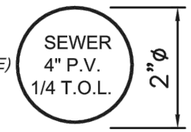
PUMP STATION DETAILS - 3

SHEET 13

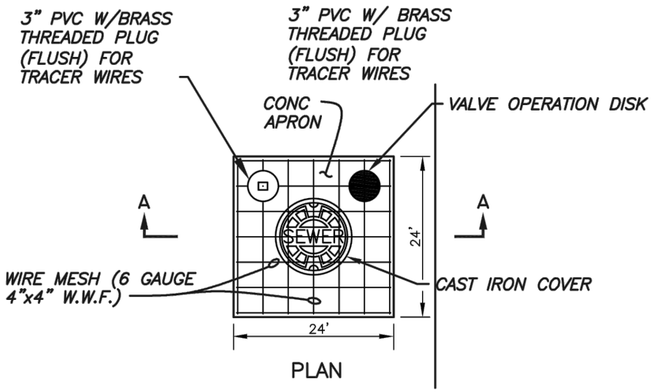
IMPORTANT - FOR EACH OPERABLE VALVE:

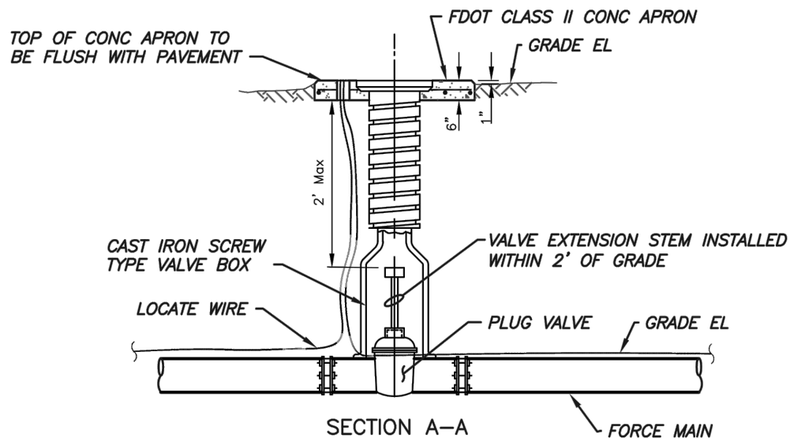
PROVIDE A BRASS IDENTIFICATION TAG ANCHORED TO THE CONCRETE APRON THAT IS A MINIMUM 2" IN DIAMETER AND 1/8-INCH THICK. THE TAG SHALL BE ENGRAVED WITH "SEWER", SIZE OF VALVE, TYPE OF VALVE, AND DIRECTION AND NUMBER OF TURNS TO OPEN.

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:

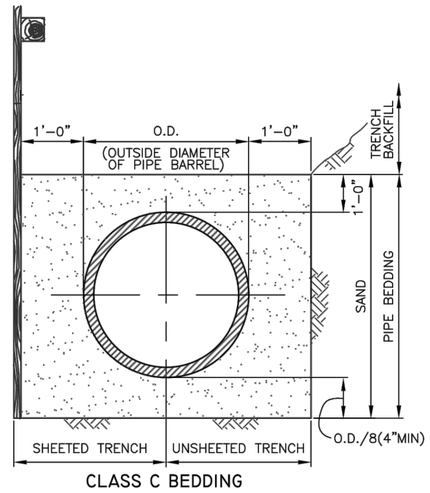


VALVE OPERATION DISK
Not To Scale





VALVE BOX DETAIL
Not To Scale



CLASS C BEDDING

PIPE BEDDING FOR GRAVITY AND FM PIPE INSTALLATION
DETAIL
SCALE: NTS

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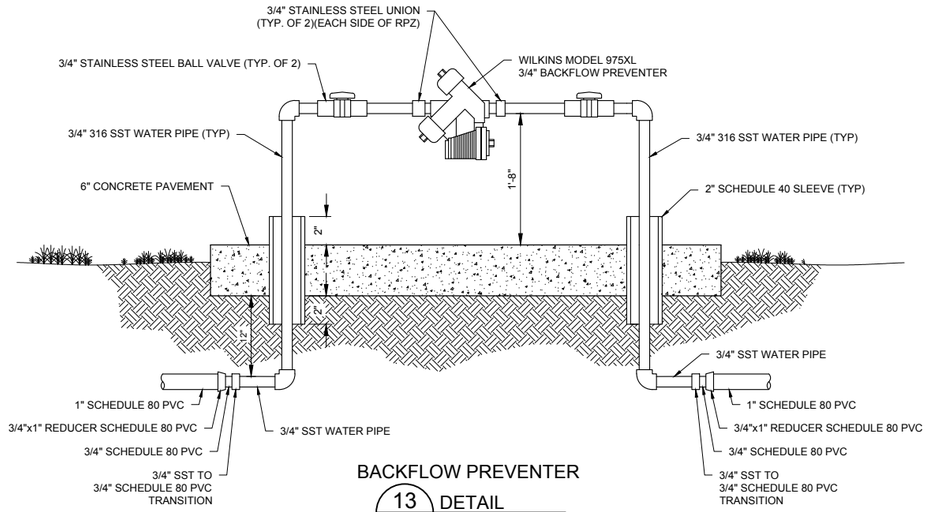
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

PUMP STATION DETAILS - 4

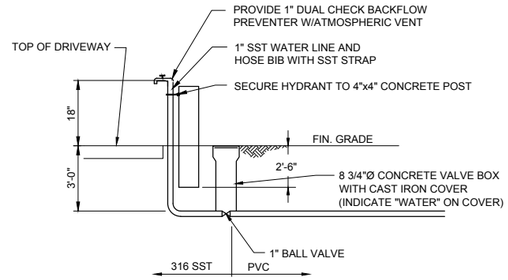
SHEET 14

PLOTTED BY: Sommenberg, Terence DRAWING FILE L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott_Sheets\14 PUMP STATION DETAILS - 4.dwg
PLOT DATE: Wednesday, March 1, 2023 10:16:16 AM LAST SAVED BY: terence.sommenberg CTB: AECOM-17.ctb



BACKFLOW PREVENTER

13 DETAIL
- SCALE: NTS



HOSE BIB

14 DETAIL
- SCALE: NTS

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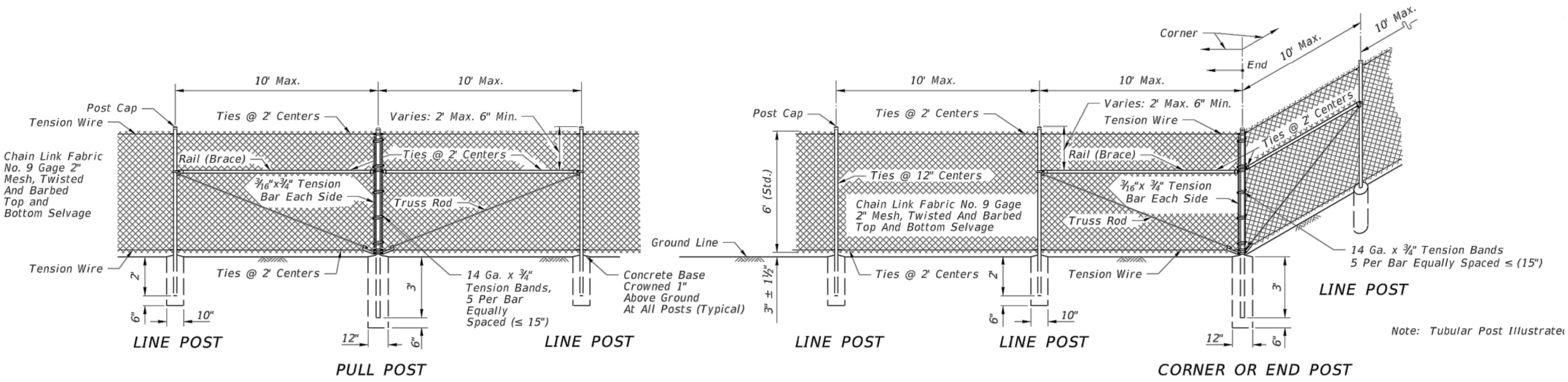
PRESCOTT PUMP STATION REHABILITATION

POTABLE WATER DETAILS

SHEET
15



GENERAL NOTES

1. This fence to be used generally in urban areas.
2. For supplemental information refer to Section 550 of FDOT Standard Specifications.
3. Chain link fabric, post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous fittings and hardware shall meet the requirements of AASHTO and ASTM signify current reference.
4. Fence Component Options:
   A. Line post options:
      (1) Galvanized steel pipe, Schedule 40– 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B): Schedule 40– 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe– 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Steel H–Beam– 1⅞"x 1⅝": Zinc Galv. 1.8 oz./ft.: AASHTO M111 and Detail.
      (5) Aluminum alloy H–Beam– 1⅞"X 1⅝" Detail.
      (6) Steel C– 1⅞"X 1⅜": Galv.: 1.8 oz/ft. zinc: AASHTO M111; OR , 0.9 oz./ft². zinc–5% aluminum–mischmetal: ASTM F1043 and Detail.
      (7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   B. Corner, end, and pull post options:
      (1) Galvanized steel pipe, Schedule 40– 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe– 2½" nominal dia.: ASTM B241 or B221, Alloy 6063,T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   C. Rail options:
      (1) Galvanized steel pipe, Schedule 40– 1¼" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
      (2) Aluminum coated steel pipe; ASTM A53 steel, X 2 Tables Schedule 40; 1¼" nominal dia., 1.660" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
      (3) Aluminum alloy pipe– 1¼" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
      (4) Resistance welded steel pipe; 50,000 psi min. yeild strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 1⅝" OD, 1¼" NPS, 1.660" dec. equiv., 0.111" min. wall thick. and min. wt. 1.836 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

   D. Chain link fabric options (2" mesh with twisted and barbed selvage top and bottom for all options except as described in Note No. 10):
      (1) AASHTO M181 Type I – Zinc Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 1.8 oz/ft². (M181 Class D 2.0 oz./ft². modified to 1.8 oz./ft².).
      (2) AASHTO M181 Type II –Aluminum Coated Steel, No. 9 gage (coated wire diameter), coated at the rate of 0.40 oz./ft².
      (3) AASHTO M181 Type IV– Polyvinyl Chloride (PVC) Coated Steel, No. 9 guage (coated core wire diameter), core wire–zinc coated steel. PVC coating: M181 Class A (either extruded or extruded and bonded) or Class B (bonded). See table right. Unless the plans call for M181 standard colors medium green, dark green or black the coating color shall be soft gray matching that of No. 36622 of Federal Standard 595a.

   E. Tension wire options:
      (1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².: AASHTO M181.
      (2) Aluminum alloy wire with a diameter of 0.1875" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No.7 gage coated at the rate of 0.040 oz./ft².: AASHTO M181.

   F. Tie wire and hog ring options:
      (1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².
      (2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
      (3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

TYPE B FENCE

SHEET 16

PLOTTED BY: Sonnenberg, Terence - DRAWING FILE: L:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_DS\912_CAD_Prescott_Sheets\16 TYPE B FENCE.dwg
PLOT DATE: Wednesday, March 1, 2023 1:01:03 PM - USF SHED BY terence.sonnenberg - CTB - AECOM 11/17/20

STRUCTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALUM	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECTURE/ ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BLDG	BUILDING
BM	BENCH MARK
BOT	BOTTOM
BP	BASE PLATE, BEARING PLATE
BRG	BEARING
C	CHANNEL
C&C	COMPONENTS AND CLADDING
CF	CUBIC FOOT/ CUBIC FEET
CHKD	CHECKED
CIP	CAST-IN-PLACE
CJ	CONTRACTION JOINT
CLR	CLEAR/ CLEARANCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMU	CONCRETE MASONRY UNIT
COEFF	COEFFICIENT
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
CSJ	CONSTRUCTION JOINT
CY	CUBIC YARD
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRIC/ ELECTRICAL
EQ SP	EQUAL SPACING
ES	EACH SIDE
EW	EACH WAY
EXJ	EXPANSION JOINT
EXP	EXPANSION
EXT	EXTERIOR
FCJ	FULL CONTRACTION JOINT
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISH FLOOR
FG	FINISH GRADE
FP	FULL PENETRATION WELD
FS	FAR SIDE
FT	FOOT/ FEET
FTG	FOOTING
GA	GAGE/ GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH/ INCHES
INT	INTERIOR
INV	INVERT
K	KIP/ 1000 POUNDS
L	ANGLE
LB	POUND/ POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LP	LOW POINT
MAT'L	MATERIAL
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MPH	MILES PER HOUR
MWFRS	MAIN WIND FORCE RESISTING SYSTEM
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OP	OPPOSITE HAND
OPNG	OPENING
PCF	POUNDS PER CUBIC FOOT
PEN	PENETRATION
PJF	PREMOLDED BITUMINOUS JOINT FILLER
PLF	POUNDS PER LINEAR FOOT
PREFAB	PREFABRICATED
PROJ	PROJECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCEMENT
REQ'D	REQUIRED
SCH	SCHEDULE
SCJ	SAW CUT JOINT
SIM	SIMILAR
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
SYM	SYMMETRIC
T/	TOP OF
T&B	TOP AND BOTTOM
TEMP	TEMPERATURE, TEMPORARY
TOL	TOLERANCE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VOL	VOLUME
W	WIDE FLANGE
W/	WITH
W/O	WITH OUT
WP	WORKING POINT
WS	WATERSTOP
WT	WEIGHT, STRUCTURAL TEE SECTION
WWR	WELDED WIRE REINFORCEMENT

STRUCTURAL NOTES

A. DESIGN CRITERIA

1. FLORIDA BUILDING CODE: FBC 2020, 7th EDITION.
2. ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS, AND OTHER STRUCTURES.
3. ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

B. LOADINGS

1. LIVE LOADS:

1.1.	FLOOR ACCESS HATCH	300 PSF
1.2.	WET WELL TOP SLAB	200 PSF
1.3.	ELECTRICAL PLATFORM	100 PSF
1.4.	GENERATOR PLATFORM	SEE GENERATOR SECTION VIEW

2. WIND LOADS:

2.1.	ULTIMATE WIND VELOCITY, V_{ULT}	151 MPH
2.2.	NOMINAL WIND VELOCITY, V_{ASD}	117 MPH
2.3.	EXPOSURE CATEGORY	C
2.4.	RISK CATEGORY	III

C. GENERAL REQUIREMENTS

1. ALL DETAILS ARE TYPICAL. INCORPORATE INTO PROJECT AT APPROPRIATE LOCATIONS WHERE CONDITIONS ARE SIMILAR.
2. DO NOT SCALE DRAWINGS. DIMENSIONS NOT SHOWN ON THE DRAWINGS SHALL BE VERIFIED WITH THE ENGINEER.
3. SHORING REQUIRED FOR THE STABILITY OF THE UNCOMPLETED STRUCTURE OR FOR INSTALLATION OR MODIFICATION OF STRUCTURAL MEMBERS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
4. CONTRACTOR TO SUBMIT DOCUMENTS SHOWING METHOD OF SHORING TO THE ENGINEER.
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO START OF CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS.
6. COORDINATE FINAL SIZE AND LOCATION OF ALL OPENINGS WITH THE ACTUAL EQUIPMENT SUPPLIED, PROJECT REQUIREMENTS, AND FIELD CONDITIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOUNDATIONS UNDER MECHANICAL EQUIPMENT AND SHALL COORDINATE SIZE AND LOCATION OF FOUNDATIONS.
8. PROCESS EQUIPMENT SHOWN ON STRUCTURAL DRAWINGS IS FOR VISUAL REFERENCE ONLY.
9. NET ALLOWABLE FOUNDATION SOIL BEARING CAPACITY SHALL BE 2000 PSF AS SET FORTH IN THE GEOTECHNICAL REPORT PREPARED BY TIERRA, INC., DATED DECEMBER 8, 2021. CONTRACTOR TO VERIFY SOIL CAPACITY WITH ENGINEER PRIOR TO PLACING FOUNDATIONS. STRENGTHEN SOIL AS REQUIRED TO ACHIEVE STATED BEARING CAPACITY.

D. CAST IN PLACE CONCRETE

1. CONCRETE FOR ALL STRUCTURES, CONCRETE FLOOR TOPPING AND CONCRETE NOT OTHERWISE SPECIFIED SHALL BE 4,000 PSI CONCRETE, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
3. ALL SPLICES SHALL BE CLASS B, TENSION LAP SPLICES, UON.
4. DO NOT WELD OR TACK WELD REINFORCING STEEL.
5. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A1064.
6. PROVIDE WELDED WIRE REINFORCEMENT HEAVIER THAN W2.9 IN FLAT SHEETS.
7. REBAR COVER SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

7.1.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
7.2.	CONCRETE EXPOSED TO EARTH AND/OR WEATHER	2"
7.3.	CONCRETE NOT EXPOSED TO EARTH OF WEATHER (#11 OR SMALLER)	$\frac{3}{4}$"

E. FLOWABLE FILL

1. PROVIDE FLOWABLE FILL MIX DESIGN PER PROJECT SPECIFICATIONS. EXCAVATABLE OR NON-EXCAVATABLE MIX DESIGNS ARE ACCEPTABLE.
2. SUBMIT MIX DESIGNS TO THE ENGINEER FOR APPROVAL.
3. POUR FLOWABLE FILL IN LIFTS TO PREVENT BUOYANCY OF TANK. FILL TANK WITH WATER AS REQUIRED TO PREVENT BUOYANCY.

F. STRUCTURAL STEEL

1. STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE ASTM STANDARDS LISTED:

1.1.	W-SHAPES	6061-T6
1.2.	CHANNELS	6061-T6
1.3.	BARS, PLATES, AND L-SHAPES	6061-T6
1.4.	HSS	6061-T6
1.5.	PIPE	6061-T6
1.6.	ANCHOR BOLTS	SS 316
1.7.	COMMON BOLTS	SS 316

2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AWS AND AISC. INSPECT ALL WELDING IN ACCORDANCE WITH THE SPECIFICATIONS.
3. FOR WELD SIZES NOT INDICATED ON DRAWINGS USE MINIMUM WELD SIZED FOR THE CONNECTED MATERIALS IN ACCORDANCE WITH AWS.
4. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT ENGINEER'S ACCEPTANCE.
5. PLACE NATURAL CAMBER OF BEAMS UPWARD.

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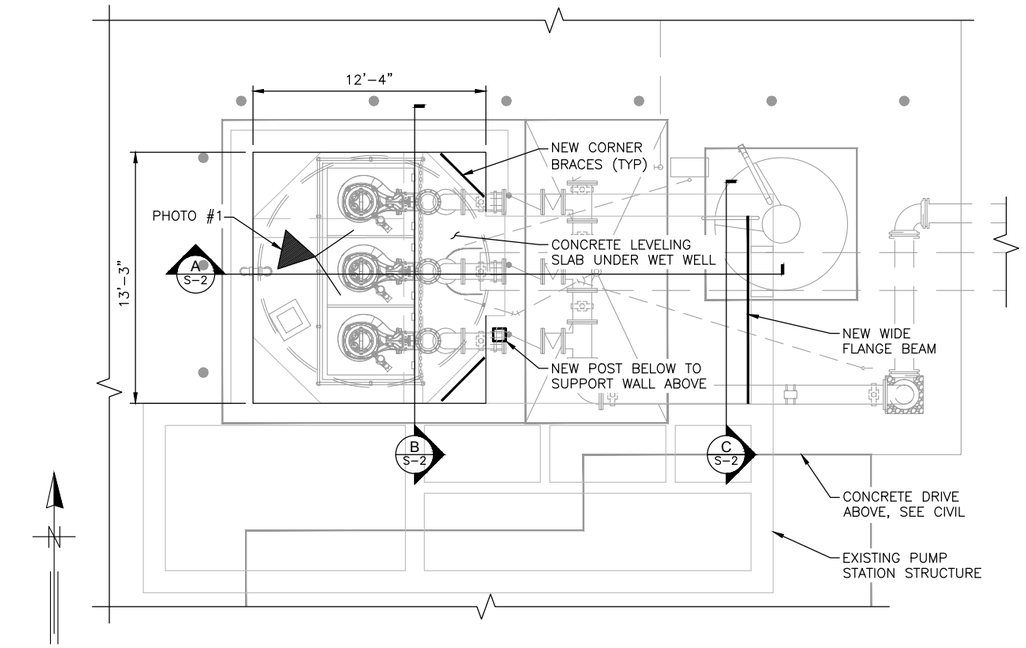
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

STRUCTURAL NOTES AND ABBREVIATIONS

SHEET
S-1



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

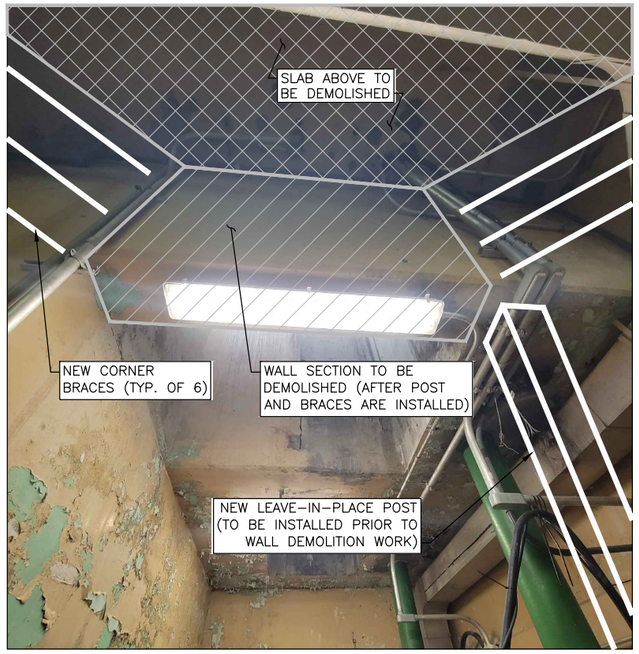
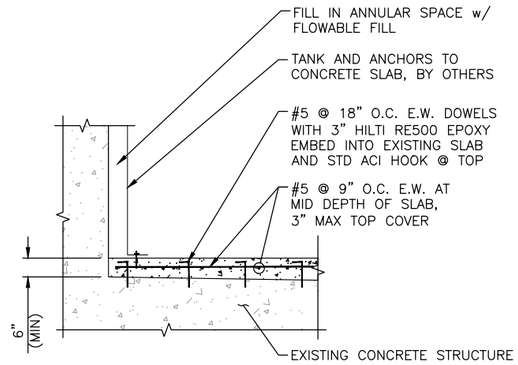
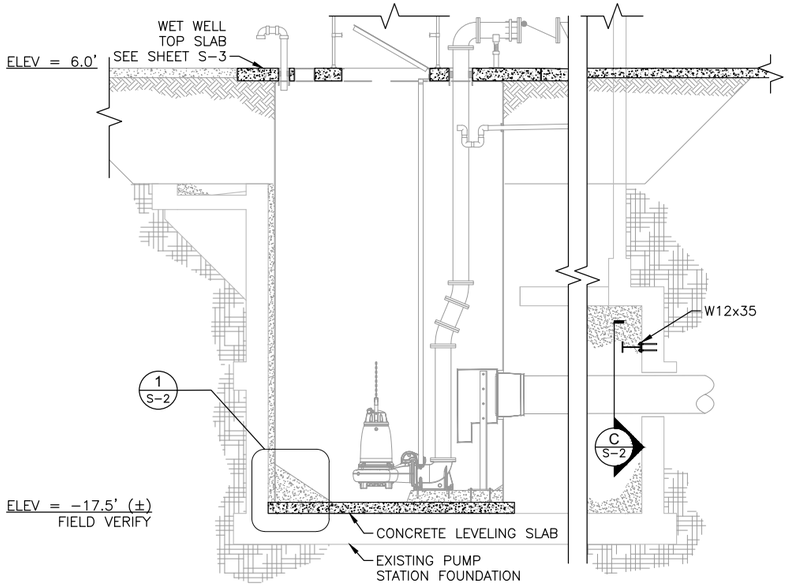


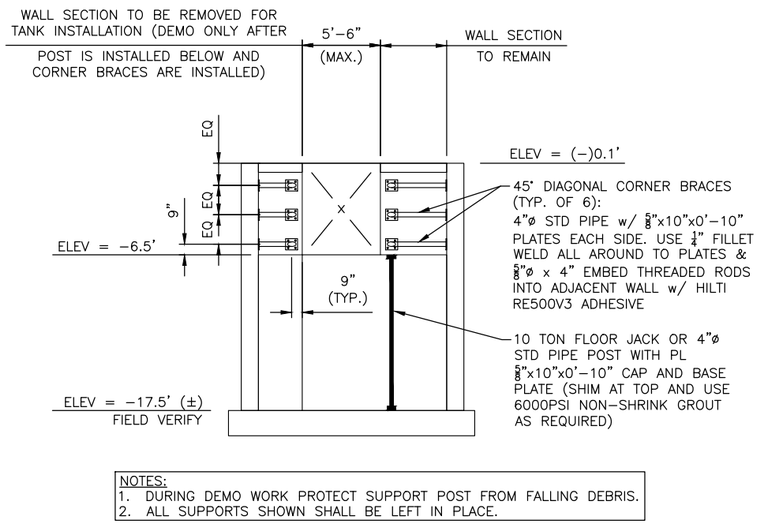
PHOTO #1
SCALE: NTS



CONCRETE LEVELING SLAB
1 / S-2 DETAIL
SCALE: 1/4"=1'-0"

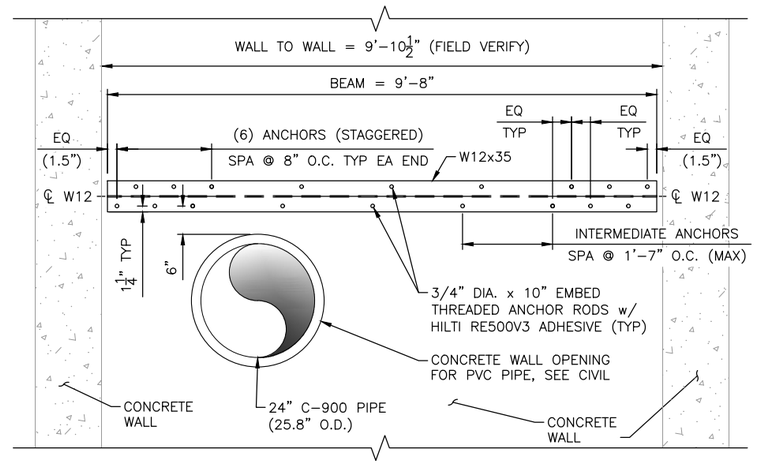


SECTION A-A
SCALE: 1/8" = 1'-0"



NOTES:
1. DURING DEMO WORK PROTECT SUPPORT POST FROM FALLING DEBRIS.
2. ALL SUPPORTS SHOWN SHALL BE LEFT IN PLACE.

SECTION B-B
SCALE: 3/32" = 1'-0"



SECTION C-C
SCALE: 3/8" = 1'-0"

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DES: SF
DRN: MS
CKD: KM
DATE: 03/01/2023

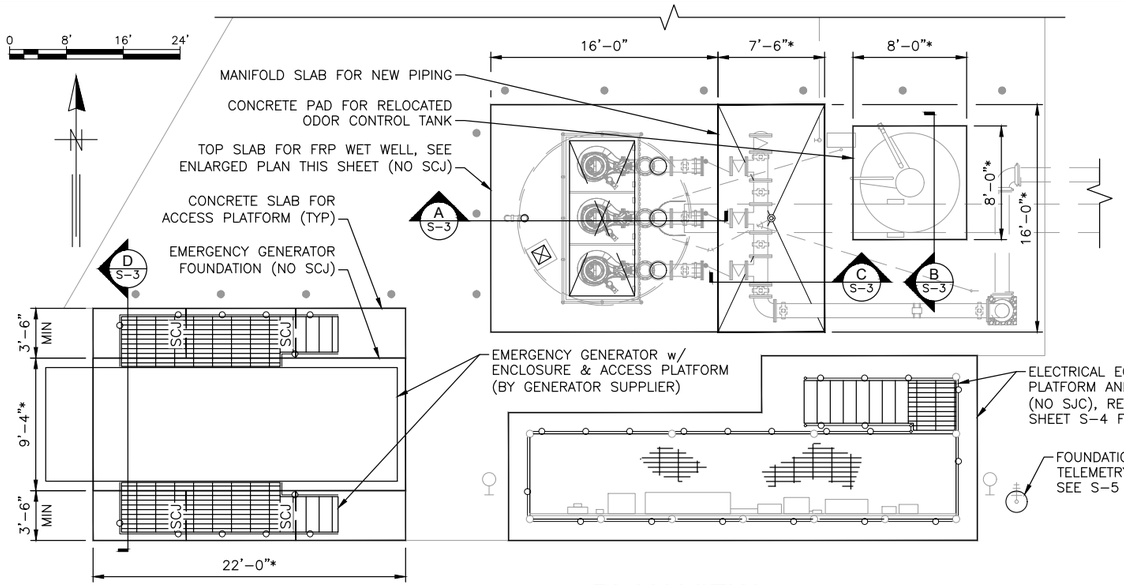
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

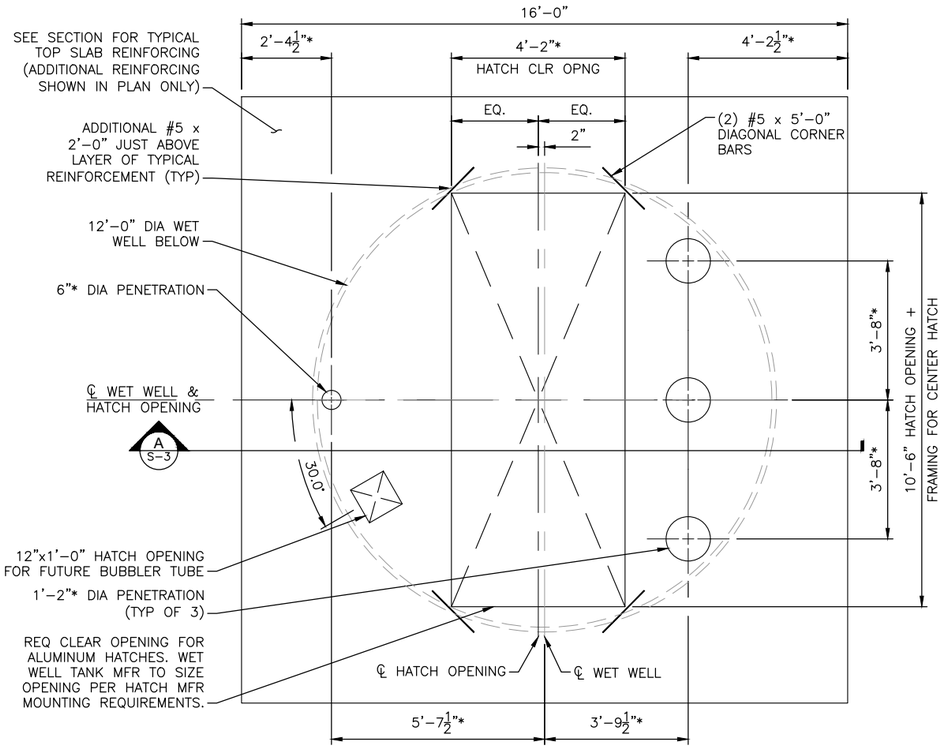
STRUCTURAL DETAILS - I

SHEET S-2

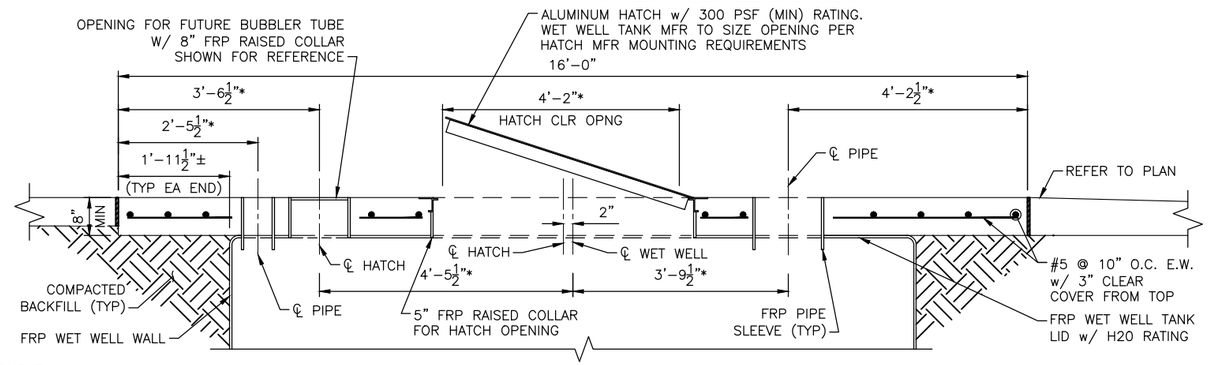
PLOTTED BY: Sonnenberg, Terence - DRAWING FILE: J:\DCS Projects\WPH 60651648_Tampa_WWPSRehab\900_CAD_GIS\910_CAD_Prescott_Structural_Sheets\S-2 STRUCTURAL DETAILS - 1.dwg
PLOT DATE: Wednesday, March 1, 2023 10:16:11 AM USER: SMED BY: terence.sonnenberg CTB - AECOM-11X17.CTB



PLAN VIEW
SCALE: 3/32" = 1'-0"

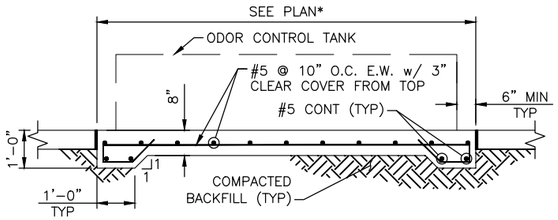


WET WELL TOP SLAB PLAN
SCALE: 1/4" = 1'-0"

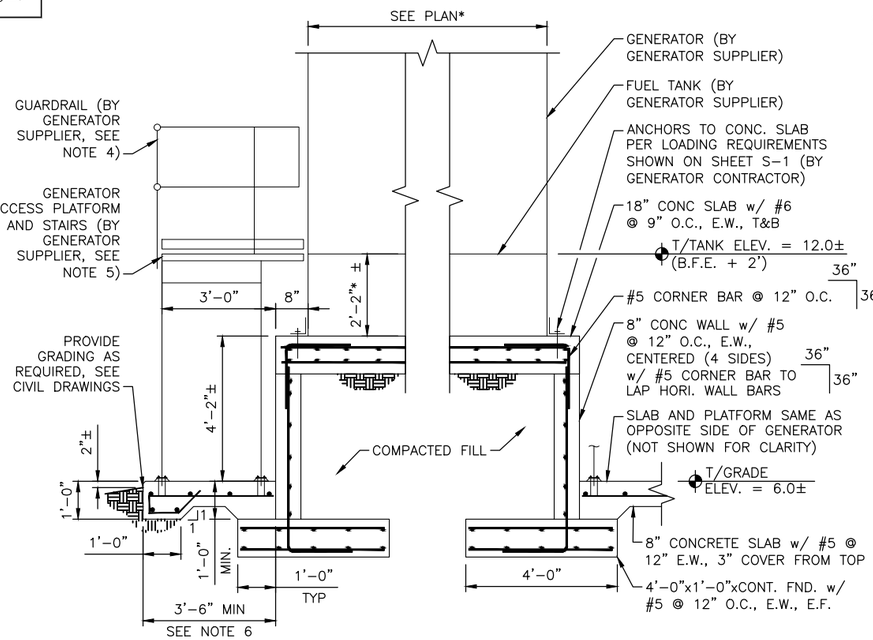


SECTION A-A
SCALE: 3/8" = 1'-0"

SHEET NOTES:
1. THE * SYMBOL INDICATES THAT THE CONTRACTOR SHALL VERIFY SIZE REQUIREMENTS WITH THE FINAL EQUIPMENT PURCHASED PRIOR TO CONSTRUCTION



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



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

EMERGENCY GENERATOR NOTES:
1. ALL COMPONENTS SHALL BE MADE OF MATERIALS RATED FOR EXTERIOR USE.
2. PROVIDE SHORING FOR ALL WALLS WITH UNBALANCED SOIL LOAD GREATER THAN 1 FT UNTIL TOP OF WALL IS BRACED WITH SLAB.
3. CONCRETE SHALL BE PLACED ON IN SITU SOIL AND/OR AS REQUIRED BY ENGINEER OR PLACED ON STRUCTURAL FILL PLACED IN 6" LIFTS COMPACTED TO 95% MODIFIED PROCTOR.
4. GUARDRAIL SHALL BE DESIGNED FOR 50 PLF AND 200 LBS LOAD IN ANY DIRECTION (NON-CONCURRENT).
5. GENERATOR ACCESS PLATFORM SHALL BE MADE OF ALUMINUM AND SHALL BE DESIGNED FOR 60 PSF DISTRIBUTED LOAD AND 300 LBS POINT LOAD (LOADS DO NOT NEED TO BE APPLIED CONCURRENT). STAIR SHALL BE DESIGNED FOR 100 PSF & 300 LBS (NON-CONCURRENT). PROVIDE SIGNED AND SEALED CALCULATIONS WITH SHOP DRAWINGS FOR REVIEW.
6. COORDINATE SLAB WIDTH WITH GENERATOR PLATFORM MANUFACTURER.

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

SAW-CUT JOINTING NOTES:
1. JOINT DEPTH SHALL BE 0.25xSLAB DEPTH, OR 1-1/2" MAX.
2. JOINT SPACING SHALL BE 8'-0" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
3. FILL WITH EPOXY JOINT SEALANT FOR JOINTS EXPOSED TO TRAFFIC. FILL WITH ELASTOMERIC JOINT SEALANT FOR ALL OTHER JOINTS.
4. JOINTS SHALL BE CUT WITHIN (1) TO (4) HOURS OF FINISHING SLAB (1 HOUR IN HOT WEATHER, 4 HOURS IN COLD WEATHER). JOINTS SHALL BE CUT WITH EARLY ENTRY SAWS.
5. SAW-CUT JOINTS ARE NOTED AS "SCJ" ON PLANS.

SAW-CUT CONSTRUCTION JOINT
1 / S-3 DETAIL
SCALE: 1 1/2"=1'-0"

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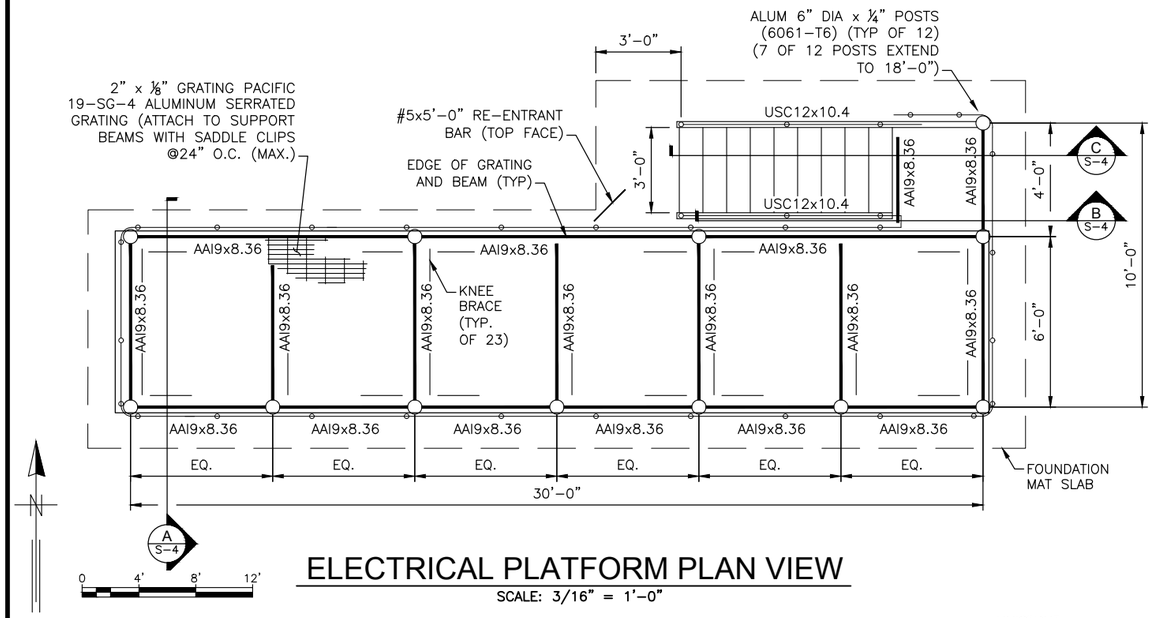
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

STRUCTURAL DETAILS - 2

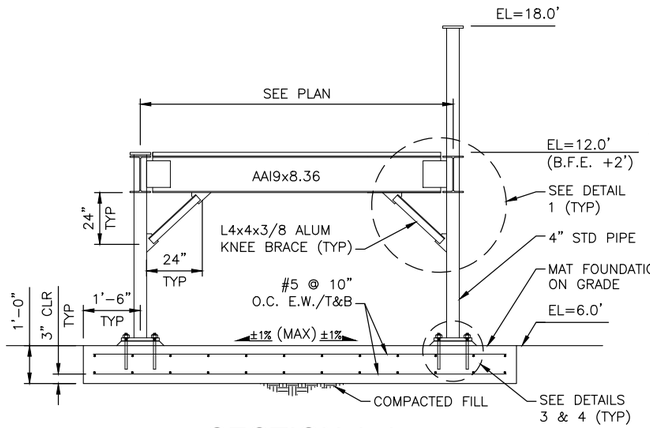
SHEET S-3

PLOTTED BY: Sommerberg, Terence - DRAWING FILE: J:\DCS\Projects\WTR\60651648_Tampa_WWPS#etc\900_CAD_GIS\912_CAD_Prescott_Structural_Sheets\S-3 STRUCTURAL DETAILS - 2.dwg
PLOT DATE: Wednesday, March 1, 2023 10:19:08 AM - AECOM-41V17.21B
LAST SAVED BY: terence.sommerberg



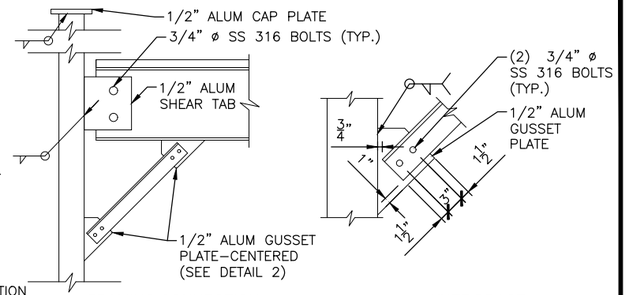
ELECTRICAL PLATFORM PLAN VIEW

SCALE: 3/16" = 1'-0"



SECTION A-A

SCALE: NTS

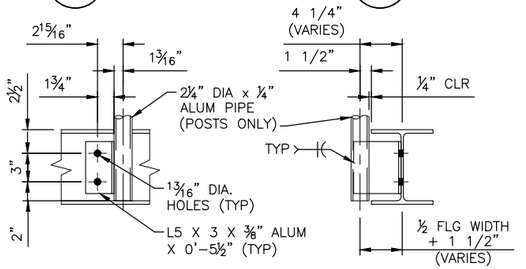


FRAMING CONNECTION

1 DETAIL S-4 — SCALE: NTS

KNEE BRACE

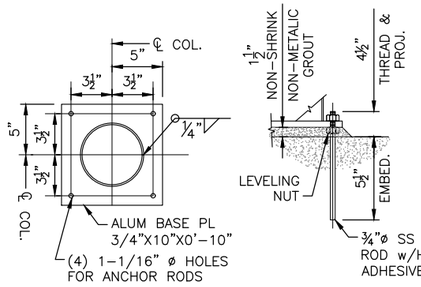
2 DETAIL S-4 — SCALE: 1/2"=1'-0"



OFFSET RAILING (BEAM) AAI9x8.36

OFFSET RAILING (BEAM)

6 DETAIL S-4 — SCALE: NTS



UNISTRUT CONNECTION TO ROUND POST - PLAN VIEW

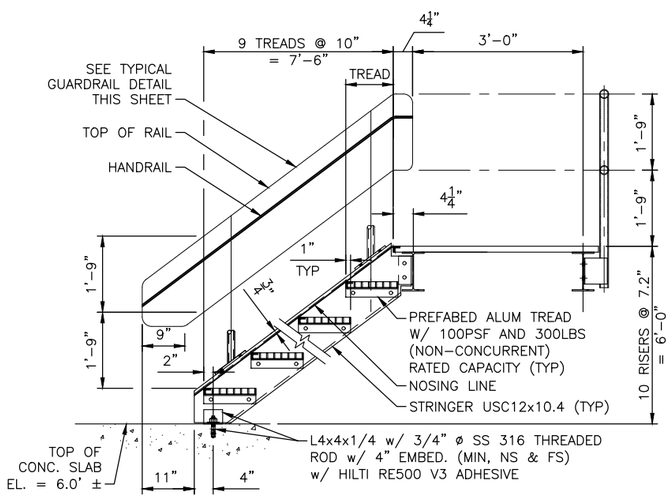
3 DETAIL S-4 — SCALE: NTS

BASE PLATE

4 DETAIL S-4 — SCALE: NTS

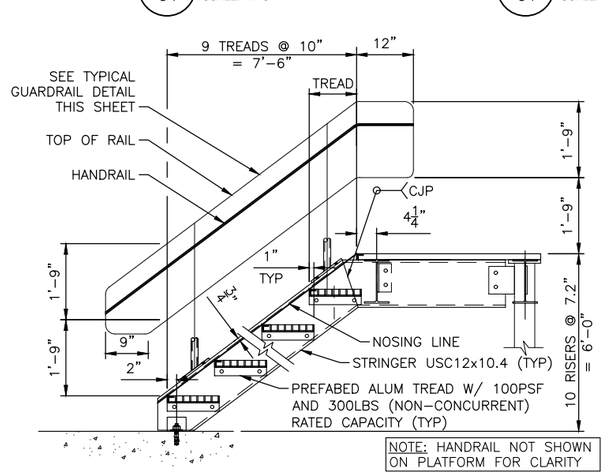
ANCHOR ROD

5 DETAIL S-4 — SCALE: NTS



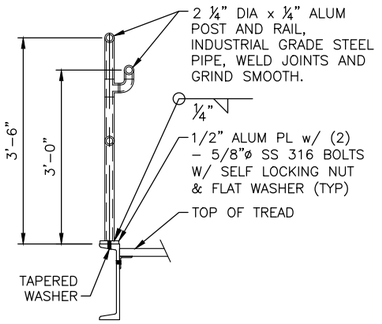
SECTION B-B

SCALE: NTS



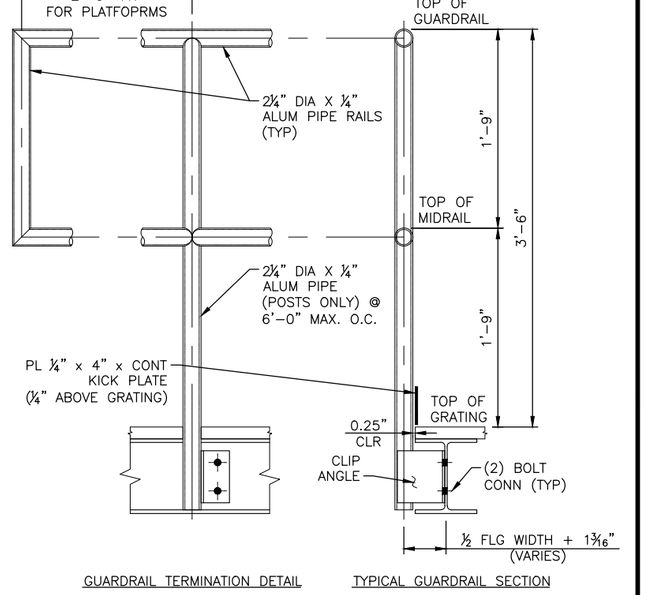
SECTION C-C

SCALE: NTS



TYPICAL GUARDRAIL

7 DETAIL S-4 — SCALE: NTS



GUARDRAIL TERMINATION DETAIL — TYPICAL GUARDRAIL SECTION

ELECTRICAL PLATFORM TYPICAL HANDRAIL

8 DETAIL S-4 — SCALE: NTS

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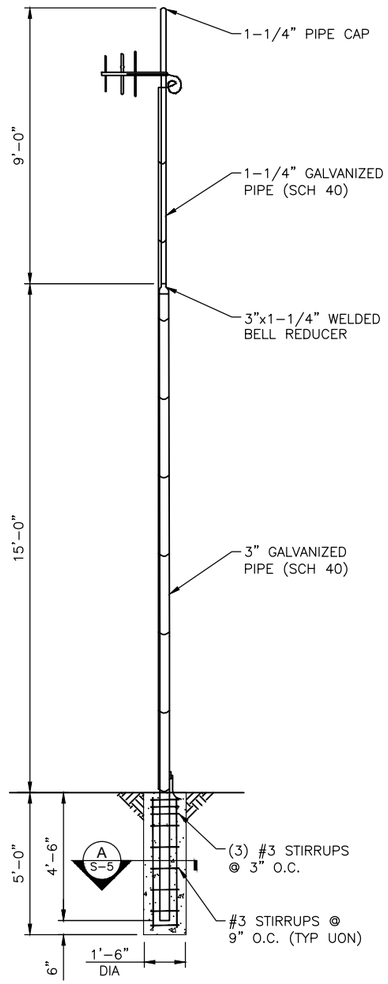
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

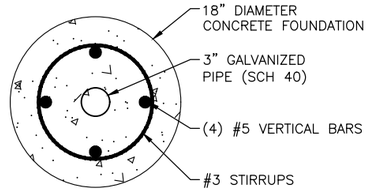
ELECTRICAL PLATFORM STRUCTURAL DETAILS

SHEET S-4



ANTENNA POLE & FOUNDATION

1 / S-5 DETAIL
SCALE: NTS



SECTION A-A
SCALE: 3/4" = 1'-0"

SHEET NOTES:
1. REFER TO SHEET S-1 FOR STRUCTURAL DESIGN CRITERIA AND NOTES.
2. TELEMETRY TOWER DESIGNED PER ASCE 7-16 §30.12.
   2.1. ANTENNA DESIGN EPA = 40 SQ. IN. (MAX)
   2.2. ANTENNA DESIGN WEIGHT = 5 LBS. (MAX)

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WASTEWATER DEPARTMENT

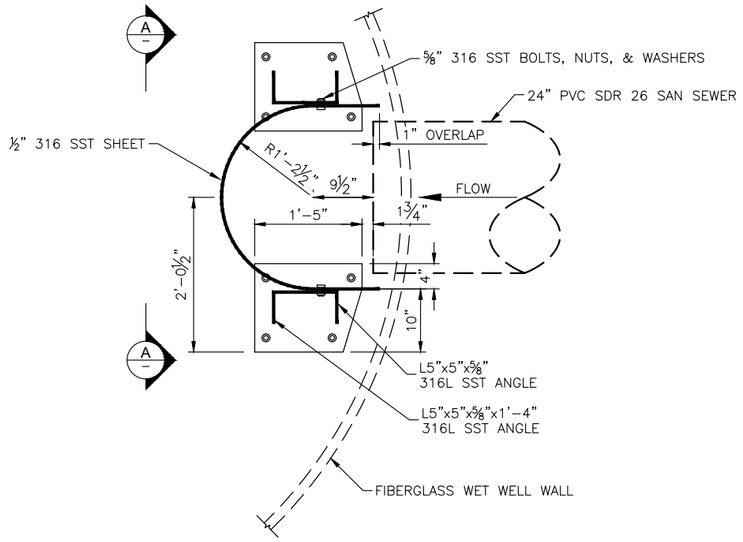
PRESCOTT PUMP STATION REHABILITATION

TELEMETRY TOWER STRUCUTRAL DETAILS

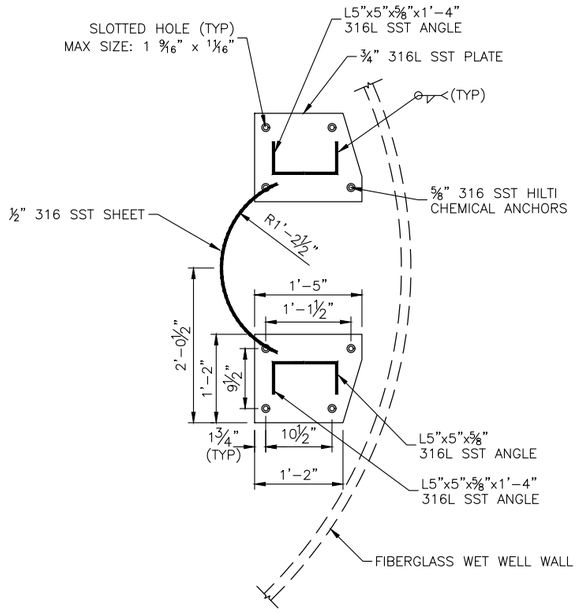
SHEET S-5

PLOTTED BY: Sonnenberg, Terence DRAWING FILE: J:\DCS\Projects\WTP\60651648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott\1_Structural\1_Sheets\S-5 TELEMETRY TOWER STRUCTURAL DETAILS.dwg
PLOT DATE: Wednesday, March 1, 2023 10:19:54 AM LAST SAVED BY: terence.sonnenberg CTB = AECOM 11/17/09

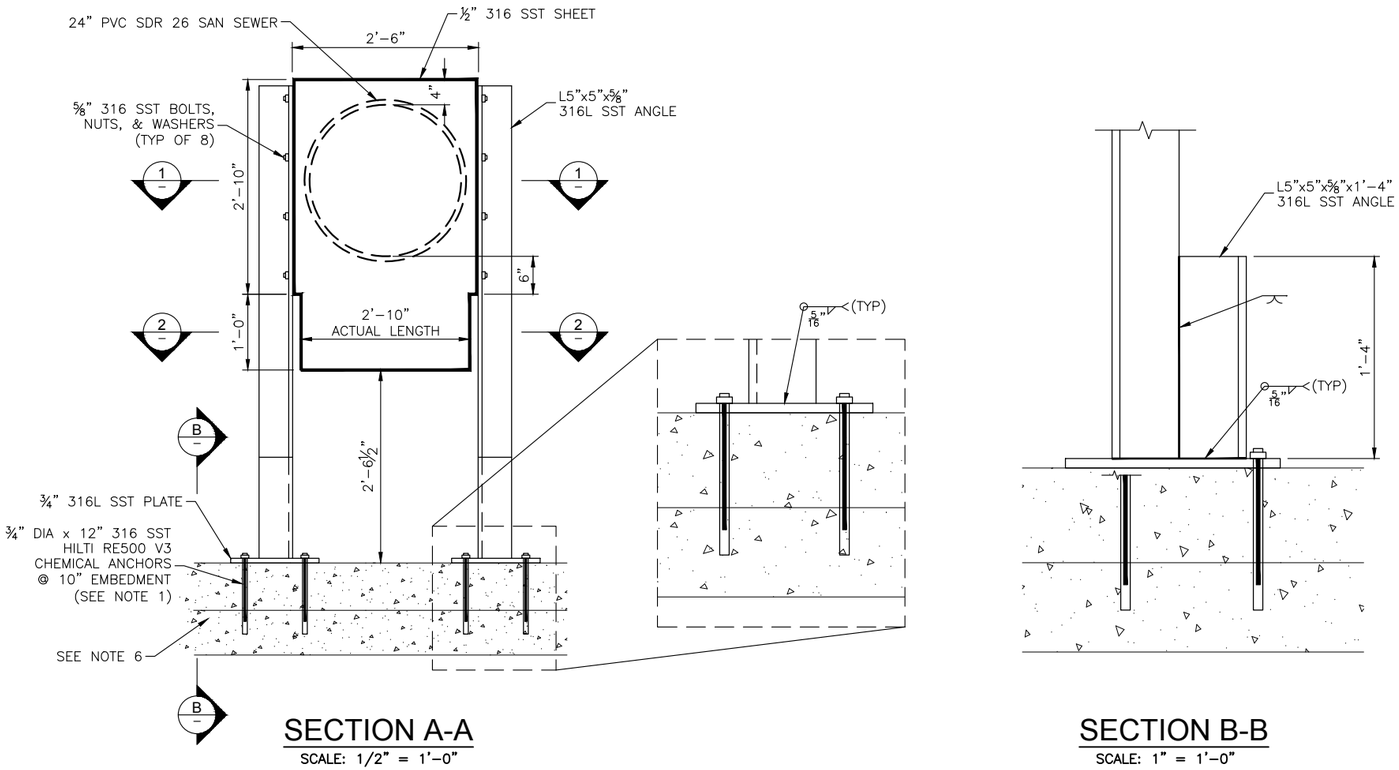
NOTES:
1. CONTRACTOR SHALL INSTALL HILTI ANCHOR BOLTS ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. CONTRACTOR TO HAVE A MANUFACTURER'S REPRESENTATIVE PRESENT DURING THE INSTALLATION OF THE CHEMICAL ANCHOR BOLTS.
2. CONTRACTOR SHALL VERIFY ALL SPACINGS, LOCATIONS AND DIMENSIONS PRIOR TO FABRICATION AND CONSTRUCTION. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS DETAILING ALL DIMENSIONS PRIOR TO ANY FABRICATION OF THE STRUCTURE.
3. ALL WELDED PARTS OF BAFFLE PLATE STRUCTURE SHALL BE TYPE 316L STAINLESS STEEL UNLESS OTHERWISE NOTED.
4. ALL BOLTS, NUTS, AND WASHERS SHALL BE 316 STAINLESS STEEL UNLESS OTHERWISE NOTED.
5. CONTRACTOR TO TEST EACH OF THE CHEMICAL ANCHORS ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS FOR NO LESS THAN SIXTY-FIVE PERCENT (65%) OF THE RATED "PULL-OUT" STRENGTH.
6. DURING THE DOWELING (DRILLING) PROCESS, IF THE EXISTING REINFORCEMENTS ENCOUNTERED, CONTRACTOR SHALL RETRACT DRILL, FILL HOLE WITH EPOXY AND RELOCATE DOWEL.



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



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



SECTION A-A
SCALE: 1/2" = 1'-0"

SECTION B-B
SCALE: 1" = 1'-0"
0 1/4' 1/2' 1'

BAFFLE PLATE STRUCTURE
SCALE: 1/2" = 1'-0"
0 1/2' 1' 2'

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PRESCOTT PUMP STATION REHABILITATION

BAFFLE PLATE STRUCTURAL DETAILS

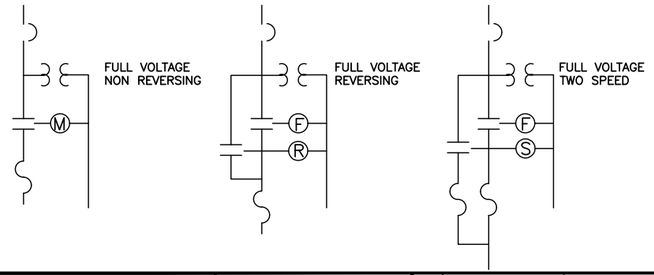
SHEET S-6

PLOTTED BY: Sonnenberg, Terence DRAWING FILE L:\DCS\Projects\WPR\60661648_Tampa_WWPSRehab\900_CAD_GIS\912_CAD_Prescott\L_Structural\L_Sheets\S-6 BAFFLE PLATE STRUCTURAL DETAILS.dwg
PLOT DATE: Wednesday, March 1, 2023 10:20:14 AM USER NAME: terence.sonnenberg CTB - AECOM 17.1.17.CTB

ONE LINE DIAGRAM SYMBOLS

- 600 A — BUS–RATING AS SHOWN
- INCOMING LINE
- OUTCOMING LINE
- DISCONNECTING DEVICE
- CONDUCTORS CONNECTED
- CONDUCTORS NOT CONNECTED
- 100A — FUSE–RATING AS SHOWN
- 100A — SINGLE THROW DISCONNECT SWITCH–RATING AS SHOWN
- 100A/70A — FUSED DISCONNECT SWITCH–100A SWITCH, 70A FUSE
- 100A — LOW VOLTAGE AIR CIRCUIT BREAKER WITHOUT TRIP DEVICE 100A FRAME
- 225A/125A — LOW VOLTAGE AIR CIRCUIT BREAKER WITH 225A FRAME AND 125A TRIP
- 52 — MEDIUM VOLTAGE DRAWOUT TYPE AIR CIRCUIT BREAKER
- GROUND CONNECTION
- SPD — LIGHTNING OR SURGE ARRESTORS
- SURGE CAPACITOR
- POWER TRANSFORMER WITH WINDING CONNECTIONS INDICATED
- CPT — CONTROL POWER TRANSFORMER
- PT — POTENTIAL TRANSFORMER
- CT — CURRENT TRANSFORMER
- OL1 — THERMAL OVERLOAD ELEMENT (OL)
- (5) — SQUIRREL CAGE MOTOR (INDICATE HORSEPOWER)
- (G) — GENERATOR
- (R) — INDICATING LIGHT (R–RED, G–GREEN, A–AMBER, B–BLUE, W–WHITE)

COMBINATION STARTER WITH CONTROL TRANSFORMERS AND OVERLOAD RELAYS AND MOTOR CIRCUIT PROTECTOR



SCHEMATIC AND WIRING DIAGRAM SYMBOLS

- (M) — OPERATING COIL
  - M–MOTOR STARTER
  - C–CONTRACTOR
  - F–FORWARD
  - R–REVERSE
  - AR–AUXILIARY RELAY
  - CR–CONTROL RELAY
  - TR–TIME DELAY RELAY
- NORMALLY OPEN CONTACT (N.O.)
- NORMALLY CLOSED (N.C.)
- NORMALLY OPEN CONTACT WITH TIME DELAY CLOSING (ON–DELAY)
- INSTANT OPEN–TIME DELAY CLOSED CONTACT (OFF DELAY)
- NORMALLY CLOSED CONTACT WITH TIME DELAY OPENING (ON–DELAY)
- INSTANT CLOSE–TIME DELAY OPEN CONTACT (OFF DELAY)
- (R) — INDICATING LIGHT–PUSH TO TEST (R–RED, G–GREEN, A–AMBER, BLUE, W–WHITE)
- H O A — 3–POSITION SELECTOR SWITCH (SHOWN IN "H" POS.)
- NORMALLY OPEN PUSHBUTTON–MOMENTARY CONTACT
- NORMALLY CLOSED PUSHBUTTON–MOMENTARY CONTACT
- DOUBLE CIRCUIT PUSHBUTTON WITH SPRING RETURN TO NORMAL
- TRANSFORMER
- OL — OVERLOAD RELAY CONTACT
- THERMAL OVERLOAD ELEMENT (OL)
- ON–OFF SWITCH
- (G) — GROUND BUS
- (N) — NEUTRAL BUS (INSULATED)
- SINGLE–POLE CIRCUIT BREAKER

	NORMALLY OPEN N.O.	NORMALLY OPEN N.C.
LIMIT SWITCH		
FLOAT SWITCH		
PRESSURE SWITCH		
FLOW SWITCH		
TEMPERATURE		

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
- G — 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
- J — 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
- COIL — TD – TIME DELAY RELAY; CR – CONTROL RELAY; ETI – TIMEMETER; M – MOTOR STARTER
- (R) — 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
- (G) — GROUND BUS
- (N) — NEUTRAL BUS (INSULATED)
- FUSE
- TD — "ON DELAY" CONTACT
- I. C. — 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.

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PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL SYMBOLS & ABBREVIATIONS

SHEET E-1

GENERAL SYMBOLS

	START–STOP PUSHBUTTON
ON/OFF/L	ON–OFF MAINTAINED CONTACT PUSHBUTTON WITH LOCK ATTACHMENT
S/L	INDICATING LIGHT AND START–STOP PUSHBUTTON WITH LOCK ATTACHMENT ON STOP
RESUME STOP/L	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.)
L	ON–OFF SWITCH WITH LOCK ATTACHMENT ON OFF POSITION
FL	FLOW SWITCH
LS	LIMIT SWITCH
P	PRESSURE SWITCH
S	SOLENOID OPERATED VALVE
T	TEMPERATURE SWITCH
F	FLOAT SWITCH
L	LEVEL TRANSMITTER (PRESSURE ANALOG TYPE)
LC	LEVEL TRANSMITTER (FLOAT TYPE)
T	TEMPERATURE TRANSMITTER
FT	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

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
2. ALL POWER CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. W/XHHW–2 INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED W/ NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
5. FIELD VERIFY ALL MECHANICAL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
6. PLANS ARE DESIGNED IN ACCORDANCE WITH THE 7TH EDITION 2020 OF THE FLORIDA BUILDING CODE AND THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
7. ALL THREADED CONNECTIONS SHALL BE COATED W/ ALUMA–SHIELD ANTI–SEIZE COMPOUND MANUFACTURED BY THOMAS AND BETTS (T & B) OR EQUAL.
8. 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.
9. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'–0" INTERVALS.
10. ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT W/ POWER CONDUCTORS.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNED IN THE DRAWINGS.
12. NEATLY COIL ALL SPARE CONDUCTORS & TAPE W/ VINYL ELECTRICAL TAPE (SCOTCH 33+)
13. PROVIDE A MINIMUM OF 3'–6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE W/ ARTICLE 110 OF THE NEC.
14. ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316–STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
15. 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).
16. 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.
17. 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.
18. ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, FLOOR(S) BELOW GRADE, OR WASHDOWN AREAS.
19. A 316–STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316–STAINLESS STEEL MOUNTING HARDWARE.
20. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
21. 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.
22. 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.
23. THE WET WELL CLASSIFICATION IS CLASS 1, DIVISION 2, GROUP D (HAZARDOUS AREA), NEC CHAPTER 5 IS APPLICABLE FOR INTERFACING WET WELL AND THE CONTROL ENCLOSURE.
24. 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 ELECTRICAL INSPECTORS, AS APPLICABLE.
25. 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 STAINLESS STEEL AUTOMATIC TRANSFER SWITCH MUST BE LABELED "SUITABLE FOR USE AS SERVICE EQUIPMENT."
26. 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.
27. ALL COMPONENTS TO BE MOUNTED ON PANEL USING TAPPED HOLES.
28. ALL CONTROL WIRING SHALL BE STRANDED XHHW–2 COPPER, MINIMUM AWG #14. INSTALL FERRULES FOR ALL WIRE TERMINATIONS SMALLER THAN #8 AWG.
29. ALARM FLOAT SWITCH WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
30. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "*" TO BE DETERMINED AFTER EQUIPMENT SELECTION.
31. ALL MECHANICAL CONNECTORS SHALL BE TORQUED PER NEC, UL OR MANUFACTURER'S SPECIFICATIONS.
32. INSTALL LAMINATED SCHEMATIC, LAMINATED DATA SHEET AND LAMINATED SOFT STARTER SETUP PARAMETERS ON BACK FACE OF THE DOOR INSIDE THE ENCLOSURE.
33. ENSURE THAT LINE CONNECTIONS TO METER SOCKET PROVIDE CORRECT MOTOR ROTATION.
34. 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.
35. ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.
36. 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 CONTRACTOR SHALL COORDINATE HIS EFFORTS WITH STAR CONTROLS, AUTOMATED CONTROLS, CURRY CONTROLS, ROCHA CONTROLS, OR CAYZO CONSULTING INC. TO ENSURE SYSTEM COMPATIBILITY.
37. 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.
38. 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.
39. 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.
40. PROVIDE FINGER–SAFE POWER DISTRIBUTION BLOCKS.
41. 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.
42. 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.
43. 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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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

GENERAL NOTES AND SYMBOLS

SHEET
E-2

PRESCOTT PS ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3Ø, 4W

LOAD	CONNECTED	DEMAND	APPROX. PHASE CURRENTS L1	L2	L3
PUMP #1	90.62 KVA	90.62 KVA	109 A	109 A	109 A
PUMP #2	90.62 KVA	90.62 KVA	109 A	109 A	109 A
PUMP #3	90.62 KVA	90.62 KVA	109 A	109 A	109 A
MINI POWER ZONE LP	15 KVA	8.98 KVA	31.25 A	0 A	31.25 A
TOTAL	286.86 KVA	280.84 KVA	358.25 A	327 A	358.25 A

SERVICE ENTRANCE MINIMUM: 358.25 + (.25)(109) = 385.50 AMPS

PRESCOTT PS PUMP MOTOR DATA

MAKE: FLYGT

MODEL: NP 3301 185 MT

HP: 85 HP

460V, 3–PHASE, 109 FLA

TOTAL PUMP LOAD: 327 AMPS, 271.9 KVA

PRESCOTT PS SHORT CIRCUIT CALCULATIONS

UTILITY SERVICE: 480/277 VOLT, 3 PHASE
SERVICE ADDRESS: PRESCOTT ST AND WEST SHORE BLVD
METER NUMBER: 1000776203 (NEW METER REQUIRED)
TECO CONTACT: GILBERT NIEVES 813–610–8547

POINT–TO–POINT SHORT CIRCUIT CALCULATION METHOD
AVAILABLE SHORT CIRCUIT CURRENT AT UTILITY SERVICE: 18,042 AMPS
SERVICE CONDUCTOR LENGTH: 100 FEET, PVC RACEWAY
SERVICE CONDUCTORS: #500, XHHW–2 COPPER
PHASE CONDUCTOR CONSTANT: 26,706
SHORT CIRCUIT CURRENT AVAILABLE AT THE LINE SIDE OF THE AUTOMATIC TRANSFER SWITCH: 14,027 AMPS

$$\left[\frac{1}{1+\left[\frac{(1.732)(100)(18{,}042)}{(26{,}706)(480)}\right]}\right] * 18{,}042 = 14{,}027$$

SCOPE OF WORK:

1. EXISTING AND NEW SERVICE VOLTAGE FOR THE FACILITY:
   –PRESCOTT PS EXISTING SERVICE: 240V, 3–PHASE, HIGH LEG
   –PRESCOTT PS NEW SERVICE: 480/277V, 3–PHASE, 4–WIRE
2. REMOVE THE EXISTING METER SOCKET, LIGHTNING ARRESTOR, GROUNDING, CONTROL PANEL, CONCRETE PEDESTAL, AND ALL ASSOCIATED CONDUIT AND CONDUCTORS, AS SHOWN ON PLANS. 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 NEW MAIN DISCONNECT THROUGH NEW UTILITY METER.
3. CONTRACTOR TO CAREFULLY REMOVE THE EXISTING DCR SCADA RTU CABINET MOUNTED ON THE EXISTING SCADA ANTENNA. DELIVER THIS RTU PACKAGE TO THE CITY FOR MAINTENANCE INVENTORY.
4. 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.
5. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW ELECTRICAL METER SOCKET, LIGHTNING ARRESTOR AND GROUNDING, AS SHOWN ON PLANS.
6. CONTRACTOR TO PREPARE THE SITE FOR THE INSTALLATION OF THE PROPOSED CONTROL EQUIPMENT.
7. CONTRACTOR SHALL PROVIDE AND INSTALL TRIPLEX 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
8. CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X 316 SS WET WELL ISOLATION JUNCTION BOX FOR PUMP MOTOR CONNECTIONS.
9. CONTRACTOR SHALL PROVIDE AND INSTALL TRIPLEX MOTOR CONTROL PANEL. THE MOTOR CONTROL PANEL SHALL CONTAIN CIRCUIT BREAKERS AND MOTOR STARTERS, AS SHOWN ON PLANS AND DETAILED IN SPECIFICATIONS.
10. CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X 316 SS WET WELL ISOLATION BOX FOR INSTRUMENTATION AND CONTROL CONNECTIONS.
11. CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X, SERVICE ENTRANCE RATED, AUTOMATIC TRANSFER SWITCH AND STANDBY GENERATOR, AS SHOWN ON PLANS.
12. CONTRACTOR SHALL PROVIDE AND INSTALL NEW SCADA ANTENNA MAST AS SHOWN ON THE PLANS.
13. CONTRACTOR SHALL PROVIDE AND INSTALL RADIO ANTENNA AND WET WELL LEVEL SENSING DEVICES
14. CONTRACTOR SHALL PROVIDE AND INSTALL AREA LIGHT, AS SHOWN ON PLANS.
15. 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.
16. CONTRACTOR SHALL PROVIDE AND INSTALL PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
17. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS, AS SHOWN, SPECIFIED AND REQUIRED.
18. 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.
19. 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.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TEMPORARY POWER TO THE SITE. CONTRACTOR SHALL ALSO PROVIDE TEMPORARY POWER TO THE ODOR CONTROL SYSTEM DURING CONSTRUCTION.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOTE WASTEWATER LEVEL MONITORING, ALARM, AND TROUBLESHOOTER DISPATCH DURING CONSTRUCTION.

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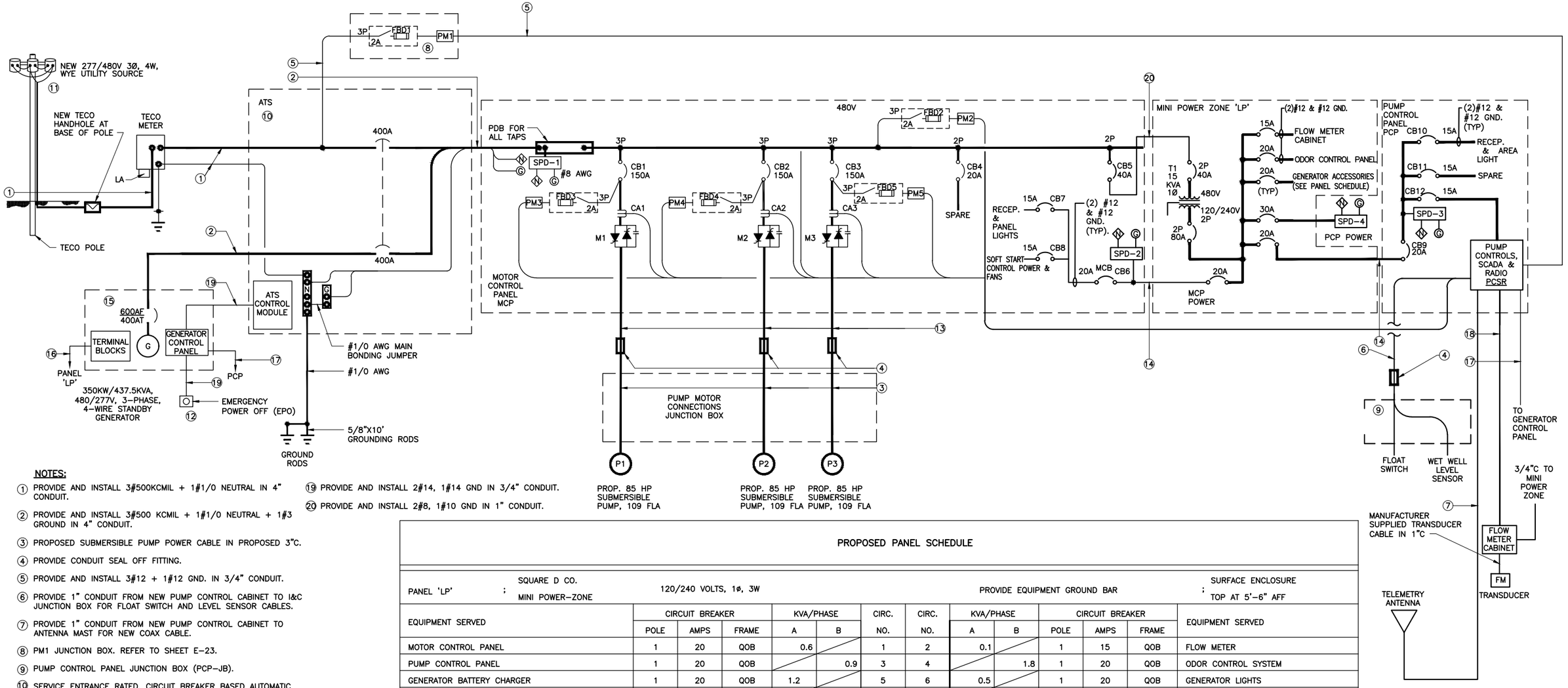
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

SCOPE OF WORK

SHEET
E-3



NOTES:

1. PROVIDE AND INSTALL 3#500KCMIL + 1#1/0 NEUTRAL IN 4" CONDUIT.
2. PROVIDE AND INSTALL 3#500 KCMIL + 1#1/0 NEUTRAL + 1#3 GROUND IN 4" CONDUIT.
3. PROPOSED SUBMERSIBLE PUMP POWER CABLE IN PROPOSED 3"C.
4. PROVIDE CONDUIT SEAL OFF FITTING.
5. PROVIDE AND INSTALL 3#12 + 1#12 GND. IN 3/4" CONDUIT.
6. PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO I&C JUNCTION BOX FOR FLOAT SWITCH AND LEVEL SENSOR CABLES.
7. PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO ANTENNA MAST FOR NEW COAX CABLE.
8. PM1 JUNCTION BOX. REFER TO SHEET E-23.
9. PUMP CONTROL PANEL JUNCTION BOX (PCP-JB).
10. SERVICE ENTRANCE RATED, CIRCUIT BREAKER BASED AUTOMATIC TRANSFER SWITCH.
11. AVAILABLE FAULT CURRENT AT THE SECONDARY LUGS FOR THE POLE-MOUNTED TRANSFORMER BANK IS SHOWN ON THE SCOPE OF WORK. THE INTERRUPTING RATING, IR, OF THE AUTOMATIC TRANSFER SWITCH IS 65KA RMS.
12. PROVIDE PLACARD: GENERATOR EMERGENCY POWER OFF.
13. PROVIDE AND INSTALL 3#1/0 + 1#6 GND + 2#12 (LEAK/TEMP) IN 2" CONDUIT.
14. PROVIDE AND INSTALL 2#12, 1#12 GND IN 3/4" CONDUIT.
15. 480 VOLT, 350kW STANDBY GENERATOR IN LEVEL 2 SOUND ATTENUATED ENCLOSURE WITH 72 HOUR SUB-BASE FUEL TANK. GENERATOR CIRCUIT BREAKER SHALL HAVE ADJUSTABLE TRIP BETWEEN 400 AMP TO 600 AMP. SET TRIP TO 400 AMP.
16. PROVIDE AND INSTALL 2#10 (BATTERY CHANGER), 2#10 (BLOCK HEATER), 2#10 (ALTERNATOR HEATER), 2#12 (GENERATOR LIGHTS), 1#12 GND IN 1-1/2" CONDUIT.
17. PROVIDE AND INSTALL 10#14 AWG + 1#14 GND IN 1" CONDUIT.
18. PROVIDE AND INSTALL 4-20mA SIGNAL CABLE (BELDEN 8719) IN 1" CONDUIT.
19. PROVIDE AND INSTALL 2#14, 1#14 GND IN 3/4" CONDUIT.
20. PROVIDE AND INSTALL 2#8, 1#10 GND IN 1" CONDUIT.

PROPOSED PANEL SCHEDULE

PANEL 'LP' ; SQUARE D CO. MINI POWER-ZONE — 120/240 VOLTS, 1Ø, 3W — PROVIDE EQUIPMENT GROUND BAR — ; SURFACE ENCLOSURE TOP AT 5'-6" AFF

EQUIPMENT SERVED	CIRCUIT BREAKER POLE	AMPS	FRAME	KVA/PHASE A	B	CIRC. NO.	CIRC. NO.	KVA/PHASE A	B	CIRCUIT BREAKER POLE	AMPS	FRAME	EQUIPMENT SERVED
MOTOR CONTROL PANEL	1	20	QOB	0.6		1	2	0.1		1	15	QOB	FLOW METER
PUMP CONTROL PANEL	1	20	QOB		0.9	3	4		1.8	1	20	QOB	ODOR CONTROL SYSTEM
GENERATOR BATTERY CHARGER	1	20	QOB	1.2		5	6	0.5		1	20	QOB	GENERATOR LIGHTS
GENERATOR ALT HEATER	1	20	QOB		1.0	7	8		.	--	--	--	SPACE
GENERATOR BLOCK HEATER	2	20	QOB	1.44		9	10	.		--	--	--	SPACE
--	--	--	--		1.44	11	12		.	--	--	--	SPACE
SPACE	--	--	--	.		13	14	.		--	--	--	SPACE
SPACE	--	--	--		.	15	16		.	--	--	--	SPACE
SPACE	--	--	--	.		17	18	.		--	--	--	SPACE
SPACE	--	--	--		.	19	20		.	--	--	--	SPACE
SPACE	--	--	--	.		21	22	.		2	30	QOB	SURGE PROTECTIVE DEVICE
SPACE	--	--	--		.	23	24		.	--	--	--	SPACE
			SUB-TOTAL KVA	3.24	3.34			0.6	1.8				

TOTAL CONNECTED LOAD = 8.98 KVA

TOTAL DEMAND LOAD = 8.98 KVA

SINGLE LINE DIAGRAM

SCALE: N.T.S.

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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

SINGLE LINE DIAGRAM

SHEET E-4

EXISTING TECO POWER POLE TO REMAIN

N

EXISTING POWER POLE TO BE REMOVED

① EXISTING SCADA ANTENNA

EXISTING ELECTRICAL ② PANELS TO BE REMOVED

EXISTING ODOR CONTROL SYSTEM TO BE RELOCATED

EXISTING TECO METER

② EXISTING DIESEL PUMP & CONCRETE PAD AND CONTROLS TO BE REMOVED

PLAN VIEW

0 5' 10'

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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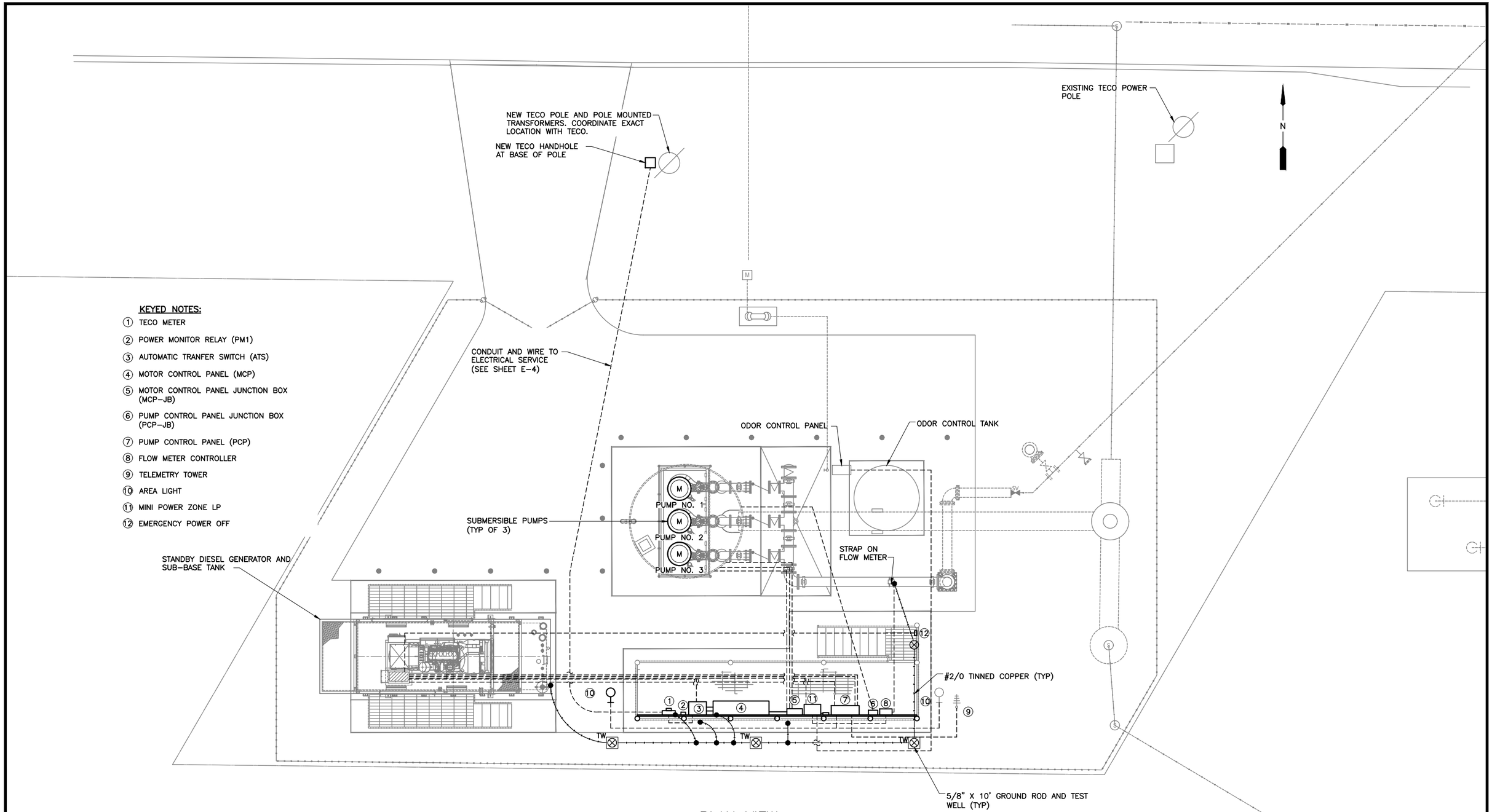
PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL DEMOLITION PLAN

SHEET
E-5



KEYED NOTES:

1. TECO METER
2. POWER MONITOR RELAY (PM1)
3. AUTOMATIC TRANFER SWITCH (ATS)
4. MOTOR CONTROL PANEL (MCP)
5. MOTOR CONTROL PANEL JUNCTION BOX (MCP-JB)
6. PUMP CONTROL PANEL JUNCTION BOX (PCP-JB)
7. PUMP CONTROL PANEL (PCP)
8. FLOW METER CONTROLLER
9. TELEMETRY TOWER
10. AREA LIGHT
11. MINI POWER ZONE LP
12. EMERGENCY POWER OFF

PLAN VIEW

0 5' 10'

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CITY of TAMPA
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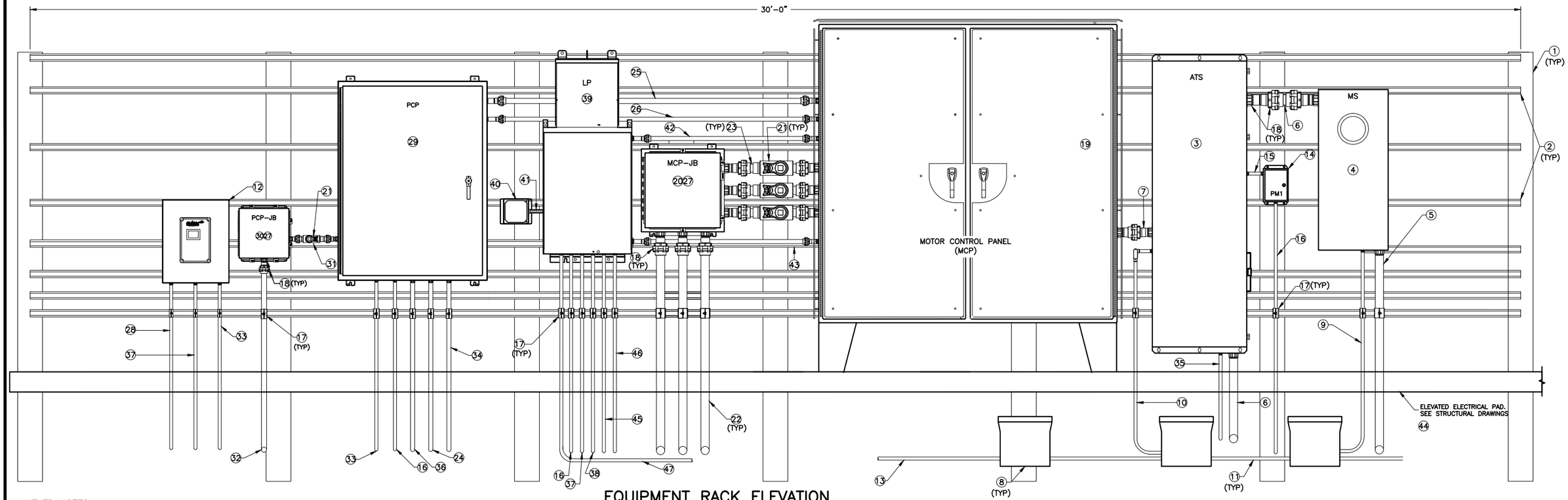
PRESCOTT PUMP STATION REHABILITATION

PROPOSED ELECTRICAL SITE PLAN

SHEET E-6



EQUIPMENT RACK ELEVATION

SCALE: 1"=1'-0"

12" 6 0 1'

KEYED NOTES:

1. ELECTRICAL PANELS ARE INSTALLED ON AN ELEVATED ALUMINUM PLATFORM. SEE STRUCTURAL SHEETS.
2. PROVIDE AND INSTALL 1-5/8" x 1-5/8" 316 STAINLESS STEEL UNISTRUT WITH 316 STAINLESS ALUMINUM HARDWARE. NOTE: INSTALL ALL BOLTS FOR UNISTRUT COMPLETELY THROUGH STEEL POSTS.
3. EATON AUTOMATIC TRANSFER SWITCH. REFER TO PARTS SCHEDULE ON SHEET E-18.
4. PROVIDE AND INSTALL TECO METER SOCKET IN ALUMINUM ENCLOSURE. ELEVATION TO THE CENTER OF THE METER SHALL NOT EXCEED 5'-0" PER TECO STANDARDS. PROVIDE SURGE PROTECTION DEVICE PER TECO STANDARDS.
5. PROVIDE AND INSTALL 3#500 KCMIL XHHW-2 CU + 1#1/0 XHHW-2 CU NEUTRAL IN 4" CONDUIT. FROM TECO POLE MOUNTED TRANSFORMERS TO METER. REFER TO SHEET E-6 FOR CONTINUATION.
6. PROVIDE AND INSTALL 3#500 KCMIL XHHW-2 CU + 1#1/0 XHHW-2 CU NEUTRAL IN 4" CONDUIT FROM METER TO SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH.
7. PROVIDE AND INSTALL 3#500 KCMIL XHHW-2 CU + 1#1/0 XHHW-2 CU NEUTRAL + 1#3 XHHW-2 CU GND IN 4" CONDUIT FROM AUTOMATIC TRANSFER SWITCH TO MOTOR CONTROL PANEL.
8. PROVIDE AND INSTALL GROUND ROD TEST WELL, OLDCASTLE PRECAST ENCLOSURE SOLUTIONS #F08 BOX WITH #F08C CAST IRON LID MARKED "GROUND". MINIMUM SPACING BETWEEN GROUND ROD TEST WELLS/GROUND RODS SHALL BE 6'-0". PROVIDE AND INSTALL APPROVED GROUNDING ROD AND ATTACH BARE COPPER GROUND CONDUCTOR (AWG #4 MINIMUM) UTILIZING APPROVED GROUND CLAMPS. REFER TO SHEET E-21 FOR GROUND TEST WELL DETAIL.
9. PROVIDE AND INSTALL #1/0 TINNED COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT FROM METER TO GROUND ROD TEST WELL. CONFIRM CONDUCTOR SIZE WITH TECO.
10. PROVIDE AND INSTALL #1/0 TINNED COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 80 PVC CONDUIT FROM AUTOMATIC TRANSFER SWITCH TO GROUND ROD TEST WELL.
11. PROVIDE AND INSTALL #2/0 TINNED COPPER GROUNDING ELECTRODE CONDUCTOR BETWEEN GROUND ROD TEST WELLS.
12. FLOW TRANSMITTER AND ENCLOSURE. REFER TO SHEETS E-24 AND E-25.
13. PROVIDE AND INSTALL #4 BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT FROM ANTENNA POLE TO GROUND ROD TEST WELL. REFER ALSO TO ANTENNA POLE DETAIL ON SHEET E-22
14. PROVIDE AND INSTALL A 3ø, POWER MONITOR RELAY 'PM1' JUNCTION BOX WITH 480 VAC LINE INPUT – ALARM ON PHASE LOSS, UNDERVOLTAGE, OR WRONG ROTATION. PANEL MOUNT, ATC DIVERSIFIED MODEL SUA-440-ASA, FUSE BOX DISCONNECT (FBD1) – ALLEN BRADLEY 1492-FB3630-L WITH BUSSMAN KTK-R-2 FUSES IN NEMA 4X STAINLESS STEEL 8" X 6" X 6" ENCLOSURE WITH CONTINUOUS HINGE – HAMMOND MANUFACTURING EJ863S16. REFER TO DETAIL ON SHEET E-23.
15. PROVIDE AND INSTALL (3) #12 XHHW-2 CU + (1) #12 XHHW-2 CU GND. IN 3/4"C.
16. PROVIDE AND INSTALL (2) #12 XHHW-2 CU + (1) #12 XHHW-2 CU GND. IN 3/4"C. FROM PM1 TO PUMP CONTROL PANEL AND FROM MINI POWER ZONE LP TO PUMP CONTROL PANEL.
17. PROVIDE AND INSTALL ALUMINUM CONDUIT STRAPS (TYPICAL).
18. PROVIDE AND INSTALL WATER-TIGHT / DUST-TIGHT MYERS HUB AND UNION (TYP.).
19. PROVIDE AND INSTALL MOTOR CONTROL PANEL. REFER TO DETAIL ON SHEETS E-8 AND E-9.
20. MOTOR CONTROL PANEL JUNCTION BOX (MCP-JB) USED AS A DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 20"X20"X6" NEMA 4X, STAINLESS STEEL JUNCTION BOX WITH HINGED DOOR, HAMMOND #1418N4SSD6. INSTALL A STAINLESS STEEL LOUVER PLATE KIT (4.75"X 4.5") ON SIDE OF BOX TO PROVIDE NATURAL ASPIRATION, WIEGMANN #WAVK0304SSA. TERMINATIONS SHALL BE MADE USING FINGER-SAFE POWER DISTRIBUTION BLOCKS. SEE SHEET E-20 FOR J.B. DETAILS.
21. PROVIDE AND INSTALL CROUSE-HINDS EYS TYPE SEALS W/CHICO COMPOUNDS.
22. PROVIDE AND INSTALL NEW 3" CONDUITS WITH NEW MANUFACTURER SUPPLIED SUBMERSIBLE PUMP POWER CABLES TO WET WELL. INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL.
23. PROVIDE AND INSTALL (3)#1/0 XHHW-2 CU + (1) #6 XHHW-2 CU GND + (2) #12 XHHW-2 CU (LEAK/TEMP) IN 2" CONDUIT FOR SUBMERSIBLE PUMP POWER.
24. PROVIDE AND INSTALL 1" CONDUIT FOR ANTENNA COAXIAL CABLE. REFER TO SHEET E-6 FOR CONTINUATION.
25. PROVIDE AND INSTALL (40) #12 XHHW-2 CU + (1) #12 XHHW-2 CU GND. IN 1-1/4" C. FOR 120VAC CONTROL SIGNALS (COUNT INCLUDED SPARES). REFER TO MCP TO PCP INTERCONNECTIONS WIRING DIAGRAM ON SHEET E-16. PROVIDE CONDUIT L.B. AS REQUIRED.
26. PROVIDE AND INSTALL (19) #14 XHHW-2 CU + (1) #14 XHHW-2 CU GND. IN 1" C. FOR 24V DC CONTROL SIGNALS (COUNT INCLUDES SPARES). REFER TO MCP TO PCP INTERCONNECTION WIRING DIAGRAM ON SHEET E-16. PROVIDE CONDUIT L.B. AS REQUIRED.
27. PROVIDE DUCT SEALING COMPOUND IN ALL CONDUITS EXTENDING TO THE WET WELL.
28. PROVIDE AND INSTALL 1" CONDUIT WITH TRANSDUCER SIGNAL CABLE PROVIDED BY FLOW METER MANUFACTURER.
29. PROVIDE AND INSTALL PUMP CONTROL PANEL. REFER TO DETAIL ON SHEET E-12.
30. PUMP CONTROL PANEL JUNCTION BOX (PCP-JB)-USED AS DEMARCATION BOX TO PROVIDE ISOLATION BETWEEN THE WET WELL AND PUMP CONTROLS. PROVIDE AND INSTALL A 12"X12"X6" NEMA 4X, STAINLESS STEEL 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-20 FOR JB DETAILS.
31. 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.
32. MANUFACTURER SUPPLIED CABLES FOR FLOAT SWITCH AND WET WELL LEVEL TRANSMITTER INSTALL IN 2" CONDUIT TO WET WELL FROM JUNCTION BOX. INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL.
33. PROVIDE AND INSTALL NEW FLOW METER TRANSMITTER 4-20MA SIGNAL CABLE (BELDEN 8719) IN 3/4"C. BETWEEN NEW REMOTE FLOW TRANSMITTER CABINET AND PCP. REFER TO SHEET E-6 FOR CONTINUATION.
34. PROVIDE AND INSTALL 10#14 XHHW-2 CU + 1#12 XHHW-2 CU BETWEEN GENERATOR CONTROL PANEL AND PUMP CONTROL PANEL.
35. PROVIDE AND INSTALL 2#14 XHHW-2 CU + 1#14 XHHW-2 CU GND IN 3/4" CONDUIT TO GENERATOR CONTROL PANEL.
36. PROVIDE AND INSTALL 2#12 XHHW-2 CU + 1#12 XHHW-2 CU GND IN 3/4" CONDUIT TO AREA LIGHT.
37. PROVIDE AND INSTALL (2)#12 XHHW-2 CU + 1#12 XHHW-2 CU GND IN 3/4" CONDUIT FROM MINI POWER ZONE LP TO FLOW METER CABINET.
38. PROVIDE AND INSTALL 2#12 XHHW-2 CU + 1#12 XHHW-2 CU GND IN 3/4" CONDUIT FOR 120V ODOR CONTROL CIRCUIT.
39. PROVIDE AND INSTALL MINI POWER ZONE 'LP' IN NEMA 3R STAINLESS STEEL ENCLOSURE. REFER TO PARTS SCHEDULE ON SHEET-19.
40. PROVIDE AND INSTALL SURGE PROTECTION DEVICE (SPD) UNIT, 120/240V, 1ϕ, TYPE 1, ASCO SERIES 400, IN NEMA 4X ENCLOSURE.
41. PROVIDE AND INSTALL (3) #8 THWN + (1) #8 THWN CU NEUTRAL + (1) #10THWN CU GND 3/4" SEAL-TITE CONDUIT TO SPD CIRCUIT BREAKER.
42. PROVIDE AND INSTALL (2) #8 XHHW-2 CU + (1) #10 XHHW-2 CU GND IN 3/4"C. FOR MINI POWER-ZONE 480V FEEDER FROM MOTOR CONTROL PANEL.
43. PROVIDE AND INSTALL (2) #12 XHHW-2 CU + (1) #12 XHHW-2 CU GND IN 3/4"C. FOR MOTOR CONTROL PANEL (MCP) 120V CONTROL CIRCUIT.
44. EQUIPMENT-LINE UP IS FOR INFORMATIONAL PURPOSES: CONTRACTOR SHALL VERIFY IF CONDUIT CAN BE INSTALLED AS SHOWN. MAKE MODIFICATIONS TO INSTALLATION AS NEEDED.
45. PROVIDE AND INSTALL 2#10 (BATTERY CHARGER), 2#10 (BLOCK HEATER), 2#10 (ALTERNATOR HEATER), 2#12 (GENERATOR LIGHTS), 1#12 GNDIN 1-1/2" CONDUIT.
46. PROVIDE AND INSTALL 2#12 XHHW-2 CU + 1#12 XHHW-2 CU GND IN 3/4" CONDUIT FROM MINI POWER ZONE TO MOTOR CONTROL PANEL.
47. PROVIDE AND INSTALL #4 BARE COPPER GROUNDING ELECTRODE IN 3/4" SCHEDULE 80 PVC CONDUIT FROM MINI POWER ZONE TO GROUND ROD TEST WELL.

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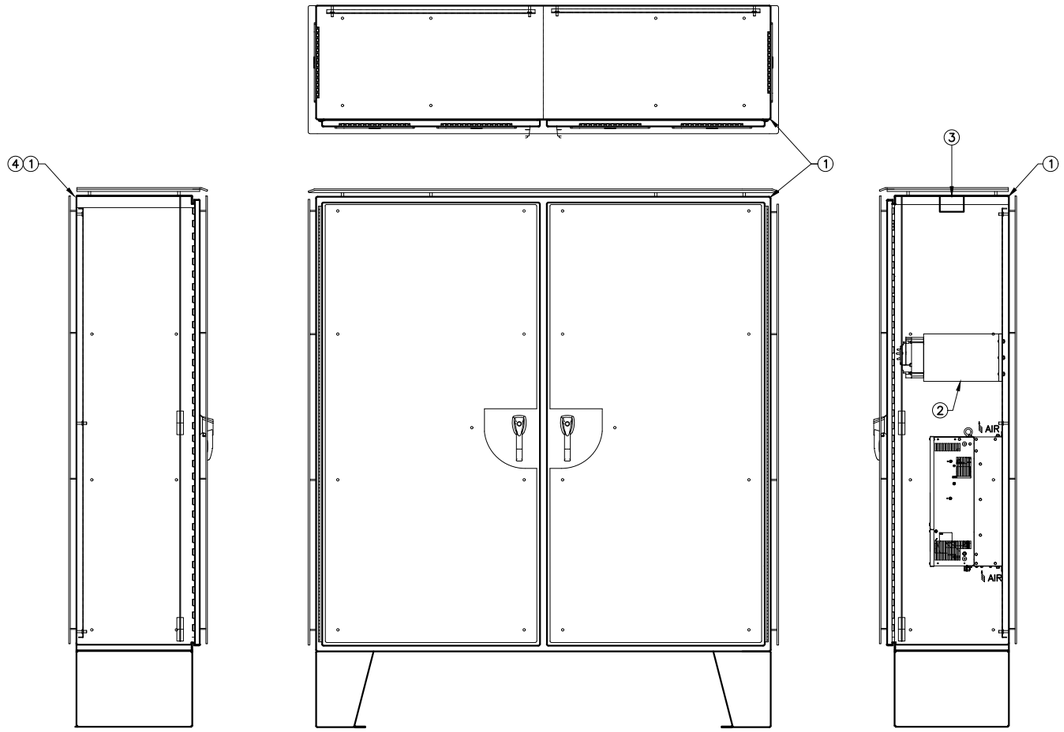
DRN: SDV
CKD: WCN
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

PUMP STATION RACK ELEVATION

SHEET
E-7



MOTOR CONTROL PANEL EXTERIOR ELEVATIONS

SCALE: N.T.S.

KEYED NOTES:

1. MOTOR CONTROL PANEL ENCLOSURE 'MCP'. 48"H X 48"W X 12"D, TWO-DOOR, NEMA 4X, 304 STAINLESS STEEL, 3-PT LATCHES. POWDER COAT WHITE. FINAL DIMENSIONS TO BE COORDINATED WITH SOFT STARTERS LAYOUT.
2. PROVIDE AND INSTALL STAND-OFF BRACKETS AS REQUIRED TO EXTEND CIRCUIT BREAKERS TO INNER DOOR.
3. PROVIDE LED FIXTURE INSIDE ENCLOSURE INNER DOOR WITH OPEN DOORS SWITCH CONTROL.
4. THE MCP ENCLOSURE SHALL BE SIZED TO COMPLY WITH UL-508A REQUIREMENTS. BEST PRACTICES SHALL BE USED TO AVOID EXCESSIVE OVERSIZING.

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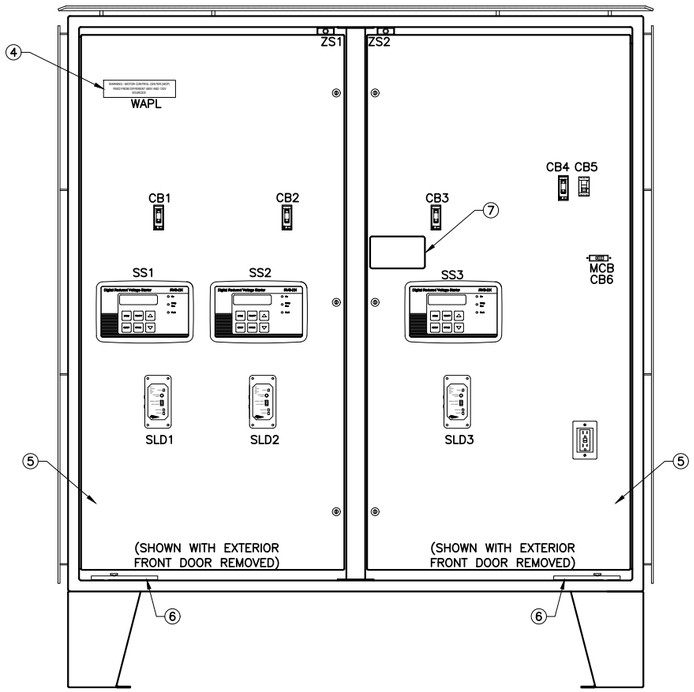
PRESCOTT PUMP STATION REHABILITATION

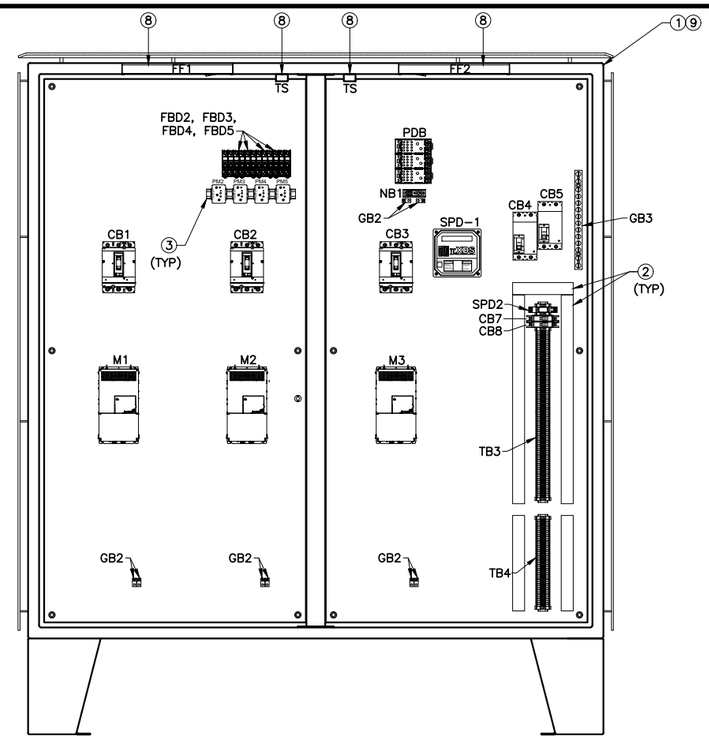
MOTOR CONTROL PANEL EXTERIOR ELEVATION

SHEET
E-8



MOTOR CONTROL PANEL INTERIOR DOOR ELEVATION

SCALE: N.T.S.



MOTOR CONTROL PANEL INTERIOR ELEVATION

SCALE: N.T.S.

KEYED NOTES:

1. MOTOR CONTROL PANEL 'MCP'. 48" X 48 X 12" NEMA 4X SS, POWDER COAT WHITE.
2. PROVIDE AND INSTALL PANDUIT WIRING DUCT. SIZE AS REQUIRED.
3. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
4. PROVIDE AND INSTALL WARNING LABEL. LABEL TO READ: 'WARNING – MOTOR CONTROL CENTER FEED FROM DIFFERENT 480V AND 120V SOURCES'.
5. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR.
6. PROVIDE AND INSTALL DOOR STOP KIT.
7. PROVIDE ARC FLASH LABEL AS PER NEC 110.16.
8. PROVIDE LED FIXTURE INSIDE ENCLOSURE INNER DOOR WITH OPEN DOORS SWITCH CONTROL.
9. THE MCP ENCLOSURE SHALL BE SIZED TO COMPLY WITH UL–508A REQUIREMENTS. BEST PRACTICES SHALL BE USED TO AVOID EXCESSIVE OVERSIZING.

GENERAL NOTES:

1. ALL HINGED SURFACES SHALL BE GROUNDED WITH A #12 COPPER BOND CONDUCTOR (WITH GREEN INSULATION) SECURED TO THE ENCLOSURE OR BACKPANEL. THIS SHALL INCLUDE THE OUTER DOOR AND INNER DOOR.

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	PUMP NO. 3 CIRCUIT BREAKER
CB4	CIRCUIT BREAKER	SPARE
CB5	CIRCUIT BREAKER	MINI POWER ZONE 'LP' FEEDER
CB6/MCB	CIRCUIT BREAKER	CONTROL POWER MAIN CIRCUIT BREAKER
CB7	CIRCUIT BREAKER	RECEPT. & PANEL LIGHTS
CB8	CIRCUIT BREAKER	SOFT START CONTROL POWER
SS1	SOFT START NO. 1 REMOTE KEYPAD	SOFT START NO. 1
SS2	SOFT START NO. 2 REMOTE KEYPAD	SOFT START NO. 2
SS3	SOFT START NO. 3 REMOTE KEYPAD	SOFT START NO. 3
SLD1	SEAL LEAK DETECTOR	PUMP NO. 1 SEAL LEAK DETECTOR
SLD2	SEAL LEAK DETECTOR	PUMP NO. 2 SEAL LEAK DETECTOR
SLD3	SEAL LEAK DETECTOR	PUMP NO. 3 SEAL LEAK DETECTOR
MCB	MOTOR CONTROL PANEL CONTROL POWER MAIN CIRCUIT BREAKER	120V AC CONTROL POWER MAIN CIRCUIT BREAKER (CB6)
WAPL	WARNIING PLACARD	REFER TO NOTE 4 FOR VERBIAGE

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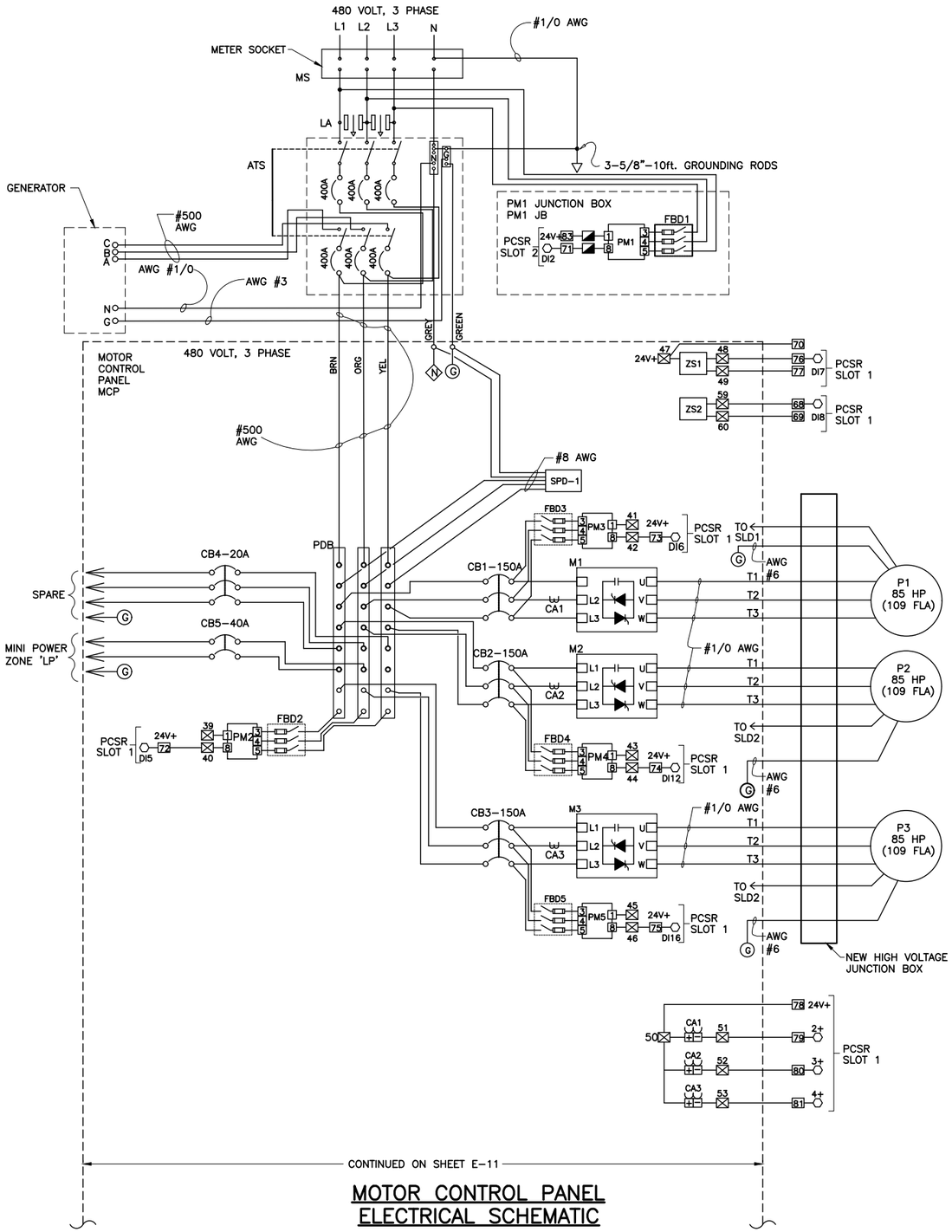
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

MOTOR CONTROL PANEL INTERIOR ELEVATIONS

SHEET
E-9



MOTOR CONTROL PANEL 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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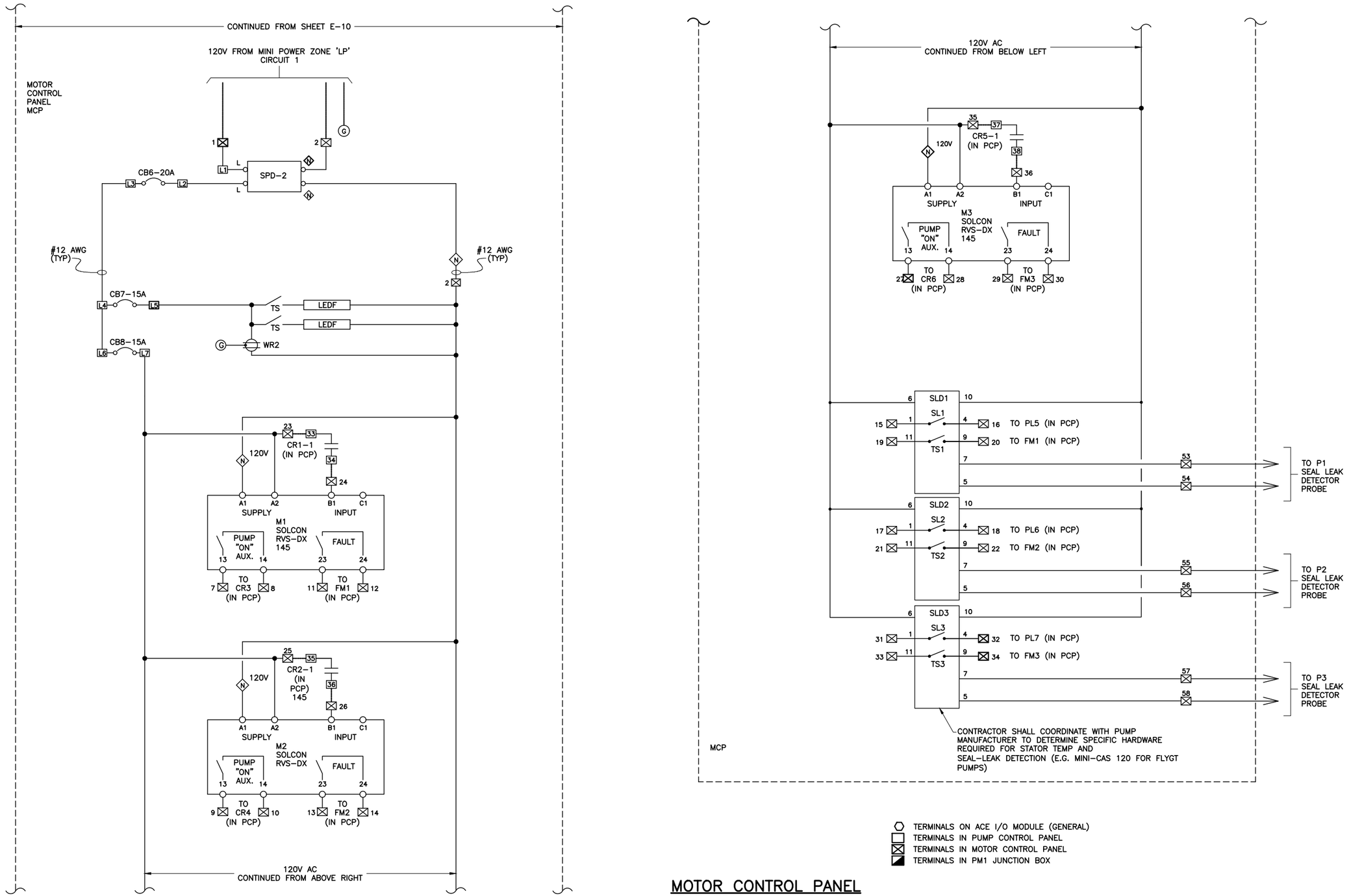
PRESCOTT PUMP STATION REHABILITATION

MOTOR CONTROL PANEL ELECTRICAL SCHEMATIC (I)

SHEET E-10



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

MOTOR CONTROL PANEL ELECTRICAL SCHEMATIC

SCALE: N.T.S.

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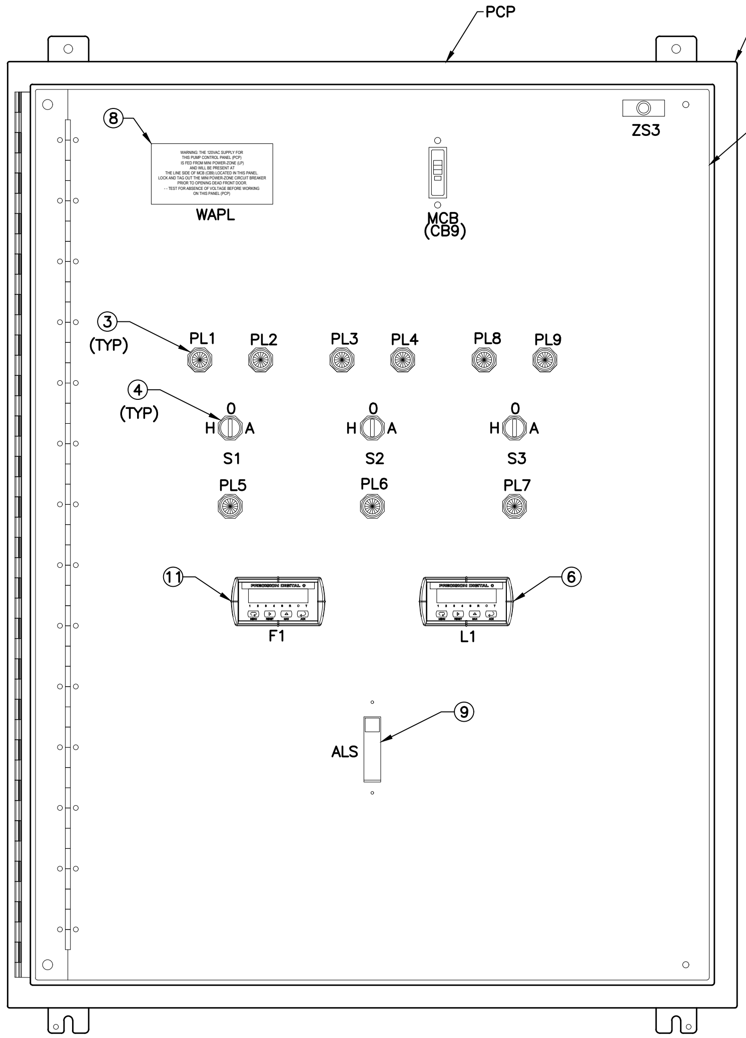
PRESCOTT PUMP STATION REHABILITATION

MOTOR CONTROL PANEL ELECTRICAL SCHEMATIC (2)

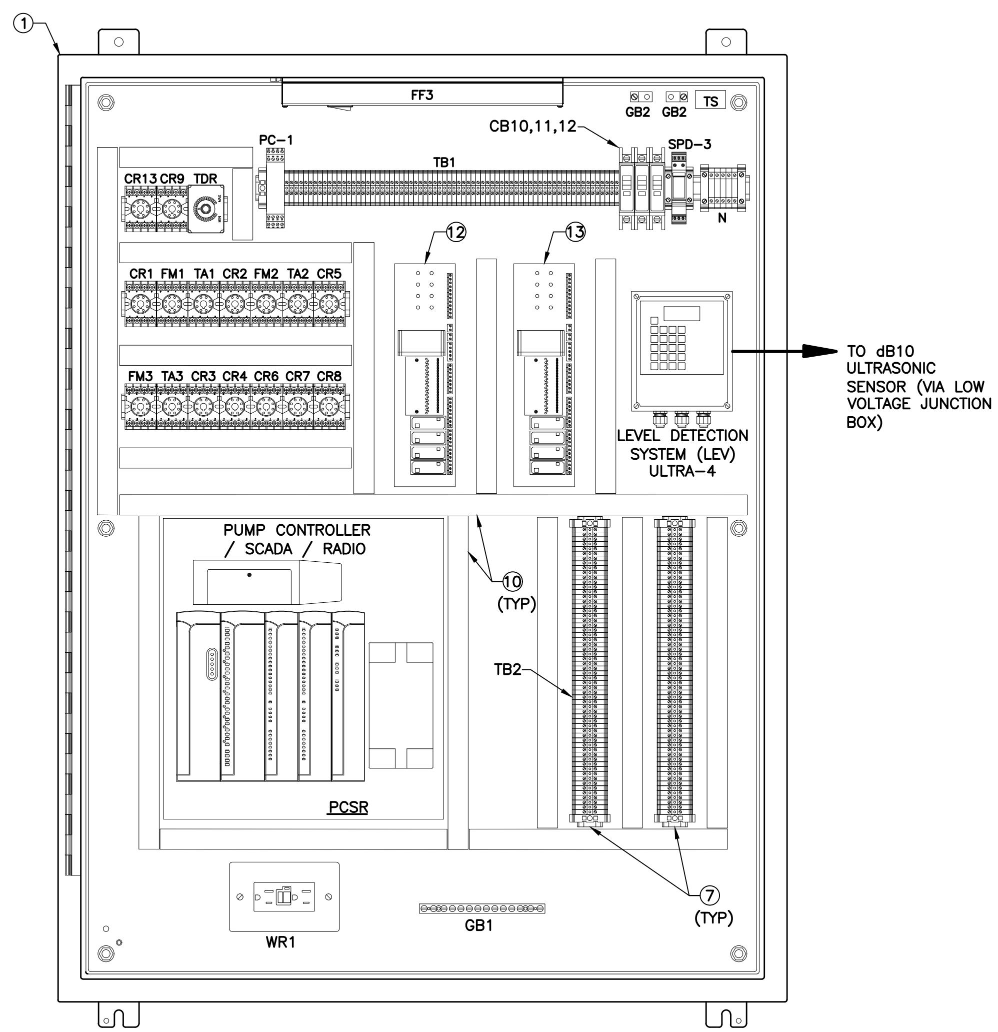
SHEET E-11



PUMP CONTROL PANEL INTERIOR DOOR ELEVATION

SCALE: N.T.S.

NOTE: FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY



PUMP CONTROL PANEL INTERIOR ELEVATION

SCALE: N.T.S.

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
PL1	YELLOW PILOT LIGHT	PUMP NO. 1 ON
PL2	RED ILLUMINATED PUSH BUTTON	PUMP NO. 1 TEMP. ALARM
PL3	YELLOW PILOT LIGHT	PUMP NO. 2 ON
PL4	RED ILLUMINATED PUSH BUTTON	PUMP NO. 2 TEMP. ALARM
PL5	RED PILOT LIGHT	PUMP NO. 1 SEAL LEAK ALARM
PL6	RED PILOT LIGHT	PUMP NO. 2 SEAL LEAK ALARM
PL7	RED PILOT LIGHT	PUMP NO. 3 SEAL LEAK ALARM
PL8	YELLOW PILOT LIGHT	PUMP NO. 3 ON
PL9	RED ILLUMINATED PUSH BUTTON	PUMP NO. 3 TEMP. ALARM
S1	3 POSITION SWITCH	PUMP NO. 1 HAND-OFF-AUTO
S2	3 POSITION SWITCH	PUMP NO. 2 HAND-OFF-AUTO
S3	3 POSITION SWITCH	PUMP NO. 3 HAND-OFF-AUTO
MCB	PUMP CONTROL PANEL MAIN CIRCUIT BREAKER	MAIN CIRCUIT BREAKER (CB9)
L1	DIGITAL PROCESS METER	WET WELL LEVEL
F1	DIGITAL PROCESS METER	FLOW METER
WAPL	WARNIING PLACARD	REFER TO NOTE 8 FOR VERBIAGE

KEYED NOTES:

1. PUMP CONTROL PANEL. 48" X 36 X 12" NEMA 4X SS, PAINTED WHITE.
2. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
3. PROVIDE AND INSTALL NEW PILOT LIGHT. REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.
4. PROVIDE AND INSTALL NEW SELECTOR SWITCH. REFER ALSO TO PARTS SCHEDULE ON SHEET E-18.
5. NOT USED.
6. PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6X3-00 WITH 4-20mA OUTPUT (WET WELL LEVEL). REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.
7. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
8. PROVIDE AND INSTALL WARNING PLACARD WHICH STATES: "WARNING: THE 120VAC SUPPLY FOR THIS PUMP CONTROL PANEL (PCP) IS FED FROM MINI POWER-ZONE 'LP' AND WILL BE PRESENT AT THE LINE SIDE OF MCB (CB9) LOCATED IN THIS PANEL. LOCK AND TAG OUT THE MINI POWER-ZONE CIRCUIT BREAKER PRIOR TO OPENING DEAD FRONT DOOR-- TEST FOR ABSENCE OF VOLTAGE, BEFORE WORKING ON THIS PANEL (PCP)."
9. PROVIDE AND INSTALL NEW SINGLE-POLE 120V, 20A LIGHT SWITCH TO CONTROL AREA LIGHTS. REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.
10. PROVIDE AND INSTALL PANDUIT WIRING DUCT. SIZE AS REQUIRED.
11. PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6X3-00 WITH 4-20mA OUTPUT (FLOW METER). REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.
12. PROVIDE AND INSTALL MIXED I/O AUXILIARY INTERFACE #1. WILKERSON BOARD PART #SIB V245/V453. REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.
13. PROVIDE AND INSTALL MIXED I/O AUXILIARY INTERFACE #2. WILKERSON BOARD PART #SIB V245/V453. REFER ALSO TO PARTS SCHEDULE ON SHEET E-18 AND E-19.

GENERAL NOTES:

1. ALL HINGED SURFACES SHALL BE GROUNDED WITH A #12 COPPER BOND CONDUCTOR (WITH GREEN INSULATION) SECURED TO THE ENCLOSURE OR BACKPANEL. THIS SHALL INCLUDE THE OUTER DOOR AND INNER DOOR.

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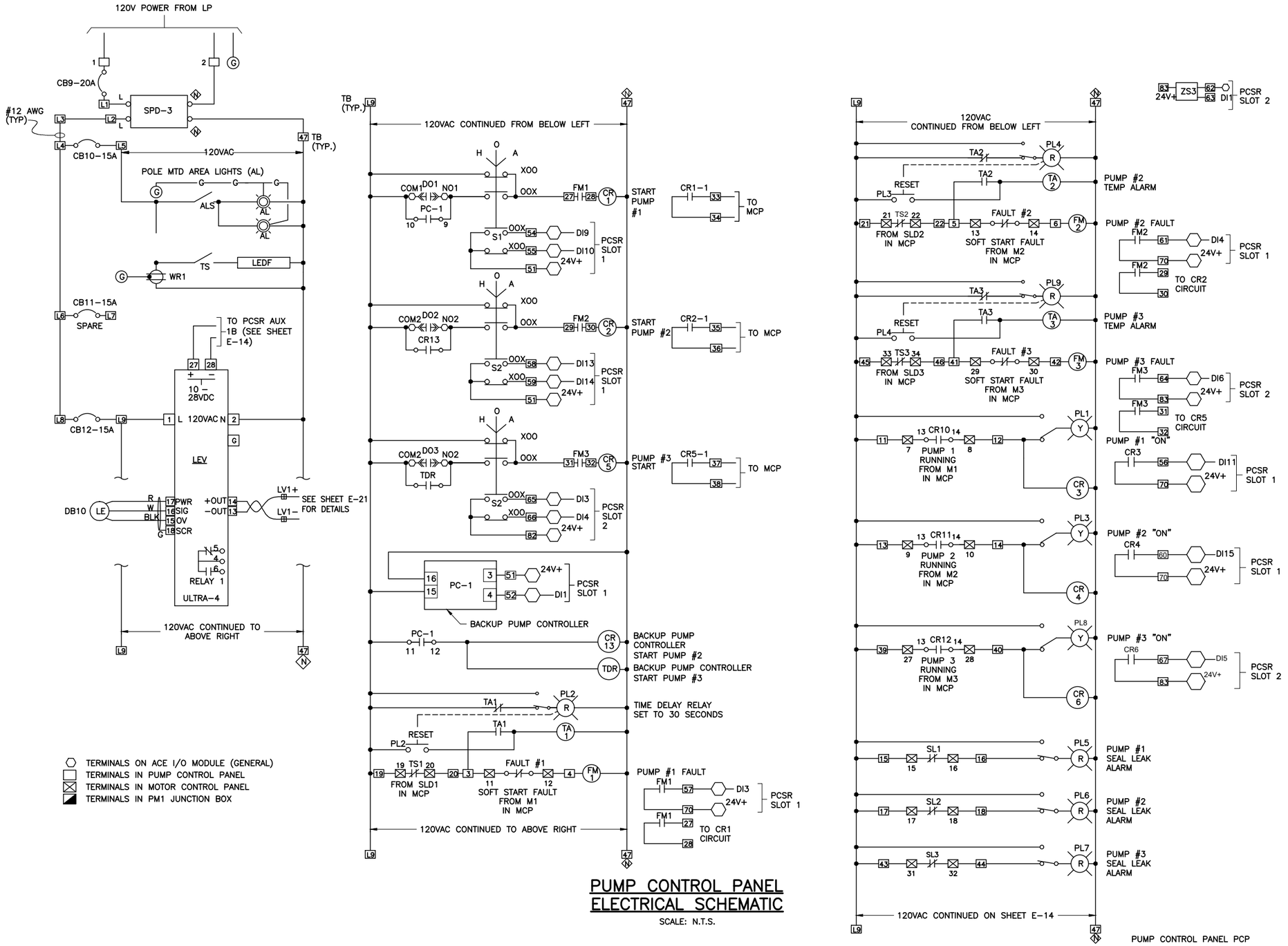
DES: MJC
DRN: SDV
CKD: WCN
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

PUMP CONTROL PANEL DETAILS

SHEET E-12



PUMP CONTROL PANEL ELECTRICAL SCHEMATIC

SCALE: N.T.S.

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PRESCOTT PUMP STATION REHABILITATION

PUMP CONTROL PANEL ELECTRICAL SCHEMATIC (I)

SHEET
E-13

PLOTTED BY: Sandy Reyes DRAWING FILE: C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 2\03b_100P Prescott\DWG\E-13.dwg
PLOT DATE: Wednesday, March 1, 2023 12:14:16 PM LAST SAVED BY: Sreyes CTB - 11/1/17 IN-HOUSE TOOLING.CTB
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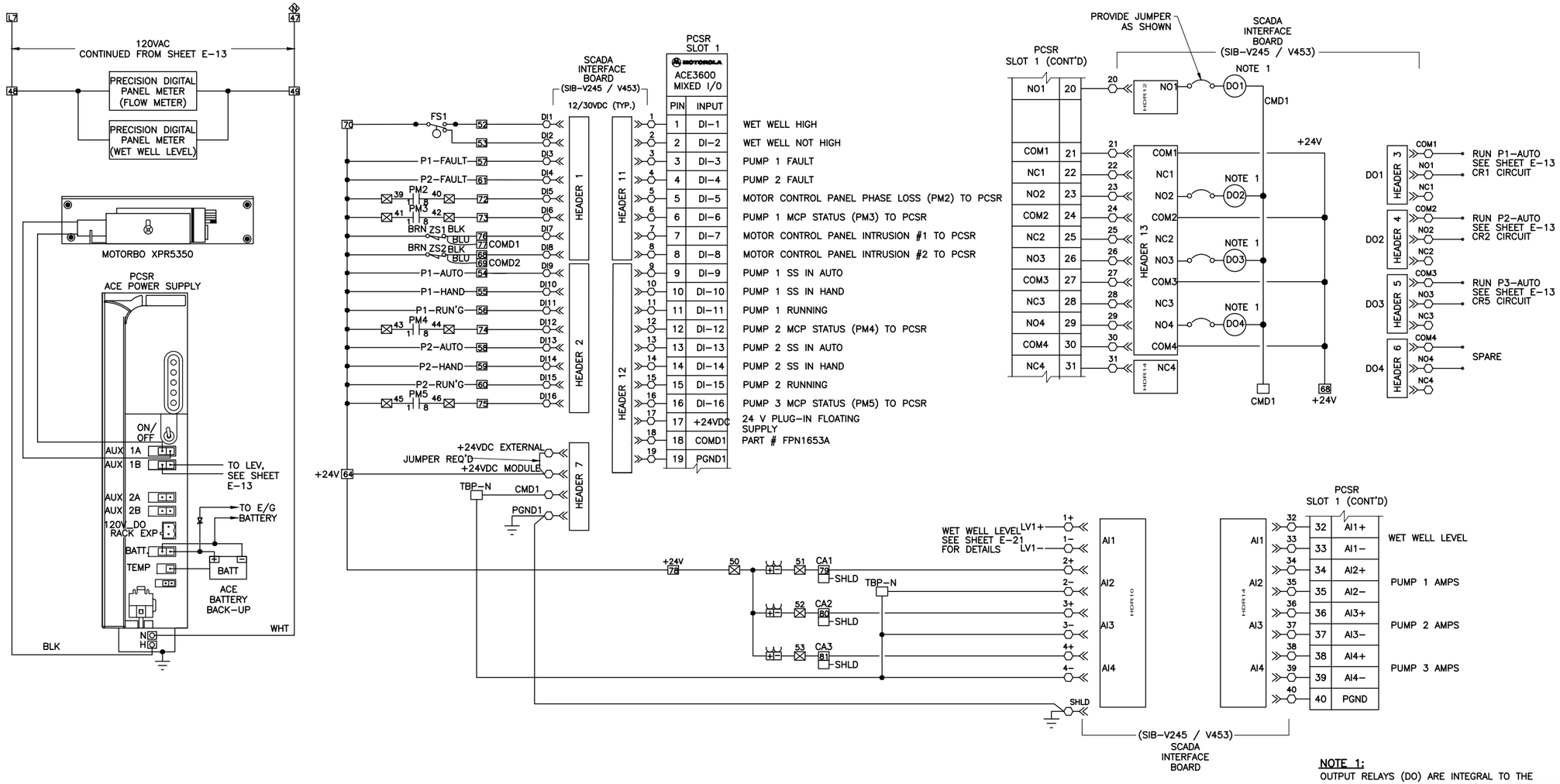

NOTE 1:
OUTPUT RELAYS (DO) ARE INTEGRAL TO THE WILKERSON MIXED I/O AUXILIARY INTERFACE BOARD

PUMP CONTROL PANEL 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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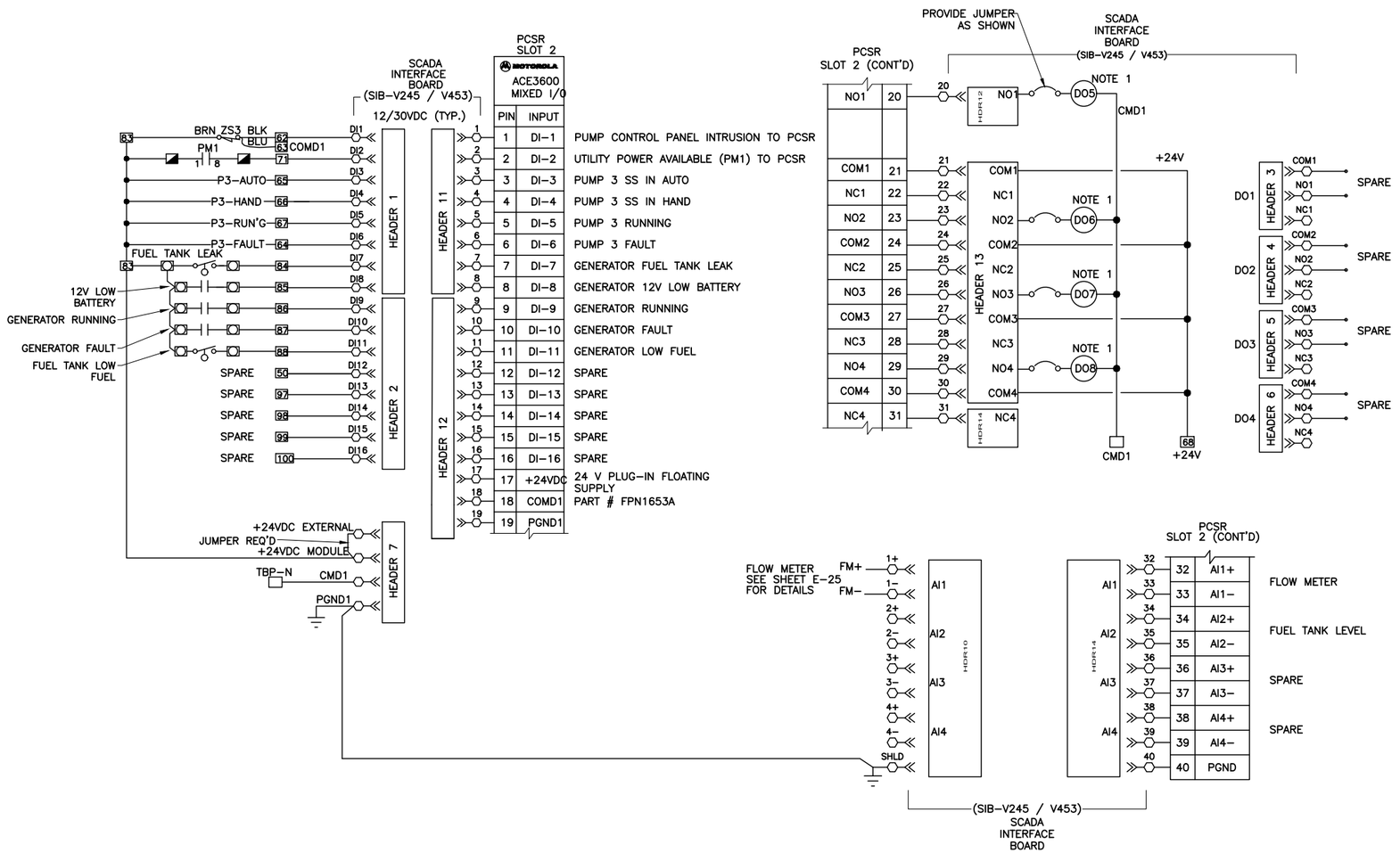
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

PUMP CONTROL PANEL ELECTRICAL SCHEMATIC (2)

SHEET
E-14



PUMP CONTROL PANEL ELECTRICAL SCHEMATIC

SCALE: N.T.S.

NOTE 1:

OUTPUT RELAYS (DO) ARE INTEGRAL TO THE WILKERSON MIXED I/O AUXILIARY INTERFACE BOARD

- ⬡ TERMINALS ON ACE I/O MODULE (GENERAL)
- ☐ TERMINALS IN PUMP CONTROL PANEL
- ☒ TERMINALS IN MOTOR CONTROL PANEL
- ◪ TERMINALS IN PM1 JUNCTION BOX
- ◯ TERMINALS IN DIESEL BACKUP PUMP CONTROLLER

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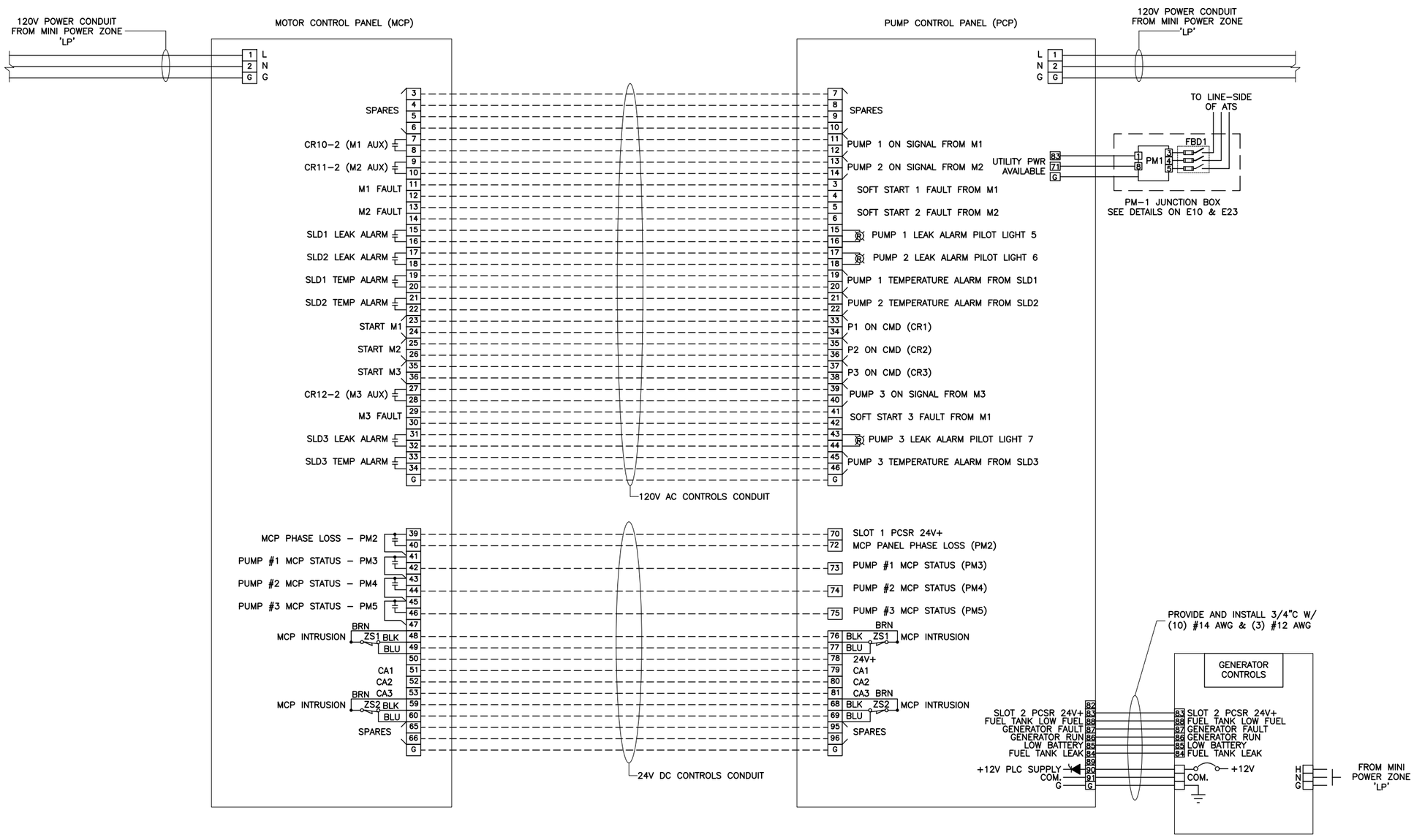
CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

PUMP CONTROL PANEL ELECTRICAL SCHEMATIC (3)

SHEET E-15



PUMP STATION ELECTRICAL MCP TO PCP INTERCONNECTION WIRING DIAGRAM

SCALE: N.T.S.

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DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

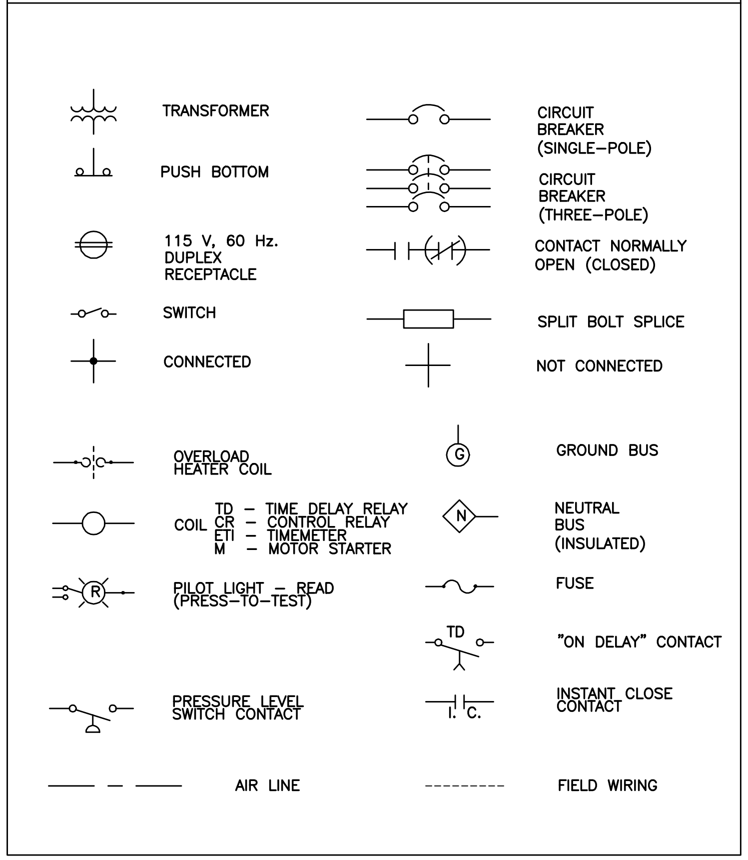
PRESCOTT PUMP STATION REHABILITATION

INTERCONNECTION WIRING DIAGRAM

SHEET E-16

PLOTTED BY: Sandy Reyes DRAWING FILE C:\Users\sreyes\Electrical Design Associates\ACTIVE-ORL - Documents\AECOM\Tampa\PS Rehab DB Year 1, Group 2\03b_100P Prescott\DWG\E-16.dwg, 3/1/2023 12:15:51 PM
PLOT DATE: Wednesday, March 1, 2023 12:15:52 PM LAST SAVED BY: sreyes

CONTROL SCHEMATIC SYMBOLS



TB1 (☐) (120V AC) MOUNTED ON PUMP CONTROL PANEL (PCP)

TERM.	DESCRIPTION
1	120V FROM MOTOR CONTROL PANEL
2	NEUTRAL FROM MOTOR CONTROL PANEL
3	SOFT START NO. 1 FAULT
4	SOFT START NO. 1 FAULT
5	SOFT START NO. 2 FAULT
6	SOFT START NO. 2 FAULT
7–10	SPARES
11	P1 "ON" SIGNAL FROM M1 (IN MCP)
12	P1 "ON" SIGNAL FROM M1 (IN MCP)
13	P2 "ON" SIGNAL FROM M2 (IN MCP)
14	P2 "ON" SIGNAL FROM M2 (IN MCP)
15	PUMP 1 LEAK ALARM FROM MCP
16	PUMP 1 LEAK ALARM FROM MCP
17	PUMP 2 LEAK ALARM FROM MCP
18	PUMP 2 LEAK ALARM FROM MCP
19	PUMP 1 TEMPERATURE ALARM FROM MCP
20	PUMP 1 TEMPERATURE ALARM FROM MCP
21	PUMP 2 TEMPERATURE ALARM FROM MCP
22	PUMP 2 TEMPERATURE ALARM FROM MCP
23	SPARE
24	SPARE
25–26	SPARE
51	SPARE
27	PUMP 1 FAULT RELAY CONTACT
28	PUMP 1 FAULT RELAY CONTACT
29	PUMP 2 FAULT RELAY CONTACT
30	PUMP 2 FAULT RELAY CONTACT
31	PUMP 3 FAULT RELAY CONTACT
32	PUMP 3 FAULT RELAY CONTACT
33	M1 START CMD (CR–1)
34	M1 START CMD (CR–1)
35	M2 START CMD (CR–2)
36	M2 START CMD (CR–2)
37	M3 START CMD (CR–5)
38	M3 START CMD (CR–5)
39	P3 "ON" SIGNAL FROM M2 (IN MCP)
40	P3 "ON" SIGNAL FROM M2 (IN MCP)
41	SOFT START NO. 3 FAULT
42	SOFT START NO. 3 FAULT
43	PUMP 3 LEAK ALARM FROM MCP
44	PUMP 3 LEAK ALARM FROM MCP
45	PUMP 3 TEMPERATURE ALARM FROM MCP
46	PUMP 3 TEMPERATURE ALARM FROM MCP
47	SPD–3 NEUTRAL OUT
48	FLOW AND LEVEL PRECISION DIGITAL LINE
49	FLOW AND LEVEL PRECISION DIGITAL NEUTRAL
50–51	SPARES
L1	SPD–3 LINE
L2	CB9 (MCB) LINE
L3	CB9 (MCB) LOAD
L4	CB10 LINE
L5	CB10 LOAD
L6	CB11 LINE
L7	CB11 LOAD
L8	CB12 LINE
L9	CB12 LOAD

TB2 (☐) (24V DC) MOUNTED ON PUMP CONTROL PANEL (PCP)

TERM.	DESCRIPTION
51	SLOT 1 PCSR 24V+
52	WET WELL HIGH
53	WET WELL NOT HIGH
54	PUMP 1 "AUTO" TO PCSR
55	PUMP 1 "HAND" TO PCSR
56	PUMP 1 "ON" TO PCSR
57	PUMP 1 "FAULT" TO PCSR
58	PUMP 2 "AUTO" TO PCSR
59	PUMP 2 "HAND" TO PCSR
60	PUMP 2 "ON" TO PCSR
61	PUMP 2 "FAULT" TO PCSR
62, 63	PUMP CONTROL PANEL INTRUSION – ZS3
64	PUMP 3 "FAULT" TO PCSR
65	PUMP 3 "AUTO" TO PCSR
66	PUMP 3 "HAND" TO PCSR
67	PUMP 3 "ON" TO PCSR
68, 69	MOTOR CONTROL PANEL INTRUSION – ZS2
70	SLOT 1 PCSR 24V+
71	UTIL. POWER AVAILABLE (PM1) TO PCSR
72	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR
73	PUMP #1 MCP STATUS (PM3) TO PCSR
74	PUMP #2 MCP STATUS (PM4) TO PCSR
75	PUMP #3 MCP STATUS (PM5) TO PCSR
76, 77	MOTOR CONTROL PANEL INTRUSION – ZS1
78	24V+
79	PUMP 1 AMPS
80	PUMP 2 AMPS
81	PUMP 3 AMPS
82	SPARE
83	SLOT 2 PCSR 24V+ TO GENERATOR CONTROLS
84	GENERATOR FUEL LEAK
85	GENERATOR 12V LOW BATTERY
86	GENERATOR RUNNING
87	GENERATOR FAULT
88	GENERATOR LOW FUEL
89	SPARE
90, 91	12V PLC SUPPLY
92	SPARE
93	SPARE
94	SPARE
95	SPARE
96	SPARE
106–120	SPARES

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)

TB3 (⊠) (120V AC) MOUNTED ON MOTOR CONTROL PANEL (MCP)

TERM.	DESCRIPTION
1	120V TO PUMP CONTROL PANEL
2	NEUTRAL (CONTINUED TO MINI POWER–ZONE 'LP')
3–6	SPARES
7	PUMP 1 'ON' SIGNAL TO CR–3 (IN PCP)
8	PUMP 1 'ON' SIGNAL TO CR–3 (IN PCP)
9	PUMP 2 'ON' SIGNAL TO CR–4 (IN PCP)
10	PUMP 2 'ON' SIGNAL TO CR–4 (IN PCP)
11	SOFT START #1 FAULT SIGNAL TO PCP
12	SOFT START #1 FAULT SIGNAL TO PCP
13	SOFT START #2 FAULT SIGNAL TO PCP
14	SOFT START #2 FAULT SIGNAL TO PCP
15	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)
16	PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)
17	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)
18	PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP)
19	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)
20	PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP)
21	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)
22	PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP)
23	M1 START CMD (CR–1)
24	M1 START CMD (CR–1)
25	M2 START CMD (CR–2)
26	M2 START CMD (CR–2)
27	PUMP 3 'ON' SIGNAL TO CR–6 (IN PCP)
28	PUMP 3 'ON' SIGNAL TO CR–6 (IN PCP)
29	SOFT START #3 FAULT SIGNAL TO PCP
30	SOFT START #3 FAULT SIGNAL TO PCP
31	PUMP 3 LEAK DETECTED TO PILOT LIGHT 7 (IN PCP)
32	PUMP 3 LEAK DETECTED TO PILOT LIGHT 7 (IN PCP)
33	PUMP 3 TEMPERATURE ALARM TO FM3 (IN PCP)
34	PUMP 3 TEMPERATURE ALARM TO FM3 (IN PCP)
35	M3 START CMD (CR–5)
36	M3 START CMD (CR–5)
37	SPARE
38	SPARE
L1	SPD–2 LINE
L2	CB6 (MCB) LINE
L3	CB6 (MCB) LOAD
L4	CB7 LINE
L5	CB7 LOAD
L6	CB8 LINE
L7	CB8 LOAD

TB4 (⊠) (24V DC) MOUNTED ON MOTOR CONTROL PANEL (MCP)

TERM.	DESCRIPTION
39	SLOT 1 PCSR 24V+
40	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR
41	SLOT 1 PCSR 24V+
42	PUMP #1 MCP STATUS PHASE LOSS (PM3) TO PCSR
43	SLOT 1 PCSR 24V+
44	PUMP #2 MCP STATUS PHASE LOSS (PM4) TO PCSR
45	SLOT 1 PCSR 24V+
46	PUMP #3 MCP STATUS PHASE LOSS (PM5) TO PCSR
47	SLOT 1 PCSR 24V+
48, 49	MOTOR CONTROL PANEL INTRUSION - ZS1
50	PCSR 24V+
51	CA1
52	CA2
53	CA3
53	PUMP 1 SEAL LEAK DETECTOR PROBE
54	PUMP 1 SEAL LEAK DETECTOR PROBE
55	PUMP 2 SEAL LEAK DETECTOR PROBE
56	PUMP 2 SEAL LEAK DETECTOR PROBE
57	PUMP 3 SEAL LEAK DETECTOR PROBE
58	PUMP 3 SEAL LEAK DETECTOR PROBE
59, 60	MOTOR CONTROL PANEL INTRUSION- ZS2
61	SPARE
62	SPARE
63	SPARE
64	SPARE
65	SPARE
66	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)

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CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL SCHEMATIC LEGEND

SHEET E-17

PRESCOTT MOTOR CONTROL PARTS SCHEDULE

SYMBOL	NAME	PART			RATING	REMARKS
		MAKE	TYPE	MODEL OR CAT. #		
CB1, CB2, CB3	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36150	600 V, 150A	18KAIC @ 480V
CB4	CIRCUIT BREAKER	SQUARE D	THREE POLE	HDL 36020	600 V, 20A	18KAIC @ 480V
CB5	CIRCUIT BREAKER	SQUARE D	TWO POLE	HDL 26040	600 V, 40A	18KAIC @ 480V
M1, M2, M3	MOTOR SOFT STARTER	SOLCON	SOFT STARTER	RVS-DX-145-480-115V-115V-8-U-S	480V, 145A, 120V CONTROLS	PROVIDE REMOTE KEYPAD
CB7, CB8	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-115	120 V, 15A	
CB6	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU-120	120 V, 20A	
CA1, CA2, CA3	CIRCUIT SENSOR	ENERCORP INSTRUMENTS	4-20mA OUTPUT	SC200-2	0-100A, 0-150A, 0-200A	SELECTABLE RANGE
ZS1, ZS2	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F-X5F1 (GRAINGER-1EA77)	12-24VDC, 3-WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER - 5B233)
FF1, FF2	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH-TS
WR1, WR2	WALL RECEPTACLE	HUBBELL	DUPLEX W/GFI	GF5262	120V AC, 15A GFI	W/A LUMINUM OUTLET BOX AND COVER
SPD-1	SURGE PROTECTIVE DEVICE TYPE 1	ASCO	MOTOR CONTROL PANEL SPD	TE04XDS104X	480/277 V, 3ø, 4W	
SPD-2	SURGE PROTECTIVE DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L, N, G)	2856812	120 V, 25A	
TB-1, TB-2, TB-3, TB-4	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, 48"x48"x12"	48"x48"x12" SS	304 SS, POWDER COATED WHITE	3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT.
MP	ENCLOSURE PANEL	HOFFMAN	42" X 42", STEEL	A42P42	STEEL, 12 GAUGE	
PM2, PM3, PM4, PM5	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	PDBFS330	600 V, 400 AMP	FINGER-SAFE TERMINAL BLOCKS
FBD 2, 3, 4, 5	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
FTB2	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5-HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
SLD1, SLD2, SLD3	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, 12"x10"x8"	EJ12108S12	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. #		
MS	METER SOCKET	MILBANK	7 TERMINAL		600 VAC, 400 AMP	ALUMINUM CONSTRUCTION
EPO	EMERGENCY POWER OFF	CATERPILLAR	GENERATOR EMERGENCY	MAINTAINED 2 POSITION SWITCH W/1-5/8" DIA. OPERATOR, 1 N.O. AND 1 N.C. CONTACT MOUNTED IN NEMA 4X SS ENCLOSURE		FURNISHED WITH GENERATOR
			SHUT DOWN PUSH BUTTOM			
MCP-JB	MOTOR CONTROL PANEL JUNCTION BOX	WIEGMANN	NEMA 4X, 20"X20"X6"	1418N4SSD6	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-B-2-A-1-B-1-A		25' CABLE MOUNT ON EQUIPMENT RACK ADJACENT TO PIPE
LA	LIGHTING ARRESTER	GENERAL ELECTRIC	TRANQUELL	9L15ECC001	650V	
ATS	AUTOMATIC TRANSFER SWITCH	EATON	SERVICE ENTRANCE RATED. AUTOMATIC TRANSFER SWITCH.	CATALOG NO ATV9LDB30400XDU DESIGNATION 400A STANDARD FEATURES: 1B, 1C, 1D, 2A, 3B, 3C, 3D, 4B, 5H, 5J, 5K, 5L, 5M, 6B, 7A, 8E, 10B, 10D, 12C, 12D, 12G 12H, 14C, 14D, 15E, 15F, 23M, 26H, 26J, 26K, 26L, 26M, 32A, 42, 48F, 48U, 49C, OPTIONAL FEATURES: 12L, 12M, 16B 37A, 38B, 51F1, 54B, 61F, 80D	PRODUCT FAMILY: RACK MOUNT SWITCH TYPE: 30A THRU 1000A 480/277V,60HZ 3 PHASE, 4 WIRE, 3 POLES TRANSITION MODE: OPEN CONTROLLER TYPE: ATC-900 CONTINUOUS CURRENT: 400 AMPS WITHSTAND: 65KA NORMAL SOURCE TERMINALS: (1)4/0-600 CU/AL EMERGENCY SOURCE TERMINALS: (1) 4/0-600 CU/AL LOAD SIDE TERMINALS: (2) #1-500 CU/AL NEUTRAL TERMINALS: (6) 250-350 CU/AL	STAINLESS STEEL ENCLOSURE ATC-900 CONTROLLER SEE SPECIFICATION SECTION W16216
GENERATOR	GENERATOR	CATERPILLAR	STANDBY DIESEL GENERATOR	SEE SPECIFICATION SECTION W16216	350KW/437.5KVA, 480/277 VOLT, 3-PHASE, 4-WIRE	SOUND ATTENIATED ENCLOSURE 72 HOUR SUB BASE FUEL TANK SEE SECTION 16216 FOR REQUIREMENTS
LP	15KVA T1 MINI POWER ZONE PANEL 'LP'	SCHNEIDER	NEMA 3R SS	MPZB15S40FSS	480-240/120 VOLT, SINGLE PHASE, 15KVA, 24 POLE	INTERRUPT RATING
SPD-4	SURGE PROTECTIVE DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L,N,G)	2856812	120 V, 25A	

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Certificate of Authorization No. 8115

MICHAEL J. CAHILL, P.E.
FL. P.E. LICENSE NO. 70837

No.	DATE	REVISIONS
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DES: MJC
DRN: SDV
CKD: WCN
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL
PARTS SCHEDULE (I)

SHEET
E-18

PARTS SCHEDULE (PUMP CONTROL PANEL)

SYMBOL	NAME	PART — PCSR PARTS LIST				REMARKS
		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 — REMAINING PARTS LIST				REMARKS
		MAKE	TYPE	MODEL OR CAT. #	RATING	
PC–1	BACKUP PUMP CONTROLLER	WILKERSON	DUPLEX LIFT STATION	DR1920	10 AMP CONTACTS	DIN RAIL MOUNTING
FTB1, FTB2	FUSED TERMINAL BLOCKS	PHOENIX CONTACT		UK 5–HESI	PROVIDE 1, 2, & 5A FUSES	PROVIDE COOPER BUSSMAN GDB SERIES FUSES
L1, F1	PROCESS METER	PRECISION DIGITAL	4 DIGIT, 1.2" DISPLAY	PD765–6R0–10		PROVIDE 4–20 mA OUTPUT
FL, FL1, FL2	FLOAT SWITCHES	ANCHOR SCIENTIFIC	SPDT	S20NONC	10 A @ 120 V	PROVIDE BY THE CITY INSTALLED BY CONTRACTOR
CB10, CB11, CB12	CIRCUIT BREAKER	SQUARE D	SINGLE POLE	QOU–115	120 V, 15A	
PL1, PL3, PL8	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT – 38LYA9	120 V, LED TYPE	YELLOW LENS & PRESS TEST
PL2, PL4, PL9	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT – 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
PL5, PL6, PL7	INDICATOR LIGHT	SQUARE D	CLASS 9001	SKT – 38LRR9	120 V, LED TYPE	RED LENS & PRESS TEST
S1, S2, S3	HOA SWITCH ASSEMBLY	SQUARE D	OIL–TIGHT CLASS 9001	SKS – 43B H2	10A @ 120V	
ZS3	CONTROL PNL INTRUSION SENSOR	OMRON	CYLINDRICAL, SHORT BARREL	E2F–X5F1 (GRAINGER–1EA77)	12–24VDC, 3–WIRE PNP	W/ TELEMECANIQUE MTG. BRACKET (GRAINGER – 5B233)
FF3	LED LIGHTING FIXTURE	HOFFMAN	LED	LEDA1S35	120 V, 5W	W/TOGGLE SWITCH–TS
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 GB3	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, TA3, CR1, CR2, CR5, CR13	CONTROL RELAY	POTTER & BRUMFIELD	8 PIN PLUG–IN	KRPA–11AG–120	120V AC COIL, 10A CONTACTS	DPDT W/ SOCKET AND HOLD
FM1, FM2, CR3, CR4 CR6, CR7, CR8, CR9,	CONTROL RELAY	POTTER & BRUMFIELD	8 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 TRANSMITTER	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
PCP	PUMP CONTROL PANEL ENCLOSURE	HOFFMAN	NEMA 4X, 3P LATCH, 48"x36"x12"	48"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–3	SURGE PROTECTION DEVICE TYPE 3	PHOENIX CONTACT	3 CONDUCTOR SYSTEM (L, N, G)	2856812	120V, 25A	

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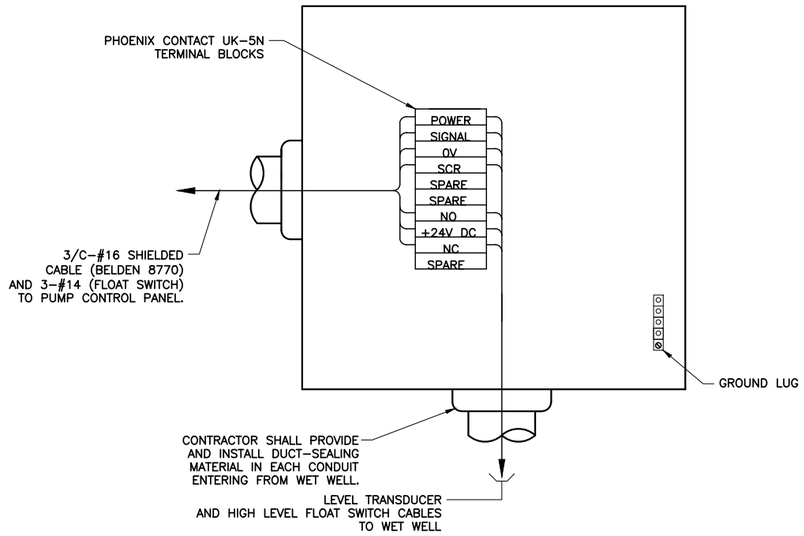
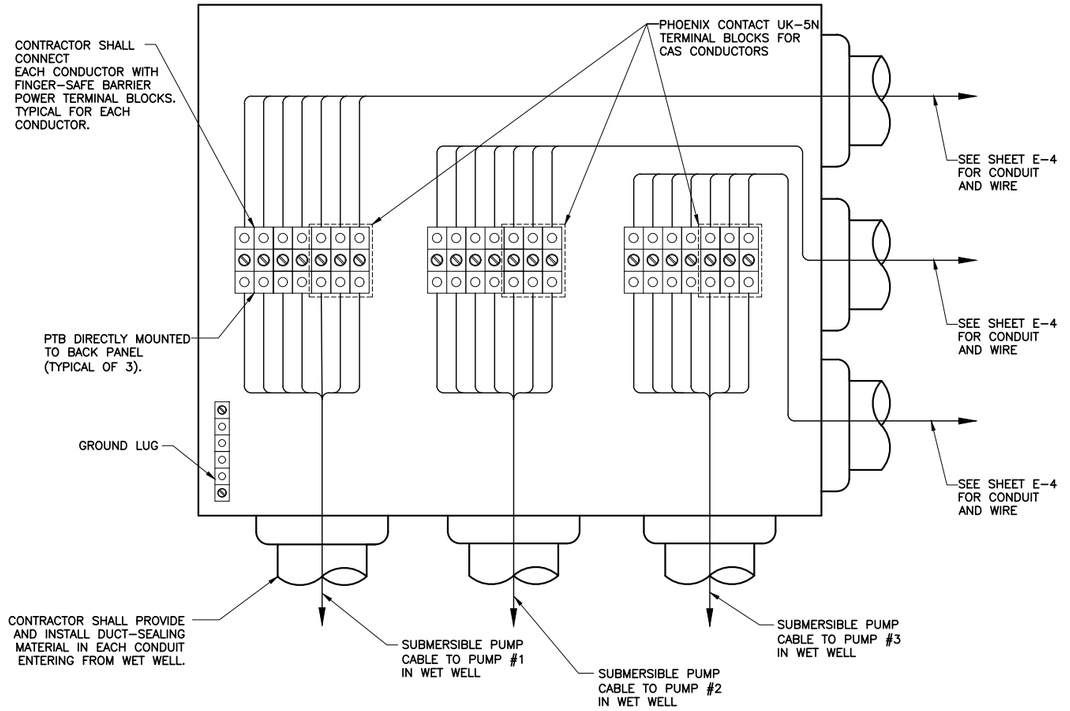
PRESCOTT PUMP STATION REHABILITATION
ELECTRICAL
PARTS SCHEDULE (2)

SHEET
E-19



PUMP CONTROL PANEL JUNCTION BOX (PCP-JB) DETAIL

SCALE: NTS



MOTOR CONTROL PANEL JUNCTION BOX (MCP-JB) DETAIL

SCALE: NTS

NOTES:

1. COVER NOT SHOWN FOR CLARITY
2. BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
3. CONNECTION TO GROUND LUGS NOT SHOWN FOR CLARITY.
4. CONTRACTOR SHALL PROVIDE FEED-TROUGH TERMINAL BLOCKS (PHOENIX CONTACT UK5N) ON ALUMINUM DIN RAIL. STRANDED COPPER WIRE FOR TERMINAL BLOCK CONNECTIONS SHALL BE MADE WITH A FERRULE TO WIRE TERMINATION. THE FERRULE SHALL BE INSULATED AND EXTEND FROM THE STRIPPED INSULATION, THEN COMPRESSED WITH PHOENIX CONTACT CRIMPING PLIERS (CRIMPFOX CENTRUS OR APPROVED EQUAL). THE FERRULE SHALL BE MANUFACTURED BY PHOENIX CONTACT, OR EQUAL.

NOTES:

1. COVER NOT SHOWN FOR CLARITY
2. BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.
3. CONNECTION TO GROUND LUGS NOT SHOWN FOR CLARITY.
4. CONTRACTOR SHALL PROVIDE FEED-TROUGH TERMINAL BLOCKS (PHOENIX CONTACT UK5N) ON ALUMINUM DIN RAIL. STRANDED COPPER WIRE FOR TERMINAL BLOCK CONNECTIONS SHALL BE MADE WITH A FERRULE TO WIRE TERMINATION. THE FERRULE SHALL BE INSULATED AND EXTEND FROM THE STRIPPED INSULATION, THEN COMPRESSED WITH PHOENIX CONTACT CRIMPING PLIERS (CRIMPFOX CENTRUS OR APPROVED EQUAL). THE FERRULE SHALL BE MANUFACTURED BY PHOENIX CONTACT, OR EQUAL.

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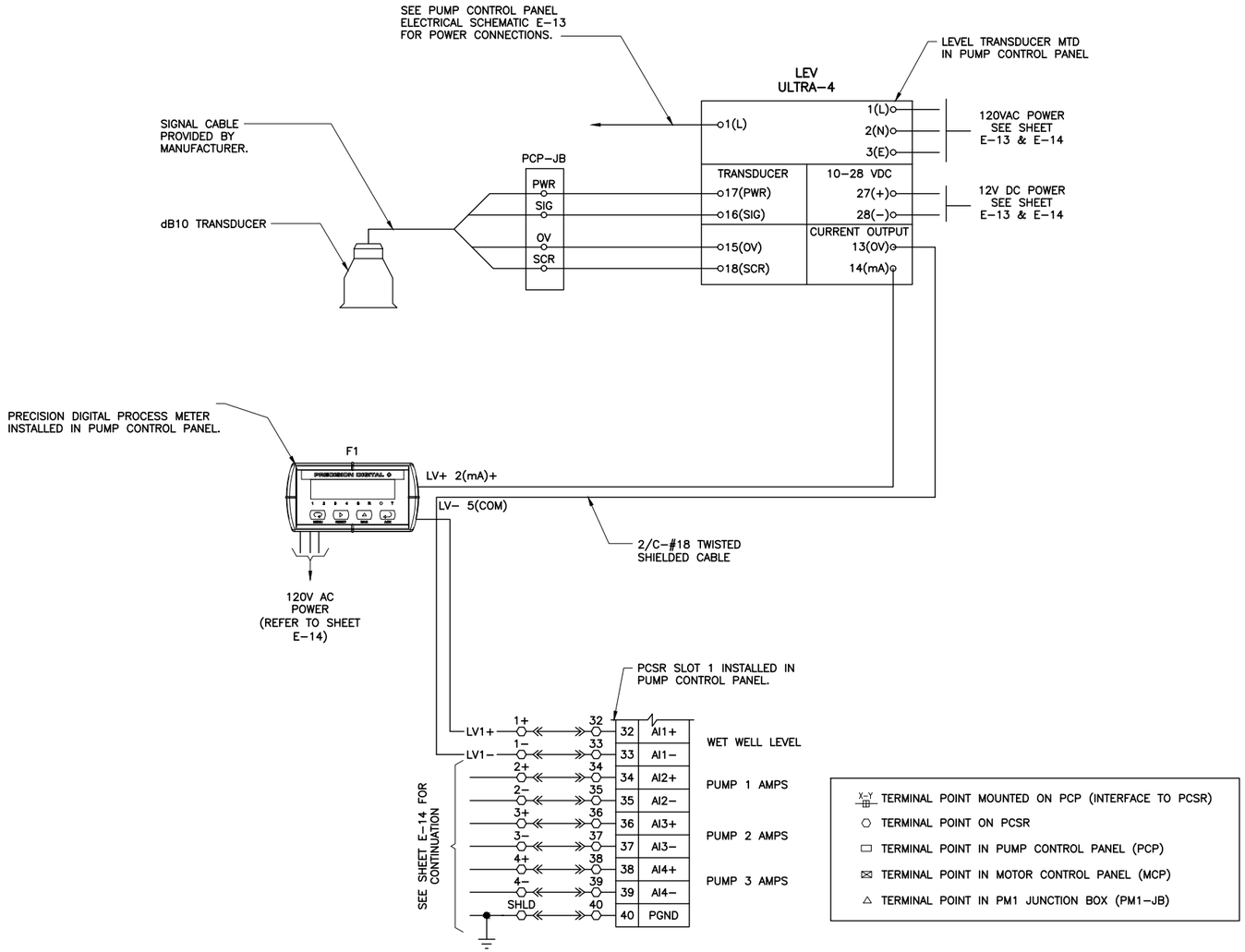
PRESCOTT PUMP STATION REHABILITATION

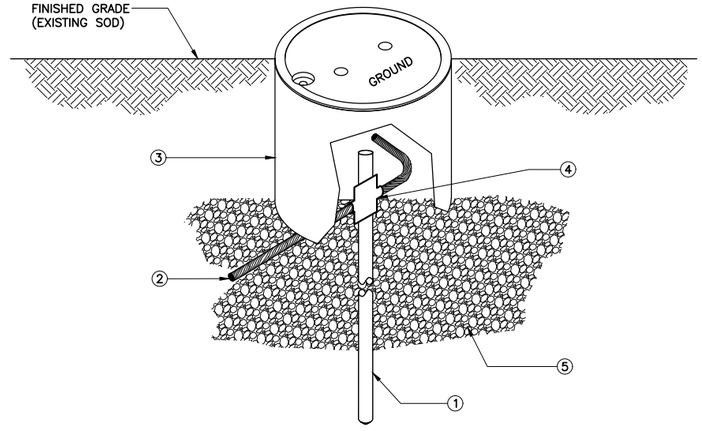
ELECTRICAL DETAILS
(SHT. 1 OF 6)

SHEET
E-20



LEVEL TRANSDUCER WIRING SCHEMATIC

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



GROUND TEST WELL DETAIL KEYED NOTES:

1. NEW GROUND ROD, STAINLESS STEEL, 5/8" X 10'-0" (TYP).
2. #1/0 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.

GROUNDING TEST WELL DETAIL

SCALE: N.T.S.

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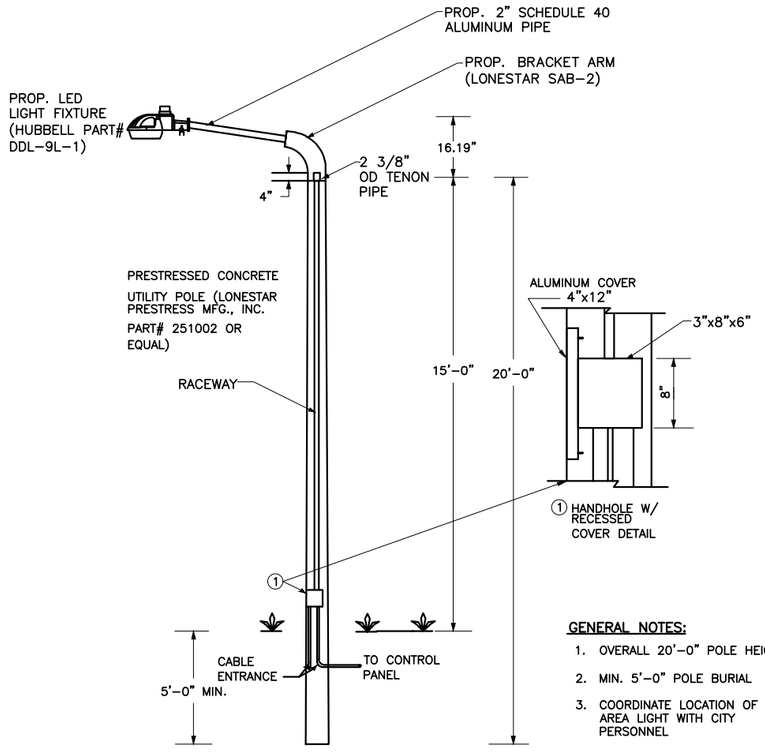
PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL DETAILS
(SHT. 2 OF 6)

SHEET
E-21

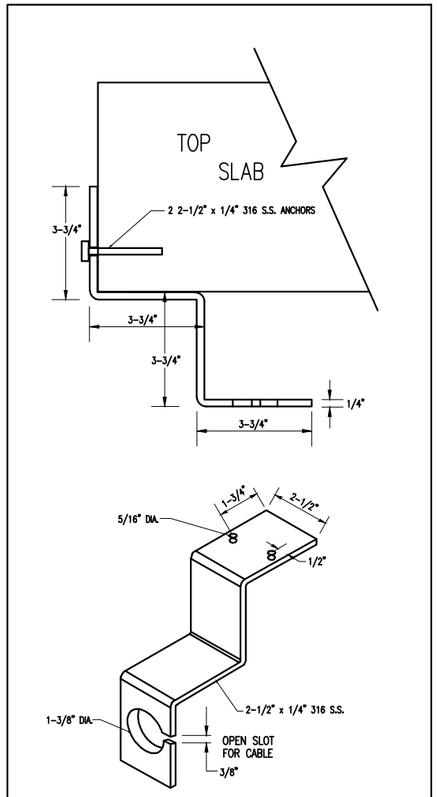


AREA LIGHT (AL) DETAIL

SCALE: N.T.S.

GENERAL 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.



NOTE:

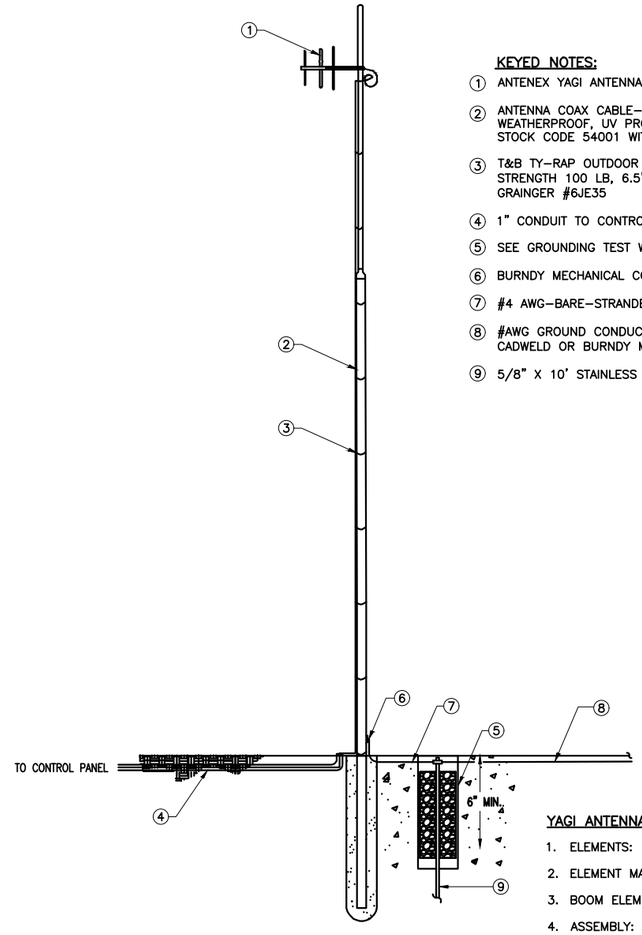
ROUND OVER ALL EDGES, RADIUS ALL CORNERS

DB10 OR PULSAR MOUNTING BRACKET DETAIL

SCALE: N.T.S.

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

BASIC WIND SPEED(Vult)	151 MPH
NOMINAL WIND SPEED(Vasd)	117 MPH
CATEGORY (RISK)	III
WIND EXPOSURE	C
DESIGN WIND PRESSURE (PSF)	55.7 PSF



ANTENNA DETAIL

SCALE: N.T.S.

KEYED 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" CONDUIT TO CONTROL PANEL
5. SEE GROUNDING TEST WELL DETAIL, SHEET E-20
6. BURNDY MECHANICAL CONNECTOR #KA25-4-1/0
7. #4 AWG-BARE-STRANDED GROUNDED CONDUCTOR
8. #AWG GROUND CONDUCTOR TO CONTROL PANEL GROUNDING SYSTEM, USE CADWELD OR BURNDY MECHANICAL CONNECTOR #VT2525
9. 5/8" X 10' STAINLESS STEEL GROUND ROD

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.	LIGHTING PROTECTION:	DC GROUNDED
12.	RATE WIND VELOCITY:	151 MPH
13.	LATERAL THRUST:	12.2 LBS

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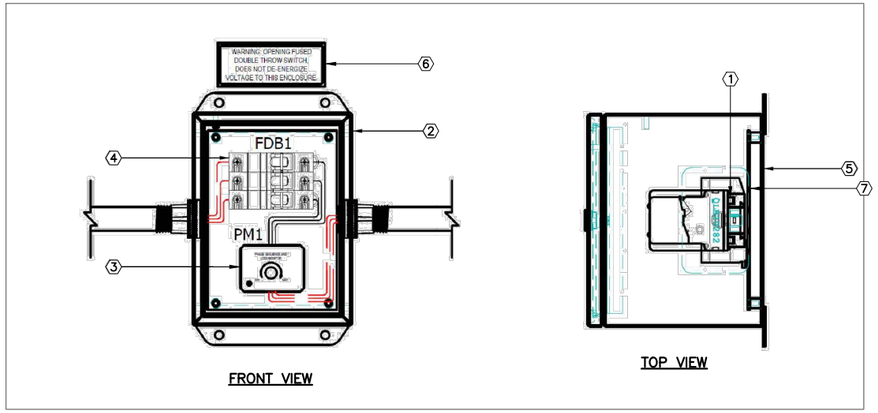
ELECTRICAL DETAILS
(SHT. 3 OF 6)

SHEET
E-22



FRONT VIEW

TOP VIEW

PHASE MONITOR (PMI) JUNCTION BOX

SCALE: N.T.S.

KEYED NOTES:

1. 8 PIN OCTAL SOCKET, DIN RAIL MOUNTED OT08.
2. NEMA 4X 316 STAINLESS STEEL ENCLOSURE.
3. 3-PHASE POWER MONITOR, PM1.
4. FUSE DISTRIBUITION 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. BACK PLATE PROVIDED WITH ENCLOSURE

PRESCOTT

PM1 JUNCTION BOX		
EJ12108S12	ENCLOSURE, NEMA 4X, 316SS 12"X10"X8"	HAMMOND
RB08-PC	RELAY SOCKET, 8-PIN, 600V	MPE
SUA-440-ASA	PHASE MONITOR RELAY, 480V, SPDT,	ATC-DIVERSIFIED
1492-FB3C30-L	FUSE BLOCK/DISCONNECT	ALLEN BRADLEY
KTK-R-2	FUSES	BUSSMAN

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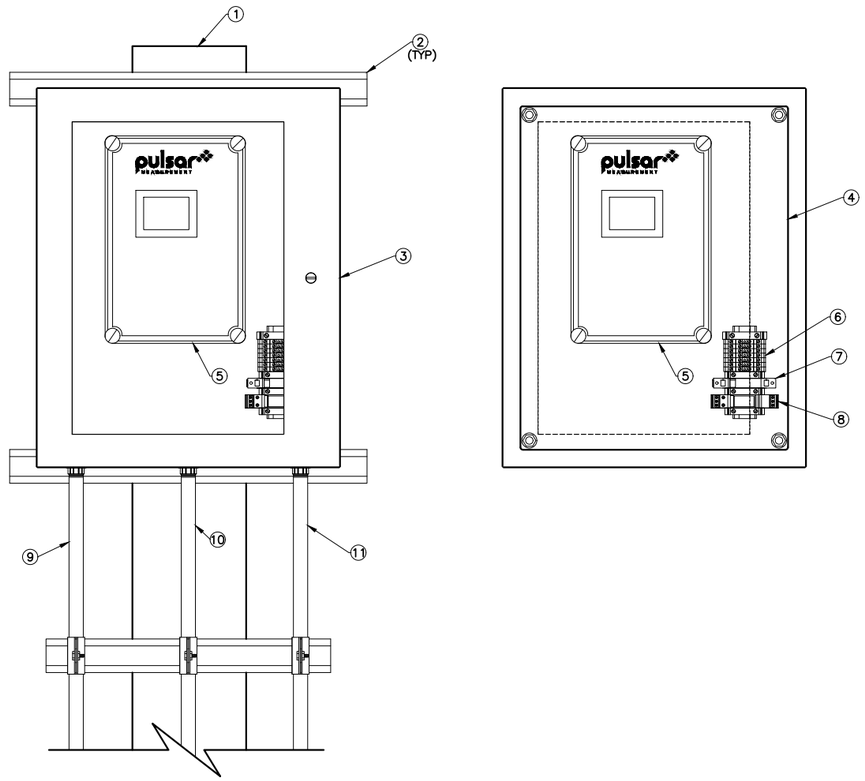
ELECTRICAL DETAILS
(SHT. 4 OF 6)

SHEET
E-23



FLOW TRANSMITTER CABINET DETAILS

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

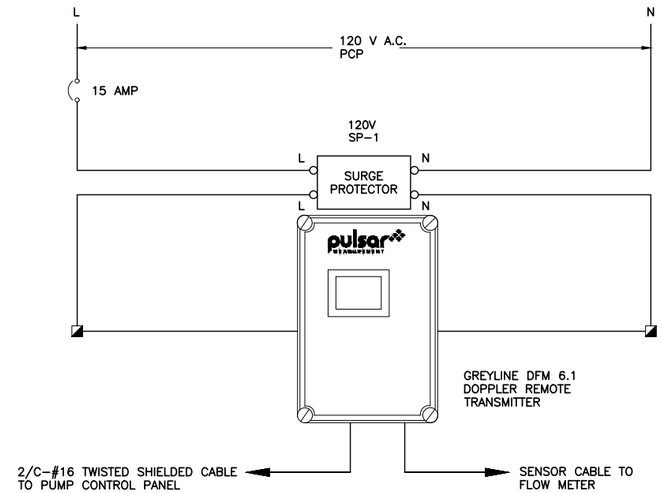
NOTE: FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY.

GENERAL NOTES:

1. REFER TO SHEET E-25 FOR FLOW TRANSMITTER WIRING SCHEMATIC WHICH INCLUDES CONNECTIONS TO FLOW METER ELEMENT, PROCESS METER AND PCSR (IN PUMP CONTROL PANEL).

KEYED NOTES:

1. FLOW METER TRANSMITTER TO BE INSTALLED ON ELECTRICAL SERVICE ENTRANCE RACK. SEE SHEET E-7 FOR DETAILS
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. SEE SHEET E-7 FOR DETAILS.
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 MINI POWER ZONE LP CONTROL PANEL PCP TO FLOW TRANSMITTER FOR 120V POWER. REFER TO SHEET E-6 AND E-7 FOR MINI POWER ZONE LP LOCATION.
10. PROVIDE AND INSTALL NEW FLOW METER TRANSMITTER 4-20 mA SIGNAL CABLE (BELDEN 8719) IN 3/4" CONDUIT. TO PUMP CONTROL PANEL FOR FLOW TRANSMITTER 4-20mA SIGNAL. REFER TO SHEET E-6 AND E-7 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-6 AND E-7 FOR TRANSMITTER LOCATION.



FLOW TRANSMITTER CABINET WIRING SCHEMATIC

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

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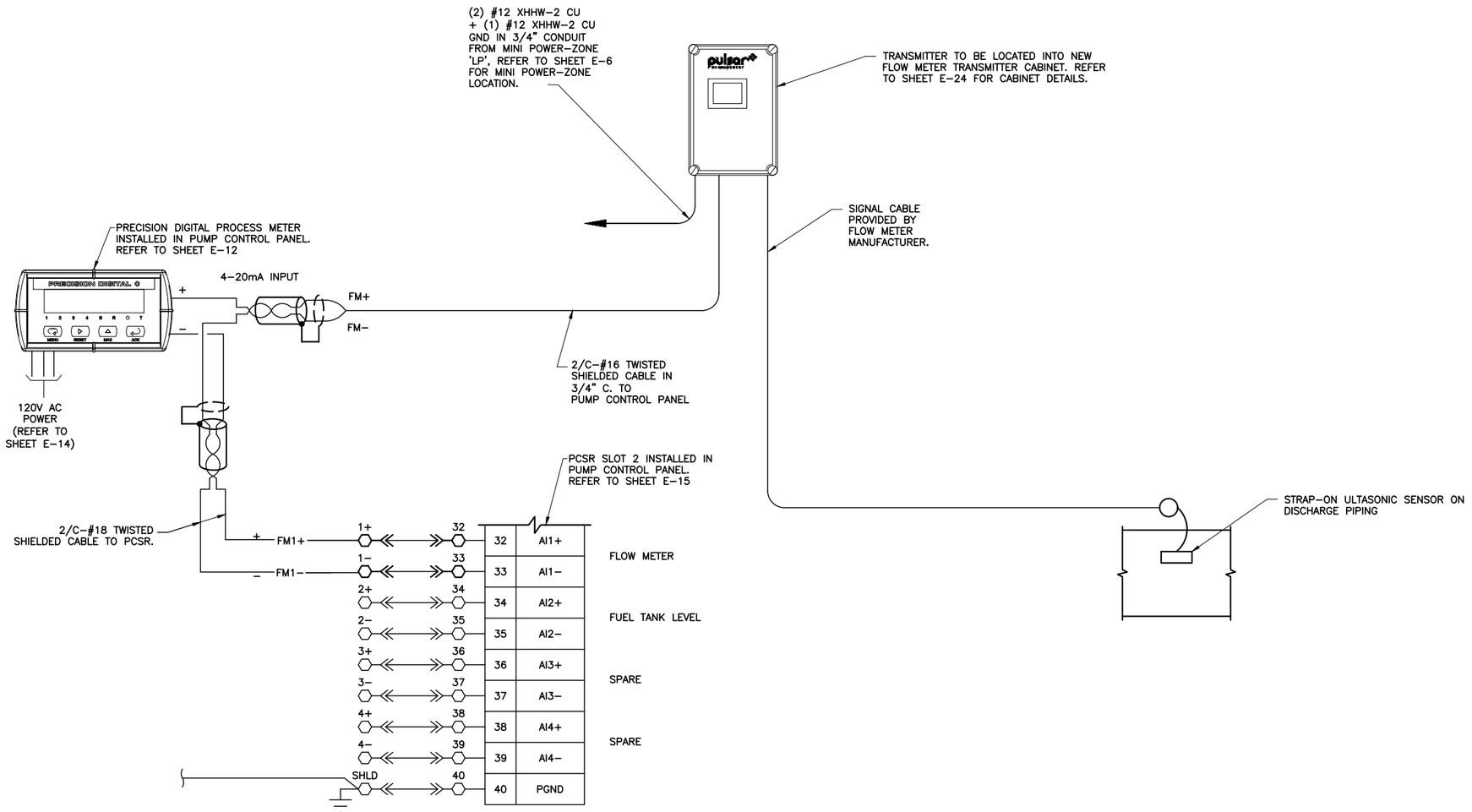
(SHT. 5 OF 6)

SHEET
E-24



FLOW TRANSMITTER WIRING SCHEMATIC

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No.	DATE	REVISIONS
3		
2		
1		

DES: MJC
DRN: SDV
CKD: WCN
DATE: 03/01/2023

CITY of TAMPA
WASTEWATER DEPARTMENT

PRESCOTT PUMP STATION REHABILITATION

ELECTRICAL DETAILS
(SHT. 6 OF 6)

SHEET
E-25