

Tampa Construction Specifications
Contract 26-C-00040; Pump Station Resiliency and Reliability Improvements Contract C

CITY OF TAMPA, FLORIDA

PLANS FOR PENALTY LAKE PUMP STATION

Contract 26-C-00040 Pump Station Resiliency and Reliability Improvements Contract C

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City of Tampa

Contract Administration Department

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SEPTEMBER 2026

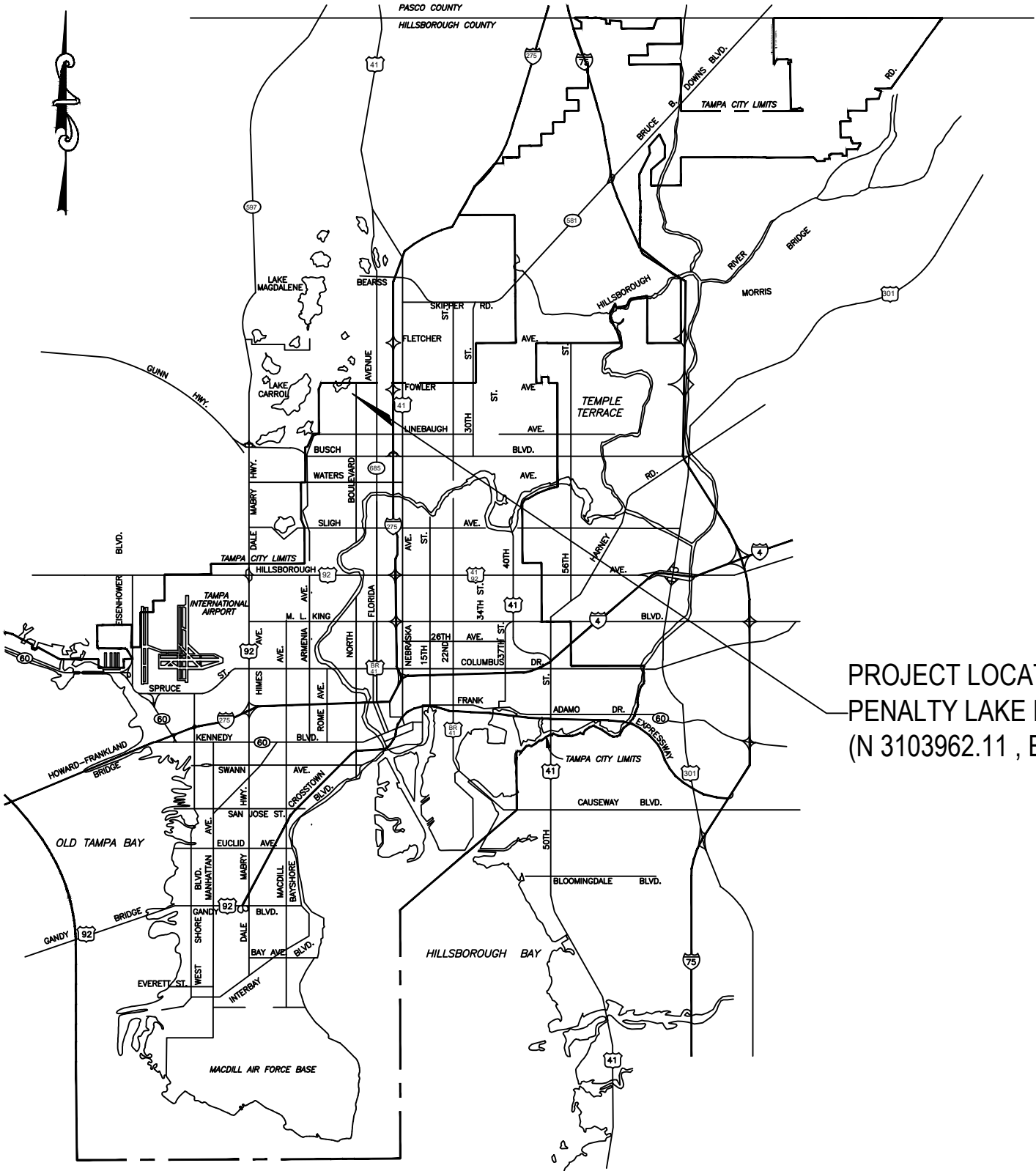
CITY of TAMPA



MOBILITY DEPARTMENT
STORMWATER ENGINEERING DIVISION

PLANS FOR
PUMP STATION RESILIENCY AND RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION

FINAL SUBMITTAL
MAY 2026



PROJECT LOCATION
PENALTY LAKE PUMP STATION
(N 3103962.11 , E 355688.66)

FILE SAVE DATE: 5/19/2026 5:54 PM
FILE PATH: P:\Projects24\301.2400798.001_Tampa_Stormwater_Pumping_Stations\13_Drainage
FILE NAME: KEYST02.dwg
PLOT TIME: 3:01 PM



15310 AMBERLY DR., SUITE 310
TAMPA, FL 33647

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FLA. REG. NO. 88984
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No.	DATE	REVISIONS
3		
2		
1		

DES : BA
DRN : JP
CKD : BA
DATE : 5/28/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION
KEY SHEET

SHEET
G-1

SHEET
G-2

FILE SAVE DATE: 5/28/2026 2:58 PM

FILE PATH: P:\Projects24\301.2400798.001_Tampa_Stormwater_Pumping_Stations\13_Drainage

FILE NAME: GNWT02.dwg PLOT TIME: 3:01 PM

GENERAL NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE PERFORMED CONSISTENT WITH THE FOLLOWING SPECIFICATIONS:

a. CITY OF TAMPA CODE OF ORDINANCES AND LAND DEVELOPMENT CODES

b. FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT)

c. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD)

d. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP)
2. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE WORK REQUIRED, AND ALL OTHER CONDITIONS THAT MAY AFFECT THE SUCCESSFUL COMPLETION OF THE JOB PRIOR TO COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS BEARING ON THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THERewith, HE SHALL PROMPTLY NOTIFY THE CITY AND THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, RAILWAYS, WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, AND TELEGRAPH FACILITIES SUCH AS PAVEMENTS, TRACKS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THERewith THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.
5. UNLESS OTHERWISE SPECIFIED IN THE GENERAL CONDITIONS, ALL CONSTRUCTION IS TO BE GOVERNED BY THE PLANS, APPLICABLE PERMITS, AND SPECIFICATIONS HEREIN, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING AND SAFETY CODES, LAWS AND ORDINANCES.
6. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC OR UTILITY RIGHT-OF-WAY, CONTRACTOR SHALL OBTAIN AUTHORIZATION AND PERMIT FROM JURISDICTION RESPONSIBLE FOR SUCH RIGHT-OF-WAY.
7. IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS HE SHALL IMMEDIATELY NOTIFY THE OWNER OR OWNER'S AGENT.
8. CONTRACTOR SHALL PRESERVE AND PROTECT ALL PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCH MARKS AND PROPERTY CORNERS. IN THE EVENT THE MONUMENTS, POINTS OR MARKERS ARE DISTURBED THE CONTRACTOR SHALL EMPLOY A FLORIDA REGISTERED LAND SURVEYOR TO RESET OR REPLACE THEM.
9. THE OWNER, OWNER'S AGENT AND INSPECTORS OF APPLICABLE GOVERNMENT JURISDICTIONS, SHALL AT ALL TIMES HAVE ACCESS TO THE WORK WHEREVER AND WHENEVER IT IS IN PREPARATION OR PROGRESS; AND THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR SUCH ACCESS AND FOR THE INSPECTION.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL REASONABLE AND PRUDENT PRECAUTIONS TO ENSURE THAT ALL COMPLETED WORK, MATERIALS AND EQUIPMENT STORED ON SITE ARE SAFE AND SECURED FROM UNAUTHORIZED ACCESS OR USE. SUCH PRECAUTIONS MAY INCLUDE INSTALLATION OF SIGNS, FENCES, OR POSTING OF SECURITY GUARDS.
11. CONTRACTOR SHALL, AT ALL TIMES, UTILIZE ALL NORMALLY ACCEPTED AND REASONABLY EXPECTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND GUIDELINES PERTAINING TO SAFE UTILIZATION OF EQUIPMENT OR MATERIALS AS PUBLISHED BY MANUFACTURER.
12. PRIOR TO INITIATING ANY EXCAVATION (INCLUDING BUT NOT LIMITED TO TUNNELS, DITCHES, STORM WATER PONDS, CANALS, ARTIFICIAL LAKES) CONTRACTOR SHALL INSTALL FENCES AND TAKE ALL OTHER REASONABLE AND PRUDENT STEPS TO ENSURE THAT ACCESS TO EXCAVATION BY UNAUTHORIZED PERSONNEL IS PREVENTED.
13. CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE PROVISIONS OF THE FLORIDA STATE TRENCH SAFETY ACT.
14. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:

a. ALL EMPLOYEES ON THE WORK AND ALL OTHER PERSONS WHO MAY BE AFFECTED THEREBY;

b. ALL THE WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, UNDER THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS;

c. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAY, STRUCTURES AND UTILITIES NOT DESIGNATED FOR DEMOLITION IN THE COURSE OF CONSTRUCTION.
15. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC, QUASI PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR FOR THEIR PROTECTION AGAINST DAMAGE, INJURY OR LOSS, OR DESIGNED TO PROTECT THE ENVIRONMENT. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES OF THE EXISTENCE OF HAZARDS AND OF THE SAFETY REGULATIONS.
16. THOSE PARTS OF WORK IN PLACE WHICH ARE SUBJECT TO DAMAGE BECAUSE OF OPERATIONS BEING CARRIED ON ADJACENT THERETO SHALL BE COVERED, BOARDED UP OR SUBSTANTIALLY ENCLOSED WITH ADEQUATE PROTECTION BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
17. ADEQUATE TRAFFIC CONTROL, BARRICADES AND FLAGMAN SERVICES SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR AT ALL POINTS WHERE CONVEYING EQUIPMENT ENGAGED ON THE WORK REGULARLY ENTERS ONTO OR CROSSES TRAFFIC-CARRYING ROADS.
18. THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH ANY AND ALL APPLICABLE STATE LAWS AND REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH.
19. ALL WORK PERFORMED UNDER THE CONTRACT, AND ALL EQUIPMENT, APPLIANCES, TOOLS AND LIKE ITEMS USED IN THE WORK SHALL CONFORM TO APPLICABLE SAFETY CODES AND REGULATIONS OF ANY PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION. IN THE EVENT OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT INTERPRETATION OR REGULATION SHALL GOVERN.
20. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT AN EROSION CONTROL PLAN TO MINIMIZE EROSION AND ENSURE FUNCTIONING OF STORMWATER MANAGEMENT SYSTEM UPON COMPLETION OF CONSTRUCTION.
21. CONTRACTOR TO PROVIDE MAINTENANCE OF TRAFFIC. TEMPORARY TRAFFIC CONTROL PLANS APPROVED BY A LICENSED ENGINEER REGISTERED IN THE STATE OF FLORIDA MUST BE PROVIDED BY THE CONTRACTOR FOR STAGING ROAD CLOSURES AND/OR TRAFFIC PEDESTRIAN DETOURS. CONTRACTOR WILL ALSO OBTAIN A TEMPORARY TRAFFIC CONTROL AND RIGHT-OF-WAY USE PERMIT IF NECESSARY PRIOR TO START OF CONSTRUCTION.
22. CONTRACTOR IS RESPONSIBLE FOR STAGING ACTIVITIES AND TO PROVIDE STAGING PLAN FOR APPROVAL TO THE CITY.
23. PUMP STATION MUST REMAIN IN SERVICE AT ALL TIMES DURING CONSTRUCTION.
24. ANY SERVICE OUTAGE MUST BE APPROVED AND COORDINATED WITH CITY STAFF IN ADVANCE.
25. LOCATIONS, ELEVATIONS AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS, OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION. GAS, FIBER OPTIC, WATER MAIN, WATER SERVICES, SEWER LATERALS AND OTHER SUBSURFACE PIPING HAS NOT BEEN LOCATED. ENGINEER OF RECORD SHOWS LOCATIONS AS APPROXIMATE AS PROVIDED BY OTHERS.
26. EXISTING UTILITIES AND TOPOGRAPHIC INFORMATION DENOTED BY UPPER AND LOWER CASE. PROPOSED WORK DENOTED BY ALL UPPER CASE.
27. WHEN IN CONFLICT, UTILITY POLES, GAS LINES, UNDERGROUND ELECTRIC, TELEPHONE AND OTHER COMMUNICATION CABLES AND

CONDUIT WILL BE RELOCATED BY THE RESPECTIVE UTILITY OWNERS AT THEIR OWN EXPENSE.

28. PRIOR TO ANY CONSTRUCTION, CONTACT TAMPA ELECTRIC COMPANY (PH: 813-228-4111 OR 813-275-3037) FOR EXACT LOCATION OF UNDERGROUND LINES. TECO TO RELOCATE ANY CONFLICTING LINES.
29. PRIOR TO ANY CONSTRUCTION, CONTACT TECO GAS (813-275-3743) FOR EXACT LOCATION OF UNDERGROUND LINES. TECO GAS TO RELOCATE ANY CONFLICTING LINES.
30. PRIOR TO ANY CONSTRUCTION, CONTACT VERIZON (813-978-2164) FOR EXACT LOCATION OF UNDERGROUND LINES. VERIZON TO RELOCATE ANY CONFLICTING LINES.
31. THE SOLID WASTE DEPARTMENT (813-348-1146) IS TO BE NOTIFIED PRIOR TO ANY STREET CLOSURES IN THE PROJECT AREA.
32. TREE REMOVAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING SITE CLEARING PERMIT PRIOR TO START OF ANY CONSTRUCTION.
33. NECESSARY ROOT PRUNING AND TRIMMING OF BRANCHES SHALL BE DONE BY A CERTIFIED ARBORIST.
34. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE LATEST "TREE ORDINANCE" OF THE CITY OF TAMPA. THE CONTRACTOR IS REQUIRED TO RELOCATE THE TREES REMOVED AS A PART OF THE NECESSARY CONSTRUCTION INDICATED ON PLANS.
35. SOD ALL THE DISTURBED AREAS WITHIN APPROVED TRENCH LIMITS.
36. WHERE CONNECTIONS TO EXISTING DRIVES AND WALKS ARE NOT INDICATED ON THE PLANS, PROPER CONNECTIONS SHALL BE MADE AT THE DIRECTION OF THE ENGINEER.
37. DRIVEWAYS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH CHAPTER 25 OF THE CITY CODE AND THE TRANSPORTATION TECHNICAL MANUAL. DEVIATION FROM ESTABLISHED STANDARDS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER.
38. THE 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 & RECREATION DEPARTMENT, NATURAL RESOURCES DIVISION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. ROOT PRUNING MAY BE REQUIRED AT CERTAIN LOCATIONS AND SHALL BE COMPLETED IN ACCORDANCE WITH CHAPTER 13 TECHNICAL MANUAL SPECIFICATIONS.
39. THE CONTRACTOR SHALL MAINTAIN COPIES OF ALL APPLICABLE PERMITS ON-SITE AND SHALL BE RESPONSIBLE TO ADHERE TO ALL PERMIT CONDITIONS DURING CONSTRUCTION.
40. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE ENGINEER FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL STORM SEWER INLETS AND OUTFALL CONTROL STRUCTURES SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED STRAW BALES, SOD, STONE, ETC.
2. CONTRACTOR WILL BE REQUIRED TO PROHIBIT DISCHARGE OF SILT THROUGH THE OUTFALL CONTROL STRUCTURE DURING CONSTRUCTION OF ANY DETENTION/RETENTION AREA AND WILL BE REQUIRED TO CLEAN OUT THE DETENTION/RETENTION AREA BEFORE INSTALLING ANY SUB-DRAIN PIPES (IF USED).
3. ALL EROSION AND SEDIMENTATION CONTROL DEVICES WILL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL, AND SHALL BE CLEANED OUT OR REPAIRED AS REQUIRED.
4. ALL EROSION/SEDIMENTATION CONTROL WILL BE ESTABLISHED PRIOR TO ANY CONSTRUCTION , AND WILL BE MAINTAINED UNTIL THE STORMWATER FACILITIES ARE COMPLETED.
5. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO MINIMIZE DAMAGE.
6. CONTRACTOR SHALL SPRINKLE OR OTHERWISE APPLY WATER TO AFFECTED CONSTRUCTION AREAS TO CONTROL BOTH SIGNIFICANT WIND EROSION, AND FUGITIVE DUST.
7. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION ENTRANCE TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEPED AS REQUIRED TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE SHALL BE COVERED WITH A TARPULIN.
8. THE CONTRACTOR SHALL DIRECT ONSITE RUNOFF TO THE STORMWATER MANAGEMENT SYSTEM DURING CONSTRUCTION.
9. THE SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, FILLING OUT THE INSPECTION AND MAINTENANCE REPORT AND IF NECESSARY, REVISING THE STORMWATER POLLUTION PREVENTION PLAN CONSISTENT WITH MODIFICATIONS MADE DUE TO UNFORESEEN CAUSES, AS DICTATED BY FIELD CONDITIONS.
10. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT FOR INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.
11. SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO INSURE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO INSURE THAT THE FENCE POSTS ARE INSTALLED FIRMLY IN THE GROUND.
12. SILTATION ACCUMULATIONS GREATER THEN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SILTATION CONTROL BARRIER OR CONTROL DEVICES SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS. ALL SILTATION BARRIERS SHALL THEN BE RESTORED TO THE ORIGINAL CONDITIONS.
13. THE SEDIMENT BASIN SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHED 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.
14. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
15. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
16. THE LOCATION OF SILT FENCE AND OTHER BMP FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THESE FACILITIES ARE PLACED IN A LOCATION AND MANNER THAT DOES NOT CONFLICT WITH THE LIMITS OF CONSTRUCTION OR AREAS TO BE PROTECTED AS SET FORTH IN THESE PLANS.

SITE NOTES

1. ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET DOWN IN CITY OF TAMPA STORMWATER TECHNICAL MANUAL, LATEST VERSION.
2. ALL RIGHT-OF-WAY INSTALLATIONS MUST COMPLY WITH THE CITY OF TAMPA STANDARDS AND TECHNICAL MANUALS.
3. IN AREAS WHERE FILL MATERIAL IS REQUIRED, THE EXISTING VEGETATION AND ROOTS SHALL BE REMOVED PRIOR TO PLACING ANY FILL MATERIAL. THE FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 12 INCHES AS MEASURED LOOSE, AND COMPACTED TO A UNIFORM DENSITY ASTM D698. THE MATERIAL SHALL BE COMPACTED AT A MOISTURE CONTENT PERMITTING THE SPECIFIED COMPACTION. THE FILL SHALL BE TESTED BY THE CITY OF TAMPA THROUGH THE CITY INSPECTOR AND THE RESULTS SUPPLIED TO THE ENGINEER.
4. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY ON ANY CONFLICTS ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSULT WITH THE ENGINEER FOR MAKING ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS. HOWEVER, THIS IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY FOR CONSTRUCTING THE PROJECT TO ACCOMPLISH THE INTENT OF THE PLANS.
5. REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE COMMENCING CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.
6. EROSION/SEDIMENTATION CONTROL: THE CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES

- OR SILTATION CURTAIN), IF REQUIRED TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON THE GROUND, AS REQUIRED, IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT THE SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE, EITHER BY NATURAL DRAINAGE OR BY VEHICLE TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR LOCAL AUTHORITIES.
7. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. AGGREGATE SHALL CONFORM TO ASTM C33. READY MIXED CONCRETE SHALL CONFORM TO ASTM C-04. SUBSURFACE SHALL BE FREE FROM TROWEL OR MACHINE MARKS. SURFACE VARIATIONS SHALL NOT EXCEED 1/4 INCH UNDER TEN-FOOT (10') STRAIGHT EDGE.
8. ALL GRADING OF SIDEWALKS AND PEDESTRIAN WALKWAYS SHALL MEET MINIMUM 'ADA' STANDARDS. SIDEWALK CROSS SLOPES AND DRIVEWAY CROSSINGS FOR SIDEWALKS TO BE 2.0% MAX. SLOPE. ALL SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 5% WITHOUT USE OF PROPER RAMPS FOR FDOT OR FLORIDA BUILDING CODE. CONTRACTOR SHALL FIELD-VERIFY SIDEWALK FORM BOARDS PRIOR TO CONSTRUCTING WALKWAYS.
9. THE FLOOD OF RECORD PER THE CITY OF TAMPA IS NOTED AT EL 32.50 (NAVD88) PER THE 2024 HURRICANE MILTON EVENT.
10. THE SUBJECT PROPERTY IS LOCATED WITHIN FEMA FLOOD ZONE X (UNSHADED) AS INDICATED ON FEMA FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 1201140211H. THIS AREA IS OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN; THEREFORE, NO BASE FLOOD ELEVATION (BFE) IS DETERMINED BY FEMA FOR THIS ZONE.

CONSTRUCTION

1. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICES.
2. CONTRACTOR TO SOD DISTURBED RIGHT-OF-WAY WITH BAHIA SOD AND/OR LIKE KIND OF EXISTING SOD.
3. CONTRACTOR TO RESTORE DISTURBED RESIDENTIAL YARDS WITHIN CONSTRUCTION LIMITS WITH BAHIA, ST. AUGUSTINE, AND/OR LIKE KIND OF SOD.
4. CONTRACTOR SHALL RESTORE ALL NEIGHBORING RESIDENTIAL YARDS WITH LIKE KIND OF LANDSCAPING, MAILBOXES, WALK WAYS, DRIVEWAYS, ETC. EACH YARD SHALL BE RESTORED TO EXISTING CONDITIONS UP TO AND INCLUDING FROM BACK OF CURB TO RIGHT OF WAY LINE.
5. CONTRACTOR TO PROTECT EXISTING IRRIGATION SYSTEMS AND ANY OTHER UTILITIES IN RESIDENTIAL YARDS WITHIN CONSTRUCTION LIMITS AND/OR RESTORE ANY DAMAGED SYSTEMS DURING CONSTRUCTION BACK TO EXISTING CONDITIONS.
6. CONTRACTOR TO PROTECT EXISTING PRIVATE FENCES DURING CONSTRUCTION OR REPLACE IN LIKE KIND.
7. CONTRACTOR TO PROTECT THE EXISTING CONDUIT THAT IS TO REMAIN.
8. ALL REMOVAL WITHIN PROPOSED EXCAVATION AREAS IS PART OF PIPE & DITCH CONSTRUCTION.
9. CONTRACTOR SHALL CONTACT SUNSHINE ONE CALL 811 AT LEAST 48 HOURS (TWO FULL BUSINESS DAYS, EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO ANY CONSTRUCTION.
10. CONTRACTOR TO PROTECT ALL POWER POLES & SUBSURFACE UTILITIES. IN THE EVENT OF A CONFLICT THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY PROVIDER RESPONSIBLE FOR THE RELOCATION.
11. CONCRETE STRUCTURES AND JUNCTION BOXES MAY BE PRECAST OR CAST IN PLACE.
12. FOR BRICK/PAVER DRIVEWAYS THE INTENT IS TO STACK AND STORE ANY DISTURBED PAVERS, AND TO RESTORE ANY DAMAGED PAVERS AS CLOSE AS POSSIBLE.

TREE NOTES

1. ALL WORK WITHIN THE PROTECTIVE RADIUS OF THE TREES MUST BE COORDINATED WITH PLANNING AND DEVELOPMENT, IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE AND NATURAL RESOURCES SECTION WHO CAN BE REACHED AT (813) 274-3100.
2. PRIOR TO ANY CONSTRUCTION ACTIVITIES, PROTECTIVE BARRICADES SHALL BE INSTALLED AROUND ALL PROTECTED TREES AND GRAND TREES WITHIN FIFTEEN FEET OF THE FORCE MAIN OR PUMP STATION.

a. BARRICADES SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET FROM A PROTECTIVE TREE AND A MINIMUM OF TWENTY (20) FEET FROM A GRAND TREE.
3. NO CHANGES SHALL TAKE PLACE TO THE PREDEVELOPMENT CONDITIONS WITHIN THE PROTECTIVE ROOT ZONE DURING THE CONSTRUCTION PROCESS, UNLESS NOTED ON THE PLANS.
4. NO PARKING OR STORAGE OF VEHICLES, EQUIPMENT, OR MATERIALS IS ALLOWED WITHIN THE PROTECTIVE ROOT ZONE.
5. ALL TREE TRIMMING AND ROOT PRUNING MUST BE SUPERVISED BY A CERTIFIED ARBORIST AND PERFORMED CLEANLY WITH APPROVED CUTTING TYPE EQUIPMENT, SUCH AS A CHAINSAW, HAND SAW, OR OTHER CUTTING EQUIPMENT.



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DES : BA

DRN : JP

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DATE : 5/28/26

CITY of TAMPA

Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION
GENERAL NOTES

SHEET

C-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FILE SAVE DATE: 5/6/2026 3:07 PM
FILE PATH: P:\Projects24\301.2400798.001_Tampa_Stormwater_Pumping_Stations\13_Drainage
FILE NAME: SURVRD02.dwg
PLOT TIME: 3:01 PM

LEGEND:
BOB Bottom of Bank
CONC Concrete
CPVC Corrugated Polyvinyl Chloride
(D) Deed
ELEV Elevation
FIP Found Iron Pipe
FIR Found Iron Rod
FND Found Nail Disk
ID Identification
INV Invert Elev
LB Licensed Business
LS Licensed Surveyor
OHL Overhead Utility Line
(P) Plat
PSM Professional Surveyor and Mapper
PVCF Polyvinyl Chloride Fence
QL Quality Level B
RCP Reinforced Concrete Pipe
SOP Shot on Pipe
SIRC Set Iron Rod and Cap
TOB Top of Bank

SYMBOL LEGEND:
Bollard
Found Iron Rod
Set Nail and Disk
Light Pole
Light Post
Manhole - Drainage
Manhole - Storm
Mail Box
Meter - Electric
Meter - Water
Post
Shared Utility Pole
Stump
Tree - Oak
Tree - Palm
Tree - Pine
Tree - Unknown
Set Iron Rod and Cap

HATCHING LEGEND:
Asphalt
Brick
Building
Concrete

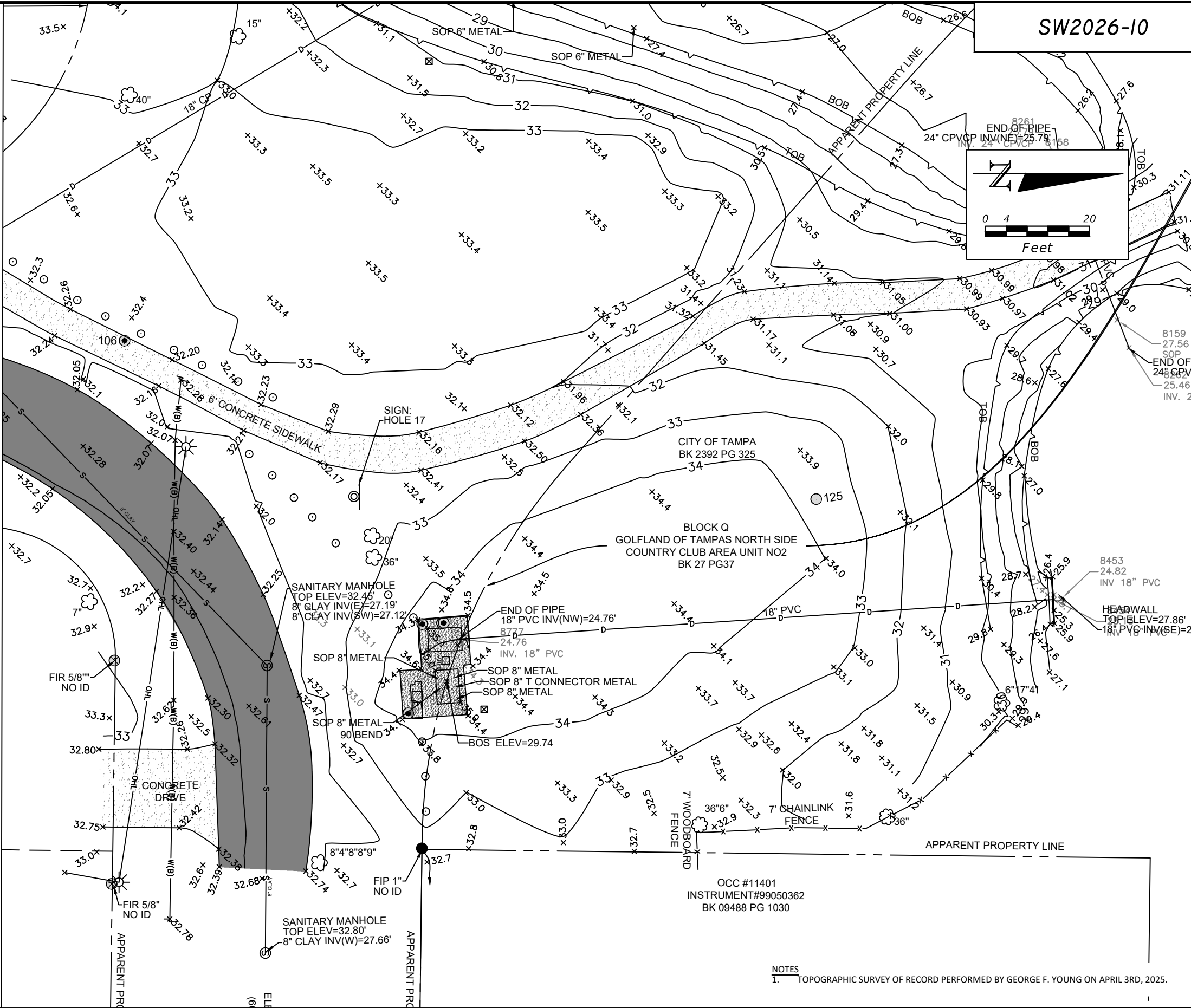
LINETYPE LEGEND:

— Buried Fiber Optic (QL B)
— Drainage Pipe
— X — Fence
— Overhead Utility Line
— Lot Line
— Right-Of-Way
— Sanitary
— Water Line (QL B)

CONTROL POINTS				
NAME	NORTHING	EASTING	ELEV	DESCRIPTION
105	1351962.92	505010.18	30.98	SND PK&D G.F.Y.
106	1352264.78	505016.50	32.18	SND PK&D G.F.Y.
107	1352306.73	505316.21	33.90	0.5" SIRC G.F.Y.
125	1352397.74	505046.99	34.28	0.5" SIRC G.F.Y.

SURVEYOR'S NOTES

- A TOPOGRAPHIC AND RECORD SURVEY AT THE INTERSECTION OF N EDISON AVE AND W ELBOW DR THEN ALONG N EDISON AVE, CITY OF TAMPA, FLORIDA, LYING IN SECTION 14, TOWNSHIP 28 SOUTH, RANGE 18 EAST.
- SURVEY DATE: APRIL 3, 2025.
- HORIZONTAL: COORDINATES OF SITE CONTROL POINTS WERE ESTABLISHED BY REAL-TIME KINEMATIC (RTK) GPS METHODOLOGY, USING THE FLORIDA PERMANENT REFERENCE NETWORK (FPRN) FOR CORRECTIONS AND TIED TO NGS MONUMENT E A I (PID=DG8947, NORTHING=1,346,545.76, EASTING=499,955.68.) COORDINATES ARE RELATIVE TO THE NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83/11), FLORIDA STATE PLANE COORDINATE SYSTEM, WEST ZONE, U.S. SURVEY FEET.
- VERTICAL: ELEVATIONS OF SITE CONTROL POINTS WERE ESTABLISHED BY DIFFERENTIAL DIGITAL LEVEL, AND ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD88) BASED ON SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT BENCHMARK 670748 (ELEVATION=35.05 FEET).
- TOPOGRAPHIC SURVEY INCLUDES ANY HARDSCAPE ELEMENTS AND ABOVE GROUND UTILITIES, INCLUDING BUT NOT LIMITED TO ALL RETAINING WALLS, FENCES, CULVERTS, DRAINAGE STRUCTURES, PAVED DITCHES, WATER METERS, VALVES, JUNCTION BOXES, MANHOLES, DRIVEWAYS, PARKING LOTS, UTILITY/LIGHT POLES, OVERHEAD UTILITY LINES, TREES OF 4" DIAMETER OR GREATER, AND ANY OTHER SIGNIFICANT FEATURE WITHIN THE SURVEY AREAS IDENTIFIED ABOVE. VISIBLE ABOVE GROUND UTILITIES ARE SHOWN HEREIN HOWEVER ADDITIONAL UTILITIES MAY EXIST. THE LOCATION OF FOOTERS, FOUNDATIONS AND STRUCTURES BENEATH THE GROUND SURFACE HAS NOT BEEN DETERMINED.
- EXCLUDED FROM THIS SURVEY ARE HEDGES, SMALL BUSHES, SPRINKLER SYSTEMS AND NON-PERMANENT LANDSCAPING SUCH AS PLANTERS WITH TIMBER BORDERS, AND VERTICAL LOCATION OF OVERHEAD UTILITY LINES.
- RECORD SURVEY INCLUDES APPARENT RIGHT-OF-WAY AND SUBSURFACE UTILITIES.
- THIS IS NOT A BOUNDARY SURVEY. APPARENT RIGHT-OF-WAY AND PROPERTY LINES SHOWN HEREIN ARE BASED UPON PLATS AND DEEDS AVAILABLE TO THE PUBLIC ON THE HILLSBOROUGH COUNTY PROPERTY APPRAISER WEBSITE, AND TIED TO LIMITED FOUND MONUMENTATION. A TITLE SEARCH WAS NOT OBTAINED FOR THIS SURVEY. APPARENT RIGHT-OF-WAY SHOULD BE CONSIDERED APPROXIMATE AND USED FOR REFERENCE PURPOSES ONLY. ADDITIONAL EASEMENTS MAY EXIST.
- A TICKET WAS FILED WITH SUNSHINE ONE-CALL TO MARK SUBSURFACE UTILITIES IN THE FIELD. MARKINGS WERE FOUND AND LOCATED BY GEORGE F. YOUNG INC. ON SUBSEQUENT FIELD VISITS AND SHOWN HEREIN AS QUALITY LEVEL B UTILITY DESIGNATION. GEORGE F. YOUNG INC. AND THE UNDERSIGNED MAKE NO REPRESENTATION AS TO THE ACCURACY OF SAID MARKINGS OR LACK THEREOF.
- FORTY-EIGHT (48) HOURS BEFORE DIGGING, BORING, PILE-DRIVING, PLANTING, ETC, CALL SUNSHINE STATE ONE CALL SYSTEM, 1-800-432-4770 SO THAT UNDERGROUND UTILITIES MAY BE FIELD SPOTTED.
- THIS MAP OF SURVEY IS INTENDED TO BE DISPLAYED AT A SCALE OF 1" = 10' OR 1:120.
- ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
- CERTIFICATION IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE SIGNING SURVEYOR AND MAPPER BASED ON THE SURVEYOR AND MAPPER'S KNOWLEDGE AND INFORMATION, AND IT IS NOT A GUARANTEE OR WARRANTY, EXPRESS OR IMPLIED.
- THIS MAP OF SURVEY OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
- PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
- THIS REPORT HAS BEEN DIGITALLY SIGNED AND SEALED UNDER RULE 5J-17.062 OF THE FLORIDA ADMINISTRATIVE CODE.



NOTES
1. TOPOGRAPHIC SURVEY OF RECORD PERFORMED BY GEORGE F. YOUNG ON APRIL 3RD, 2025.



15310 AMBERLY DR., SUITE 310
TAMPA, FL 33647

APPROVED BY:

BRUNO J. ARRIOLA, P.E.
FLA. REG. NO. 88984
DRMP, INC.
15310 AMBERLY DR., SUITE 310
TAMPA, FL 33647

DATE

No.

DATE

REVISIONS

3

2

1

DES : KD
DRN : PM
CKD : MC
DATE : 4/3/25

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION
EXISTING CONDITIONS

SHEET
C-2

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

A north arrow pointing upwards and a scale bar labeled "Feet" with markings at 0, 2, and 10.

LEGEND

- AREA TO BE DISTURBED/GRADED
- SILT FENCE PER DETAIL 2 ON SHEET C-5
- TREE BARRICADE PER DETAIL 1 ON SHEET C-5

SANITARY MANHOLE
TOP ELEV=32.45'
8" CLAY INV(E)=27.19'
8" CLAY INV(SW)=27.12'

END OF PIPE
18" PVC INV(NW)=24.76'

EXIST. LIGHT POLE TO REMAIN, PROTECT IN PLACE

REMOVE AND REPLACE EXIST. BOLLARDS IN PLACE SEE DETAIL 4 ON SHEET C-5

CONCRETE DRIVE

W ELBOW DRIVE

SANITARY MANHOLE
TOP ELEV=32.80'
8" CLAY INV(W)=27.66'

VAULT

8"4"8"8"9"

FIP 1" NO ID

APPROXIMATE

7' WOODBOARD

7' CHAINLINK
FENCE

OCC #11401
INSTRUMENT#99050362
BK 09488 PG 1030

AREA TO BE DISTURBED/GRADED

SILT FENCE PER DETAIL 2
ON SHEET C-5

TREE BARRICADE PER
DETAIL 1 ON SHEET C-5

- 1) EXISTING TREE TO BE PROTECTED DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN PLANS. SEE DETAIL 1 ON SHEET C-5 FOR MORE INFORMATION.
- 2) EXISTING UTILITIES TO BE PROTECTED DURING CONSTRUCTION.
- 3) ALL EXISTING FEATURES TO REMAIN UNLESS OTHERWISE NOTED IN PLANS.
- 4) PROVIDE TREE BRANCH TRIMMING AS NECESSARY TO MEET REQUIRED CLEARANCES BY GENSET ENCLOSURE MANUFACTURER.



DRMP
Design - Research - Marketing - Planning

BRUNO J. ARRIOLA, P.E. FLA. REG. NO. 88984 DRMP, INC. 15310 AMBERLY DR., SUITE 310 TAMPA, FL 33647	DATE
--	------

3		
2		
1		

DES : BA
DRN : DM
CKD : BA
DATE : 5/28/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY & RELIABILITY IMPROVEMENTS PENALTY LAKE PUMP STATION SITE PREPARATION

SHEET
C-3

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FILE SAVE DATE: 5/20/2026 10:13 AM
FILE PATH: P:\Projects2\301.2400798.001_Tampa_Stormwater_Pumping_Stations\13_Drainage
FILE NAME: SITEPREP02.dwg PLOT TIME: 3:02 PM



- FLOW ARROW

SHEET
C-4



THE DRIPLINE OF A TREE IS THE IMAGINARY, VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND. FIG. A



FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY HORIZONTAL MEMBERS OF NO LESS THAN 1" X 4" LUMBER; OR UPRIGHT STAKES SPACED AT 5' INTERVALS OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY SILT SCREEN FABRIC OR MATERIAL OF COMPARABLE DURABILITY. FIG. B



OTHER METHODS OF DEMARCATION WILL BE CONSIDERED DEPENDING
UPON THE CHARACTERISTICS OF THE SITE



SCALE
NTS

 $\mathcal{I}$ 

SCALE
NTS

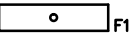
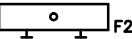
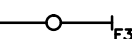
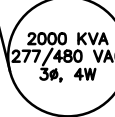
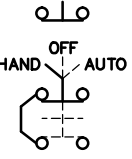
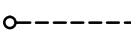
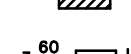
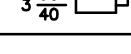
(c)



SCALE
NTS

1

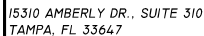
ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
 F1	LED FIXTURE – CEILING MNTD., F1 INDICATES FIXTURE TYPE.		JUNCTION BOX – SIZED PER NEC		COMBINATION DISCONNECT & MAGNETIC MOTOR STARTER		LEVEL SWITCH, NORMALLY OPEN
 F2	LED FIXTURE – WALL MNTD., F2 INDICATES FIXTURE TYPE.		MAGNETIC MOTOR STARTER		MOTOR, 100 HP, 460 VAC, 3Ø		LEVEL SWITCH, NORMALLY CLOSED
 F3	STRIP FIXTURE, F3 INDICATES FIXTURE TYPE.		HORSEPOWER RATED MANUAL STARTER				LIMIT SWITCH OR TORQUE SWITCH, NORMALLY OPEN
	LED FIXTURE – CEILING MNTD., F4 INDICATES FIXTURE TYPE.		STEP-DOWN, DRY-TYPE TRANSFORMER				LIMIT SWITCH OR TORQUE SWITCH, NORMALLY CLOSED
	LED FIXTURE – WALL MNTD., F5 INDICATES FIXTURE TYPE.		MOTOR OPERATED VALVE		EMERGENCY GENERATOR, 2000 KVA.		PRESSURE SWITCH, NORMALLY OPEN
	LED EMERGENCY LIGHT, MNTD. 18” BELOW CLG., F6 INDICATES FIXTURE TYPE.		WELD, BY EXOTHERMIC WELD PROCESS (CADWELD), CONNECTION POINT.				PRESSURE SWITCH, NORMALLY CLOSED
	EXIT LIGHT – TOP MNTD., F7 INDICATES FIXTURE TYPE.		DOWN CONDUCTOR TO GROUND ROD		NEMA SIZED MOTOR STARTING CONTACTOR w/ 120 VAC COIL & MOTOR OVERLOAD ELEMENTS SIZED w/ MOTOR NAMEPLATE DATA.		FLOW SWITCH, NORMALLY OPEN
	EXIT LIGHT – BACK MNTD., F8 INDICATES FIXTURE TYPE.	-----	CONDUIT IN SLAB OR BURIED		STEP-DOWN TRANSFORMER, RATING AS INDICATED ON DRAWINGS.		FLOW SWITCH, NORMALLY CLOSED
S	SINGLE POLE SWITCH 20A, 120/277V, CTR. @ 50” AFF.	— — — — —	CONDUIT CONCEALED IN CLG. OR WALL		POWER COMPANY METER, RATING AS INDICATED ON DRAWINGS. CENTER METER 4’-6” ABOVE FINISHED GRADE.		TEMPERATURE SWITCH, NORMALLY OPEN
S ₂	DOUBLE POLE SWITCH 20A, 120/277V, CTR. @ 50” AFF.	-----	CONDUIT EXPOSED		KEYED NOTE SYMBOL, REFERENCE KEYED NOTE #3.		TEMPERATURE SWITCH, NORMALLY CLOSED
S ₃	THREE-WAY SWITCH 20A, 120/277V, CTR. @ 50” AFF.	— — — — — T — — — — —	TELEPHONE CONDUIT CONCEALED IN CLG. OR WALL		CIRCUIT BREAKER, 3P, 50A		PULL CORD SAFETY SWITCH, NORMALLY OPEN
S ₄	FOUR-WAY SWITCH 20A, 120/277V, CTR. @ 50” AFF.	----- T -----	TELEPHONE CONDUIT IN SLAB OR UNDERGROUND		PUSH BUTTON STATION		PULL CORD SAFETY SWITCH, NORMALLY CLOSED
S _D	INCAND. ROTARY DIMMER, CTR. @ 50” AFF.	— OH —	OVERHEAD PRIMARY FEEDER		UNION & SEALING FITTING, SIZED PER CONDUIT.		MOMENTARY PUSH BUTTON, NORMALLY OPEN
S _K	KEY OPERATED SWITCH, CTR. @ 50” AFF.	----- UG -----	UNDERGROUND PRIMARY FEEDER		LED PILOT LIGHT, PUSH TO TEST, x INDICATES COLOR, G=GREEN, R=RED, B=BLUE, A=AMBER		MOMENTARY PUSH BUTTON, NORMALLY CLOSED
S _M	MANUAL MOTOR STARTER w/ THERMAL OVERLOAD ELEMENTS, CTR. @ 50” AFF.	----- FO -----	FIBER OPTIC CABLE		LED PILOT LIGHT, x INDICATES COLOR, G=GREEN, R=RED, B=BLUE, A=AMBER		HAND-OFF-AUTO (HOA) SWITCH, SHOWN IN THE HAND POSITION
S _P	SWITCH WITH PILOT LIGHT 20A, 120/277V, CTR. @ 50” AFF.		CONDUIT IN SLAB OR UNDERGROUND – UP		ALARM STROBE		TD5 – TIME DELAY RELAY
	20A, 125V, 3-WIRE DUPLEX GROUNDING RECEPT., CTR. @ 18” AFF.	← — — — —	CONDUIT EXPOSED – DOWN		AUDIBLE ALARM HORN		TD5 – TIMED CONTACT, NORMALLY OPENED, TIMED CLOSED.
	20A, 125V, 3-WIRE GROUNDING DUPLEX RECEPT., CTR @ 50” AFF OR 4” ABOVE COUNTER.		120V, 1Ø CIRCUIT HOMERUN TO 1-POLE BRKR.		TERMINAL FOR CONNECTION TO FIELD DEVICE		TD5 – TIMED CONTACT, NORMALLY OPENED, TIMED OPEN.
	20A, 125V, 3-WIRE SINGLE GROUNDING RECEPT., CTR. @ 18” AFF.		277V, 1Ø CIRCUIT HOMERUN TO 1-POLE BRKR.		PLC TERMINAL CONNECTION		TD5 – TIMED CONTACT, NORMALLY CLOSED, TIMED OPEN.
	20A, 125V, 3-WIRE DUPLEX RECEPT. FED FROM DEDICATED CIRCUIT.		208V OR 480V, 1Ø CIRCUIT HOMERUN TO 2-POLE BRKR.		R2 – RELAY COIL		TD5 – TIMED CONTACT, NORMALLY CLOSED, TIMED OPEN.
	3-WIRE DUPLEX RECEPT., TOP SWITCHED		208V OR 480V, 3Ø CIRCUIT HOMERUN TO 3-POLE BRKR.		R2 – RELAY CONTACT, NORMALLY OPEN		TD5 – TIMED CONTACT, NORMALLY CLOSED, TIMED CLOSED.
	20A, 125V, 3-WIRE QUADRUPLIX GROUNDING.		SLASH MARKS DENOTE NO. OF WIRES; LONG – NEUTRAL, X – GROUND, O – ISOLATED GROUND.		R2 – RELAY CONTACT, NORMALLY CLOSED		ELAPSED TIME METER
	20A, 125V, 3-WIRE, QUADRUPLIX GROUNDING RECEPTACLE.		BRANCH CIRCUIT PANELBOARD, TOP @ 6’-0” AFF.		SOLENOID VALVE		SURGE PROTECTIVE DEVICE
	20A, 125V, 3-WIRE DUPLEX FLOOR MNTD. RECEPT.		MAIN DISTRIBUTION PANELBOARD OR SWITCHBOARD				
	SPECIAL PURPOSE RECEPT., RATING AS SHOWN.		HEAVY DUTY SAFETY SWITCH, 60A, 3-POLE, FUSED @ 40A, TOP @ 6’-0” AFF.				
	OUTLET BOX w/ BLANK COVER. FLOOR MNTD.						



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ABBREVIATIONS							
Ø	PHASE	DN	DOWN	LA	LIGHTNING ARRESTER	PWR	POWER
3P	3 POLE	DWG	DRAWING	LPG	LIGHTING PANEL "G"	RECEPT.	RECEPTACLE
A	AMPERE	EC	EMPTY CONDUIT	LS	LIFT STATION	REQ'D.	REQUIRED
ABV	ABOVE	ELEC	ELECTRICAL, ELECTRIC	LTG	LIGHTING	RTU	REMOTE TELEMETRY UNIT
AF	AMPERE FRAME	ELEV	ELEVATOR, ELEVATION	MACH	MACHINE	RVSSS	REDUCED VOLTAGE SOLID STATE STARTER
AFD	ADJUSTABLE FREQUENCY DRIVE	EM	EMERGENCY	MCB	MAIN CIRCUIT BREAKER	RWHSP	RECLAIMED WATER HIGH SERVICE PUMP
AFF	ABOVE FINISHED FLOOR	EMT	ELECTRICAL METALLIC TUBING	MCC	MOTOR CONTROL CENTER	SA	SURGE ARRESTER
AFG	ABOVE FINISHED GRADE	EO	ELECTRICALLY OPERATED	MCH	SPRING CHARGING MOTOR	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
AIC	AMPERE INTERRUPTING CAPACITY	EQUIP	EQUIPMENT	MECH	MECHANICAL	SPD	SURGE PROTECTIVE DEVICE
AT	AMPERE TRIP	ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	MFR.	MANUFACTURER	SS	STAINLESS STEEL
ATS	AUTOMATIC TRANSFER SWITCH	ESD	EMERGENCY SHUTDOWN	MGD	MILLION GALLONS PER DAY	SW	SWITCH
AWG	AMERICAN WIRE GAUGE	EX	EXISTING	MIN.	MINIMUM	SWBD	SWITCHBOARD
BLDG.	BUILDING	EXH	EXHAUST	MLO	MAIN LUGS ONLY	TC	TRAY CABLE
BRKR.	BREAKER	F	FUSE	MNT.	MOUNT	TELE	TELEPHONE
C.	CONDUIT	FA	FIRE ALARM	MNTD.	MOUNTED	THRU	THROUGH
c/w	COMPLETE WITH	FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	MNTG.	MOUNTING	TQ	TORQUE SWITCH
CAB	CABINET	FL	FLOOR	N.C.	NORMALLY CLOSED	TR	TRIP
CAT. NO.	CATALOG NUMBER	FLA	FULL LOAD AMPERES	NEC	NATIONAL ELECTRICAL CODE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
CB	CIRCUIT BREAKER	FTS	FLOAT TEST SWITCH	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	TYP.	TYPICAL
CKT.	CIRCUIT	FUT	FUTURE	NEUT.	NEUTRAL	UG	UNDERGROUND
CLG.	CEILING	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NF	NON-FUSED	U.O.N.	UNLESS OTHERWISE NOTED
CM	CENTIMETER	GND.	GROUND	N.O.	NORMALLY OPENED	UPS	UNINTERRUPTIBLE POWER SUPPLY
CO	CONDUIT ONLY	HOA	HAND OFF AUTO	NO.	NUMBER	V	VOLT
CO.	COMPANY	HP	HORSEPOWER	NTS	NOT TO SCALE	VAC	VOLTS ALTERNATING CURRENT
COORD.	COORDINATE	HT	HEIGHT	PB	PUSH BUTTON	VFD	VARIABLE FREQUENCY DRIVE
CT	CURRENT TRANSFORMER	IG	ISOLATED GROUND	PLC	PROGRAMMABLE LOGIC CONTROLLER	W	WIRE
CTR.	CENTER	JB, JBOX	JUNCTION BOX	PNL	PANEL	w/	WITH
CTRD.	CENTERED	KCMIL	1000 CIRCULAR MILS	PPX	POWER PANEL "X"	WP	WEATHERPROOF
DEG.	DEGREE	KVA	KILOVOLT AMPERES	PT.	POINT	XFMR	TRANSFORMER
DIA.	DIAMETER	KW	KILOWATTS	PVC	POLYVINYL CHLORIDE		
DISC	DISCONNECT						



ENGINEER OF RECORD:
BOB E. HALLMAN, P.E.
FLORIDA REGISTRATION NO. 20761

1

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

E2-2

GENERAL NOTES:

SW2026-10

1. PLANS ARE DESIGNED IN ACCORDANCE WITH THE 8TH EDITION 2023 OF THE FLORIDA BUILDING CODE, THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND CHAPTER 5 OF THE CITY OF TAMPA CODE AND SHALL BE INSPECTED BY THE CITY OF TAMPA/HILLSBOROUGH COUNTY ELECTRICAL INSPECTORS AS APPLICABLE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
2. ALL SHOP DRAWINGS SUBMITTED TO ENGINEER FOR APPROVAL SHALL BE ORIGINAL COPIES. COPIES OF SHOP DRAWINGS OR DATA SHEETS TRANSMITTED BY FACSIMILE (FAX) WILL NOT BE REVIEWED.
3. SHOP DRAWINGS SUBMITTED FOR REVIEW MORE THAN TWICE WILL BE REVIEWED BY THE ENGINEER AT THE CONTRACTOR’S EXPENSE. CHARGES FOR THE REVIEW OF SHOP DRAWINGS AFTER THE SECOND SUBMITTAL WILL BE INVOICED TO THE CONTRACTOR. SUCH CHARGES WILL BE BILLED AT THE ENGINEER’S STANDARD HOURLY RATE.
4. SHIELD AND DRAIN WIRE FOR EACH ANALOG SIGNAL (4–20 mA) CABLE SHALL BE GROUNDED AT THE PLC ONLY. THE SHIELD AND DRAIN WIRE AT EACH FIELD DEVICE SHALL BE NEATLY TRIMMED & TAPED w/ (2) LAYERS OF VINYL ELECTRICAL TAPE (SCOTCH 33+).
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL AND SHALL RECEIVE SAID APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
6. ALL UNDERGROUND CONDUITS SHALL BE BURIED w/ A MINIMUM OF 24” COVER UNLESS OTHERWISE NOTED.
7. ALL WIRING SHALL BE IDENTIFIED w/ NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMs. MARKERS SHALL BE THOMAS & BETTS INSTA–CODE CLIP–ON MARKERS OR APPROVED EQUAL.
8. ALL CIRCUITS SHALL HAVE GROUNDING CONDUCTORS ROUTED INSIDE THE CONDUIT w/ POWER, CONTROL & INSTRUMENTATION CONDUCTORS.
9. ALL POWER CONDUCTORS SHALL BE TESTED WITH A 600 VOLT INSULATION RESISTANCE TESTER “MEGGER”. INSULATION READINGS SHALL BE A MINIMUM OF 20 MEGOHMS TO GROUND (DO NOT TEST LOW–VOLTAGE CONTROLS). INSULATION READINGS THAT ARE LESS THAN 20 MEGOHMS SHALL REQUIRE THE REPLACEMENT OF THE CONDUCTOR OR MOTOR AS APPLICABLE.
10. NEATLY COIL & TAPE SPARE CONDUCTORS w/ VINYL ELECTRICAL TAPE (SCOTCH 33+) U.O.N.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS. NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
12. LIQUDTIGHT FLEXIBLE METALLIC CONDUIT CONNECTIONS SHALL NOT EXCEED A LENGTH OF 18”.
13. ALL THREADED CONNECTIONS SHALL BE COATED w/ COPPER SHIELD ANTI–SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B).
14. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC UNLESS OTHERWISE NOTED. CONTRACTOR SHALL OPTIMIZE THE CONDUIT ROUTING, TAKING INTO ACCOUNT THE FIELD CONDITIONS AND THE FINAL EQUIPMENT SELECTED AND APPROVED IN THE SUBMITTALS.
15. PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND TO 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.
16. PROVIDE PVC SLEEVES FOR ALL METALLIC CONDUIT PENETRATIONS THROUGH CONCRETE. PROVIDE STAINLESS STEEL LINK SEAL BETWEEN THE PVC SLEEVE & CONDUIT.
17. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5’–0” INTERVALS.
18. ALL FASTENING AND MOUNTING HARDWARE SHALL BE 316 SS. CAD PLATED HARDWARE WILL NOT BE ACCEPTED.
19. ALL UNISTRUT SHALL BE 1 5/8” x 1 5/8” x 12 GA. 316 STAINLESS STEEL.
20. EACH DISCONNECTING MEANS SHALL BE LEGIBLY MARKED TO INDICATE ITS PURPOSE. THIS MARKING SHALL INCLUDE THE IDENTIFICATION AND LOCATION OF THE CIRCUIT SOURCE THAT SUPPLIES THE DISCONNECTING MEANS.

21. CONTRACTOR SHALL FIELD VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATINGS PRIOR TO CONNECTING.
22. ALL SWITCHBOARDS, SWITCHGEAR AND PANELBOARDS INSTALLED BY THE CONTRACTOR SHALL BE MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER ORIGINATES.
23. ALL CONDUITS ROUTED IN CONCRETE SHALL BE INSTALLED WITH A SEPARATION BETWEEN CONDUITS OF NOT LESS THAN 3 DIAMETERS (CENTER–TO–CENTER) & IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE STANDARD NO. 318
24. ALL CONDUIT EXPOSED ABOVE GRADE SHALL BE RIGID HEAVY WALL ALUMINUM, THROUGH AND INCLUDING THE FIRST 90 DEGREE ELBOW (OR EQUIVALENT SET OF FITTINGS) INSTALLED BELOW GRADE. ALL PVC CONDUIT SHALL BE SCHEDULE 80. CONNECTIONS TO PVC CONDUIT SHALL BE MADE w/ A RIGID ALUMINUM TO PVC CONDUIT ADAPTER. ALL BELOW GRADE CONDUIT SHALL BE PVC.
25. A POINT–TO–POINT LOOP FIELD VERIFICATION SHALL BE PERFORMED ON EACH INSTRUMENTATION & CONTROL LOOP BY THE CONTRACTOR. THIS VERIFICATION SHALL BE WITNESSED BY A REPRESENTATIVE OF THE OWNER PRIOR TO ENERGIZING THE SYSTEMS.
26. CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
27. ALL PANELS, PANEL COMPONENTS, DISCONNECTS, SWITCHES & 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. EDGES OF NAMEPLATES SHALL BE BEVELED 45°. THE NAMEPLATES SHALL BE SECURED TO EQUIPMENT WITH STAINLESS STEEL SCREWS OR RIVETS. THE USE OF GLUE IS NOT PERMITTED.
28. ALL INSTALLED COMPONENTS SHALL BE LISTED BY UNDERWRITERS LABORATORY (UL), OR SIMILAR NATIONALLY RECOGNIZED TESTING LABORATORY.
29. ALL EQUIPMENT SHALL BE INSTALLED AT AN ELEVATION A MINIMUM OF 12 INCHES ABOVE THE FLOODPLAIN ESTABLISHED BY FEMA AND/OR LOCAL AUTHORITIES.
30. REFERENCE PLAN & SECTION DRAWINGS FOR EQUIPMENT LOCATIONS.
31. COORDINATE ALL INSTALLATIONS w/ ALL OTHER TRADES.
32. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS & ACTUAL CONDITIONS ARE DISCOVERED, INCLUDING AS–BUILT, LOOP & POINT–TO–POINT DRAWINGS.
33. ALL “AS BUILT” DRAWINGS PROVIDED BY THE CONTRACTOR SHALL BE SIGNED AND DATED WITH CHANGES CLEARLY NOTED IN RED. ADDITIONALLY, THE PRINTED NAME OF THE INDIVIDUAL SIGNING THE “AS BUILT” DRAWINGS ALONG WITH THAT PERSON’S COMPANY AFFILIATION SHALL BE INCLUDED. IF NO CHANGES WERE MADE DURING CONSTRUCTION, A NOTE DESIGNATING “NO CHANGES” SHALL BE INCLUDED ON THE “AS BUILT” DRAWINGS. PROVIDE “AS–BUILT” DRAWINGS IN PDF FORMAT.
34. ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR CONTRACTOR’S REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID & PRIOR TO COMMENCING CONSTRUCTION.
35. PROVIDE A MINIMUM OF 3’–0” CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE w/ ARTICLE 110 OF THE NEC.
36. ALL CONDUIT TRENCHES SHALL BE DUG BY HAND TO AVOID DAMAGING UNDERGROUND PIPING AND UTILITIES.
37. ALL UNDERGROUND CONDUITS SHALL BE ENCASED IN STEEL REINFORCED CONCRETE.
38. ALL CATEGORY 6A DATA CABLES SHALL BE FOUR (4) BONDED PAIRS OF NO. 23 AWG SOLID COPPER WIRE w/ POLYETHYLENE INSULATION. INDIVIDUAL PAIRS SHALL BE SHIELDED w/ OVERLAPPED ALUMINUM FOIL–POLYESTER (BELDFOIL) PROVIDING 100% SHIELD COVERAGE & AN OVERALL TINNED BRAIDED SHIELD PROVIDING 30% COVERAGE. THE OUTER JACKET SHALL BE PVC & YELLOW IN COLOR. THE CABLE SHALL HAVE A UL VOLTAGE RATING OF 300V RMS. BELDEN CAT. NO. 10GXE02. THE DATA CABLE SHALL BE TERMINATED w/ CATEGORY 6A, 10GX SHIELDED MODULAR PLUGS. BELDEN CAT. NO. RVAFPSME–S1
39. ALL CONTROL WIRING SHALL BE STRANDED XHHW–2 COPPER, MINIMUM AWG #14. INSTALL FERRULES FOR ALL WIRE TERMINATIONS SMALLER THAN #8 AWG.
40. PROVIDE FINGER SAFE DISTRIBUTION BLOCKS.
41. ARC FLASH HAZARD ANALYSIS SHALL BE PROVIDED BY CONTRACTOR POST CONSTRUCTION PER SPECIFICATIONS.



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			3						
			2						
			1						

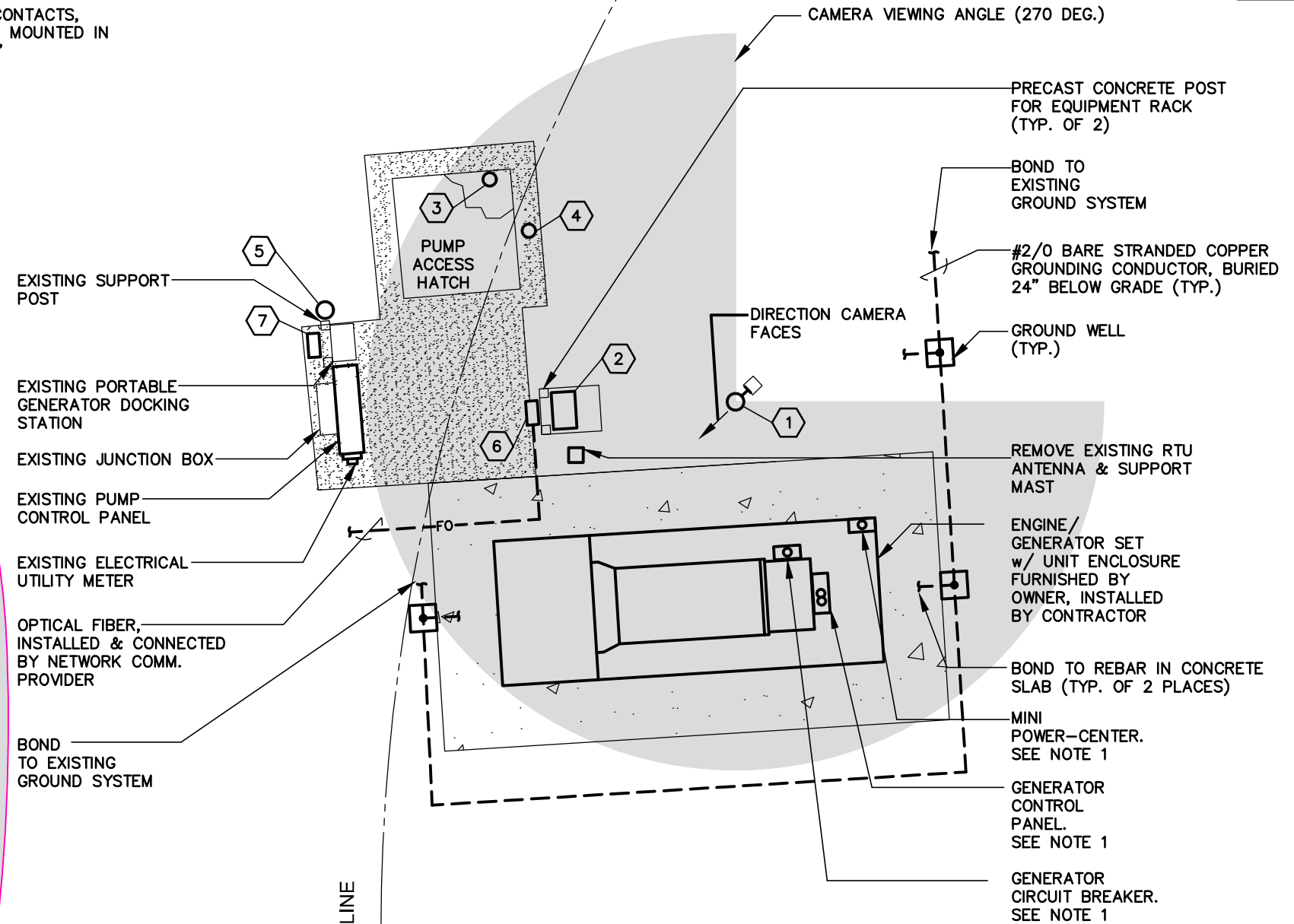
KEYED NOTES:

- 1 NETWORK CAMERA MOUNTED ON A 20' CONCRETE POLE. COORDINATE CAMERA LOCATION & ORIENTATION w/ OWNER. REFERENCE NETWORK CAMERA DETAILS.
- 2 3P, 200A CIRCUIT BREAKER TYPE, AUTOMATIC TRANSFER SWITCH (ATS) w/ AUXILIARY CONTACTS, TIME DELAYS, ENGINE STARTING CONTACTS, INSULATED NEUTRAL BLOCK & PILOT LIGHTS MOUNTED IN A NEMA 4X SS ENCLOSURE. EATON ATC-900 SERIES. MOUNT TOP OF ENCLOSURE 6'-0" ABOVE FINISHED GRADE. REFERENCE TYPICAL ELECTRIC EQUIPMENT MOUNTING DETAILS
- 3 REMOVE EXISTING PULSAR ULTRASONIC LEVEL TRANSDUCER & ASSOCIATED CABLE.
- 4 PULSAR RADAR-TYPE LEVEL TRANSDUCER MOUNTED ON 8" DIAMETER PIPE. REFERENCE WET WELL RADAR LIQUID LEVEL SENSOR - MOUNTING DETAIL. COORDINATE LOCATION w/ OWNER.
- 5 RAIN GAUGE w/ 6" RECEIVING ORIFICE DIAMETER MOUNTED ON EXISTING CONCRETE POST. REFERENCE RAIN GAUGE DETAILS.
- 6 NETWORK COMMUNICATIONS ENCLOSURE. MOUNT ON CONCRETE SUPPORT POSTS. REFERENCE NETWORK COMMUNICATIONS DIAGRAM.
- 7 CELLULAR ANTENNA ENCLOSURE. MOUNT ON EXISTING SUPPORT POSTS w/ SS UNISTRUT. REFERENCE NETWORK COMMUNICATIONS DIAGRAM.

NOTES:

1. PROVIDED BY ENGINE/GENERATOR SET SUPPLIER.

SW2026-10



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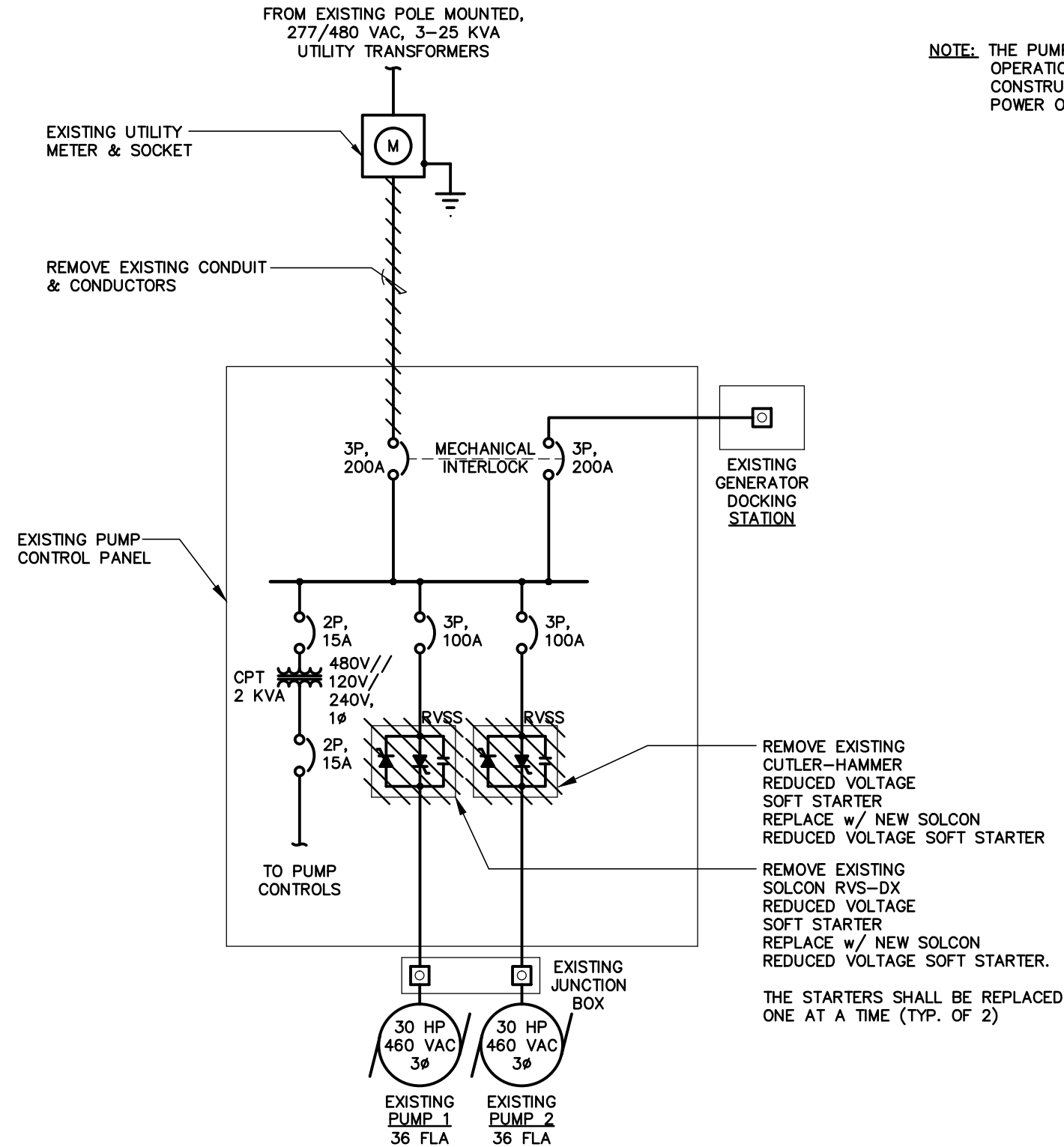
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Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
ELECTRICAL SITE PLAN

SHEET

E2-4

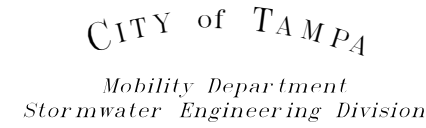
NOTE: THE PUMP STATION SHALL REMAIN OPERATIONAL AT ALL TIMES THROUGHOUT CONSTRUCTION. COORDINATE ANY POWER OUTAGE w/ OWNER.



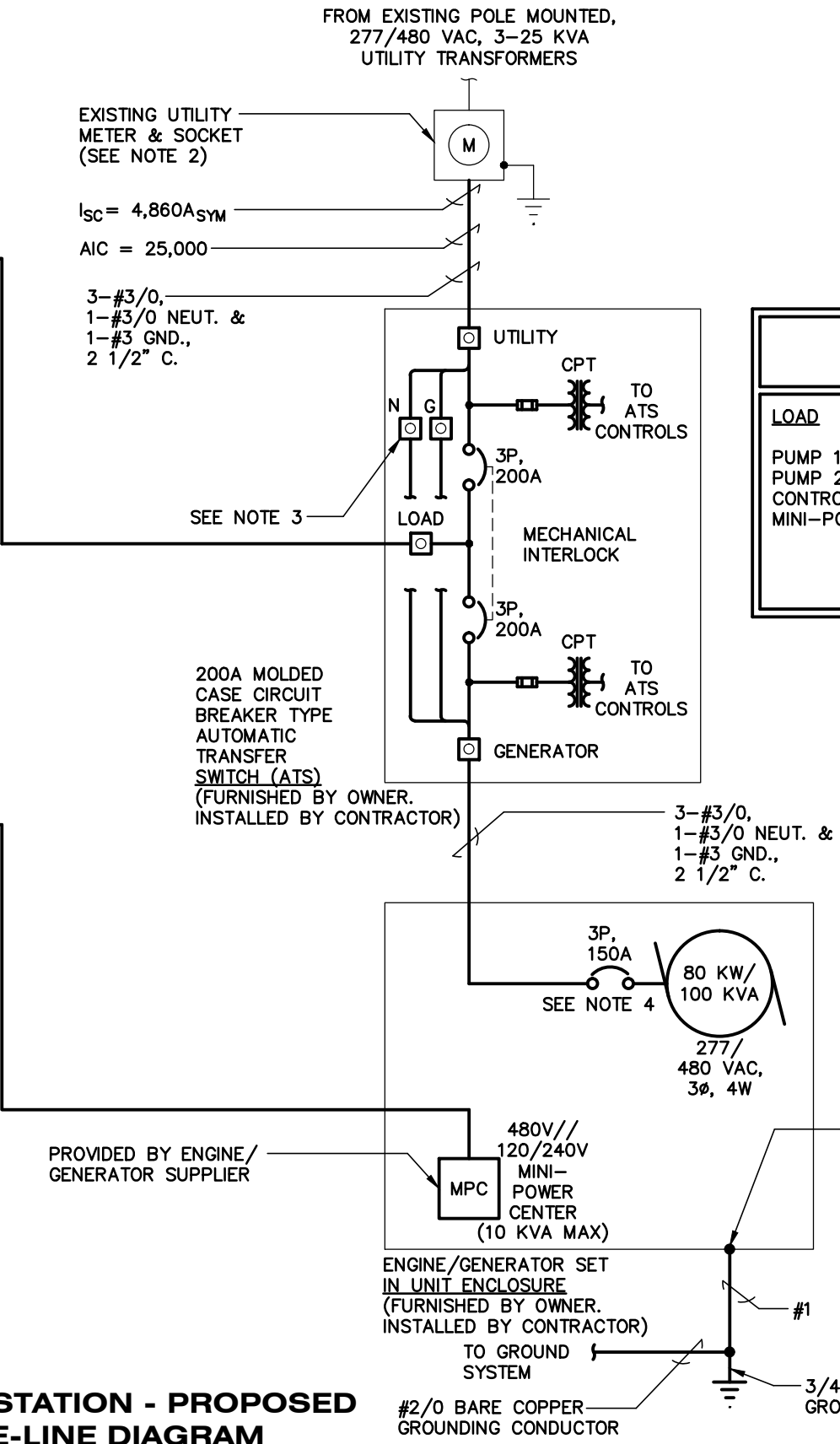
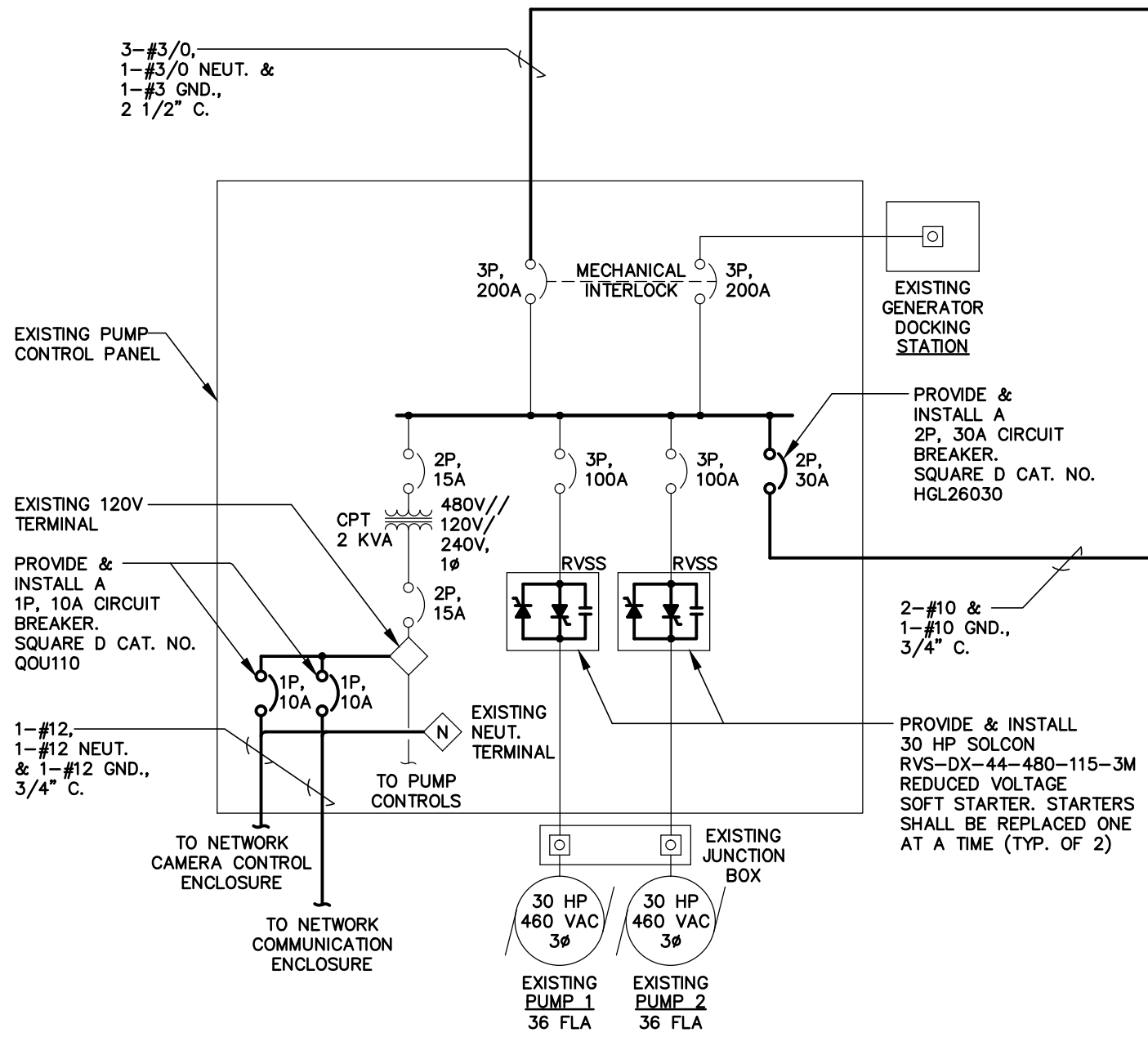
**PENALTY LAKE PUMP STATION - EXISTING
CONDITION & DEMOLITION PLAN**



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			3						
			2						
			1						

NOTE: THE PUMP STATION SHALL REMAIN OPERATIONAL AT ALL TIMES THROUGHOUT CONSTRUCTION. COORDINATE ANY POWER OUTAGE w/ OWNER.



LOAD SUMMARY		
277/480 VAC, 3Ø, 4W		
LOAD	CONNECTED	DEMAND
PUMP 1	28.7 KVA	28.7 KVA
PUMP 2	28.7 KVA	28.7 KVA
CONTROLS	2.0 KVA	2.0 KVA
MINI-POWER CENTER	10.0 KVA	4.0 KVA
TOTAL	69.4 KVA	63.4 KVA

- NOTES:**
1. LIGHT LINES INDICATE EXISTING INSTALLATIONS.
 2. ENSURE THE NEUTRAL IN THE UTILITY METER IS BONDED TO THE EXISTING GROUND SYSTEM.
 3. THE NEUTRAL AT THE ATS & THE GENERATOR SHALL BE ISOLATED FROM GROUND.
 4. DO NOT GROUND THE GENERATOR NEUTRAL AT THE GENERATOR.

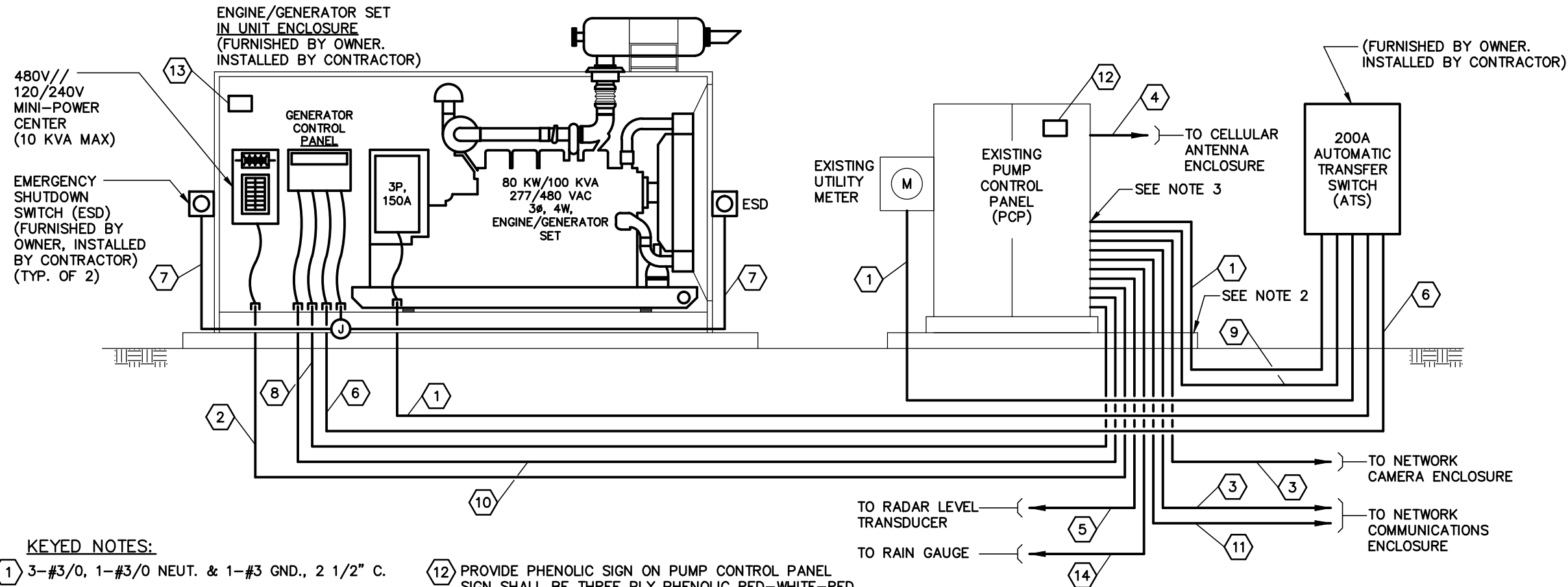
PENALTY LAKE PUMP STATION - PROPOSED ELECTRICAL ONE-LINE DIAGRAM



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			3						
			2						
			1						

NOT FOR CONSTRUCTION-



KEYED NOTES:

- 1 3-#3/0, 1-#3/0 NEUT. & 1-#3 GND., 2 1/2" C.
- 2 2-#10 & 1-#10 GND., 3/4" C.
- 3 1-#12, 1-#12 NEUT. & 1-#12 GND., 3/4" C.
- 4 (5) ANTENNA CABLES, 1 1/4" C.
- 5 2/C SHLD. LEVEL TRANSDUCER CABLE, 1" C.
- 6 2-#12 (ENGINE/GENERATOR ON/OFF CONTROL) & 1-#12 GND., 3/4" C.
- 7 2-#12 & 1-#12 GND., 3/4" C.
- 8 9-#14 (STATUS), 6-#14 SPARE & 1-#14 GND., 1 1/4" C.
- 9 4-#14 (STATUS), 4-#14 SPARE & 1-#14 GND., 1" C.
- 10 CONTINUOUS FUEL TANK LEVEL: 1-2/C #16 SHLD. (BELDEN 8719), 3/4" C.
- 11 (1) 4-PR. AWG #23 SHLD. CAT 6A CABLE (BELDEN 10 GXE02), 3/4" C.

- 12 PROVIDE PHENOLIC SIGN ON PUMP CONTROL PANEL SIGN SHALL BE THREE PLY PHENOLIC RED-WHITE-RED, ENGRAVED THROUGH THE FIRST RED LAYER. LETTERING SHALL BE 1/2" MIN. EDGES OF SIGN SHALL BE BEVELED 45 DEG. SIGN SHALL BE LABELED: "WARNING - GENERATOR MAY ALSO POWER LOAD".
- 13 PROVIDE PHENOLIC SIGN ON EACH SIDE OF ENGINE/GENERATOR ENCLOSURE. SIGN SHALL BE THREE PLY PHENOLIC YELLOW-BLACK-YELLOW, ENGRAVED THROUGH THE FIRST YELLOW LAYER. LETTERING SHALL BE 1/2" MIN. EDGES OF SIGN SHALL BE BEVELED 45 DEG. SIGN SHALL BE LABELED: "WARNING - THIS EQUIPMENT STARTS AUTOMATICALLY".
- 14 2/C CABLE (PROVIDED BY RAIN GAUGE MANUFACTURER) & 1-#12 GND., 3/4" C. COORDINATE RAIN GAUGE CABLE LENGTH w/ FIELD CONDITIONS.

NOTES:

- EACH CONDUIT CONNECTION TO THE ENGINE/GENERATOR SHALL BE LIQUIDTIGHT NON-METALLIC FLEXIBLE CONDUIT NOT EXCEEDING 36"
- EXISTING CONCRETE SLAB. SAW CUT & REMOVE CONCRETE AS REQUIRED FOR ROUTING CONDUITS INTO PUMP CONTROL PANEL. REFINISH CONCRETE SURFACE TO ORIGINAL CONDITION.
- CONDUIT ENTRIES INTO THE PUMP CONTROL PANEL SHALL BE THROUGH THE SIDE OF THE ENCLOSURE. INSTALL COPPER FREE ALUMINUM LB CONDUIT BODIES, SIZED FOR CONDUIT ENTRIES INTO THE ENCLOSURE. COORDINATE CONDUIT ENTRIES INTO ENCLOSURE w/ EXISTING HOSE BIB.

NEW STATUS POINTS ADDED AND TO BE MONITORED BY THE SCADA RTU SHALL INCLUDE THE FOLLOWING:

ENGINE/GENERATOR SET:

- GENERATOR RUN STATUS (ON/OFF)
- GENERATOR FAULT (NORMAL/FAULT)
- BATTERY VOLTAGE (NORMAL/LOW)
- GENERATOR CIRCUIT BREAKER (NORMAL/TRIPPED)
- DIESEL FUEL TANK LOW LEVEL (NORMAL/LOW)
- DIESEL FUEL TANK HIGH LEVEL (NORMAL/HIGH)
- DIESEL FUEL TANK LEAK STATUS (NORMAL/LEAK)
- CONTINUOUS DIESEL FUEL TANK LEVEL (ANALOG)

AUTOMATIC TRANSFER SWITCH:

- ATS POSITION (UTILITY/GENERATOR)
- TRANSFER SWITCH FAULT (NORMAL/FAULT)
- UTILITY SOURCE (AVAILABLE/NOT AVAILABLE)

RAIN GAUGE

- RAIN DATA

PENALTY LAKE PUMP STATION - ELECTRICAL RISER DIAGRAM

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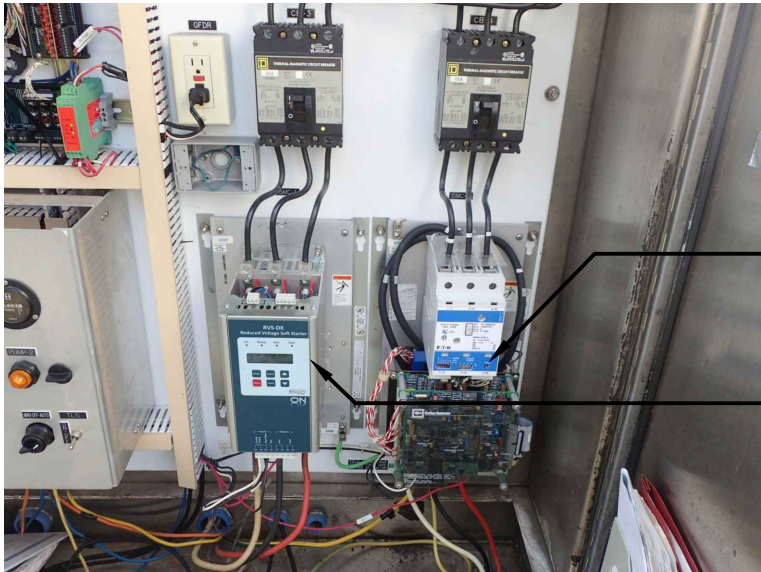
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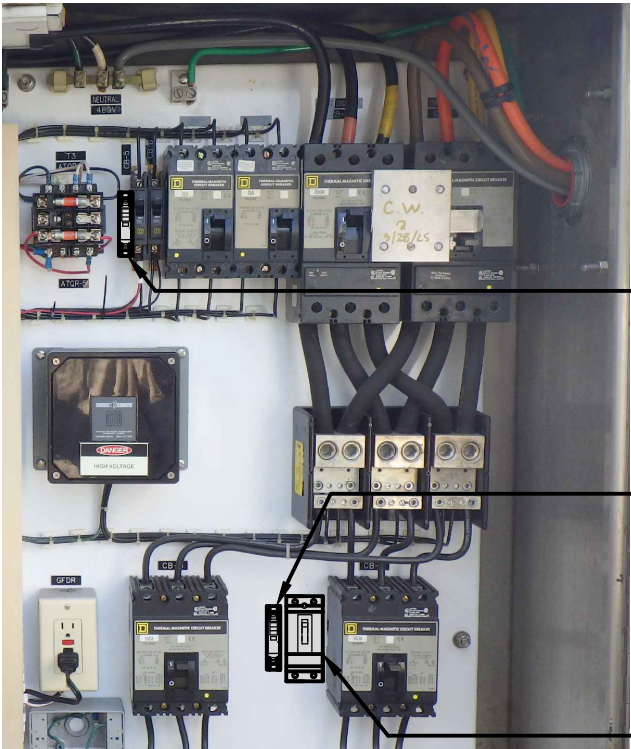
PUMP STATION RESILIENCY & RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION - ELECTRICAL RISER DIAGRAM

SHEET
E2-7



PENALTY LAKE PUMP STATION – CONTROL PANEL

- REMOVE EXISTING CUTLER–HAMMER EASY START REDUCED VOLTAGE STARTER & BYPASS CONTACTOR. REPLACE w/ A SOLCON RVS–DX–44–480–115 (30 HP) REDUCED VOLTAGE SOFT STARTER. REFERENCE ELECTRICAL ONE–LINE DIAGRAM & RVSS DETAILS.
- REMOVE EXISTING SOLCON RVS–DX REDUCED VOLTAGE SOFT STARTER. REPLACE w/ NEW SOLCON REDUCED VOLTAGE SOFT STARTER. REFERENCE ELECTRICAL ONE–LINE DIAGRAM & RVSS DETAILS
- THE STARTERS SHALL BE REPLACED ONE AT A TIME (TYP. OF 2)

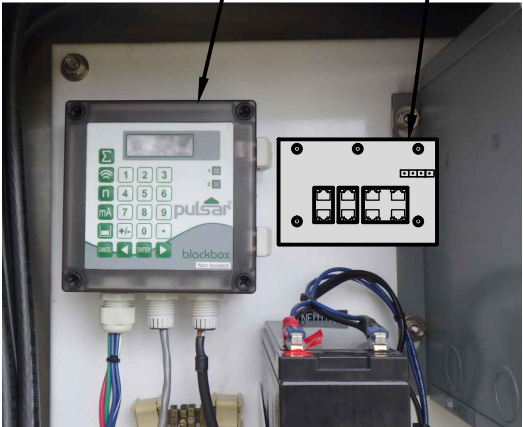


PENALTY LAKE PUMP STATION – CONTROL PANEL

- PROVIDE & INSTALL 1P, 10A CIRCUIT BREAKER FOR BRANCH CIRCUIT TO RECEPTACLE IN NETWORK COMMUNICATIONS ENCLOSURE. REFERENCE NETWORK COMMUNICATIONS DIAGRAM.. MOUNT TO BACK PANEL USING SS FASTENING HARDWARE
- PROVIDE & INSTALL 1P, 10A CIRCUIT BREAKER FOR BRANCH CIRCUIT TO NETWORK CAMERA CONTROL ENCLOSURE. REFERENCE NETWORK CAMERA CONNECTION DETAIL. MOUNT TO BACK PANEL USING SS FASTENING HARDWARE
- PROVIDE & INSTALL 2P, 30A CIRCUIT BREAKER FOR BRANCH CIRCUIT TO GENERATOR MINI–POWER CENTER. REFERENCE ELECTRICAL ONE–LINE DIAGRAM. MOUNT TO BACK PANEL USING SS FASTENING HARDWARE

REMOVE EXISTING PULSAR BLACK BOX 130 LEVEL TRANSMITTER & ASSOCIATED WIRING.

PROVIDE & INSTALL DIN–RAIL MOUNTED, RUGGED FIREWALL. MOUNT IN THE LOCATION OF THE REMOVED PULSAR BLACK BOX. REFERENCE NETWORK COMMUNICATIONS DIAGRAM



PENALTY LAKE PUMP STATION – CONTROL PANEL

REMOVE EXISTING MOTOROLA SCADA RADIO & ANTENNA. REFERENCE NETWORK COMMUNICATIONS DIAGRAM.



PENALTY LAKE PUMP STATION – CONTROL PANEL



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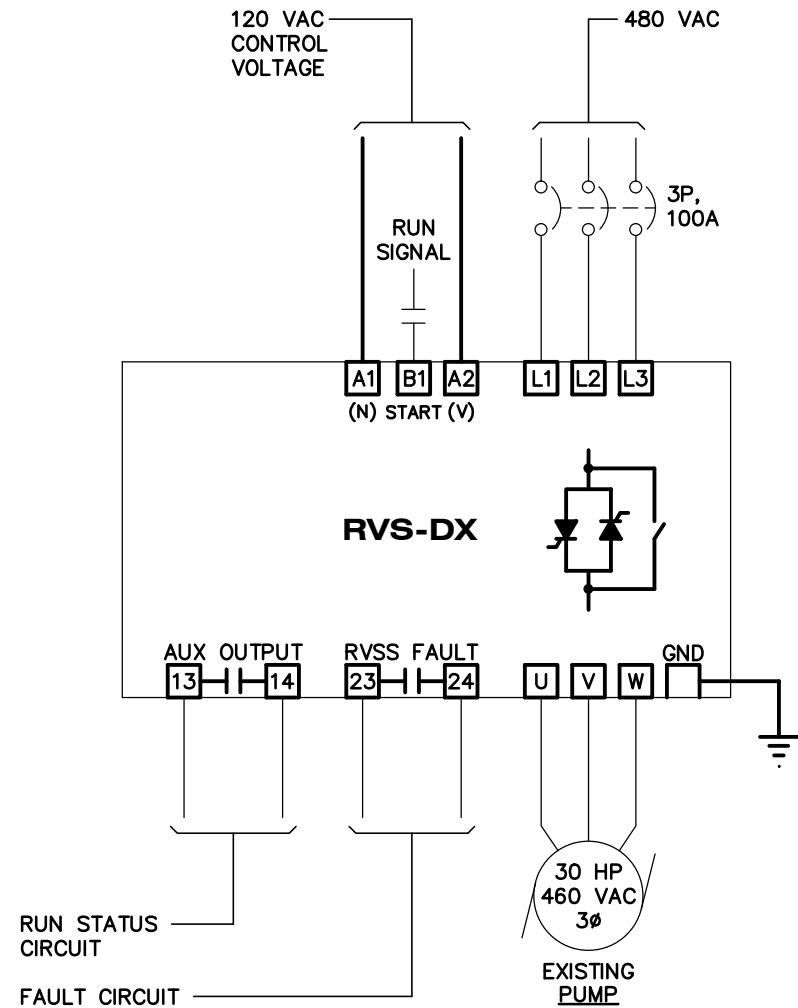
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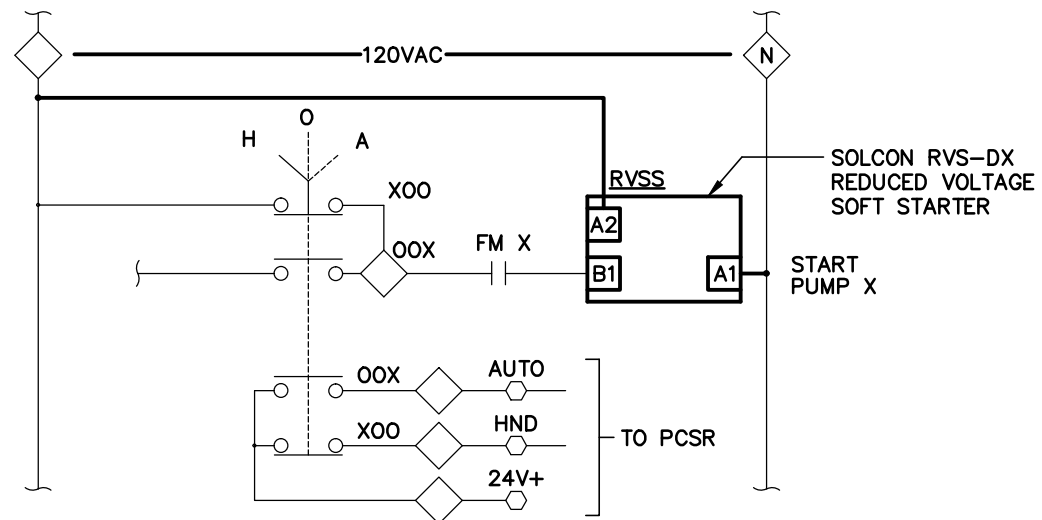
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Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
CONTROL PANEL MODIFICATIONS

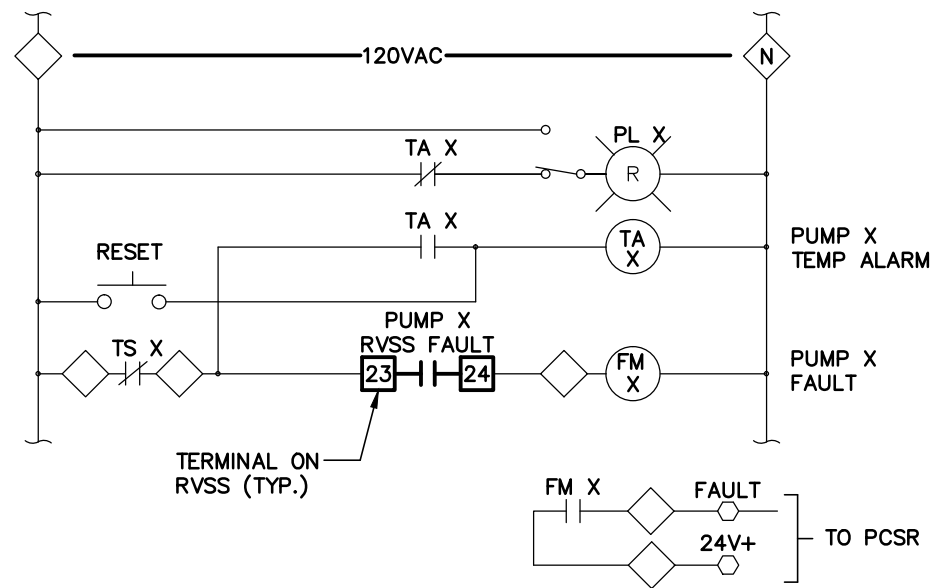
SHEET
E2-8



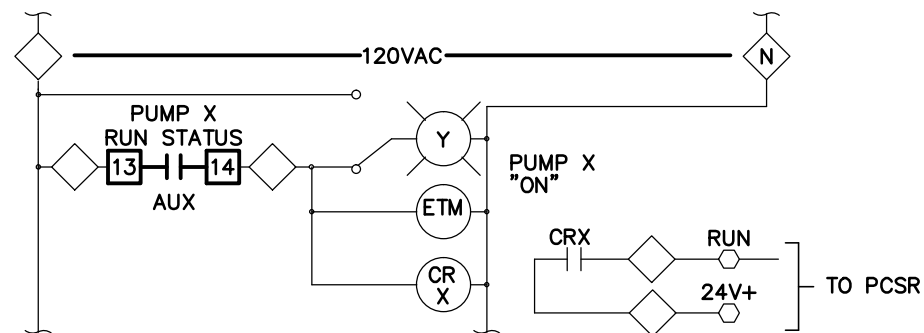
**SOLCON RVS-DX SOFT STARTER
WIRING DIAGRAM**



**PUMP RVSS
START CIRCUIT (TYP.)**



**PUMP RVSS
FAULT CIRCUIT (TYP.)**



**PUMP RVSS
RUN STATUS CIRCUIT (TYP.)**

NOTES:

1. LIGHT LINES INDICATE EXISTING INSTALLATIONS.
2. PROVIDE CONNECTIONS TO RVSS AS SHOWN.
3. CONFIGURE RVSS TO OPERATE w/
 - A) START/STOP INPUT TO TERMINAL B1 AS SHOWN.
 - B) PUMP RUN OUTPUT CONTACT
 - C) RVSS FAULT OUTPUT CONTACT
 - D) 15 SECOND RAMP UP SPEED
 - E) 20 SECOND RAMP DOWN SPEED
4. CONTRACTOR SHALL CONFIGURE EACH RVSS TO PROVIDE PROPER OPERATION & PROTECTION OF THE EXISTING PUMPS.



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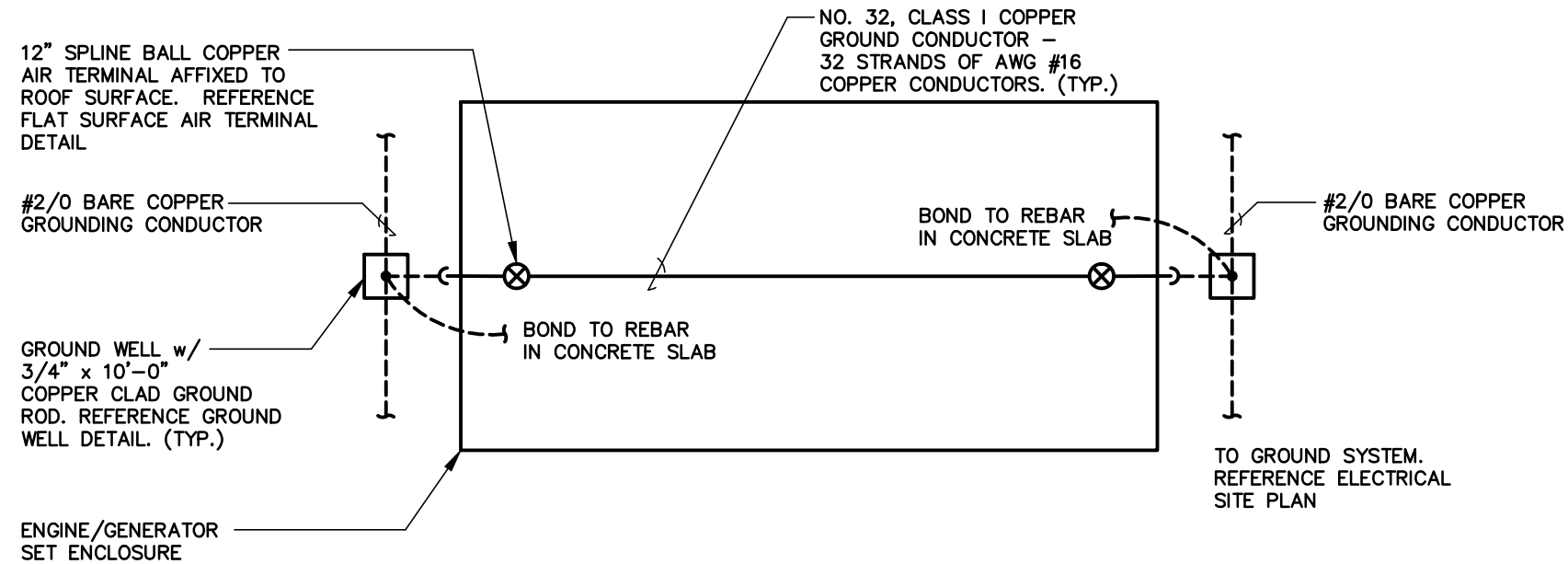
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PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
RVSS DETAILS

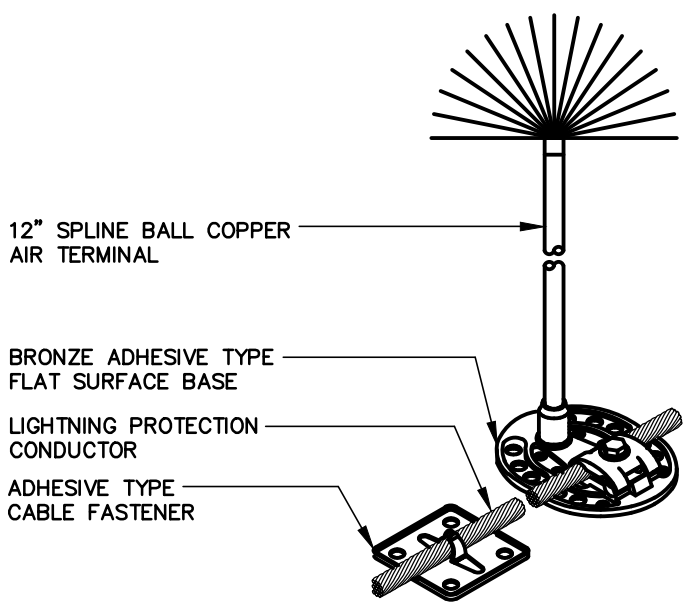
SHEET

E2-9



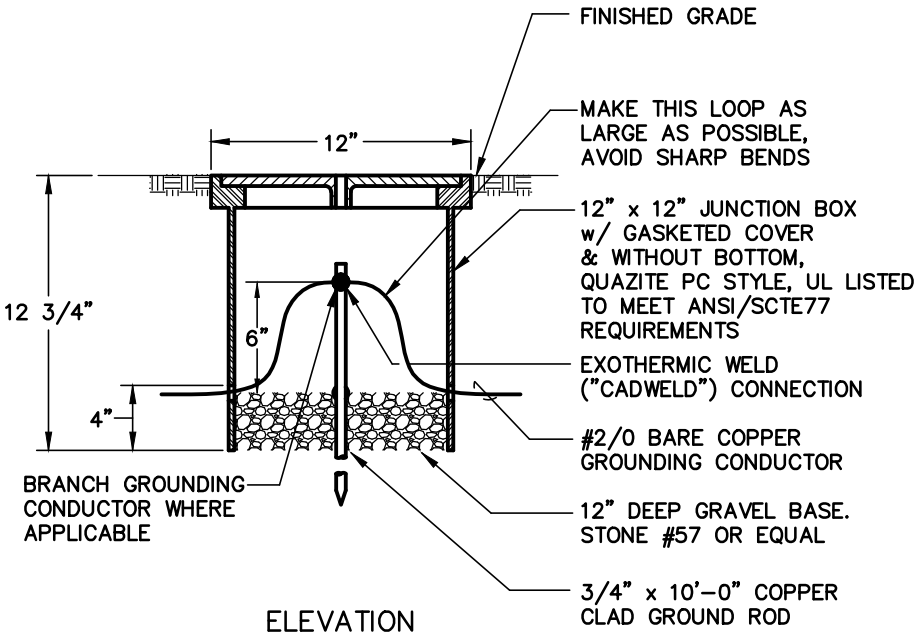
NOTE: REFERENCE ELECTRICAL SITE PLAN FOR GROUNDING SYSTEM.

GENERATOR AIR TERMINAL LOCATIONS

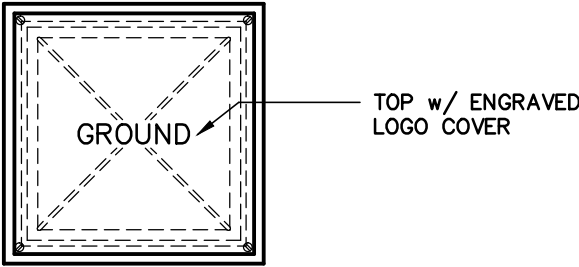


FLAT SURFACE AIR TERMINAL DETAIL

- GROUNDING LEGEND**
- ⊗ SURFACE MOUNTED AIR TERMINAL
 - EXOTHERMIC WELD (CAD WELD)
 - DOWN CONDUCTOR
 - GROUND WELL
 - 3/4" x 10'-0" COPPER CLAD GROUND ROD



ELEVATION



PLAN

GROUND WELL DETAIL

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			3						
			2						
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NOTES:

SW20206-10

1. MAIN CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE SPECIFIED STANDARDS FOR CLASS I STRUCTURES AND SHALL PROVIDE A TWO WAY HORIZONTAL OR DOWNWARD PATH FROM EACH AIR TERMINAL TO CONNECTIONS WITH GROUND SYSTEM. CONDUCTORS SHALL BE FREE OF EXCESSIVE SPLICES AND NO BEND OF A CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN NEITHER 90 DEGREES NOR HAVE A RADIUS BEND LESS THAN 8 INCHES. MAIN CONDUCTOR SHALL BE A MINIMUM NO. 32, CLASS I COPPER GROUND CONDUCTOR WITH 32 STRANDS OF AWG #16 COPPER CONDUCTORS.

2. LIGHTNING GROUNDING SYSTEM SHALL BE BONDED TO THE GROUND SYSTEM AS SHOWN.

3. THE DESIGN & INSTALLATION DETAILS SHOWN MEET THE NFPA 780 & UL 96A REQUIREMENTS FOR LIGHTNING PROTECTION SYSTEMS.

4. METAL BODIES OF INDUCTANCE SITUATED WITHIN 6'-0" OF A LIGHTNING PROTECTION CONDUCTOR OR OTHER BONDED METAL BODIES SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM.

5. ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED AT MAXIMUM INTERVALS OF 5'-0" ON CENTER.

6. UPON THE COMPLETION OF THE LIGHTNING PROTECTION SYSTEM INSTALLATION & INSPECTION, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A CERTIFICATION THAT THE INSTALLATION COMPLIES WITH THE REQUIREMENTS OF NFPA 780 & UL 96A.

7. DOWN CONDUCTORS SHALL BE CONTINUOUS FROM THE MAIN CONDUCTOR OR TERMINAL TO THE GROUND ROD. THE BUILDING STEEL OR STRUCTURAL MEMBER SHALL NOT SERVE AS THE DOWN CONDUCTOR. DOWN CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE SPECIFIED STANDARDS AND IN NO CASE SHALL BE SMALLER THAN THE MAIN ROOF CONDUCTOR. DOWN CONDUCTORS SHALL BE SPACED AT INTERVALS AVERAGING NOT MORE THAN 100 FEET AROUND THE PERIMETER OF THE STRUCTURE. IN NO CASE SHALL A STRUCTURE HAVE FEWER THAN TWO DOWN CONDUCTORS. WHERE DOWN CONDUCTORS ARE INSTALLED EXPOSED ON THE EXTERIOR OF A STRUCTURE AND SUBJECT TO PHYSICAL DAMAGE OR DISPLACEMENT, GUARDS SHALL BE USED TO PROTECT THE DOWN CONDUCTOR A MINIMUM OF 6 FEET ABOVE GRADE.

8. ALUMINUM LIGHTNING PROTECTION SYSTEM COMPONENTS SHALL NOT BE MOUNTED TO COPPER SURFACES OR COME INTO CONTACT WITH COPPER SURFACES. COPPER COMPONENTS SHALL BE USED TO AVOID ELECTROLYTIC CORROSION. COPPER MATERIALS SHALL NOT BE MOUNTED ON ALUMINUM SURFACES INCLUDING GALVALUME, GALVANIZED STEEL AND ZINC; THIS INCLUDES THESE MATERIALS THAT HAVE BEEN PAINTED. ALUMINUM MATERIALS SHALL NOT COME INTO CONTACT WITH EARTH OR WHERE RAPID DETERIORATION IS POSSIBLE. IN LOCATIONS WHERE SYSTEM COMPONENTS ARE MOUNTED ON ALUMINUM SURFACES, ALUMINUM MATERIALS SHALL BE USED TO AVOID ELECTROLYTIC CORROSION OF THE DISSIMILAR METALS.
9. AIR TERMINAL BASES SHALL BE SECURELY FASTENED TO THE STRUCTURE IN ACCORDANCE WITH THE SPECIFIED STANDARDS. THE ADHESIVE USED WITH ADHESIVE AIR TERMINAL BASES AND CONDUCTOR FASTENERS SHALL BE COMPATIBLE WITH ROOFING MEMBRANE, VERIFY COMPATIBILITY WITH ROOFING CONTRACTOR.

10. AIR TERMINALS SHALL PROJECT A MINIMUM OF 10 INCHES ABOVE THE OBJECT OR AREA IT IS TO PROTECT. AIR TERMINALS SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 20'-0" ALONG RIDGES AND ALONG THE PERIMETER OF FLAT OR GENTLY SLOPING ROOFS.

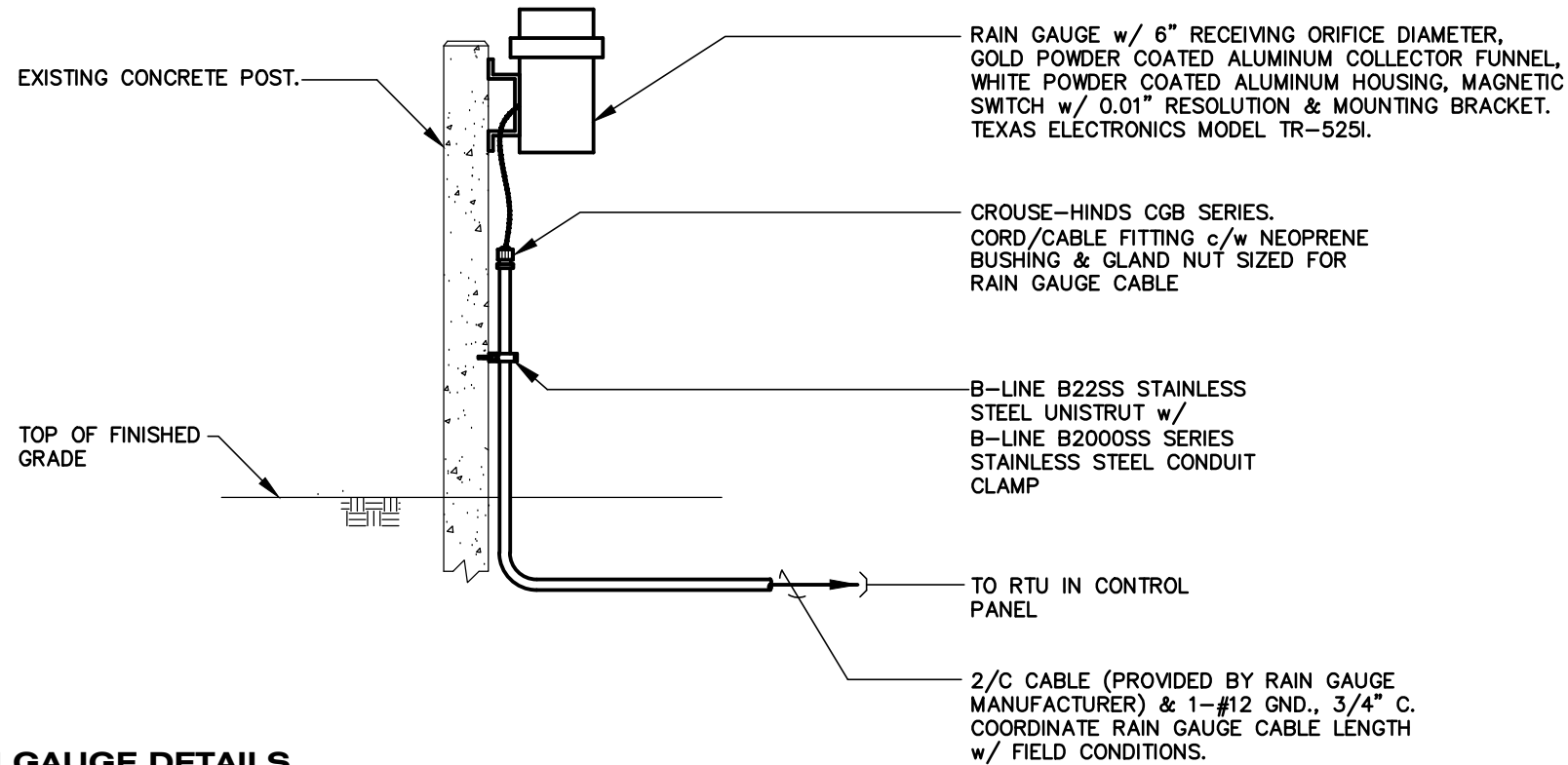
11. ALL MATERIAL SHALL BE UL APPROVED WITH LABELS ON CONDUCTORS AT 10'-0" INTERVALS AND LABELS ON ALL AIR TERMINALS.

12. THE RESISTANCE FROM THE LIGHTNING PROTECTION SYSTEM GROUND ROD & GROUND SHALL BE TESTED PRIOR TO CONNECTING THE LIGHTNING PROTECTION SYSTEM (LPS) GROUND ROD TO THE GROUNDING RING OR GROUND SYSTEM. IF THE RESISTANCE TO GROUND IS NOT 25 OHMS OR LESS, THE LPS GROUND ROD SHALL BE AUGMENTED BY AN ADDITIONAL GROUND ROD, NOT LESS THAN 6'-0" AWAY. THE RESULTS OF THE RESISTANCE TESTING SHALL BE FURNISHED TO THE ENGINEER.



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 15310 AMBERLY DR., SUITE 310 TAMPA, FL 33647	APPROVED BY: ENGINEER OF RECORD: BOB E. HALLMAN, P.E. FLORIDA REGISTRATION NO. 20761	DATE	No.	DATE	REVISIONS	DES : BEH DRN : STK CKD : BEH DATE : 5/15/26	CITY of TAMPA Mobility Department Stormwater Engineering Division	PUMP STATION RESILIENCY & RELIABILITY IMPROVEMENTS PENALTY LAKE PUMP STATION - GENERATOR - AIR TERMINAL DETAILS (SHEET 2 OF 2)	SHEET E2-II
			3						
			2						
			1						

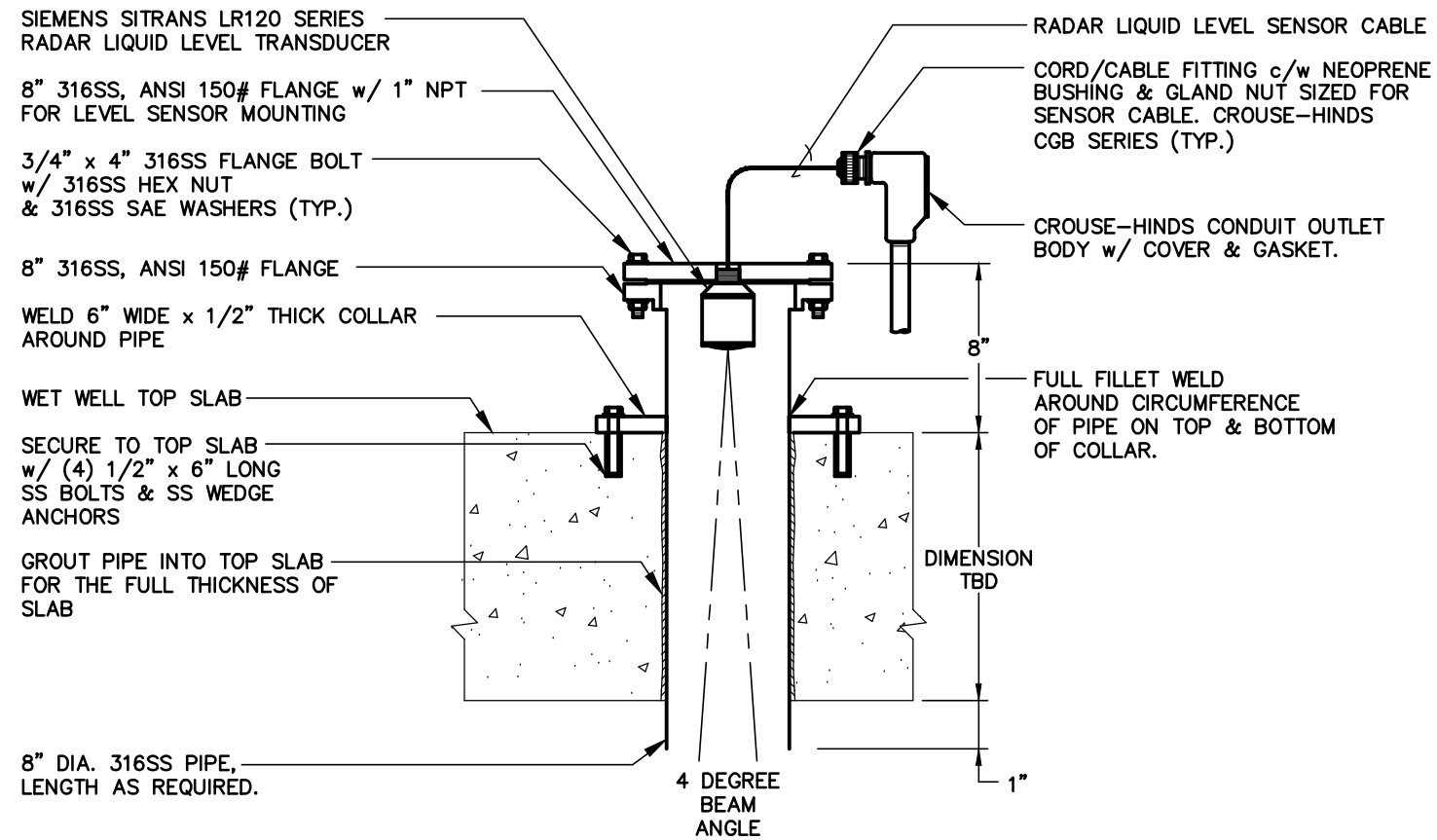


1 RAIN GAUGE DETAILS

3

NOTES:

1. RADAR LIQUID LEVEL SENSOR SHALL HAVE A CLEAR & UNOBSTRUCTED VIEW OF THE LIQUID BELOW. AVOID INSTALLATION WITHIN 24" OF PUMPS, PUMP CABLES & LEVEL SENSING FLOATS.



4 WET WELL RADAR LIQUID LEVEL SENSOR - DETAILS



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FLORIDA REGISTRATION NO. 20761

DATE

No.	DATE	REVISIONS
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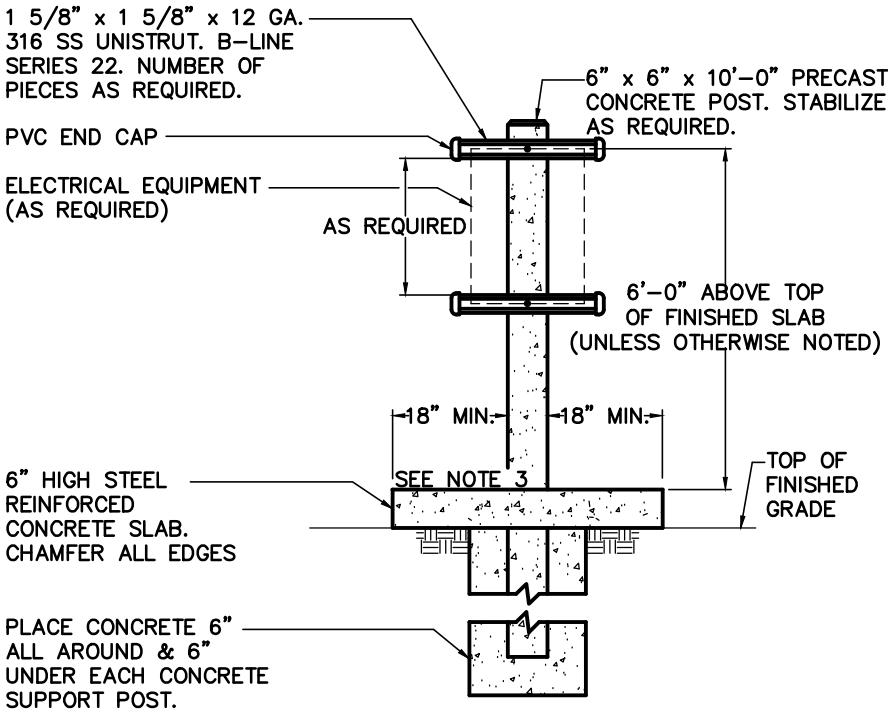
DES: BEH
DRN: STK
CKD: BEH
DATE: 5/15/26

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

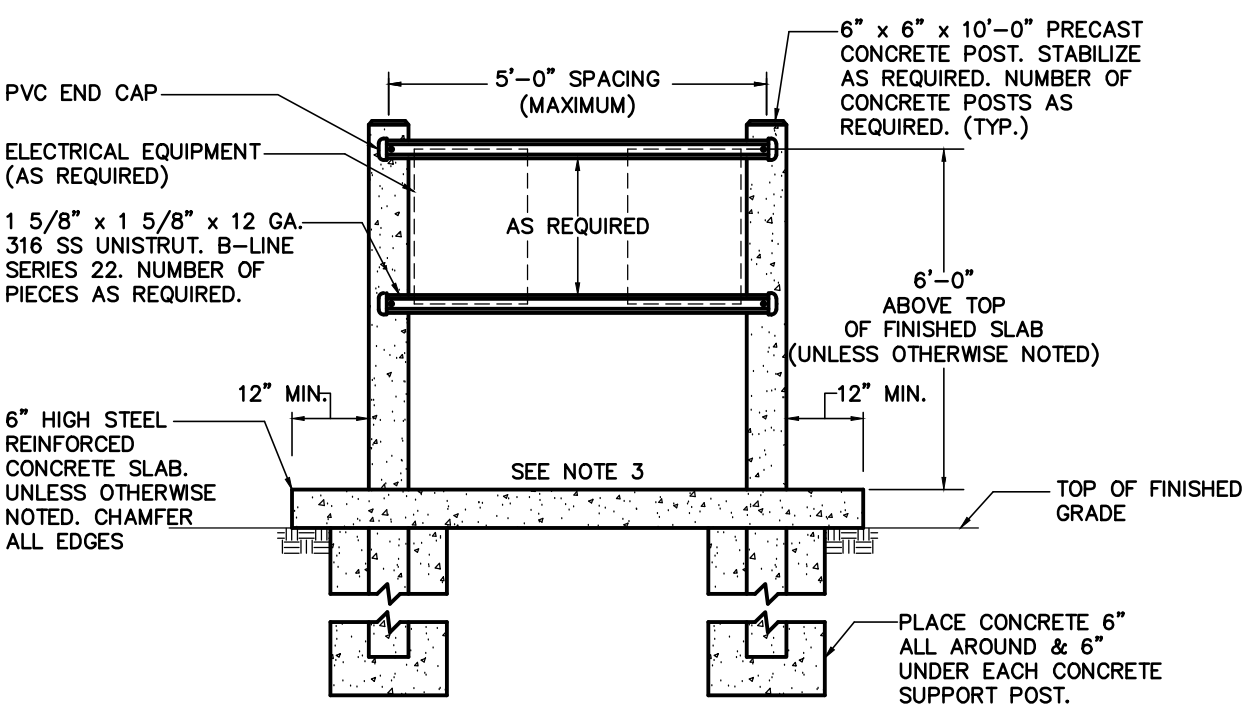
PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
ELECTRICAL DETAILS

SHEET

E2-12



MOUNTING FOR SINGLE SMALL ENCLOSURES



MOUNTING FOR MULTIPLE OR LARGE ENCLOSURES

- NOTES:
1. ALL EDGES OF UNISTRUT SHALL BE FILED SMOOTH.
 2. ALL FASTENING AND MOUNTING HARDWARE SHALL BE 316 SS.
 3. EXTEND CONCRETE SLAB 4' IN FRONT OF MOUNTED ELECTRICAL EQUIPMENT.

1 ELECTRICAL EQUIPMENT MOUNTING DETAILS

4

5

6

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DRMP
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APPROVED BY: _____
ENGINEER OF RECORD: BOB E. HALLMAN, P.E.
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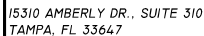
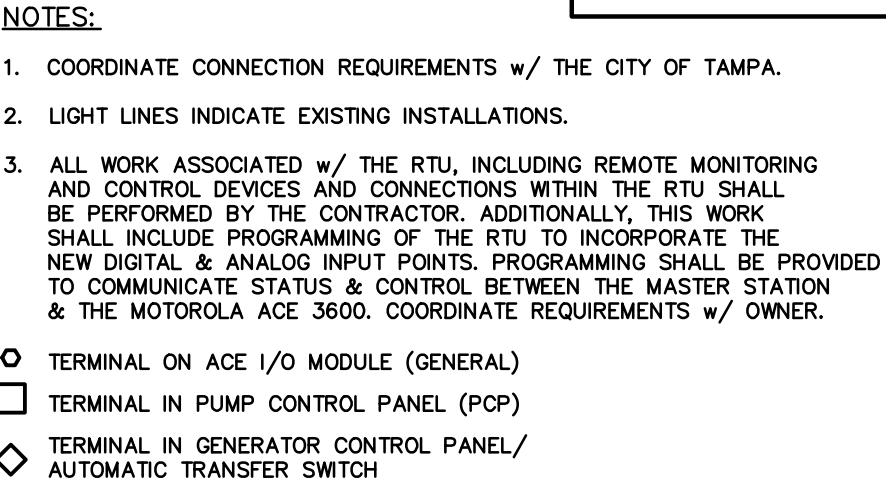
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DRN: STK
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
ELECTRICAL DETAILS

SHEET

E2-13



ENGINEER OF RECORD:
BOB E. HALLMAN, P.E.
FLORIDA REGISTRATION NO. 20761

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
I/O CONNECTIONS

KEYED NOTES:

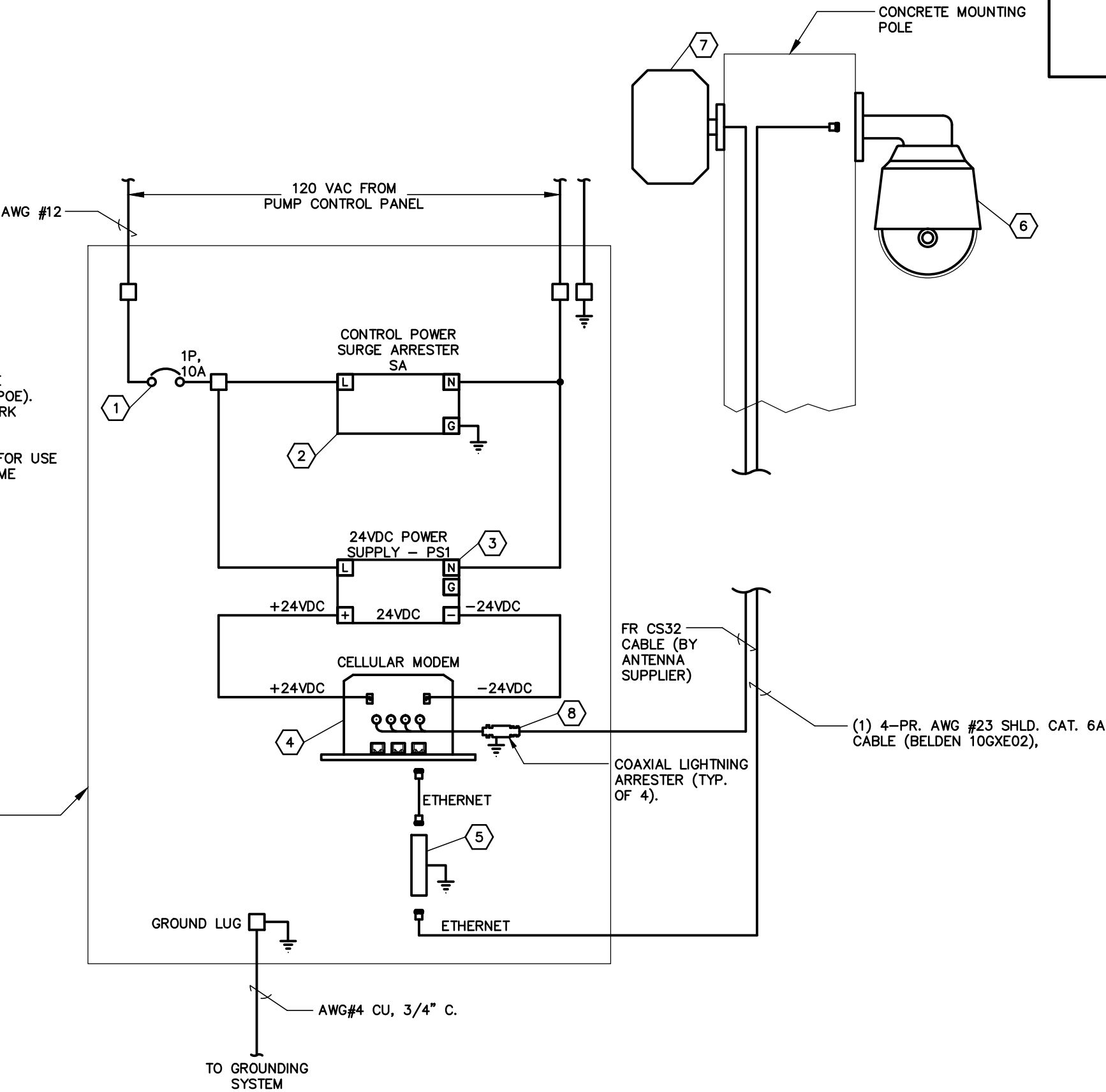
- 1 1P, 10A, 10KAIC, CIRCUIT BREAKER. SQUARE D CAT. NO. QOU110.
- 2 CONTROL POWER SURGE ARRESTER 120V, 40KA, UL1449, DIN-RAIL MOUNTED. PHOENIX CONTACT 2907918.
- 3 24VDC POWER SUPPLY, 120V INPUT, 24VDC, 3.8A OUTPUT, DIN-RAIL MOUNTED. SOLA MODEL SDN 4-24-100LP.
- 4 MINI 5G CELLULAR MODEM w/ 4X SMA CELLULAR ANTENNA CONNECTORS, ETHERNET INPUT, & 11W, 24VDC POWER INPUT. PEPLINK MODEL MAX-BR1-MINI-5GN-T-M-PRM
- 5 ETHERNET SURGE PROTECTOR, 10KV, 5KA, DIN-RAIL MOUNTED, w/ RJ45 10BASE-T/100BASE-TX CONNECTORS. PHOENIX CONTACT DT-LAN-CAT.6. BOND GROUND OF SURGE PROTECTOR TO BACK PANEL OF PCP.
- 6 HDTV OUTDOOR NETWORK CAMERA, MULTIDIRECTIONAL WITH AI ANALYTICS (270 DEG.), WALL MOUNT, DAY-NIGHT MODE ILLUMINATION, 4 CHANNELS w/ 5 MP PER CHANNEL, AUTOFOCUS, IN AN IP66, NEMA 4X HARD COATED DOME ALUMINUM & POLYCARBONATE CASING, RJ45 10BASE-T/100BASE-TX CONNECTORS & 10W, POWER OVER ETHERNET (POE). AXIS MODEL P3747-PLVE PANORAMIC. MOUNT ON CONCRETE POLE. REFERENCE NETWORK CAMERA MOUNTING DETAIL.
- 7 5G OMNI-DIRECTIONAL ANTENNA w/ (4) MIMO, ADVANCED NOISE FILTERING, SUITABLE FOR USE ON 5G NETWORKS FROM 617-6000MHZ, WALL MOUNTING BRACKET, & INTEGRATED FLAME RETARDANT CS32 CABLE. PANORAMA MODEL DW-IN2713
- 8 0-6 GHz COAXIAL LIGHTNING ARRESTER w/ GAS DISCHARGE TUBE, MULTISTRIKE CAPABILITY, 10KA MAX DISCHARGE CURRENT & GROUND WIRE LUG. PROXICAST ANT-211-002. BOND GROUND LUG TO BACK PANEL OF PCP.

NOTES:

1. REFERENCE NETWORK CAMERA MOUNTING DETAIL.

□ - DENOTES TERMINAL FOR FIELD CONNECTION.

NETWORK CAMERA
CONTROL ENCLOSURE
(MOUNTED ON CONCRETE
CAMERA SUPPORT POLE)



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NETWORK CAMERA
CONNECTION DETAIL



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REVISIONS

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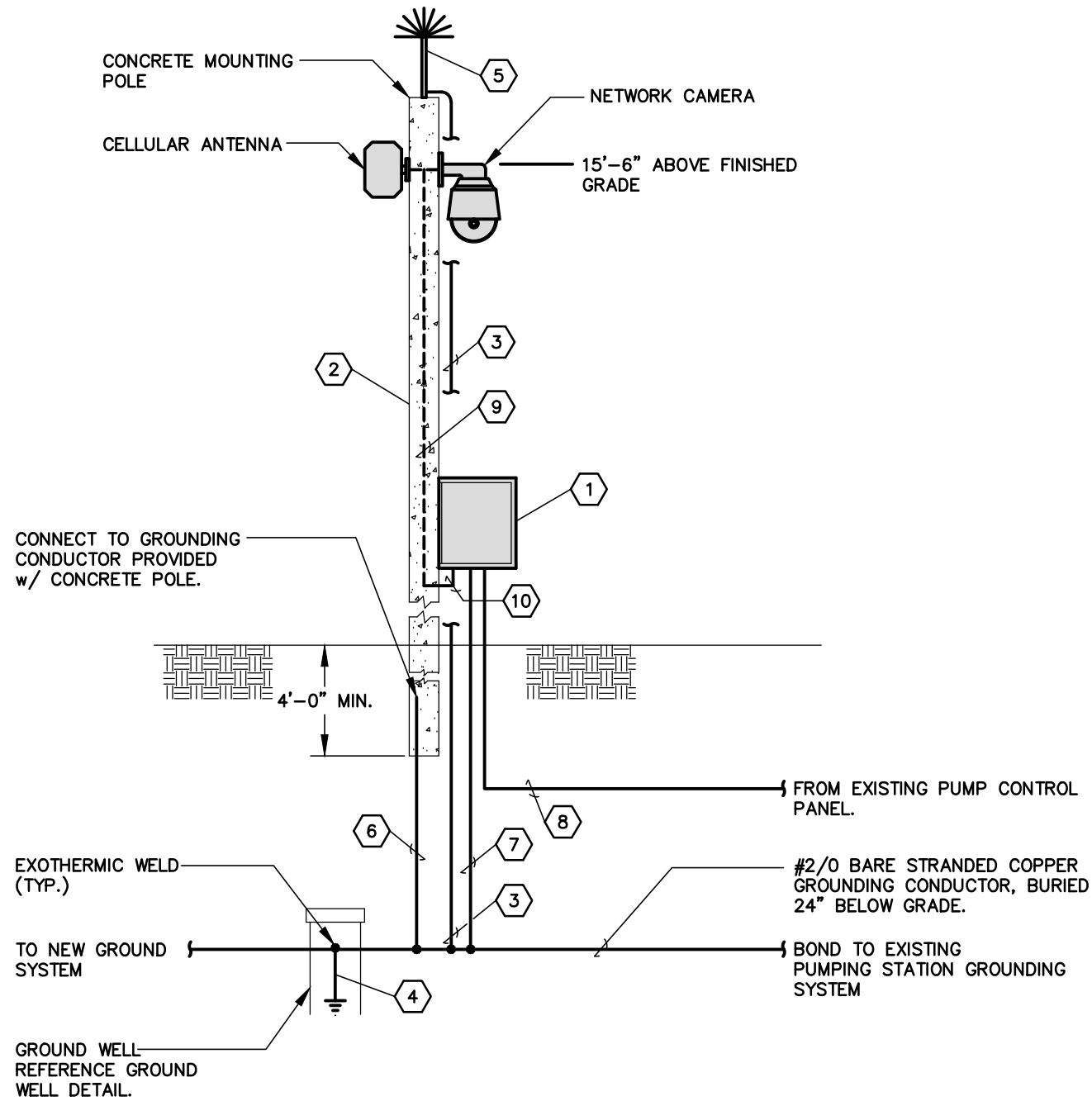
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
NETWORK CAMERA CONNECTION DETAIL

SHEET

E2-15



NETWORK CAMERA
MOUNTING DETAIL

KEYED NOTES:

- 1 NETWORK CAMERA CONTROL ENCLOSURE: 16" x 12" x 10" NEMA 4X SS ENCLOSURE w/ CONTINUOUS HINGE & BACK PANEL. SCHAEFER CAT. NO. SPN4SS-161210 (ENCLOSURE). ENCLOSURE SHALL HAVE A POLYESTER POWDER COAT WHITE FINISH. MOUNT ENCLOSURE ON CONCRETE POST w/ BOTTOM OF ENCLOSURE 24" ABOVE FINISHED GRADE. ROUTE CABLES TO THE CAMERA & ANTENNA INSIDE THE OPEN CHASE OF THE CONCRETE POLE.
- 2 20'-0" TYPE II CONCRETE POLE. DEPTH & STRUCTURE AS REQUIRED BY SOIL CONDITIONS FOR 145 MPH WIND SPEED IN ACCORDANCE W/ FLORIDA BUILDING CODE. CONTRACTOR SHALL COORDINATE POLE DEPTH REQUIREMENTS W/ A CIVIL ENGINEER. CONNECT CONCRETE POLE GROUNDING CONDUCTOR TO GROUNDING SYSTEM.
- 3 NO. 32 CLASS I COPPER LIGHTNING CONDUCTOR w/ 32 STRANDS OF AWG #16 COPPER CONDUCTORS (TYP.) SECURE CONDUCTOR DIRECTLY TO POLE AT INTERVALS NOT TO EXCEED 3'-0".
- 4 3/4" DIA. X 10'-0" COPPER CLAD GND. ROD
- 5 12" COPPER AIR TERMINAL. SECURE TO TOP OF CONCRETE POLE WITH A CAST BRONZE PARAPET AIR TERMINAL BASE.
- 6 AWG #4/CU GROUNDING CONDUCTOR.
- 7 AWG #4/CU GROUNDING CONDUCTOR, 3/4" C.
- 8 1-#12, 1-#12 NEUT. & 1-#12 GND., 3/4" C
- 9 - 1-4-PR. AWG #23 SHLD. CAT. 6A CABLE (BELDEN 10GXE02),
- FR CS32 CABLE (BY ANTENNA SUPPLIER)
ROUTE IN OPEN CHASE IN CONCRETE POLE.
- 10 1-4-PR. AWG #23 SHLD. CAT. 6A CABLE (BELDEN 10GXE02) &
FR CS32 CABLE (BY ANTENNA SUPPLIER), 1" C. GROUT CONDUIT INTO CONCRETE POLE.

NOTES:

- 1. SECURE CAMERA, ANTENNA & AIR TERMINAL TO CONCRETE POLE w/ 1/4" x 1 1/2" LONG SS WEDGE ANCHORS.
- 2. SECURE THE CONTROL ENCLOSURE TO THE CONCRETE POLE w/ 1 5/8" x 1 5/8" SS UNISTRUT & SS CHANNEL NUTS AS REQUIRED. SECURE UNISTRUT TO CONCRETE POLE w/ 1/4" X 1 1/2" LONG SS WEDGE ANCHORS.



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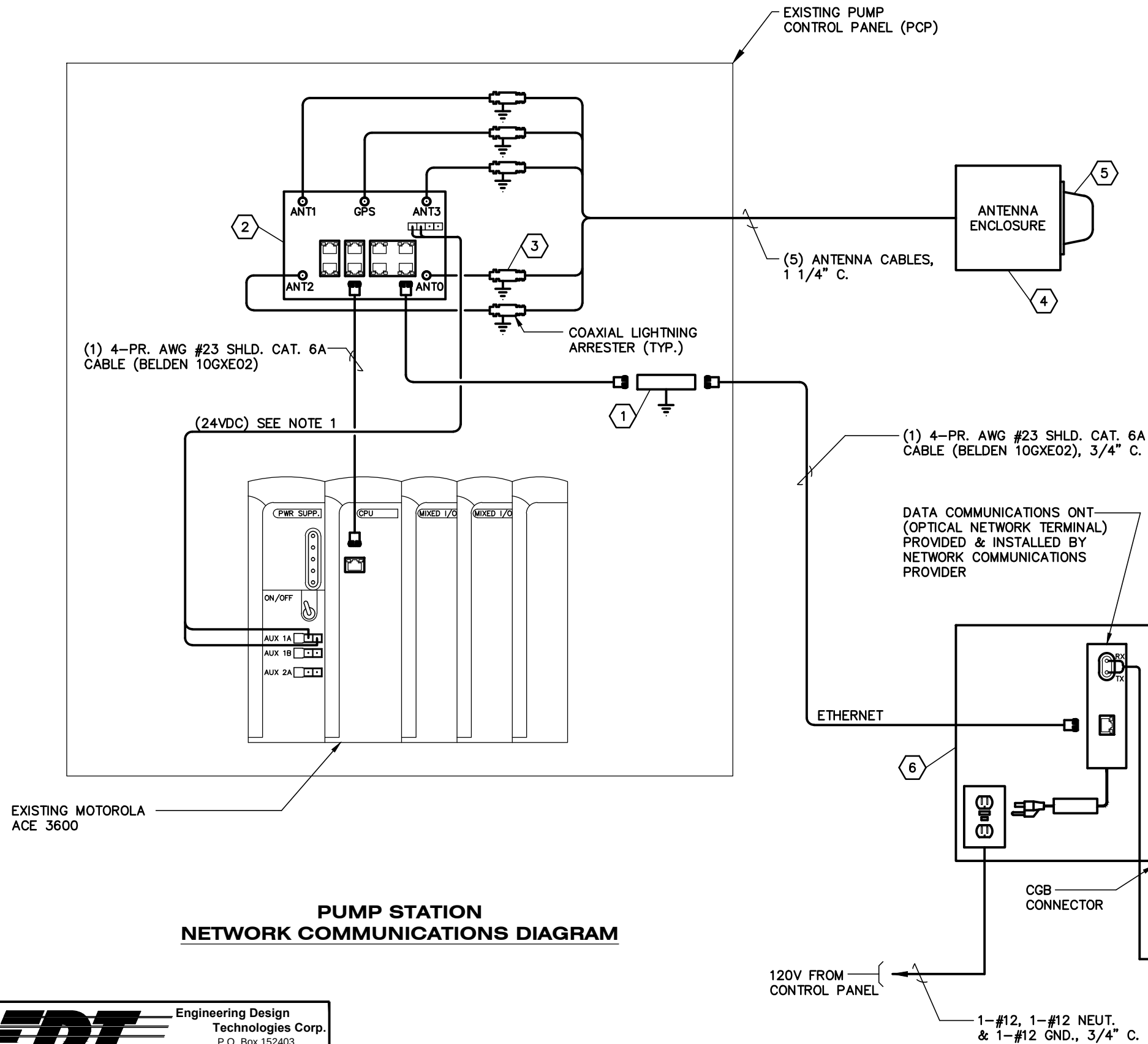
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KEYED NOTES:

- 1 ETHERNET SURGE PROTECTOR, 10KV, 5KA, INDOOR/OUTDOOR MOUNTING, IN A WEATHERPROOF METAL ENCLOSURE w/ RJ45 10BASE-T/100BASE-TX CONNECTORS. AXIS MODEL T8061. BOND GROUND OF SURGE PROTECTOR TO BACK PANEL OF PCP.
- 2 DIN-RAIL MOUNTED, NEXT GENERATION FIREWALL (NGFW) w/ SIX (6) GE RJ45 PORTS, DUAL SIM (ACTIVE/PASSIVE), 5G MODEM, GPS, REDUNDANT 12-54VDC INPUTS, TWO (2) SMALL FORMA FACTOR PLUGGABLE (SFP) SLOTS & DIGITAL I/O MODULE. FORTINET - FORTIGATE RUGGED SERIES FGR-50G-5G.
- 3 0-6 GHz COAXIAL LIGHTNING ARRESTER w/ GAS DISCHARGE TUBE, MULTISTRIKE CAPABILITY, 10KA MAX DISCHARGE CURRENT & GROUND WIRE LUG. PROXICAST ANT-211-002. BOND GROUND LUG TO BACK PANEL OF PCP.
- 4 CELLULAR ANTENNA ENCLOSURE 12" x 10" x 8" NEMA 4X SS JUNCTION BOX, HAMMOND EJ12108SS OR EQUAL. PROVIDE AND INSTALL CELLULAR ANTENNA WITH MANUFACTURER'S INTEGRAL CABLES. MOUNT ENCLOSURE ON CONCRETE POST w/ TOP OF ENCLOSURE 6'-0" ABOVE FINISHED GRADE. NEATLY COIL & TY-RAP EXCESS ANTENNA CABLE LENGTH IN ANTENNA ENCLOSURE.
- 5 5-IN-1 5G/4G-LTE PERMANENT MOUNT ANTENNA w/ 5M LOW LOSS ANTENNA CABLE & IP67 WATERPROOF POLYCARBONATE ENCLOSURE & BASE. FORTINET FANT-5IN1-RNF-5M ANTENNA.
- 6 NETWORK COMMUNICATIONS ENCLOSURE: 16" x 16" x 8" (MINIMUM) NEMA 4X SS ENCLOSURE W/ CONTINUOUS HINGE & BACK PANEL. HOFFMAN CAT. NO. A16H1606SSLP (ENCLOSURE) & A16P16SS6 (BACK PANEL). ENCLOSURE SHALL CONTAIN PK4GTA GROUND BAR KIT & HUBBELL GF5262 GFI RECEPTACLE, w/ ALUMINUM OUTLET BOX & COVER. COORDINATE REQUIREMENTS w/ NETWORK COMMUNICATIONS PROVIDER.
- 7 INSTALL 3/4" x 10'-0" COPPER CLAD DRIVEN GROUND ROD BELOW ENCLOSURE.

NOTES:

1. CONTRACTOR SHALL UTILIZE THE ACE POWER SUPPLY CONDUCTORS TO CONNECT TO THE TERMINALS OF NEXT GENERATION RUGGED FIREWALL (NGFW).
2. LIGHT LINES INDICATE EXISTING INSTALLATIONS.



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ENGINEER OF RECORD:
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FLORIDA REGISTRATION NO. 20761

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DES: BEH
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CITY of TAMPA

Mobility Department
Stormwater Engineering Division

PUMP STATION RESILIENCY &
RELIABILITY IMPROVEMENTS
PENALTY LAKE PUMP STATION -
NETWORK COMMUNICATIONS DIAGRAM

SHEET

E2-17



VICINITY MAP: NOT TO SCALE

- | <u>LEGEND:</u> | |
|----------------|----------------------------------|
| BOB | Bottom of Bank |
| CONC. | Concrete |
| CPVC | Corrugated Polyvinyl Chloride |
| (D) | Deed |
| ELEV | Elevation |
| FIP | Found Iron Pipe |
| FIR | Found Iron Rod |
| FND | Found Nail Disk |
| ID. | Identification |
| INV | Invert Elev |
| LB | Licensed Business |
| LS | Licensed Surveyor |
| OHL | Overhead Utility Line |
| (P) | Plat |
| PSM | Professional Surveyor and Mapper |
| PVCF | Polyvinyl Chloride Fence |
| QL | Quality Level B |
| RCP | Reinforced Concrete Pipe |
| SOP | Shot on Pipe |
| SIRC | Set Iron Rod and Cap |
| TOB | Top of Bank |

SYMBOL LEGEND:

- | | |
|---|----------------------|
|  | Bollard |
|  | Found Iron Rod |
|  | Set Nail and Disk |
|  | Light Pole |
|  | Light Post |
|  | Manhole - Drainage |
|  | Manhole - Storm |
|  | Mail Box |
|  | Meter - Electric |
|  | Meter - Water |
|  | Post |
|  | Shared Utility Pole |
|  | Stump |
|  | Tree - Oak |
|  | Tree - Palm |
|  | Tree - Pine |
|  | Tree - Unknown |
|  | Set Iron Rod and Cap |

LINETYPE LEGEND:

- | | |
|-----------|---------------------------|
| —BFO(B)— | Buried Fiber Optic (QL B) |
| —D— | Drainage Pipe |
| —X—X—X— | Fence |
| —OHL— | Overhead Utility Line |
| — — — — — | Lot Line |
| — — — — — | Right-Of-Way |
| —S— | Sanitary |
| —W(B)— | Water Line (QL B) |

HATCHING LEGEND:

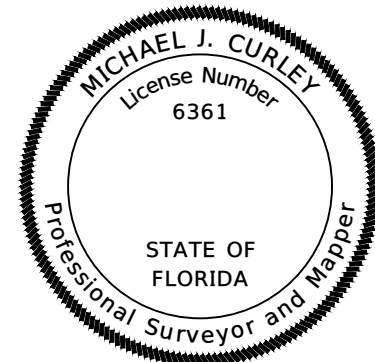
-  Asphalt
 Brick
 Building
 Concrete

SURVEYOR'S NOTES:

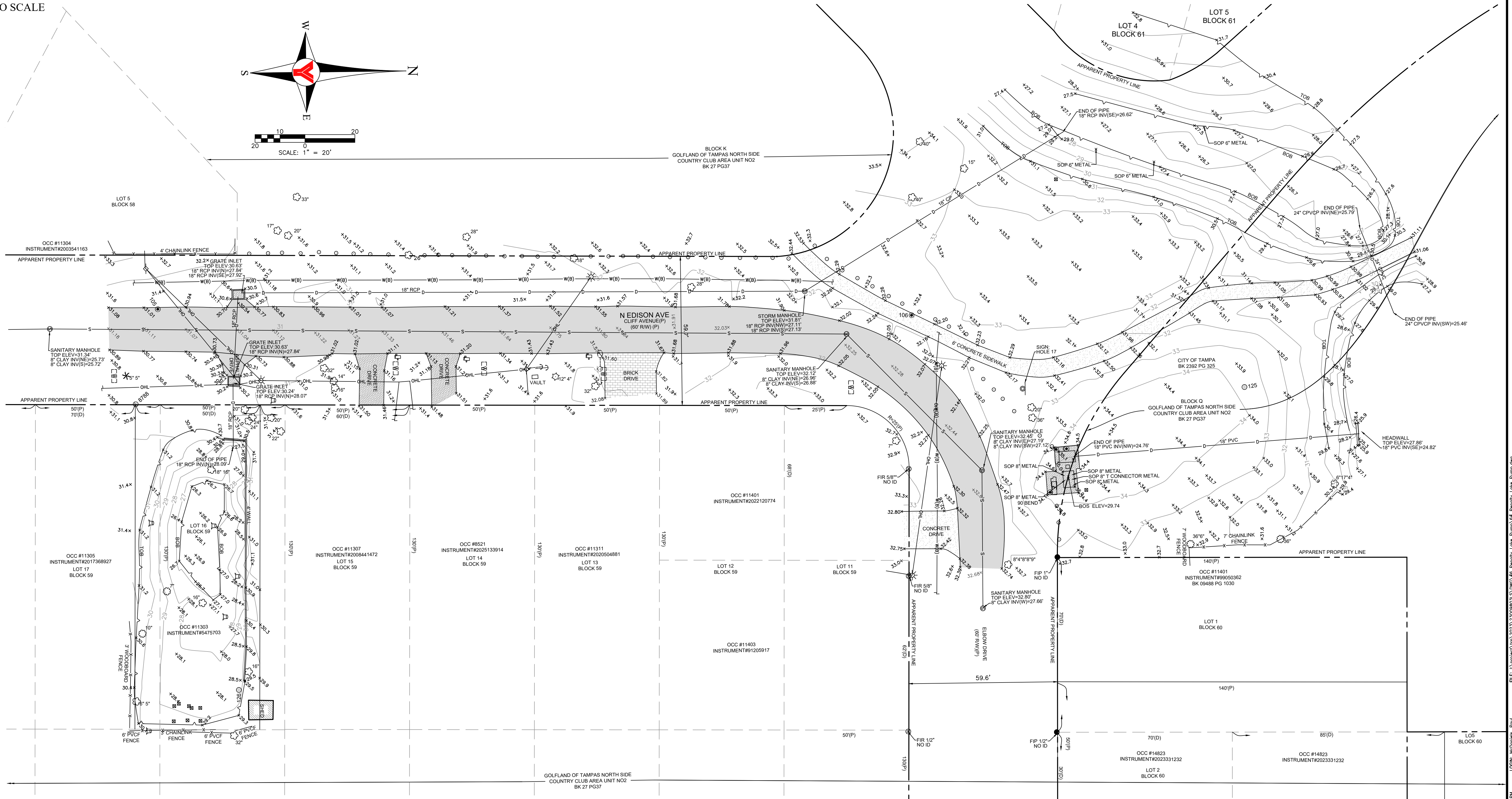
1. A Topographic and Record Survey at the intersection of N Edison Ave and W Elbow Dr then along N Edison Ave, City of Tampa, Florida, lying in Section 14, Township 28 South, Range 18 East.
 2. Survey Date: April 3, 2025.
 3. HORIZONTAL: Coordinates of site control points were established by Real-Time Kinematic (RTK) GPS methodology, using the Florida Permanent Reference Network (FPRN) for corrections and tied to NGS Monument *E 1 I* (PID=DG8947, Northing=1,346,545.76, Easting=499,955.68.) Coordinates are relative to the North American Datum of 1983, 2011 Adjustment (NAD83/11), Florida State Plane Coordinate System, West Zone, U.S. Survey Feet.
 4. VERTICAL: Elevations of site control points were established by differential digital level, and are relative to the North American Vertical Datum of 1988, (NAVD88) based on Southwest Florida Water Management District Benchmark *670748* (Elevation=35.05 feet).
 5. TOPOGRAPHIC SURVEY includes any hardscape elements and above ground utilities, including but not limited to all retaining walls, fences, culverts, drainage structures, paved ditches, water meters, valves, junction boxes, manholes, driveways, parking lots, utility/light poles, overhead utility lines, trees of 4" diameter or greater, and any other significant feature within the survey areas identified above. Visible above ground utilities are shown herein however additional utilities may exist. The location of footers, foundations and structures beneath the ground surface has not been determined.
 6. Excluded from this survey are hedges, small bushes, sprinkler systems and non-permanent landscaping such as planters with timber borders, and vertical location of overhead utility lines, .
 7. RECORD SURVEY includes apparent right-of-way and subsurface utilities.
 8. This is not a Boundary Survey. Apparent right-of-way and property lines shown herein are based upon plats and deeds available to the public on the Hillsborough County Property Appraiser Website, and tied to limited found monumentation. A title search was not obtained for this survey. Apparent Right-of-Way should be considered approximate and used for reference purposes only.
- Additional easements may exist.

9. A ticket was filed with Sunshine One-Call to mark subsurface utilities in the field. Markings were found and located by George F. Young Inc. on subsequent field visits and shown herein as Quality Level B utility designation. George F. Young Inc. and the undersigned make no representation as to the accuracy of said markings or lack thereof.
10. Forty-Eight (48) hours before digging, boring, pile-driving, planting, etc, call Sunshine State One Call System, 1-800-432-4770 so that underground utilities may be field spotted.
11. This map of survey is intended to be displayed at a scale of 1" = 10' or 1:120.
12. Additions or deletions to survey maps or reports by other than the signing party or parties are prohibited without the written consent of the signing party or parties.
13. Certification is understood to be an expression of professional opinion by the signing surveyor and mapper based on the surveyor and mapper's knowledge and information, and it is not a guarantee or warranty, express or implied.
14. This map of survey or the copies thereof are not valid without the original signature and seal of a Florida licensed Surveyor and Mapper.
15. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
16. This report has been digitally signed and sealed under Rule 5J-17.062 of the Florida Administrative Code.

CONTROL POINTS				
NAME	NORTHING	EASTING	ELEV	DESCRIPTION
105	1351962.92	505010.18	30.98	SND PK&D G.F.Y.
106	1352264.78	505016.50	32.18	SND PK&D G.F.Y.
107	1352306.73	505316.21	33.90	0.5" SIRC G.F.Y.
125	1352397.74	505046.99	34.28	0.5" SIRC G.F.Y.



Michael J. Curley, PSM
Florida Professional Surveyor and Mapper
License Number LS 6361
George F. Young Inc. LB21



REVISIONS	NO.	BY	DATE	DESCRIPTION	REVISED	NO.	BY	DATE	DESCRIPTION	INITIALS	DATE	PREPARED FOR:	Since 1919 George F. Young, Inc. 299 DR. MARTIN LUTHER KING JR. STREET, N. ST. PETERSBURG, FLORIDA 33701 PHONE (727) 822-4317 WWW.GEORGEFYOUNG.COM BUSINESS ENTITY (LBT) CIVIL, TRANSPORTATION, SUBSURFACE & STRUCTURAL ENGINEERING ECOLOGY I GIS I PLANNING I SURVEYING ST. PETERSBURG • LAKEWOOD RANCH • TAMPA • GAINESVILLE • LAKE WALES • PUNTA GORDA	City of Tampa Pump Station - Penalty Lake Pump Topographic Survey	SECTION 14, TOWNSHIP 28S., RANGE 18E.	JOB NO. 23009803LS		
	1	PM	05-06-25	SPELLING CORRECTION		6					DRAWN						KD	4/3/25
	2					7					CHECKED						MC	5/5/25
	3					8					FIELD BOOK							DIGITAL
	4					9					FIELD DATE							4/3/25
	5					10												