CITY OF TAMPA, FLORIDA

PLANS FOR

Contract 27-C-00004 Lantana-Poinsettia Stormwater Pumping Station Replacement

These Plans for the referenced projects come from uncontrolled sources and do not conform to WCAG 2.1 at level AA. Individuals with disabilities seeking assistance with the individual project plans or specifications should e-mail Contractadministration@tampagov.net.

City of Tampa

Contract Administration Department

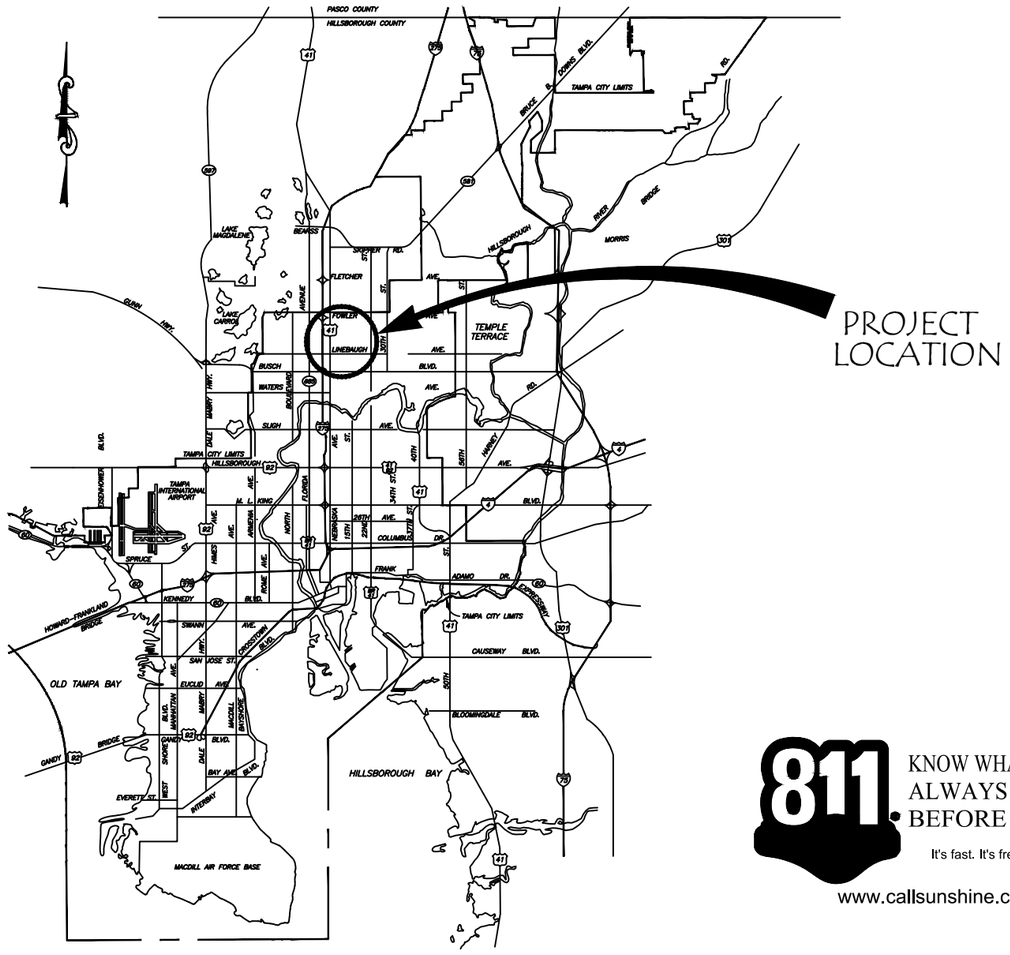
Tampa Municipal Office Building

306 E Jackson Street #280A4N Fourth Floor

Tampa, Florida 33602

NOVEMBER 2026

SW 2024-06



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CITY of TAMPA

Mobility Department

Stormwater Engineering Division

PLANS FOR:

LANTANA - POINSETTIA
Stormwater Pumping Station

27-C-0004

YUAN LI LICENSE No.66595 STATE OF FLORIDA PROFESSIONAL ENGINEER

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GENERAL: SHEETS G01 THROUGH G05
CIVIL: SHEETS C01 THROUGH C16

MICHAEL FADINI LICENSE No 87173 STATE OF FLORIDA PROFESSIONAL ENGINEER

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ELECTRICAL: SHEETS E01 THROUGH E14
INSTRUMENTATION: SHEETS I01 THROUGH I18

DES: B.S.	No.	DATE	REVISIONS	
DRN: J.S.	3			
CKD: JDM	2			
DATE: 9/2/2026	1	9/2/2026	ISSUED FOR BID	

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

COVER SHEET

SHEET G01 OF 53

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Plot Date: Tuesday, September 8, 2026 PLOT

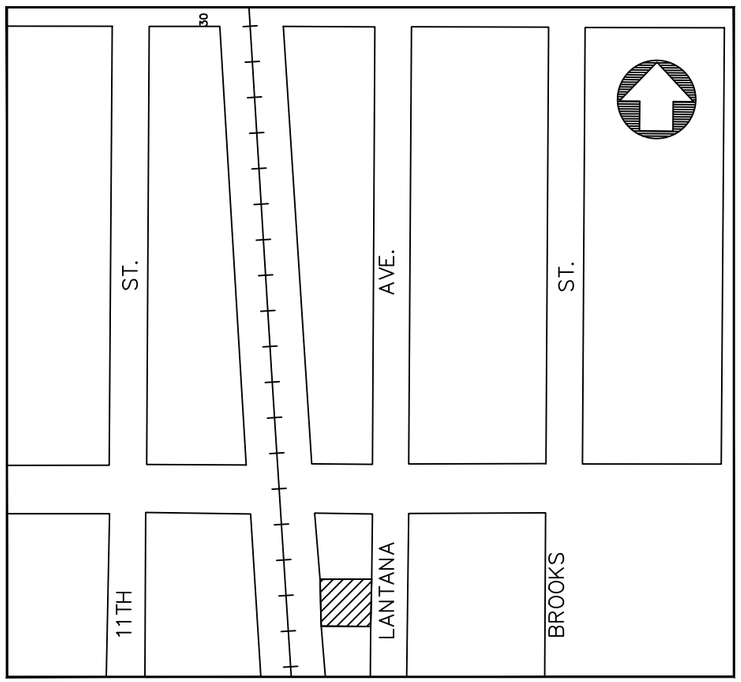
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LEGEND

	UP to 18" & SMALLER	24" & LARGER
EX STORMWATER		
FORCE MAIN		
PIPES & MANHOLES		
CATCH BASIN, GRATE		
DITCHES, SWALES		
PROP STORMWATER		
FORCE MAIN		
PIPES & MANHOLES		
OTHER UTILITIES		
SAN SEWER & MANHOLES		
WATER LINE		
GAS LINE		
ELECTRICAL CABLE or DUCT		
TELEPHONE CABLE or DUCT		
TV CABLE		
VALVE		
HYDRANT		
CLEAN OUT		
EXISTING WYE		
POWER POLE		
TELEPHONE POLE		
GUY POLE		
GUY WIRE		
VALVE VAULT	V	
WATER METER	M	
ELECTRICAL MANHOLE or VAULT	E	
TELEPHONE MANHOLE or VAULT	T	
TRAFFIC BOX or VAULT	TR	
OTHER FEATURES		
RIGHT of WAY LINE	R/W	
EDGE of PAVEMENT		
BUILDING LIMIT	1236	
PROPERTY OWNERSHIP		
FENCE		
CONIFER	6"	
PALM	8"	
OAK	10"	
OTHER	12"	
SHRUB		
HEDGE		
RAILROAD TRACKS		
IRON PIPE		
CONCRETE MONUMENT		

ABBREVIATIONS

TOP of PIPE	TP
INVERT ELEVATION	IE or INV EL
RIGHT of WAY	R/W
MANHOLE	MH
POLYVINYL CHLORIDE PIPE	PVCP
VITRIFIED CLAY PIPE	VCP
ADVANCED DRAINAGE SYSTEM	ADS
DUCTILE IRON PIPE	DIP
REINFORCED CONCRETE PIPE	RCP
CONCRETE PIPE	CP
APPROXIMATE LOCATION	AL
BENCH MARK	BM
POINT of INTERSECTION	PI
MATCH EXISTING GRADE	MEG
UNLESS NOTED OTHERWISE	UNO
CLEAR	CLR



LOCATION MAP

NOT TO SCALE

DRAWING INDEX

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I08	PCP (RTU) ACE 3600 INTERFACE BOARD WIRING
I09	PCP (RTU) ACE 3600 COMMUNICATIONS WIRING
I10	PCP (RTU) TO MCP INTERCONNECTS
I11	PCP (RTU) TERMINAL BLOCK LAYOUTS
I12	PCP (RTU) BOM
I13	ANTENNA MAST MOUNTING DETAILS
I14	CCTV NETWORK SWITCH ENCLOSURE LAYOUT
I15	CCTV NETWORK SWITCH BACK PANEL LAYOUT & BOM
I16	CCTV NETWORK SWITCH POWER, WIRING & ENET CABLES
I17	SITE CAMERA
I18	MISCELLANEOUS DETAILS

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
LEGEND, INDEX, AND LOCATION MAP

SHEET G02 OF 53

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GENERAL NOTES

1. The Contractor shall perform all construction in accordance with the lines and grades shown on the Plans and to tolerances stated herein or in the specifications. Refer to the boundary and/or topographic survey for additional information on existing conditions. An electronic CADD drawing of the existing survey data and of the proposed site improvements is available and may be used for convenience in layout of the work. However, use of this electronic format is at the contractor's sole responsibility as all work must be in accordance with the contract documents for the project. The accuracy of these files shall be checked and verified by the user. Any discrepancies are to brought to the attention of the Engineer prior to use of this information.

2. Contractor shall be responsible for maintaining all horizontal and vertical control markers, right-of-way and property corners (monuments, pipes, etc.) for the duration of construction. Markers shall be continuously flagged and shall be reset immediately by a Florida licensed land surveyor if any should become disturbed.

3. Contractor is to exercise caution when operating near or adjacent to existing public and private utilities. Locations, elevations and dimensions of existing utilities, structures and other features are shown according to the best information available at the time of the preparation of these drawings and do not purport to be absolutely correct. The Contractor shall verify the locations, elevations and dimensions of all existing utilities, structures, etc. affecting his work prior to construction.

4. If utility field location markings are required, the Contractor shall coordinate his construction schedule with all utility companies as well as any affected City and County departments by providing a minimum 48-hour notice of when construction will commence in an area in order to permit field location of utility lines prior to construction. The contractor is responsible for contacting SUNSHINE 811 for this purpose by dialing 811. Further, the Contractor is cautioned that the SUNSHINE 811 system may not reveal all onsite utilities and his further investigation may be required. Contractor shall coordinate utility relocation work with affected utility owner(s) and shall endeavor to coordinate his own work to avoid delays in his schedule.

5. All utilities shall be kept in operation except with the express written consent of the utility owner. It shall be the Contractor's responsibility to preserve existing utilities and any and all damage to existing utilities as a result of the Contractor's actions shall be repaired at the Contractor's expense.

6. The Contractor shall endeavor to protect all adjacent improvements within the project area and replace all pavement, stabilized earth, driveways, sidewalks, retaining walls, mailboxes, traffic signs, etc. removed or damaged during construction with the same material removed or damaged or as otherwise directed by the Engineer.

7. The Contractor shall contact the Engineer prior to proceeding with any work with which a conflict has arisen during construction of any improvements shown in these documents.

8. Construction shall be carried out "in the dry". The Contractor shall review site conditions and determine methods and extent of dewatering necessary and shall include costs of dewatering in the bid. No additional compensation shall be provided for control of ground or surface water or for additional materials or rework required as a result of inadequate or insufficient dewatering.

9. All work to be performed on this project shall be constructed according to the best practices of the industry and in accordance with applicable Federal, State, County and/or City codes, ordinances, technical standards and permit conditions.

10. The Contractor shall be responsible for supplying a record survey(s) prepared and submitted by a licensed Professional Surveyor and Mapper including, but not limited to, location and finished grade elevations sufficient to determine direction of drainage and elevations of retention/detention areas, mitigation areas and ditch/channel conveyances including tops of banks, toes of slopes, pond bottoms and water levels; elevations and dimensions of pond control structures, spillways, skimmers/baffles, sumps and underdrains; ties to water lines, valves, bends, service connections; water line elevations and clearances from sanitary and storm sewer pipes; ties to sanitary sewer lines, cleanouts and service connections; manhole rim and invert elevations; ties to storm sewer lines and storm structure top and invert elevations; plus locations, dimensions and elevations of all other construction components which vary from the design. Ties to underground utilities shall be dimensioned from permanent above ground structures (buildings, walks, poles, manholes, valve boxes, etc.) Further, Contractor shall comply with as-built survey requirements applicable to water and sewer system adjustments or new installations of the Tampa Water and Wastewater Departments. Four copies of the signed and sealed record survey (or one electronically signed/sealed pdf file) and one copy of the survey in AutoCAD (.dwg) format in the native datums shall be provided. A record survey depicting the as-built condition of only water and sewer utilities shall be provided if these utilities are to be placed in service prior to closeout of the project.

11. Refer to the Specific Provisions section of the contract documents for additional requirements for the work.

ROAD, DRAINAGE AND GRADING CONSTRUCTION NOTES

1. Pavement, concrete slabs, and grading shall be sloped to the proposed elevations and/or contours shown on the drawings. Smooth, constant slopes shall be maintained between proposed elevations and contours. Proposed contour elevations, spot elevations and finished grade elevations in non-paved areas refer to finished surface elevations once sodding or seeding is complete and in paved areas refer to finished pavement elevations.

2. Finished grades adjacent to walks, curbs or slabs shall be 1 inch below adjacent surface, unless noted otherwise in the plans.

3. All areas disturbed during construction (except landscape beds), shall be sodded or seeded and mulched to provide a fully grassed site at substantial completion. Contractor is responsible for controlling site erosion and shall provide additional sod, sod staking or seed & mulch and shall fill, level, repair and re-grass all eroded or dead areas as necessary, to achieve an erosion-free site (free from rutting, etc.) to the lines & grades shown herein upon final acceptance. All swales and all surfaces 6:1 or steeper shall be sodded in addition to other locations shown on or detailed in the plans. Seed and sod shall be 95% weed-free Argentine Bahia unless otherwise indicated or required to match existing and shall be installed and maintained in accordance with FDOT Specification Section 570 and 575, as applicable, including the initial rolling to fully seat sod to the subgrade and eliminate irregular surface.

PROJECT NOTES

1. Project Address: **10102 N. Lantana Ave., Tampa FL 33612**.

2. Reference Survey: Topographic survey prepared by **Suncoast Land Surveying, Inc., dated 11/29/2018.**

3. The project site is located within **Zone X, Areas Determined To Be Outside 500-year Flood Plain,** as shown on the Flood Insurance Rate Map Community Panel Number 12057C0212H, dated 08/27/2008. Historic Flood Elevation Established by onsite observations of stain/debris lines by COT Stormwater Engineering Division in October 2024 as a result of Hurricane Milton is 28.5 feet.

4. Elevations shown hereon are based on the North American Vertical Datum of 1988 (NAVD88) and utilize City of Tampa Bench Mark HV-02 0227, having an elevation of 36.12 feet.

5. Bearings and coordinates shown hereon are based on the Florida State Plane Coordinate System, West Zone as referenced to the North American Datum 1983, adjustment of 2011, NAD83(2011) and are shown in US Survey Feet.

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Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
GENERAL, TREE AND SURVEY NOTES

SHEET
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SW2024-06

ENVIRONMENTAL PROTECTION NOTES

Dewatering Activities:

1. Prior to any groundwater dewatering activities, Contractor shall obtain coverage under the FDEP Generic Permit for the Discharge of Produced Groundwater from any Non-Contaminated Site Activity pursuant to Chapter 62-621.300(2), F.A.C.

2. All water collected and pumped during trench dewatering activities shall be disposed of in upland areas into double staked hay bales. Discharge locations shall be a minimum of 75 feet from the nearest property boundary, wetland jurisdictional or surface water area, to allow for maximum overland filtration of soil particles.

Erosion & Sediment Control BMPs:

1. Staked or floating silt screens, hay bales, or other appropriate best management practices (BMPs), shall be utilized as silt barriers and placed in locations shown and as detailed on the plans and at other locations as required to keep sediment from reaching water bodies, wetland areas, adjacent properties or rights-of-way. These barriers shall be installed prior to commencing construction and shall be considered as limits of construction. Limited perimeter clearing and grubbing along the limits of construction is allowed, if necessary, to facilitate installation of silt barriers providing that disturbance is the minimum width necessary for such work. Perimeter barriers shall be fully installed, including backfilling if necessary, prior to any additional clearing and grubbing operations within the construction limits.

2. Temporary stockpiles shall not be located adjacent to storm sewer inlets, ditches, undisturbed wetlands or surface water areas where sedimentation from stockpiles may cause damage. Additionally, silt barriers shall continuously and fully encircle all stockpiles which will remain for longer than 24 hours to contain materials within a reasonably confined area.

3. Off-site vehicle tracking of sediment shall be minimized by cleaning vehicle undercarriage areas or other effective methods prior to site departure.

4. All fugitive dust shall be controlled on site. Only areas scheduled for immediate construction shall be cleared or stripped of vegetation. Watering, application of calcium chloride or other prior approved means of dust control shall be employed to prevent the emanation of dust from the site. Permanent grassing, landscaping and other site work shall be incorporated as soon as possible.

5. Contractor shall use other structural BMPs, as necessary, to divert runoff from exposed soils, store runoff and/or sediment on-site, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site.

6. Contractor shall inspect and maintain all sediment and erosion control BMPs to assure proper operation. Inspections shall occur at a minimum interval of once every 7 calendar days and within 24 hours of the end of a storm that is 1/4-inch or greater.

7. Any maintenance operations needed to ensure proper operation of all controls, shall be done in a timely manner, but in no case later than 7 calendar days following the inspection in which the need is identified.

8. Temporary or permanent ground stabilization BMPs shall be implemented as soon as practicable, but in no case more than 14 days in portions of the site where construction activities have been temporarily or permanently ceased. Stabilization BMPs may include temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, swale sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.

9. Once construction is substantially completed and finished grading and final stabilization has been achieved, silt barriers shall be completely removed to the satisfaction of the Engineer and prior to final acceptance.

Wetlands & Surface Waters Protection:

1. Construction equipment shall not be operated in wetland jurisdictional or surface water areas unless such construction practices are specifically identified in this plan or approved in a plan of operation submitted to the Engineer & the appropriate regulatory authorities.

2. Where construction is necessary across or adjacent to wetland jurisdictional or surface water areas, silt barriers shall be installed as shown on the plans.

4. Fertilizers or pesticides shall not be used except to the extent allowed by the landscape specifications. Nutrients shall be applied only at rates necessary to establish and maintain vegetation.

Tree Protection:

1. Tree Barricades shall be placed prior to commencing construction and shall be considered as limits of construction.

2. The Contractor shall not prune, trim, excavate within the tree's dripline or remove or damage any trees without prior authorization from the City's Natural Resources Dept. other than those specifically shown to be removed.

3. Refer to other requirements for tree protection in the Plans and Specific Provisions of the Contract Documents.

DEMOLITION NOTES

1. All existing underground water, sewer, irrigation and storm sewer piping and structures which fall within 5 feet of the limits of new infrastructure, unless otherwise noted, shall be completely removed and legally disposed of offsite. All other found underground utilities left in place shall be clearly shown on the contractor as-builts and grouted in-place unless otherwise approved by the Engineer.

2. All incidental paving, sidewalks, bollards, fences, hedges, bushes and other appurtenances within construction limits shall also be removed. Trees not specifically shown to be removed shall be protected with tree barricades for the duration of construction. Tree limb or root pruning shall only be done in the presence of a certified arborist and in accordance with the City Tree Ordinance.

3. All materials demolished or removed shall be removed from the site. Items which the Owner desires to retain shall be delivered to the City property at the Port of Tampa or as otherwise directed. All other materials shall be properly disposed of at the contractor's expense unless on-site use is otherwise approved.

4. No open burning will be allowed at the site unless a plan is approved by the Owner, Engineer and the appropriate regulatory authority.

5. Contractor shall protect all adjacent structures, pavements, etc. damaged during demolition or construction and shall repair, in kind all damaged facilities or improvements to the satisfaction of the Engineer and Owner .

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LANTANA - POINSETTIA
STORMWATER PUMPING STATION
GENERAL, TREE AND SURVEY NOTES

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STRUCTURAL NOTES

1. DESIGN CRITERIA REQUIREMENTS & CODES

- 2023 Florida Building Code (FBC), Building, Eighth Edition
- Minimum Design Loads for Buildings and Other Structures (ASCE 7-22)

2. DESIGN LOADS

-	Live Load:	300 psf Generator Concrete Pad
-	Roof Load:	N/A
-	Snow Load:	N/A
-	Wind Loads:	FBC 2023 and ASCE 7-22
---	Vult =	150 mph
---	Vasd =	116 mph
-	Exposure Category:	C
-	Risk Category	III
-	Calc. Wind Base Shears:	Vx = 1.0k & Vy = 1.0K
-	Soil Bearing:	REF.: "8. Foundations", below.

3. MATERIALS

- Normal Weight Concrete 28-day Compressive Strength:

-	Slabs-on-grade:	f'c = 4,000 psi
-	Footings, Walls, and Piers:	f'c = 4,000 psi
-	Reinforcing Steel:	ASTM A615, Grade 60
-	Welded Wire Fabric:	ASTM A1064
-	Anchor Bolts:	¾" dia., Type 316 SS

4. CONCRETE

- Provide Minimum Cover for Reinforcing Bars, Unless Otherwise Indicated.

-	Cast Against Ground	3"
-	Concrete Exposed to Earth or Weather	
--	#5 Bars and Smaller:	1 ½"
--	#6 Bars and Larger:	2"
-	Concrete Not Exposed to Weather or Not in Contract with Ground	
--	Slabs and Walls:	1"

- All reinforcing bends and laps shall conform with ACI 318, Chapter 12 Tension Lap (Class B) Requirements, U.N.O.
- All reinforcing bends shall be a 90-degree standard hook as defined in ACI 318, U.N.O.

5. CONCRETE ANCHORS

5.1. Bolted Anchoring Systems embedded in Concrete Shall be Red Head, C6 Epoxy Adhesive Anchoring System or Approved Equivalent.

5.2. Rebar Anchoring Systems embedded in Concrete shall be Red Head, C6 Epoxy Adhesive Anchoring System or Approved Equivalent. Depth of Rebar Embedment shall meet Manufacturers recommendations to insure development of the full tensile strength of the reinforcing bar.

6. GENERAL

6.1. All work is to be performed in a good workmanlike and professional manner.

6.2. All construction shall be in strict compliance with the requirements of the 2023 Florida Building Code (FBC), Building, Eighth Edition, or local building code requirements if more stringent.

6.3. These Drawings do not show provisions for safety during construction. It is the responsibility of the General Contractor to provide the required bracing, shoring and safety devices throughout the construction of this project.

7. COORDINATION

7.1. Coordinate the exact size and location of all sleeves and openings through concrete walls or slabs with Civil, Electrical, Mechanical & Plumbing Drawings including vendor submittal drawings and other Contract Documents.

7.2. Any discrepancy(ies) between actual conditions and those shown on these drawings are to be brought to the attention of the Engineer before work proceeds, including fabrication.

7.3. Independent testing of materials shall be provided as defined in the Documents. In general, the project involves the following: soil/fill compaction & bearing; C.I.P. concrete.

8. FOUNDATIONS

8.1. Shallow Foundation Criteria: Prepare the existing subgrade in accordance with the project geotechnical report as prepared by Meskel & Associates Engineering (MAE Project No. 0135-005, dated 2/23/2026). In the event unusual bearing soil conditions are uncovered, including conditions that deviate from those described in the report, notify the Owner and Engineer prior to foundation construction for instructions how to proceed.. Adjustments in the footing depths and general foundation construction may be made by the Engineer before work proceeds. Contractor is responsible for performing any such adjustments.

8.2. Footing & base slab excavations and forms shall be reviewed by a City construction representative for compliance with the Drawings prior to placement of concrete.

8.3. All excavations shall be adequately dewatered prior to placement of concrete. No concrete or concrete fill shall be placed in standing water. Accumulation exceeding 1" shall be removed.

8.4. Footings and base slab elevations shall no be adjusted.

8.5. Structural fill/backfill shall be select material as described in the geotechnical report and free from roots, trash, wood scraps and other deleterious materials.

8.6. Construction joints in slabs shall be made at location shown on the Drawings.

9. REINFORCING STEEL

9.1. Bars shall be rolled from new billet-steel of domestic manufacture conforming to "Standard Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement", ASTM A615, Grade 60.

9.2. Detail and fabricate reinforcing steel in accordance with the American Concrete Institute "ACI Detailing Manual", SP66 (04).

9.3. Welded wire fabric shall conform to "Standard Specification for Welded Steel Wire Fabrick for Concrete Reinforcement", ASTM A1064.

9.4. Reinforcing steel shop drawings shall be submitted for approval prior to fabrication.

9.5. Reinforcing steel in place shall be reviewed by the City construction representative prior to placement of concrete.

9.6. Provide bars at corners and intersections of walls and footings at the same number and size as longitudinal bars, U.N.O. on the Drawings.

9.7. Fabricate continuous bars in walls, slabs & footings to the longest practicable lengths.

9.8. Bars shall only be cold bent during fabrication and shall not be:

9.8.1. Heated for any reason;

9.8.2. Bent after being partially embedded in hardened concrete;

9.8.3. welded, U.N.O. on the plans.

9.9. Lap splicing of reinforcing steel in concrete shall lap a minimum of 50 bar diameters, U.N.O. All laps are to be wire tied.

9.10. Place welded wire fabric at center depth of slabs-on-grade, U.N.O.

10. CONCRETE

10.1. Concrete work shall conform to "Building Code Requirements for Reinforced Concrete", ACI 318-19 & to "Code Requirements for Environmental Engineering Concrete Structures", ACI 350-20.

10.2. Place ½ inch expansion joint material between edges of slabs and vertical surfaces U.N.O.

10.3. Provide construction or control joints in slabs & walls at locations shown on the drawings, at offsets and changes in direction and at maximum 30 feet, U.N.O. Contractor to provide construction joint layout plan if such layout is not provided or changes are proposed prior to placing concrete.

10.4. Chamfer exposed edges of concrete ¾ inch, U.N.O.

10.5. Contractor shall be responsible for proper curing of all concrete. Curing methods shall conform to "Building Code Requirements for Reinforced Concrete", ACI 318-19, "Code Requirements for Environmental Engineering Concrete Structures" ACI 350-20, and "Standard Practice for Curing Concrete", ACI 308R-1 (08).

10.6. Dowels shall be the same number and size as the largest vertical bar to which they are spliced, U.N.O.

10.7. Required concrete finishes shall be per Specifications or as otherwise agreed to by the Engineer.

10.8. Cast-in-place reinforced concrete shall attain a minimum compressive strength as specified herein. Documentation indicating the proposed concrete mix design will produce the specified compressive strength in accordance with ACI 301-16, sections 4.2.3.4.A or 4.2.3.4.B shall be submitted for acceptance prior to concrete placement.

10.9. For multiple pours, roughen the "base" concrete surface to a full amplitude of ¼" minimum, where noted on the Construction Drawings, if applicable.

10.10. Concrete accessories, as follows:

10.10.1. Caulk/Sealant for joints in horizontal surfaces: Provide ASTM C920, Type M, Grade P, Class 25, Use T. Color of sealant shall be selected by Owner from manufacturer's full range.

10.10.2. Bonding Agent: Provide structural epoxy adhesive conforming to ASTM C-881, Type I Strength and II, Grade 2, Class B & C with a minimum bond strength of 1900 psi. (SIKA Armatec 110 EpoCem, O.A.E.)

10.11. Post-installed anchors:

10.11.1. Bolted anchoring systems embedded in concrete shall be Red Head, C6 Epoxy Adhesive Anchoring System or an approved equivalent.

10.11.2. Rebar anchoring system embedded in concrete shall be Red Head, C6 Epoxy Adhesive Anchoring System or an approved equivalent. Depth of rebar embedment shall meet MFG.'s recommendations to ensure development of the full tensile strength of the reinforcing bar.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
STRUCTURAL CONSTRUCTION NOTES

SHEET G05 OF 53

Plot Date: Tuesday, September 8, 2026 PLOT

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SW 2024-06

EXISTING TREE TO BE REMOVED

TREE PROTECTION BARRIER R=10' (MIN.), REFER TO TREE PROTECTION DETAILS

N

0 10 20 Feet

NOTES:
1. REFER TO THE ATTACHED DARK MOSS "TREE DISPOSITION SUMMARY" DATED 2025-12-23 FOR A SUMMARY OF EXISTING TREES AND TREES TO BE REMOVED.
2. REFER TO THIS SHEET FOR LOCATION OF TWO (2) EXISTING TREES PROPOSED TO BE REMOVED:
   (1) 26" OAK
   (2) 21" OAK
3. ALL EX. TREES ARE TO BE PROTECTED AS SHOWN.

BEGIN EX. FENCE REMOVAL WITHIN R/W

EX. LANTANA STORMWATER POND, TO BE RE-GRADED

SILT FENCE (TYP), SEE CIVIL DETAILS, AND LIMITS OF CONSTRUCTION

EX. FENCE WITHIN R/W TO BE REMOVED

R10 TYP.

EX. STORM INLET TO BE DEMOLISHED AND RECONSTRUCTED, REFER TO SITE PLAN SHEET

TREE PROTECTION BARRICADES (TYP)

EX. 12X18 ERCP SW OF EX. CURB INLET TO BE REMOVED

TREE TO BE REMOVED (TYP)

END EX. FENCE REMOVAL WITHIN R/W

TBM
EL.=25.93'
N=1348148.94
E=512070.18
SN&T

LANTANA AVE.
ASPHALT ROAD
8" CLAY
CONC
12X18 ERCP
15" RCP
POINSETTIA AVE.
ASPHALT ROAD
8" CLAY
4' CLF
3'CLF
6' WDF
#1206
#1205
#1202
#1201
#10024
FCM 4DIAM
N RIM EL.=26.16' FORCEMAIN
N RIM EL.=26.36' N=21.96'
N RIM EL.=26.29' N=20.64'
INV=25.67' 4HDPE
INV=23.35' 12X18ERCP
INV=23.62' 12X18ERCP
INV=23.59' 12X18ERCP
INV=23.47' 12X18ERCP
INV=23.54' 12X18ERCP
INV=23.37' 15RCP
N RIM EL.=26.30' SE=23.62' SW=23.55'
S89°39

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: JS
CKD: JDM
DATE: 9/02/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA STORMWATER PUMPING STATION
EXISTING CONDITIONS, DEMOLITION AND EROSION CONTROL PLAN

SHEET C01 OF 53

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SW 2024-06

EX. POND TOB
PROP. POND TOB
PROP. INTAKE STRUCTURE, SEE CIVIL DETAILS
IE = 21.00 (W)
PROP. FES FDOT INDEX NO. 430-021
INV = 21.5 (E)
LANTANA-WEST
MIN. TOB = 26.0
NWL EL. = 23.0
BOT EL. = 21.0
8 LF 24" RCP STUB @0.08% W/ PLUG END
41 LF 24" RCP @ 0.10%
20 LF 18" RCP @ 1.91%
PROP. BOLLARDS (TYP)
PROP. FES FDOT INDEX NO. 430-020
INV 21.50 (N)
57 LF 24" RCP @ 0.10%
PROP. COT TYPE "1" MODIFIED INLET
(RECONSTRUCT EX. INLET PER CITY STD. DETAIL)
IE = 21.57 (W)
IE = 23.62 (SE)
CL FUTURE 24" RCP
INFLOW PIPE TO LS
ST104
FDOT TYPE J, ALT A BOTTOM WITH MANHOLE TOP
INDEX NO. 425-001, 425-010
RIM = 26.40
INV = 21.50 (NE)
INV = 20.50 (S)
INV = 20.50 (W)
PROP. PUMP STATION WET WELL
TOP EL. 27.0'
IE 19.50 (N)
EX. 8" FM TO BE CAPPED AND ABANDONED IN PLACE
6.0-FT DBL SWING GATE, BLACK PVC COATED CHAINLINK
CONSTRUCT FM QUICK CONNECT, SEE CIVIL DETAILS
S-201, COT TYPE T INLET W/RAISED GRATE TOP AND 3.0-FT X 0.75-FT (WxH) WINDOW ON WEST SIDE
GRATE EL = 25.85
WINDOW EL = 25.10 (W)
INV = 21.50 (E)
PROP. GENSET, SEE NEXT SHEET FOR GRADING DETAILS
TOP 8" PVC FORCEMAIN= 23.01'
PROP. 8" MJ CAP
8" FM TIE-IN
8" X 8" MJ TEE
8" MJ GV
EX. CAM-LOCK, CHECK VALVE, MH RISER TO BE REMOVED, INSTALL 8" MJ CAP.
6' CLF
8" CLAY
LANTANA AVE.
ASPHALT ROAD
POINSETTIA AVE.
15" RCP
12X18 ERCP
CONC
EX ROW
#10024
#1201
#1202
#1205
#1206

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: JS
CKD: JDM
DATE: 9/02/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
SITE PLAN

SHEET C02 OF 53

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SW 2024-06

GENERAL GENSET SITING NOTES

1. CATERPILLAR 40KW GENSET MODEL NO. D40GC TO BE FURNISHED BY OWNER AND INSTALLED BY THE CONTRACTOR.
2. GENSET SHALL BE ANCHORED IN PLACE USING ANCHOR BOLTS PER MANUFACTURER'S RECOMMENDATIONS.
3. CRITICAL ELEVATIONS:
   FEMA BFE = N/A (ZONE X, MAP NO. 12057C0212H)
   FLOOD OF RECORD (2024) = 28.50 FT
   GENSET FDN. EL. = 28.10 FT
   GENSET FUEL TANK HT. = 1.42 FT
   GENERATOR BASE EL. = 29.52 FT
4. ALL DIMENSIONS ARE IN FEET AND ELEVATIONS ARE IN NAVD88 FEET U.N.O.

6" CONC. SIDEWALK, SEE DETAIL SHEET C4

STRUCTURAL CONC. PEDESTAL, SEE DETAIL SHEET C4

25.39 PROPOSED SPOT ELEVATION

INV=23.59'
12X18ERCP

6" THICK #57 STONE OVER NON-WOVEN GEOTEXTILE (MIRAFI 140N OR EQUAL). PROOF ROLL SUBGRADE. TOP OF STONE EL. = 26.50±

6.0-ft TYPE-B PVC COATED CHAIN LINK SECURITY FENCE (BLACK) PER FDOT INDEX 550-002

BOLLARD (TYP), SEE CIVIL DETAILS

TOB EL. = 26.00

5.00'

6.50'

3.50'

5.50'

3.78'

0.50' MIN. (TYP)

EX. 8" STORM FORCE MAIN

LEVEL SENSING STANDPIPE, SEE INSTRUMENTATION PLANS FOR DETAILS. COORDINATE FINAL LOCATION WITH OWNERS REPRESENTATIVE PRIOR TO PLACEMENT.

TOP EX. 8" PVC FORCEMAIN= 23.01'

12.0-FT ASPHALT DRIVEWAY

6.0-FT TYPE B DBL SWING GATE, PVC COATED BLACK CHAIN-LINK SECURITY FENCE (TYP) PER FDOT INDEX 550-002

LANTANA AVE

N

0 1 2

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: B.S.
DRN: JS
CKD: JDM
DATE: 5/29/2026

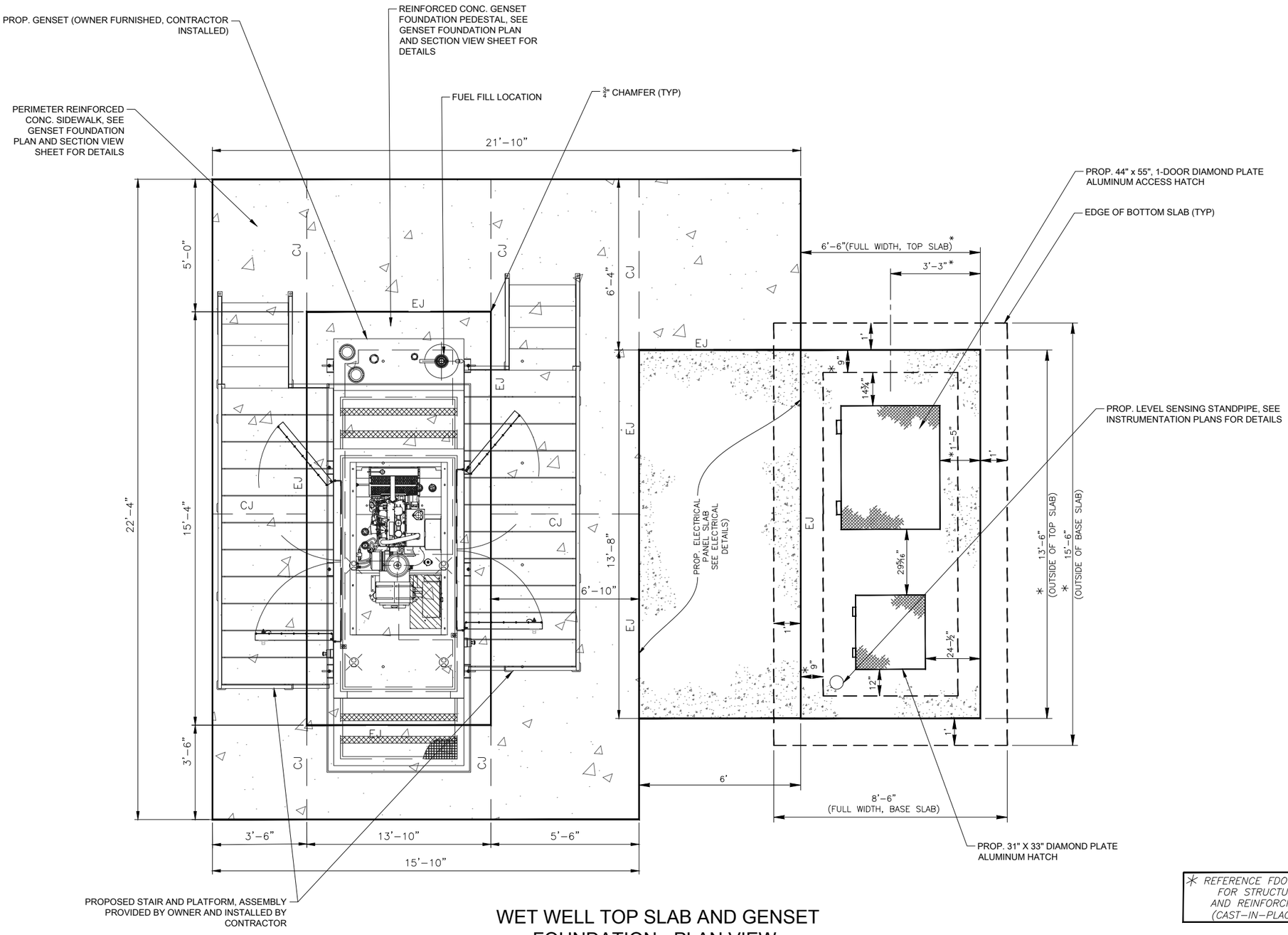
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Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
GRADING DETAIL PLAN

SHEET C03 OF 53

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SW2024-06



WET WELL TOP SLAB AND GENSET FOUNDATION - PLAN VIEW

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

* REFERENCE FDOT INDEX 425-010 FOR STRUCTURE DIMENSIONS AND REINFORCING INFORMATION. (CAST-IN-PLACE VS. PRECAST)

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

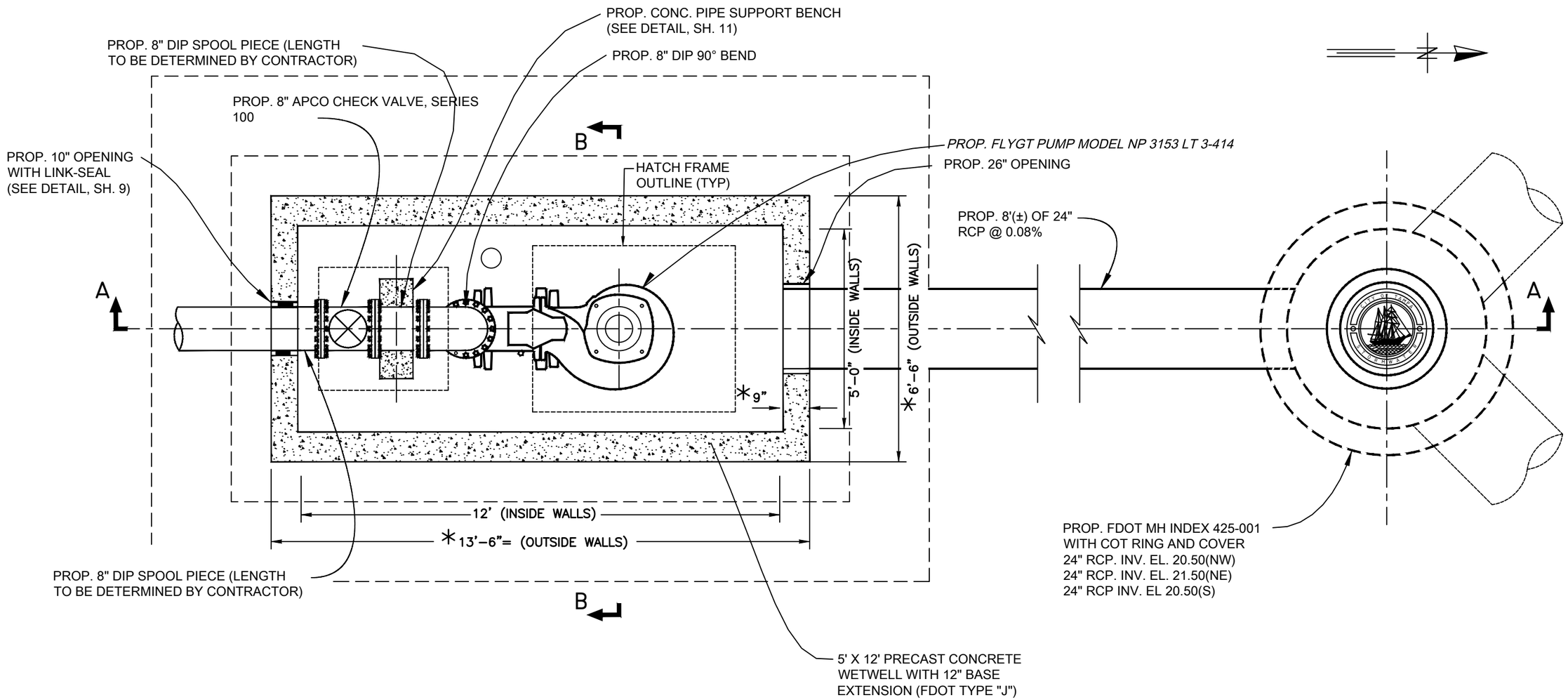
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Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
TOP SLAB - PLAN VIEW

SHEET C04 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026

SW2024-06



COMPACTION 95% PROCTOR DEPTH OF AT LEAST 1'-0" BELOW BEARING

* REFERENCE FDOT INDEX 425-001 FOR STRUCTURAL REQUIREMENTS AND REINFORCING INFORMATION. (CAST-IN-PLACE VS. PRECAST)

PLAN VIEW

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

No.	DATE	REVISIONS	No.	DATE	REVISIONS	
3			6			DES: B.S.
2			5			DRN: J.S.
1	9/2/2026	ISSUED FOR BID	4			CKD: JDM
						DATE: 9/2/2026

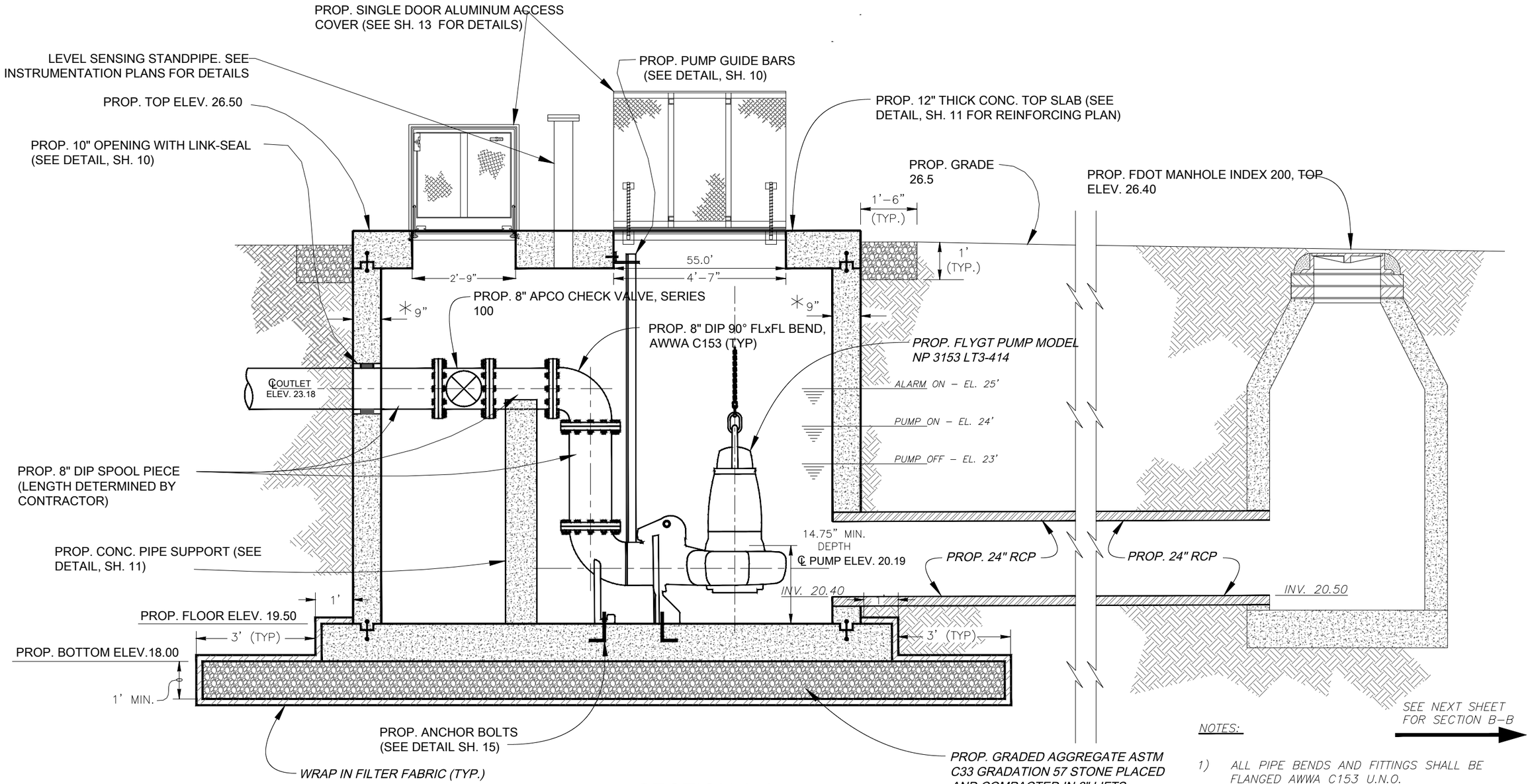
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Mobility Department
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LANTANA - POINSETTIA
STORMWATER PUMPING STATION
PUMPING STATION - PLAN VIEW

SHEET C0
OF 53

Plot Date: Tuesday, September 8, 2026 PLOT

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SECTION A-A

scale: 3/8" = 1'-0"

NOTES:

1) ALL PIPE BENDS AND FITTINGS SHALL BE FLANGED AWWA C153 U.N.O.

COMPACTION 95% PROCTOR DEPTH OF AT LEAST 1'-0" BELOW BEARING

* REFERENCE FDOT INDEX 425-010 FOR STRUCTURE DIMENSIONS AND REINFORCING INFORMATION. (CAST-IN-PLACE VS. PRECAST)

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

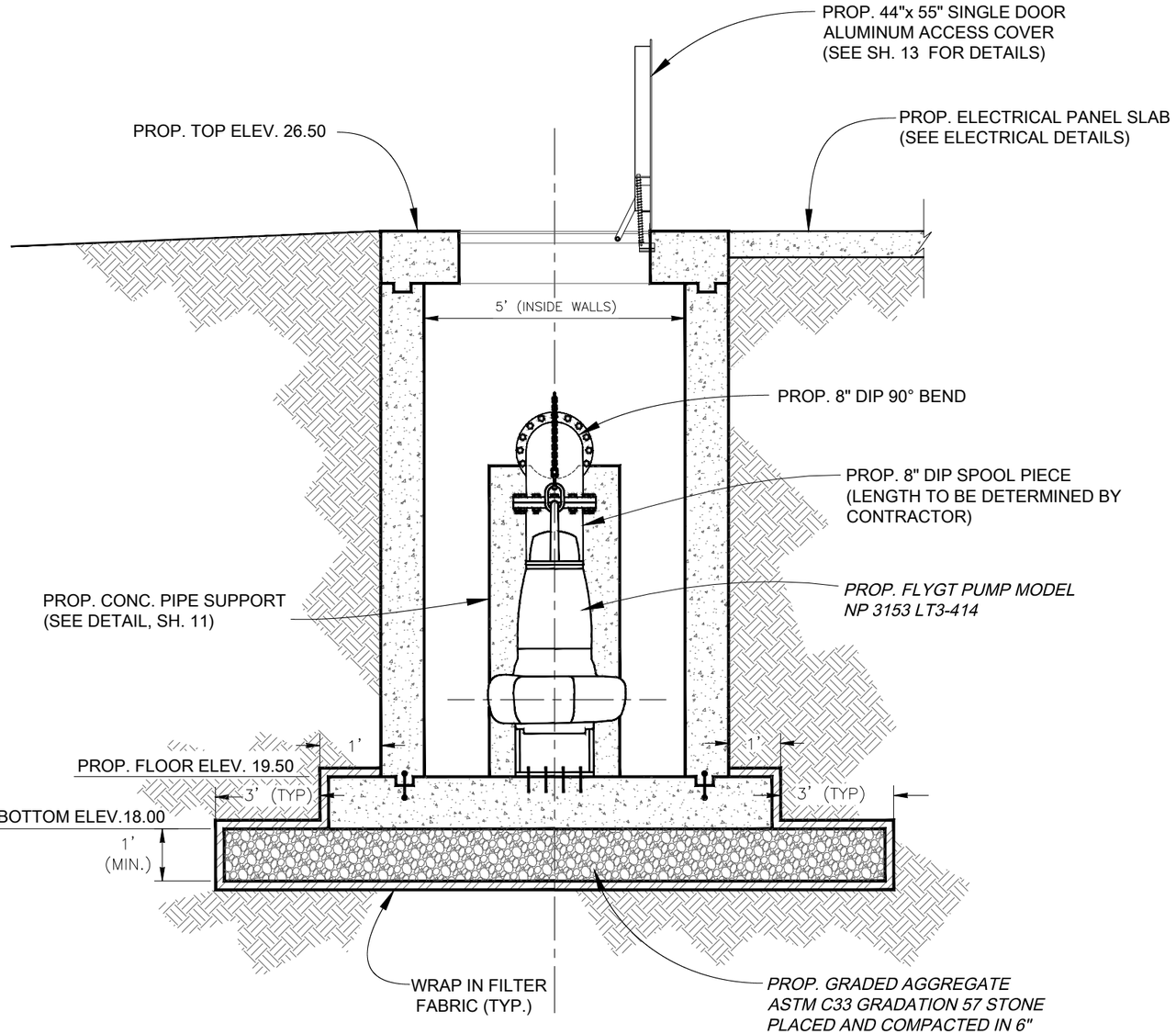
DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
PUMPING STATION - SECTION A-A

SHEET C06
OF 53

Plot Date: Tuesday, September 8, 2026 PLOT
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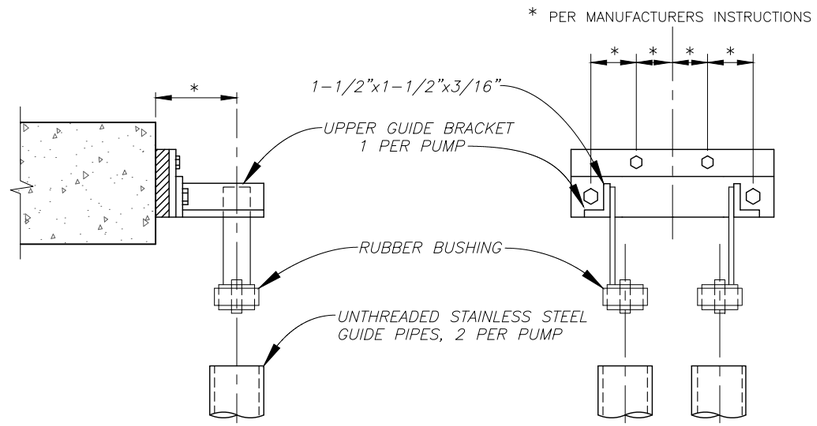


SECTION B-B

scale: 3/8" = 1'-0"

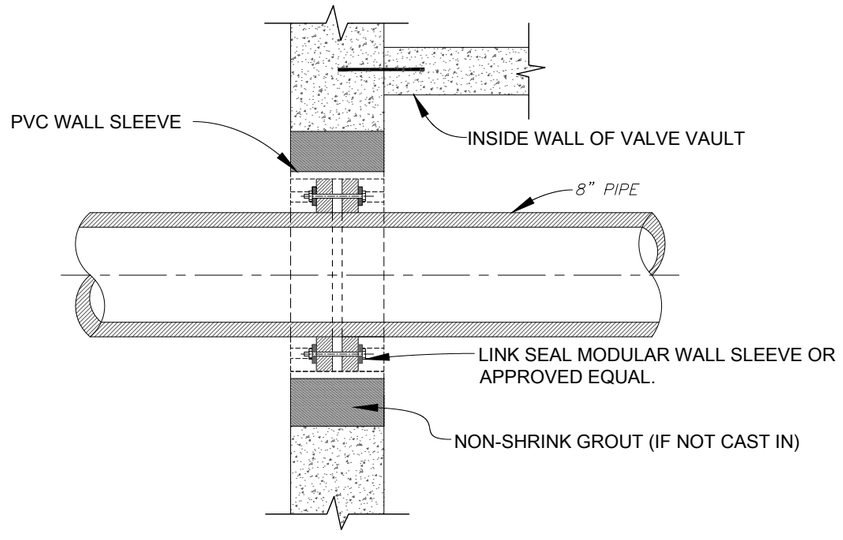
✳ REFERENCE FDOT INDEX 425-010 FOR STRUCTURE DIMENSIONS AND REINFORCING INFORMATION. (CAST-IN-PLACE VS. PRECAST)

COMPACTION 95% PROCTOR DEPTH OF AT LEAST 1'-0" BELOW BEARING



GUIDE BRACKET DETAIL (SUPPLIED WITH PUMPS)

NOT TO SCALE



WALL SLEEVE DETAIL

NOT TO SCALE

No.	DATE	REVISIONS	No.	DATE	REVISIONS	DES: B.S.
3			6			DRN: J.S.
2			5			CKD: JDM
1	9/2/2026	ISSUED FOR BID	4			DATE: 9/2/2026

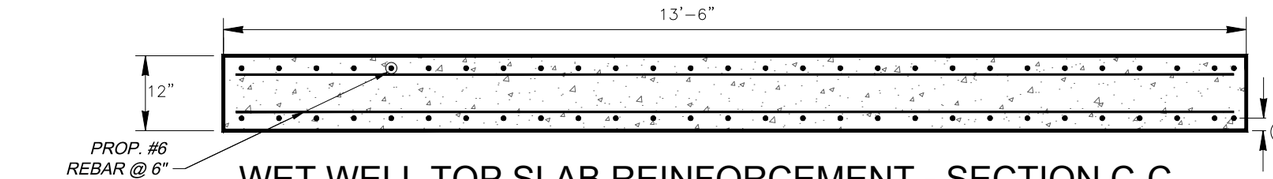
CITY of TAMPA
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Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
SECTION B-B AND MISCELLANEOUS DETAILS

SHEET C07 OF 53

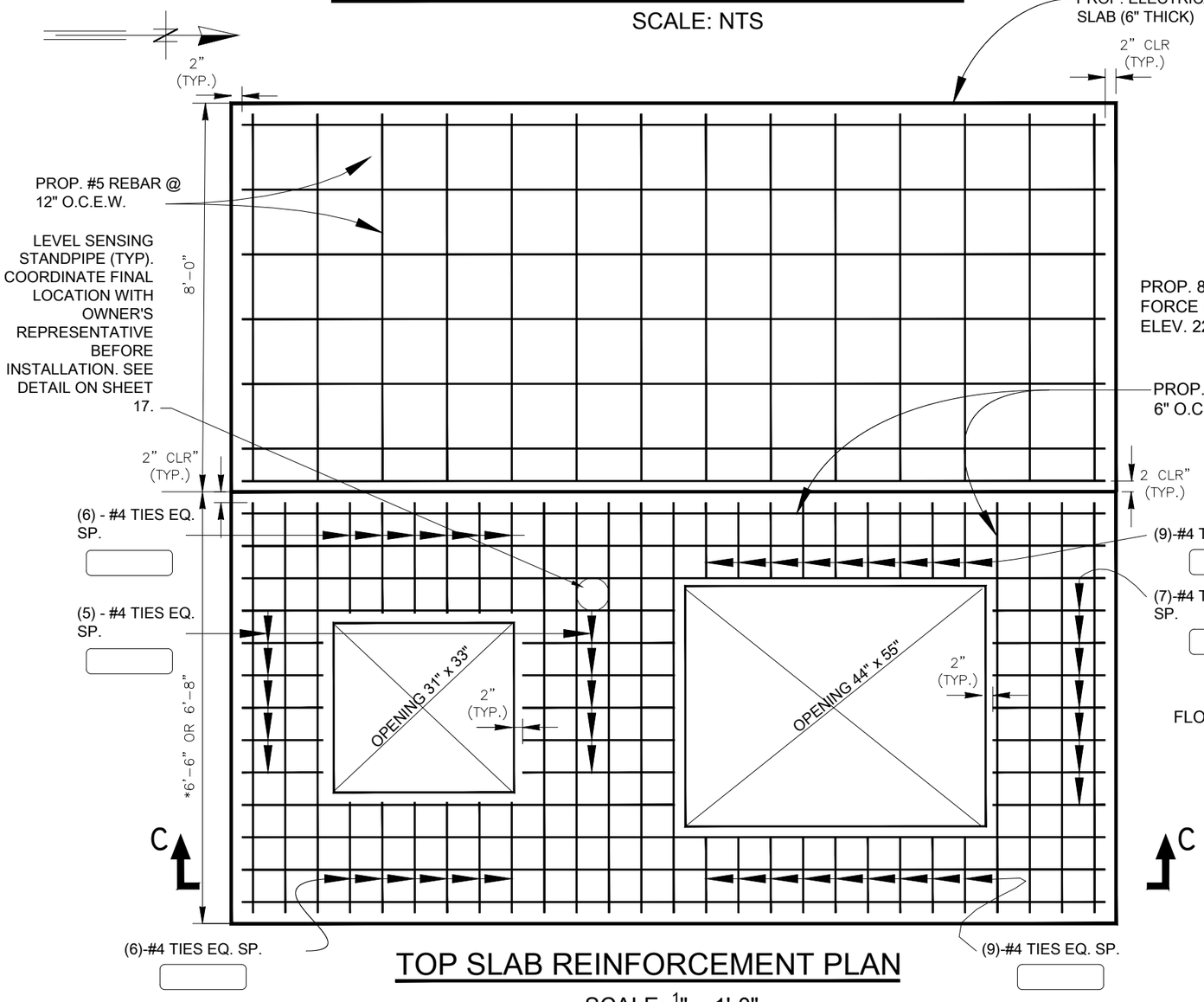
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Plot Date: Tuesday, September 8, 2026

SW2024-06



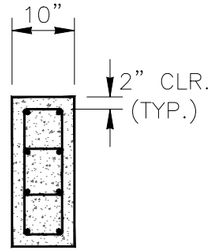
WET WELL TOP SLAB REINFORCEMENT - SECTION C-C

SCALE: NTS



TOP SLAB REINFORCEMENT PLAN

SCALE: $\frac{1}{2}$" = 1'-0"

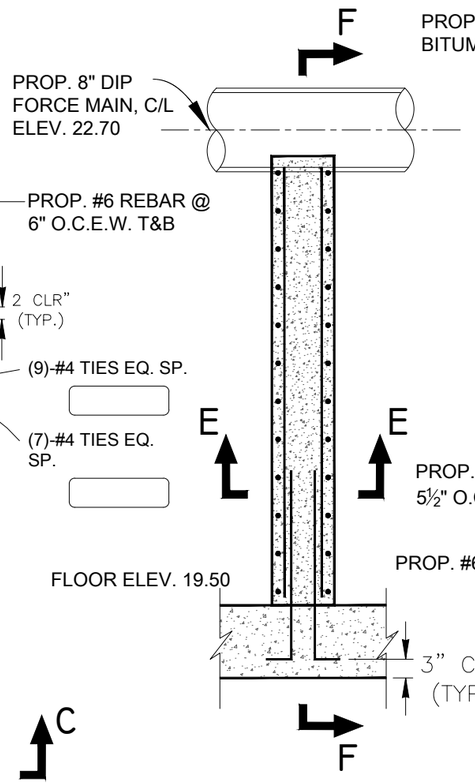


SECTION E-E

SCALE: NTS

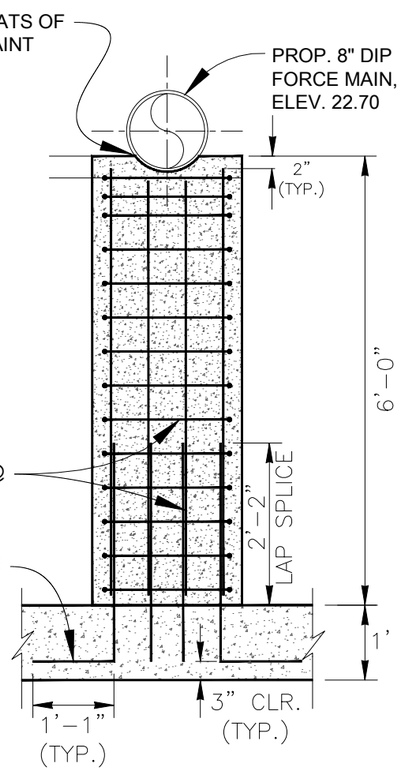
"CLR" IS THE CLEAR DISTANCE FROM EDGE OF CONCRETE TO THE OUTSIDE SURFACE OF THE REINFORCING.

ALL CONCRETE SHALL HAVE A MINIMUM 28- DAY COMPRESSIVE STRENGTH OF 5000PSI.



CONCRETE PIPE SUPPORT

SCALE: NTS



SECTION F-F

SCALE: NTS

No.	DATE	REVISIONS	No.	DATE	REVISIONS	DES: B.S.
3			6			DRN: J.S.
2			5			CKD: JDM
1	9/2/2026	ISSUED FOR BID	4			DATE: 9/2/2026

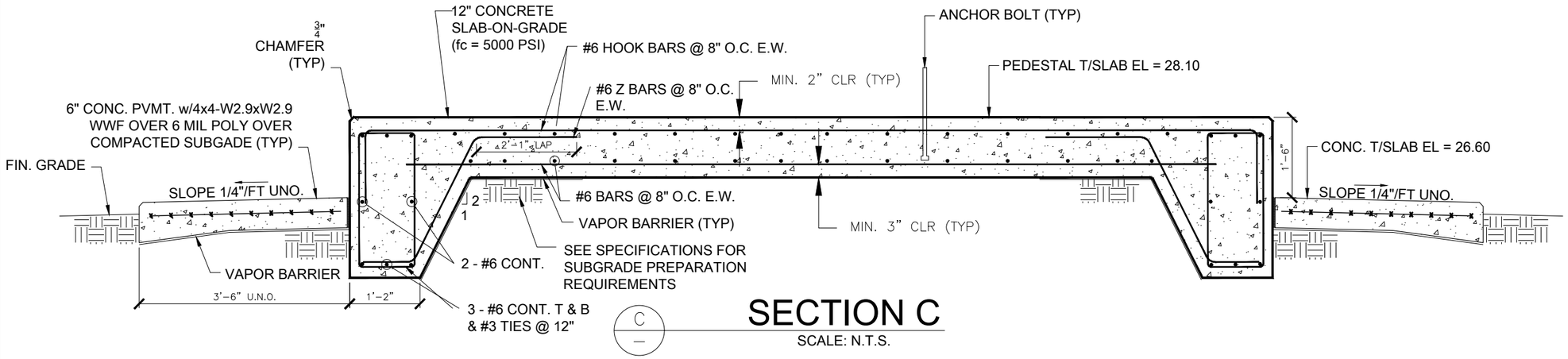
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
TOP SLAB - REINFORCEMENT PLAN

SHEET C08 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026

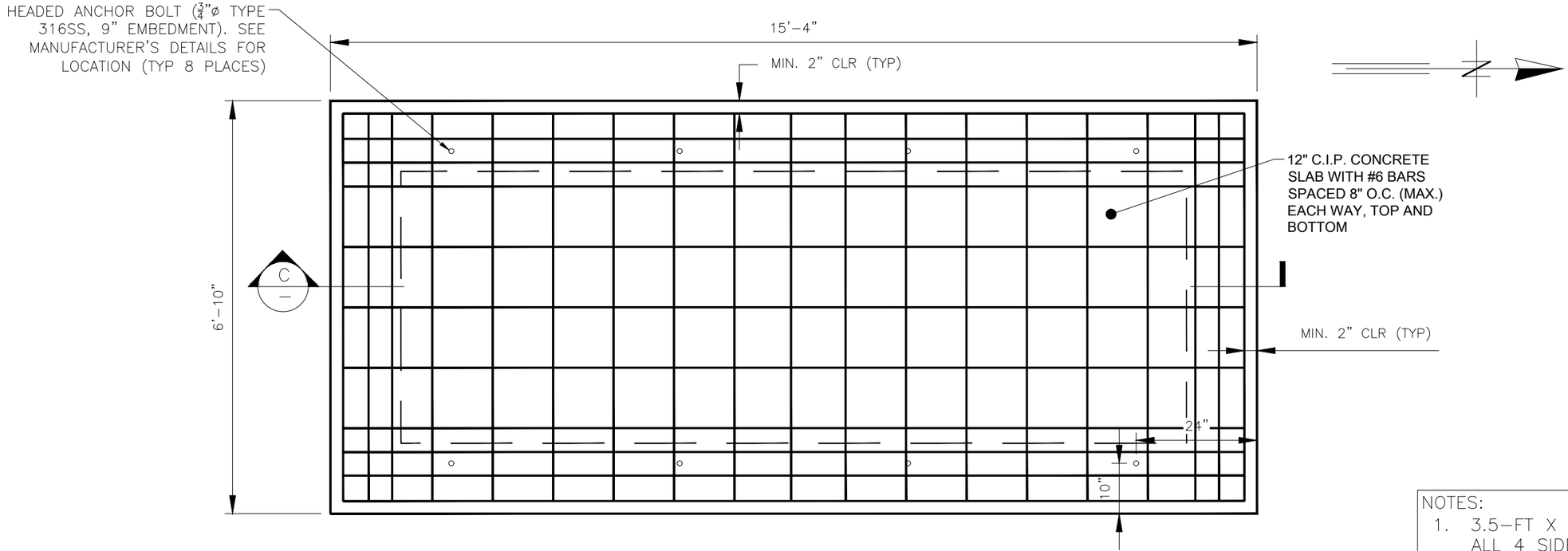
SW2024-06



C

SECTION C

SCALE: N.T.S.



GENSET PLATFORM REINFORCEMENT PLAN

SCALE: ½" = 1'-0"

NOTES:
1. 3.5-FT X 6" THICK CONC. SIDEWALK ON ALL 4 SIDES OF GENSET FDN. SLAB IS NOT SHOWN IN PLAN VIEW FOR CLARITY. SEE SITE AND GRADING PLAN FOR LIMITS OF SIDEWALK.
2. COORDINATE CONDUIT STUB UPS IN CONC. SLAB FOR GENSET PRIOR TO PLACEMENT OF REINFORCEMENT BARS. ANY PROPOSED REBAR PLACEMENT MODIFICATIONS TO BE APPROVED BY THE ENGINEER OF RECORD.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: JAS
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

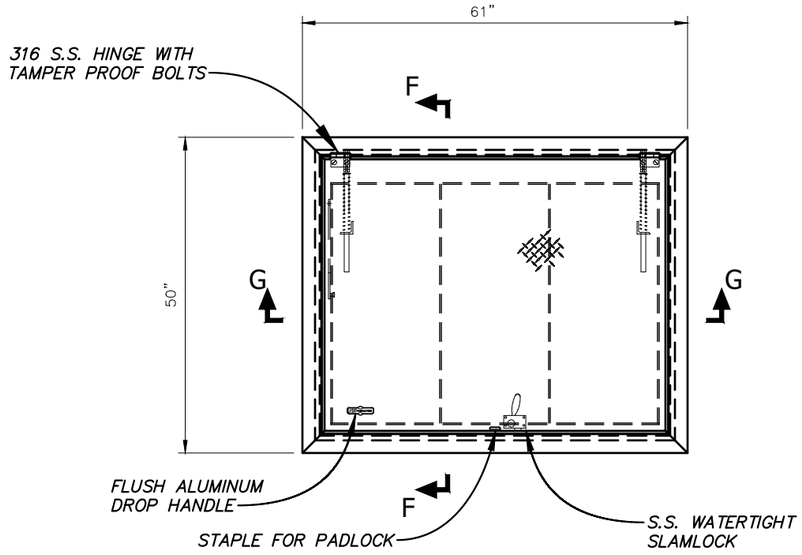
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
GENSET FOUNDATION PLAN & SECTION

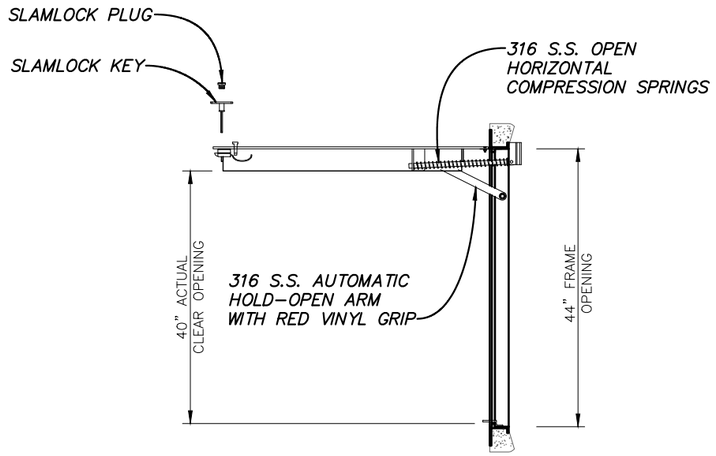
SHEET C09 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026

SW 2024-06



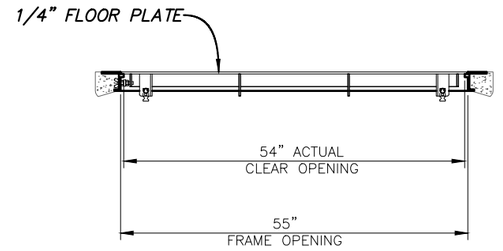
PLAN VIEW



SECTION F-F

44"x 55" WATERTIGHT HATCH

N.T.S.

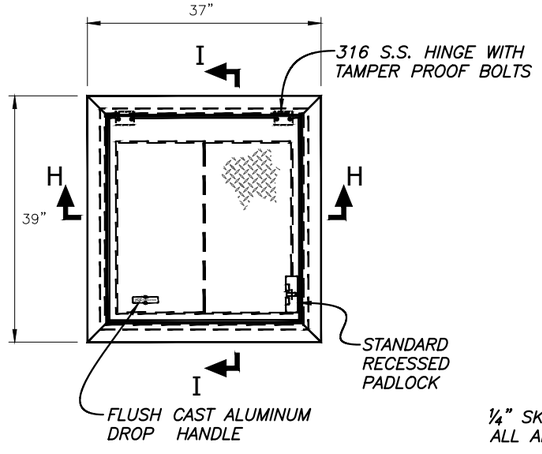


SECTION G-G

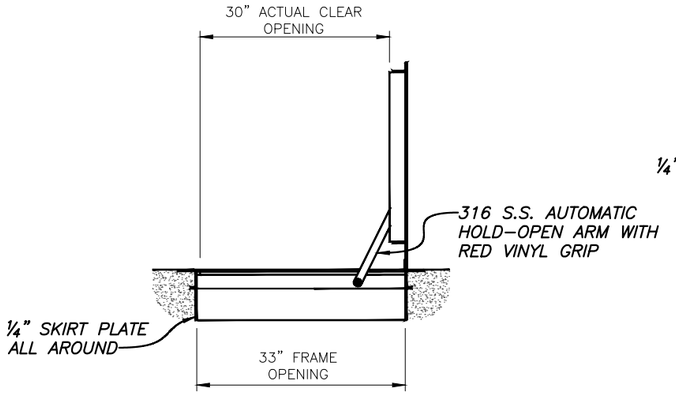
NOTES

1. MATERIAL: ALUMINUM
2. FINISH: MILL
3. LOADING: 300 PSF
4. 316 SS NUTS & BOLTS
5. APPROX HATCH WT: 132.82 LBS
6. USE U.S. FOUNDRY APS 44x55 OR EQUAL.
7. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
8. BREAK ALL SHARP CORNERS AND EDGES TO 0.01"
9. TOLERANCES, UNLESS OTHERWISE SPECIFIED FRACTIONAL

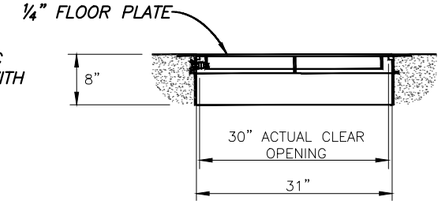
   INCHES = ± 1/16"
   1/16" = ± 1/32"
   1/32" = ± 1/64"



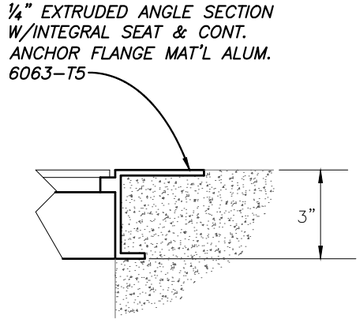
PLAN VIEW



SECTION I-I



SECTION H-H



FRAME DETAIL

31"x 33" WATERTIGHT HATCH

N.T.S.

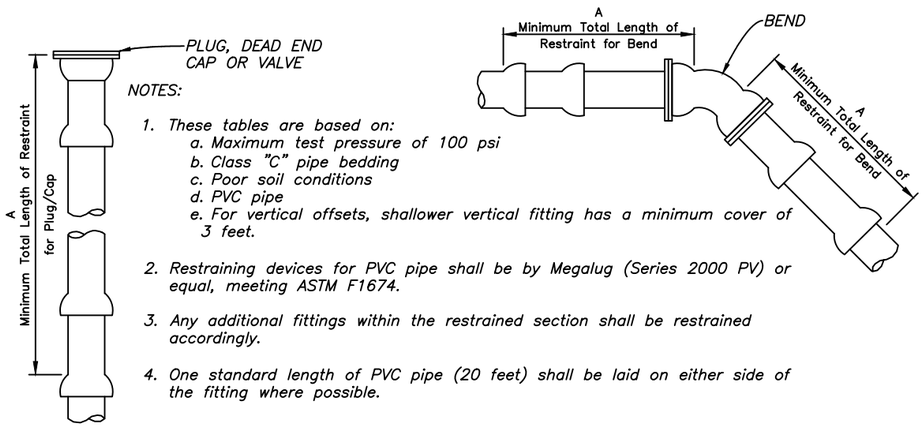
No.	DATE	REVISIONS	No.	DATE	REVISIONS	DES: B.S.
3			6			DRN: J.S.
2			5			CKD: JDM
1	9/2/2026	ISSUED FOR BID	4			DATE: 9/2/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
HATCH DETAIL

SHEET C10 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026



NOTES:

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

RESTRAIN "A" (LF) *

FITTING TYPE	4"	6"	8"	10"	12"	16"	18"	20"	24"
11–1/4°	1*	2*	2*	2*	3*	3*	3*	4*	4*
22–1/2°	2*	3*	3*	4*	5*	6*	6*	7*	8*
45°	4*	5*	7*	8*	9*	11*	13*	14*	16*
90°	9	12*	15*	18*	21	27	29	32	37
PLUG / CAP / ISOLATION VALVE	26	36	47	59	66	85	94	102	119

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

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

HORIZONTAL OFFSET:

RESTRAIN "A" (LF) *

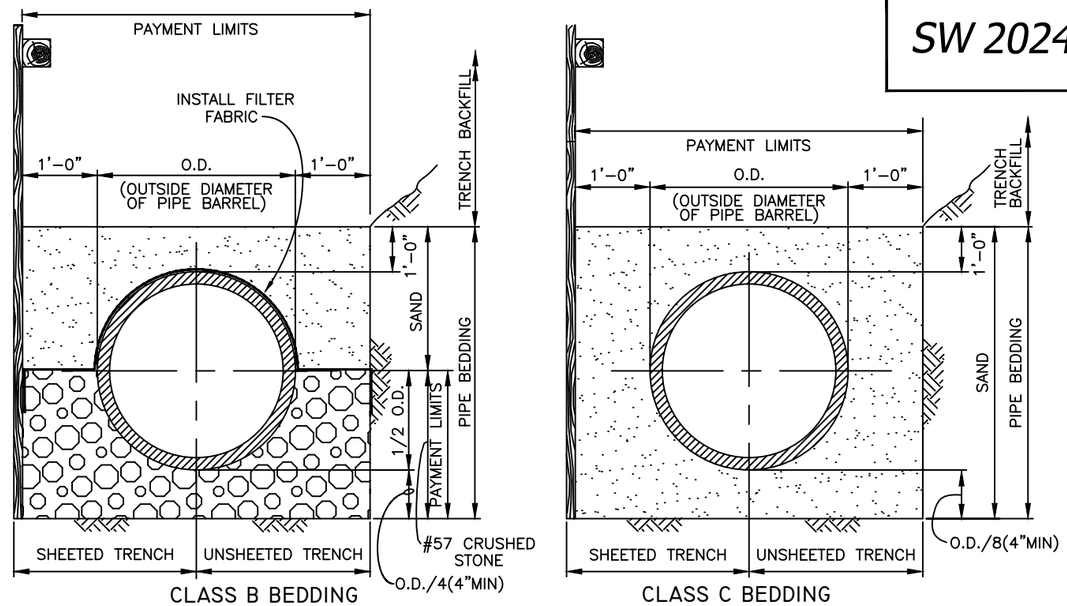
FITTING TYPE	4"	6"	8"	10"	12"	16"	18"	20"	24"
11–1/4°	3*	4*	5*	6*	7*	9*	10*	11*	12*
22–1/2°	5*	8*	10*	12*	14*	17*	19*	21	24
45°	11*	15*	20	23	28	35	39	43	50

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

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

VERTICAL OFFSET:

FITTING RESTRAINT DETAIL



PIPE BEDDING DETAILS

N.T.S.

NOTES:

1. ALL BENDS, FITTINGS, AND VALVES INSTALLED ON THE FORCE MAIN SHALL HAVE RESTRAINED MECHANICAL JOINTS.
2. ADDITIONAL PIPE JOINTS UPSTREAM AND DOWNSTREAM OF ALL BENDS, FITTINGS, AND VALVES INSTALLED ON THE FORCE MAIN SHALL ALSO BE RESTRAINED. THE REQUIRED LENGTHS OF THE RESTRAINED PIPE SHALL MEET THE LENGTHS SPECIFIED IN THE RESTRAINED PIPE TABLE SHOWN AT LEFT.
3. THRUST BLOCKS ARE NOT PERMITTED FORCE MAINS.
4. FORCE MAINS LOCATED IN THE ROADWAY WITH A DIAMETER OF 14 INCHES OR LESS SHALL BE CONSTRUCTED WITH DUCTILE IRON PIPE.
5. DEFLECTIONS AT STANDARD PIPE JOINTS SHALL NOT EXCEED 1°. DEFLECTIONS UP TO A MAXIMUM OF 3° MAY BE ACCOMPLISHED AT A PIPE JOINT UTILIZING TWIN GASKET HIGH DEFLECTION COUPLING INSTEAD OF A STANDARD BELL AND SPIGOT JOINT. STANDARD BENDS SHALL BE USED FOR DEFLECTIONS GREATER THAN 3°.
6. FACTORY FABRICATED BENDS SHALL BE USED TO ACCOMPLISH BENDS GREATER THAN 3°.
7. PIPE BENDS AND FITTINGS SHALL BE D.I.P. BENDS AND FITTINGS MEETING THE REQUIREMENTS OF AWWAC 110. PIPE DEFLECTIONS AT THESE BENDS SHALL NOT EXCEED 3°. ALL BENDS AND FITTINGS SHALL HAVE RESTRAINED MECHANICAL JOINTS AND CEMENT LINING.
8. RESTRAINING DEVICES SHALL ACCOMMODATE THE FULL WORKING PRESSURE RATING OF THE PIPE PLUS SURGE ALLOWANCE. RESTRAINERS SHALL BE EBAA IRON "MEGALUG" OR APPROVED EQUAL.
9. ALL PIPES SHALL BE INSTALLED USING CLASS C BEDDING, UNLESS OTHERWISE INSTRUCTED OR ADVISED BY THE DEPARTMENT. BACKFILL SHALL BE CLEAN SOIL FREE OF DEBRIS, ORGANICS, ROCKS, AND DELETERIOUS MATERIAL.

SW 2024-06

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

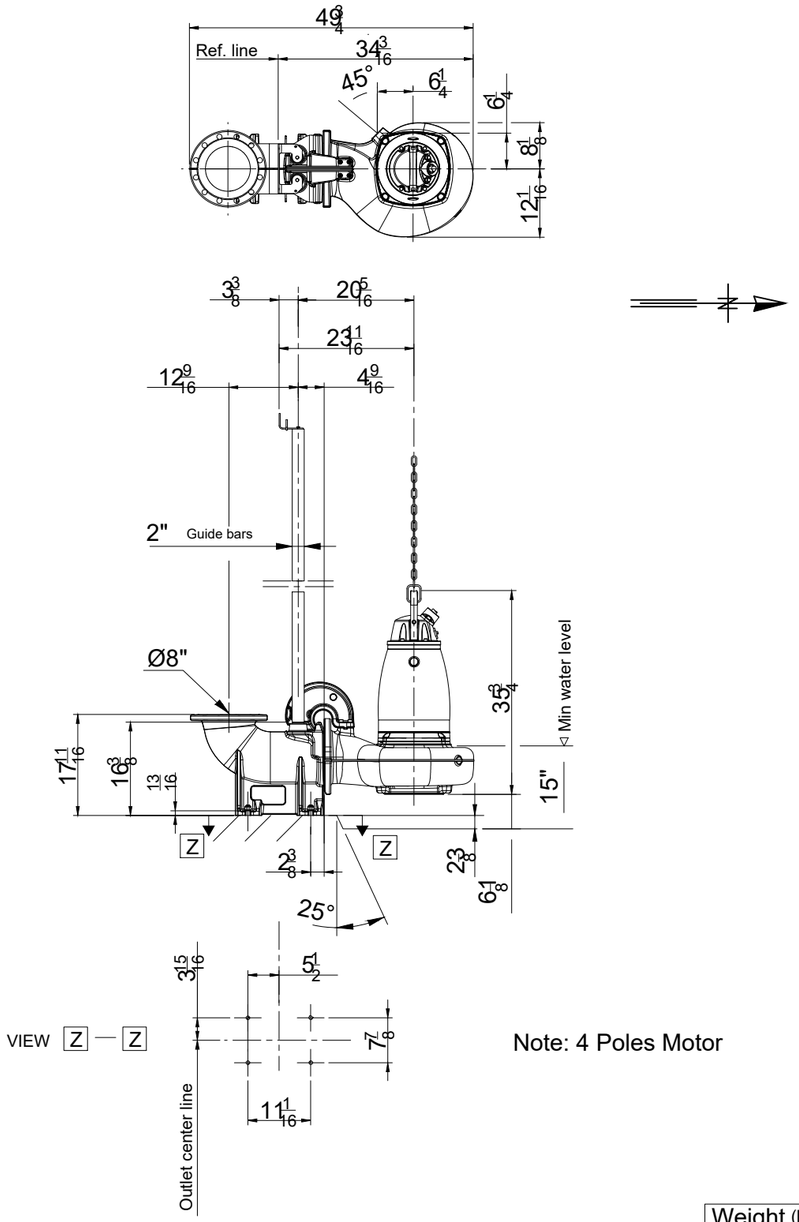
DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
BEDDING AND PIPE RESTRAINT DETAILS

SHEET C11 OF 53

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Plot Date: Tuesday, September 8, 2026 PLOT



Note: 4 Poles Motor

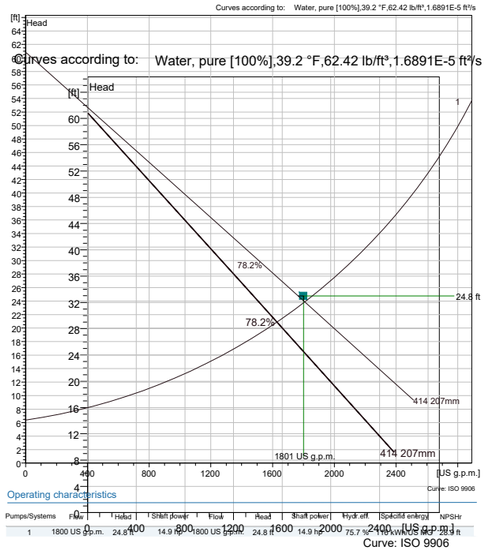
Weight (lbs)	
Pump	Stand
710	175

NP 3153 LT 3~ 414

Patented self cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade.

Technical specification





Operating characteristics

Pumps/Systems	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Specific energy	NPSHr
1	1800 US g.p.m.	24.8 ft	14.9 hp	1800 US g.p.m.	24.8 ft	14.9 hp	75.7 %	195 kWh/kft³	28.8 ft

Curve: ISO 9906

Configuration

Motor number
N3153.185 21-18-4AA-W 20hp

Installation type
P - Semi permanent, Wet

Impeller diameter
207 mm

Discharge diameter
7 7/8 inch

Pump information

Impeller diameter
207 mm

Discharge diameter
7 7/8 inch

Inlet diameter
200 mm

Maximum operating speed
1760 rpm

Number of blades
2

Materials

Impeller
Hard-Iron ™

Project	Created by	Last update
Block	Created on	1/2/2020

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

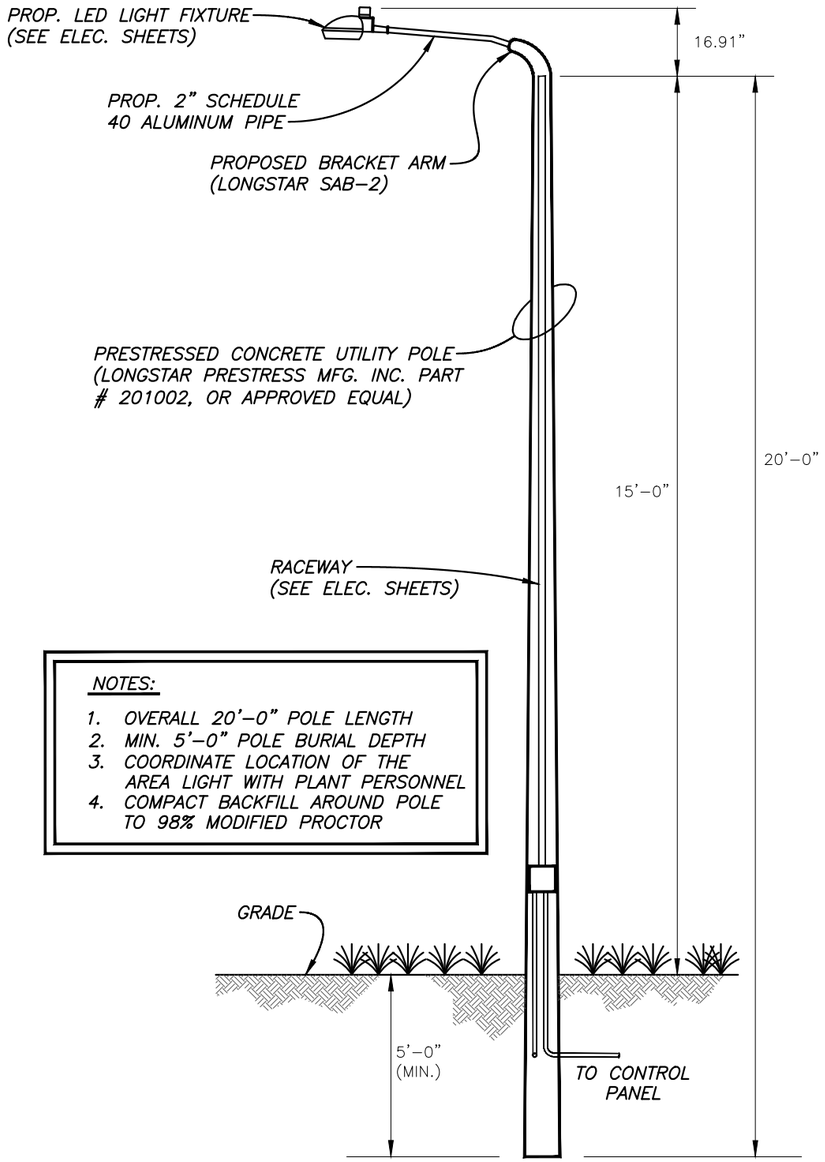
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
PUMP SPECIFICATIONS AND DETAILS

SHEET C12
OF 53

PLOT Plot Date: Tuesday, September 8, 2026

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NOTES:

1. OVERALL 20'-0" POLE LENGTH
2. MIN. 5'-0" POLE BURIAL DEPTH
3. COORDINATE LOCATION OF THE AREA LIGHT WITH PLANT PERSONNEL
4. COMPACT BACKFILL AROUND POLE TO 98% MODIFIED PROCTOR

AREA LIGHT POLE DETAIL

NOT TO SCALE

WIND DESIGN DATA

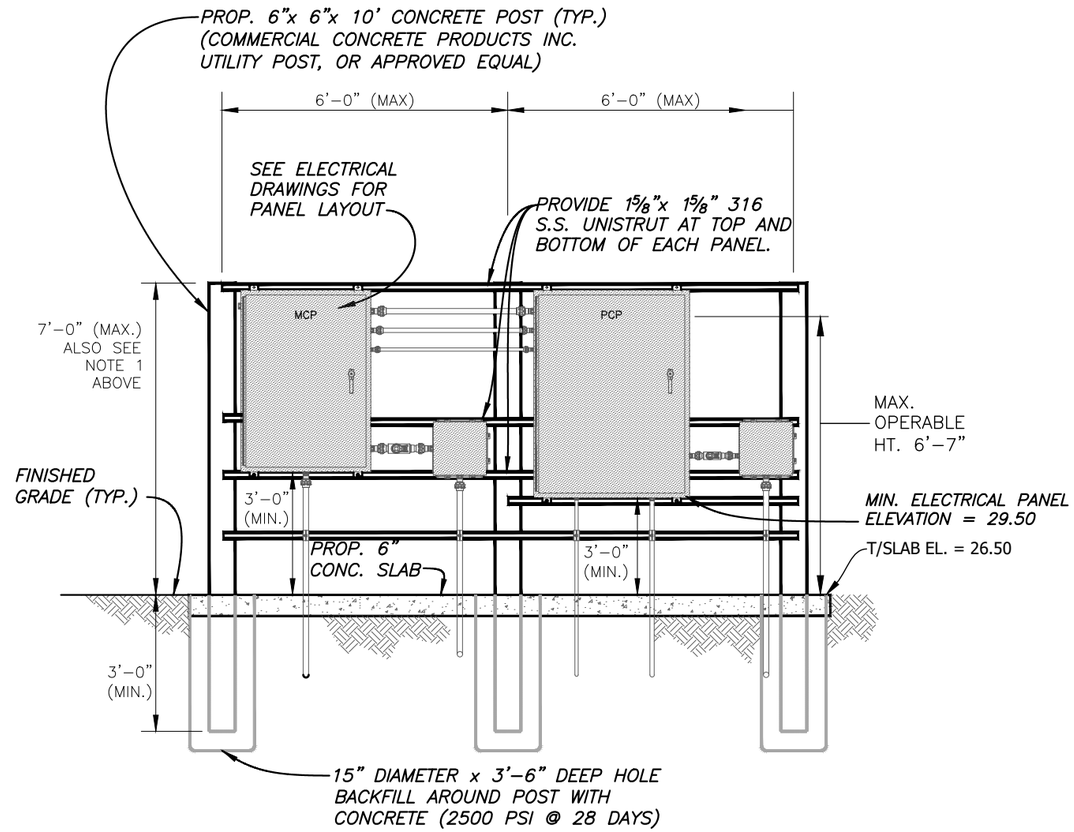
CODE: FLORIDA BUILDING CODE 2020, 7th EDITION AND ASCE/SEI 7-20

BASIC WIND SPEED(VULT).....152 MPH
NOMINAL WIND SPEED (VASD).....118 MPH
CATEGORY (RISK).....111
WIND EXPOSURE.....B

DESIGN WIND PRESSURE (PSF).....55.7 PSF

NOTES:

1. HIGHEST REACH TO ANY SWITCH OR CIRCUIT BREAKER OPERATING HANDLE SHALL BE NO GREATER THAN 6'-7" MAX. PER NATIONAL ELECTRIC CODE (NEC)
2. REFER TO ELECTRICAL (E) AND INSTRUMENTATION (I) PLANS FOR ALL ADDITIONAL PANEL DETAILS



ELECTRICAL CONTROL PANEL RACK

NOT TO SCALE

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: J.S.
CKD: JDM
DATE: 9/2/2026

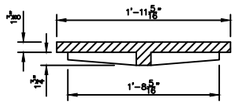
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
MISCELLANEOUS CIVIL DETAILS (1 OF 3)

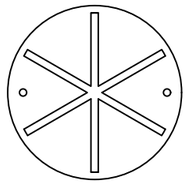
SHEET C13 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026

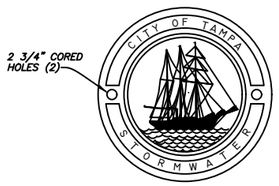
SW 2024-06



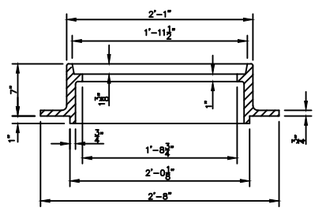
COVER SECTION



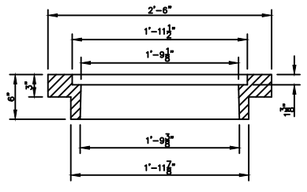
COVER BACK



COVER BACK



STANDARD FRAME SECTION

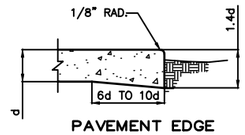


INVERTED FRAME SECTION

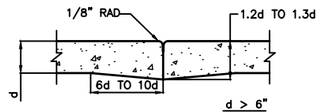
MANHOLE FRAMES & COVER
Not To Scale

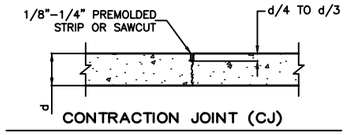
NOTE:
Manhole structures shall be per FDOT Standard Index, current year revision.

FOR CLOSED BASINS

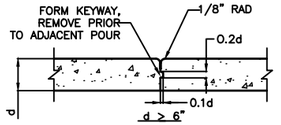


PAVEMENT EDGE

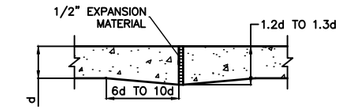




CONTRACTION JOINT (CJ)



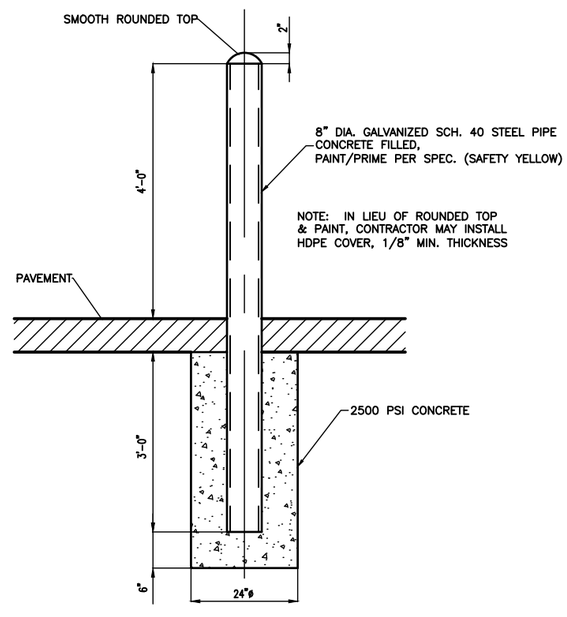
LONGITUDINAL
CONSTRUCTION JOINT (LCJ)



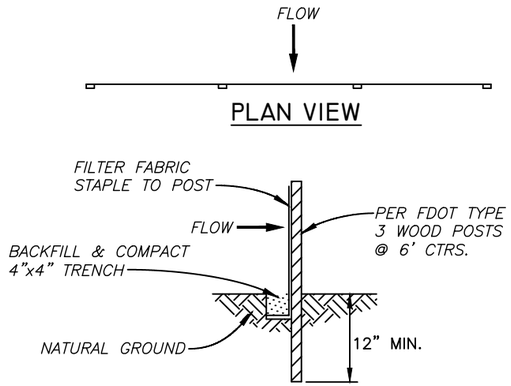
EXPANSION JOINT (EJ)

N.T.S.

JOINT DETAILS
N.T.S.



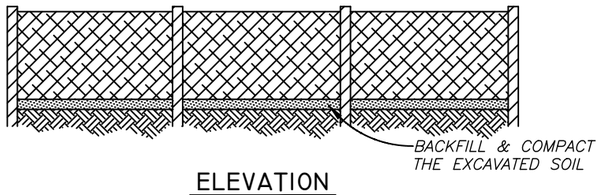
TRUCK BOLLARD DETAIL
N.T.S.



PLAN VIEW

SECTION

NOTE:
SILT FENCE WILL NOT BE ACCEPTED UNLESS PROPERLY TRENCHED INTO PLACE.



ELEVATION

STAKED SILT FENCE DETAIL

NOT TO SCALE

NOTES:

1. THE FABRIC SHALL FACE THE AREA OF CONSTRUCTION WITH THE STAKES ON THE OUTSIDE AWAY FROM CONSTRUCTION.
2. FABRIC MUST BE TRENCHED IN AND BACK FILLED. THIS CAN BE DONE WITH A TRENCHER, FRONT BUCKET, OR BY HAND. FLAP MUST BE FOUR INCHES BELOW GRADE AND EXTEND FOUR INCHES TOWARDS THE FLOW OF SILT.
3. DOUBLE ROW SHALL BE USED ON ANY SITE NEAR A WATER BODY OR A STORM WATER CONVEYANCE SYSTEM. DOUBLE ROW WILL ALSO BE USED ON ANY SITE THAT IS NEAR AN INLET STRUCTURE THAT LEADS DIRECTLY TO A WATER BODY, EVEN IF THE SITE ITSELF IS NOT NEAR THE WATER BODY.

No.	DATE	REVISIONS	No.	DATE	REVISIONS	DES: B.S.
3			6			DRN: JS
2			5			CKD: JDM
1	9/2/2026	ISSUED FOR BID	4			DATE: 9/02/2026

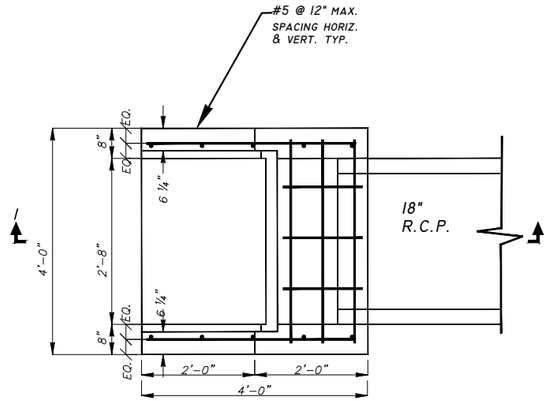
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
MISCELLANEOUS CIVIL DETAILS (2 OF 3)

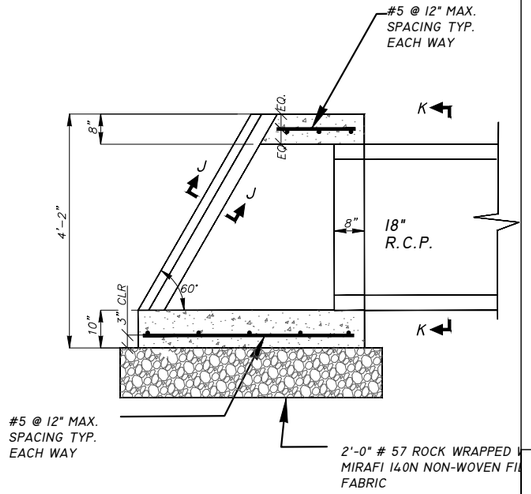
SHEET C14 OF 53

Plot Date: Tuesday, September 8, 2026 PLOT
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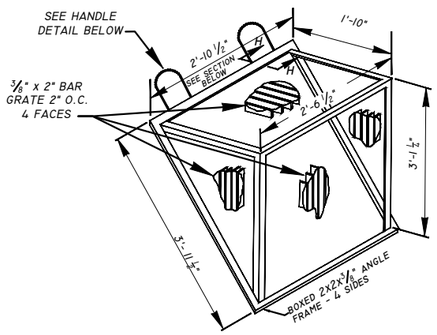
SW 2024-06



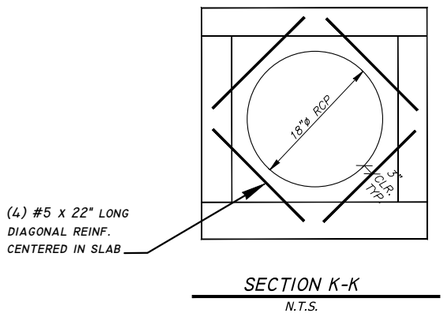
PLAN VIEW
N.T.S.



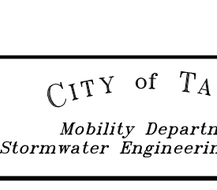
SECTION I-I
N.T.S.



EXPANDED AREA GRATE
FOR INTAKE STRUCTURE
N.T.S.

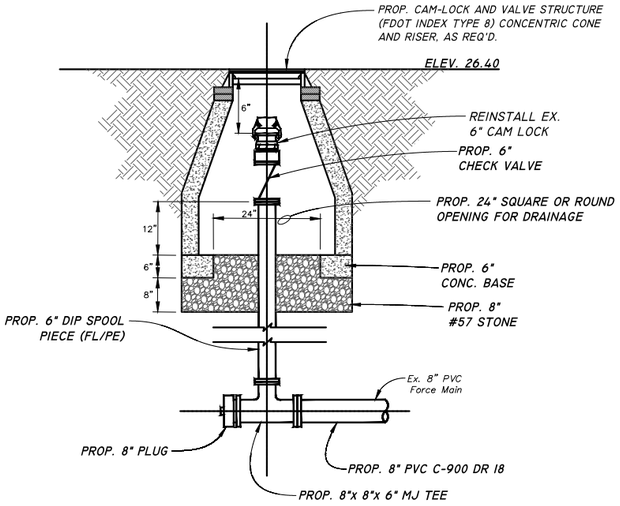


SECTION K-K
N.T.S.



DRIVEWAY PAVEMENT DETAIL
N.T.S.

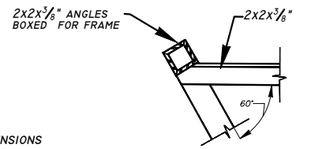
1. 1.5" TYPE S-1 ASPHALT PAVEMENT
2. 6" LIMEROCK OR CRUSHED CONCRETE BASE
3. 12" TYPE B STABILIZATION, MIN. LBR 40 COMPACTED TO MIN. 98% MAX. DENSITY PER AASHTO T-180
4. PROOF ROLL SUBGRADE



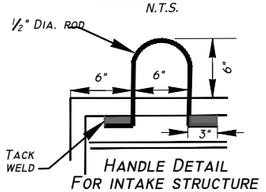
FORCE MAIN CONNECTION
PROP. VALVE / CAM-LOCK CONTAINMENT STRUCTURE
(FDOT INDEX TYPE 8)
N.T.S.

NOTES:

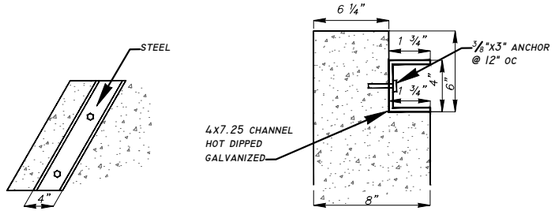
1. VERIFY DIMENSIONS IN THE FIELD.
2. HOT DIP GALV. AFTER FABRICATION.



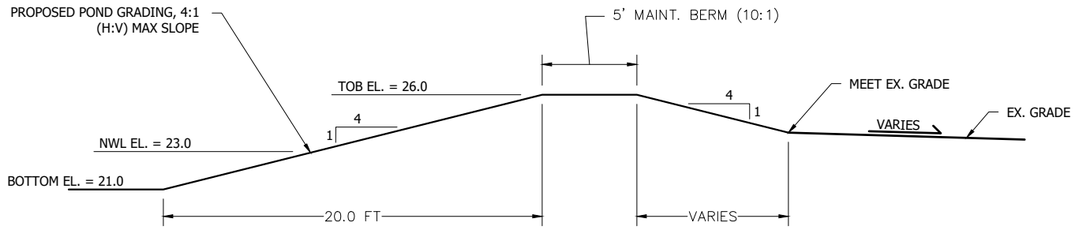
SECTION H-H
(EXPANDED AREA GRATE)
N.T.S.



HANDLE DETAIL
FOR INTAKE STRUCTURE
N.T.S.



SECTION J-J
(GRATE SLOT W/STEEL CHANNEL)
N.T.S.



A C02 POND TYPICAL CROSS SECTION
N.T.S.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	9/2/2026	ISSUED FOR BID	4		

DES: B.S.
DRN: J.S.
CKD: JWD
DATE: 9/2/2026

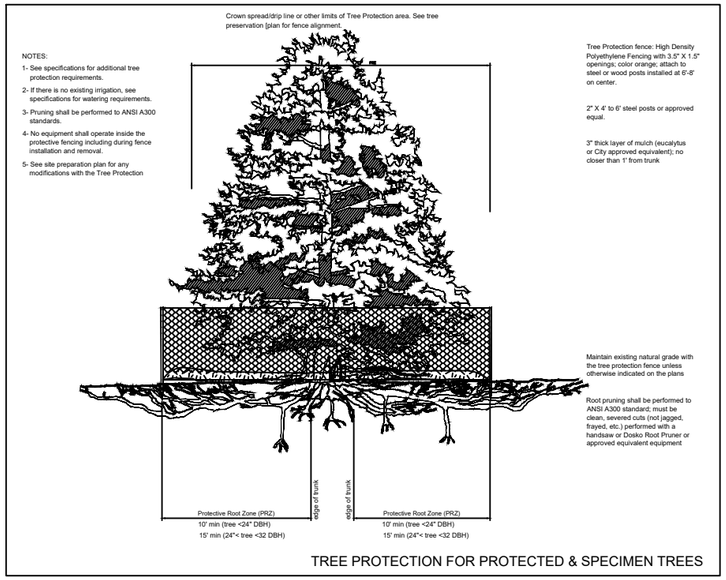
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
MISCELLANEOUS CIVIL DETAILS (3 OF 3)

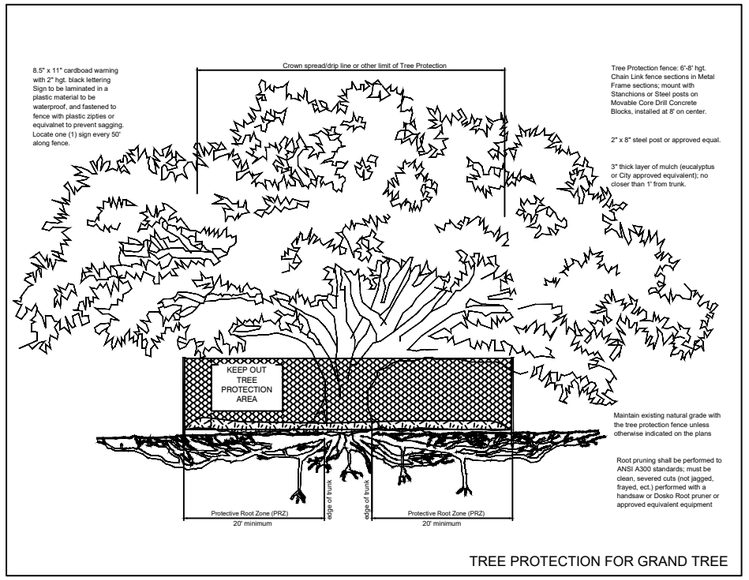
SHEET C15 OF 53

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PLOT
Plot Date: Tuesday, September 8, 2026

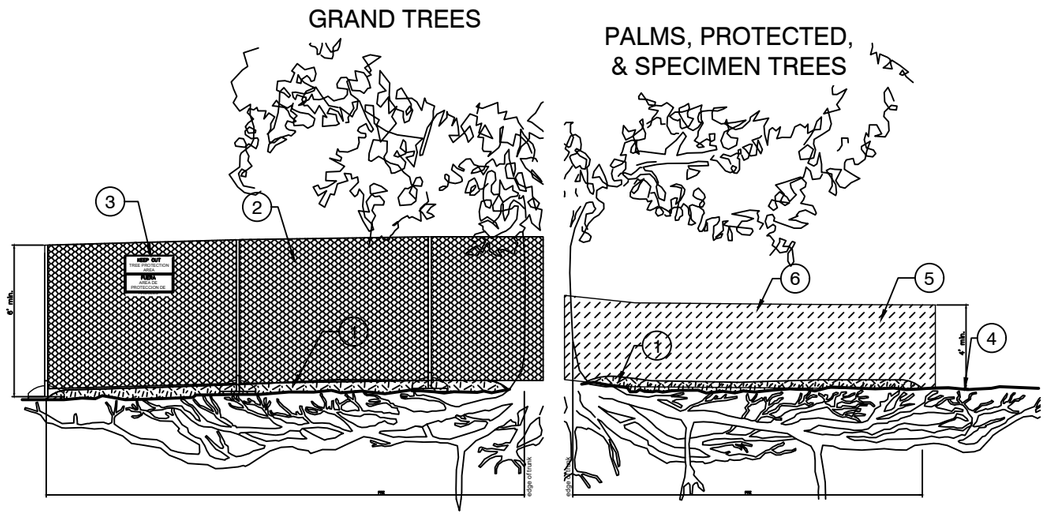
SW 2024-06



TREE PROTECTION FOR PROTECTED & SPECIMEN TREES



TREE PROTECTION FOR GRAND TREE



TREE PROTECTION DETAIL AND NOTES

1/4" = 1'-0"

1. 3-inch layer of mulch (eucalyptus or city approved equivalent); no mulch shall be placed within one foot of the trunk.
2. Grand Tree Protection Fence: 6-foot or 8-foot high chain link in metal frame sections; mount with stanchions or stell posts on movable core drilled concrete blocks, installed on 8' on center max spacing.
3. Notice Sign: 8.5" x11" corrugated plastic warning with 2" high black lettering. Fasten to fence with plastic zipties or similar. Locate one sign every 50' along the fence.
4. Maintain existing natural grade within the tree protection fence unless noted otherwise on the plans.
5. Standard Tree Protection Fence: high density polyethylene fencing with 3.5-inch x 1.5-inch openings; color orange; attach to steel or wood posts installed at eight-foot on center max.
6. 2x2x6' posts embedded a minimum of 24-inches (or similar approved post)

PRZ:
Protective Root Zone:
The entire surface and subsurface soil area encompassed by prescribed radius for protected, specimen, and grand trees.

See plan for fence extents, but typically the extents are as follows:

- **Palms: 3' offset FFT**
- **Protected Trees (5- to 23-inch DBH): 10' offset from face of trunk (FFT)**
- **Specimen Trees: (24- to 31-inch DBH):15' offset FFT**
- **Grand Trees (32-inch DBH): 20' offset FFT**

TREE PROTECTION NOTES

1. Minimum protection standards shall be met for all protected trees, prior to commencement of any construction activities on a development site and/or in public or private right-of-way, in accordance with the tree protection graphics below.
2. No changes to the predevelopment conditions within the approved protective root zone during the construction process.
3. Protective barricades may be removed only to prepare the development site for final landscaping activities. During this activity only non-mechanical techniques may occur within the designated protective root zone. No alteration(s), of any kind, shall be made to any part of the tree (roots, trunk, canopy/crown), other than those that are approved by the Natural Resources Coordinator or designee, as part of the related permit.
4. No parking or storing of vehicles, equipment, or materials is permitted within the minimum protective area, at any time.
5. No site clearing or grading is permitted within the minimum protective area, other than those changes that are approved by the Natural Resources Coordinator or designee, as part of the related permit.
6. All canopy pruning must Meet ANSI A300 pruning per "American National Standards for Tree Care Operations". ANSI. A300, current edition. Work should be planned and supervised by an ISA Certified Arborist.
7. Root Pruning shall be performed to ANSI A300 standards; must be clean, severed cuts (not jagged or frayed). Root pruning shall be performed with specifically designed mechanical root pruning tools (Vermeer or Dosko) or hand pruners, loppers, hand saws, reciprocating saws, oscillating saws, or small chain saws. Trenchers, excavators, and backhoes shall not be used to prune or crush roots.

No.	DATE	REVISIONS	No.	DATE	REVISIONS	
3			6			DES: B.S.
2			5			DRN: JS
1	9/2/2026	ISSUED FOR BID	4			CKD: JDM
						DATE: 9/02/2026

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA - POINSETTIA
STORMWATER PUMPING STATION
TREE PROTECTION DETAILS

SHEET C16 OF 53

Plot Date: Tuesday, September 8, 2026
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SW 2024-06

1 ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE UTILIZED FOR THIS PROJECT

A, AMP	AMMETER / AMPERE
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AIT	ANALYTICAL INDICATION TRANSMITTER
AL	ALUMINUM
ARMS	ARC-FLASH REDUCTION SYSTEM
AS	AMMETER SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
AQD	ARC QUENCHING DEVICE
BKR	BREAKER
BV	BUTTERFLY VALVE
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CBV	CABLE BY VENDOR, INSTALLED BY CONTRACTOR
CCTV	CLOSED CIRCUIT TELEVISION
CHH	COMMUNICATION HANDHOLE
CKT	CIRCUIT
CL2	CHLORINE
CMH	COMMUNICATION MANHOLE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY, CORROSION RESISTANT
CS	CONTROL STATION
CSH	DIAPHRAGM LEAK DETECTOR
CT	CURRENT TRANSFORMER
CTRL	CONTROL
CU	COPPER
CV	CONTROL VALVE
DB	DECIBEL
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DETD	DUAL ELEMENT TIME DELAY
DISC	DISCONNECT
DPDT	DOUBLE POLE DOUBLE THROW
DPSH	DIFFERENTIAL PRESSURE SWITCH
DS	DISCONNECT SWITCH
DWG	DRAWING
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EHH	ELECTRICAL HANDHOLE
EL, ELEV	ELEVATION
ELTU	ELECTRONIC TRIP UNIT
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPRF	EXPLOSION PROOF
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FIT	FLOW INDICATION TRANSMITTER
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLOUR	FLUORESCENT
FMC	FLEXIBLE METALLIC CONDUIT
FS	FLOW SWITCH
FT	FEET OR FOOT
FUT	FUTURE
FVNR	FULL VOLTAGE NON-REVERSING STARTER
FWE	FURNISHED WITH EQUIPMENT
G, GND	GROUND
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFIC	GROUND FAULT CIRCUIT INTERRUPTER
HDG	HOT DIPPED GALVANIZED
HH	HANDHOLE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
ID	INTERIOR DIAMETER
IHH	INSTRUMENTATION HANDHOLE
IMC	INTERMEDIATE METALLIC CONDUIT (GALVANIZED)
IMH	INSTRUMENTATION MANHOLE
IMT	INTERMEDIATE METALLIC
IN	INCHES
ITB	INSTRUMENT TERMINAL BOX
JB	JUNCTION BOX
K	THOUSAND
KA	KILOVOLT AMPERE
KAIC	THOUSAND AMPERES INTERRUPTING CURRENT
KCMIL	THOUSAND CIRCULAR MILLS
KVA	THOUSAND VOLT AMPERES
KW	KILOWATTS
KWH	KILOWATT-HOURS
LA	LIGHTNING ARRESTOR
LCP	LOCAL CONTROL PANEL
LED	LIGHT-EMITTING DIODE
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LIT	LEVEL INDICATION TRANSMITTER
LP	LIGHTING PANEL, LIGHT POLE
LS	LEVEL SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
M	MOTOR
MA	MILLIAMPERE
MB	MOTOR BEARINGDETECTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MS	MOISTURE SENSOR
MSB	MAIN SWITCHBOARD
MTD	MOUNTED/MOUNTING
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE - MOTOR VIBRATION DETECTOR
NA	NON-AUTOMATIC
N/A	NOT APPLICABLE
NC	NORMALLY CLOSE
NEC	NATIONAL ELECTRIC CODE
N, NEU	NEUTRAL
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OL	OVERLOAD RELAY
P	POLE
PA	PUBLIC ADDRESS
PB	PUSH BUTTON
P/B	PULL BOX
PCP	PUMP CONTROL PANEL
PF	POWER FACTOR
PFC	POWER FACTOR CORRECTION CAPACITORS
PFD	PULL FUSE DISCONNECT
φ, PH	PHASE
PIT	PRESSURE INDICATION TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER PANEL, POWER POLE
PR	PAIR
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PTZ	PAN-TILT-ZOOM
PVC	POLYVINYL CHLORIDE
REC	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RMC	RIGIDREMOTE TELEMETRY UNIT
R/S	RUN/STOP HAND SWITCH
RVSS	REDUCED VOLTAGE SOFT STARTER
SCCR	SHORT CIRCUIT CURRENT RATING
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SEC	SECONDARY
SP	SPARE
SPEC	SPECIFICATION
SPD	SURGE PROTECTION DEVICE
SS	SELECTOR SWITCH
SS	STAINLESS STEEL
ST	SHUNT TRIP
SV	SOLENOID VALVE
SW	SWITCH
TB	TERMINAL BOX
TEL	TELEPHONE
TEMP	TEMPERATURE
TEW	THERMOCOUPLE EXTENSION WIRE
TIT	TEMPERATURE INDICATION TRANSMITTER
TMTU	THERMAL-MAGNETIC TRIP UNIT
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTMETER
VAC	VOLTS ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
VLV	MANUAL OPERATED VALVE
VS	VOLTMETER SWITCH
WS	TORQUE SWITCH
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
ZI	ZONE INTERLOCK
ZC	STROKE POSITIONER
ZS	LIMIT SWITCH
ZSC	LIMIT SWITCH CLOSED
ZSO	LIMIT SWITCH OPEN

2 CONTRACTOR RESPONSIBILITIES

2.1. CONTRACTOR SHALL REFERENCE ALL SPECIFICATIONS, DRAWINGS AND CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND CONTRACT RESPONSIBILITIES PRIOR TO COMMENCING WORK.

2.2. THE GENERAL NOTES AS STATED ON THIS SHEET ARE APPLICABLE TO ALL CONTRACT DOCUMENTS AND SCOPE OF WORK UNDER THIS CONTRACT UNLESS NOTED OTHERWISE.

2.3. ALL ELECTRICAL WORK SHALL COMPLY WITH THE CURRENT NFPA, NEC, NESC AND LOCAL CODES INCLUDING OWNERS STANDARDS AND REQUIREMENTS.

2.4. CONTRACTOR SHALL COORDINATE WITH THE LOCAL ELECTRICAL UTILITY TO ESTABLISH NEW ELECTRICAL SERVICE(S) AND FINAL CONNECTIONS TO PROVIDE UTILITY POWER AS REQUIRED TO INCLUDE ESTABLISHING TEMPORARY UTILITY ACCOUNT TO PROVIDE ELECTRICAL POWER FOR START-UP AND COMMISSIONING.

2.5. THE ELECTRICAL INSTALLATION SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE NECA/NEIS STANDARDS TO INCLUDE OWNER CONSTRUCTION STANDARDS.

2.6. CONTRACTOR SHALL PLAN AND COORDINATE ELECTRICAL CONSTRUCTION WITH ALL CRAFT/TRADE TO ACHIEVE AN EFFICIENT AND EFFECTIVE ELECTRICAL INSTALLATION.

2.7. THE SCHEDULING AND DURATION OF ANY PROCESS OR FACILITY SHUTDOWN TO REMOVE AND/OR INSTALL EQUIPMENT SHALL BE COORDINATED IN ADVANCE WITH FACILITY MANAGEMENT, ENGINEER, OWNER OR OWNER REPRESENTATIVE.

4 ELECTRICAL EQUIPMENT

5.1. 600V RATED ELECTRICAL EQUIPMENT SHALL HAVE AN AMPERE INTERRUPTING CAPACITY (AIC) RATINGS AS SHOWN ON THE CONTRACT DRAWINGS.

5.2. EQUIPMENT SHALL BE ARRANGED AND INSTALLED TO COMPLY WITH ALL CODE-REQUIRED, MANUFACTURER-RECOMMENDED AND HEAT-DISSIPATION CLEARANCES.

5.3. EQUIPMENT INSTALLATIONS AND PLACEMENTS SHALL COMPLY WITH NEC ARTICLE 110 FOR ALL CLEARANCE REQUIREMENTS.

5.4. EQUIPMENT SHALL FIT INTO THOSE SPACES AS SHOWN ON THE CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE TO PROVIDE EQUIPMENT WHICH MEETS THE SPACE REQUIREMENTS.

5.5. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS REQUIRED FOR MAKING FINAL CONNECTIONS FOR ALL EQUIPMENT INSTALLED AND/OR MODIFIED UNDER CONTRACT.

5.6. USE CHICO FIBER AND SEALING COMPOUND OR EQUAL FOR FILL OF CLASSIFIED AREA SEALOFFS.

5 GROUNDING AND BONDING

8.1. GROUNDING AND BONDING SYSTEMS SHALL COMPLY WITH NFPA 70 AND NFPA 780 TO INCLUDE THOSE REQUIREMENTS IN SPECIFICATION SECTION 26 05 19

8.2. REFERENCE GROUNDING INSTALLATION DETAILS AS SHOWN ON CONTRACT DOCUMENTS

8.3. ALL DIRECT-BURIED GROUNDING SYSTEM CONDUCTORS SHALL BE BARE 4/0AWG COPPER

8.4. ALL CONCRETE ENCASED GROUNDING SYSTEM CONDUCTORS SHALL BE TINNED 4/0AWG COPPER

8.5. ALL GROUNDING AND BONDING TAPS SHALL BE TINNED #2AWG COPPER MINIMUM

8.6. GROUNDING SYSTEM CONDUCTORS SHALL BE BURIED 30-INCH BELOW FINISHED GRADE

8.7. UNDERGROUND OR CONCRETE ENCASED GROUNDING SYSTEM CONNECTIONS SHALL BE MADE WITH EXOTHERMIC WELDS

8.8. CONNECTIONS TO STRUCTURAL STEEL AND/OR REBAR SHALL BE MADE WITH EXOTHERMIC WELDS

8.9. ELECTRICAL EQUIPMENT AND/OR FRAMING SUPPORTS SHALL BE BONDED TO GROUNDING SYSTEM USING TINNED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION FASTENERS AND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

8.10. MECHANICAL EQUIPMENT AND/OR SKID FRAMING SHALL BE BONDED TO GROUNDING SYSTEM USING TINNED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION FASTENERS AND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

8.11. MAN-WAY AND/OR EQUIPMENT HATCH FRAMES SHALL BE BONDED TO GROUNDING SYSTEM USING TINNED #2AWG COPPER; MECHANICAL LUGS; 316L STAINLESS-STEEL, ANTI-VIBRATION FASTENERS AND BLUE 'LOCTITE' OR EQUAL THREAD COMPOUND (MINIMUM 2 LOCATIONS)

8.12. GROUND TEST WELLS SHALL BE 15-INCH MINIMUM ROUND CONCRETE WITH CAST IRON COVER WITH BEAD WELDED LETTERING, "GROUND" AND RATED AASHTO H-10 LOADING

8.12.1. J&R CONCRETE PRODUCTS P/N E6-RT-BOX OR EQUAL

8.13. GROUNDING SYSTEM EXTENSIONS:

8.13.1. PROVIDE SUFFICIENT SLACK GROUNDING CABLE TO MAKE CONNECTIONS TO FUTURE GROUNDING CONDUCTORS, DUCTBANKS AND/OR EQUIPMENT

8.13.2. INSTALL 2.0-INCH PVC PIPE 48-INCH ABOVE FINISHED GRADE AT LOCATION AND INDICATE ON AS-BUILD DRAWINGS WITH A MINIMUM OF THREE (3) MEASUREMENTS FROM NEAREST STRUCTURES

8.14. SITE TO BE LIGHTNING PROTECTED SEE SPECIFICATION FOR SCOPE

8 SITE LIGHTING

9.1. CONTRACTOR SHALL REFERENCE ALL CONTRACT DRAWINGS PRIOR TO EXCAVATION AND INSTALLATION OF UNDERGROUND RACEWAYS, DUCTBANKS AND GROUNDING/BONDING COMPONENTS.

9.2. ALL SITE LIGHTING POWER "RUN" CONDUCTORS SHALL BE #6AWG STRANDED COPPER W/600V TYPE XHHW-2, 90°C INSULATION.

9.3. ALL SITE LIGHTING POWER "TAP" CONDUCTORS SHALL BE #10AWG STRANDED COPPER W/ 600V TYPE THHN/THWN, 90°C INSULATION.

9.4. ALL TAP AND RUN CONNECTIONS SHALL BE WATER-PROOF.

9.5. TRANSITIONS THROUGH FINISHED GRADE AND CONCRETE SHALL BE PVC-COATED ALUMINUM CONDUIT EXTENDING 12-INCHES ABOVE AND BELOW TRANSITION.

9.6. ALL SITE LIGHTING BRANCH CIRCUITS SHALL BE DIRECT-BURIED SCH-80 2.0" PVC CONDUIT UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS.

3 POWER AND CONTROL RACEWAYS

3.1. EXPOSED CONDUIT SHALL BE RIGID ALUMINUM CONDUIT (RAC), GRS. IMC AND EMT ARE NOT ACCEPTABLE.

3.2. CONCEALED CONDUIT EMBEDDED IN CONCRETE SHALL BE SCH-40 PVC

3.3. DIRECT-BURIED CONDUIT SHALL BE DIRECT-BURIED SCH-80 PVC

3.4. TRANSITIONS THROUGH FINISHED GRADE AND/OR CONCRETE SHALL BE PVC-COATED RAC CONDUIT.

3.5. DRAWINGS DEPICT MAJOR DUCTBANK, CABLE-TRAY, BUS-DUCT, WIRE-WAY, TRENCH/FLOOR DUCTS, RACEWAY, CONDUIT, ETC., TO INCLUDE CABLE, CONDUCTOR AND WIRING IN SCHEMATIC AND/OR DIAGRAMMATIC FORMATS. THE CONTRACTOR SHALL REFERENCE ALL EQUIPMENT SPECIFICATIONS AND MANUFACTURER INSTRUCTIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.

3.6. RACEWAY INSTALLATION AND/OR ARRANGEMENT LAYOUTS ARE NOT TYPICALLY SHOWN ON THE DRAWINGS. CONTRACTOR SHALL DEVELOP LOGICAL GROUPINGS, ROUTING AND MARSHALLING OF DUCTBANK, CABLE-TRAY, BUS-DUCT, WIRE-WAY, TRENCH/FLOOR DUCT, RACEWAY, CONDUIT, ETC., THESE SHALL NOT BE ROUTED THROUGH OR INTERFERE WITH ANY STRUCTURAL ELEMENTS. CONTRACTOR SHALL SUBMIT THESE RACEWAY INSTALLATION AND/OR ARRANGEMENT LAYOUTS PER THE SPECIFICATIONS FOR ENGINEER REVIEW PRIOR TO INSTALLATION.

3.7. RACEWAY ROUTINGS SHALL BE ORGANIZED AND GROUPED IN A PRACTICAL MANNER TO MINIMIZE CROSS-OVERS AND SADDLES. RACEWAY INSTALLATIONS SHALL BE ARRANGED TO ENTER EQUIPMENT FOR DIRECT CONDUCTOR TERMINATIONS.

3.8. RACEWAYS SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE NOTED OR SHOWN. THESE SHALL RUN PARALLEL TO LANDSCAPE AND STRUCTURAL FEATURES WHILE THE BENDS AND TURNS SHALL BE MADE BY MEANS OF LARGE RADII FITTINGS.

3.9. PROVIDE FLEXIBLE RACEWAY CONNECTIONS TO ALL EQUIPMENT SUBJECT TO MOVEMENT AND/OR VIBRATION. CONTRACTOR SHALL MAKE RACEWAY CONNECTIONS COMPLETE AND IN ACCORDANCE WITH THE SPECIFICATIONS.

3.10. CONTRACTOR SHALL PROVIDE ALL REQUIRED PULL BOXES, TERMINAL BOXES AND JUNCTION BOXES FOR INSTALLATION FOR THE WIRING SYSTEMS IN ACCORDANCE WITH THE SPECIFICATIONS THOUGH ALL BOXES MAY NOT BE INDICATED ON THE DRAWINGS.

3.11. SPARE CONDUITS SHALL BE CAPPED OR PLUGGED WITH A PVC FITTING AND INCLUDE 200# TEST POLYPROPYLENE PULL STRING.

3.12. PROVIDE EXPLOSION PROOF HAZARDOUS SEALS, AT LOCATIONS AS REQUIRED BY NEC. MAXIMUM CONDUIT FILL SHALL BE 25% WHEN SEALS ARE UTILIZED, OVERSIZE SEALS ARE ALLOWED TO PROVIDE 40% FILL.

6 DUCTBANK SYSTEMS

6.1. DUCTBANK SYSTEM ROUTING AND SECTIONS ARE SHOWN ON THE CONTRACT DOCUMENTS AS DIAGRAMMATIC, CONTRACTOR SHALL SUBMIT PROPOSED DUCTBANK INSTALLATION LAYOUT DRAWINGS FOR ENGINEER REVIEW PRIOR TO EXCAVATION, FABRICATION AND/OR INSTALLATION PER SPECIFICATION SECTION 26 05 43 1.4A

6.2. DUCTBANK SYSTEMS SHALL NOT INTERFERE WITH ANY STRUCTURAL FOUNDATION AND/OR FEATURE

6.3. DUCTBANK SYSTEMS SHALL HAVE A MINIMUM OF 18-INCH OF CLEAN COMPACTED COVER UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS

6.4. DUCTBANK SYSTEMS ROUTED UNDER ROADWAYS SHALL BE CONSTRUCTED AND INSTALLED PER STRUCTURAL ENGINEER OF RECORD DESIGN REQUIREMENTS

6.5. DUCTBANK SYSTEMS SHALL INCLUDE A BARE 4/0AWG COPPER GROUNDING CONDUCTOR LAID 6 TO 12-INCHES ABOVE DUCTBANK AND ROUTED INTO EACH MAN-HOLE

6.6. DUCTBANK GROUNDING CONDUCTOR SHALL BE CONNECTED WITH EXOTHERMIC WELDS TO GROUNDING SYSTEMS AS SHOWN THE DRAWINGS

6.7. DUCTBANK SYSTEMS SHALL BE ARRANGED TO ALLOW 1.5 TO 2.0-INCH MINIMUM SEPARATION BETWEEN RACEWAYS

6.8. ABS PLASTIC DUCT-SPACERS SHALL BE UTILIZED AND INSTALLED TO MAINTAIN RACEWAY SEPARATION DURING PLACEMENT OF CONCRETE

6.8.1. UNDERGROUND DEVICES INC. P/N DUCT DONUT 2C OR APPROVED EQUAL

6.9. RACEWAYS SHALL BE SECURED TO PREVENT FLOATATION DURING CONCRETE PLACEMENT WITH METALLIC HOLD-DOWN ASSEMBLIES

6.9.1. UNDERGROUND DEVICES, INC. P/N HOLD-DOWN BAR H5X-XX-2X OR APPROVED EQUAL

6.10. ALL RACEWAYS BENDS SHALL BE MADE WITH LARGE SWEEP RADII

6.11. ALL RACEWAYS SHALL BE REAMED, DE-BURRED AND CLEAN PRIOR TO COUPLING

6.12. ALL PVC RACEWAYS SHALL BE JOINED WITH GREY HEAVY-BODIED PVC CEMENT AND FULLY SEATED IN SLIP-COUPLING OR FITTING

6.13. ALL PVC RACEWAYS SHALL ENTER MAN-HOLE WALLS PERPENDICULAR AND HAVE BELL-END FITTINGS INSTALLED PRIOR TO DRAWING WIRES OR CABLES

6.14. RACEWAY ARRANGEMENTS SHALL BE MADE TO MAXIMUM THE DISTANCE BETWEEN 480/277V AND 208/120V FEEDER AND BRANCH CONDUCTORS FROM LOW-VOLTAGE AND FIBER OPTIC SIGNAL CABLING

6.15. DUCTBANK EXTENSIONS:

6.15.1. BULK-HEAD DUCTBANK CONCRETE POUR AND REMOVE ALL FORM WORK

6.15.2. EXTEND ALL REBAR AND CONDUITS 24" MINIMUM FROM END OF CONCRETE DUCTBANK

6.15.3. GLUE PVC END CAPS ON ALL CONDUITS. SLEEVE REBAR WITH PVC PIPE

6.15.4. INSTALL 2.0-INCH PVC PIPE 48-INCH ABOVE FINISHED GRADE AT LOCATION AND INDICATE ON AS-BUILD DRAWINGS WITH A MINIMUM OF THREE (3) MEASUREMENTS FROM NEAREST STRUCTURES

9 WIRING DEVICES

10.1. GENERAL

10.1.1. INDOORS OR NON PROCESS AREAS SHALL BE INSTALLED CONCEALED AND FLUSH WITH STAINLESS-STEEL DEVICE COVER PLATES.

10.1.2. OUTDOORS OR IN PROCESS AREAS SHALL BE INSTALLED WITHIN WEATHER-PROOF, CORROSION RESISTANT DEVICE BOXES WITH METALLIC IN-USE AND/OR WATER-TIGHT DEVICE COVER PLATES.

10.2. RECEPTACLES/GROUND FAULT CURRENT INTERRUPTING (GFCI)

10.2.1. SHALL BE INDIVIDUAL GFCI RECEPTACLE DEVICES RATED FOR 20A/120V WITH LED POWER INDICATOR.

10.2.2. GFCI RECEPTACLE DEVICES SHALL NOT SHARE NEUTRAL CONDUCTORS ON THREE-PHASE SYSTEMS

7 CABLES/ CONDUCTORS/ WIRES

7.1. ALL CABLES/CONDUCTORS/WIRES SHALL BE STRANDED COPPER.

7.2. QUANTITY AND SIZING OF CONDUCTORS, CABLING, WIRING AND RESPECTIVE RACEWAYS DEPICTED ON THE CONTRACT DOCUMENTS ARE SELECTED UPON THE BASIS OF DESIGN, STANDARD ELECTRICAL COMPONENTS AND/OR STANDARD EQUIPMENT WITH DIRECT ROUTED CONNECTIONS.

7.3. CONTRACTOR MAY SUBMIT FOR REVIEW BY ENGINEER AND PRIOR TO INSTALLATION, LOGICAL CONDUCTOR AND RACEWAY GROUPINGS IN COMPLIANCE WITH APPLICABLE CODES, STANDARDS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO OWNER.

7.4. CONTRACTOR SHALL PROVIDE A CIRCUIT IDENTIFICATION LABEL AT EACH END OF EACH POWER, BRANCH, CONTROL AND INSTRUMENTATION CIRCUIT CABLE ASSEMBLY, CONDUCTOR OR WIRE.

7.5. POWER/FEEDER

7.5.1. CONTRACTOR SHALL NOT EXCEED CABLE MANUFACTURER SPECIFICATIONS FOR SIDE-WALL AND TENSION LIMITS WHEN DRAWING POWER CABLES INTO RACEWAYS.

7.5.2. CONTRACTOR SHALL DRAW POWER CABLES AND CONDUCTORS WITHIN RACEWAYS UTILIZING POLYWATER LUBRICANT J OR APPROVED EQUAL.

7.5.3. NO SPLICES TO POWER CONDUCTORS AND/OR CABLING SHALL BE MADE WITHOUT ENGINEER APPROVAL. NO JUNCTIONS SHALL BE MADE BELOW GRADE WITHOUT APPROVAL OF ENGINEER.

7.6. POWER/BRANCH

7.6.1. RACEWAY AND WIRING FOR LIGHTING, RECEPTACLES AND BRANCH CIRCUITS ARE NOT TYPICALLY SHOWN ON THE CONTRACT DRAWINGS BUT SHALL BE PROVIDED AS REQUIRED UNDER THIS CONTRACT

10 HARDWARE AND SUPPORTS

11.1. ALL FASTENERS AND HARDWARE SHALL BE STAINLESS-STEEL 316L.

11.2. STRUT-CHANNEL SHALL NOT BE BENT, DRILLED, CUT OR OTHERWISE MODIFIED TO PRODUCE FITTINGS, BRACES OR BRACKETS FOR CONDUIT AND EQUIPMENT SUPPORTS.

11.3. MANUFACTURED STRUT-CHANNEL BRACES, BRACKETS, FITTINGS OR POST BASES SHALL BE PROVIDED AND INSTALLED WITH ASSOCIATED HARDWARE AND FASTENERS FOR CONDUIT AND EQUIPMENT SUPPORTS.

11.4. CONTRACTOR SHALL PROVIDE ALL SUPPORTS AND FASTENING HARDWARE FOR SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, CONTROL PANELS, ETC., AS REQUIRED IN THE SPECIFICATIONS.

11.5. CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE EMBEDDED LEVELING CHANNEL SUPPORTS FOR FLOOR MOUNTED EQUIPMENT SPANNING DISTANCES 48" AND GREATER IN LENGTH OR 36" AND GREATER IN DEPTH.

11.6. STRUCTURAL MEMBERS SHALL NOT BE DRILLED, CUT, WELDED TO, OR OTHERWISE MODIFIED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD.

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
ELECTRICAL GENERAL NOTES AND ABBREVIATIONS

SHEET
E01
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SW 2024-06

1 GENERAL ELECTRICAL SYMBOLS

- LIGHTING, INSTRUMENT OR RECEPTACLE PANELBOARD
- POWER PANELBOARD
- CP — CONTROL PANEL
- MCC — MOTOR CONTROL CENTER
- PM — POWER MONITOR
- A — AMMETER
- AS — AMMETER SWITCH
- V — VOLTMETER
- VS — VOLTMETER SWITCH
- FS — FLOAT/FLOW SWITCH
- LS — LIMIT SWITCH
- PS — PRESSURE SWITCH
- T — THERMOSTAT
- JB — JUNCTION BOX, SIZE PER NEC
- E — ELECTRICAL EQUIPMENT CONNECTION
- XXX — ELECTRICAL MANHOLE / HANDHOLE AND THE LETTERS INDICATE THE TYPE OF THE HOLE
- DB110 — RACEWAY SYSTEM CALL-OUTS:
  CT - CABLE TRAY
  BD - BUS DUCT
  DB - DUCTBANK
  EC - EXPOSED CONDUIT
  WW - WIRE WAY/TROUGH
- 042000 — RACEWAY AND/OR CABLE ID NUMBER
- LP-3 — RACEWAY HOMERUN TO EQUIPMENT ID TAG AS SHOWN. LINE TYPE DESIGNATES CONCEALED, EXPOSED, ETC. NUMBERS/TEXT DESIGNATE HOMERUN EQUIPMENT (I.E. PANEL BOARD CIRCUIT NUMBER).
- TO PLC-1 / 9#14 #12G 0.75"C — CONDUCTOR/CABLE CALL-OUT WITHIN RACEWAY
- CONCEALED RACEWAY(S) IN FLOOR SLAB, UNDERGROUND, ETC.
- RACEWAY TURNED DOWN
- RACEWAY TURNED UP
- RACEWAY TERMINATED / CAPPED OFF
- CONDUIT WITH CABLE GLAND FITTING
- NEW ELECTRICAL RACEWAY(S)
- OVERHEAD ELECTRICAL UTILITY
- UNDERGROUND ELECTRICAL UTILITY
- G — NEW GROUNDING / BONDING

2 POWER SYMBOLS

- CLASS 1/2 DIVISION I/II
  CONDUIT SEAL-OFF FITTING
- LOCAL CONTROL STATION
  WITH THREE OR MORE SELECTOR/PUSH SWITCHES
  LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCAL CONTROL STATION
  WITH TWO SELECTOR/PUSH SWITCHES
  LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCAL CONTROL STATION
  WITH ONE SELECTOR/PUSH SWITCH
  LOWER-RIGHT SYMBOL INDICATES MOUNTING LOCATION
- LOCATED AT FIELD DEVICE
- LOCATED AT MAIN CONTROL PANEL
- LOCATED AT LOCAL CONTROL PANEL
- MOUNTED ON DOOR
- PSR EO 1600AF 1200AT — DRAW-OUT POWER CIRCUIT BREAKER
  WITH PROGRAMMABLE SOLID STATE RELAY
  'EO' DENOTES ELECTRICALLY OPERATED
- ASR 1600AF 1200AT — FIXED-MOUNT POWER CIRCUIT BREAKER
  WITH ADJUSTABLE SOLID STATE RELAY
- 300AF 300AT TMTU — CIRCUIT BREAKER, GENERIC FIXED-MOUNT
  'TMTU' THERMAL-MAGNETIC TRIP UNIT
  'ELTU' ELECTRONIC TRIP UNIT
- CB1 — CIRCUIT BREAKER, GENERIC
- CB2 — CIRCUIT BREAKER, THERMAL
- CB3 — CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTOR
- 3R 200AF 175AT — CIRCUIT BREAKER, THERMAL ENCLOSED
  TOP NUMBER DENOTES TRIP
  BOTTOM NUMBER DENOTES FRAME SIZE
  UPPER LEFT NUMBER DENOTES NEMA ENCLOSURE RATING
- FU1 — FUSE, GENERIC
- 30AT 600V RK1 — FUSE, GENERIC
  TOP NUMBER DENOTES TRIP
  BOTTOM NUMBER DENOTES VOLTAGE CLASS
  MIDDLE NUMBER DENOTES TYPE
- INTEGRAL STARTER

- XF1 — TRANSFORMER, POWER
  TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- XF2 — TRANSFORMER, SHIELDED ISOLATION
  TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- CT1 100/5 — TRANSFORMER, CURRENT 'CT'
  TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- PT1 100:1 — TRANSFORMER, POTENTIAL 'PT' OR 'VT'
  TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- N E L — AUTOMATIC OR MANUAL TRANSFER SWITCH, STAND-ALONE
  TYPE AND RATINGS AS NOTED ON THE DRAWINGS
- F 200AF 100AT 4X/SS — SAFETY / DISCONNECT SWITCH
  TOP NUMBER DENOTES FUSE SIZE (NF=NON-FUSED)
  BOTTOM NUMBER DENOTES FRAME SIZE
  RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING
- 00 FVNR 21-70AT 7AF 12 — MOTOR CONTROLLER, STAND-ALONE WITH EXTERNAL DISCONNECT:
  UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE
  UPPER RIGHT NUMBERS DENOTE AMPERE AND FRAME RATINGS
  CENTER RIGHT NUMBER DENOTES NEMA ENCLOSURE RATING
  LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING:
  FVNR FULL VOLTAGE NON-REVERSE
  FVR FULL VOLTAGE REVERSIBLE
  TS1W TWO SPEED - SINGLE WINDING
  TS2W TWO SPEED - DUAL WINDING
  RVSS REDUCED VOLTAGE SOFT STARTER
  RVAT REDUCED VOLTAGE AUTO TRANSFORMER
  VFD VARIABLE FREQUENCY DRIVE
- 00 FVNR — MOTOR CONTROLLER, FULL-VOLTAGE MCC UNIT:
  UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE
  LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING:
  FVNR FULL VOLTAGE NON-REVERSE
  FVR FULL VOLTAGE REVERSIBLE
- TS2W — MOTOR CONTROLLER, PART-WINDING MCC UNIT:
  UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE
  LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING:
  TS1W TWO SPEED - SINGLE WINDING
  TS2W TWO SPEED - DUAL WINDING
- RVAT — MOTOR CONTROLLER, REDUCED-VOLTAGE MCC UNIT:
  UPPER LEFT NUMBER DENOTES NEMA FRAME SIZE
  LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING:
  RVSS REDUCED VOLTAGE SOFT STARTER
  RVAT REDUCED VOLTAGE AUTO TRANSFORMER
- VFD — MOTOR CONTROLLER, VARIABLE FREQUENCY DRIVE, MCC UNIT:
  LETTERS WITHIN THE SYMBOL DENOTE THE FOLLOWING:
  VFD VARIABLE FREQUENCY DRIVE
- 3% — LINE OR LOAD REACTOR
  CENTER RIGHT NUMBER DENOTES PERCENT IMPEDANCE
- dV/dT — MOTOR PROTECTION FILTER
- M 15HP 460V 21.0 FLA — AC MOTOR
  SINGLE OR THREE PHASE AS NOTED

3 SCHEMATIC SYMBOLS

- PB1 — MOMENTARY PUSH BUTTON NORMALLY OPENED
- PB2 — MOMENTARY PUSH BUTTON NORMALLY CLOSED
- PB3 — MUSHROOM PUSH BUTTON NORMALLY OPENED
- PB4 — MUSHROOM PUSH BUTTON NORMALLY CLOSED
- TG1 — TOGGLE SWITCH NORMALLY OPENED
- TG2 — TOGGLE SWITCH NORMALLY CLOSED
- SS1 — TWO-POSITION SWITCH NORMALLY OPENED
- SS2 O H A — THREE-POSITION BUTTON NORMALLY OPENED
- LS1 — LIMIT SWITCH NORMALLY OPENED
- LS2 — LIMIT SWITCH NORMALLY CLOSED
- LS3 — LIMIT SWITCH HELD OPENED
- LS4 — LIMIT SWITCH HELD CLOSED
- TS1 — TEMPERATURE SWITCH NORMALLY OPENED
- TS2 — TEMPERATURE SWITCH NORMALLY CLOSED
- FLS1 — FLOAT SWITCH NORMALLY OPENED
- FLS2 — FLOAT SWITCH NORMALLY CLOSED
- FS1 — FLOW SWITCH NORMALLY OPENED
- FS2 — FLOW SWITCH NORMALLY CLOSED
- PS1 — PRESSURE SWITCH NORMALLY OPENED
- PS2 — PRESSURE SWITCH NORMALLY CLOSED
- TD1 — ON DELAY TIME RELAY NORMALLY OPENED TIMED CLOSED NOTC
- TD2 — ON DELAY TIME RELAY NORMALLY CLOSED TIMED OPENED NCTO
- TD3 — OFF DELAY TIME RELAY NORMALLY OPENED TIMED OPENED NOTO
- TD4 — OFF DELAY TIME RELAY NORMALLY CLOSED TIMED CLOSED NCTC
- LT1 B — INDICATION LIGHT
  W - WHITE G - GREEN A - AMBER
  R - RED B - BLUE C - CLEAR
- LT2 R — INDICATION LIGHT, PUSH-TO-TEST
  W - WHITE G - GREEN A - AMBER
  R - RED B - BLUE C - CLEAR
- CR1 — CONTROL RELAY, GENERIC DESIGNATIONS:
  CR CONTROL RELAY
  MX AUXILIARY RELAY
  TR TIMING RELAY
  AR ALARM RELAY
  RR READY RELAY
- LR1 L — CONTROL RELAY, LATCHING
- CR1 — CONTACT, NORMALLY OPENED TOP ID TAG DENOTES PARENT RELAY
- LR1 — CONTACT, NORMALLY CLOSED TOP ID TAG DENOTES PARENT RELAY
- SOL1 — SOLENOID, GENERIC
- R1 — HEATING ELEMENT, GENERIC
- ETM — ELAPSED TIME METER, ELECTRONIC
- AH1 — HORN, ALARM
- AH2 A/V — HORN, ALARM
  AUDIO AND VISUAL ANNUNCIATION
- XF3 — TRANSFORMER, CONTROL POWER
  RATINGS AS NOTED ON THE DRAWINGS

NOTES:
ALL SYMBOLS MAY NOT BE UTILIZED FOR THIS PROJECT.
ADDITIONAL SYMBOLS NOT SHOWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE ELECTRICAL DRAWINGS. IF REQUIRED, IEC RATINGS WILL INCLUDE THE "IEC" AND "IP" PREFIX.

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LANTANA POINSETTIA
STORMWATER PUMPING STATION
ELECTRICAL SYMBOLS 1 OF 2

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4 LIGHTING AND RECEPTACLE SYMBOLS

A1 / a / LP-100/15 — LIGHT FIXTURE, VARIOUS TYPES
UPPERCASE CHARACTERS "A1" DENOTES TYPE,
REFER TO LIGHTING SCHEDULE OR DRAWING NOTES
LOWERCASE LETTER "a" DENOTES CONTROL SWITCH
DUAL SWITCHING INDICATED BY PAIRS OF LOWERCASE LETTERS "a,b"
NUMBER "LP-100/15" DENOTES LIGHTING PANEL AND CIRCUIT NUMBER
"NL" DENOTES NIGHT LIGHT, CIRCUIT AHEAD OF CONTROL SWITCHES.

LIGHT FIXTURE, VARIOUS TYPES
EMERGENCY / EGRESS BATTERY BACK-UP POWER

PENDANT OR CEILING MOUNTED LIGHTING FIXTURE

WALL MOUNTED LIGHTING FIXTURE

POLE OR STANCHION MOUNTED LIGHTING FIXTURE

TWO (2) POLE OR STANCHION MOUNTED LIGHTING FIXTURE

GF — POLE OR STANCHION MOUNTED LIGHTING FIXTURE WITH RECEPTACLE

EM — TWO (2) LAMP EMERGENCY / EGRESS LIGHTING FIXTURE
LETTERS DENOTE TYPE

EXIT SIGN WALL MOUNTED (SINGLE FACE WITH INDICATING ARROWS)
WITH BATTERY PACK ARROW INDICATES DIRECTION OF EXIT DOOR

EXIT SIGN PENDANT MOUNTED (DOUBLE FACE WITH INDICATING
ARROWS) WITH BATTERY PACK ARROWS INDICATE DIRECTION OF
EXIT DOOR

D / 150 / 10'-0" AFF — FIXTURE DESIGNATION SYMBOL. SEE LIGHTING FIXTURE SCHEDULE
FOR DESCRIPTION AND TYPE. ALL FIXTURES SHOWN IN A ROOM WITH
THIS SYMBOL SHALL BE OF TYPE INDICATED BY LETTER; NUMBER IN
SYMBOL INDICATES LAMP WATTAGE AND NUMBER OF LAMPS WHERE
MORE THAN ONE (UNLESS OTHERWISE NOTED). NUMBER BELOW
SYMBOL INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR OR
AS NOTED.

a S D — WIRING DEVICE
LIGHTING CONTROL SWITCHES:
UPPER-LEFT CHARACTER "a" DENOTES SWITCH DESIGNATION.
LOWER-RIGHT CHARACTER "4" DENOTES SWITCH CONTROL
2 TWO POLE
3 THREE-WAY SWITCH CONTROL
4 FOUR-WAY SWITCH CONTROL
D DIMMER CONTROL
OS OCCUPANCY SENSOR
M MOTOR RATED SWITCH
T 24V DC MOMENTARY CONTACT SWITCH
V VARIABLE SPEED FAN SWITCH

a b SS 4

a b c SSS 3

L21-30 — WIRING DEVICE, POWER RECEPTACLE
WITH INTEGRAL DISCONNECT / LOAD BREAK
NEMA CONFIGURATION SHOWN LOWER RIGHT

PR1 / L21-30 — WIRING DEVICE, POWER RECEPTACLE
NEMA CONFIGURATION SHOWN LOWER RIGHT

GF — WIRING DEVICE, SINGLE DUPLEX RECEPTACLE, TYPICAL
LOWER RIGHT CHARACTERS DENOTE THE FOLLOWING:
GF GROUND FAULT CIRCUIT INTERRUPTER
IG ISOLATED GROUND
SS SURGE PROTECTIVE
WP WEATHER-PROOF
GF/WP GROUND FAULT CIRCUIT INTERRUPTER / WEATHERPROOF

GF/WP — WIRING DEVICE, DUPLEX RECEPTACLE
GROUND FAULT CIRCUIT INTERRUPTER / WEATHERPROOF
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, DUPLEX RECEPTACLE
SPLIT-WIRED / SWITCHED
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, QUADPLEX RECEPTACLE
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, QUADPLEX RECEPTACLE
FLOOR BOX MOUNTED
NEMA 5-20 125V 20A UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, HEAT-TRACE OR SPECIAL PURPOSE RECEPTACLE
REFERENCE DRAWINGS FOR ADDITIONAL DETAILS

WIRING DEVICE, TELEPHONE
RJ-11 UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, TELEPHONE AND DATA
RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, DATA
RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

WIRING DEVICE, TELEPHONE AND DATA
FLOOR BOX MOUNTED
RJ-11 AND RJ-45 UNLESS OTHERWISE NOTED ON DRAWINGS

5 FIRE ALARM SYSTEM

A/V / 110 — AUDIO / VISUAL ALARM INDICATOR
HORN / STROBE NUMBER INDICATES STROBE CANDELA RATING
OTHER THAN 15

H — HORN

F — PULL STATION

XXXX — CONTROL PANEL
MIDDLE LETTERS DENOTE THE FOLLOWING:
FACP FIRE ALARM CONTROL PANEL

B — BELL

FAAS — FIRE ALARM ANNUNCIATOR STATION

FS — FLOW SWITCH

TS — VALVE TAMPER SWITCH

END OF LINE RESISTOR

FD — FLAME DETECTOR

SD / X — SMOKE DETECTOR, MULTISENSOR
D - DUCT MOUNTED
H - HIGH TEMPERATURE / THERMAL
I - IONIZATION
P - PHOTOELECTRIC

CT — SIGNAL INPUT MODULE

CC1 — SIGNAL MODULE

6 GROUNDING / BONDING SYMBOLS

GROUND ROD TEST WELL

GROUND ROD

GROUNDING / BONDING CONNECTION
EXOTHERMIC WELD

GROUNDING / BONDING CONNECTION
MECHANICAL

GROUND, EARTH

GROUNDING / BONDING CONDUCTOR
(REFERENCE CONTRACT DOCUMENTS FOR REQUIREMENTS)

L — LIGHTNING PROTECTION CONDUCTOR
(REFERENCE CONTRACT DOCUMENTS FOR REQUIREMENTS)

G — GROUNDING SYSTEM EXTENSION

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7 AUXILIARY SYSTEMS

XX — AUXILIARY DETECTOR
DC DOOR CONTACT
GD GLASS-BREAK DETECTOR
MS MOTION SENSOR
CR CARD READER

XXXX — CONTROL PANEL
MIDDLE LETTERS DENOTE THE FOLLOWING:
IACP INTRUSION ALARM CONTROL PANEL
ACP ALARM CONTROL PANEL
FOPP FIBER OPTIC PATCH PANEL

R — ALARM BEACON
LETTER INDICATORS COLOR

CCC — CLOSED CIRCUIT CAMERA

PU — PAGING UNIT

LS — PAGING UNIT WITH LOUD SPEAKER

C — PAGING UNIT

SOUND POWERED TELEPHONE

TB — FLAT CABLE TRANSITION BOX

TELEPHONE PUNCH DOWN BLOCK

PBX — PRIVATE BRANCH EXCHANGE

EPN — EXTERNAL PORT NODE

F/C — FIBER OPTIC CONVERTER

LE — LINE EXTENDER

PCC — PAGING CONTROL CABINET

MUX — MULTIPLEXOR

XCR — TRANSCEIVER

MONITOR

T — T1 DEMARCATION

UPS — UNINTERRUPTIBLE POWER SUPPLY

NOTES:
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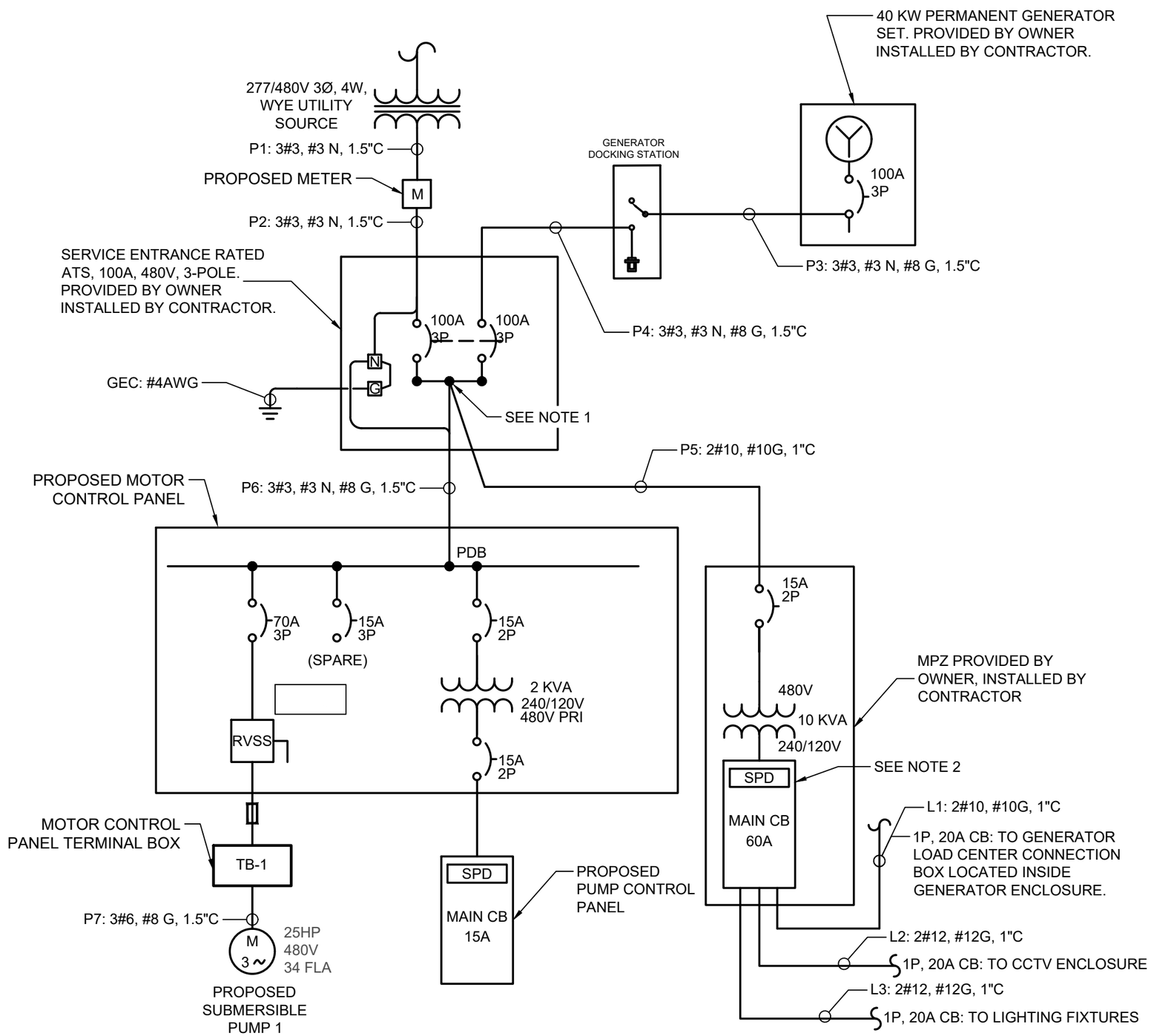
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ELECTRICAL SYMBOLS 2 OF 2

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AVAILABLE FAULT CURRENT AT THE SECONDARY LUGS FOR THE NEW 75KVA, PAD-MOUNTED TRANSFORMER IS 7,048A. THE INTERRUPTING RATING, IR, OF THE FDTS CURRENT LIMITING FUSE IS 200KA RMS, SYMMETRICAL. THE LET-THROUGH CURRENT OF THE FUSE AT 3,556A SHORT CIRCUIT CURRENT IS 2,600A RMS, SYMMETRICAL.

ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3Ø, 4W

LOAD	CONNECTED	DEMAND	APPROX. PHASE CURRENTS L1	L2	L3
NEW PUMP #1	25.2 KVA	25.2 KVA	30.0 A	30.0 A	30.0 A
PUMP CONTROL PANEL	5.0 KVA	5.0 KVA	0.0 A	10.0 A	10.0 A
TOTAL	30.2 KVA	30.2 KVA	30.0 A	40.0 A	40.0 A

ONE LINE DIAGRAM NOTES:

1. CONTRACTOR TO INSTALL A RING TERMINAL OR SIMILAR MEANS ON LUGS TO TAP CIRCUIT P5.
2. PROVIDE AND INSTALL TWO ADDITIONAL 20A, 120V, 1-POLE CIRCUIT BREAKERS, ONE FOR CIRCUIT L2 FOR CCTV AND ONE FOR LIGHTING FIXTURES L3.

SHORT CIRCUIT CALCULATIONS

AVAILABLE SHORT-CIRCUIT CURRENT AT 480V UTILITY SERVICE IS 7,048 AMPERES.

TECO CONTACT: RICH RICHMORE (813) 228-4704

UTILITY SERVICE: 480/277, 3 PH, 75 KVA PAD MOUNTED
TRANSFORMER AVAILABLE FAULT CURRENT AT SECONDARY SIDE OF TECO'S TRANSFORMER: 7,048 AMP RMS SYM.
SERVICE CONDUCTOR LENGTH: 150 FEET
SERVICE CONDUCTOR SIZE: #3 XHHW-2 CU.
FUSE RATING: 100 AMPS
ISCA AT LINE SIDE OF FTDS:

$$ISCA = \left[\frac{1}{1 + \left[\frac{(1.73)(150)(7{,}048)}{(3{,}880)(480)}\right]}\right] * 7{,}048 = 3{,}556A$$

SHORT CIRCUIT CURRENT AVAILABLE AT MAIN LUGS OF MCP=2,600 AMPS RMS, SYMMETRICAL

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LANTANA POINSETTIA
STORMWATER PUMPING STATION
SINGLE LINE DIAGRAM

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N

3" = 1'-0"

0 3" 6" 9" 12"

#4 AWG BARE STRANDED TINNED COPPER GROUND RING DIRECT BURIED

#8 AWG BARE STRANDED TINNED COPPER GROUND CONDUCTOR (TYP.)

PROPOSED METER CAN

PROPOSED ATS TO BE PROVIDED BY THE OWNER

PROPOSED MPZ TO BE PROVIDED BY THE OWNER

PROPOSED MCP

PROPOSED PERMANENT GENERATOR TO BE PROVIDED BY THE OWNER

GROUNDING TEST WELL

1 E07

2 E07

MOTOR CONTROL PANEL TERMINAL BOX (TB-1)

PUMP CONTROL PANEL TERMINAL BOX (TB-2)

PROPOSED CCTV

PROPOSED PCP

ANTENNA AND CAMERA MOUNTING POLE, REFER TO SHEET I17 FOR MORE DETAILS

3/4" X 10' CU CLAD GROUND ROD (TYP.)

ELECTRICAL SITE PLAN

SCALE: 1"=3'

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ELECTRICAL SITE PLAN

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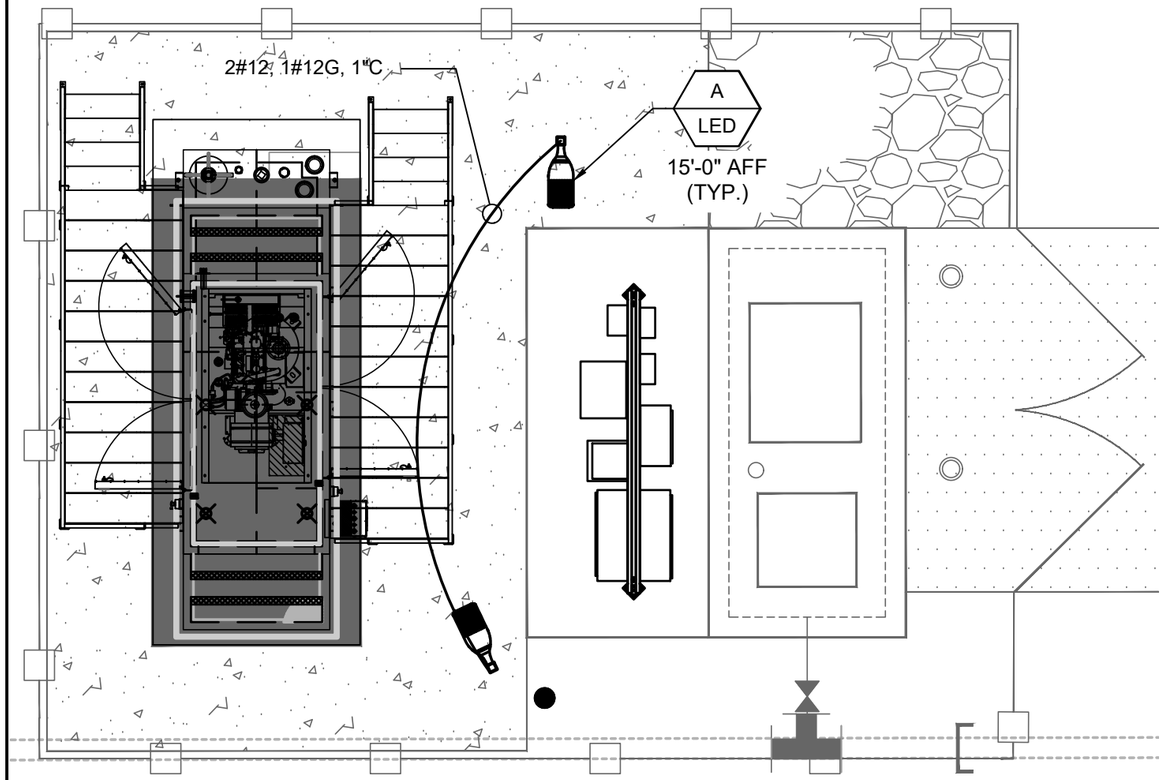
NOTES:

1. REFER TO CHANPTER 5 FOR HAZARDOUS WIRING REQUIREMENTS.
2. REFER TO NFPS 820, TABLE 4.2. ROW 4 AND FIGURE A.4.2(a).

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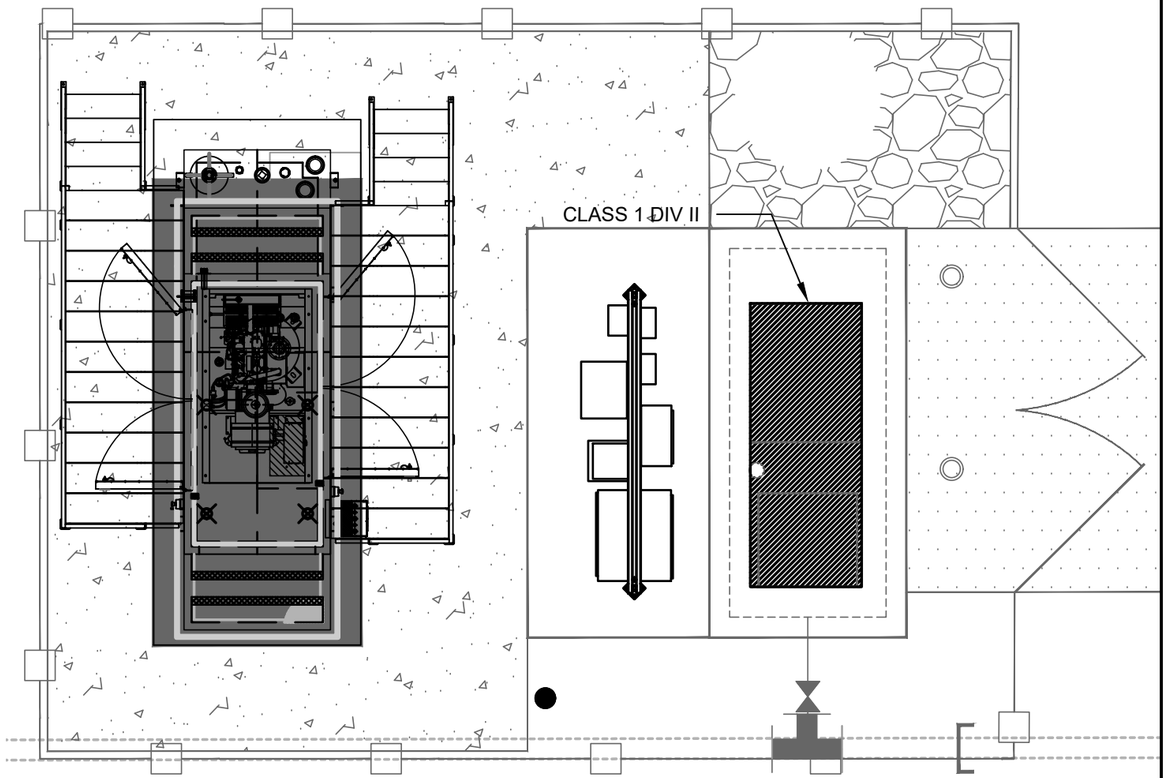
5' 0 5' 10

SCALE: 1"=5' (Horiz.)



LIGHTING SITE PLAN

SCALE: 1"=5'



CLASSIFICATION SITE PLAN

SCALE: 1"=5'

LIGHTING FIXTURE TABLE

TYPE	MANUFACTURER	MODEL	DESCRIPTION	WATTAGE
A	ACUITY BRANDS	DSX1 LED-P2-30K-80CRI-TFTM-MVOLT-PER	POLE MOUNTED LIGHTING WITH PHOTOCELL	68.0

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Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
LIGHTING, CLASSIFICATION SITE PLAN AND LIGHTING FIXTURE SCHEDULE

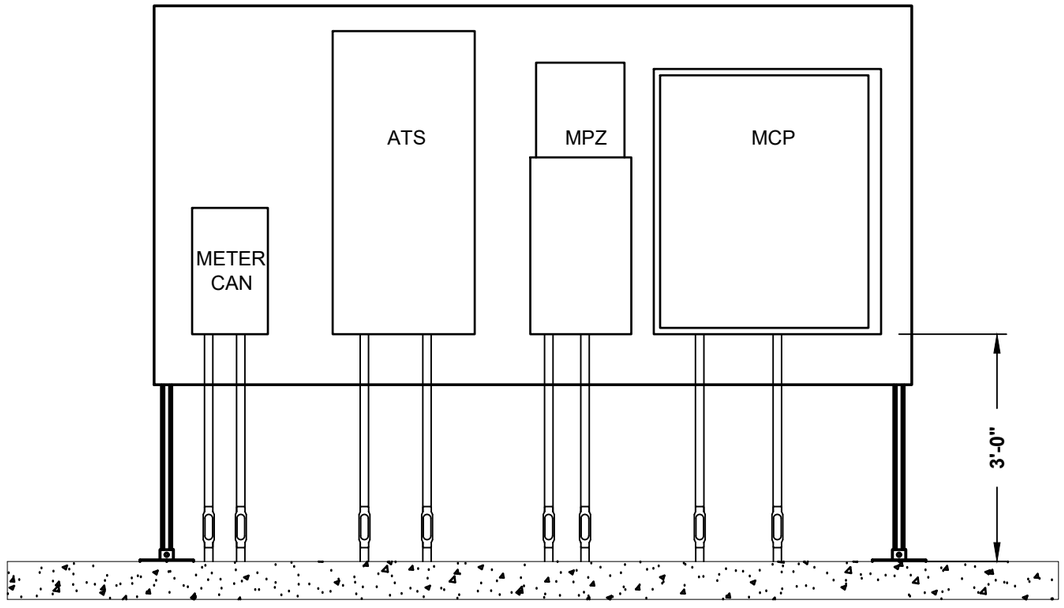
SHEET
E06
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\\MCKIMCREED.COM\NAS\UNIDATA\PROJ\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\009 ELECTRICAL\ELECTRICAL V2\PS14-ELECSITEPLANLANTANA.DWG 9/3/2026
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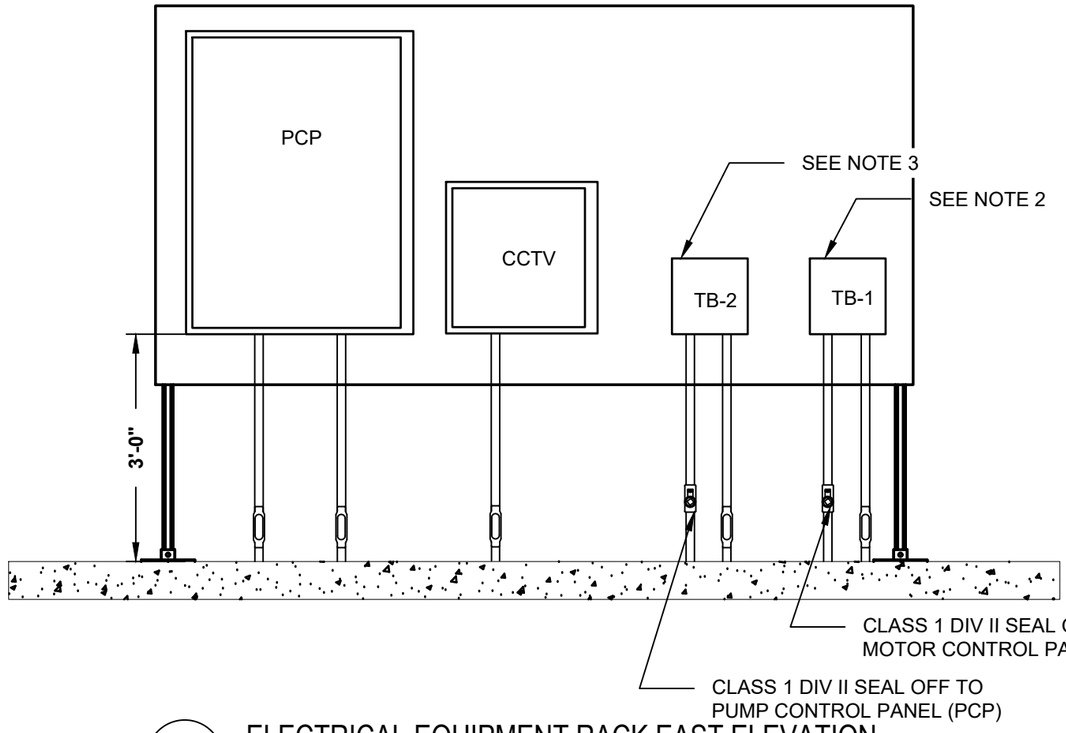
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NOTES:

1. REFERENCE ELECTRICAL EQUIPMENT RACK CONCEPTUAL DETAIL SHOWN ON THIS SHEET FOR DESIGN INTENT OF FINAL INSTALLATION.
2. CONTRACTOR TO PROVIDE AND INSTALL POWER DISTRIBUTION TERMINAL BLOCK AND CLASS 1 DIV II CGB TO TB-1.
3. CONTRACTOR TO PROVIDE AND INSTALL TERMINAL BLOCK AND CLASS 1 DIV II CGB TO TB-2.



1 ELECTRICAL EQUIPMENT RACK WEST ELEVATION
SCALE: N.T.S REF: E05



2 ELECTRICAL EQUIPMENT RACK EAST ELEVATION
SCALE: N.T.S REF: E05

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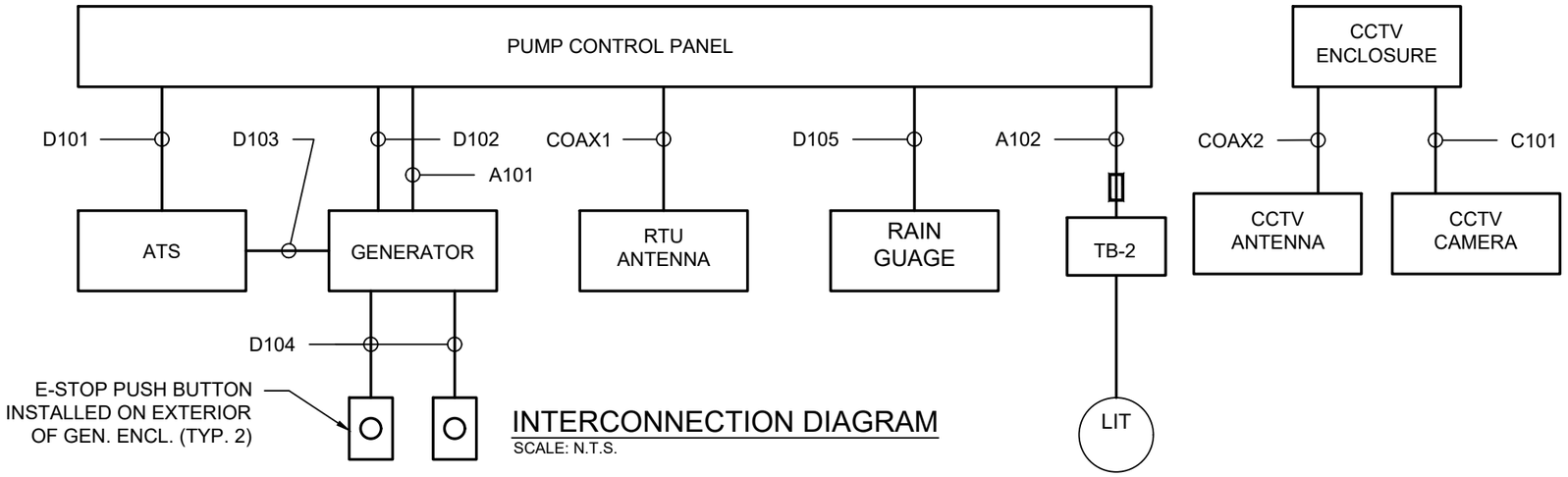
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
ELECTRICAL RACK ELEVATION

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INTERCONNECTION DIAGRAM

SCALE: N.T.S.

CONDUIT #	SIZE	WIRE SIZE	GROUND	FROM	TO	NOTES
INSTRUMENTATION AND CONTROLS						
D101	1"	5/C#14	---	ATS	PUMP CONTROL PANEL	ATS ON UTILITY/GENERATOR
D102	1"	5/C#14	---	GENERATOR	PUMP CONTROL PANEL	GENERATOR RUNNING/FAIL
D103	1"	12/C#14	---	ATS	GENERATOR	GEN. START/STOP, STATUS AND CONTROL
D104	1"	2#14	#14	E-STOP PB	GENERATOR	
A101	1"	2/C#16 STP	---	GENERATOR	PUMP CONTROL PANEL	ANALOG GENERATOR FUEL TANK LEVEL
A102	1"	2/C#16 STP	---	PUMP CONTROL PANEL	LEVEL TRANSMITTER	
C101	3/4"	CAT6	---	CCTV ENCLOSURE	CCTV CAMERA 1	
COAX1	2"	5-COAX	---	PUMP CONTROL PANEL	RTU ANTENNA	5 COAXIAL CABLES
COAX2	1.5"	3-COAX	---	CCTV ENCLOSURE	CCTV ANTENNA	3 COAXIAL CABLES

INSTRUMENTATION CONDUIT AND WIRE SCHEDULE

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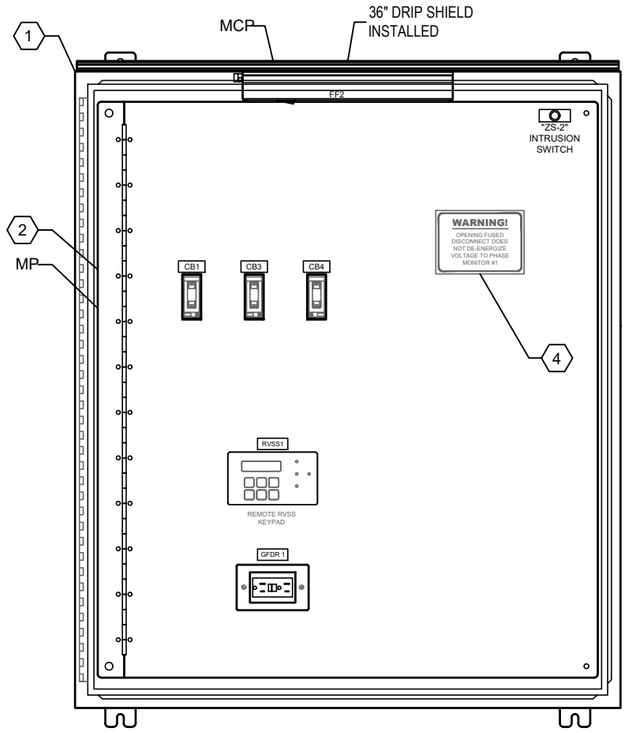
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
INTERCONNECTION DIAGRAM AND WIRING SCHEDULE

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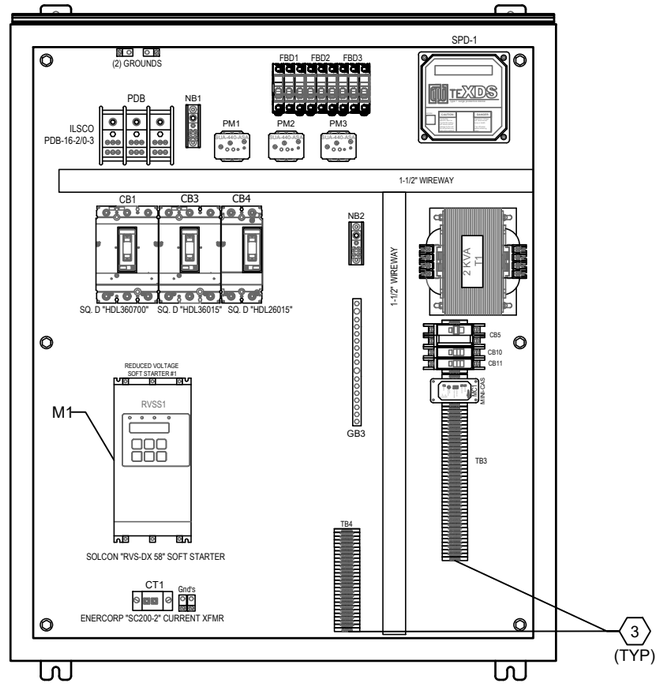


MOTOR CONTROL PANEL EXTERIOR DETAIL

SCALE: N.T.S.

(OUTER DOOR SHOWN REMOVED FOR CLARITY)

1 E05 E07



BACK PANEL LAYOUT

SCALE: N.T.S.

LEGEND PLATE SCHEDULE

SYMBOL	DEVICE	LEGEND
CB1	CIRCUIT BREAKER	PUMP NO. 1 CIRCUIT BREAKER
CB3	CIRCUIT BREAKER	SPARE CIRCUIT BREAKER
CB4	CIRCUIT BREAKER	TRANSFORMER 'T1' 480V FEEDER
RVSS1	PUMP NO. 1 REMOTE KEYPAD	RVSS1 REMOTE KEYPAD

KEYED NOTES:

1. MOTOR CONTROL PANEL. 42" X 36 X 12" NEMA 4X SS, POWDER COAT WHITE.
2. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
3. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
4. PROVIDE AND INSTALL WARNING LABEL. LABEL TO READ: 'WARNING - OPENING FUSED DOUBLE THROW SWITCH DOES NOT DE-ENERGIZE VOLTAGE TO FBD1 DISCONNECT.'"

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.

BACK PANEL LAYOUT

SCALE: N.T.S.

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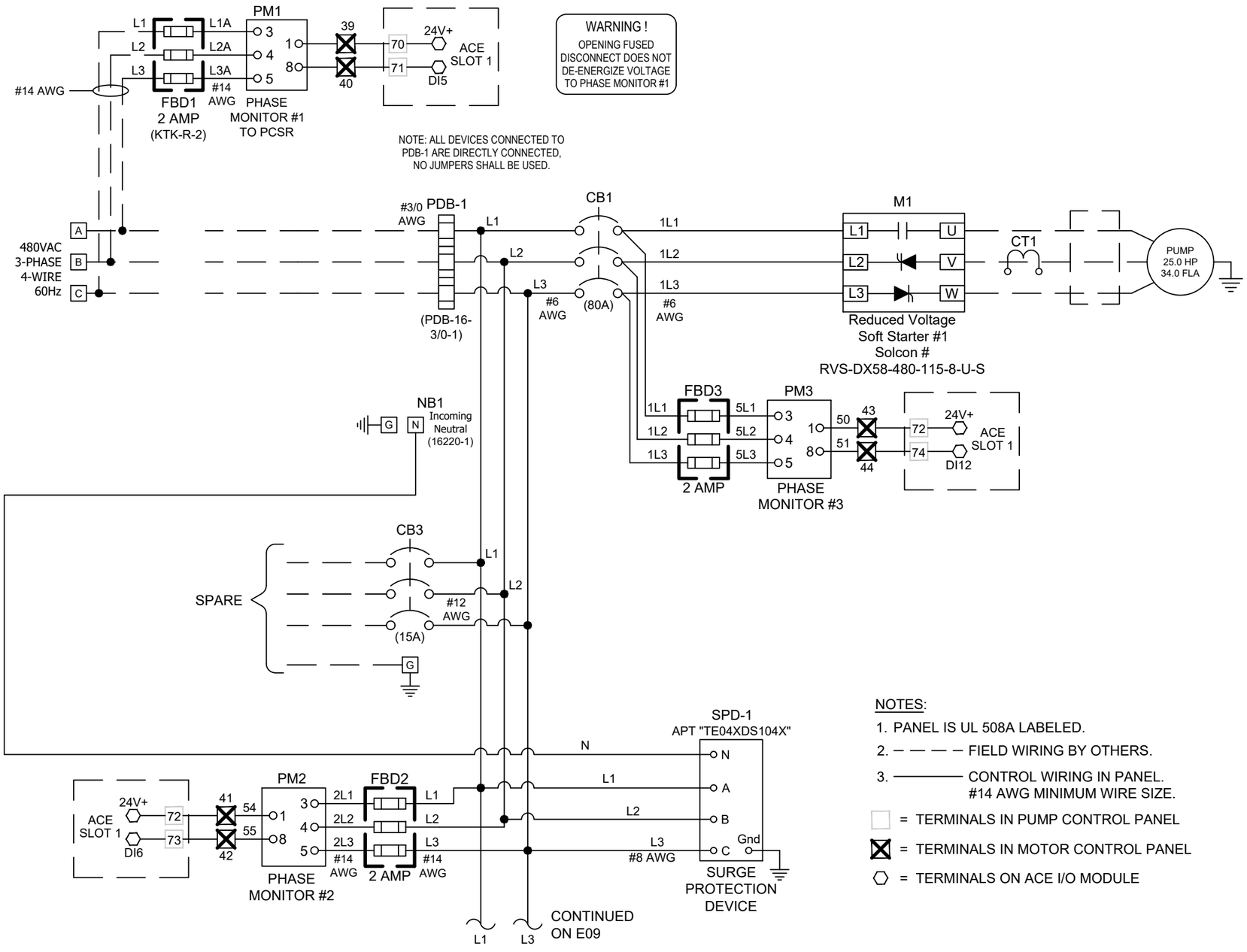
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
MCP DETAILS

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NOTES:

1. PANEL IS UL 508A LABELED.
2. – — — – FIELD WIRING BY OTHERS.
3. ———— CONTROL WIRING IN PANEL. #14 AWG MINIMUM WIRE SIZE.

☐ = TERMINALS IN PUMP CONTROL PANEL

☒ = TERMINALS IN MOTOR CONTROL PANEL

⬡ = TERMINALS ON ACE I/O MODULE

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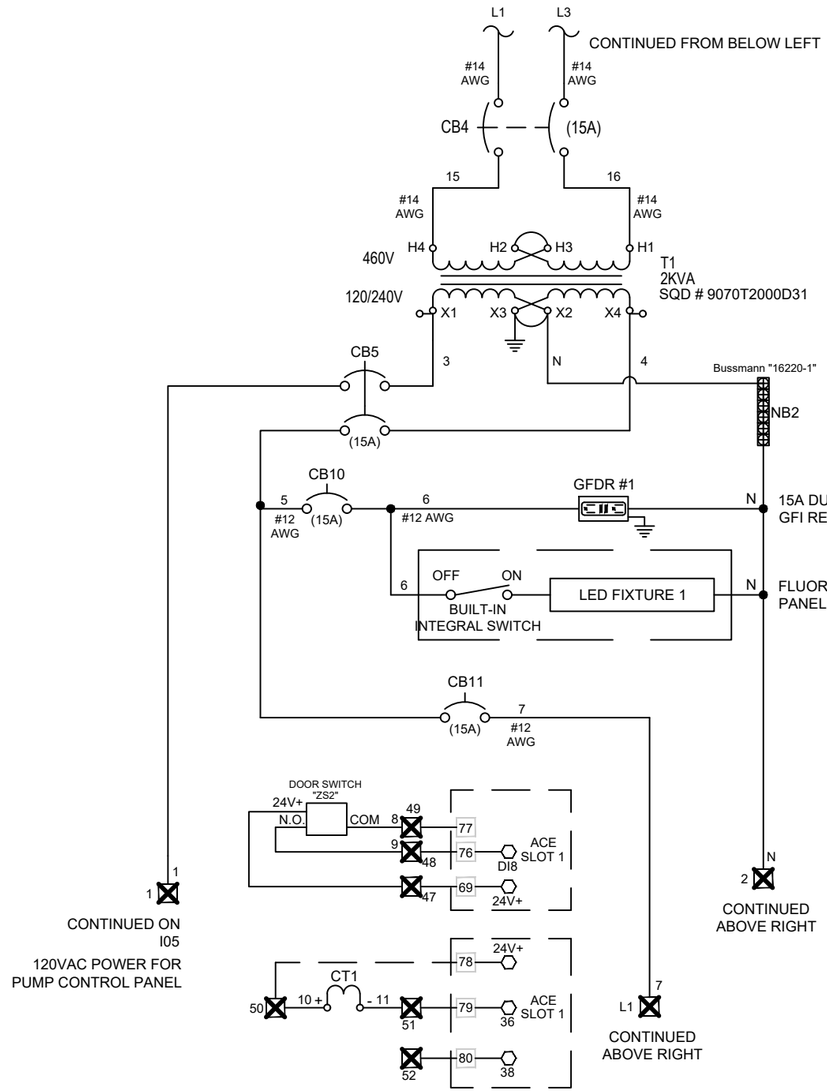
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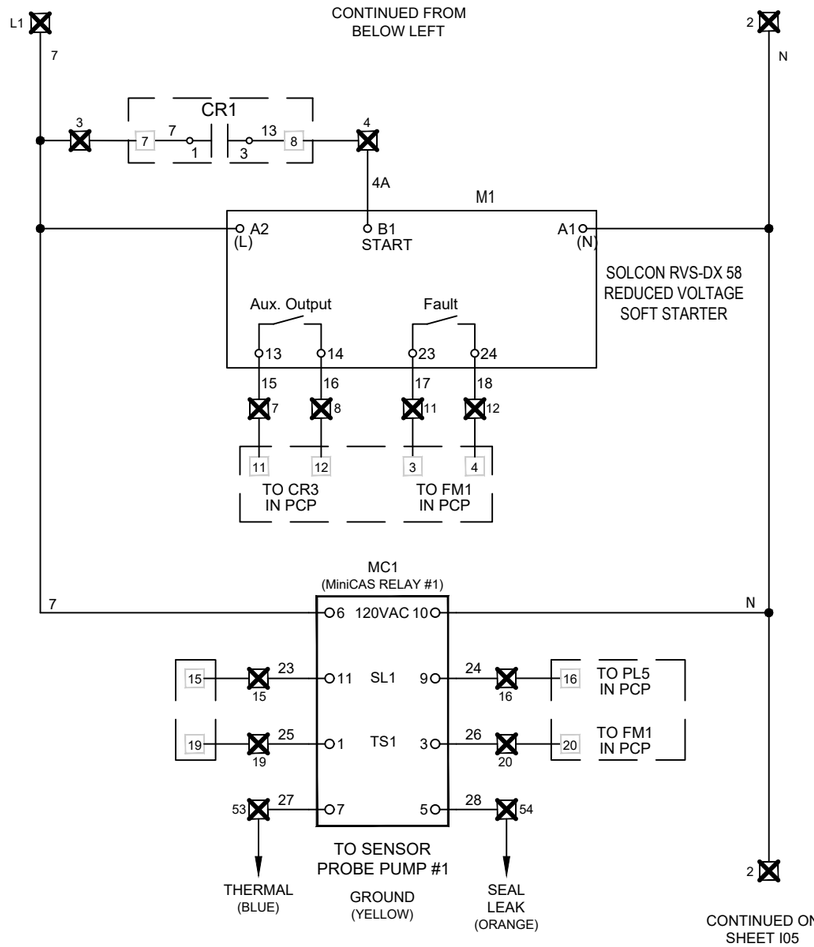
LANTANA POINSETTIA
STORMWATER PUMPING STATION
MCP SCHEMATIC 1 OF 2

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LANTANA POINSETTIA
STORMWATER PUMPING STATION
MCP SCHEMATIC 2 OF 2

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TB3 ☒	120VAC (MOTOR CONTROL PANEL)
1	120V TO PUMP CONTROL PANEL
2	NEUTRAL (CONTINUED TO PUMP CONTROL PANEL)
3	PUMP START COMMAND FROM CR1-1 (IN PCP)
4	PUMP START COMMAND FROM CR1-1 (IN PCP)
5	
6	
7	PUMP "ON" SIGNAL TO CR3 (IN PCP)
8	PUMP "ON" SIGNAL TO CR3 (IN PCP)
9	
10	
11	SOFTSTART #1 FAULT SIGNAL TO PCP
12	SOFTSTART #1 FAULT SIGNAL TO PCP
13	
14	
15	PUMP LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)
16	PUMP LEAK DETECTED TO PILOT LIGHT 5 (IN PCP)
17	
18	
19	PUMP TEMPERATURE ALARM TO FM1 (IN PCP)
20	PUMP TEMPERATURE ALARM TO FM1 (IN PCP)
21	
22	
23-37	SPARE
L1	CB11 OUT MOTOR CONTROL PANEL POWER

TB4 ☒	24VDC (MOTOR CONTROL PANEL)
39	SLOT 1 PCSR 24V+
40	UTILITY POWER AVAILABLE (PM1) TO PCSR
41	SLOT 1 PCSR 24V+
42	MOTOR CONT. PANEL PHASE LOSS
43	SLOT 1 PCSR 24V+
44	PUMP 1 MCP STATUS (PM3) TO PCSR
45	SLOT 1 PCSR 24V+
46	
47	MOTOR CONTROL PANEL INTRUSION
48	
49	
50	SLOT 2 PCSR 24V+
51	PUMP AMPS
52	
53	PUMP SEAL LEAK DETECTOR PROBE
54	PUMP SEAL LEAK DETECTOR PROBE
55	
56	
57-66	SPARE

☐ = TERMINALS IN PUMP CONTROL PANEL
☒ = TERMINALS IN MOTOR CONTROL PANEL
⬡ = TERMINALS ON ACE I/O MODULE
◪ = TERMINALS IN PUMP CONTROL PANEL

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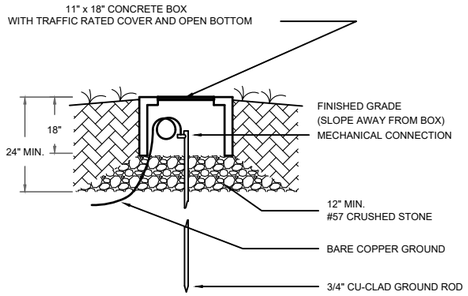
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
ELECTRICAL SCHEMATIC LEGEND

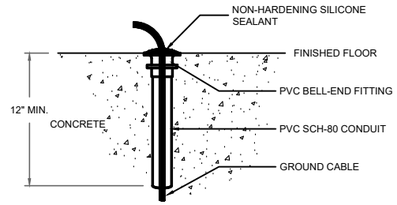
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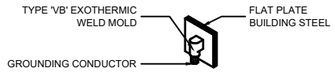
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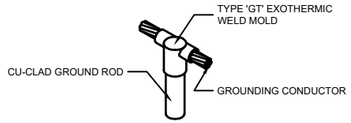
GROUND ROD TEST WELL
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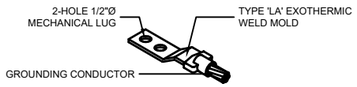
GROUND CABLE SLEEVE DETAIL
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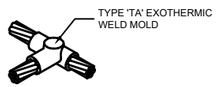
EXOTHERMIC WELD 'VB' CONNECTION
SCALE: N.T.S.



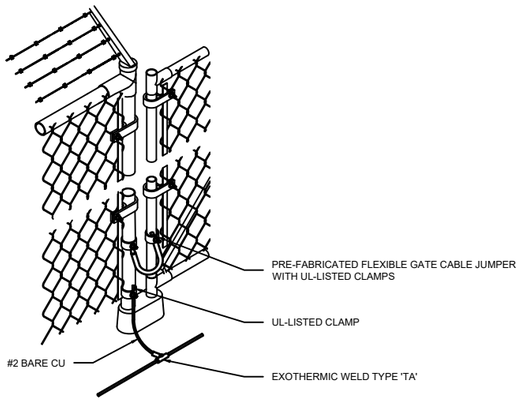
EXOTHERMIC WELD 'GT' CONNECTION
SCALE: N.T.S.



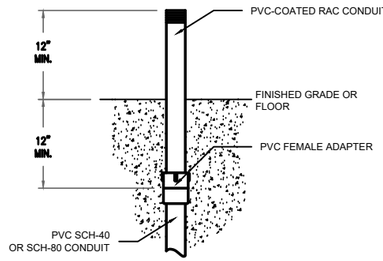
EXOTHERMIC WELD 'LA' CONNECTION
SCALE: N.T.S.



EXOTHERMIC WELD 'TA' CONNECTION
SCALE: N.T.S.



FENCE & GATE GROUNDING DETAIL
SCALE: N.T.S.



TYPICAL CONDUIT STUB-UP DETAIL
SCALE: N.T.S.

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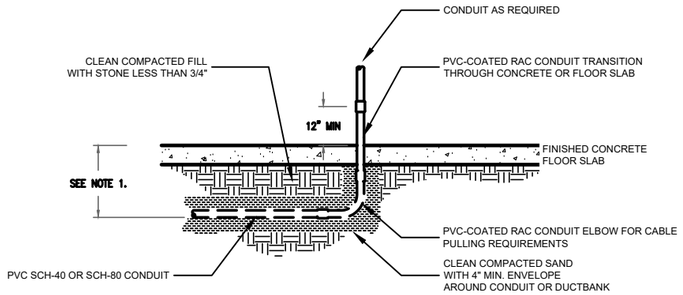
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
ELECTRICAL DETAILS 1 OF 3

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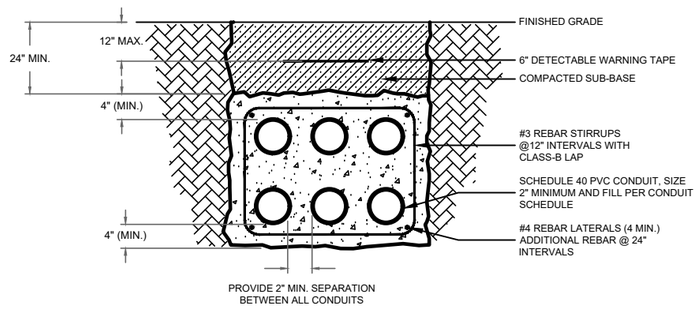


DETAIL NOTES:

1. BURIAL DEPTH OF CONDUIT OR DUCTBANK SHALL BE BASED ON THE LARGEST CONDUIT RADII SUCH THAT THE THREADED CONNECTION TO THE PVC-COATED RAC CONDUIT TRANSITION IS 6" MINIMUM BELOW BOTTOM OF CONCRETE FLOOR SLAB

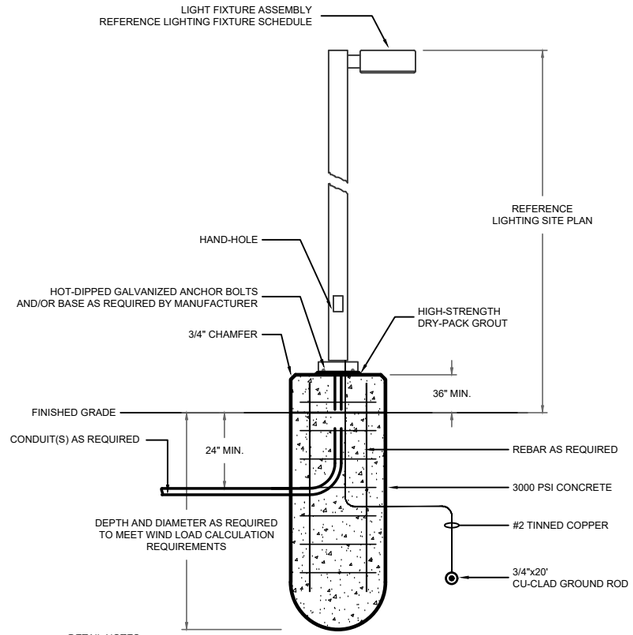
TYPICAL UNDERSLAB CONDUIT STUB-UP INSTALLATION

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REINFORCED CONCRETE DUCTBANK

SCALE: N.T.S.

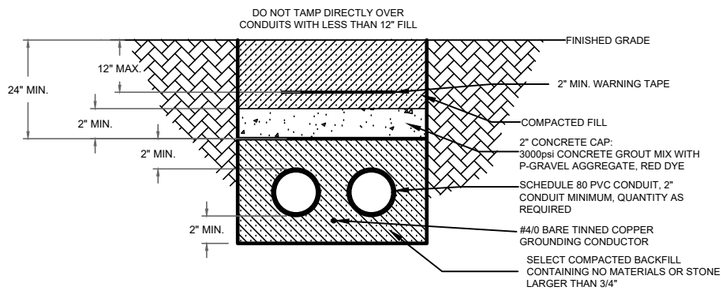


DETAIL NOTES:

1. LIGHT-POLE CONCRETE ANCHOR BASE SHALL BE PROVIDED AND INSTALLED PER LIGHT-POLE FIXTURE MANUFACTURER INSTRUCTIONS.
2. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED DRAWINGS AND DESIGN CALCULATIONS FOR THE CONCRETE ANCHOR BASE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA BUILDING CODE.
3. DESIGN SUBMITTAL SHALL BE FROM A CURRENTLY LICENSED STRUCTURAL ENGINEER BY THE STATE OF FLORIDA.
4. CONCRETE ANCHOR BASE DESIGN SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.
5. CONTRACTOR SHALL PROVIDE GEOTECHNICAL REPORT(S) FOR THE PROJECT SITE(S) IF NOT ALREADY REQUIRED BY CONTRACT DOCUMENTS.
6. CONTRACTOR SHALL NOT CONSTRUCT CONCRETE ANCHOR BASE PRIOR TO RECEIVING APPROVED SUBMITTAL, INCLUDING ORDERING AND FABRICATION OF MATERIALS.
7. PROVIDE ANCHORS, HARDWARE, SUPPORTS, ETC., AS NEEDED TO SECURE LIGHT-POLE FIXTURE.

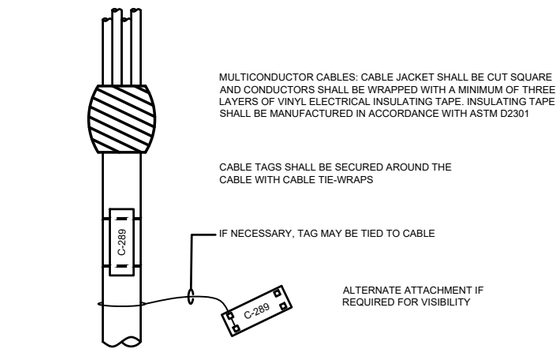
LIGHT-POLE AND CONCRETE ANCHOR BASE DETAIL

SCALE: N.T.S.



DIRECT BURIED DUCTBANK

SCALE: N.T.S.



DETAIL NOTES:

1. CABLE TAGS SHALL BE AFFIXED TO CABLE AT EACH END IN AN EASILY VIEWABLE LOCATION.
2. CABLE TAGS SHALL BE AFFIXED TO CABLES AS THEY PASS THROUGH EACH MANHOLE OR PULL BOX.
3. CABLE TAGS SHALL BE INSTALLED IMMEDIATELY AFTER THE CABLE IS INSTALLED.

TYPICAL CABLE IDENTIFICATION INSTALLATION DETAIL

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STORMWATER PUMPING STATION
ELECTRICAL DETAILS 2 OF 3

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1 INSTRUMENT/FUNCTION SYMBOLS

	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	FIELD MOUNTED	AUXILLARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	NORMALLY INACCESSIBLE OR BEHIND THE PANEL DEVICES OR FUNCTIONS
FIELD/PANEL EQUIPMENT	XX 123	XX 123	XX 123	XX 123
SHARED DISPLAY, SHARED CONTROL	XX 123	XX 123	XX 123	XX 123
PROGRAMMABLE LOGIC CONTROLLER	XX 123	XX 123	XX 123	XX 123
SUPERVISORY COMPUTER FUNCTION	XX 123	XX 123	XX 123	XX 123

SINGLE INSTRUMENT OR OTHER DEVICE HAVING MULTIPLE FUNCTIONS OR SHARING A COMMON HOUSING

XX YY SOFTWARE LOGIC OR CONTROL MODULE XX AND SUB-MODULE YY RESIDENT IN DISTRIBUTED CONTROL SYSTEM (DCS) OR PROGRAMMABLE LOGIC CONTROLLER (PLC) REFER TO CONTRACT DOCUMENTS FOR CONTROL AND MODULE DESCRIPTIONS.

ZZ DESIGNATIONS OF CONTROL FUNCTIONS (ZZ) ASSOCIATED WITH INSTRUMENT OR OTHER DEVICES.

AHC - AUTO/HOLD/CLOSE
AM - AUTO/MANUAL
AUTO - AUTOMATIC
DEV - DEVIATION
DO - DISSOLVED OXYGEN
EN - ENABLE
ES - EMERGENCY STOP
ETM - ELAPSED TIME METER
FAIL - FAILURE
FLT - FAULT
FTC - FAILED TO CLOSE
FTO - FAILED TO OPEN
FTS - FAILED TO START
HOA - HAND/OFF/AUTO
HOR - HAND/OFF/REMOTE
LAH - LEVEL ALARM HIGH
LAH - LEVEL ALARM LOW
LOS - LOCKOUT STOP
LR - LOCAL/REMOTE
LOR - LOCAL/OFF/REMOTE
MOA - MANUAL/OFF/AUTO
NO3-N - MANUAL/OFF/AUTO
OCA - OPEN/CLOSE/AUTO
ORM - OFF/REMOTE/MANUAL
POT - POTENTIOMETER
REM - REMOTE
RL - RAISE/LOWER
ROF - REVERSE/OFF/FORWARD
RS - RUN/STOP
RSL - RAISE/STOP/LOWER
RST - RESET
RUN - RUNNING
SD - SHUTDOWN
SEL - SELECT
SIL - SILENCE
SP - SET POINT
SR - START/RESET
SS - START/STOP
TURB - TURBIDITY
ZS - ZERO SPEED

INSTRUMENT PANEL MOUNTED WITH COMPUTING OR CONVERTING FUNCTION

CONVERT
E - VOLTAGE
I - CURRENT
P - PNEUMATIC
A - ANALOG
B - BINARY
H - HYDRAULIC
O - ELECTROMAGNETIC, SONIC
R - RESISTANCE (ELECT.)
D - DIGITAL

COMPUTE
Σ SUMMING
△ SUBTRACTOR
X MULTIPLYING
÷ DIVIDING
√ ROOT EXTRACTION
K PROPORTIONAL
d/dt DERIVATIVE
X^n EXPONENTIAL
Σ/n AVERAGING
: RATIO
> HIGH SELECTING
< LOW SELECTING
∫ INTEGRAL
PID PID

XXX 000 PANEL MOUNTED PILOT LIGHT

AIT 000 XXX ANALYZER, XXX = TYPE

ALK - ALKALINITY
Cl_2 - CHLORINE CONCENTRATION
COMB - COMBUSTIBLE GAS
COND - CONDUCTIVITY
DO - DISSOLVED OXYGEN
H_2S - HYDROGEN SULFIDE
LEL - LOWER EXPLOSIVE LIMIT
O_2 - OXYGEN CONCENTRATION
O_3 - OZONE
ORP - OXIDATION/REDUCTION POTENTIAL
pH - HYDROGEN ION CONCENTRATION
TH - TOTAL HARDNESS
UV - ULTRAVIOLET

∗ ASTERISK IDENTIFIES EQUIPMENT FURNISHED BY MBR MEMBRANE EQUIPMENT SUPPLIER

∗∗ DOUBLE ASTERISK IDENTIFIES EQUIPMENT FURNISHED BY UV SYSTEM SUPPLIER

2 VALVE AND ACTUATOR SYMBOLS

GENERIC VALVE OR GATE VALVE
PLUG VALVE
GLOBE VALVE
BALL VALVE
BALL VALVE (3-WAY)
3-WAY VALVE (GENERAL)
PINCH VALVE
COMBINATION VACUUM/ PRESSURE RELIEF VALVE
BUTTERFLY VALVE
SWING CHECK VALVE
BALL CHECK VALVE
DIAPHRAGM VALVE
NEEDLE VALVE
ANGLE VALVE
ROTARY VALVE
THROUGH PLUG VALVE
PRESSURE RELEIF OR SAFETY VALVE
VACUUM RELIEF VALVE
PRESSURE-REDUCING REGULATOR
BACKPRESSURE REGULATOR
BACKFLOW PREVENTER
SLUICE GATE
STOP/SLIDE GATE
STRAINER
BACKFLOW PREVENTER
ELECTRIC ACTUATOR
SOLENOID ACTUATOR
PNEUMATIC ACTUATOR
ELECTROPNEUMATIC ACTUATOR
ELECTROHYDRAULIC ACTUATOR
HAND WHEEL
EDUCTOR

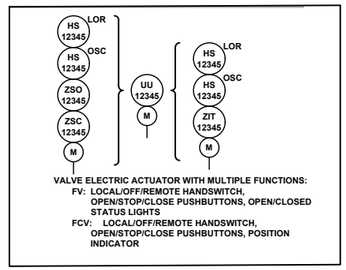
3 INSTRUMENT SYMBOLS

MAGNETIC FLOW METER
VENTURI FLOW TUBE
TURBINE FLOW METER
ROTAMETER
ULTRASONIC FLOW METER
PADDLE WHEEL FLOW METER
VORTEX FLOW METER
POSITIVE DISPLACEMENT FLOW METER
PITOT TUBE
PARSHALL FLUME
THERMAL FLOW METER
ORIFICE PLATE
STRAIGHTENING VANES
ULTRASONIC LEVEL SENSOR
SUBMERSIBLE LEVEL SENSOR
FLOAT TYPE LEVEL SWITCH
TAPPED RING SEAL
DIAPHRAGM SEAL
FULL LINE RING SEAL
VALVED TAP
RTD AND THERMOWELL
RADAR LEVEL SENSOR (UNGUIDED)
RADAR LEVEL SENSOR (GUIDED)
CAPACITANCE LEVEL SENSOR

4 PUMP AND EQUIPMENT SYMBOLS

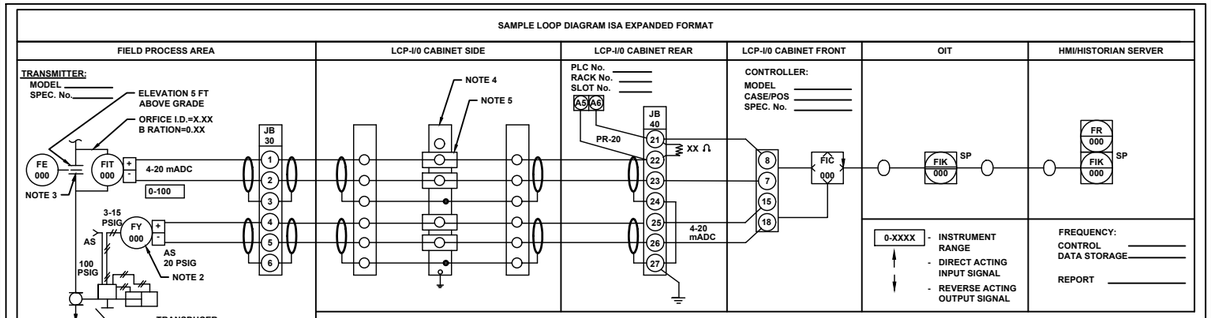
CENTRIFUGAL PUMP
CENTRIFUGAL WET PIT PUMP (SUBMERSIBLE)
BLOWER (CENTRIFUGAL)
GEAR PUMP (POSITIVE DISPLACEMENT)
PROGRESSIVE CAVITY PUMP
CHEMICAL FEED PUMP
MIXER
BLOWER (POSITIVE DISPLACEMENT)
VERTICAL PUMP
HYDROPNEUMATIC TANK
CLOSED TOP TANK
EMERGENCY SHOWER/EYEWASH
MEMBRANE FILTER
MECHANICAL SCREEN

5 VALVE ACTUATOR CONTROLS



VALVE ELECTRIC ACTUATOR WITH MULTIPLE FUNCTIONS:
FV: LOCAL/OFF/REMOTE HANDSWITCH, OPEN/STOP/CLOSE PUSHBUTTONS, OPEN/CLOSED STATUS LIGHTS
FCV: LOCAL/OFF/REMOTE HANDSWITCH, OPEN/STOP/CLOSE PUSHBUTTONS, POSITION INDICATOR

6 SAMPLE LOOP DIAGRAM



NOTES:
1. FV__3011 FULLY OPEN AT 3 PSIG AND FULLY CLOSED AT 15 PSIG.
2. STAND MOUNT PER INSTRUMENT STANDARD, BUT NOT ON THE CONTROL VALVE.
3. FE__3011 REQUIRES 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT PIPE.
4. COPPER BUS BAR, DRILLED AN TAPPED FOR GROUND CONNECTIONS
5. LIGHTNING AND SURGE ARRESTOR

7 INSTRUMENT/DEVICE IDENTIFICATION LETTERS

	FIRST-LETTER		SUCCEEDING-LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C				CONTROL	CLOSE/CLOSED
D		DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M		MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE				
O			ORIFICE, RESTRICTION		OPEN/OPENED
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RUN		RECORD & STORE	REPORT	
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, VOLUME MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	FAILURE OR TROUBLE	X AXIS			
Y	EVENT, STATE OR PRESENCE	Y AXIS		COMPUTE, CONVERT, RELAY	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

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Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
SYMBOLS & LEGENDS 1 OF 2

SHEET 101
36 OF 53

I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\IA000_02848-0043_14 - SYMBOLS_LEGENDS.DWG 9/3/2026 4:30 PM 8/31/2026 3:09 PM REGINA (REGGIE) SANDBACH

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8 MISCELLANEOUS

MISCELLANEOUS SYMBOLS

PLC OR DCS ANALOG INPUT	PLC OR DCS ANALOG OUTPUT	PLC OR DCS DISCRETE INPUT	PLC OR DCS DISCRETE OUTPUT	SILENCER
V VENT	D DRAIN	FILTER	AIR FILTER	PULSATION DAMPENER
HORN	REDUCER	PIPE MATERIAL CHANGE	QUICK CONNECT	BLIND FLANGE

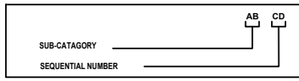
9 LINE TYPES

- PRIMARY/MAIN PROCESS LINES
- SECONDARY & UTILITY LINES
- FUTURE OR BY OTHERS
- BUILDING/MODULE LIMIT
- PACKAGED UNIT LIMIT
- DEMOLISHED EQUIPMENT

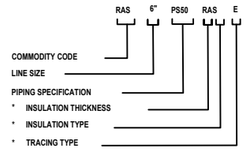
10 INSTRUMENT SIGNALS/LINES

- PRIMARY/MAIN PROCESS LINES
- SECONDARY & UTILITY LINES
- FUTURE OR BY OTHERS
- BUILDING/MODULE LIMIT
- PACKAGED UNIT LIMIT
- DEMOLISHED EQUIPMENT

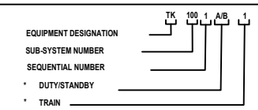
11 DRAWING NUMBER



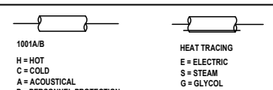
12 LINE NUMBER TAG



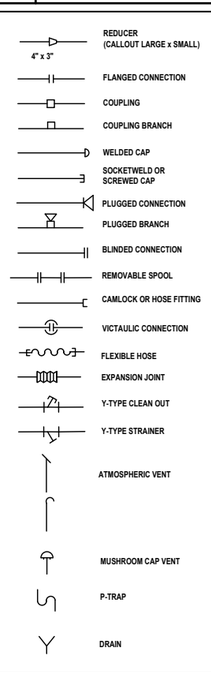
13 EQUIPMENT TAG



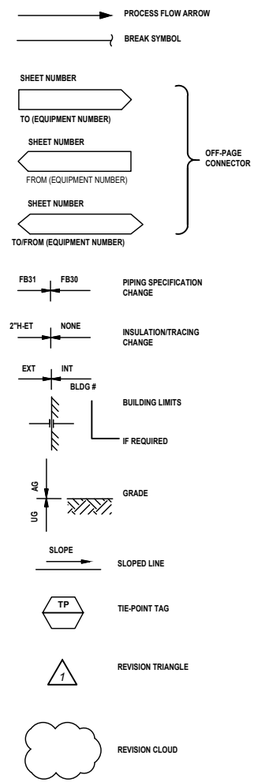
14 INSULATION/TRACING



15 FITTINGS/CONNECTIONS



16 MISCELLANEOUS SYMBOLS



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LANTANA POINSETTIA
STORMWATER PUMPING STATION
SYMBOLS & LEGENDS 2 OF 2

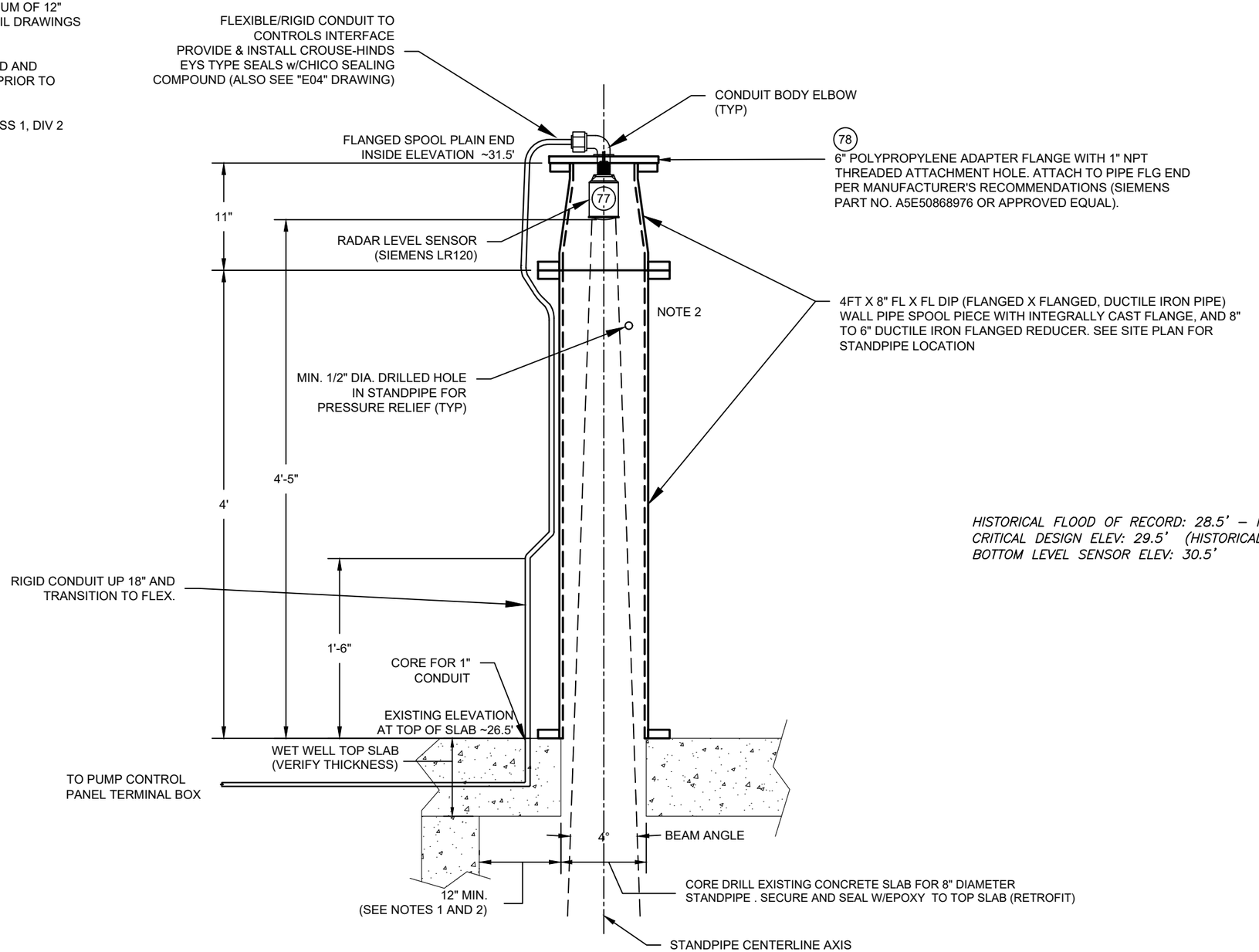
SHEET 102
37 OF 53

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SW 2024-06

NOTES:

1. LOCATE STANDPIPE, CENTERED OVER CORE DRILL OPENING IN TOP SLAB. CORE DRILL TO BE LOCATED A MINIMUM OF 12" FROM INSIDE FACE OF WETWELL WALL, SEE CIVIL DRAWINGS (SHEET 7) FOR APPROXIMATE LOCATION.
2. FINAL STANDPIPE LOCATION SHALL BE REVIEWED AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO CORING THE WETWELL TOP SLAB.
3. LEVEL EQUIPMENT SHALL BE SUITABLE FOR CLASS 1, DIV 2 LOCATION. PROVIDE SEALS PER NEC ART. 501.



HISTORICAL FLOOD OF RECORD: 28.5' – HURRICANE MILTON 2024
CRITICAL DESIGN ELEV: 29.5' (HISTORICAL FLOOD OF RECORD + 1 FT)
BOTTOM LEVEL SENSOR ELEV: 30.5'

RADAR SENSOR MOUNTING DETAIL
(NTS)

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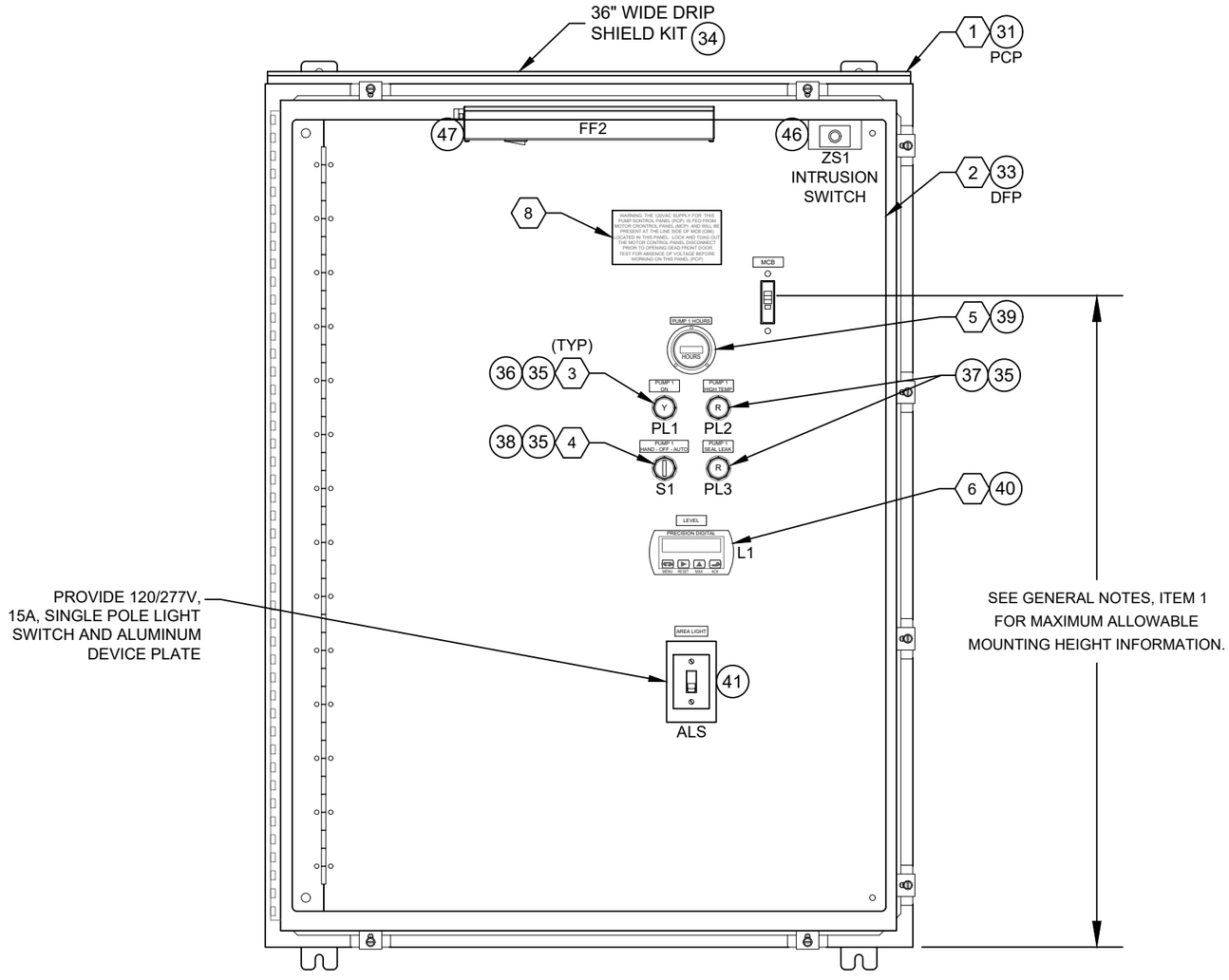
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DATE:	09/02/26

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Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
FIELD STANDPIPE DETAILS

SHEET 103
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REGINA (REGGIE) SANDBACH



(OUTER DOOR SHOWN REMOVED FOR CLARITY)

LEGEND PLATE SCHEDULE

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

KEYED NOTES:

1. PUMP CONTROL PANEL. 48" X 36 X 12" NEMA 4X SS, POWDER COATED WHITE WITH DRIP SHIELD KIT.
2. PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
3. PROVIDE AND INSTALL NEW PILOT LIGHT (SEE BOM).
4. PROVIDE AND INSTALL NEW SELECTOR SWITCH (SEE BOM).
5. PROVIDE AND INSTALL NEW ELAPSED TIME METER (SEE BOM).
6. PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6X3-20 WITH 4-20mA OUTPUT (SEE BOM).
7. PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.
8. PROVIDE IN INSTALL WARNING PLACARD WHICH STATES: “WARNING: THE 120VAC SUPPLY FOR THIS PUMP CONTROL PANEL (PCP) IS FED FROM MOTOR CONTROL PANEL MCP AND WILL BE PRESENT AT THE LINE SIDE OF MCB (CB-6) LOCATED IN THIS PANEL. LOCK AND TAG OUT THE MOTOR CONTROL PANEL DISCONNECT PRIOR TO OPENING DEAD FRONT DOOR-- TEST FOR ABSENCE OF VOLTAGE, BEFORE WORKING ON THIS PANEL (PCP).”

GENERAL NOTES:

1. THE CENTERLINE OF ALL DOOR MOUNTED PILOT DEVICES, OPERATOR CONTROLS, AND ANY INTERIOR CIRCUIT PROTECTION DEVICES (BREAKERS, FUSES, ETC.) MUST BE INSTALLED AT A HEIGHT NO GREATER THAN 6'-6" AT THEIR HIGHEST OERATING POSITION WHEN INSTALLED ON EQUIPMENT RACK .
2. ENCLOSURE SHALL BE MOUNTED IN THE FIELD ON THE ELECTRICAL EQUIPMENT RACK SUCH THAT THE BOTTOM OF THE ENCLOSURE IS 36 INCHES ABOVE THE FINISHED FLOOR OR WORKING PLATFORM. REFERENCE ELECTRICAL DRAWING E04 FOR ADDITIONAL INFORMATION.
3. 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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LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) ENCLOSURE

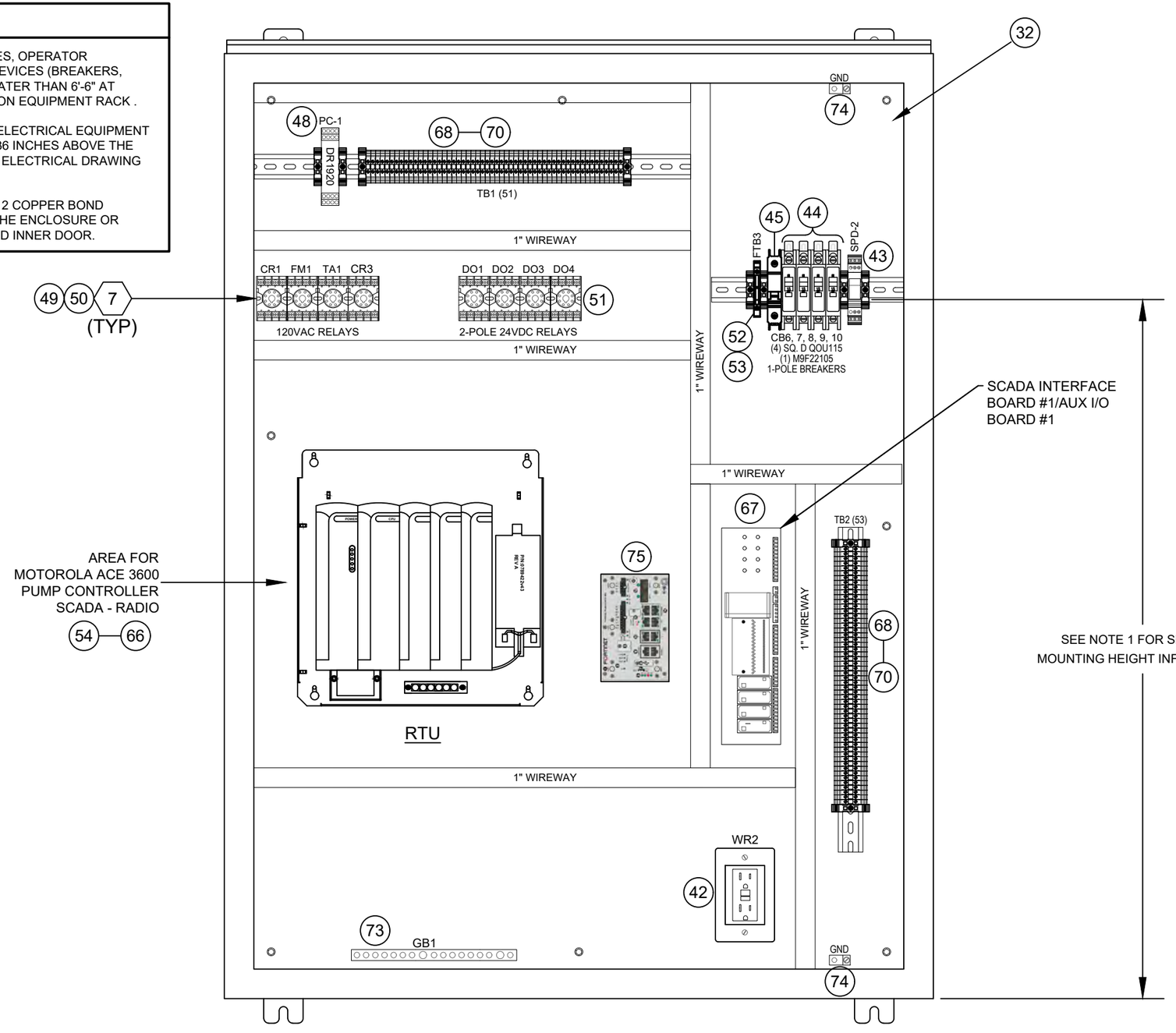
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104
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SW 2024-06

NOTES:

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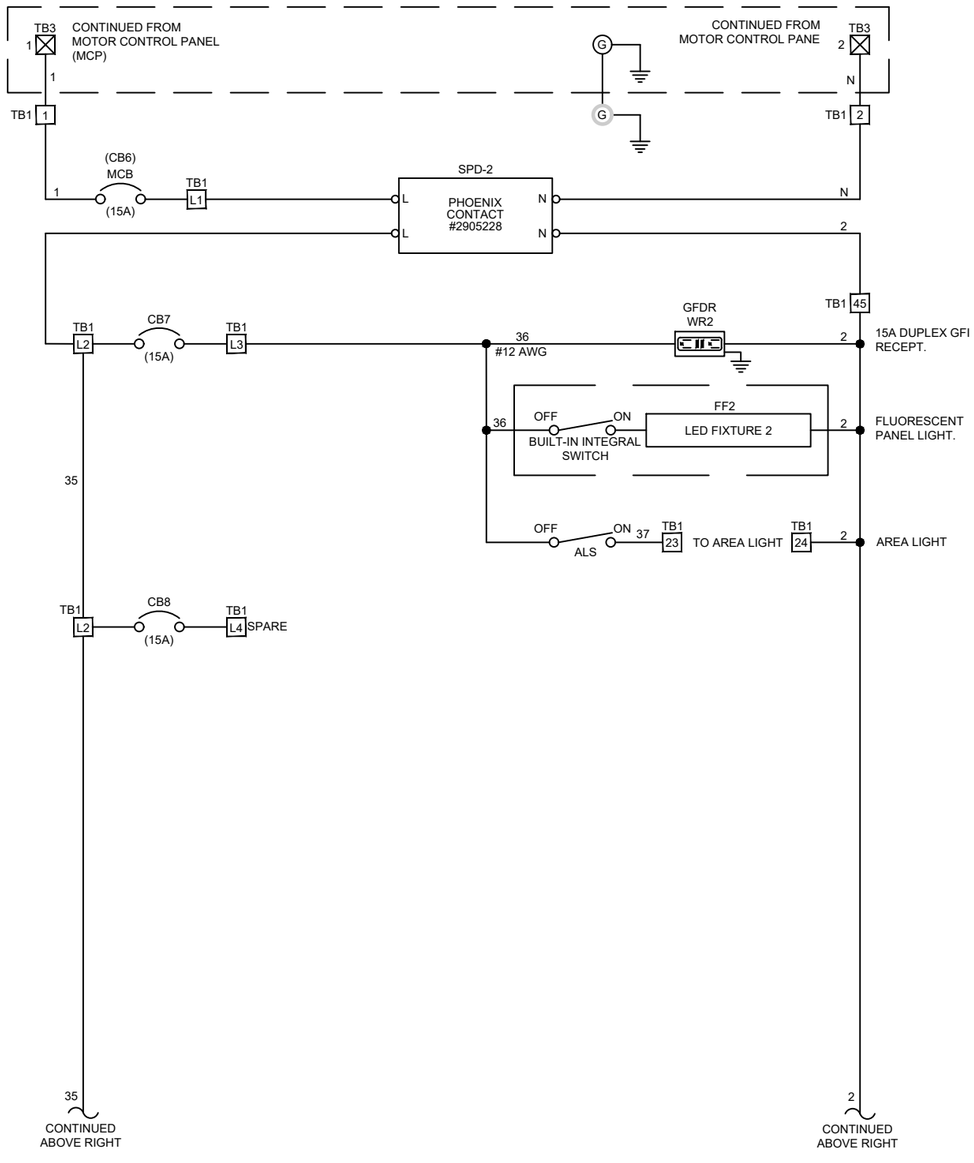
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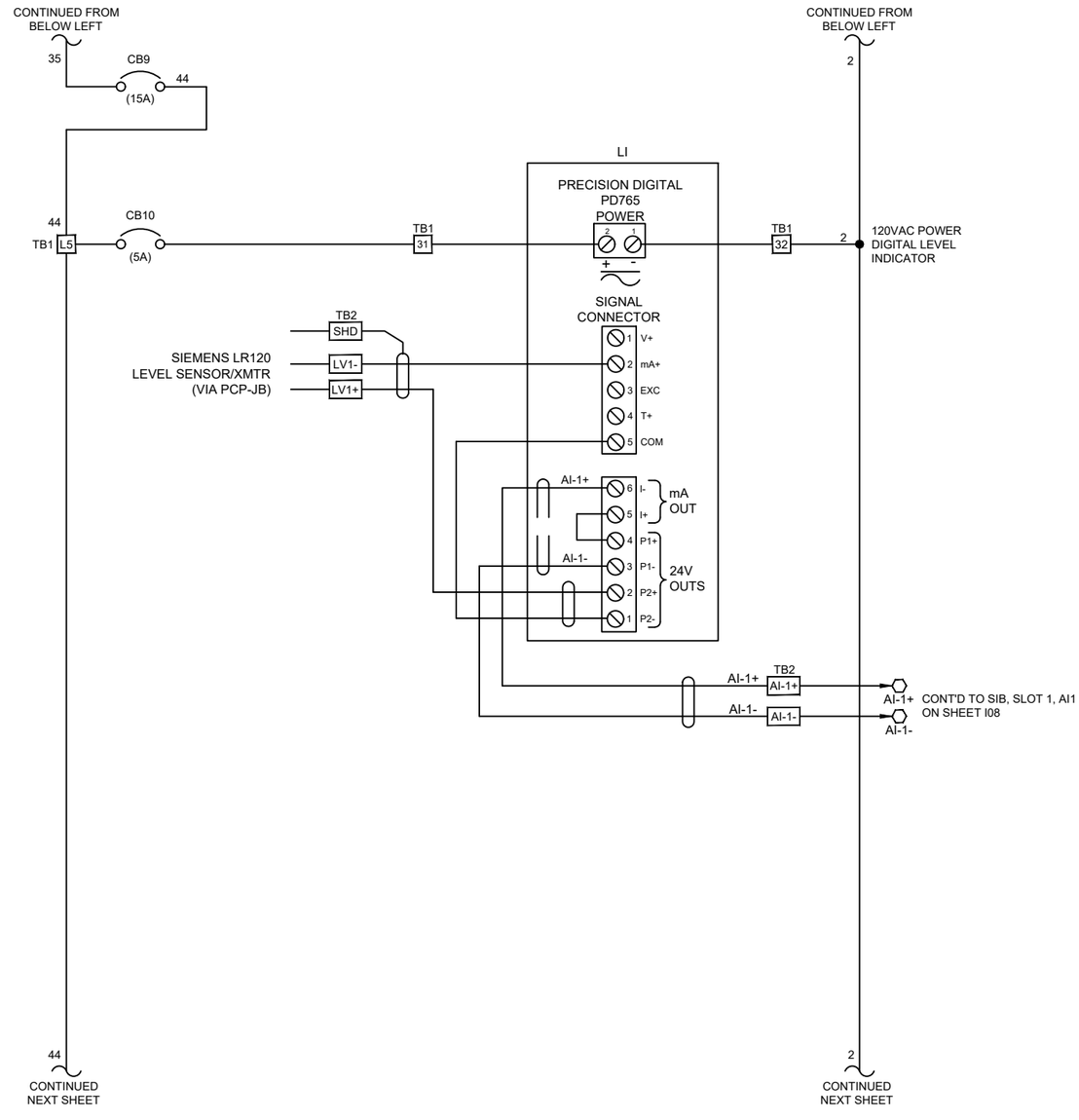
LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) SUB PANEL LAYOUT

SHEET
105
40 OF 53

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(REGGIE) SANDBACH

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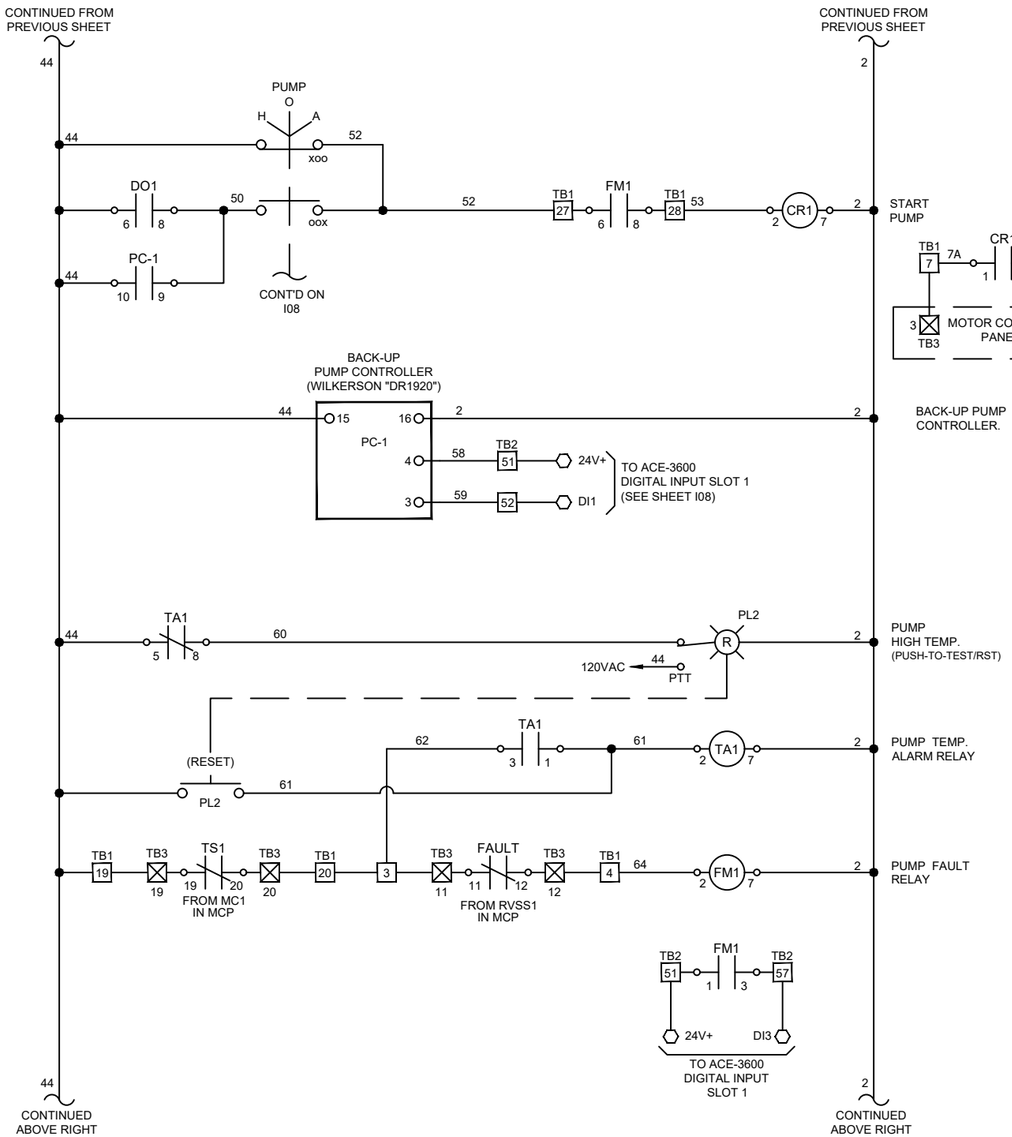
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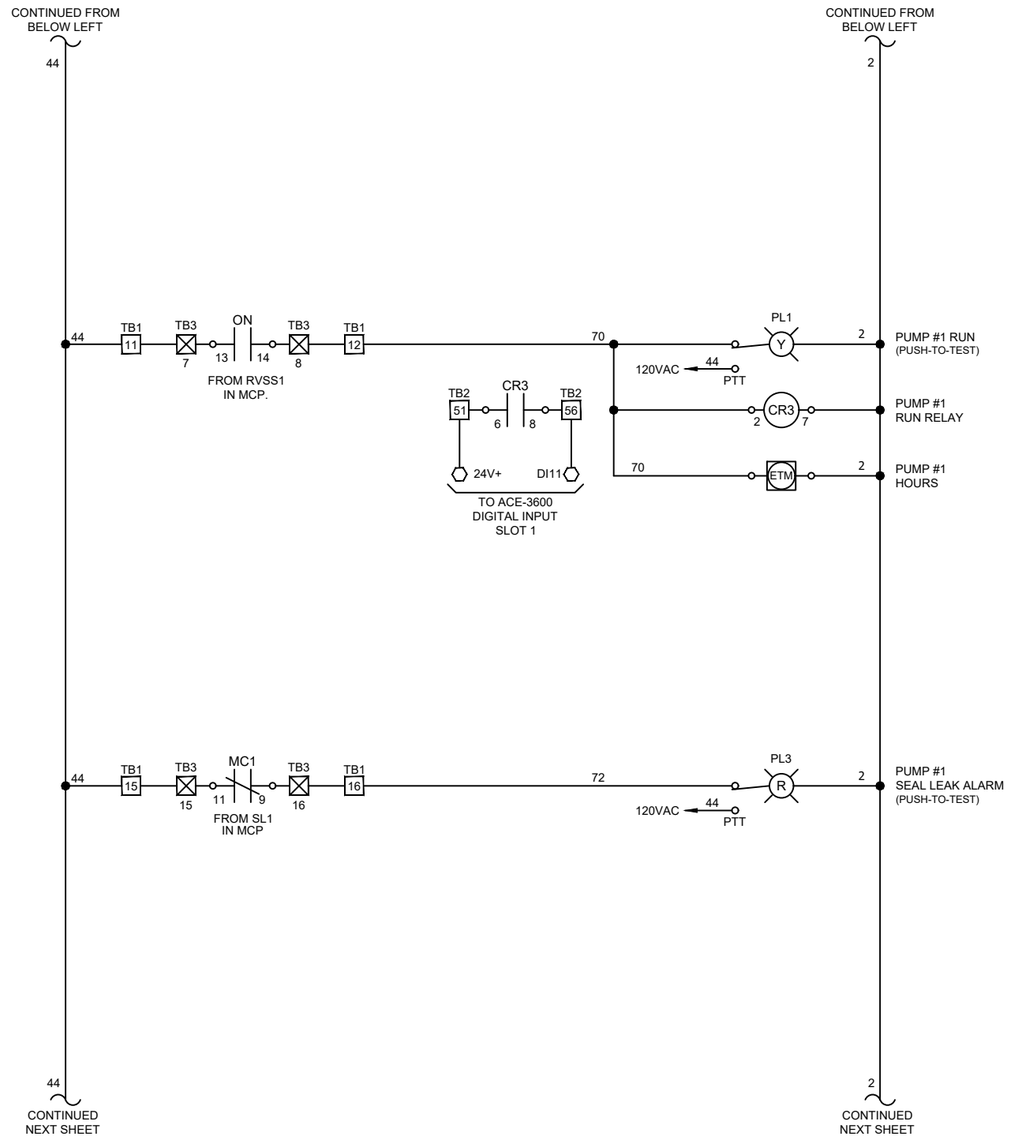
LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) PANEL 120VAC WIRING

SHEET
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(REGGIE) SANDBACH

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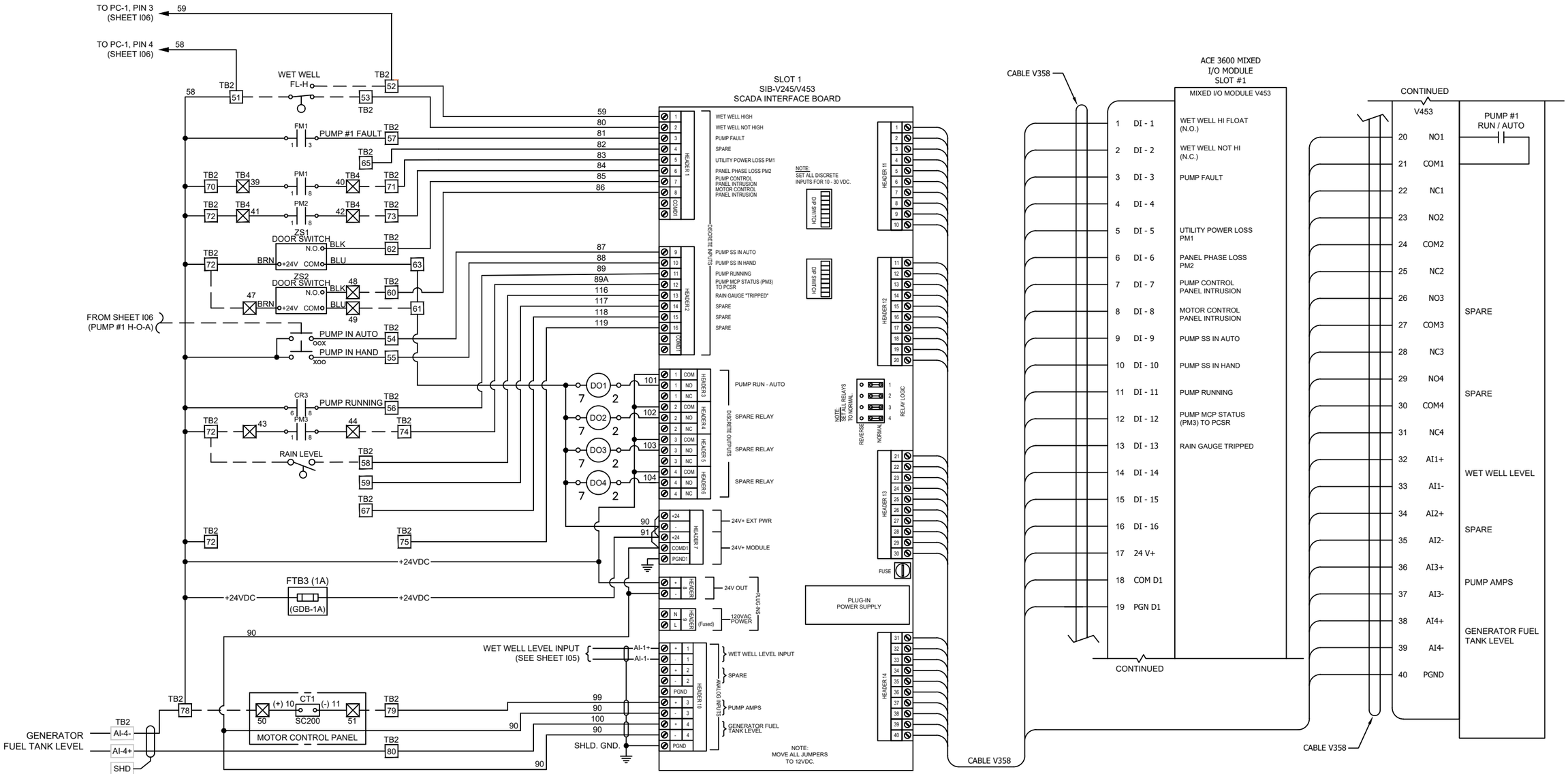
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) PANEL PUMP CONTROL WIRING

SHEET
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) ACE 3600 INTERFACE BOARD WIRING

SHEET 108
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I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\IE100_02848-0043_14 - RTU WIRING DIAGRAMS.DWG 9/3/2026 4:31 PM 9/3/2026 1:28 PM REGINA
(REGGIE) SANDBACH

SW 2024-06

CONTINUED FROM PREVIOUS SHEET
44

TO PANORAMA 5G LTE RTU ANTENNA

TO FRONTIER ONT FIBER MODEM (BY OTHERS)

CONTINUED FROM PREVIOUS SHEET
2

PROXYCAST
ANT-211-002 (X5) ANTENNA
CABLE SURGE PROTECTOR

MOD
FORTIGATE RUGGED
FIREWALL MODEM



ACE 3600
POWER SUPPLY

CPU

PB1
PB2

PWR
AUX
AUX2
DO
BATT

PI 1
SER 1
SER 2
ETH 1
PI 2

ON/OFF

75 (+)
74 (-)
AUX 1A
AUX 1B
AUX 2A
AUX 2B
12V_DO
Rack Exp.
Batt.
Temp

+ 12VDC
BATTERY
(+)
(-)
SUPPLIED WITH "ACE 3600"
78 (+)
79 (-)

N
H
G

44
2

I:\02848\00043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\E100_02848-0043_14 - RTU WIRING DIAGRAMS.DWG 9/3/2026 4:31 PM 9/3/2026 1:28 PM REGINA
(REGGIE) SANDBACH

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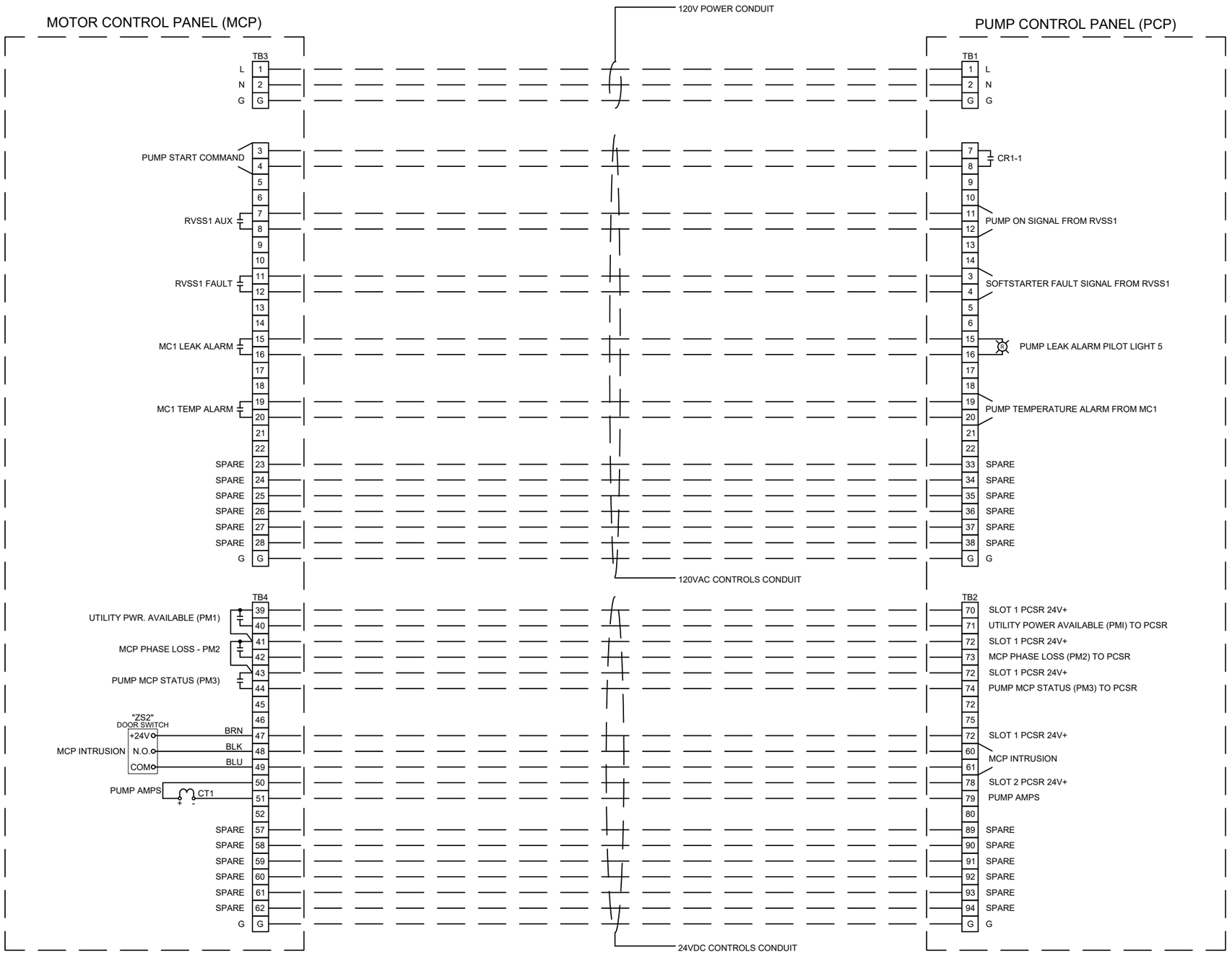
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) ACE 3600 COMMUNICATIONS WIRING

SHEET
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) TO MCP INTERCONNECTS

SHEET
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I:\02848\00043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\IE100_02848-0043_14 - RTU WIRING DIAGRAMS.DWG 9/3/2026 4:31 PM REGINA (REGGIE) SANDBACH

SW 2024-06

TB1 #	120VAC (PUMP CONTROL PANEL)
1	120V FROM MOTOR CONTROL PANEL
2	NEUTRAL FROM MOTOR CONTROL PANEL
3	SOFTSTARTER FAULT FROM RVSS1
4	SOFTSTARTER FAULT FROM RVSS1
5	SPARE
6	SPARE
7	PUMP START COMMAND TO RVSS1 (IN MCP)
8	PUMP START COMMAND TO RVSS1 (IN MCP)
9	SPARE
10	SPARE
11	P1 "ON" SIGNAL FROM RVSS1 (IN MCP)
12	P1 "ON" SIGNAL FROM RVSS1 (IN MCP)
13	SPARE
14	SPARE
15	PUMP LEAK ALARM FROM MCP
16	PUMP LEAK ALARM FROM MCP
17	SPARE
18	SPARE
19	PUMP TEMP. ALARM FROM MCP
20	PUMP TEMP. ALARM FROM MCP
21	SPARE
22	SPARE
23	AREA LIGHT "ON"
24	AREA LIGHT VAC NEUTRAL
25	SPARE
26	SPARE
27	PUMP FAULT RELAY CONTACT
28	PUMP FAULT RELAY CONTACT
29	SPARE
30	SPARE
31	PROCESS METER FOR LEVEL - 120V POWER
32	PROCESS METER FOR LEVEL - NEUTRAL
33	SPARE
34	SPARE

TB1 #	120VAC (PUMP CONTROL PANEL)
35	SPARE
36	SPARE
37	SPARE
38	SPARE
39	SPARE
40	SPARE
41	SPARE
42	SPARE
43	SPARE
44	SPARE
45	SPD-2 NEUTRAL OUT
L1	CB6 OUT
L2	SPD-2 120V LINE OUT
L3	CB7 OUT
L4	CB8 OUT
L5	CB9 OUT
L6	CB12 OUT

☐ = TERMINALS IN PUMP CONTROL PANEL
☒ = TERMINALS IN MOTOR CONTROL PANEL
⬡ = TERMINALS ON ACE I/O MODULE
◪ = TERMINALS IN PUMP CONTROL PANEL

TB2 #	24VDC (PUMP CONTROL PANEL)
51	SLOT 1 PCSR 24V+
52	WET WELL HIGH - DI1
53	WET WELL NOT HIGH - DI2
54	PUMP "AUTO" TO PCSR - DI9
55	PUMP "HAND" TO PCSR - DI10
56	PUMP "ON" TO PCSR - DI11
57	PUMP "FAULT" TO PCSR - DI3
58	RAIN GAUGE TRIPPED - DI13
59	SPARE: DI14
60	MOTOR CONTROL PANEL INTRUSION - DI8
61	
62	PUMP CONTROL PANEL INTRUSION - DI7
63	
64	SPARE
65	SPARE: DI4
66	SPARE
67	SPARE: DI15
68	SPARE
69	SPARE
70	SLOT 1 PCSR 24V+
71	UTILITY POWER LOSS (PM1) TO PCSR - DI5
72	SLOT 1 PCSR 24V+
73	MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR - DI6
74	PUMP #1 MCP STATUS (PM3) TO PCSR - DI12
75	SPARE: DI16
76	SPARE
77	SPARE
78	SLOT 1 PCSR 24V+
79	PUMP AMPS: AI3
80	GENERATOR FUEL TANK LEVEL: AI4
81-96	SPARE
LV1+	WET WELL LEVEL SENSOR (AI+)
LV1-	WET WELL LEVEL SENSOR (AI-)
AI-1+	WET WELL LEVEL SENSOR - AI1+
AI-1-	WET WELL LEVEL SENSOR - AI1-
SHD	SHIELD/GROUND
AI-4+	GENERATOR FUEL TANK LEVEL (AI+)
AI-4-	GENERATOR FUEL TANK LEVEL (AI-)

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
PCP (RTU) TERMINAL BLOCK LAYOUTS

SHEET
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SW 2024-06

ID	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	REF.
31	1	SCHAEFER	SPN4SS-483612	ENCLOSURE, NEMA 4X, TYPE 304 SS, 48"H X 36"W X 12"D, WHITE POWDER COAT	PCP
32	1	SCHAEFER	SPP-4836	BACK PANEL, PAINTED WHITE STEEL, 12 GAUGE	PP
33	1	ECS (CUSTOM)	HID-4836	HINGED INNER DOOR (DEADFRONT), .125 BLACK ALUMINUM	DFP
	2	EMKA	1000-U711	WINGKNOB INSERT / POLYAMIDE	
	2	EMKA	1000-U675	HOUSING POLYAMIDE BLACK w/BLACK POLY NUT	
	2	EMKA	1000-22	CAM	
34	1	HAMMOND	DK36LG	DRIP SHIELD KIT, N4/4X, FITS 36" WIDE ENCLOSURE (WHITE POWDER COAT)	-
35	4	SQUARE D	9001KA2	CONTACT BLOCK, 1-NORMALLY OPEN	-
36	1	SQUARE D	SKT-38LYA9	INDICATOR LIGHT, CLASS 9001, 120V, LED, YELLOW, P-T-T	PL1
37	2	SQUARE D	SKT-38LRR9	INDICATOR LIGHT, CLASS 9001, 120V, LED, RED, P-T-T	PL2, PL3
38	1	SQUARE D	9001SKS43BH2	HOA SWITCH ASM, OIL-TIGHT, CLASS 9001, 10A, 120V	S1
39	1	CRAMER	635E&S	ELAPSED TIME INDICATOR, 120V, ROUND BEZEL, NON RESET	ETM
40	1	PRECISION DIGITAL	PD765-6R3-20	DIGITAL PANEL METER, LEVEL INDICATION	LI
41	1	HUBBELL	HBL1221	AREA LIGHT SWITCH, SINGLE-POLE, 277V	ALS
42	1	HUBBELL	GF5262	DUPLEX GFI RECEPTACLE	WR2
43	1	PHOENIX CONTACT	2907918	SURGE PROTECTION DEVICE, PLUG & BASE	SPD-2
44	4	SQUARE D	QOU-115	CIRCUIT BREAKER, 1-POLE,15A, 120VAC	CB6,CB7,CB8,CB9
45	1	SQUARE D	M9F22105	CIRCUIT BREAKER, 1-POLE, 5A, 120VAC	CB10
46	1	OMRON	E2F-X5F1	CONTROL PANEL INTRUSION SENSOR w/GRAINGER #5B233 BRACKET	ZS1
47	1	HOFFMAN	LEDA1S35	LED LIGHT FIXTURE, 120V, 5W	FF2
48	1	WILKERSON	DR1920	BACKUP PUMP CONTROLLER, 10A CONTACTS	PC-1
49	2	POTTER & BRUMFIELD	KRPA-11AG-120	CONTROL RELAY, 120VAC COIL, 10A CONTACTS, DPDT W/SOCKET	CR1, TA1
50	2	POTTER & BRUMFIELD	KRPA-14AG-120	CONTROL RELAY, 120VAC COIL, 10A CONTACTS, 3PDT W/SOCKET	CR3, FM1
51	4	POTTER & BRUMFIELD	KRPA-11DG-24	CONTROL RELAY, 24VDC COIL, 10A CONTACTS, DPDT W/SOCKET	DO1,DO2,DO3,DO4
52	2	PHOENIX CONTACT	3004100	UK 5-HESI FUSE BLOCK, 5 x 20mm	FTB3,SPARE
53	1	BUSSMAN	GDB-1A	FUSE, 1A, FAST ACTING, GLASS TUBE	FTB3
54	1	MOTOROLA	F7509	ACE 3600 RTU	RTU
55	1	MOTOROLA	F7502A	ACE 3600 MID TIER CPU 3640	CPU
56	1	MOTOROLA	FPN1903B	POWER SUPPLY, 100-240VAC w/CHARGER	PS
57	1	MOTOROLA	V103	3-I/O SLOT FRAME option	-
58	1	MOTOROLA	V214	38 x 38 cm CHASSIS option	-
59	1	MOTOROLA	V261	AC POWER SUPPLY, 100-240VAC w/CHARGER option	-
60	1	MOTOROLA	V245	16DI 4DO EE 4AI +/-20mA MIXED I/O MODULE option	-
61	2	MOTOROLA	V20	BLANK I/O MODULE option	-
62	1	MOTOROLA	FPN1653A	24V FOATING POWER SUPPLY	PS
63	1	MOTOROLA	V358	40 WIRE CABLE w/TB HOLDER 3 M	-
64	1	MOTOROLA	FHN6901 / V328	MOUNTING BRACKET FOR 10 AH BATTERY	-
65	1	MOTOROLA	FNN7898	10 AH BACKUP BATTERY	-
66	1	MOTOROLA	FKN8376	BATTERY POWER CABLE	-
67	1	WILKERSON	SIB-V245 / V453	SCADA INTERFACE BOARD	SIB
68	104	PHOENIX CONTACT	3004362	UK5-N, FEED-THROUGH TERMINAL BLOCK, 800V, 32A	TB1, TB2
69	12	PHOENIX CONTACT	0800886	TERMINAL BLOCK DIN RAIL END BRACKET	-
70	8	PHOENIX CONTACT	3003020	TERMINAL BLOCK END COVER	-
71	AR	PANDUIT	F1X4LG6	SLOTTED WIREWAY, GRAY, 1"X4"	-
72	AR	PANDUIT	C1LG6	1" WIREWAY COVER, GRAY	-
73	1	PANDUIT	UGB2-0-414-12	GROUND BAR, #14-4	GB1
74	2	BURNDY	KA25U	GROUND LUG	GND
75	1	FORTINET FORTIGATE	FGR-50G-5G	5G MODEM, RUGGED SERIES, SERIAL COMMUNICATION	MOD
76	1	PANORAMA	DW-IN2713	4x4 MiMo 4G /5G ANTENNA w/INTEGRATED COAX CS32 CABLE	RTU ANTENNA
	AR	PROXICAST	ANT-211-002	COAX LIGHTNING SURGE ARRESTOR N-FEMALE/N-FEMALE (used w/above)	-
	AR	PROXICAST	ANT-212-002	COAX LIGHTNING SURGE ARRESTOR N-MALE/N-FEMALE (used w/above)	-
77	1	SIEMENS	7ML5320-1BA06-0GP0-Z	LR120, LEVEL TRANSMITTER / SENSOR (RATED FOR CLASS 1 DIV 2 LOCATION)	LIT
78	1	SIEMENS	A5E50868976	6" POLYPROPYLENE ADAPTER FLANGE w/1" NPT THREADED ATTACHMENT HOLE	-
79	1	TEXAS ELECTRONICS	TR-525I-S	POLE MOUNT RAIN GAUGE, 6" FUNNEL, TIPPING BUCKET STYLE, w/SIPHON	-

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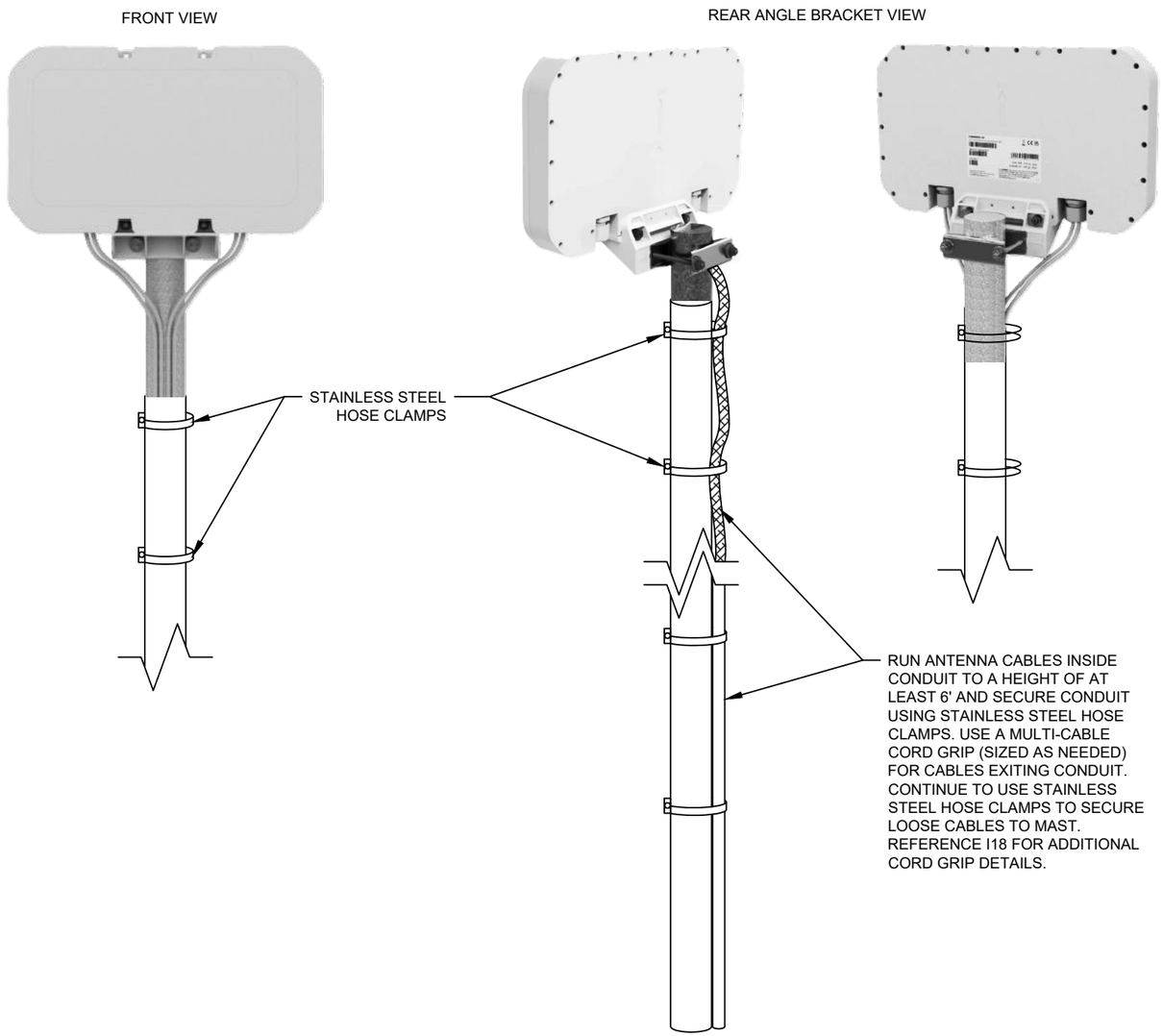
LANTANA POINSETTIA STORMWATER PUMPING STATION
PCP (RTU) BOM

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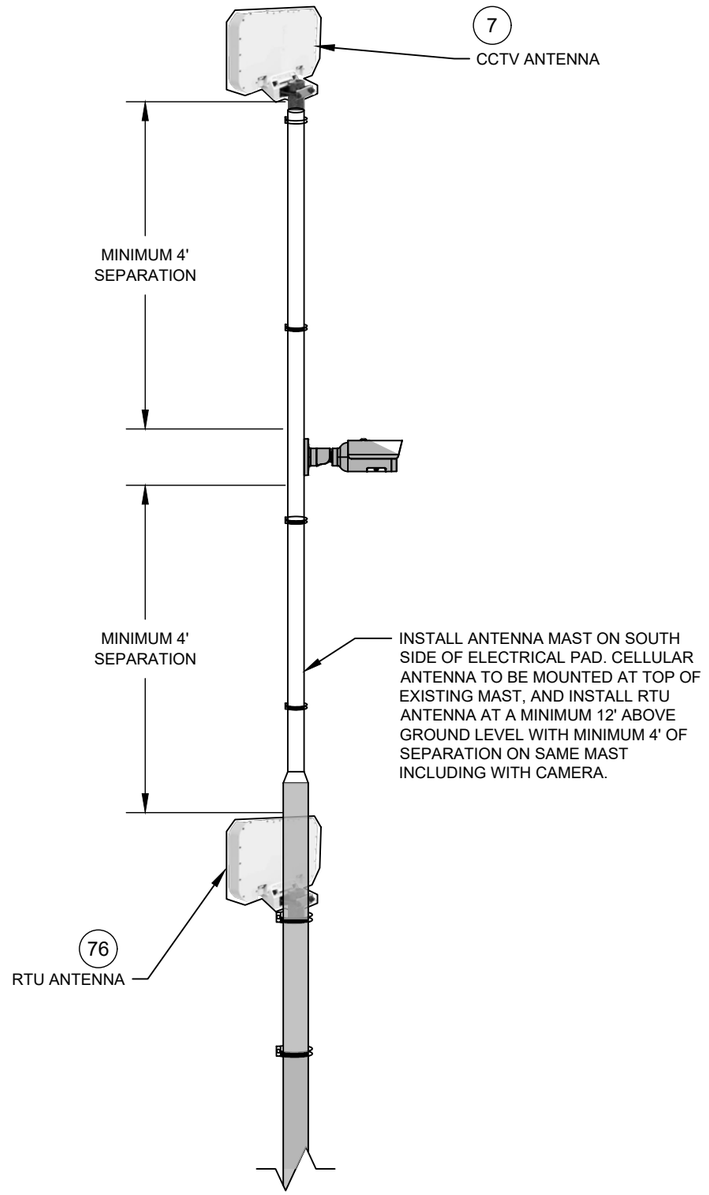
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ANTENNA POLE / MAST MOUNTING (OUTDOOR LOCATIONS):

- ENSURE THE SELECTED MOUNTING LOCATION CAN BE SAFELY ACCESSED
- MOUNT THE ANTENNA SO THAT IT HAS AT LEAST 39" OF CLEARANCE FROM ALL OBSTRUCTIONS IF POSSIBLE.
- THE ANTENNA SHOULD NOT BE INSTALLED ON METAL WALLS OR BACKING ON TO METAL MASTS OR POLES (USE FIBERGLASS IF POSSIBLE). IF THE ANTENNA MUST BE MOUNTED TO SUCH A SURFACE IT MUST BE MOUNTED AT THE VERY TOP OF THE POLE SUCH THAT THE BODY OF THE ANTENNA IS ELEVATED CLEAR OF THE METAL SURFACE.
- TO MAINTAIN GPS/GNSS PERFORMANCE, THE ANTENNA SHOULD NOT BE MOUNTED UNDER ROOF STRUCTURES OR OVERHANGS.
- MOUNT THE ANTENNA BY PLACING IT ONTO THE SUPPLIED OFFSET MOUNTING BRACKET AND ATTACH THE BRACKET TO THE ANTENNA USING THE SCREWS, NUTS AND WASHERS PROVIDED. THE SUPPLIED MAST CLAMP OR U-BOLT BRACKETS CAN THEN BE USED TO CLAMP THE ANTENNA TO THE MAST.
- WHEN PLACING ANTENNAS, PROVIDE 4-6' OF HORIZONTAL AND VERTICAL SEPARATION TO PREVENT SIGNAL COUPLING.



CELLULAR ANTENNA MOUNTING DETAIL
NTS



CELLULAR ANTENNA MOUNTING LOCATION
NTS

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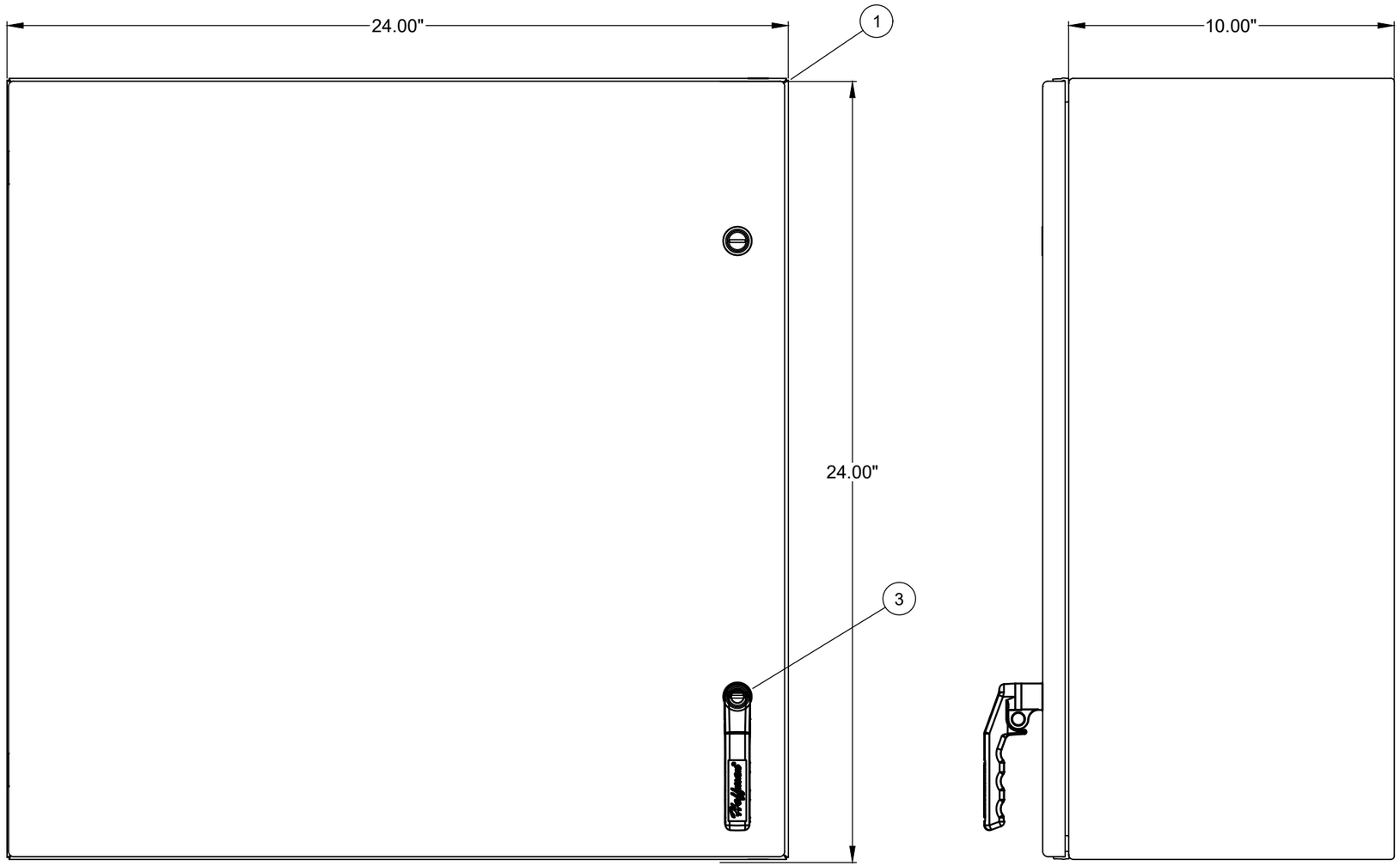
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
ANTENNA MAST MOUNTING DETAILS

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REGINA (REGGIE) SANDBACH

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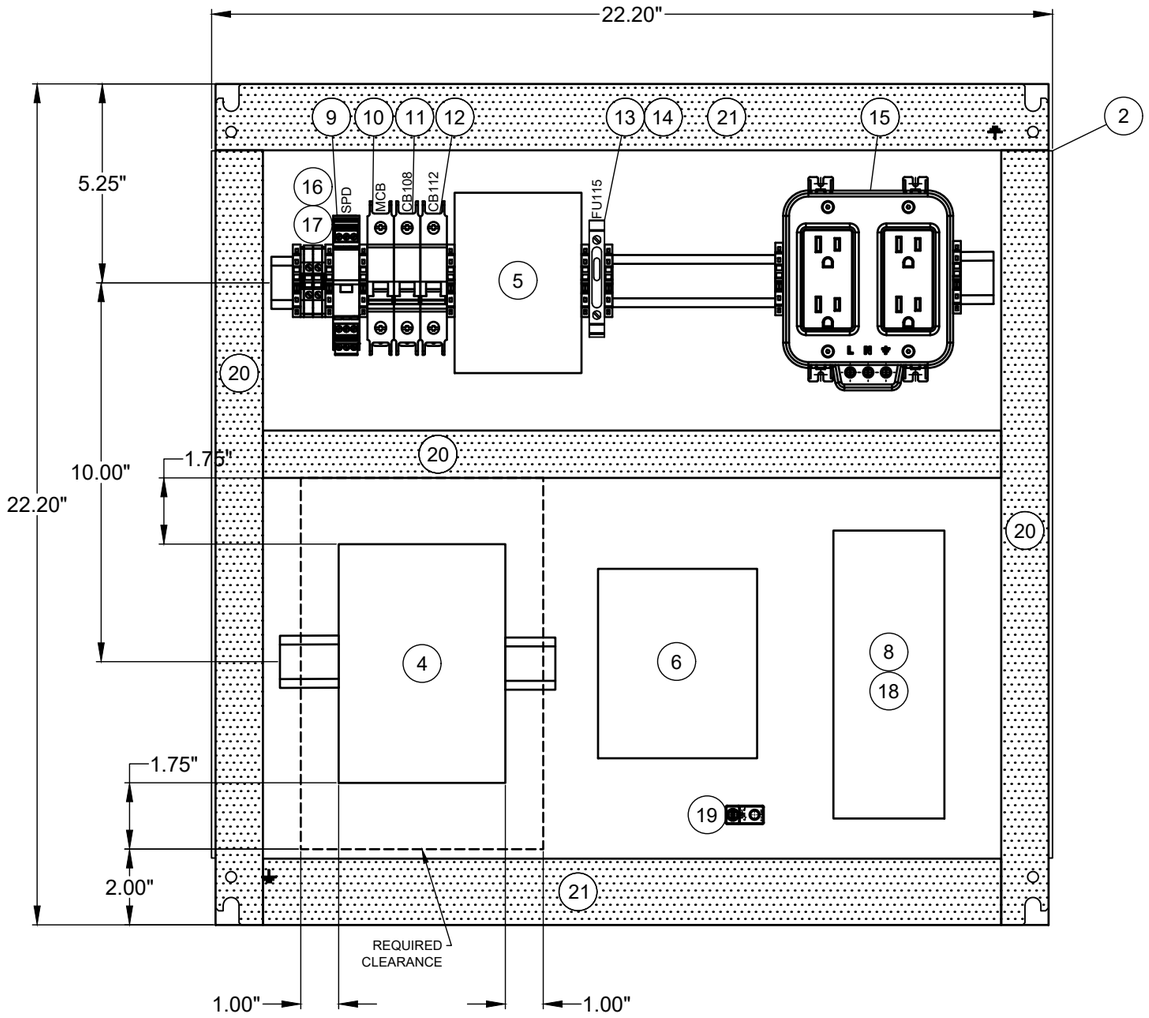
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LANTANA POINSETTIA
STORMWATER PUMPING STATION
CCTV NETWORK SWITCH ENCLOSURE LAYOUT

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I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATIONIR101_02848-0043_14 - CCTV NETWORK SWITCH BACK PANEL LAYOUT & BOM.DWG 9/3/2026
4:31 PM 8/31/2026 3:11 PM REGINA (REGGIE) SANDBACH

SW 2024-06



BILL OF MATERIAL

ITEM NO.	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	HOFFMAN	CSD242410	ENCLOSURE, NEMA 4, 24"H x 24"W x 10"D
2	1	HOFFMAN	CP2424	SUBPANEL, 22.2"H x 22.2"W
3	1	HOFFMAN	GPDLOCKHDL	HANDLE, PADLOCK, TYPE 12, 4 & 4X
4	1	HP ENTERPRISE	HPE JL817A	ARUBA NETWORK SWITCH 4100i SERIES
5	1	HP ENTERPRISE	HPE JL819A	NETWORK SW. POWER SUPPLY, 120VAC/3.5A to 54VDC/4.4A
6	1	PEPLINK	MAX-BR1-MINI-5GN-T-M-PRM	5G, CELLULAR MODEM
7	-	PANORAMA (reuse existing)	DW-IN2713	4x4 MiMo 4G /5G ANTENNA w/INTEGRATED COAX CS32 CABLE
	AR	PROXICAST	ANT-211-002	COAX LIGHTNING SURGE ARRESTOR N-FEMALE/N-FEMALE (used w/above)
	AR	PROXICAST	ANT-212-002	COAX LIGHTNING SURGE ARRESTOR N-MALE/N-FEMALE (used w/above)
8	1	DITEK	DTK-WM8NETS	8-CHANNEL, WALL MOUNT NETWORK SURGE PROTECTOR
9	1	PHOENIX CONTACT	2907918	120VAC SURGE PROTECTOR, PLUG AND BASE
10	1	SCHNEIDER	M9F43115	15A CIRCUIT BREAKER, UL489
11	1	SCHNEIDER	M9F43110	10A CIRCUIT BREAKER, UL489
12	1	SCHNEIDER	M9F43108	8A CIRCUIT BREAKER, UL489
13	1	PHOENIX CONTACT	3004265	FUSE BLOCK, UK 6.3-HESILED 24
14	1	EATON / BUSSMANN	MDA-7-R	7A VDC FUSE
15	1	GLADIATOR (AUTOMATION DIRECT)	GR-REC-4	QUAD RECEPTACLE, DIN RAIL MOUNTABLE, 15A
16	2	PHOENIX CONTACT	3044102	TERMINAL BLOCK, UT 4
17	8	PHOENIX CONTACT	3022276	TERMINAL END STOP
-	A/R	PHOENIX CONTACT	0801733	DIN RAIL, NS 35/7.5 PERF
18	6	CABLES.COM (or equal)	C5E-3-WH-SHLD	RJ45 MALE TO MALE PATCH CABLE, Cat5e, WHITE (MIN 3')
19	1	BURNDY	KA6U	GROUND LUG
20	1	PANDUIT	F1X4LG6	SLOTTED WIREWAY, GRAY, 1" X 4" (6' STICK)
	1	PANDUIT	C1LG6	1" WIREWAY COVER, GRAY (6' STICK)
21	1	PANDUIT	F1.5X4LG6	SLOTTED WIREWAY, GRAY, 1.5" X 4" (6' STICK)
	1	PANDUIT	C1.5LG6	1.5" WIREWAY COVER, GRAY (6' STICK)
22	1	AXIS	P3747-PLVE	270 TO 360 DEGREE CCTV CAMERA
23	-	AXIS	Q6355-LE PTZ	360 DEGREE PAN/TILT/ZOOM CCTV CAMERA
24	-	AXIS	P3278-LVE	90 DEGREE CCTV CAMERA

CCTV ENCLOSURE BOM

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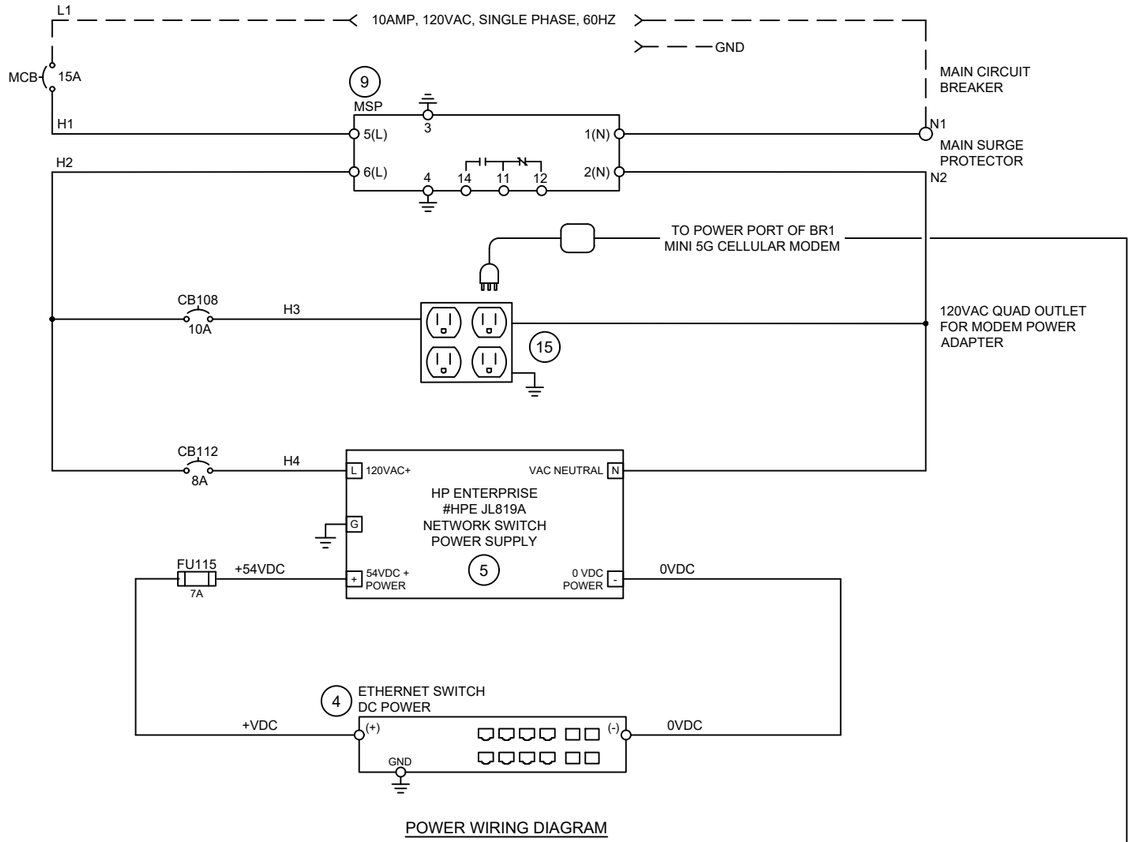
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LANTANA POINSETTIA STORMWATER PUMPING STATION
CCTV NETWORK SWITCH BACK PANEL LAYOUT & BOM

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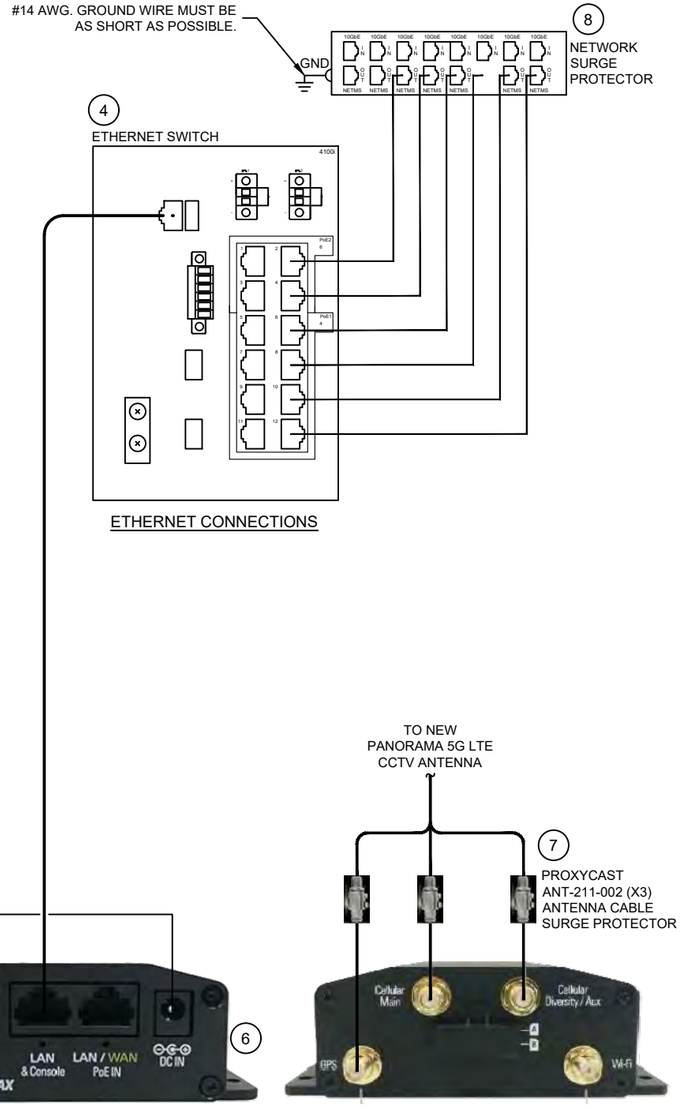
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SW 2024-06



POWER WIRING DIAGRAM

ETHERNET CONNECTIONS:
"IN" = UNPROTECTED (CABLES FROM FIELD)
"OUT" = PROTECTED (RJ45 MALE TO MALE 3-FOOT CAT5e PATCH CABLES)



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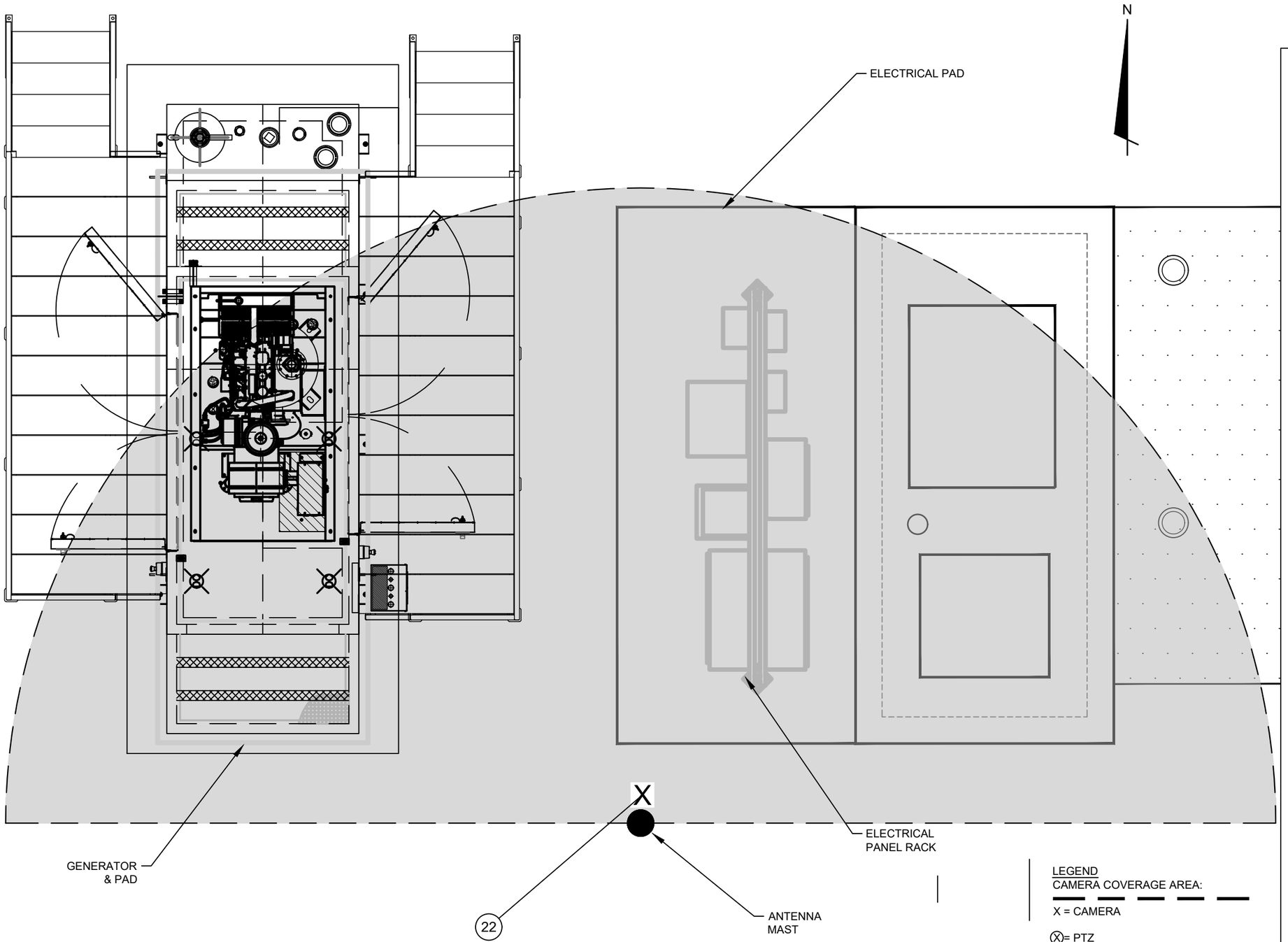
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

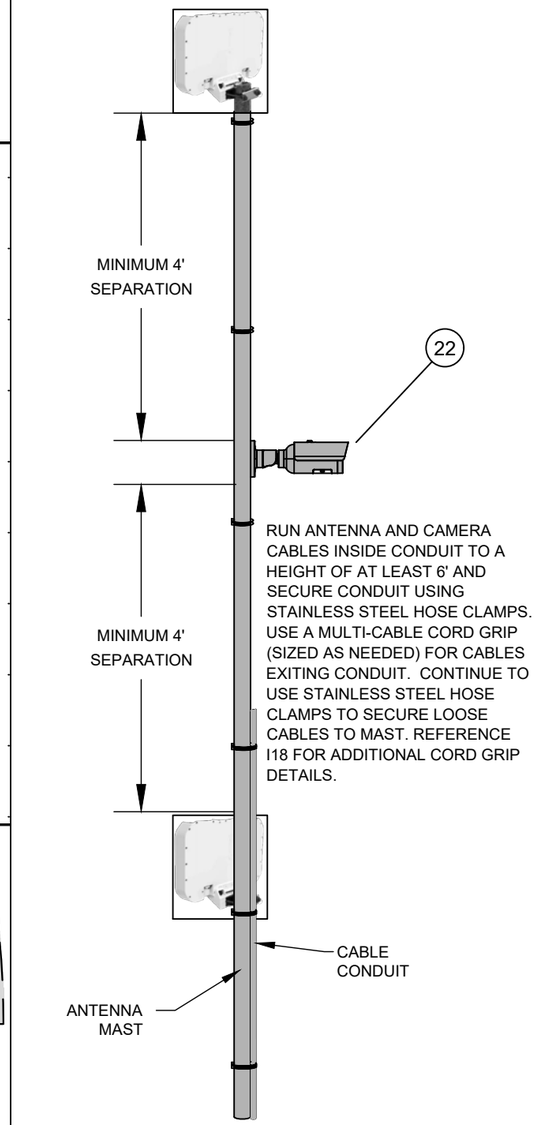
LANTANA POINSETTIA
STORMWATER PUMPING STATION
CCTV NETWORK SWITCH POWER, WIRING & ENET CABLES

SHEET
116
51 OF 53

I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATIONIE101_02848-0043_14 - CCTV NETWORK SWITCH WIRING.DWG 9/3/2026 4:31 PM 8/31/2026 3:11
PM REGINA (REGGIE) SANDBACH

SW 2024-06





PROPOSED CAMERA INSTALLATION DETAIL
NTS

No.	DATE	REVISIONS
3		
2		
1	09/02/26	ISSUED FOR BID

McKIM&CREED
3903 Northdale Blvd., Ste. 115E,
Tampa, Florida 33624
Phone:(813) 549-3740, Fax: (813) 549-3744
EB 0029588 www.mckimcreed.com

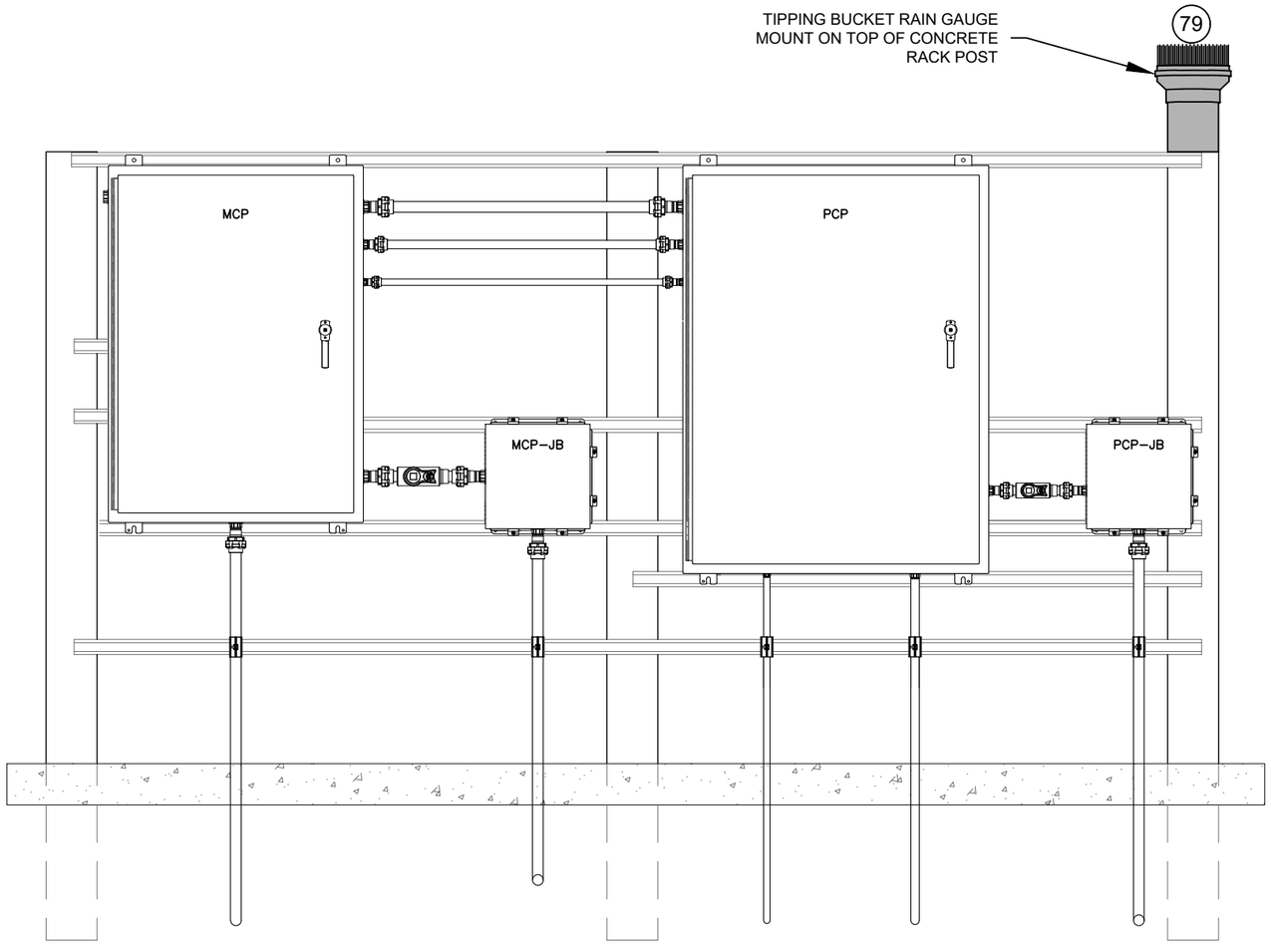
DES:	RMS
DRN:	RMS
CKD:	MMF
DATE:	09/02/26

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
SITE CAMERA

SHEET
I17
52 OF 53

I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\IK100_02848-0043_14 - SITE CAMERA LOCATIONS.DWG 9/3/2026 4:31 PM 9/3/2026 4:30 PM
REGINA (REGGIE) SANDBACH



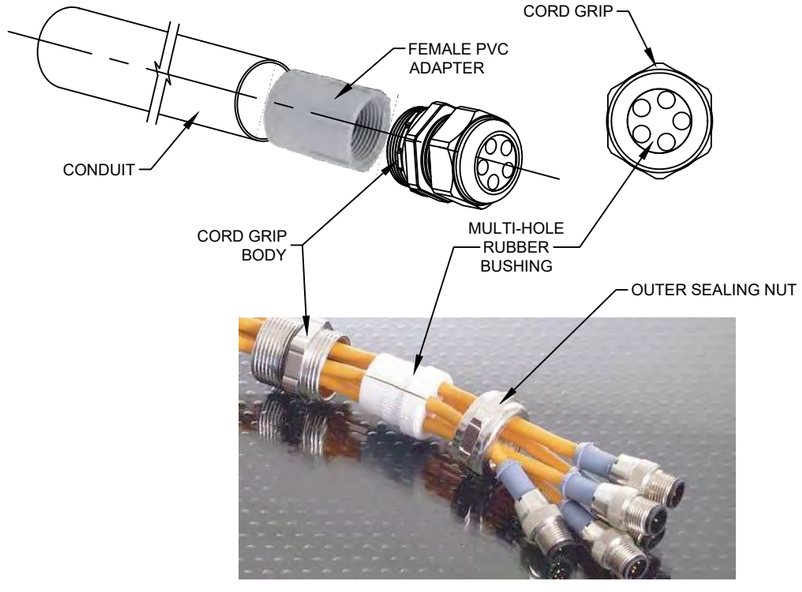
ELECTRICAL EQUIPMENT RACK, EAST ELEVATION
NTS

CORD GRIP ASSEMBLY:
WHEN PULLING CABLES THROUGH CONDUIT DIRECTLY INTO A CORD GRIP, ENSURE YOU DO NOT DAMAGE THE MULTI-HOLE RUBBER INSERT WHILE MANAGING THE PULL. BECAUSE MULTI-HOLE CORD GRIPS HAVE VERY TIGHT TOLERANCES, THE CABLES MUST BE PULLED SEQUENTIALLY OR BUNDLED SEAMLESSLY TO PREVENT JAMMING.

PREPARATION AND SETUP:
- CHECK FILL CAPACITY
- REMOVE INTERNAL COMPONENTS. UNTHREAD THE OUTER SEALING NUT AND REMOVE THE MULTI-HOLE RUBBER BUSHING FROM THE CORD GRIP BODY BEFORE YOU BEGIN THE PULL.
- INSPECT CONDUIT EDGES AND ENSURE A PLASTIC CONDUIT BUSHING OR A SMOOTH BOX CONNECTOR IS INSTALLED AT THE FEED END TO PROTECT THE CABLE JACKETS FROM SHARP EDGES.

THE PULLING PROCESS:
- STAGGER THE CABLE ENDS SO THE PULLING HEAD IS TAPERED AND SLIPS EASILY THROUGH THE CONDUIT BENDS.
- APPLY A GENEROUS AMOUNT OF WIRE-PULLING LUBRICANT (SUCH AS A WATER-BASED POLYMER GEL) TO THE CABLE JACKETS. AVOID PETROLEUM-BASED GREASES, AS THEY CAN BREAK DOWN THE PVC CABLE JACKETS OR THE NEOPRENE/RUBBER OF THE CORD GRIP.
- FEED THE PULLING ROPE THROUGH THE EMPTY CORD GRIP BODY, HOOK IT TO YOUR STAGGERED CABLE BUNDLE, AND PULL THE CABLES ENTIRELY THROUGH THE CONDUIT UNTIL YOU HAVE ENOUGH SLACK TO WORK WITH.

SECURE THE CORD GRIP:
- CLEAN THE CABLE JACKETS AND WIPE AWAY ANY EXCESS PULLING LUBRICANT FROM THE SECTION OF THE CABLES THAT WILL SIT INSIDE THE CORD GRIP. IF LEFT WET, THE LUBRICANT WILL PREVENT THE RUBBER INSERT FROM GRIPPING THE CABLES FIRMLY.
- THREAD THE OUTER SEALING NUT ONTO THE CABLE BUNDLE FIRST, FOLLOWED BY THE MULTI-HOLE RUBBER INSERT.
- PUSH THE RUBBER INSERT INTO THE CORD GRIP BODY, SLIDE EACH WIRE INTO ITS SPECIFIC HOLE, AND HAND-TIGHTEN THE OUTER NUT. USE A WRENCH TO FINISH TIGHTENING UNTIL THE RUBBER VISIBLY COMPRESSES SNUGLY AROUND EVERY INDIVIDUAL JACKET.



CORD GRIP INSTALLATION DETAILS
NTS

No.	DATE	REVISIONS
3		
2		
1	09/02/26	ISSUED FOR BID

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Phone:(813) 549-3740, Fax: (813) 549-3744
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

LANTANA POINSETTIA
STORMWATER PUMPING STATION
MISCELLANEOUS DETAILS

SHEET
118
53 OF 53

I:\02848\0043\ENG\80-DRAWINGS\SITE14_LANTANA\010 INSTRUMENTATION\ID101_02848-0043_14 - RAIN GAUGE DETAIL.DWG 9/3/2026 4:31 PM 9/3/2026 4:20 PM REGINA (REGGIE) SANDBACH