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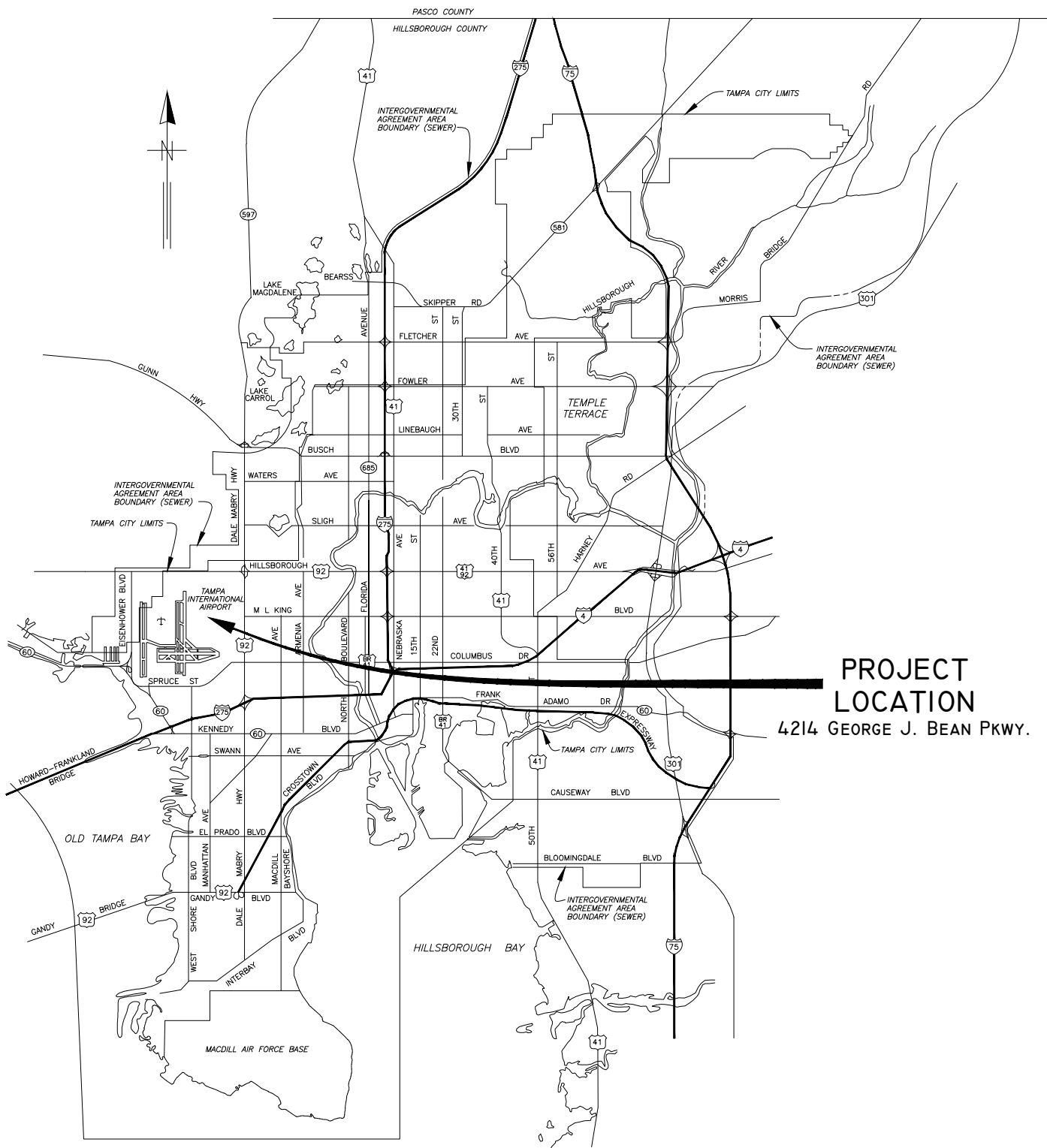
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Contract Administration Department
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 Layout: Feb 17, 2016 - 8:49am CTB - MONOCHROME.CTB

LOCATION MAP



PROJECT LOCATION
 4214 GEORGE J. BEAN PKWY.

CITY of TAMPA



WASTEWATER DEPARTMENT

PLANS FOR

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMP STATION REHABILITATION

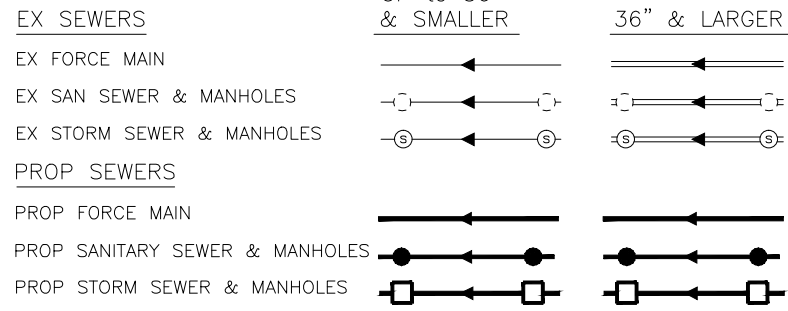
CONTRACT No. 15-C-00045



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| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT | TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: MS DRN: BL/BB CKD: DATE: | CITY of TAMPA WASTEWATER DEPARTMENT | COVER SHEET | W.O.1000088 SHEET 1 |
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LEGEND

ABBREVIATIONS

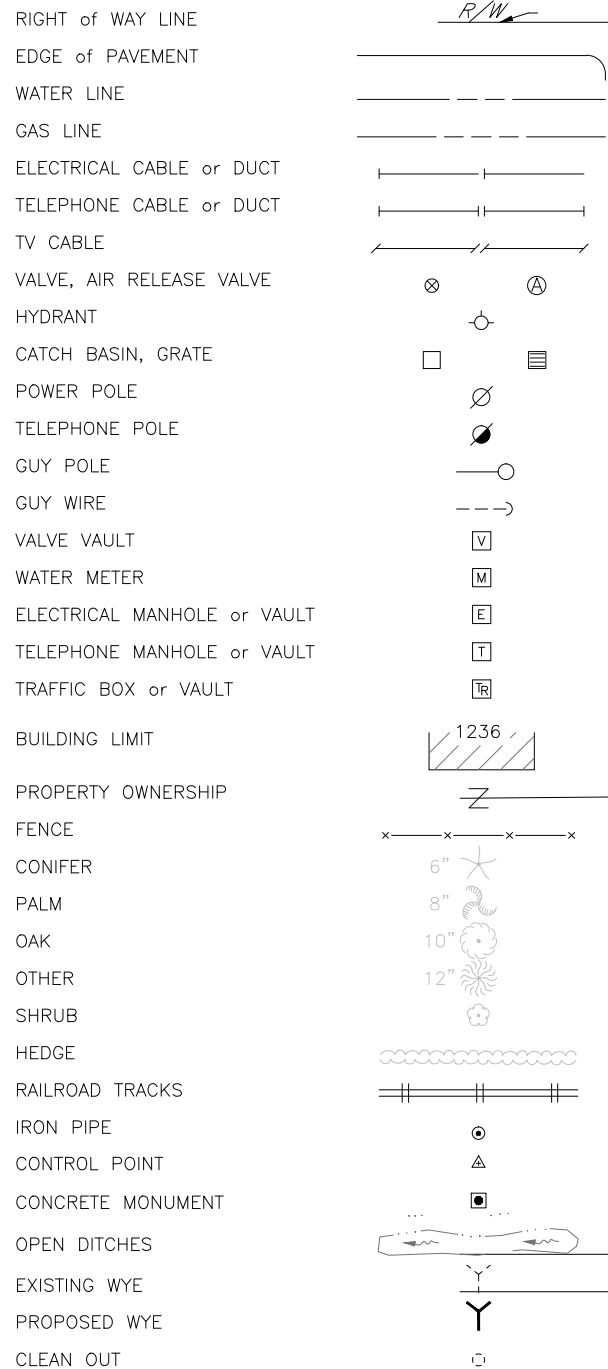


- AIR RELEASE VALVE
- APPROXIMATE LOCATION
- BENCH MARK
- BURIED TELEPHONE
- CONCRETE PIPE
- DIAMETER RATIO
- DUCTILE IRON PIPE
- EDGE OF PAVEMENT
- FIBER OPTIC CABLE
- FLORIDA DEPT. OF TRANSPORTATION
- FORCE MAIN
- HIGH DENSITY POLYETHYLENE PIPE
- EL INVERT ELEVATION

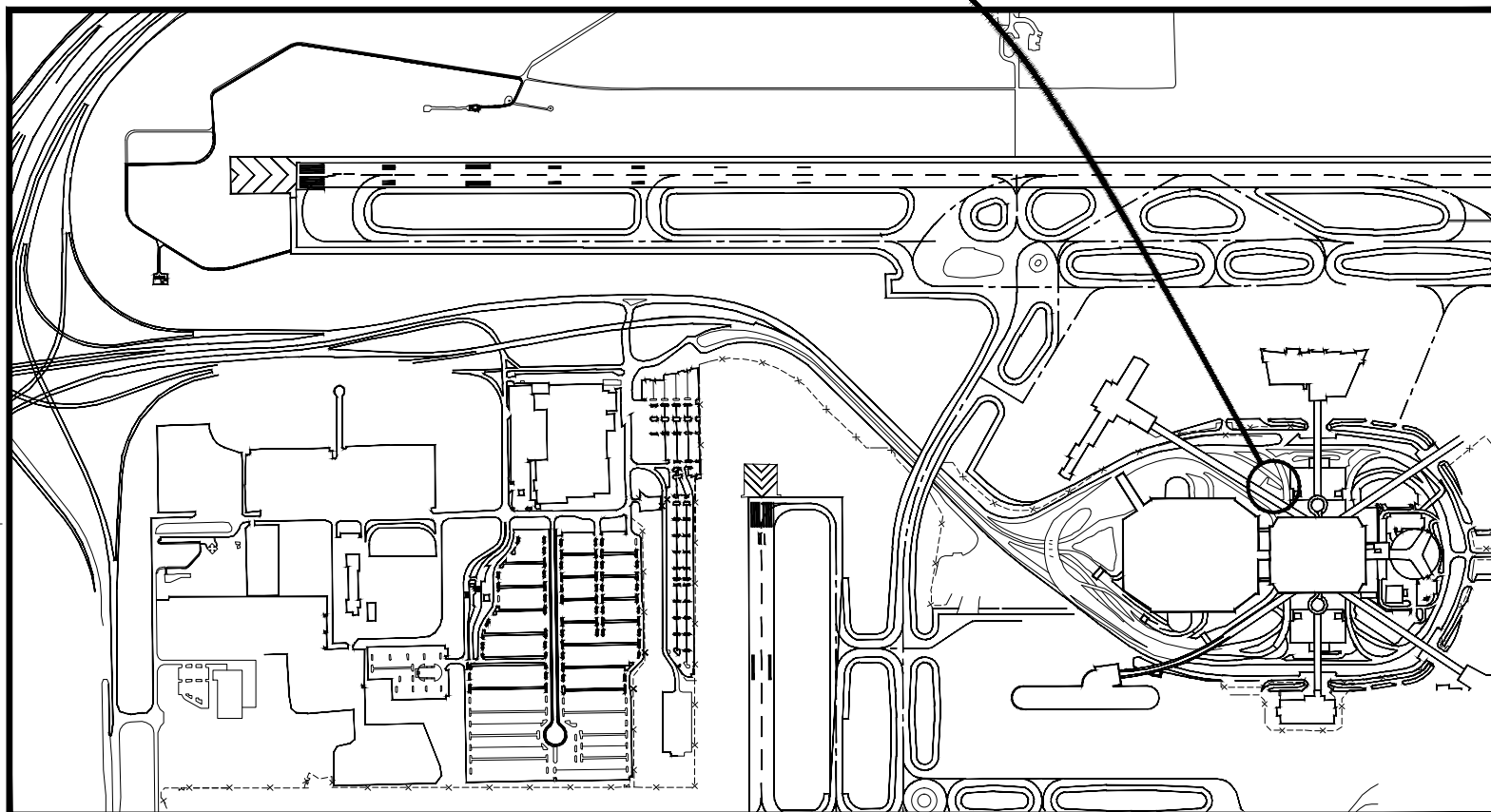
- ARV
- AL
- BM
- BT
- CP
- DR
- DIP
- EOP
- FOC
- FDOT
- FM
- HDPE
- IE or INV
- MAINTENANCE OF TRAFFIC
- MANHOLE
- PLUG VALVE
- POINT OF INTERSECTION
- POLYVINYL CHLORIDE PIPE
- REINFORCED CONCRETE PIPE
- RESTRAINED MECHANICAL JOINT
- RIGHT OF WAY
- TOP OF PIPE
- VERIFIED VERT. AND HORZ. LOCATION
- VITRIFIED CLAY PIPE
- WASTEWATER

- MOT
- MH or MH
- PV
- PI
- PVC
- RCP
- RMJ
- R/W
- TOP
- Vvh
- VCP
- WW

OTHER FEATURES



AIRPORT PUMPING STATION SITE



LOCATION MAP

NOT TO SCALE

DIRECTIONS TO PUMPING STATION:

FROM GEORGE B. PARKWAY (ENTRANCE), TAKE THE BLUE TERMINALS FOR ARRIVALS. DRIVE PAST THE PASSENGER PICK-UP AREA, AND UPON EXIT, THE PUMPING STATION WILL BE LOCATED ON THE LEFT (SOUTH).

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JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

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CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
LEGEND, INDEX & LOCATION MAP

1000088
SHEET
2

DEMOLITION NOTES

- D-1. SALVAGEABLE MATERIAL, AS DETERMINED BY DEPARTMENT PERSONNEL, SHALL BE DELIVERED TO THE PARTS WAREHOUSE LOCATED ON THE TREATMENT PLANT SITE (2700 MARITIME BLVD, TAMPA, FL 33605). NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. IN GENERAL, ALL PUMPS AND CONTROLS EQUIPMENT SHALL REMAIN PROPERTY OF THE CITY AND BE CONSIDERED SALVAGEABLE.
- D-2. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN AS NEAT AND ORDERLY CONDITION AS POSSIBLE DURING CONSTRUCTION OPERATIONS. SITE SHALL BE SECURED WITH TEMPORARY FENCING AND STRUCTURES DURING HOURS WHEN CONTRACTOR IS NOT PRESENT TO ENSURE SAFETY OF CITY EMPLOYEES AND THE PUBLIC.
- D-3. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING, SPRINKLER SYSTEM PIPING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER. CONTRACTOR SHALL SOD ALL UNPAVED AREAS.
- D-4. THE CITY OF TAMPA DOES NOT BELIEVE ASBESTOS OR LEAD PAINT IS PRESENT IN THE STRUCTURE. PRIOR TO DEMOLITION AND PER EPC REQUIREMENTS, THE CONTRACTOR WILL BE REQUIRED TO PROCURE A THIRD PARTY ASBESTOS OR LEAD PAINT SURVEY FROM A LICENSED ASBESTOS AND LEAD PAINT INSPECTION CONSULTANT. DEMOLITION OF THE STRUCTURE CANNOT BEGIN UNTIL (3) WEEKS AFTER THE ASBESTOS/LEAD PAINT SURVEY IS SUBMITTED TO THE ENGINEER. THE CITY WILL FURNISH EPC WITH THE REQUIRED NOTIFICATION. IF THE SURVEY DISCOVERS THE PRESENCE OF ASBESTOS OR LEAD PAINT, THE CITY WILL UTILIZE CONTINGENCY FUNDS FOR THE ASBESTOS OR LEAD PAINT REMOVAL IN ACCORDANCE WITH THE EPC STANDARDS BY A FLORIDA LICENSED ASBESTOS/LEAD CONTRACTOR.
- D-5. AT LOCATIONS WHERE EXISTING CONCRETE WILL BE CUT, EXPOSED REBAR SHALL BE GROUND BACK A MIN. OF 1/2" AND THE VOID FILLED WITH EPOXY. SURFACES SHALL THEN BE PAINTED TO MATCH EXISTING ADJACENT SURFACES.

GENERAL NOTES

- G-1. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE CONTRACT ADMINISTRATION DEPARTMENT, WASTEWATER PERSONNEL AND PUMPING STATION OPERATIONS.
- G-2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHT-OF-WAY PERMITS FOR THE PUMPING STATION WORK.
- G-3. THE CITY WILL OBTAIN ALL NECESSARY BUILDING PERMITS AND FDEP WASTEWATER PERMITS.
- G-4. CONTRACTOR SHALL CALL SUNSHINE (1-800-432-4770) AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- G-5. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- G-6. TWO NEW PUMPS SHALL BE SUPPLIED FOR THIS PROJECT. PROPOSED PUMPS ARE FLYGT PUMPS, 6-INCH MODEL NP-3171.181, 34 HP PUMPS SHALL BE SUPPLIED WITH FLYGT MIX-FLUSH VALVES. ALL PROPOSED PUMP BASES SHALL BE 6-INCH DIAMETER DISCHARGE ELBOWS. PUMPS SHALL BE RATED FOR 1000 GPM AT 77 FT TDH. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO "OR EQUAL" SUBMITTALS WILL BE CONSIDERED.
- G-7. CONTRACTOR SHALL VERIFY QUANTITIES OF ALL NECESSARY PIPES, REDUCERS, FITTINGS, SUPPORTS, AND ANY MISCELLANEOUS BRACKETS.
- G-8. DIMENSIONS SHOWN ARE NOT NECESSARILY ACCURATE TO THE DEGREE REQUIRED FOR FABRICATION. EXISTING DIMENSIONS AND VIEWS ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS AND REFLECT THEM ON DETAILED SHOP DRAWINGS FOR APPROVAL BEFORE ANY FABRICATION.
- G-9. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (CLEARLY LEGIBLE). NO FAXED SHEETS OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.
- G-10. PUMP DISCHARGE PIPING IN WET WELL SHALL BE 10-INCH DIAMETER HDPE, SDR-17, GREEN STRIPE, DIPS-OD. HDPE JOINTS SHALL BE FLANGED WITH 316 SS BACK UP RINGS.
- G-11. PLUG VALVES SHALL BE DEZURIK, PEF 100% PORT, ECCENTRIC PLUG VALVES OR APPROVED EQUAL. ALL ABOVE GROUND PLUG VALVES SHALL BE PROVIDED WITH 2" NUTS AND NO HANDWHEELS.
- G-12. CHECK VALVES SHALL BE APCO RUBBER FLAPPER SWING CHECK VALVES, SERIES 100. THIS EQUIPMENT IS A STANDARDIZED ITEM AT THIS FACILITY AND NO "OR EQUAL" SUBMITTALS WILL BE CONSIDERED.
- G-13. ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316 STAINLESS STEEL.
- G-14. PIPE SUPPORTS SHALL BE CONSTRUCTED AS SHOWN IN THE PIPE SUPPORT DETAIL.
- G-15. ALL CEMENTITIOUS CONCRETE AND GROUT, UNLESS OTHERWISE NOTED, SHALL BE CLASS "B", 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. ALL REINFORCING STEEL SHALL BE GRADE 60.
- G-16. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
- G-17. ALL METAL PIPE, FITTINGS, VALVES, ETC. SHALL RECEIVE:
 - 1) SHOP COAT - ONE COAT, 4-6 MILS (DRY) TNE MEC N140-1211 EPOXY PRIMER.
 - 2) FIELD COAT - ONE COAT, 5-7 MILS (DRY) TNE MEC SERIES 446 PERMA-SHIELD MCU
 - 3) FIELD COAT
 - A) ABOVE GRADE : ONE COAT, 4-6 MILS (DRY) TNE MEC 1074U ENDURASHIELD (WITH FACTORY ADDED UV BLOCKER)
 - B) BELOW GRADE : ONE COAT, 5-7 MILS (DRY) TNE MEC SERIES 446 PERMA-SHIELD MCU

- G-18. BACKFILL (NO CLAY OR CLAYEY MATERIAL) SHALL BE COMPACTED IN 6-INCH LAYERS (MAX.) TO 98% MAXIMUM DRY DENSITY OF MODIFIED PROCTOR IN CONFORMANCE WITH AASHTO T-180, METHOD A.
- G-19. ALL STAINLESS STEEL PARTS TO BE WELDED SHALL BE THE LOW-CARBON VERSION OF THE GRADE OF STAINLESS STEEL THAT IS CALLED FOR, SUCH AS: T-316L OR T-304L.
- G-20. CONTRACTOR SHALL POUR A NEW CONCRETE FILLET, AT THE BOTTOM OF THE WET-WELL, AS SHOWN IN THE PLANS WITH CLASS "B" (4,000 PSI @ 28-DAYS) CONCRETE.
- G-21. ALL CONCRETE PAVEMENT, UNLESS OTHERWISE NOTED, SHALL BE MIN 6" THICK CONCRETE WITH 4X4 W2.1XW2.1 WWF. CONCRETE SHALL BE CONSTRUCTED ON COMPACTED SUBBASE (MINIMUM 98% MODIFIED PROCTOR) WITH 1.5" DEEP CONTROL JOINTS SAWCUT @ 15' MAX, CUT WITHIN 12 HRS OF CONCRETE PLACEMENT.
- G-24. CONTRACTOR TO SUBMIT METHOD FOR 100% WATERTIGHT SEALING AT PIPE PENETRATIONS THROUGH STRUCTURES. PROPOSED LINK SEAL OR APPROVED EQUAL.
- G-25. CONTRACTOR SHALL PROVIDE A REDUCED PRESSURE BACKFLOW-PREVENTION DEVICE IN WATER SERVICE LINE, AS SHOWN IN DETAILS, AT A PLACE TO BE SPECIFIED DURING CONSTRUCTION. BACKFLOW PREVENTION DEVICE SHALL BE 1" WILKINS, MODEL #975 XL, OR EQUAL.
- G-26. ALUMINUM ACCESS COVERS SHALL BE DESIGNED FOR A PEDESTRIAN LIVE LOADING OF 300 PSF WITH 316 STAINLESS STEEL HARDWARE, HINGES AND AUTOMATIC HOLD-OPEN ARM AS MANUFACTURED BY US FOUNDRY AND MANUFACTURING CORPORATION OR APPROVED EQUAL. THE ACCESS DOOR SHALL ALSO BE EQUIPPED WITH A FLUSH LIFTING HANDLE, TAMPERPROOF FASTENERS AND EXPOSED PADLOCK STAPLES.
- G-27. THE ACCESS COVER SHALL CLOSE FLUSH WITH THE FRAME. ALL ALUMINUM SURFACES THAT CONTACT CONCRETE SHALL BE COATED WITH TWO COATS OF COAL TAR EPOXY OR BITUMINOUS COATING OR EQUAL. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE INSTALLATION AND CONFIGURATION OF THE ACCESS COVERS.
- G-28. AUTOMATIC AIR RELEASE VALVE SHALL BE 2" APCO 400A (EPOXY COATED) WITH 1/2" ORIFICE OR APPROVED EQUAL. CONTRACTOR SHALL INSTALL 2" STAINLESS STEEL BALL VALVE BETWEEN DISCHARGE PIPING AND AIR RELEASE VALVE.
- G-29. ALL DIP PIPE AND FITTING SHALL BE CLASS 53 WITH PROTECTO 401 INTERIOR COATING.
- G-30. THE EXISTING FORCE MAIN IS ASBESTOS CEMENT PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE TO IMPLEMENT ALL NECESSARY SAFETY PRECAUTIONS AND PROCEDURES WHILE WORKING WITH THIS PIPE. ALL WORK AND REMOVAL OF THIS PIPE SHALL BE DONE IN STRICT ACCORDANCE WITH E.P.C. STANDARDS AND OTHER REGULATING AGENCIES AS REQUIRED.
- G-31. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL TREES WITHIN THE VICINITY OF THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE. PRUNING OF BRANCHES IS NOT AUTHORIZED WITHOUT PRIOR APPROVAL FROM THE CITY OF TAMPA PLANNING AND DEVELOPMENT DEPARTMENT, NATURAL RESOURCE SECTION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. EXCAVATION WITHIN THE PROTECTIVE RADIUS OF TREES WILL REQUIRE ROOT PRUNING WITH THE APPROPRIATE EQUIPMENT TO ASSURE ROOTS ARE SEVERED CLEAN AT THE APPROVED RADIUS. FOR QUESTIONS REGARDING THESE REQUIREMENTS, PLEASE CONTACT THE PLANNING AND DEVELOPMENT DEPARTMENT, NATURAL RESOURCE SECTION AT 274-3100, OPTION 4, OR 1400 N. BOULEVARD, TAMPA, FLORIDA 33607.
- G-32. CONTRACTOR SHALL PREPARE WET WELL WALLS, TOP & BOTTOM SLAB TO ACCEPT 125 MILS OF STRUCTURAL COATING SYSTEM (PER SPECIFICATIONS).
- G-33. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 5TH EDITION 2014, AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
- G-34. THE SCOPE OF THE GENERATOR ROOM'S ROOF REPLACEMENT INCLUDES (1) REMOVAL OF THE EXISTING ROOFING SYSTEM (RUBERIOD T/NA 200 ROOFING MEMBRANE) AND CONTAINMENT CURBING, (2) INSTALLATION OF SIPLAST ROOFING SYSTEM AND CONCRETE PARAPET WALLS WHILE MODIFYING EXISTING DRAINAGE PATTERN AND (3) INSTALLATION OF DOWNSPOUTS. REFER TO DETAILS ON SHEET 18. SIPLAST ROOFING IS A STANDARDIZED ROOFING SYSTEM AND ALTERNATE ROOFING SYSTEMS WILL NOT BE CONSIDERED.
- G-35. ALL EXTERIOR EXISTING AND PROPOSED CONCRETE SHALL BE PAINTED TO MATCH EXISTING COLOR SCHEME.
- G-36. ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.G.V.D. 1929 AND ACQUIRED FROM AS-BUILTS DRAWINGS IN 1970. THE DIMENSIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO LAYOUT AND SHOP DRAWING SUBMITTALS.

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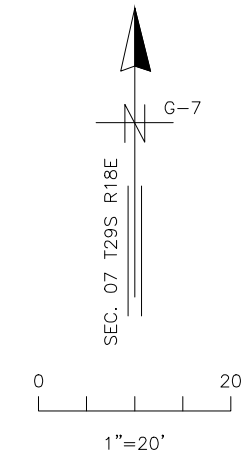
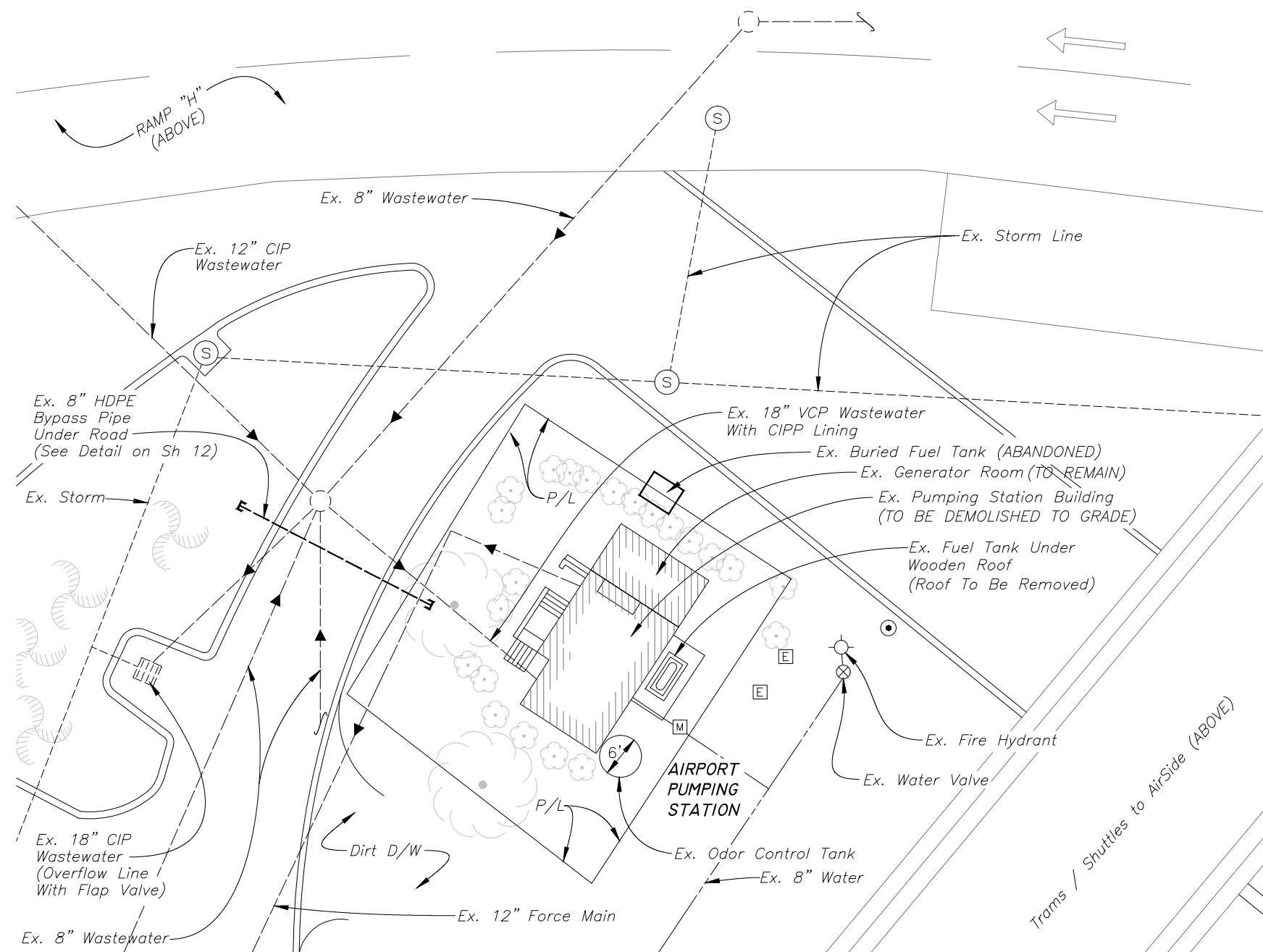
CITY of TAMPA
 WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMPING STATION
 GENERAL NOTES, DEMOLITION NOTES

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JACINTO CARLOS FERRAS, P.E. #49454
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NOTE:
THE CONTRACTOR SHALL ENSURE THAT THE EXISTING ODOR CONTROL CHEMICAL FEED REMAINS IN OPERATION DURING THE INSTALLATION OF THE PROPOSED PUMP STATION. THIS WILL REQUIRE THE INSTALLATION OF A NEW, TEMPORARY CHEMICAL FEED DISCHARGE PIPE INTO THE INFLUENT MANHOLE. THE PIPE WILL NEED TO BE BURIED ACROSS PAVEMENT TO ALLOW VEHICULAR ACCESS THROUGHOUT THE PROJECT. ALL ODOR CONTROL SHUT-DOWNS SHALL BE OF THE SHORTEST POSSIBLE DURATION. ALL SHUT-DOWNS SHALL BE COORDINATED WITH CITY PERSONNEL 24 HOURS IN ADVANCE.

EXISTING SITE PLAN

SCALE: 1"=20'

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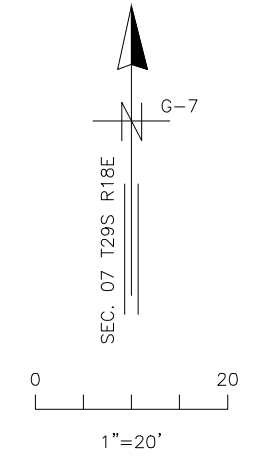
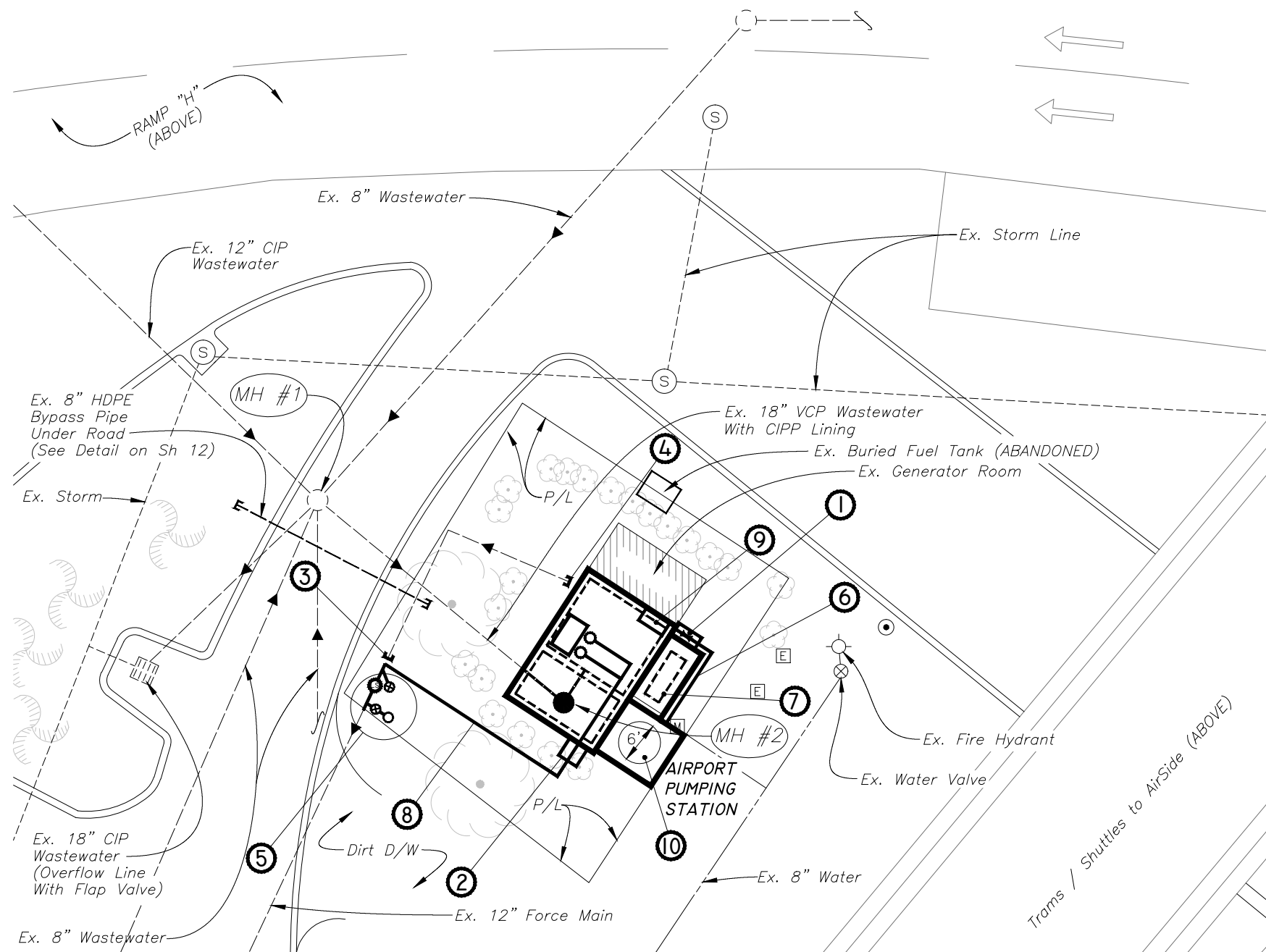
CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
EXISTING SITE PLAN

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- ① PROP. 4'x 2' SLAB AND BACK FLOW PREVENTION DEVICE. (SEE NOTE G-25, SH. 3, AND DETAIL, SH. 15)
- ② PROP. SLAB EXTENSION
- ③ CUT AND PLUG EX. 12" ASBESTOS CEMENT FORCE MAIN. FILL WITH GROUT AND ABANDON
- ④ FROM INSIDE OF THE PUMP STATION, CUT, GROUT AND PLUG EX. FORCE MAIN.
- ⑤ PROP. BYPASS ASSEMBLY (SEE DETAIL, SH. 12)
- ⑥ PROP. 1" PVC WITH HOSE BIB
- ⑦ PROP. GALVALUME ROOF STRUCTURE, OR APPROVED EQUAL OVER EX. FUEL TANK (SEE DETAILS, SH. 11)
- ⑧ PROP. 12" PVC FORCEMAIN
- ⑨ PROP. CONTROL PANEL & ELECTRICAL EQUIPMENT (SEE ELECTRICAL PLANS)
- ⑩ EXISTING ODOR CONTROL TANK RELOCATED AND CENTERED ON PROPOSED SLAB



PROPOSED SITE PLAN

SCALE: 1"=20'

NOTE:

EXISTING FORCE MAIN MATERIAL IS ASBESTOS CONCRETE.

MANHOLE #1 (EXISTING AND REHABILITATED)

TOP EL. = 17.89
 18" CIPP-LINED OUT (SE) INV. = 4.96
 12" CIP (NW) INV. = 5.24
 8" DROP (NE) INV. = 5.34±
 8" (SE) INV. = 5.55
 12" DROP (S) INV. = 5.50
 18" OVERFLOW (SW) = 12.00±

MANHOLE #2 (PROPOSED)

(FIBERGLASS MH ENCASED IN CONCRETE)

TOP EL. = 18.00±
 18" CIPP-LINED IN (NW) INV. = 4.93
 18" OUT (NE) INV. = 4.83

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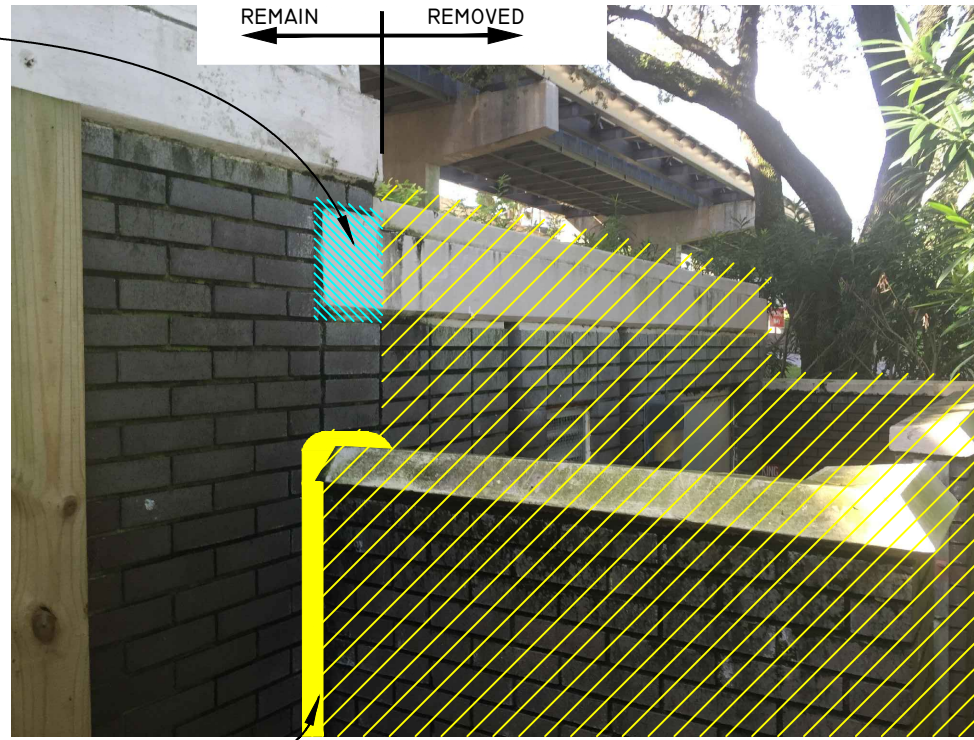
TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
PROPOSED SITE PLAN

W.O.1000088

SHEET
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PAINT EX. ALL CONC. WALLS (THAT ARE NOT BRICK VENEER) TO MATCH EXISTING BRICK COLOR(TYP)

TO REMAIN TO BE REMOVED



G-7
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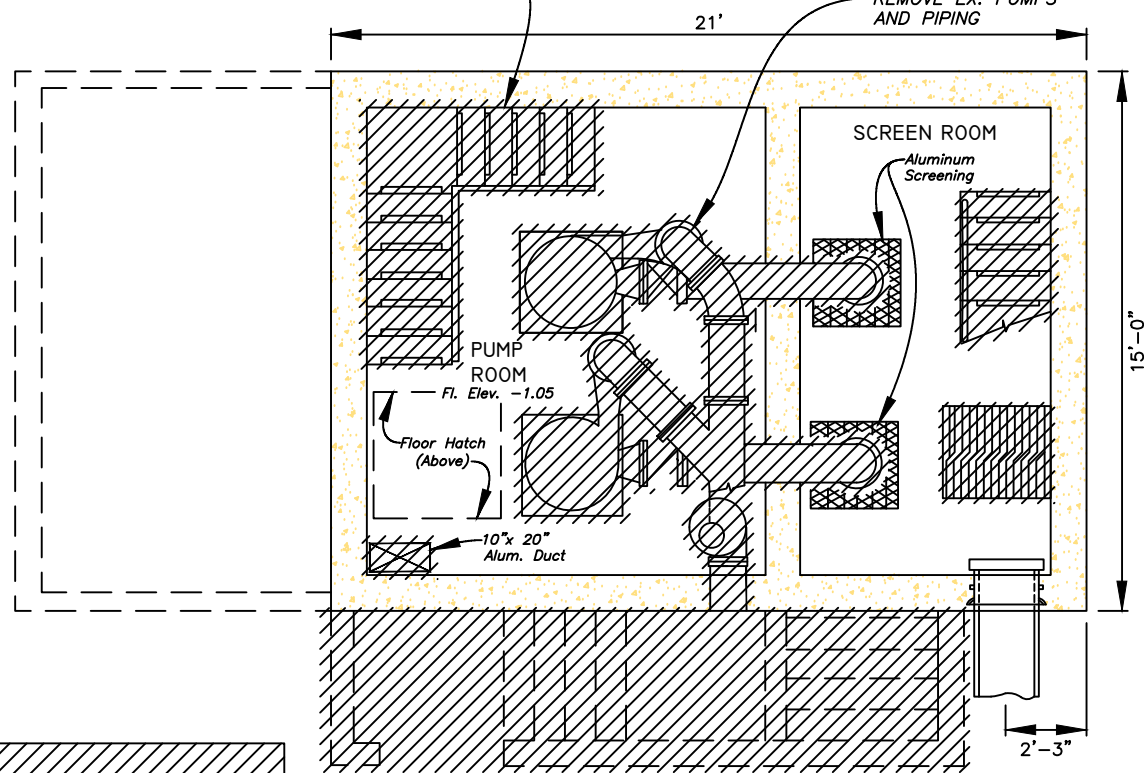
G-7
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REMOVE LOWER WALL AND FILL-IN WITH BRICK VENEER TO MATCH EXISTING (TYP.)

REMOVE EX. CONCRETE STAIRS AND SUPPORTS

REMOVE EX. PUMPS AND PIPING

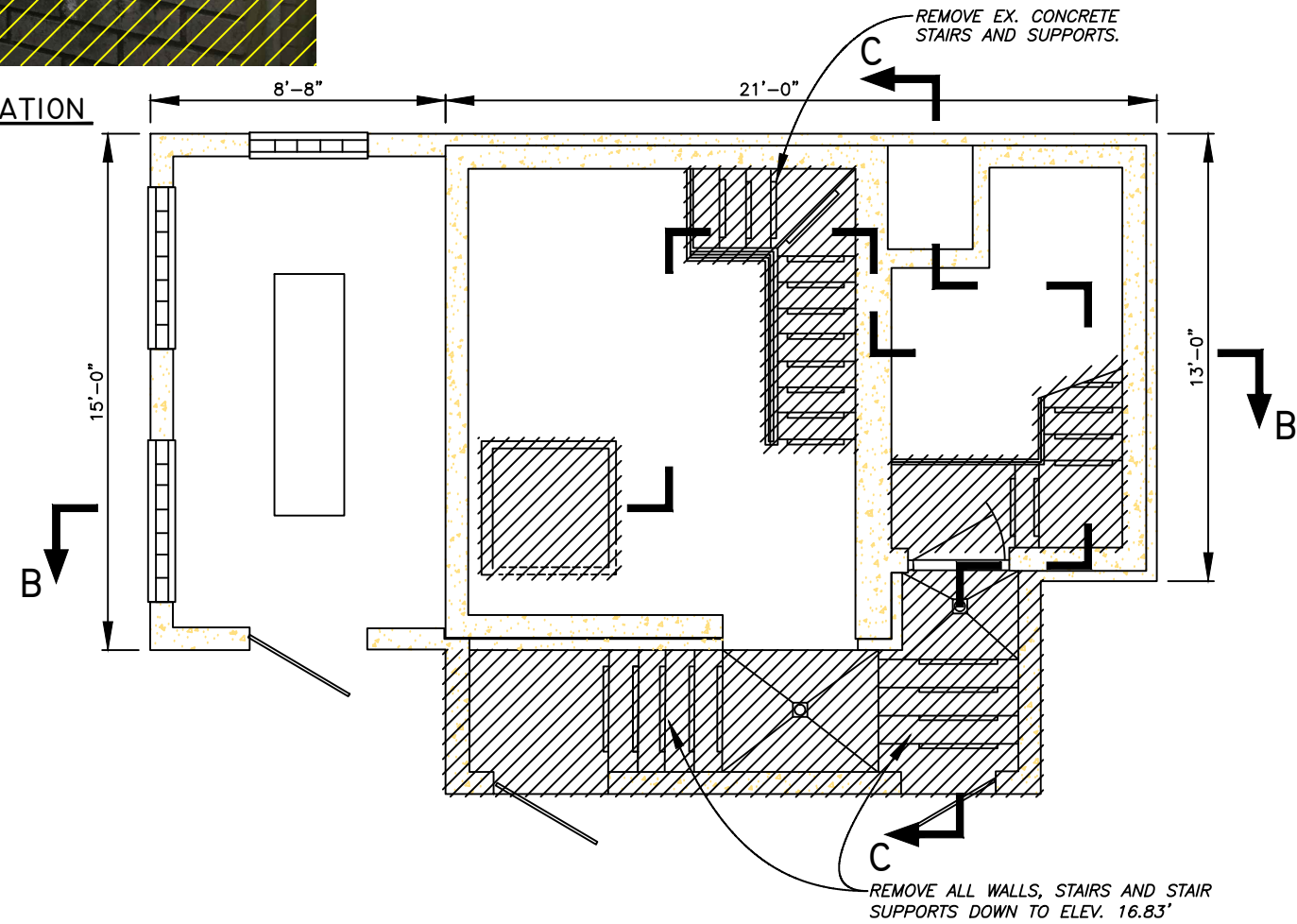
PHOTO OF WEST ELEVATION
NOT TO SCALE



PLAN VIEW AT EL. 7.68

SCALE: $\frac{3}{16}'' = 1'-0''$

ALL EQUIPMENT SHOWN AS HATCHED IS TO BE DEMOLISHED AND REMOVED.



PLAN VIEW AT EL. 18.00

SCALE: $\frac{3}{16}'' = 1'-0''$

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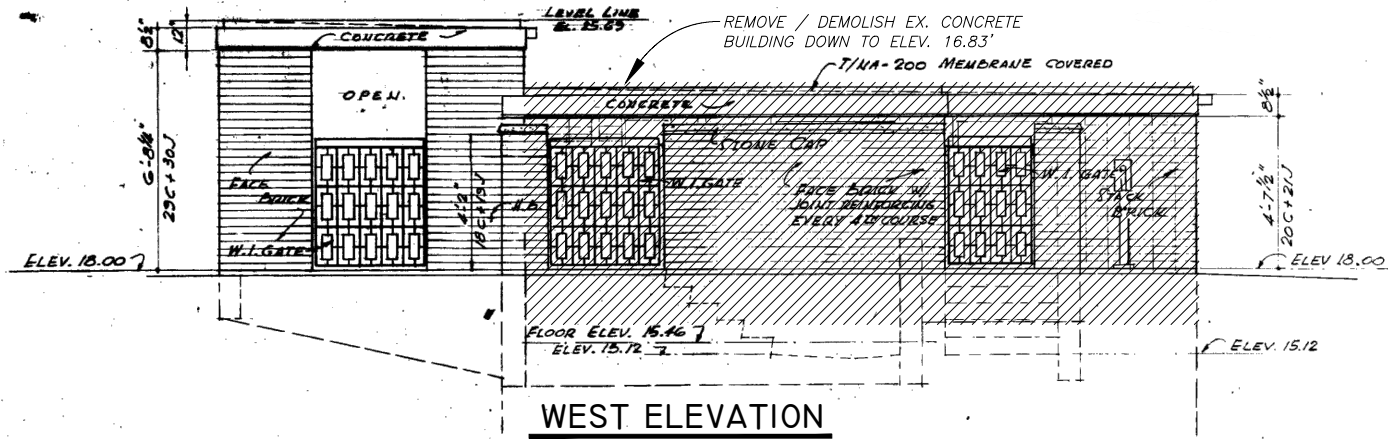
CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
DEMOLITION - PLAN VIEWS & ELEVATION

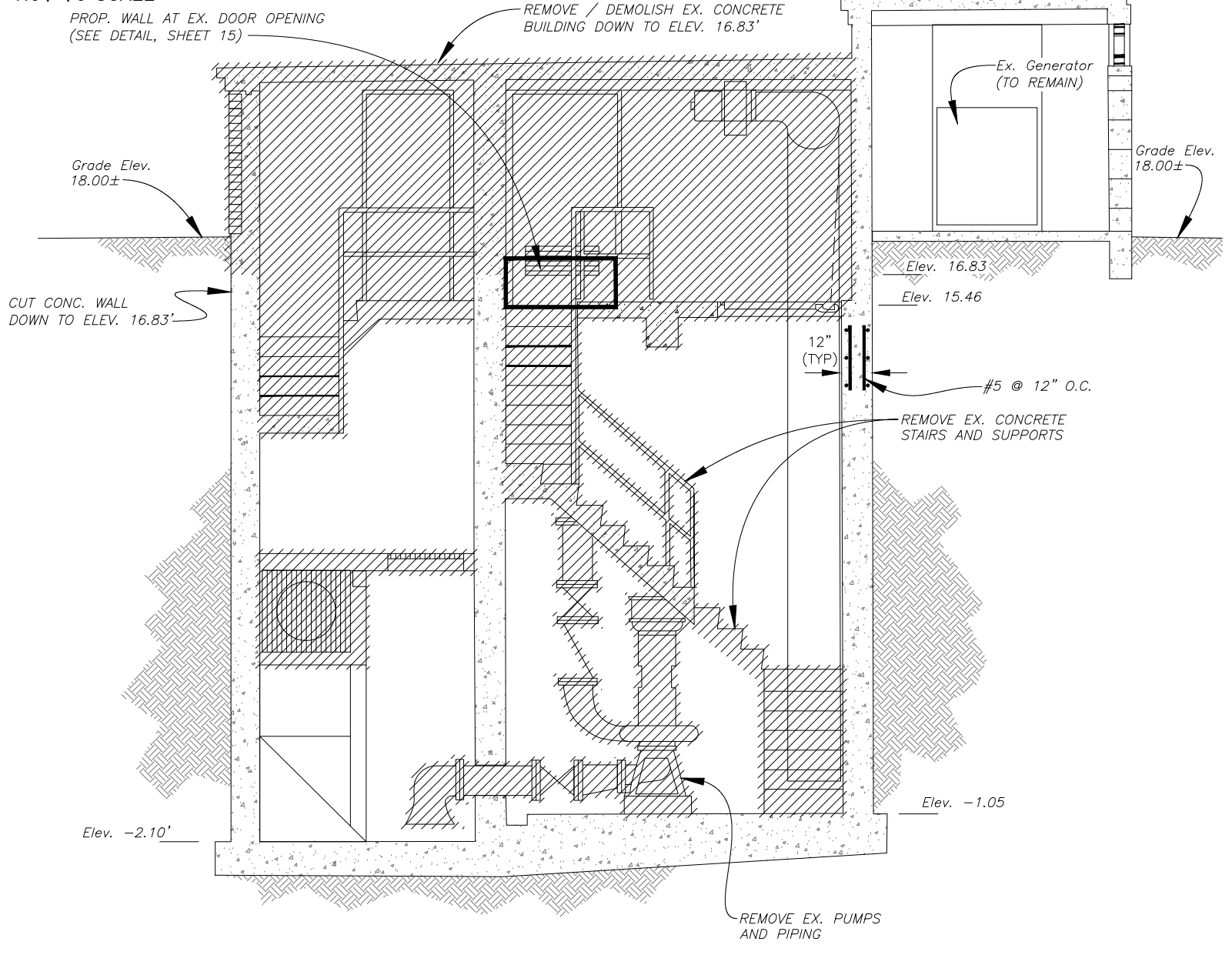
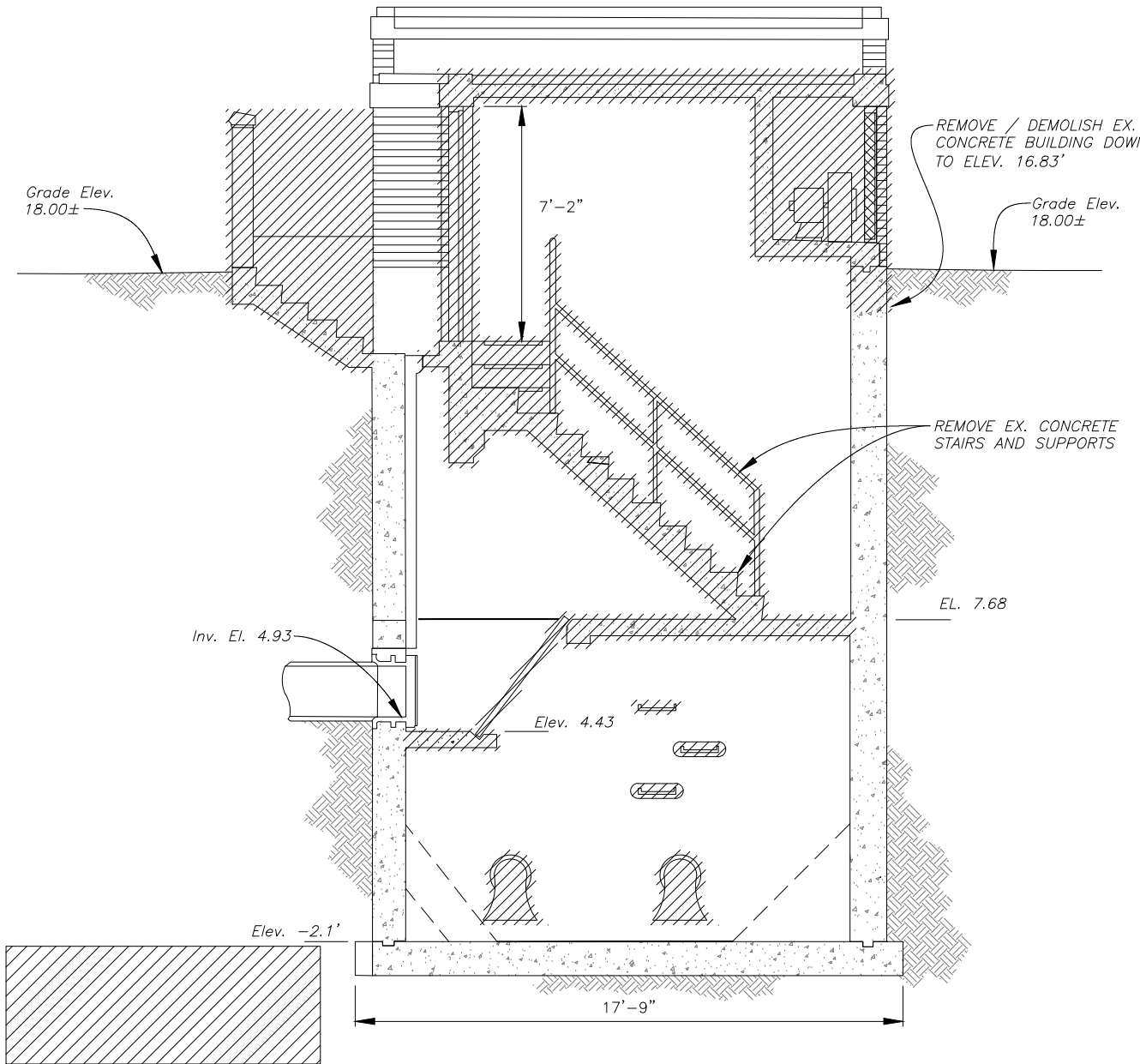
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6

NOTES:

1. DEMOLISH ALL ITEMS DOWN TO ELEV. 16.83 UNLESS OTHERWISE SHOWN OR SPECIFIED.
2. BACKFILL WITH CLEAN, COMPOSTED EARTH TO MATCH EXISTING GROUND ELEVATIONS.



Ex. Generator Building (TO REMAIN)



ALL EQUIPMENT SHOWN AS HATCHED IS TO BE DEMOLISHED AND REMOVED.

SECTION VIEW C-C
NOT TO SCALE

SECTION VIEW B-B
NOT TO SCALE

User: ssg2 Drawing Name: K:\WWP Projects\2015\2015-59KU Airport HS Replacement\Uwg\5_6_Uemo Plan & Elev_Airport Main HS.dwg Revit - Jan 12 2015 - 11:45am

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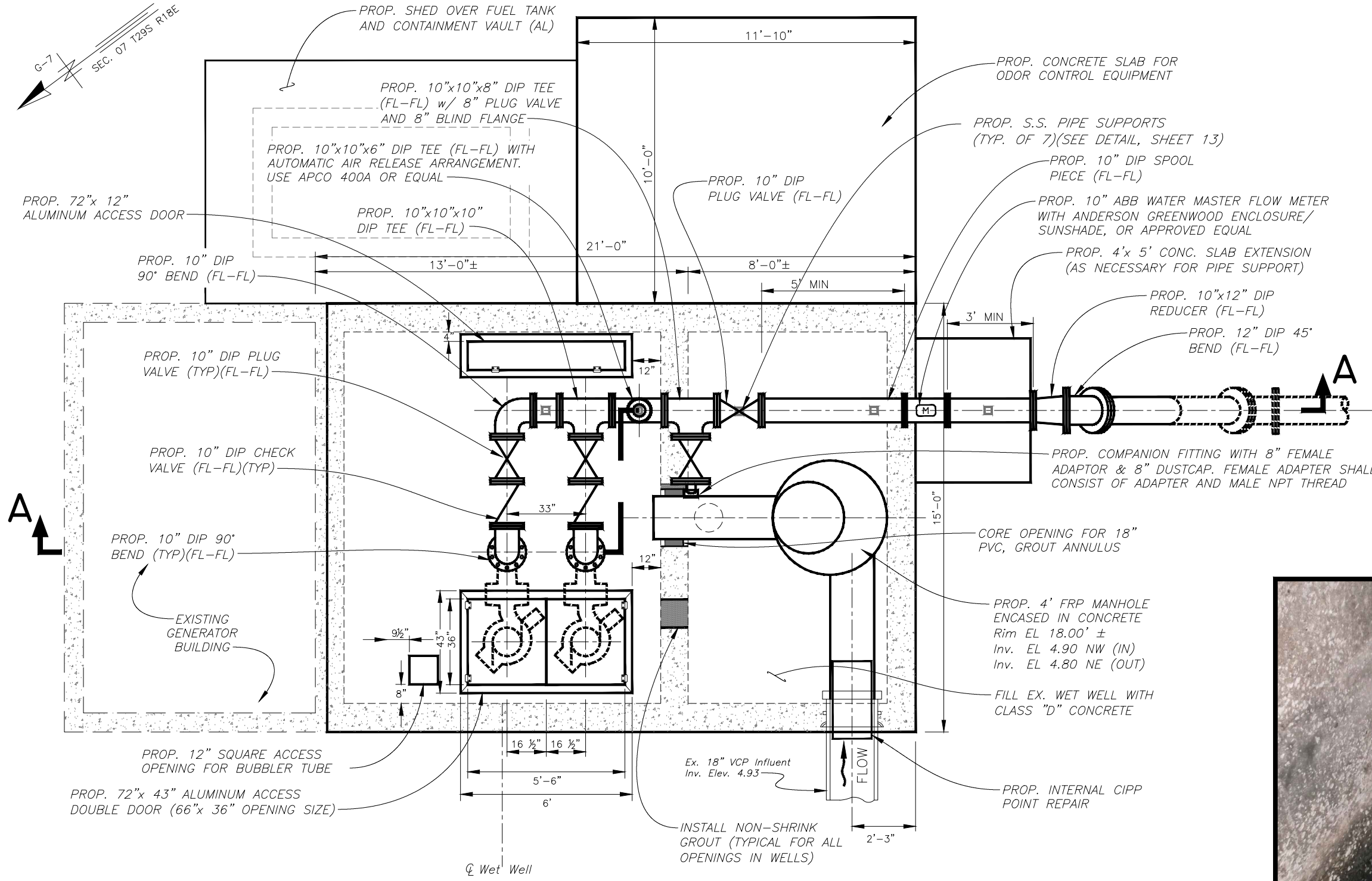
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CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
DEMOLITION - SECTION VIEWS & ELEVATION

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7

User: ssg2 Drawing Name: K:\WWP\Projects\2019\TIA\WWS\Main Pumping Station\Main Pumping Station Main HS.dwg Date: Jan 14, 2019 11:55am



PLAN VIEW

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

ELECTRICAL CONTROL PANEL, AND OTHER ELECTRICAL EQUIPMENT MOUNTED ON SOUTH FACE OF GENERATOR BUILDING WALL, IS NOT SHOWN IN THIS VIEW. REFER TO ELECTRICAL SHEETS FOR CORRECT PLACEMENT AND ORIENTATION OF PROPOSED ELECTRICAL EQUIPMENT.

ANTICIPATED PROCEDURE FOR CONNECTING PROP. PVC PIPE TO EX. C.I.P.P. LINER

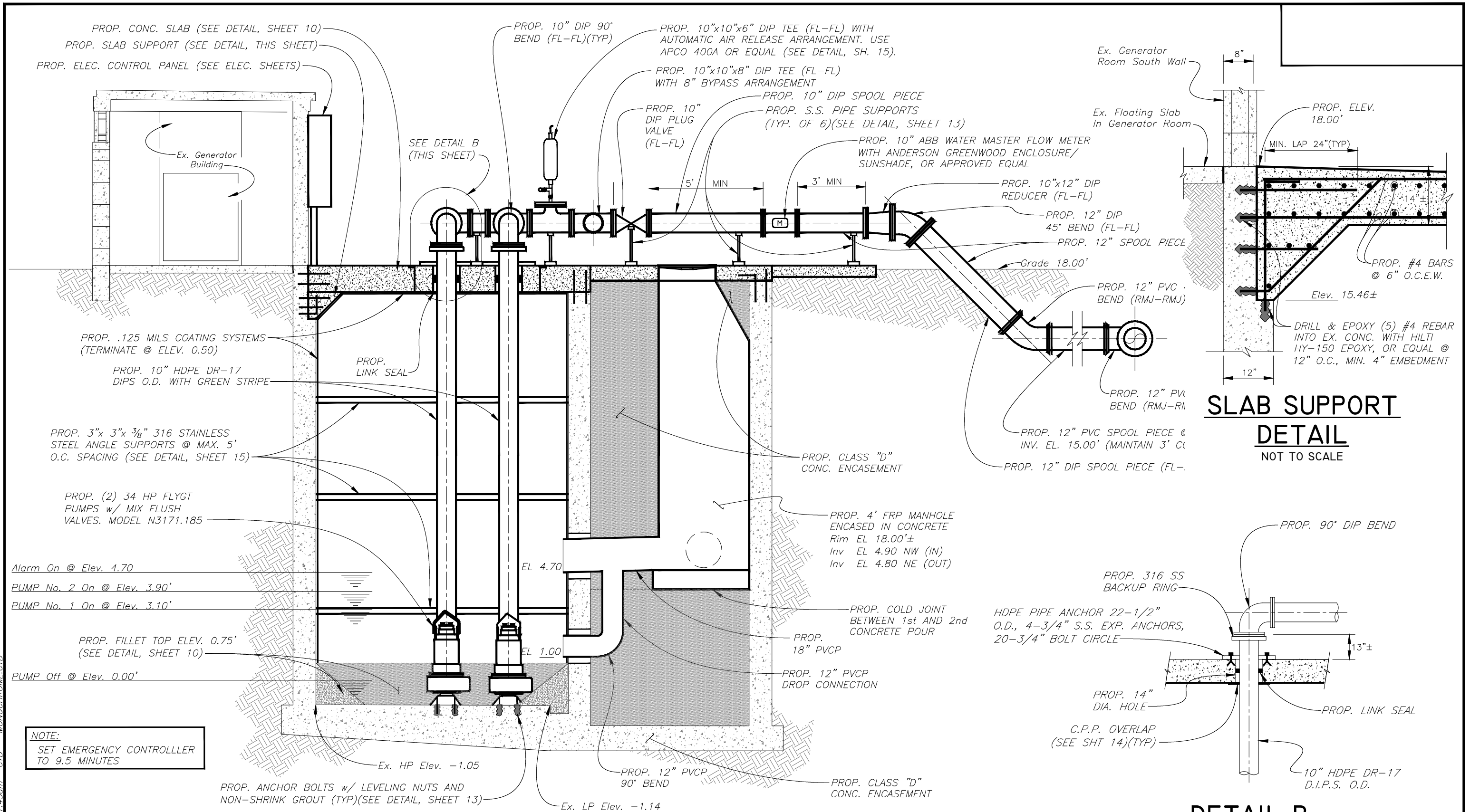
1. CAREFULLY REMOVE SLUICE GATE WITHOUT DAMAGING EX. C.I.P.P. LINER
 2. CONNECT PROP. PVC PIPE TO C.I.P.P. LINER USING A SHIELDED FERNCO ADAPTER
 3. SUPPORT PROP. PIPE AND FILL ENTIRE WET WELL WITH CLASS "D" CONCRETE.
 4. INSTALL INTERNAL 3' LONG (MIN) 18" INTERNAL CIPP POINT REPAIR CENTERED ON THE PIPE MATERIAL TRANSITION. ROUGHEN INTERIOR OF PVC AND LINER TO ACHIEVE A GOOD BOND TO POINT REPAIR LINER.
- * SEE PICTURE FOR EXISTING CONDITION OF SLUICE GATE.



* PHOTO OF EX. LINER THROUGH EX. SLUICE GATE
NOT TO SCALE

| | | | | | | | |
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| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT | No. | DATE | REVISIONS | DES: MS | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION PROPOSED - PLAN VIEW & SLUICE GATE PHOTO | W.01000088 |
| | 3 | | | DRN: BB | | | SHEET |
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| | 1 | | | DATE: | | | |

User: ssg2 Drawing Name: K:\WW Projects\2019\TIA\WWS\Main Pumping Station\Main Pumps\Main Pumps.dwg Date: Jan 14, 2019 11:55am



SECTION A-A

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

**SLAB SUPPORT
DETAIL**

NOT TO SCALE

DETAIL B

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

NOTE:
SET EMERGENCY CONTROLLER TO 9.5 MINUTES

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CITY of TAMPA
WASTEWATER DEPARTMENT

**TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
PROPOSED - SECTION A-A & DETAILS**

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9

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

Layout - Jan 12, 2015 - 11:45am CTB - MONOCHROME.CTB

PROP. PLACEMENT OF ELECTRICAL CONTROL BOX (SEE ELECTRICAL PLAN FOR REQUIRED OPENINGS)

PROP. SHED OVER FUEL TANK AND CONTAINMENT VAULT (AL)

PROP. #4 BARS @ 6" O.C.E.W. (TOP & BOTTOM)(TYP.)

PROP. 3" DRAIN

PROP. 10'x 11'-10" CONCRETE SLAB (LEVEL) FOR ODOR CONTROL EQUIPMENT

PROP. 4"x4" W6xW6 W.W.F. SPACED @ EVEN DEPTHS

PROP. 1/2" EXPANSION JOINT MATERIAL(TYP)

PROP. 4'x 5' CONC. SLAB EXTENSION (AS NECESSARY FOR PIPE SUPPORT)

PROP. 8" SLAB FOR ODOR CONTROL EQUIPMENT

PROP. 8" SLAB AROUND MANHOLE

PROP. 14" SLAB OVER WET WELL (12" AT DRAIN OPENING)

PROP. 6'x 1' ACCESS OPENING

PROP. ELEC. CONTROL PANEL

PROP. 3" DRAIN

PROP. 4'x 5' CONC. SLAB EXTENSION (AS NECESSARY FOR PIPE SUPPORT)

PORTION OF SLAB AROUND ACCESS HATCH AND ELEC. CONTROL PANEL TO BE LEVEL

PROP. 5'-6"x 3'-0" ACCESS OPENING
PROP. 4'Ø FRP MANHOLE

PROP. 4'Ø FRP MANHOLE

PROP. 4"x4" W6xW6 W.W.F. SPACED @ EVEN DEPTHS

TOP SLAB DRAINAGE DETAIL

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

PLAN VIEW

TOP SLAB REINFORCEMENT

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

PROP. 12"x12" OPENING FOR BUBBLER TUBE

PROP. 14" THICK CONC. SLAB WITH 3" DRAIN POURED OVER WET WELL

PROP. 8" CONC. SLAB POURED AROUND MANHOLE

PROP. 4' FRP MANHOLE ENCASED IN CONCRETE

PROP. SLOPED WET WELL FLOOR (TOP OF FILLET = ELEV. 0.75')

PROP. 4"x4" W6xW6 W.W.F. SPACED @ EVEN DEPTHS

PROP. 4'x 5' CONC. SLAB EXTENSION (AS NECESSARY FOR PIPE SUPPORT)

PROP. SLOPED WET WELL FLOOR

SECTION B-B

TOP SLAB REINFORCEMENT

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

PROP. WET WELL FLOOR DETAIL

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

JACINTO CARLOS FERRAS, P.E. #49454
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WASTEWATER DEPARTMENT

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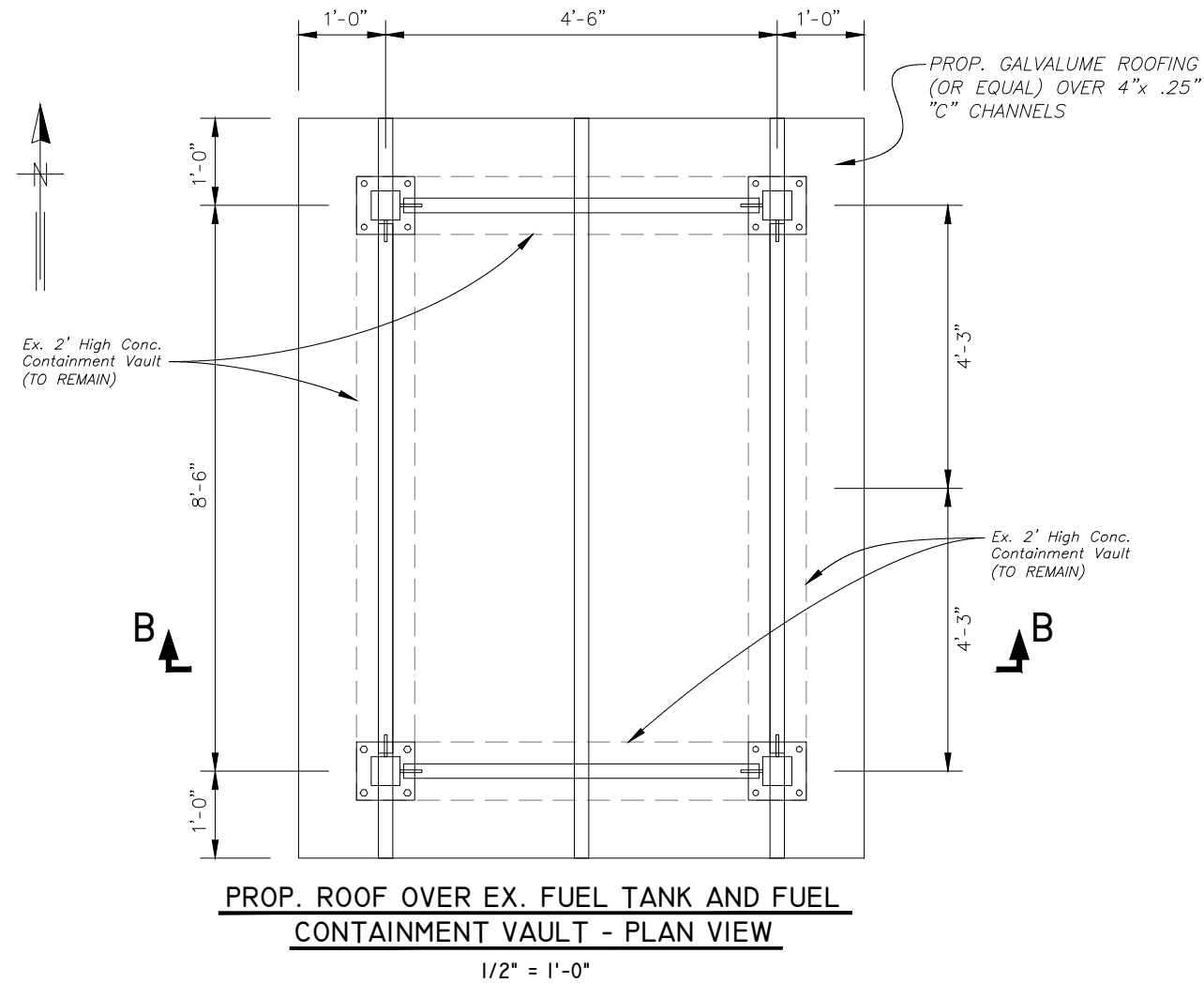
CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
PROPOSED SLAB REINFORCEMENT PLAN & DETAILS

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STRUCTURAL ALUMINUM

1. ALL ALUMINUM STRUCTURAL MEMBERS SHALL BE ASTM B221, 6061-T6 ALLOY.
2. ALUMINUM BASE PLATES SHALL BE ISOLATED FROM CONCRETE SURFACES USING A 3 MIL BITUMEN COATING.
3. ALL HARDWARE SHALL BE 316 STAINLESS STEEL (U.N.O.)

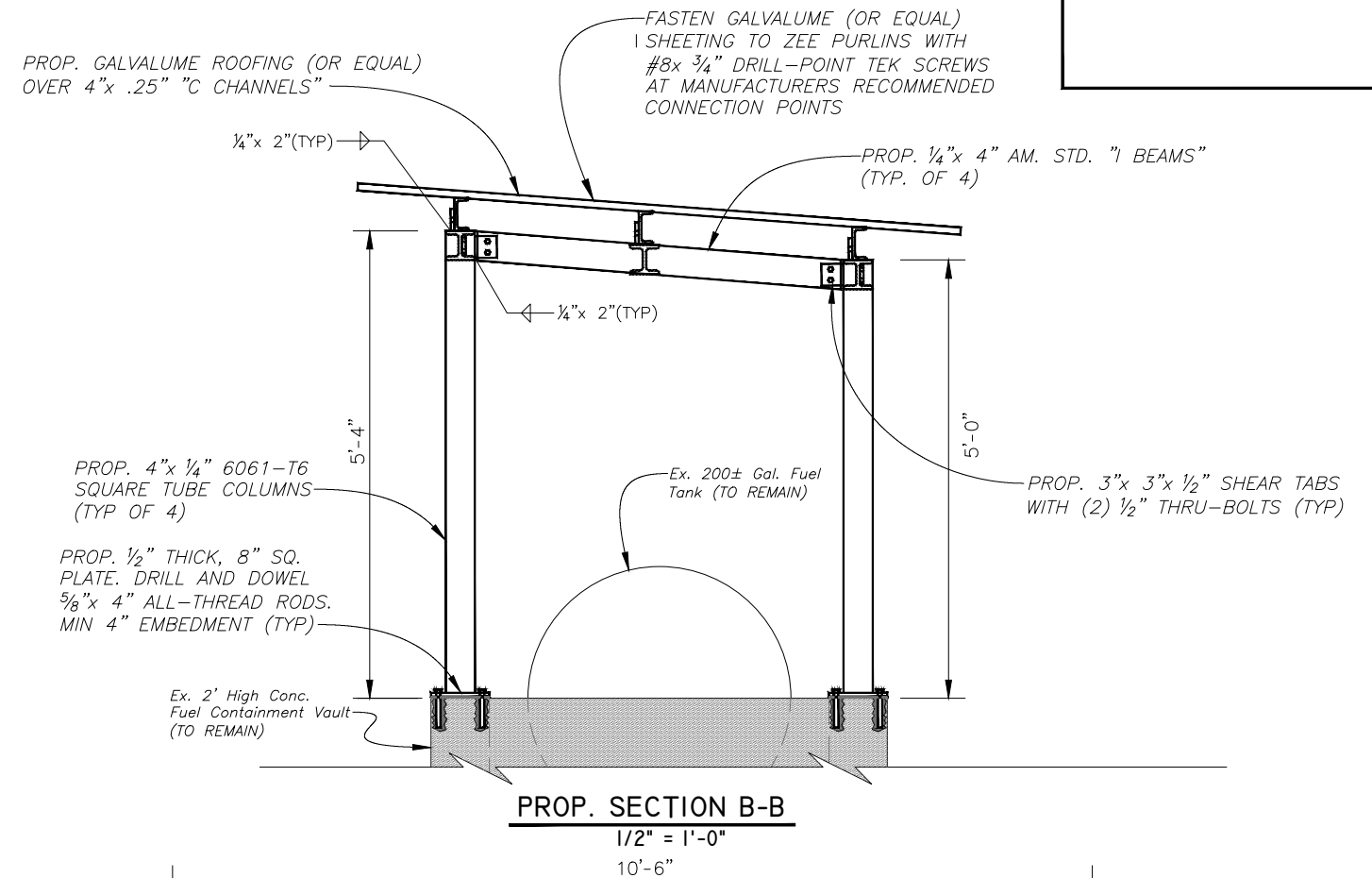


WIND LOADS ARE BASED ON 2014, 5th EDITION FLORIDA BUILDING CODE AND ASCE 7-10 "MINIMUM DESIGN LOADS FOR BUILDINGS AND STRUCTURES" USING THE FOLLOWING CRITERIA:

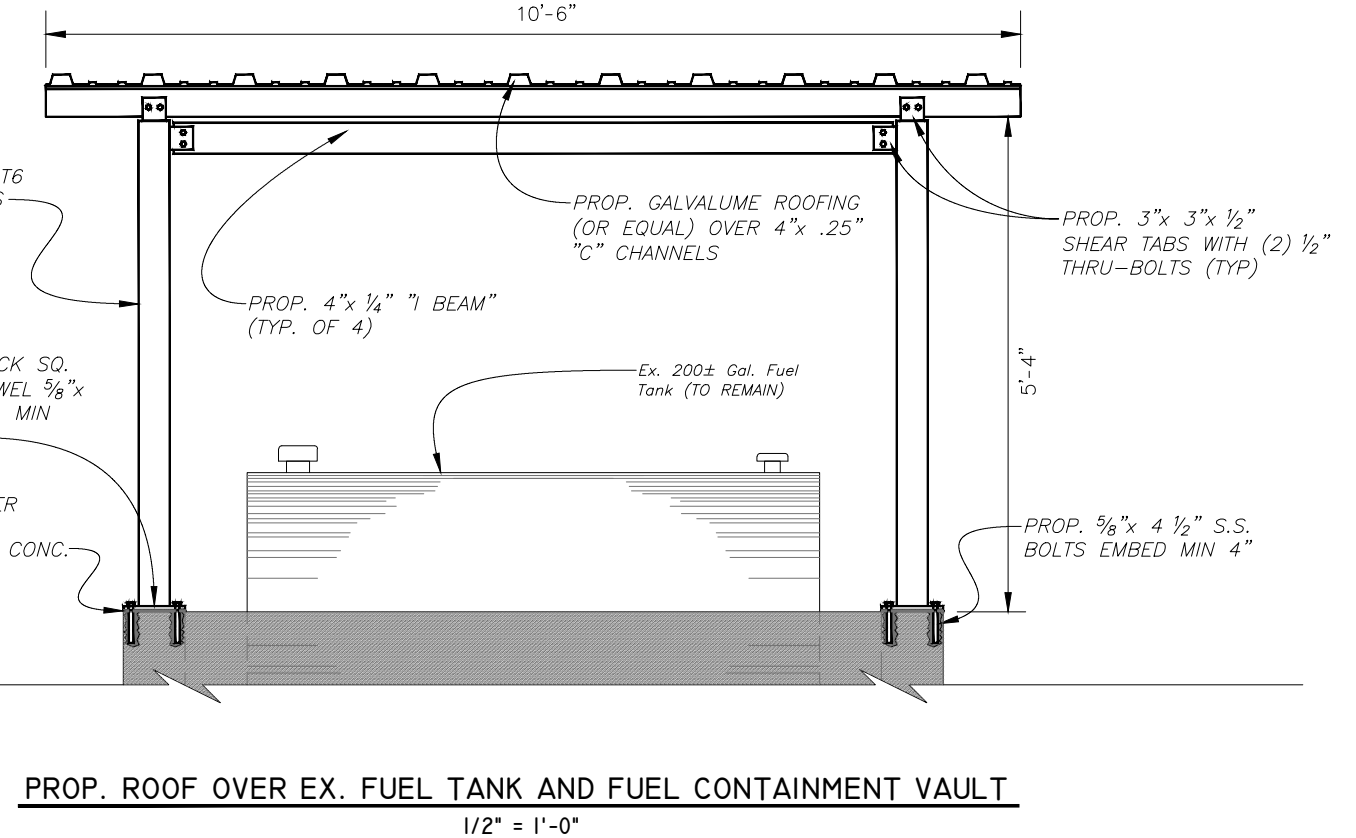
1. WIND SPEED OF 140 MPH
2. RISK CATAGORY II
3. EXPOSURE CATEGORY "B"
4. OPEN STRUCTURE
5. INTERNAL PRESSURE COEFFICIENT: +0.00, -0.00

NOTE:

DIMENSIONS SHOWN ARE NOT NECESSARILY ACCURATE TO THE DEGREE REQUIRED FOR FABRICATION. EXISTING DIMENSIONS AND VIEWS ARE SHOWN BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS AND REFLECT THEM ON DETAILED SHOP DRAWINGS FOR APPROVAL BEFORE ANY FABRICATION.



- PROP. 4"x 0.25 6061-T6 SQUARE TUBE COLUMNS (TYP OF 4)**
- PROP. 8"x 8", 1/2" THICK SQ. PLATE. DRILL AND DOWEL 5/8"x 4" ALL-THREAD RODS. MIN 4" EMBEDMENT(TYP)**
- PROP. 1/4" THICK RUBBER COROSION BARRIER TO SEPARATE STEEL FROM CONC.**



User: ssgz Drawing Name: K:\M\Projects\2015\2015_PXU_Airport PS Replacement\Wg\3_b_Lemo Plan & Elev_Airport Main PS.dwg
Date: 11-15-2015
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MONDAY, NOVEMBER 16, 2015

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WASTEWATER DEPARTMENT

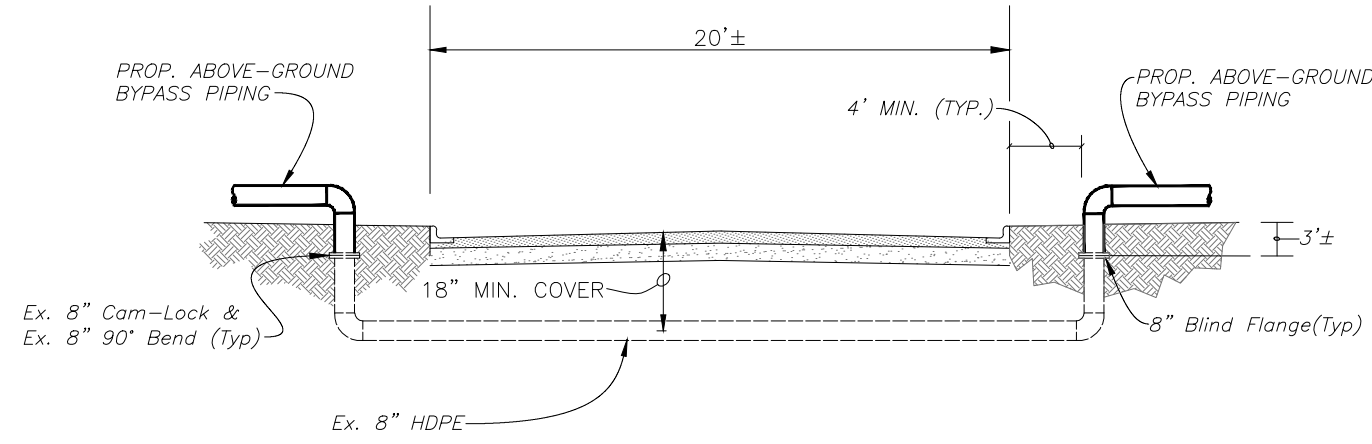
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CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
PROPOSED ROOF OVER EX. FUEL TANK AND CONTAINMENT VAULT

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11
OF

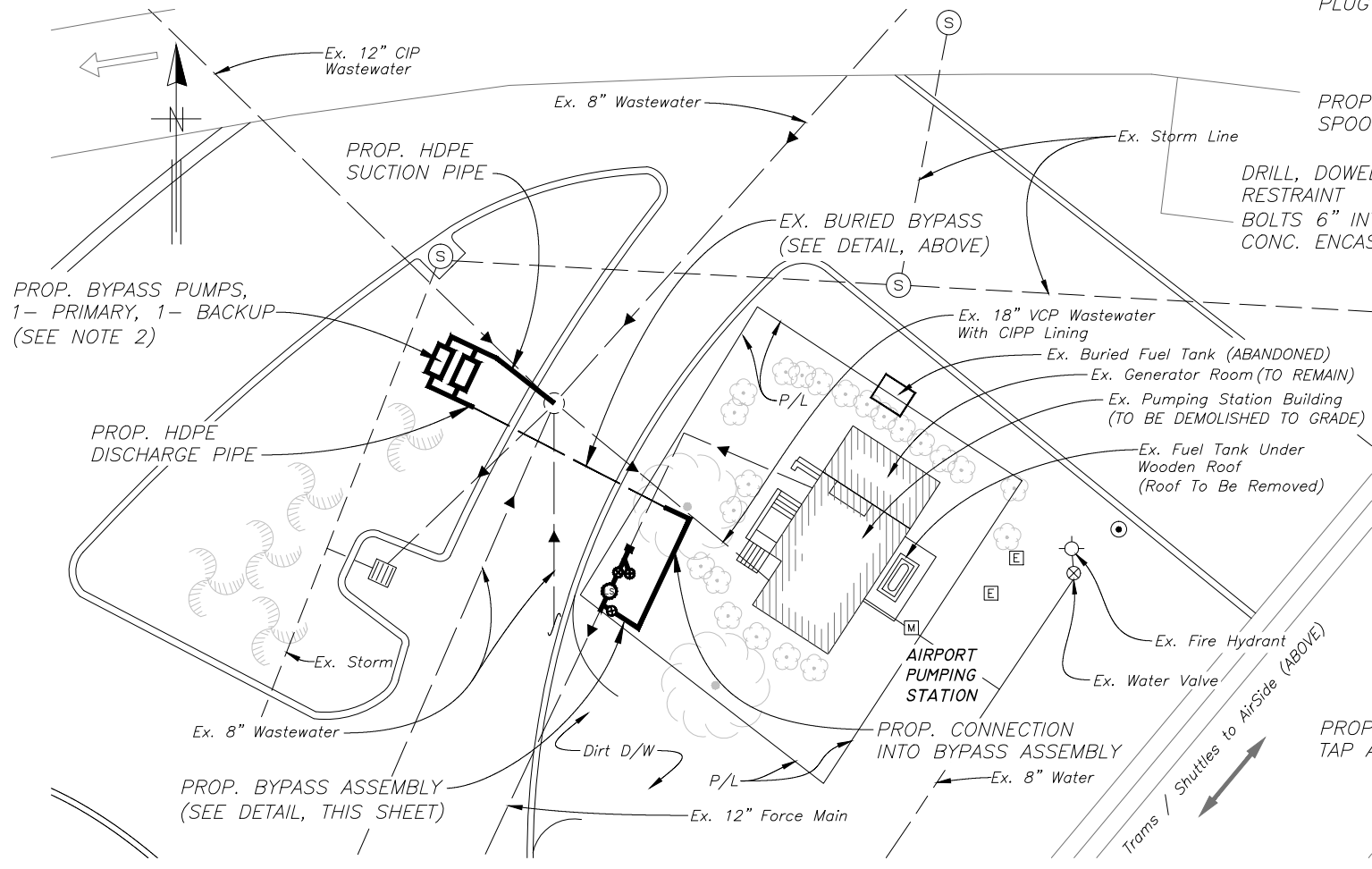


EXISTING BURIED BYPASS DETAIL

NOT TO SCALE

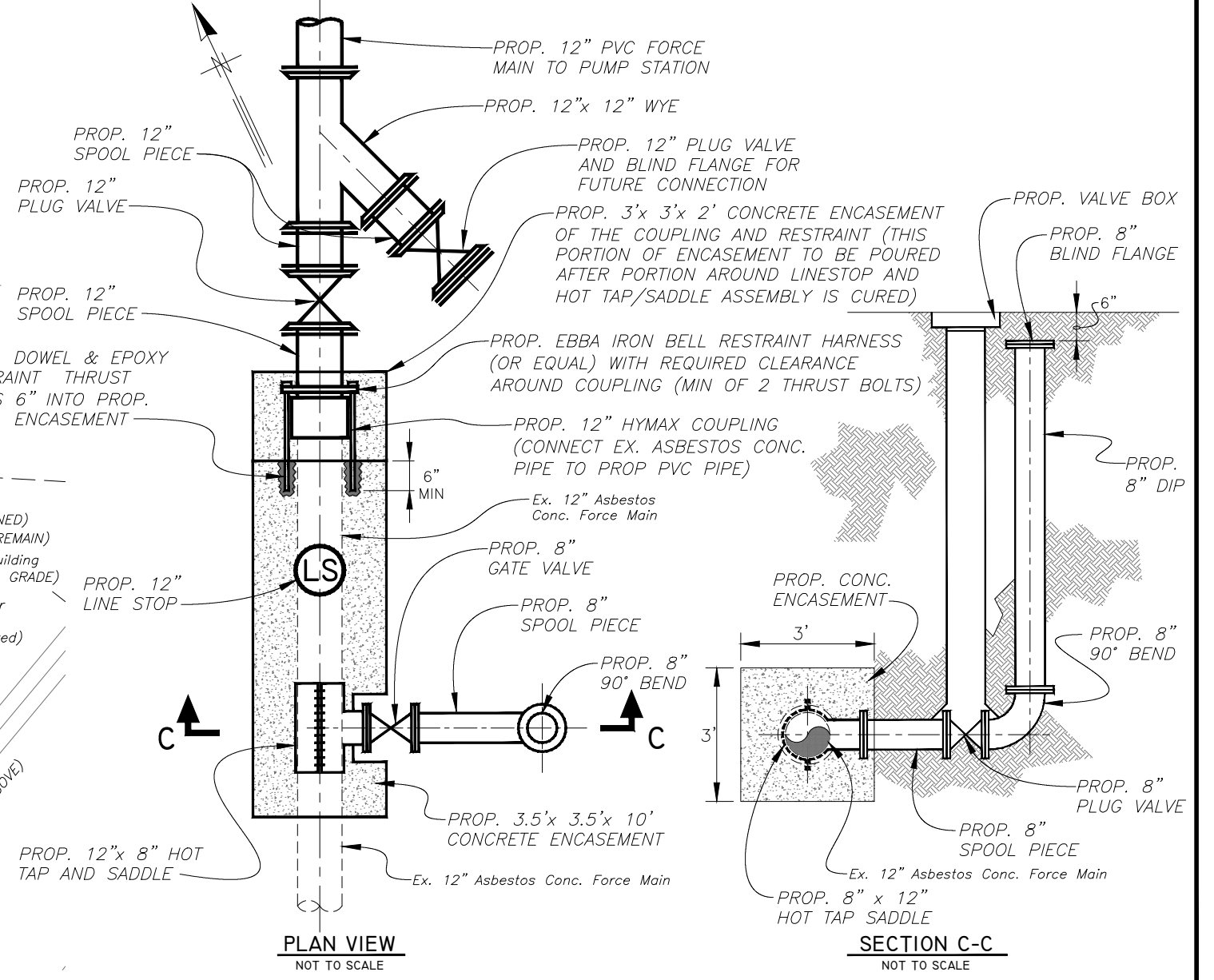
BYPASS NOTES:

- SEWER SERVICE TO CUSTOMERS SHALL NOT BE DISRUPTED DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT PROPOSAL FOR BYPASS STRATEGY. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SEQUENCES FOR COMPLETION, TESTING AND TRANSFER OF DUTY BACK TO THE PUMP STATION WITH PUMPING STRATEGY.
- THE BYPASS PUMPS SHALL BE THE SELF PRIMING QUIET FLOW TYPE PUMP. THE PUMPS SHALL SUCTION FROM MANHOLE AND DISCHARGE INTO THE PROPOSED 8" BYPASS VALVE ASSEMBLY. BYPASS PUMPS NOISE SHALL STRICTLY COMPLY TO ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL. THIS MAY REQUIRE CONSTRUCTING SOUND ATTENUATING ENCLOSURE AROUND PUMPS AND UTILIZATION OF ELECTRIC PUMP MOTORS MAY BE NECESSARY TO MEET THESE REQUIREMENTS.
- BYPASS PUMPS SHALL BE CAPABLE OF 1000 GPM @ 78' TDH. PLUS THE ADDITIONAL FRICTIONAL LOSSES FROM THE BYPASS PIPING SYSTEM. THE BYPASS PUMPS SHALL BE OF THE SELF-PRIMING QUIET FLOW TYPE PUMP. THE BYPASS SYSTEM SHALL BE EQUIPPED WITH AN AUTODIALER FEATURE TO CONTACT KEY PERSONNEL IN THE EVENT OF A HIGH WATER ALARM. MAXIMUM RESPONSE TIME IS 1 HOUR.



PROPOSED BYPASS - PLAN VIEW

SCALE: 1" = 40'



PLAN VIEW

NOT TO SCALE

SECTION C-C

NOT TO SCALE

BYPASS ASSEMBLY DETAIL

NOT TO SCALE

User: ssg2 Drawing Name: K:\WW Projects\2015\2015-06-Demo Plan & Elev. Airport Main P5.dwg Date: 06/12/2016

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DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

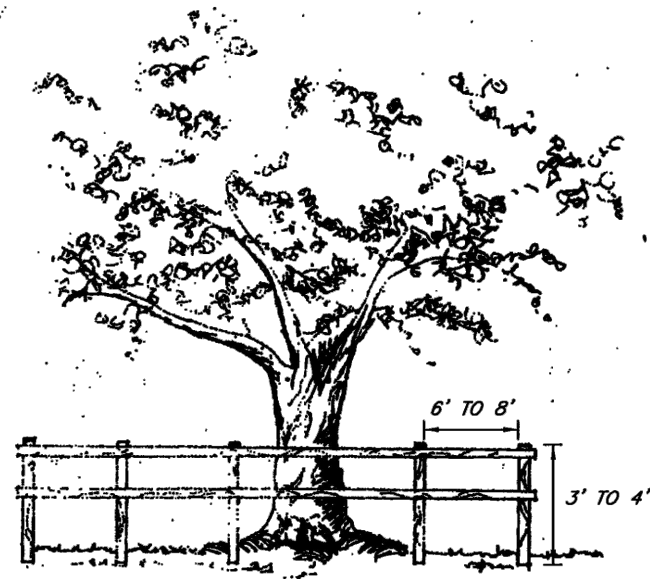
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DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
BYPASS PLAN, NOTES AND DETAILS

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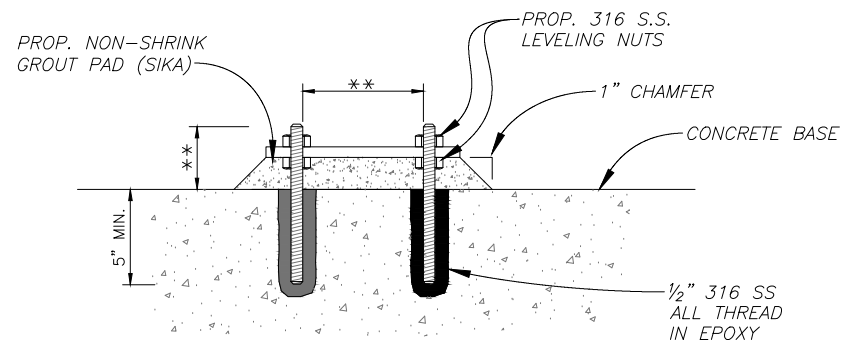
HORIZONTAL: WOOD MEMBER, ORANGE FENCING, CHAIN LINK FENCE OR OTHER APPROVED MATERIAL.

VERTICAL: WOOD MEMBER OR APPROVED MATERIAL.

BARRICADES PLACED AT DESIGNATED PROTECTIVE ROOT ZONE.

BARRICADE DETAIL FOR PROTECTED AND GRAND TREES DETAIL "J"

NTS

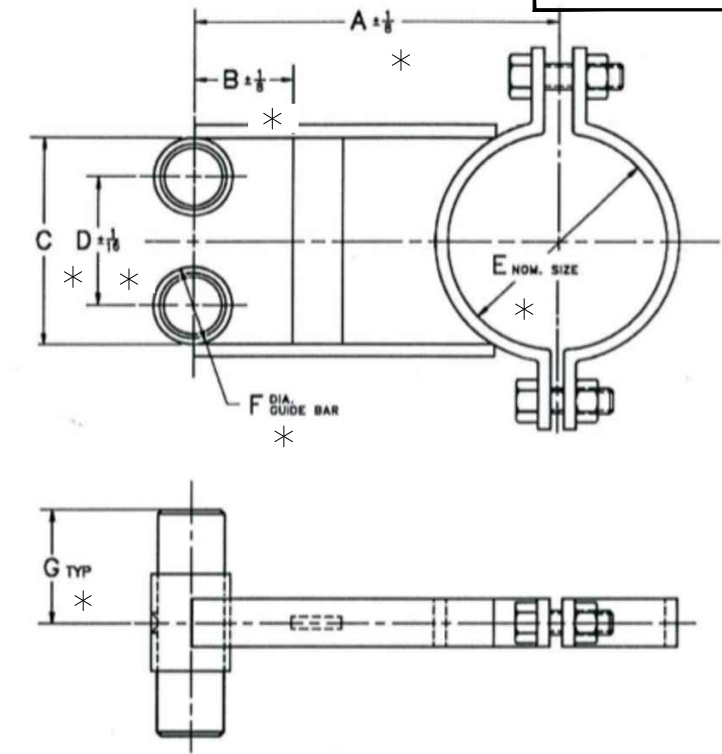


* ALIGNMENT OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY PUMP MANUFACTURER.

** CONTRACTOR SHALL PROVIDE A MINIMUM 1/2 INCH BOLT PROTRUSION ABOVE THE FINAL NUT LOCATION AFTER THE NUT IS TIGHTENED TO MANUFACTURE'S RECOMMENDATION.

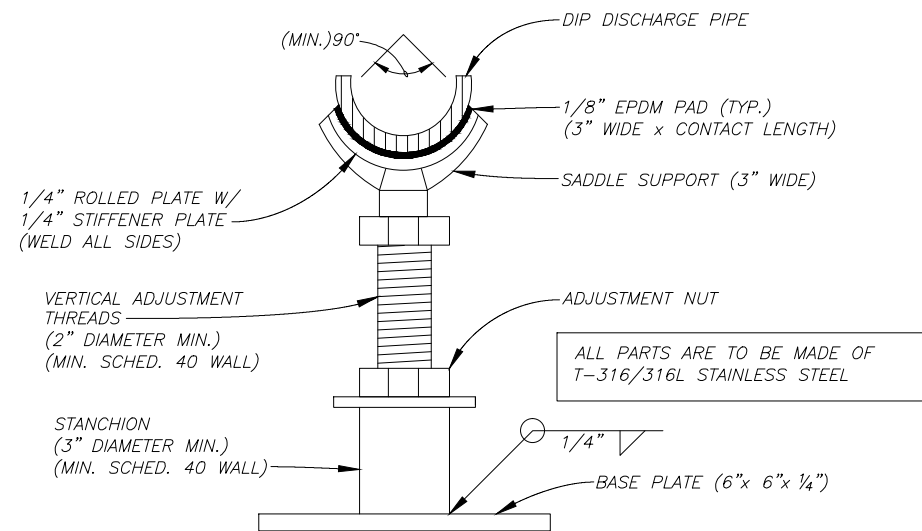
ANCHOR BOLT DETAIL

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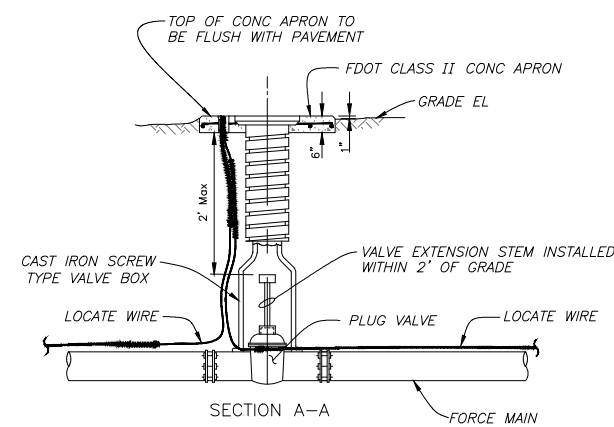
INTERMEDIATE GUIDE BAR BRACKETS

N.T.S.



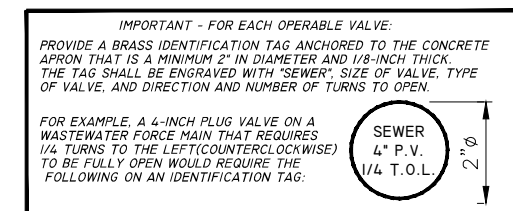
SECTION VIEW - STAINLESS STEEL STANCHION SADDLE SUPPORT

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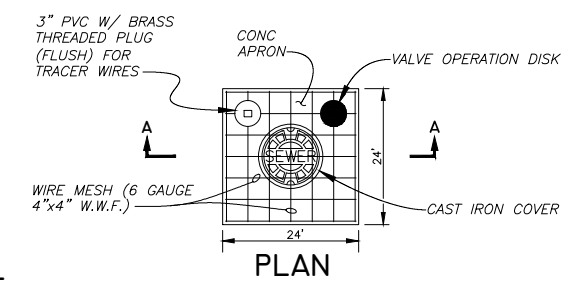
VALVE BOX DETAIL

NOT TO SCALE



VALVE OPERATION DISK

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PLAN

User: sst1 Drawing Name: K:\WW Projects\2017\2017-5980_Airport FS Replacement\Uwg\PLAN\Sheet-13-1.dwg Date: 2/16/18

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DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

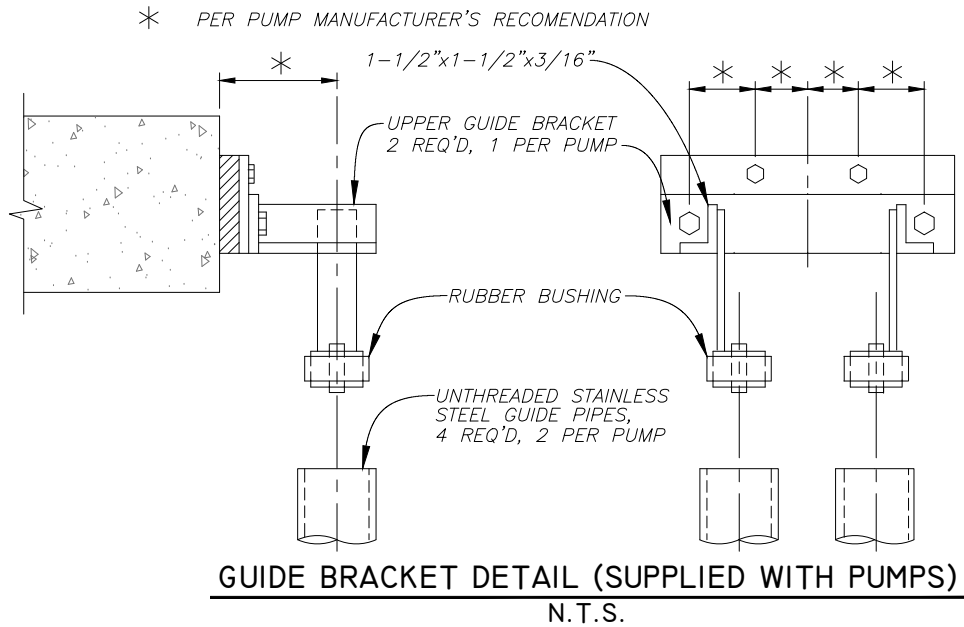
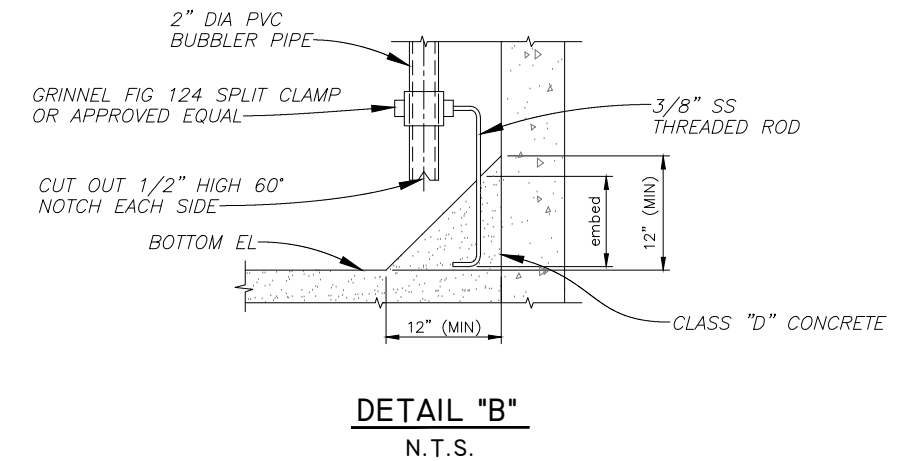
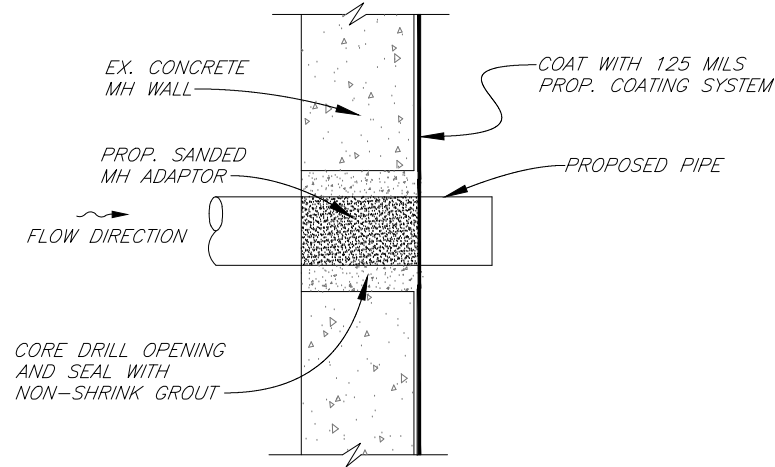
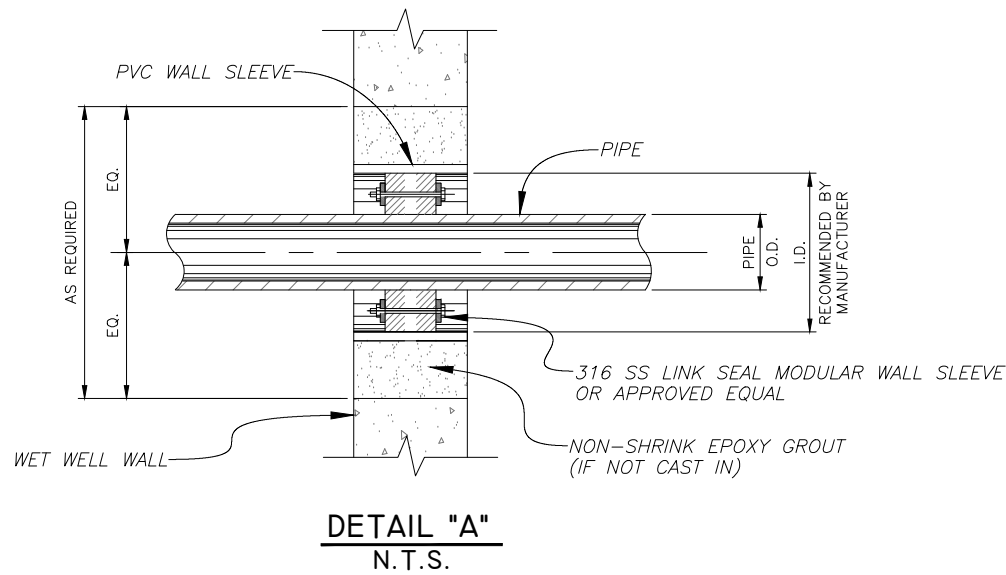
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CITY of TAMPA
WASTEWATER DEPARTMENT

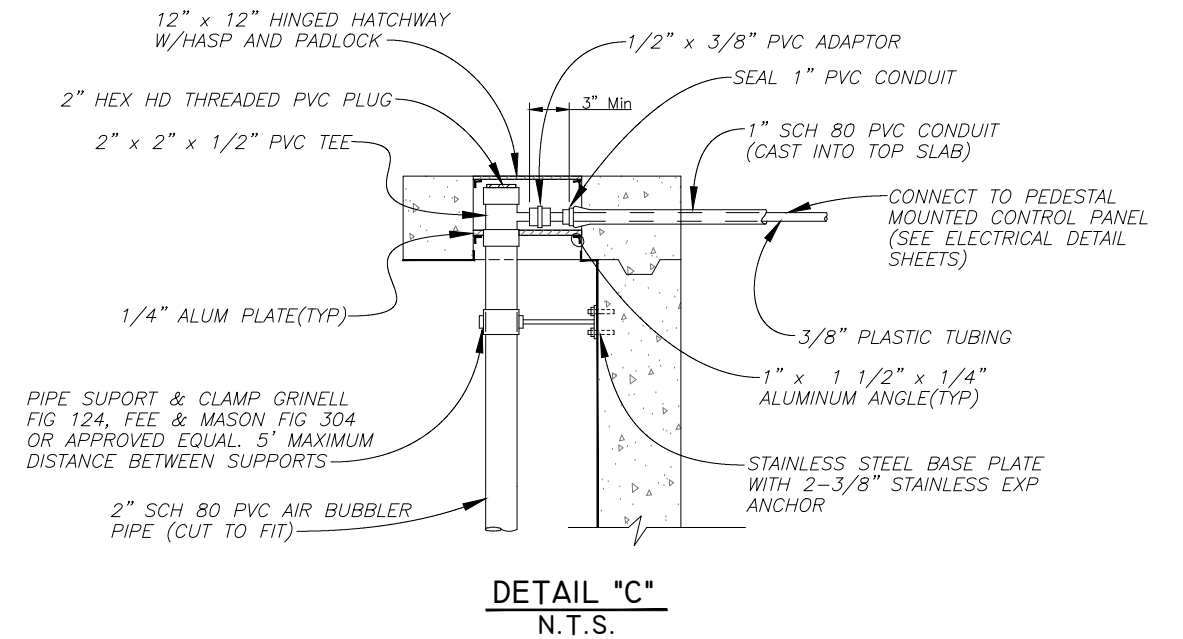
TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
MISCELLANEOUS DETAILS

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User: sst/ Drawing Name: K:\WWW\Projects\LU12\Sub-Airport PS Replacement\DWG\Sheet-13-11.dwg
 Layout: Sheet 14, Last Saved: Feb 18, 2016 1:33pm



WALL PENETRATION DETAIL
N.T.S.



NOTE: ALL P.V.C. TO BE SCH. 80

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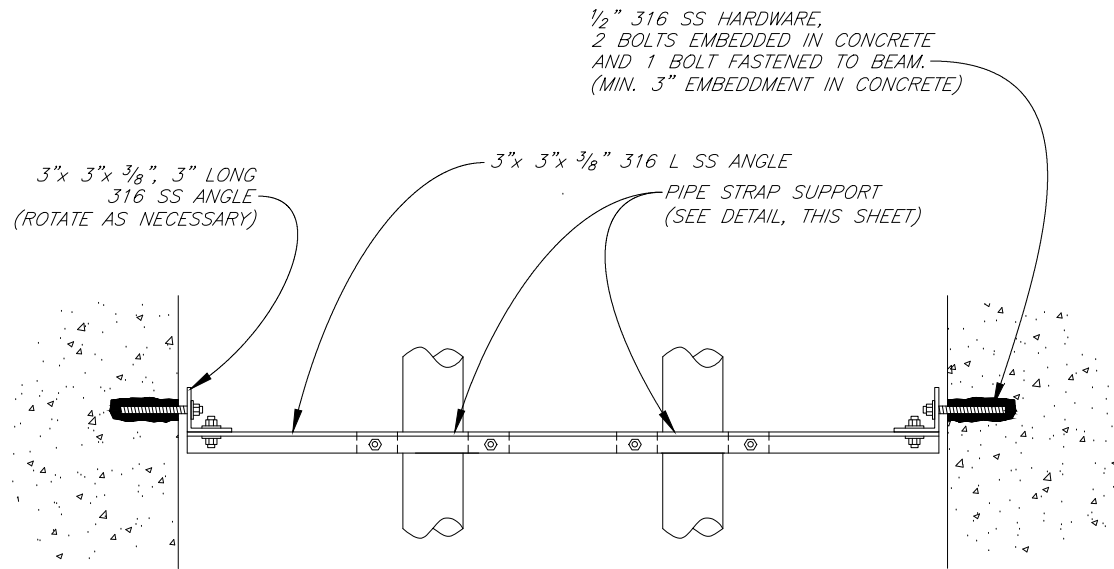
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CITY of TAMPA
WASTEWATER DEPARTMENT

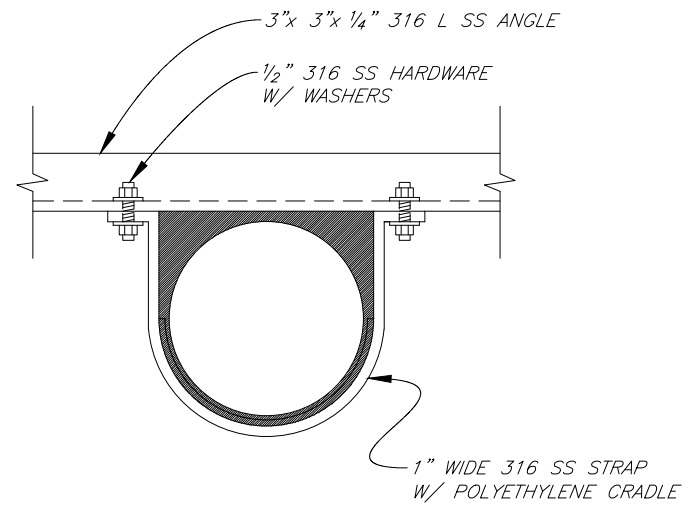
TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
MISCELLANEOUS DETAILS

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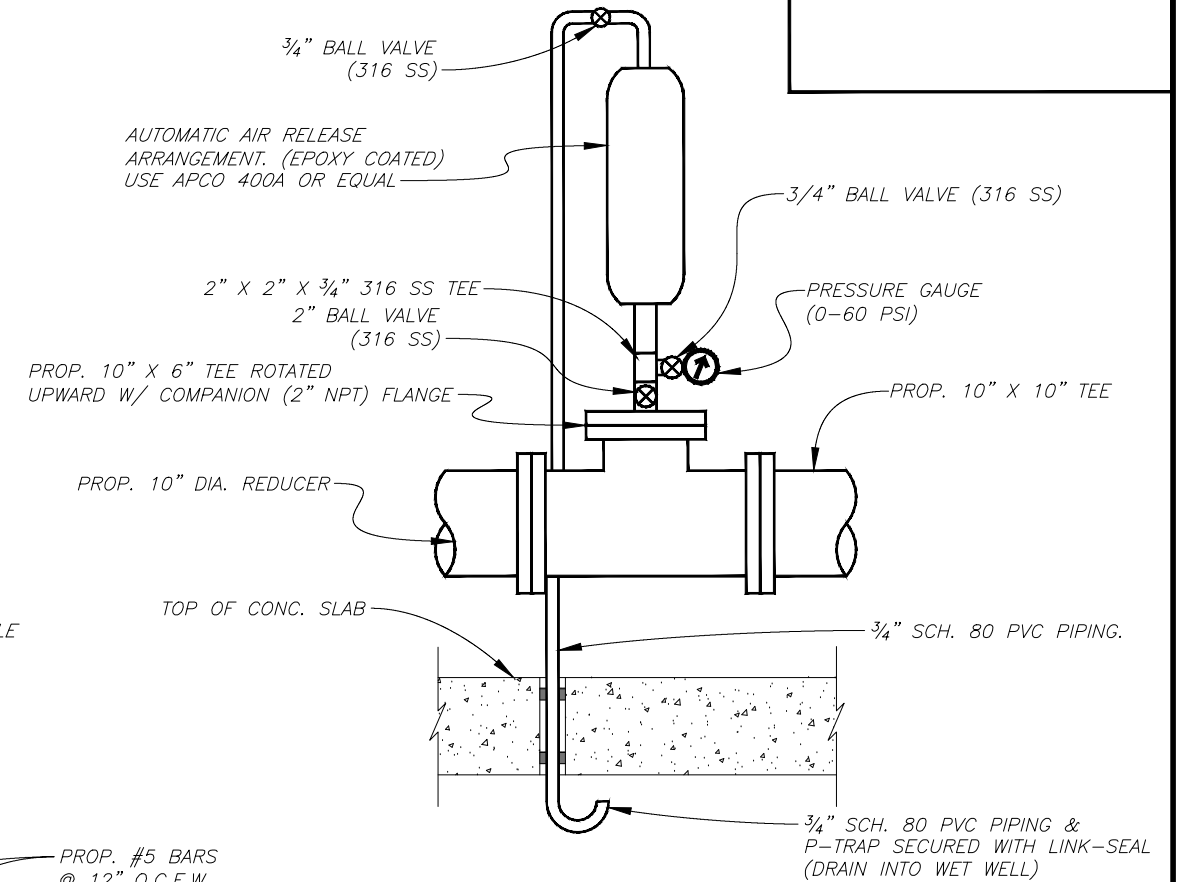
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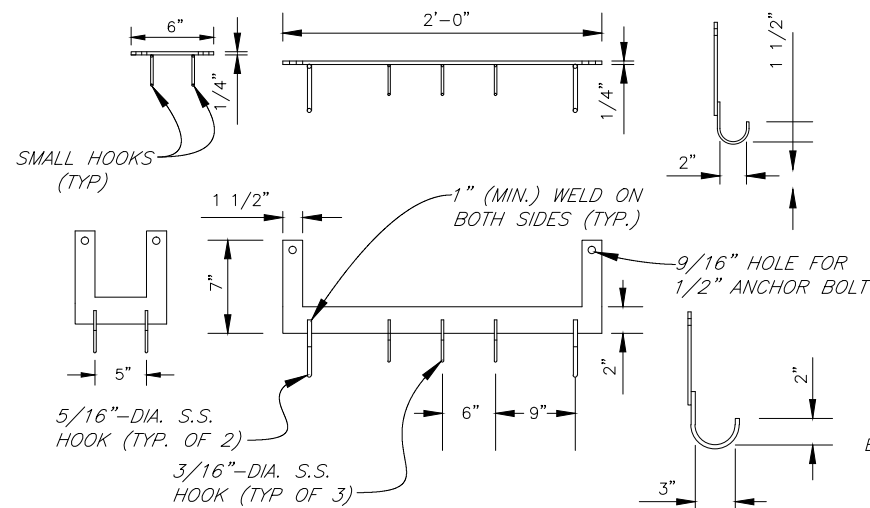
PIPE SUPPORT ASSEMBLY
N.T.S.



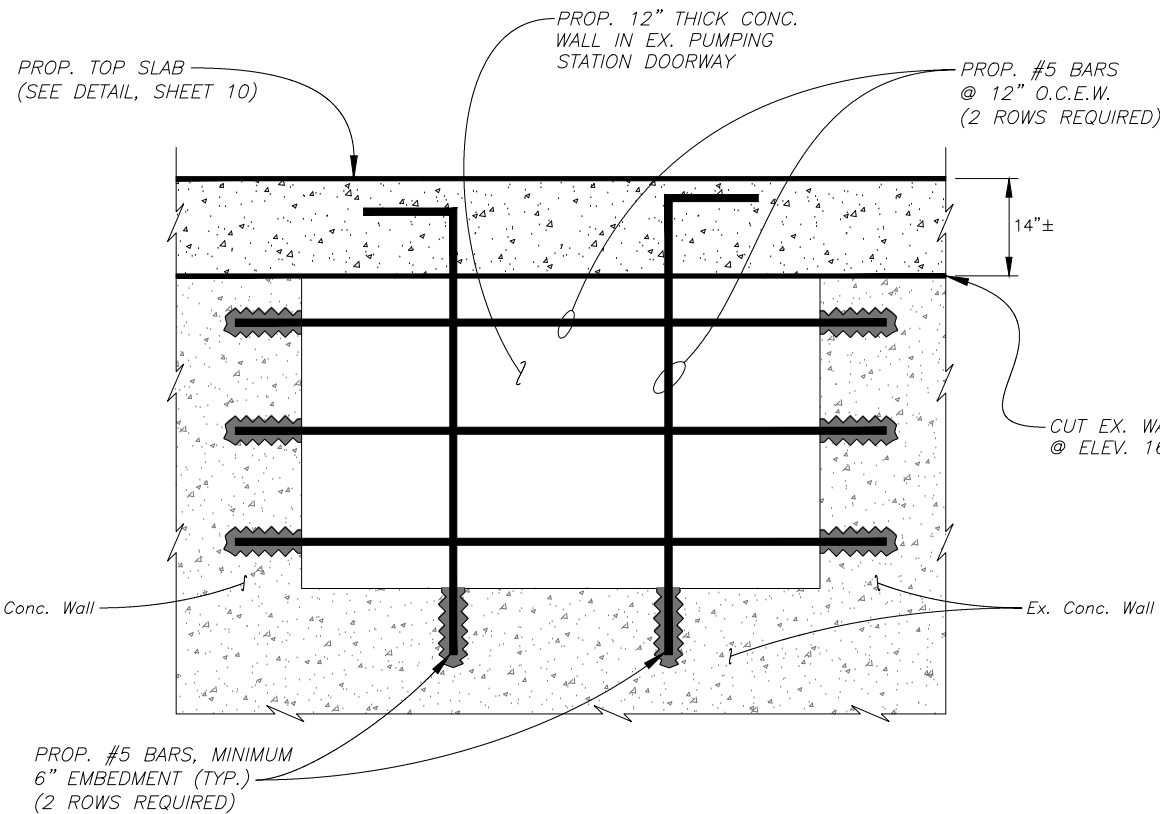
PIPE STRAP SUPPORT
N.T.S.



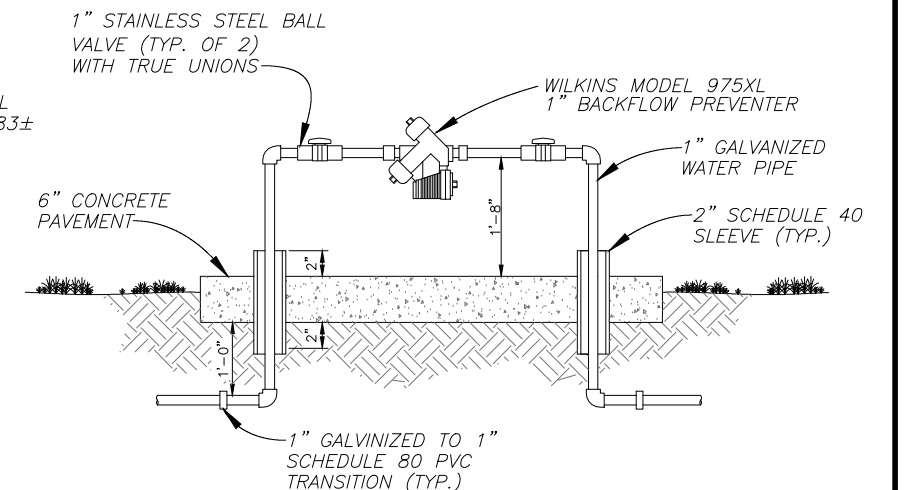
AIR RELEASE DETAIL
N.T.S.



PROP. STAINLESS STEEL HOOK RACKS
N.T.S.



PROPOSED WALL DETAIL AT EXISTING DOOR OPENING
N.T.S.



BACKFLOW PREVENTER DETAIL
N.T.S.

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CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
MISCELLANEOUS DETAILS

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15

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

NOTES

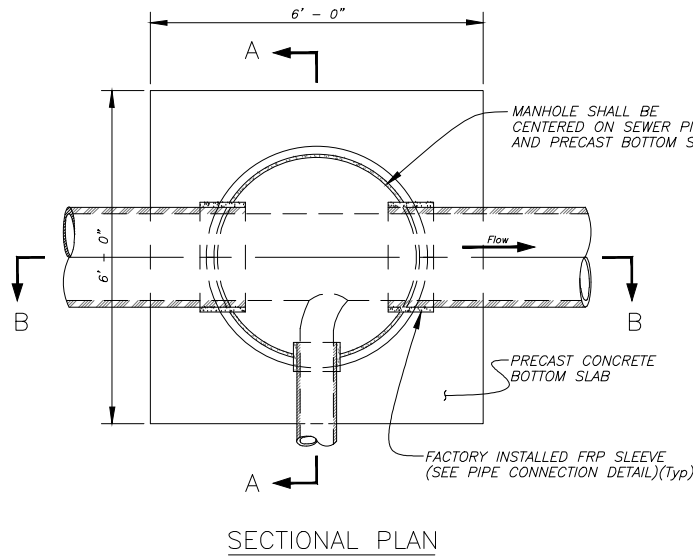
- FIBERGLASS REINFORCED POLYESTER (FRP) MANHOLES SHALL CONFORM TO ASTM D-3753 LATEST EDITION.
- THE MANHOLE BOTTOM SHALL BE INTEGRALLY JOINED TO THE BARREL SECTION AND SHALL BE A MINIMUM OF 1/2" THICK. TO ALLOW THE MANHOLE TO BE ANCHORED TO THE PRECAST BOTTOM SLAB, THE MANHOLE BOTTOM SHALL EXTEND 3 INCHES BEYOND THE OUTER EDGE OF THE BARREL.
- FRP MANHOLES SHALL BE ANCHORED TO THE PRECAST CONCRETE BOTTOM SLAB WITH HILTI 316 STAINLESS STEEL KWIK BOLT II WEDGE ANCHORS OR APPROVED EQUAL. THE SIZE, NUMBER OF ANCHORS, EMBEDMENT DEPTH, ETC. SHALL BE AS INDICATED IN TABLE "A" AND SHALL BE BASED ON THE DEPTH OF THE MANHOLE. THE DEPTH OF THE MANHOLE SHALL BE MEASURED FROM THE RIM ELEVATION TO THE BOTTOM OF THE MANHOLE. THE ANCHORS SHALL BE INSTALLED A MINIMUM OF 1-1/2" FROM THE OUTER EDGE OF THE ANCHORING FLANGE AND SHALL BE EQUALLY SPACED AROUND THE CIRCUMFERENCE OF THE MANHOLE.
- SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENTS AND COMPACTION OF PIPE AND STRUCTURE BEDDING.
- ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATERTIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.

TECHNICAL DATA FOR HILTI 316 S.S. KWIK BOLT II
ANCHOR BOLT SIZE

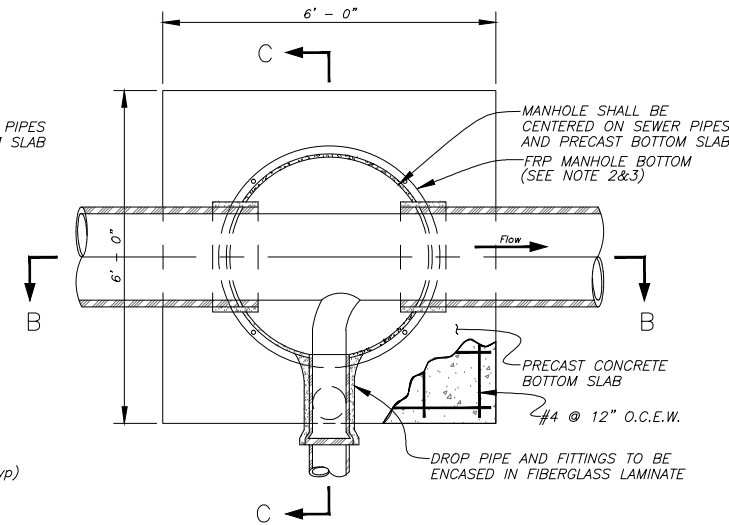
| | | | |
|----------------------------------|-------|------|-------|
| | 1/2" | 5/8" | 3/4" |
| MINIMUM PULL-OUT CAPACITY (LBS): | 2130 | 2930 | 3870 |
| MINIMUM EMBEDMENT DEPTH (IN): | 3 1/2 | 4 | 4 3/4 |

* ABOVE DATA IS BASED ON 4000 PSI CONCRETE

| MANHOLE DEPTH (FT) | ANCHOR SIZE (IN) | NUMBER OF ANCHORS |
|--------------------|------------------|-------------------|
| 0 - 5 | 1/2 | 4 |
| 5 - 10 | 1/2 | 6 |
| 10 - 15 | 5/8 | 6 |
| 15 - 20 | 3/4 | 6 |
| 20 - 25 | 3/4 | 8 |



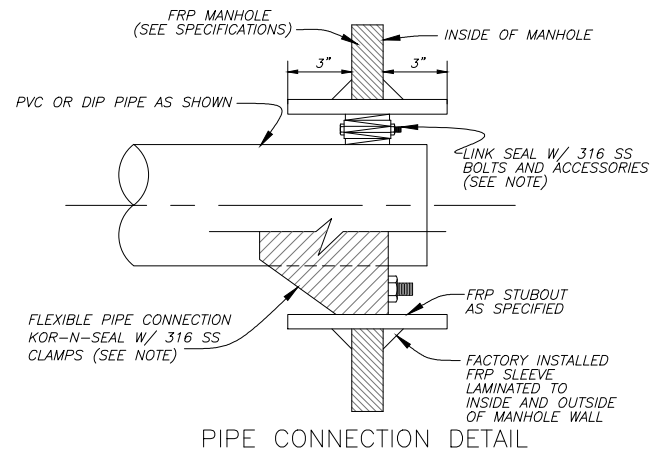
SECTIONAL PLAN



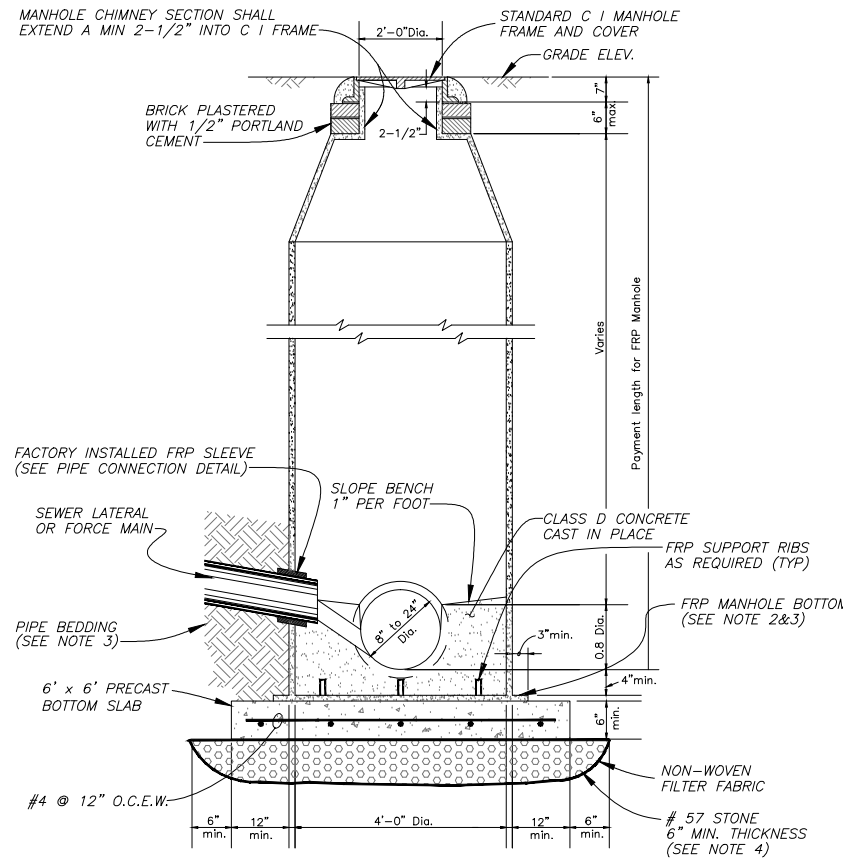
SECTIONAL PLAN
FRP DROP MANHOLE

| INLET PIPE DIAMETER "D" | DROP PIPE DIAMETER "d" |
|-------------------------|------------------------|
| 8" | 8" |
| 10" | 8" |
| 12" | 10" |
| 15" | 12" |
| 18" | 15" |
| 21" | 18" |
| 24" | 18" |
| 27" | 18" |

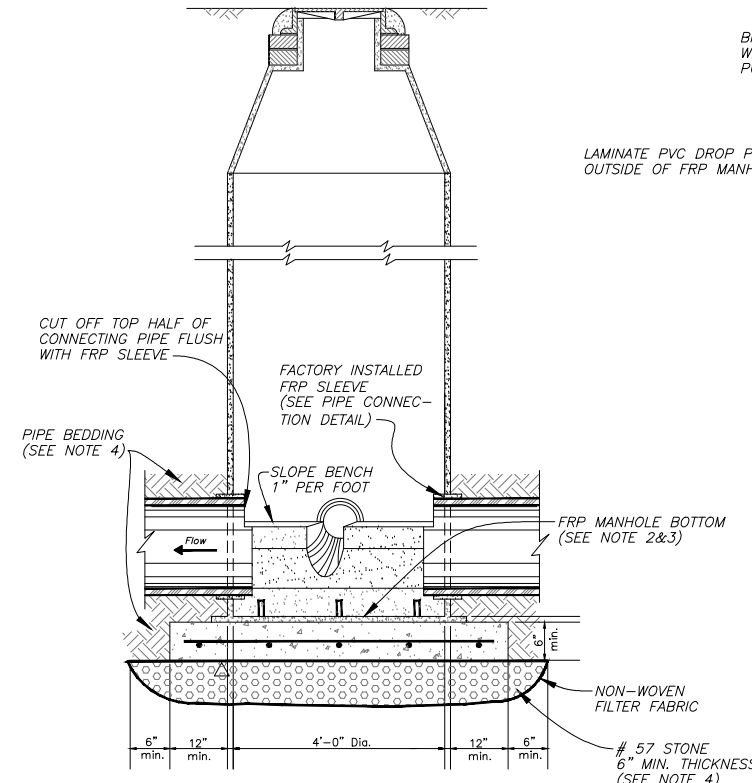
NOTE:
PRE-CAST BOTTOM SLAB AS SHOWN IN THESE DETAILS WILL NOT APPLY TO THIS PROJECT.



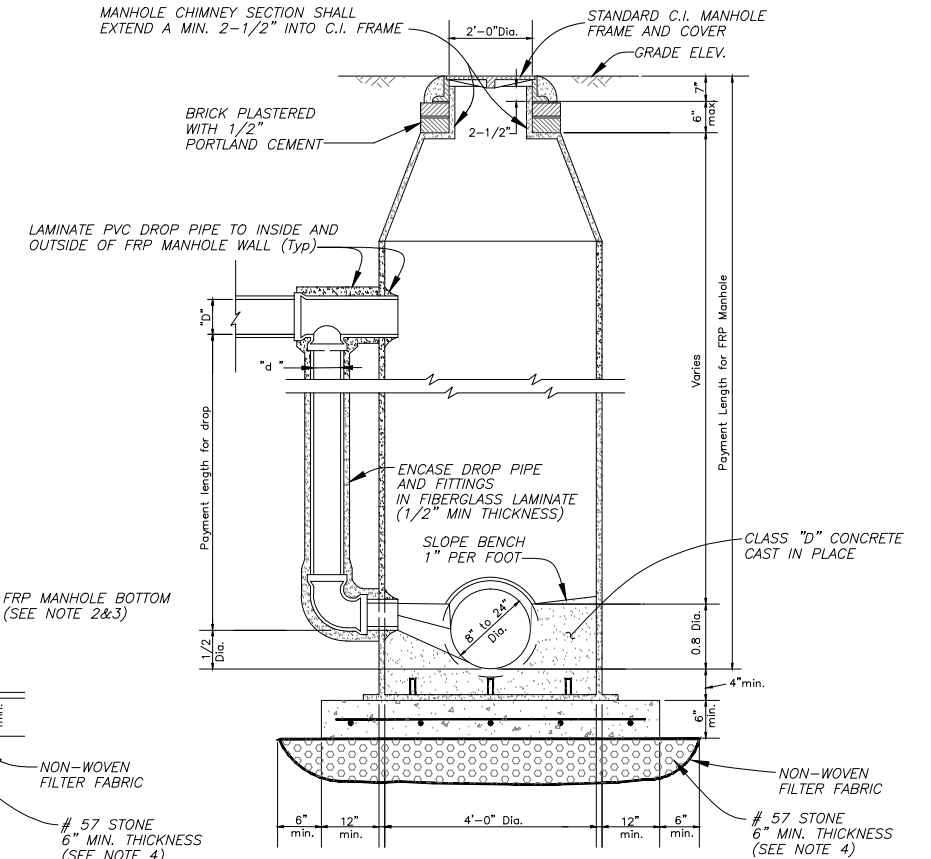
NOTE:
FORCE MAIN PIPE CONNECTIONS TO FRP MANHOLES SHALL BE MADE WITH "LINK SEAL."
GRAVITY SEWER PIPE CONNECTIONS SHALL BE MADE WITH "KOR-N-SEAL."



SECTION A-A



SECTION B-B



SECTION C-C

User: ss11, Drawing Name: K:\WWW\Projects\2015\2015_0900_Airport PS Replacement\Wg\PLAN\Sheet-13-1-1.dwg, Layout: Sheet 16, Last Saved: Feb 18, 2016, 1:30pm

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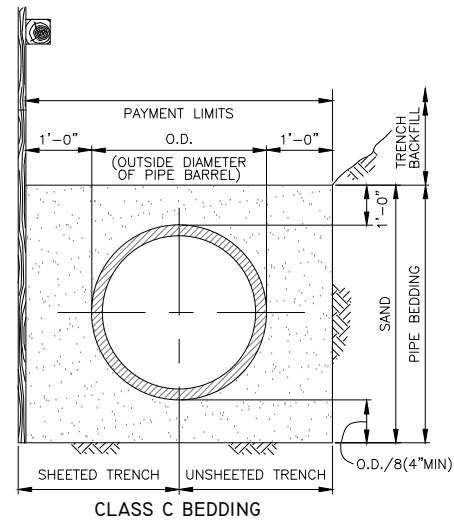
CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
FIBERGLASS MANHOLE DETAILS

W.O.1000088
SHEET
16

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

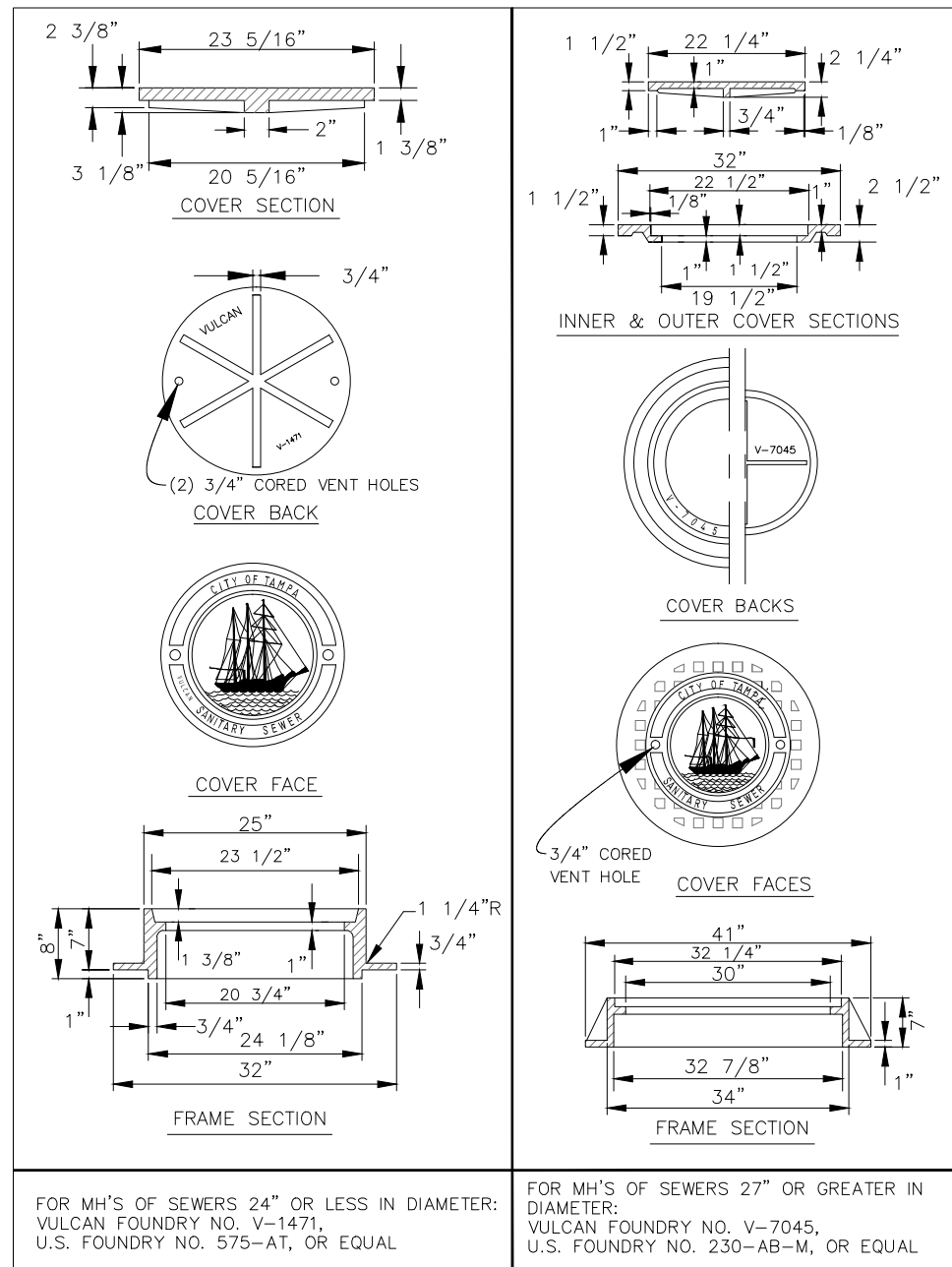
User: ss/1 Drawing Name: K:\WWW\Projects\LU13\LU13_0000_AIRPORT_RS_replacement\DWG\LU13\Sheet-13-11.dwg
 Layout: Sheet 17, Last Saved: Feb 18, 2016 1:33pm



NOTES:

1. ALL TYPES OF PIPE BEDDING SHALL EXTEND TO UNDISTURBED EARTH AT SIDES AND BOTTOM OF THE TRENCH.
2. SAND AND CRUSHED STONE PIPE BEDDING SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.

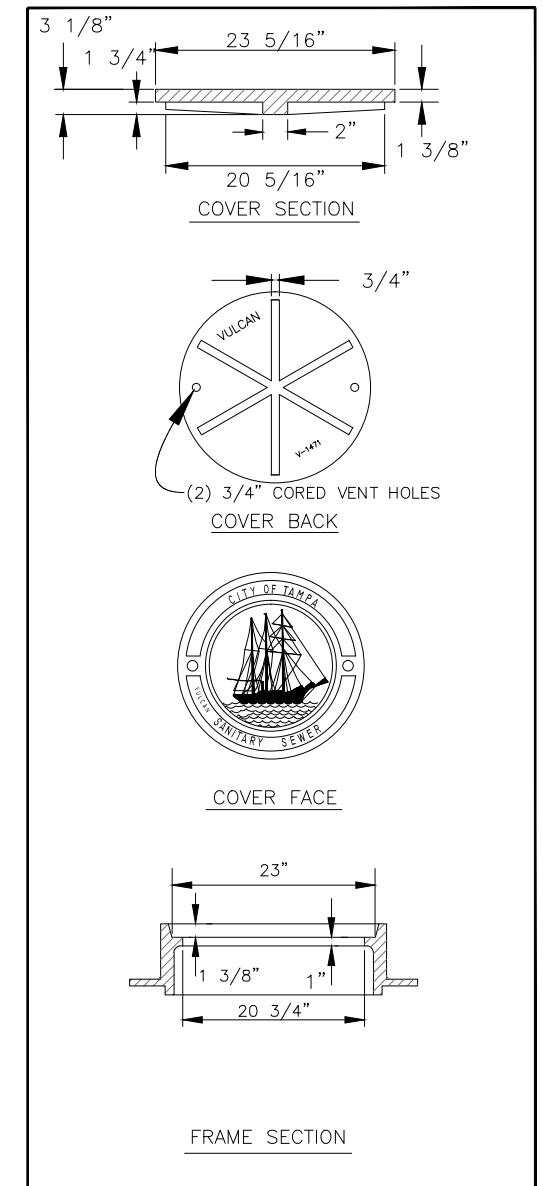
PIPE BEDDING DETAILS
N.T.S.



FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER:
VULCAN FOUNDRY NO. V-1471,
U.S. FOUNDRY NO. 575-AT, OR EQUAL

FOR MH'S OF SEWERS 27" OR GREATER IN DIAMETER:
VULCAN FOUNDRY NO. V-7045,
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

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



HEAVY DUTY CAST IRON
MANHOLE FRAME & COVER
DETAILS

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

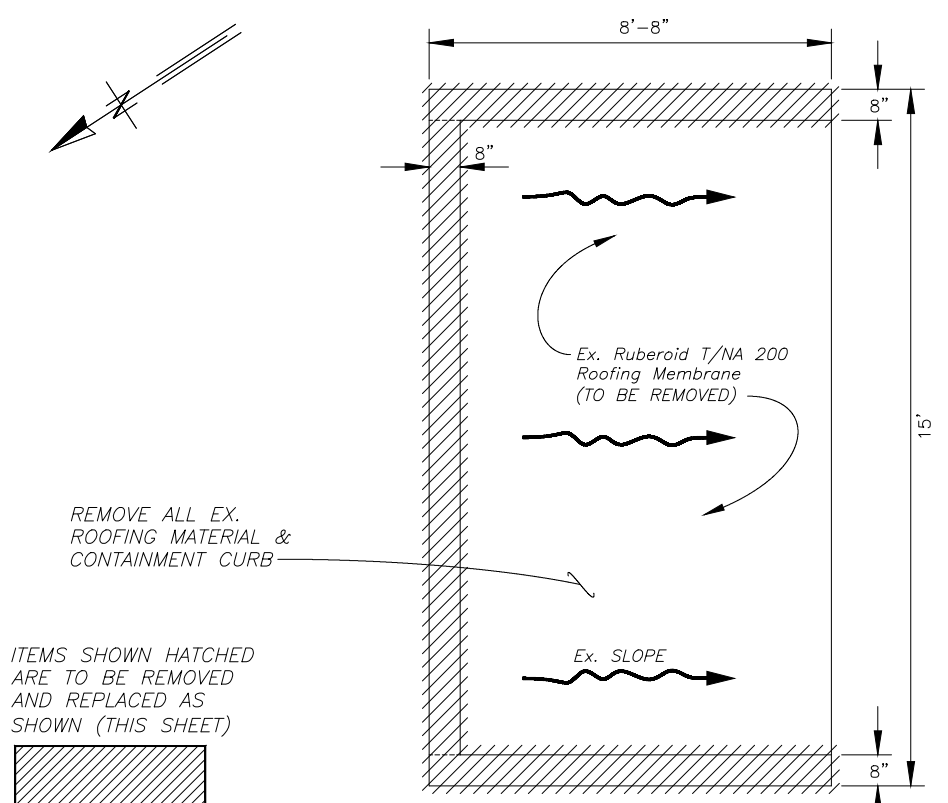
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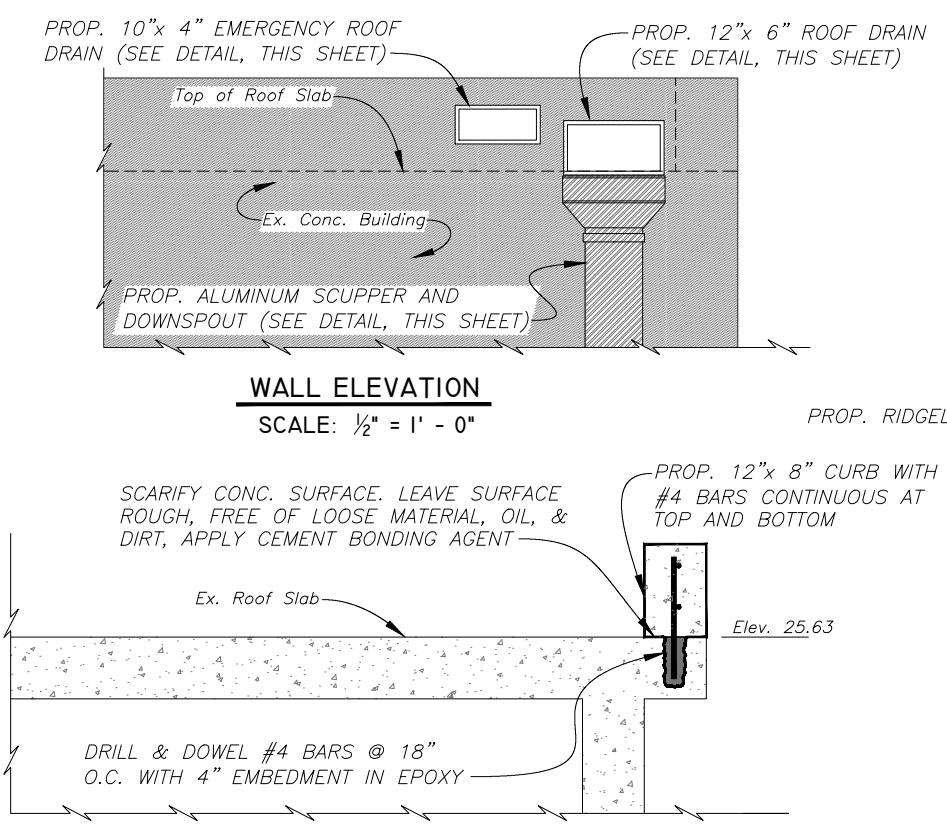
CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION REHABILITATION
BEDDING AND COVER DETAILS

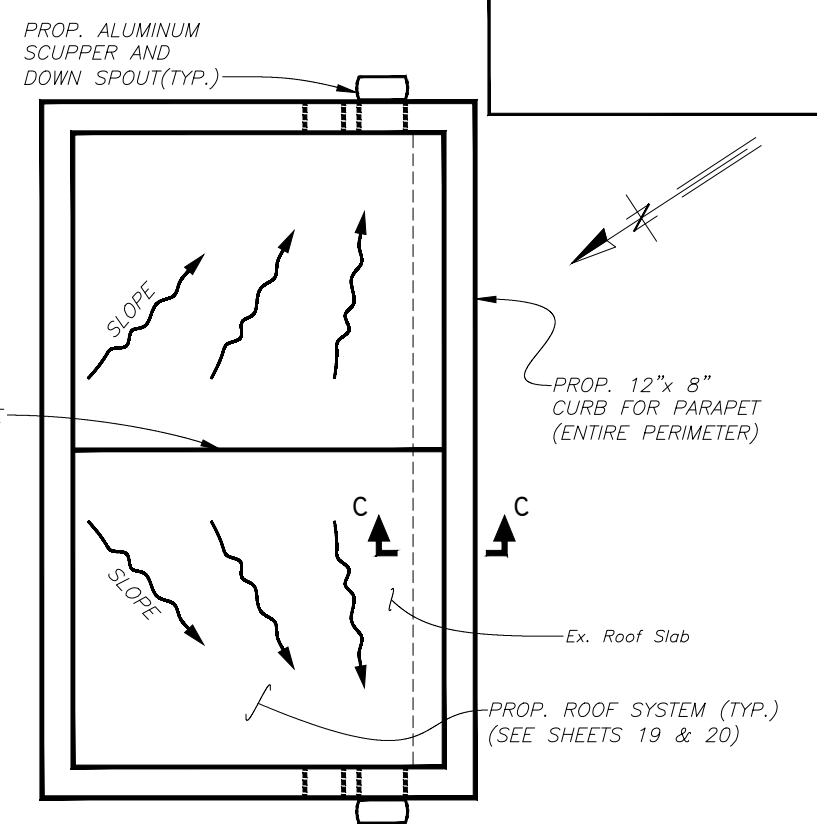
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17



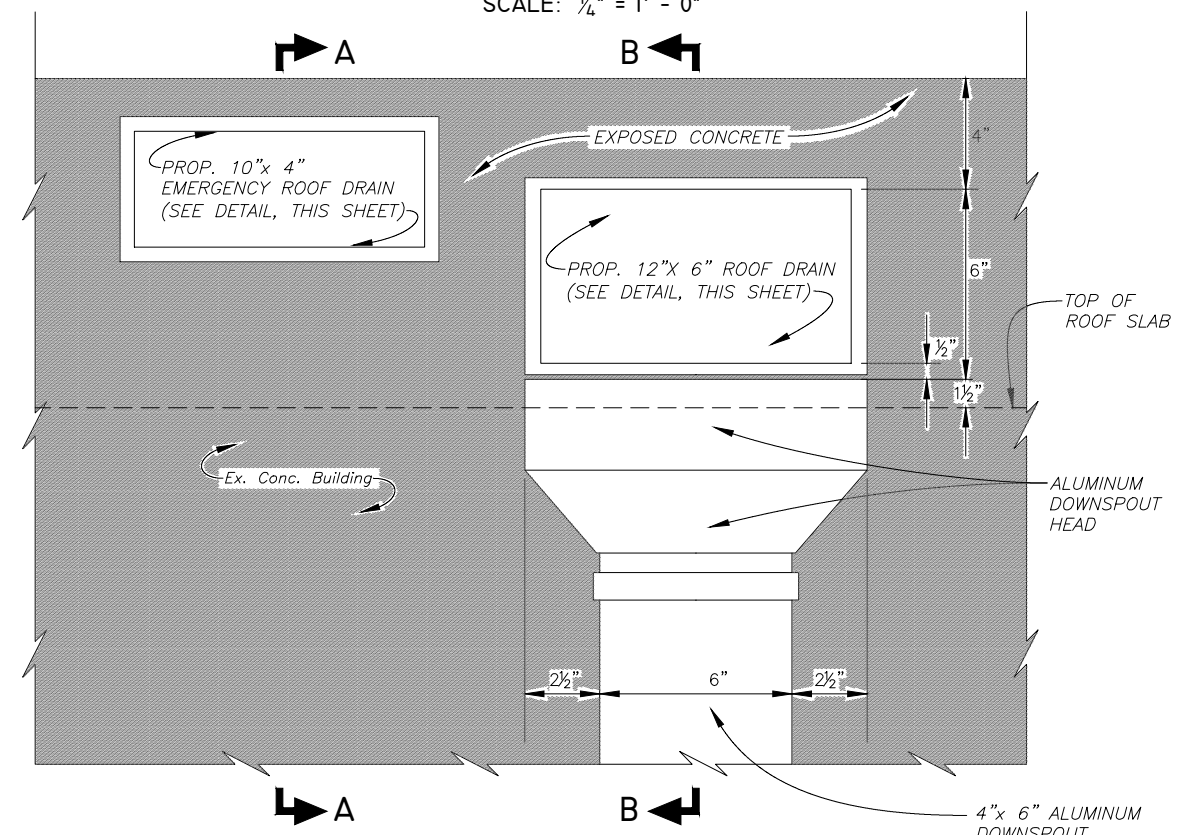
EXISTING GENERATOR ROOM ROOF - PLAN VIEW
SCALE: 1/4" = 1' - 0"



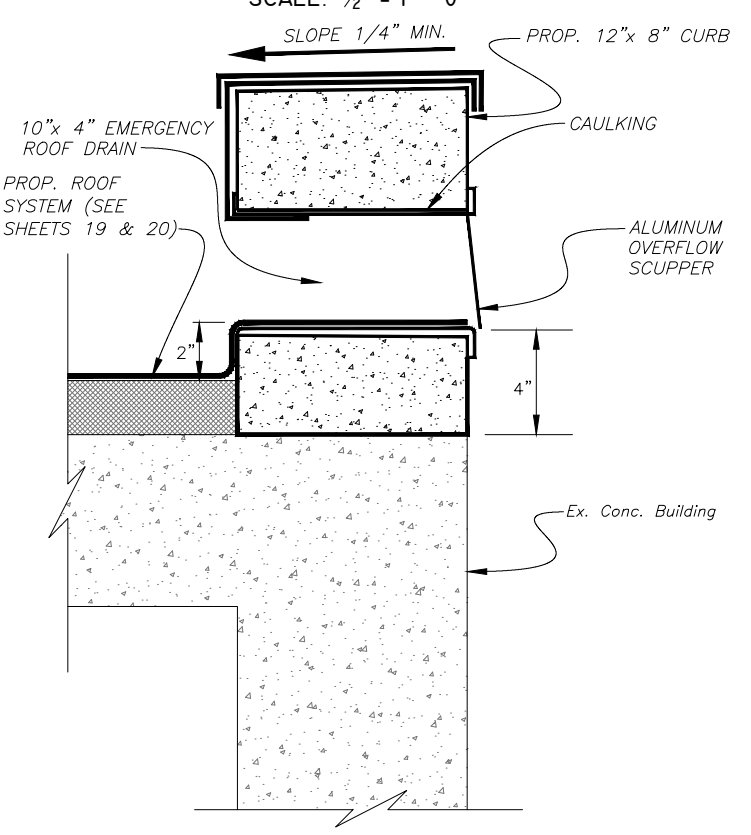
WALL ELEVATION
SCALE: 1/2" = 1' - 0"



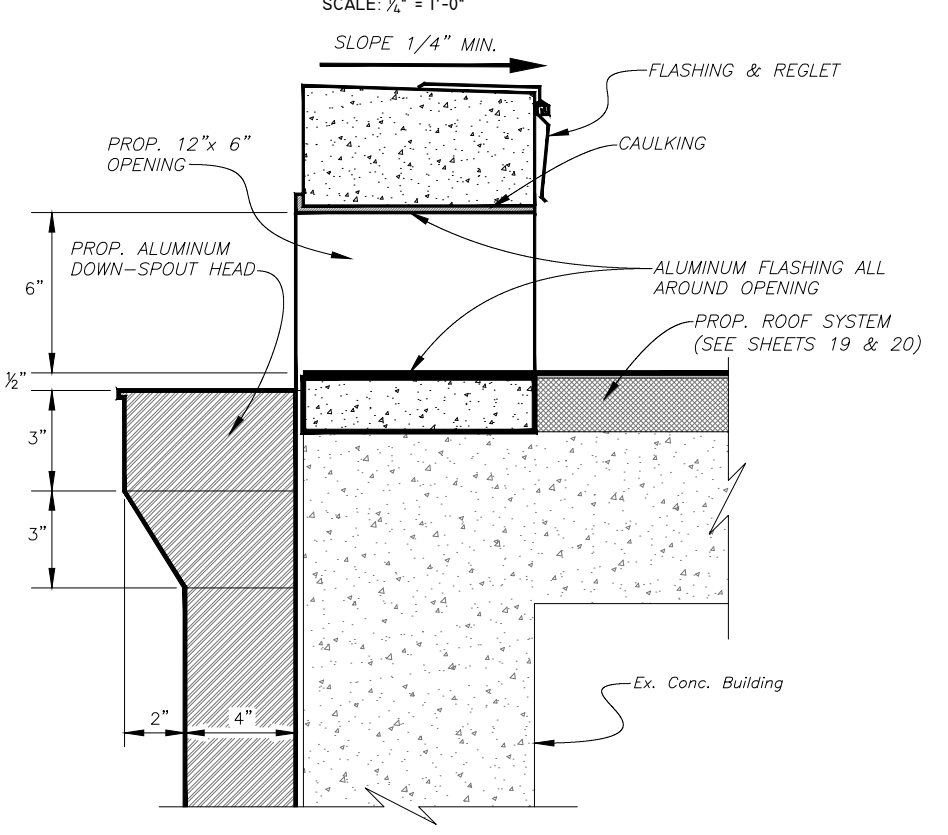
PROPOSED GENERATOR ROOM - PLAN VIEW
SCALE: 1/4" = 1' - 0"



SCUPPER & DOWNSPOUT DETAIL
NOT TO SCALE



PROPOSED ROOF EMERGENCY DRAIN - SECTION A-A
NOT TO SCALE



SCUPPER & DOWNSPOUT - SECTION B-B
NOT TO SCALE

DATE: 01/12/2015 11:45am
 DRAWN BY: JCF
 CHECKED BY: JCF
 PROJECT: TAMPA INTERNATIONAL AIRPORT MAIN PUMP STATION REHABILITATION
 SHEET: 18 OF 18
 SCALE: AS SHOWN
 DESIGNED BY: JCF
 PROJECT MANAGER: JCF
 PROJECT ENGINEER: JCF
 PROJECT ARCHITECT: JCF
 PROJECT CONSULTANT: JCF
 PROJECT CONTRACTOR: JCF
 PROJECT OWNER: JCF
 PROJECT LOCATION: TAMPA INTERNATIONAL AIRPORT
 PROJECT NUMBER: 1000088
 PROJECT DATE: 01/12/2015

JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

| No. | DATE | REVISIONS |
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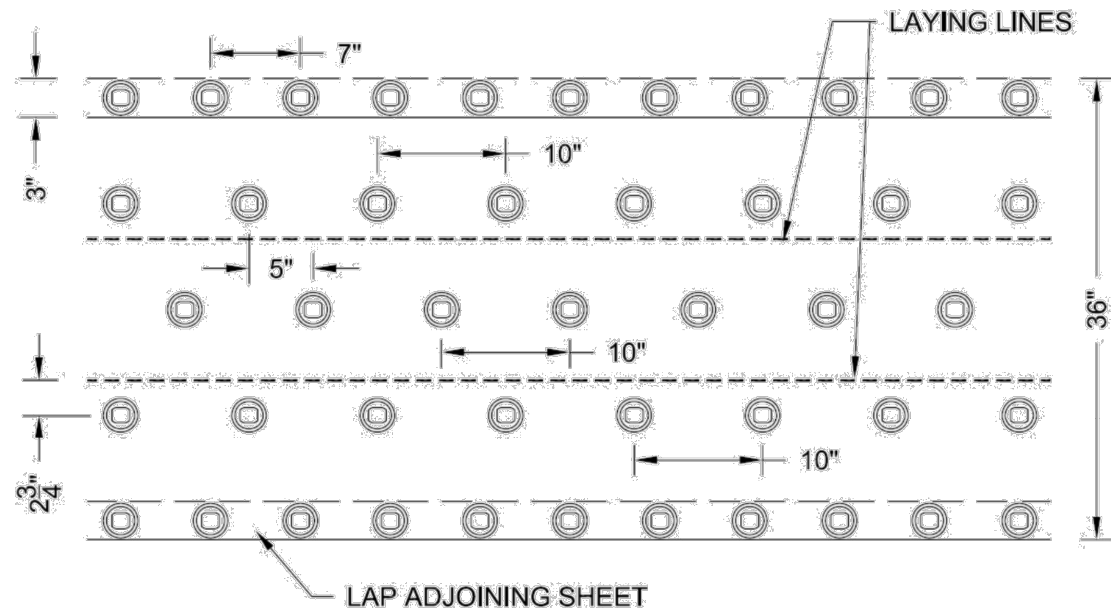
DES: M.S.
 DRN: BB
 CKD:
 DATE:

CITY of TAMPA
 WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMPING STATION REHABILITATION
 PROPOSED GENERATOR BUILDING ROOF SYSTEM DETAILS

W.O.1000088
 SHEET
18

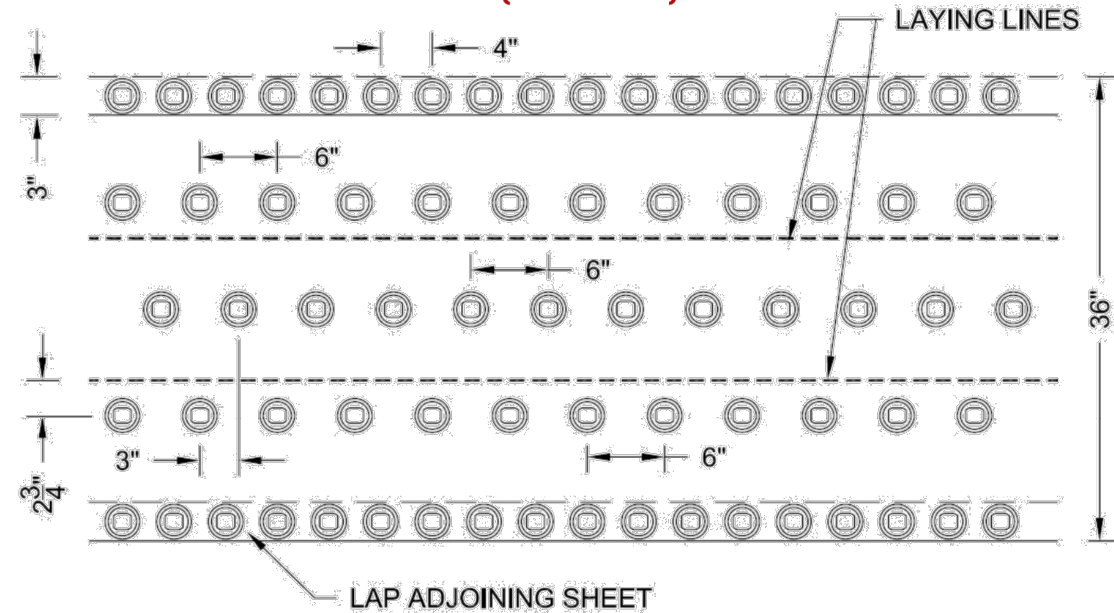
Field



LAP ADJOINING SHEET

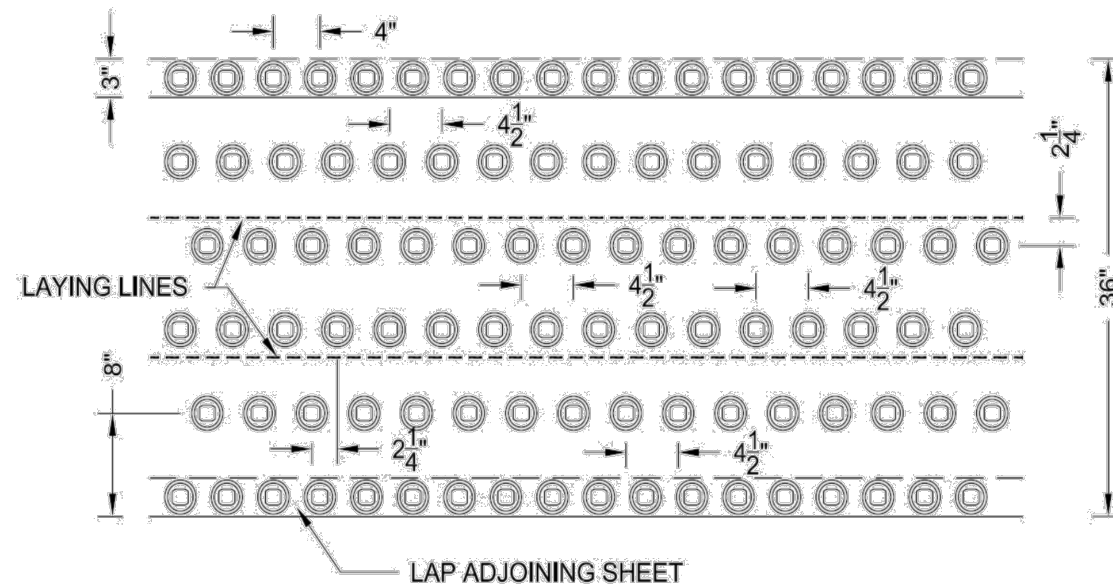
- 7" through side laps
- 3 rows in the field with fastener spacing in each row on 10" centers
- Approx. 191 fasteners / square

Perimeter (10' wide)



LAP ADJOINING SHEET

- 4" through side laps
- 3 rows in the field with fastener spacing in each row on 6" centers
- Approx. 325 fasteners / square



LAP ADJOINING SHEET

Corner (10' x 10')

- 4" through side laps
- 4 rows in the field with fastener spacing in each row on 4-1/2" centers
- Approx. 497 fasteners / square

BASE SHEET FASTENING PATTERN (DETAIL #4)

NOT TO SCALE

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 Layout - Jan 12, 2015 - 11:45am CTB - MONOCHROME.CTB

JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

| No. | DATE | REVISIONS |
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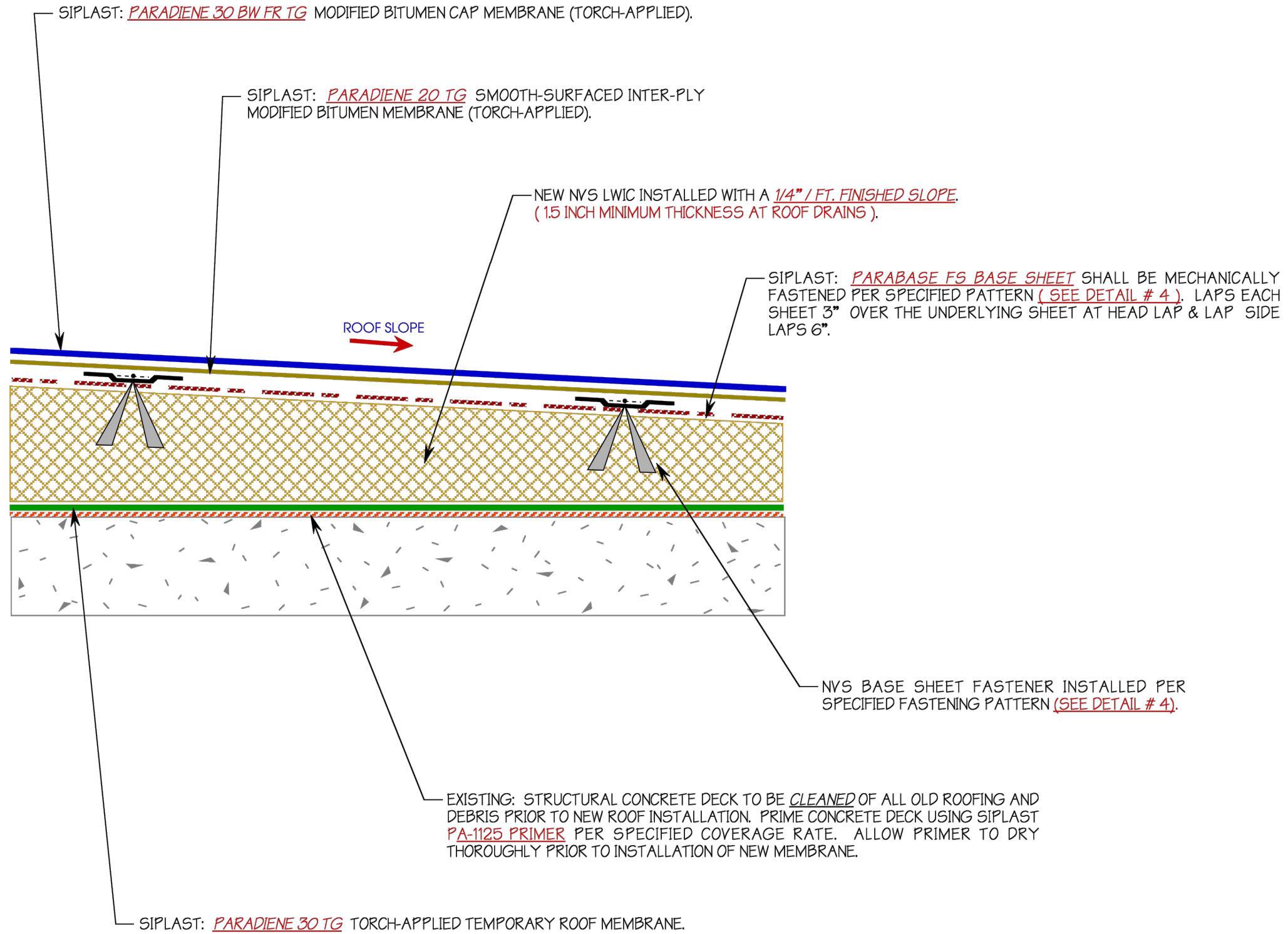
CITY of TAMPA
 WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMPING STATION REHABILITATION
 BASE SHEET FASTENING PATTERN

W.O.1000088

SHEET
19

User: ssgz Drawing Name: K:\WWP - Projects\2015\2015_0501_Airport PS Replacement\Uwg\5_6_Uemo Plan & Elev_Airport Main PS.dwg
 Date: 12/20/15
 11/25/2015
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PROPOSED ROOF SYSTEM (TYP.)
 NOT TO SCALE

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|---|-----|------|-----------|-----------|--|---|-------------|
| JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT | No. | DATE | REVISIONS | DES: M.S. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION REHABILITATION PROPOSED ROOF SYSTEM (TYP.) | W.O.1000088 |
| | 3 | | | DRN: BB | | | SHEET |
| | 2 | | | CKD: | | | 20 |
| | 1 | | | DATE: | | | |

———— CONDUIT RUN EXPOSED
 ———— CONDUIT RUN CONCEALED UNDERGROUND
 ————— CONDUIT RUN CONCEALED IN FLOOR OR SLAB
 — g — g — GROUNDING ELECTRODE CONDUCTOR


┌—— CONDUIT STUB OUT AND CAP

⊙ GROUND ROD

○ JUNCTION BOX

⌒ JUNCTION BOX WITH FLEXIBLE CONNECTION

480V
15 KVA, 1*
120/240V



TRANSFORMER, 480V INDICATED PRIMARY VOLTAGE, 120/240V INDICATES SECONDARY VOLTAGE, 15 KVA REPRESENTS POWER RATING, AND 1* INDICATES SINGLE PHASE (THREE PHASE IF NOT INDICATED)

3P
30A



THERMAL MAGNETIC CIRCUIT BREAKER WITH NUMBER OF POLES AND AMPERE RATING

COMBINATION MAGNETIC STARTER WITH CONTROL POWER TRANSFORMER (SIZED FOR LOAD). LETTERS INDICATE TYPE :

N - NON-REVERSING
 R - REVERSING
 2S - TWO-SPEED
 C - CONTACTOR
 SS - SOLID STATE SOFT START

| XXX | XXX DEVICE | DESCRIPTION |
|-----|------------|------------------------------------|
| | HLS | HIGH LEVEL SWITCH |
| | HOA | HAND-OFF-AUTO |
| | LD | LEAK DETECTION |
| | LLS | LOW LEVEL SWITCH |
| | LOR | LOCAL-OFF-REMOTE |
| | PB | PUSH BUTTON |
| | RTU | REMOTE TERMINAL UNIT |
| | SS | SOFT STARTER |
| | SS/B | SOFT START OR BYPASS |
| | TS | TEMPERATURE SWITCH |
| | TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSOR |
| | ZS | POSITION SENSOR (LIMIT SWITCH) |

⌒ FUSE

⊙ XX MOTOR

⌒ THERMAL OVERLOAD

⊙ UTILITY METER

⌒ TRANSFER SWITCH

□ ELECTRIC PANELBOARD

⌒ DISCONNECT OR SAFETY SWITCH

⌒ FLOAT SWITCH. OPENS ON LOW LEVEL.

⌒ FLOAT SWITCH. CLOSES ON LOW LEVEL.

⌒ NORMALLY OPEN (N.O.) CONTACT

⌒ NORMALLY CLOSED (N.C.) CONTACT

⌒ GROUND CONNECTION

⊙ R INDICATING PILOT LIGHT LETTER INDICATES COLOR OF LENS

⌒ DISCONNECT OR TOGGLE SWITCH

⌒ NORMALLY OPEN MOMENTARY CIRCUIT CLOSING PUSH-BUTTON SWITCH. SPRING OPEN. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

⌒ NORMALLY CLOSED MOMENTARY CIRCUIT OPENING PUSH-BUTTON SWITCH. SPRING CLOSE. NUMBER OF ELECTRICAL CONTACTS ON SWITCH SHOWN ON CONTROL SCHEMATIC

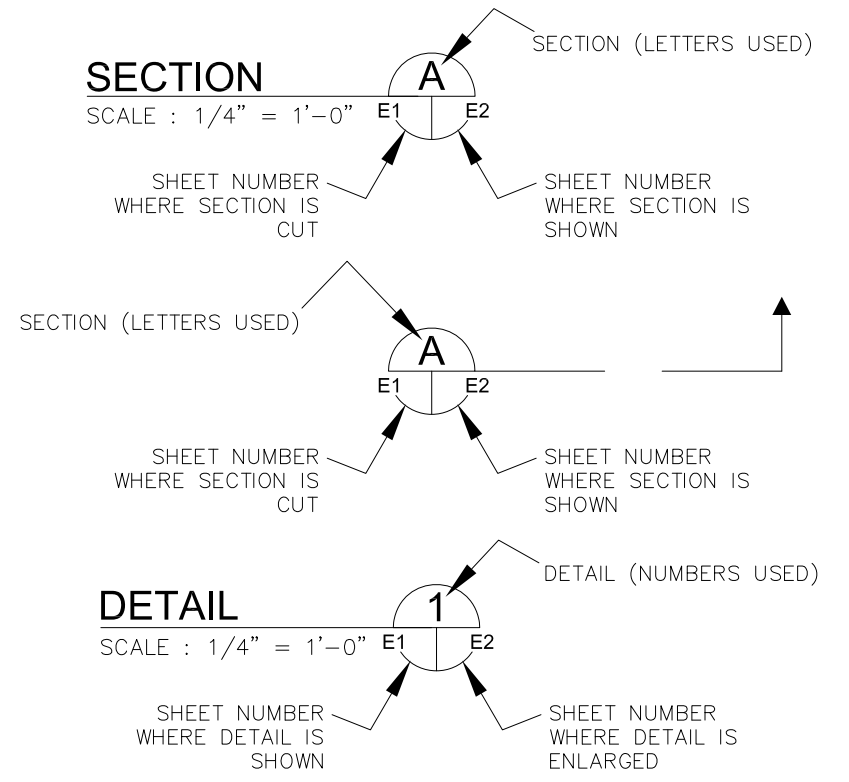
⌒ LIMIT SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

⌒ TORQUE SWITCH NORMALLY CLOSED CONTACT. CONTACT OPENS WHEN ACTUATED

⌒ PUMP THERMAL SENSOR

⊙ (H) MECHANICAL HEAT DETECTOR

EXAMPLE OF SECTION CUT AND DETAIL



ABBREVIATIONS:

| | |
|------|--------------------------|
| A | AMPS |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| ATL | ACROSS-THE-LINE |
| C | CONDUIT |
| CU | COPPER |
| EX | EXISTING |
| ELEC | ELECTRICAL |
| EXP | EXPLOSION PROOF |
| FU | FUSE |
| GFI | GROUND FAULT INTERRUPTER |
| GND | GROUNDING CONDUCTOR |
| HP | HORSEPOWER |
| HZ | HERTZ |
| IG | ISOLATED GROUND |
| KVA | KILOVOLT AMPERES |
| KW | KILOWATTS |
| MAX | MAXIMUM |
| MIN | MINIMUM |
| N/A | NOT APPLICABLE |
| PH | PHASE |
| RECP | RECEPTACLE |
| RPM | REVOLUTIONS PER MINUTE |
| RTU | REMOTE TERMINAL UNIT |
| SPD | SURGE PROTECTION DEVICE |
| TYP | TYPICAL |
| V | VOLTS |
| WP | WEATHERPROOF |



| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|--|--------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ELECTRICAL LEGEND AND ABBREVIATIONS | 100088 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | EI |
| | 1 | | | DATE: 1-27-16 | | | |

GENERAL NOTES:

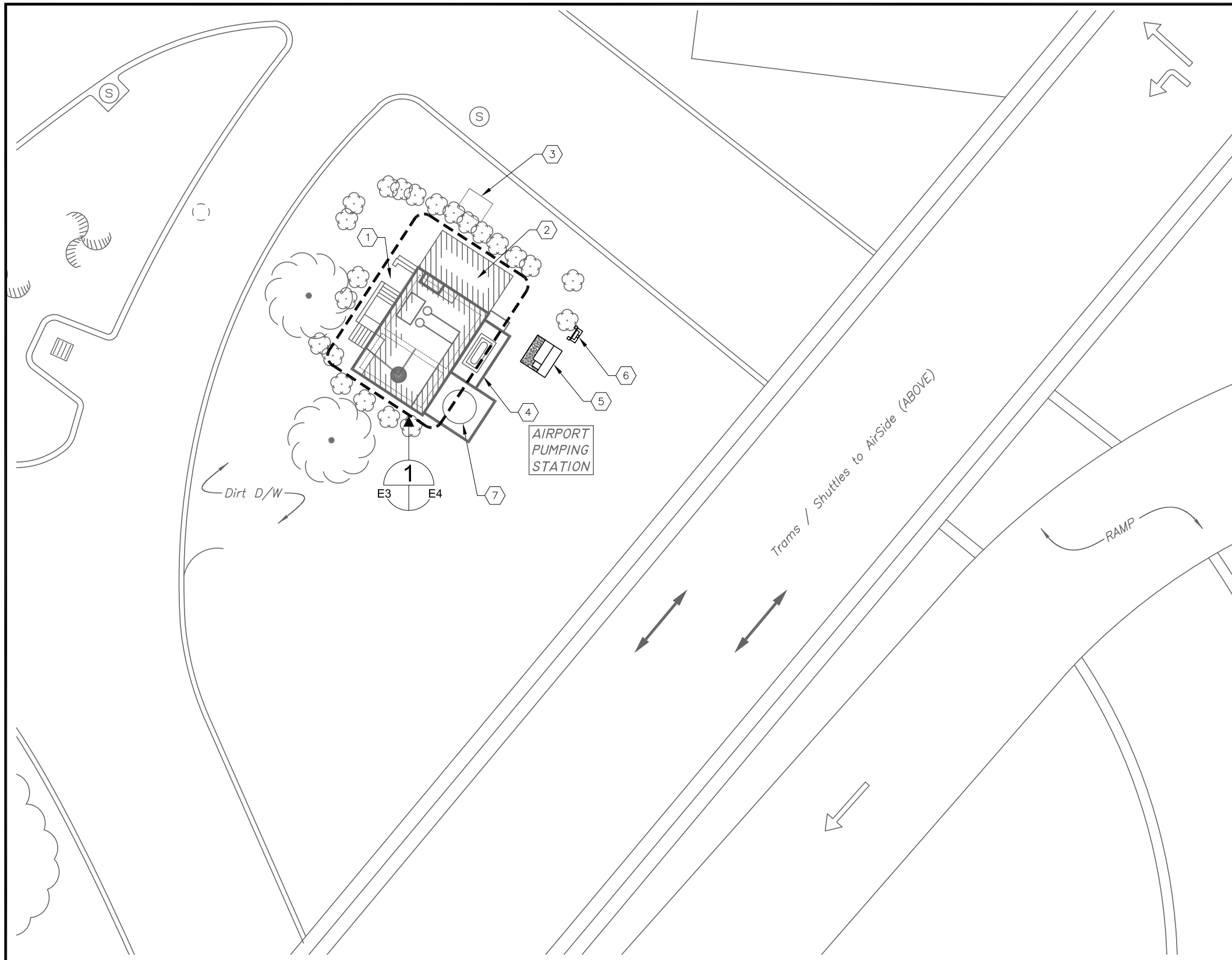
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
2. ALL CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. W/XHHW-2 INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED W/NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
5. FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
6. PLANS ARE DESIGNED IN ACCORDANCE WITH THE 5TH EDITION OF THE FLORIDA BUILDING CODE AND THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
7. ALL THREADED CONNECTIONS SHALL BE COATED W/ ALUMA- SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B) OR EQUAL.
8. ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVERPLATES SHALL BE LABELED W/ NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
9. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
10. ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT W/ POWER CONDUCTORS.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
12. NEATLY COIL ALL SPARE CONDUCTORS & TAPE W/ VINYL ELECTRICAL TAPE (SCOTCH 33+).
13. PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE W/ ARTICLE 110 OF THE NEC.
14. ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316-STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
15. EXPOSED CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, UNLESS OTHERWISE NOTED (UON). INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL.
16. DIRECT BURIED AND CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED, WITH A TRANSITION TO RIGID ALUMINUM IN THE VERTICAL RUN AT LEAST ONE FOOT PRIOR TO EMERGENCE. ALL ALUMINUM SURFACES IN CONTACT WITH SOIL, CONCRETE, AND OTHER INCOMPATIBLE MATERIALS SHALL BE COATED WITH TWO COATS OF BITUMASTIC OR OTHER APPROVED INSULATING MATERIAL.
17. ABOVE GRADE INDOOR, AND NON-WASHDOWN AREAS, RIGID ALUMINUM CONDUIT CONNECTIONS TO CONTROL BOXES, ETC. SHALL BE MADE WITH ALUMINUM DOUBLE LOCKNUTS AND BUSHINGS. TURN DOWN ON THREADS TO SOLIDLY CONNECT RACEWAY TO BOX OR ENCLOSURE.
18. ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, BELOW GRADE, OR IN WASHDOWN AREAS.
19. A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316-STAINLESS STEEL MOUNTING HARDWARE.
20. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
21. ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTOR'S REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
22. PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.
23. THE WET WELL CLASSIFICATION IS CLASS I, DIVISION 1, GROUP D, (HAZARDOUS AREA) NEC CHAPTER 5 IS APPLICABLE FOR INTERFACING WET WELL AND THE CONTROL ENCLOSURE.
24. ALL ELECTRICAL WORK SHALL BE PERFORMED WITHIN 2011 NEC AND CITY OF TAMPA/ HILLSBOROUGH COUNTY CODES AND SHALL BE INSPECTED BY CITY OF TAMPA/ HILLSBOROUGH COUNTY ELECTRICAL INSPECTORS AS APPLICABLE.
25. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED AND AS SPECIFIED, OR AS APPROVED BY THE ENGINEER. THE PANEL BUILDER SHALL BE UL-508A CERTIFIED AND A UL LABEL SHALL BE ATTACHED TO THE INSIDE OF THE ENCLOSURE.
26. THE ENCLOSURES SHALL BE NEMA 4X, THEY SHALL BE CONSTRUCTED OF MINIMUM 14 GAUGE 304 SS, THEY SHALL HAVE RAL 9003 WHITE POWDER COAT SURFACE, AND THE CLOSING SURFACES SHALL HAVE ROLLED LIPS, PROVIDE HINGED DOORS WITH 3-POINT LATCH AND LOCKABLE HANDLES. REFERENCE PARTS SCHEDULE ON SHEET E14.
27. ALL COMPONENTS TO BE MOUNTED ON PANEL USING TAPPED HOLES.
28. ALL WIRING SHALL BE COPPER, ALL CONTROL WIRING SHALL BE STRANDED XHHW-2 COPPER, MINIMUM AWG # 14, AND SHALL HAVE SPADE LUG TERMINATIONS.
29. ALARM FLOAT SWITCH WILL BE SUPPLIED BY THE CITY, BUT INSTALLED BY CONTRACTOR.
30. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "" TO BE DETERMINED AFTER EQUIPMENT SELECTION.
31. ALL MECHANICAL CONNECTORS SHALL BE TORQUED PER NEC, UL OR MANUFACTURERS SPECIFICATIONS.
32. INSTALL LAMINATED SCHEMATIC, LAMINATED DATA SHEET AND LAMINATED SOFT STARTER SETUP PARAMETERS ON BACK FACE OF THE DOOR INSIDE THE ENCLOSURE.
33. ENSURE THAT LINE CONNECTIONS TO AUTOMATIC TRANSFER SWITCH PROVIDE CORRECT MOTOR ROTATION.
34. CONDUCTORS WITHIN THE ENCLOSURE AND NOT ROUTED IN WIREWAYS, SHALL BE SECURED TO THE BACKPANEL WITH MECHANICAL FASTENERS, FASTENERS SECURED WITH ADHESIVE ARE NOT ACCEPTABLE.
35. ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.
36. THE PSCR SHALL BE A MOTOROLA ACE 3600 PACKAGE AS DISTRIBUTED BY DCR ENGINEERING SERVICES INC., SCADAONE, LLC., OR REVERE CONTROL SYSTEMS. THE PUMPING STATION CONTRACTOR SHALL COORDINATE HIS EFFORTS WITH DCR, SCADAONE, OR REVERE CONTROL SYSTEMS TO ENSURE SYSTEM COMPATIBILITY. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE DUPLEX CONTROL SYSTEM/SCADA PACKAGE, AS PROGRAMMED BY DCR, SCADAONE, OR REVERE CONTROLS - THE EXISTING PUMPING STATION DCR CONTROLS SHALL REVERT TO THE CITY AS A SPARE.
37. A WET WELL LEVEL DETECTION SYSTEM SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE OUTPUT SHALL BE A LINEAR 4-20mA SIGNAL WITH RANGE AND CALIBRATION SUITABLE FOR THIS APPLICATION. THE SYSTEM SHALL BE OF THE ULTRASONIC TYPE- PULSAR, INC. MODEL dB10 W/ BLACKBOX 130 TRANSMITTER. CITY INSTRUMENTATION PERSONNEL WILL ASSIST THE CONTRACTOR WITH SPECIFYING THE TRANSDUCER MOUNTING LOCATION AND CALIBRATION. THE DB10 TRANSDUCER SHALL BE MOUNTED USING A 2 1/2" x 1/4" S.S. BRACKET, SEE DB10 MOUNTING BRACKET DETAIL, SHEET E21.
38. PROVIDE 1/4" MINIMUM THICKNESS LEXAN SHIELDS OVER POWER DISTRIBUTION BLOCK AND OTHER EXPOSED CABLE TERMINATIONS.
39. XHHW-2 CONDUCTORS (3-#6 AWG + 1-#8 AWG GND. CU FOR EACH MOTOR) SHALL EXTEND FROM THE CONTROL PANEL TO ASSOCIATED HIGH VOLTAGE JUNCTION BOX. PROVIDE SEAL-OFF BETWEEN CONTROL PANEL AND JUNCTION BOX AS INDICATED. THE SHOWN SEAL-OFFS SHALL BE ALUMINUM BODY, CROUSE-HINDS, OR EQUIVALENT.
40. ALUMINUM CONDUIT SURFACE THAT IS IN CONTACT WITH SOIL OR CONCRETE SHALL BE COATED WITH TWO COATS ASPHALT VARNISH (FED. SPEC. TT-V-51) EXTENDING 4" BEYOND FINAL CONTACT POINT.
41. ENSURE THAT SEALING FITTING CONNECTION TO MAIN ENCLOSURE IS GAS TIGHT, USE WATER TIGHT ALUMINUM MYERS HUBS WITH SUPPLEMENTAL BARRIER (IF NECESSARY) TO EXCLUDE GASES.
42. STAINLESS STEEL HANGERS TO SUPPORT THE EXCESS LENGTH OF MOTOR CABLES SHALL BE INSTALLED IN THE WET WELL. THESE HANGERS SHALL BE LOCATED IN A SEPARATE AREA FROM THE HANGERS SUPPORTING THE PUMP CHAINS.

SCOPE OF WORK:

1. THE SERVICE VOLTAGE TO THIS FACILITY SHALL REMAIN 277/480 VAC. 3-PHASE, 4-WIRE, WYE.
2. REMOVE THE EXISTING CONTROL PANEL, SERVICE ENTRANCE DISCONNECT SWITCH, AUTOMATIC TRANSFER SWITCH (ATS), ATS DISCONNECT, LIGHT FIXTURES, MOTOR CONTROL CENTER, AND ALL ASSOCIATED CONDUIT AND CONDUCTORS, AS SHOWN ON PLANS.
3. CAREFULLY REMOVE THE EXISTING DCR SCADA RTU CABINET MOUNTED ON THE SCADA ANTENNA OUTSIDE. DELIVER THIS RTU PACKAGE TO THE CITY FOR MAINTENANCE INVENTORY.
4. ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE ENGINEER, SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE HOWARD F. CURREN AWT. PLANT. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL OTHER REMOVED EQUIPMENT.
5. PREPARE THE SITE FOR THE INSTALLATION OF THE PROPOSED PUMP CONTROLS/ SCADA/RADIO (PCSR) ENCLOSURE.
6. PROVIDE AND INSTALL A NEW DUPLEX PUMP CONTROL PANEL. THE PUMP CONTROL PANEL SHALL CONTAIN CONTROL COMPONENTS, INDICATOR LIGHTS, AND SCADA RTU AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
6. PROVIDE AND INSTALL A NEW DUPLEX MOTOR CONTROL PANEL. THE MOTOR CONTROL PANEL SHALL CONTAIN CIRCUIT BREAKERS, REDUCED VOLTAGE SOFT STARTERS AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
7. REUSE EXISTING SCADA ANTENNA/ MAST AS INDICATED.
8. CALIBRATE AND ADJUST SETPOINTS AND ALL SENSING DEVICES, ALARM DEVICES, AND TIMERS. CALIBRATIONS AND SETPOINTS SHALL BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. FURNISH AND INSTALL EXPLOSIONPROOF JUNCTION BOXES AS SHOWN ON THE PLANS.
10. PROVIDE FOR PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
11. PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS AS SHOWN, SPECIFIED, AND REQUIRED.
12. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 5TH EDITION 2014, THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) SERIES 70/NATIONAL ELECTRICAL CODE (NEC) 2011 EDITION AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
13. REFER TO CIVIL/MECHANICAL SHEETS FOR BYPASS PUMPING REQUIREMENTS. IF ELECTRICALLY DRIVEN BYPASS PUMPS ARE UTILIZED, THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY ELECTRICAL SERVICE REQUIREMENTS WITH TAMPA ELECTRIC COMPANY (TECO).

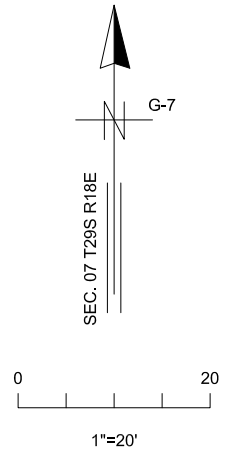


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| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION GENERAL NOTES AND SCOPE OF ELECTRICAL WORK | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E2 |
| | 1 | | | DATE: 1-27-16 | | | |



- KEYED NOTES:**
- ① EXISTING PUMPING STATION TO BE DEMOLISHED TO GRADE. REFER TO PUMPING STATION BUILDING DEMOLITION PLAN ON SHEET E4.
 - ② EXISTING GENERATOR ROOM TO REMAIN. REFER TO SHEET E4 FOR DEMOLITION WORK REQUIRED. REFER TO SHEET E6 FOR NEW WORK REQUIRED.
 - ③ EXISTING BURIED FUEL TANK. FUEL TANK IS ABANDONED. NO WORK REQUIRED.
 - ④ EXISTING FUEL TANK UNDER WOODEN ROOF. WOODEN ROOF TO BE REMOVED AND REPLACED (BY OTHERS).
 - ⑤ EXISTING TAMPA ELECTRIC COMPANY (TECO) PAD-MOUNTED TRANSFORMER. NO WORK REQUIRED.
 - ⑥ EXISTING TAMPA ELECTRIC COMPANY (TECO) METER AND ELECTRICAL SERVICE FOR OTHER FACILITIES. NO WORK REQUIRED.
 - ⑦ EXISTING ODOR CONTROL UNIT ON EXISTING GRADE. NEW CONCRETE SLAB SHALL BE PROVIDED FOR THE EXISTING ODOR CONTROL UNIT. CONTRACTOR TO REMOVE EXISTING 120V FEEDER (INCLUDING ALL CONDUIT AND CONDUCTORS) AND PROVIDE NEW 120V CIRCUIT FROM NEW PANEL 'LP' (CIRCUIT LP-5). REFER ALSO TO SHEET E5.

- GENERAL NOTES :**
1. REFER TO CIVIL AND MECHANICAL SHEETS FOR OTHER DEMOLITION WORK REQUIRED.



EXISTING SITE PLAN
SCALE : 1" = 20'-0"



TIMOTHY THOMAS, P.E. #47079

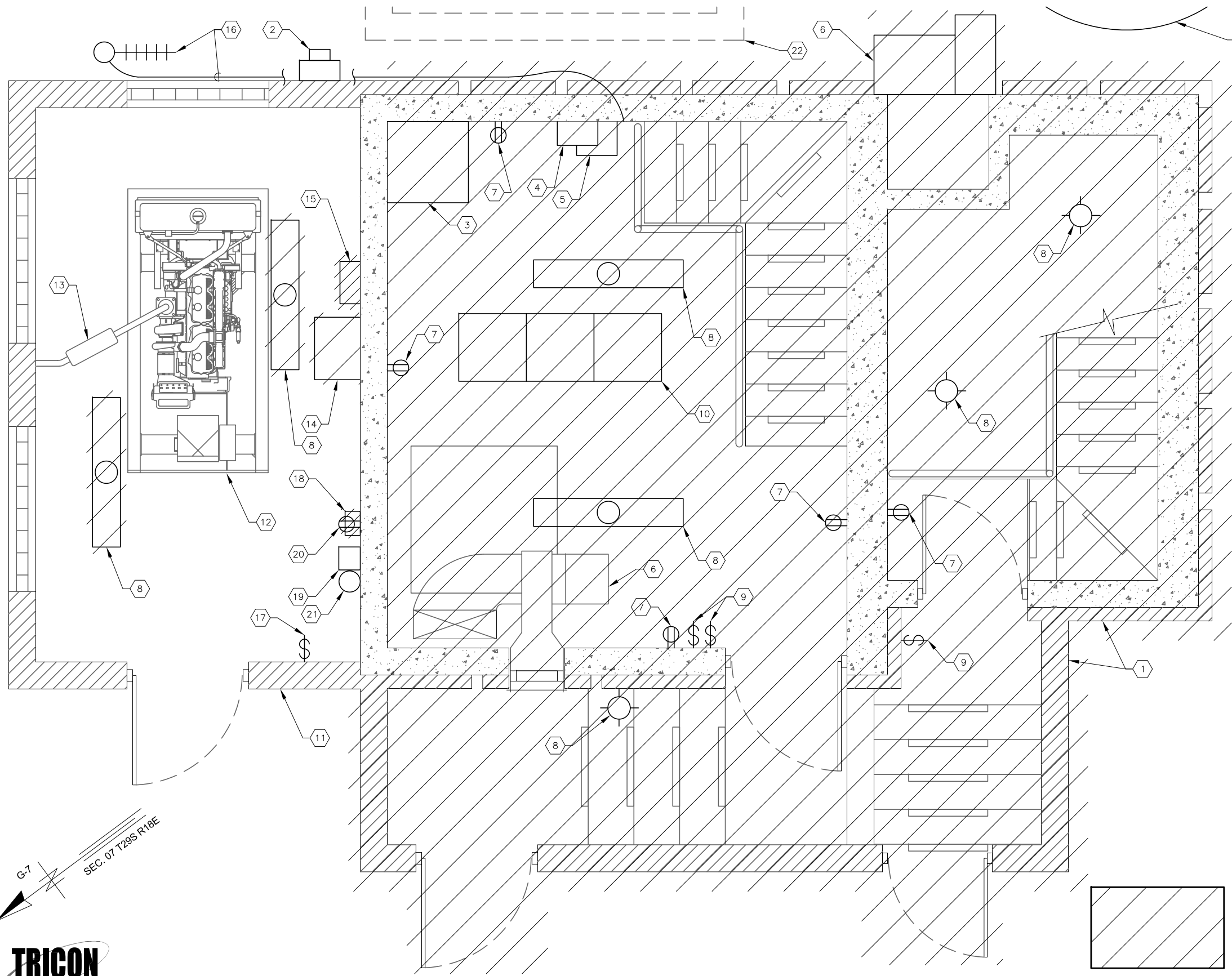
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DRN: J.L.H.
CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
EXISTING SITE PLAN

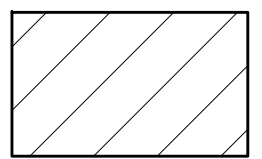
W.O. 5967
SHEET
E3



EXISTING ODOR CONTROL UNIT ON EXISTING GRADE. NEW CONCRETE SLAB TO BE PROVIDED FOR EXISTING ODOR CONTROL UNIT.

KEYED NOTES:

- ① EXISTING PUMP STATION BUILDING. HATCHED AREA TO BE DEMOLISHED AT BOTH THE ELEVATION 18.00 AND ELEVATION 7.68 LEVELS. REFER ALSO TO CIVIL SHEETS.
- ② EXISTING ELECTRICAL SERVICE METER TO REMAIN.
- ③ EXISTING WET WELL LEVEL CONTROL CABINET TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ④ EXISTING JUNCTION BOX FOR EXISTING MOSCAD SCADA RTU POWER, JUNCTION BOX SHALL BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑤ EXISTING MOSCAD SCADA RTU TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS. THE CONTRACTOR SHALL DELIVER THE MOSCAD SCADA RTU TO THE CITY OF TAMPA FOR MAINTENANCE INVENTORY.
- ⑥ EXISTING FAN AND FAN MOTOR TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑦ EXISTING RECEPTACLE TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑧ EXISTING LIGHTING FIXTURE TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑨ EXISTING SINGLE-POLE LIGHT SWITCH TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑩ EXISTING MOTOR CONTROL CENTER TO BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND CONDUCTORS.
- ⑪ EXISTING GENERATOR ROOM. GENERATOR ROOM TO REMAIN. REFER TO SHEET E6 FOR NEW WORK REQUIRED.
- ⑫ EXISTING 277/480V, 60KW, 75KVA STANDBY GENERATOR TO REMAIN.
- ⑬ EXISTING EXHAUST FOR STANDBY GENERATOR TO REMAIN.
- ⑭ EXISTING EMERGENCY TRANSFER SWITCH TO BE REMOVED.
- ⑮ EXISTING ELECTRICAL SERVICE DISCONNECT TO BE REMOVED.
- ⑯ EXISTING MOSCAD SCADA RTU ANTENNA TO REMAIN. THE CONTRACTOR SHALL PROVIDE AND INSTALL A NEW COAXIAL ANTENNA CABLE IN A NEW 1" CONDUIT TO THE NEW PUMP STATION CONTROL PANEL. REFER ALSO TO SHEET E6.
- ⑰ EXISTING SINGLE-POLE LIGHT SWITCH TO BE REUSED.
- ⑱ EXISTING LOAD CENTER WITH TWO (2) 15 AMPERE, 120V CIRCUIT BREAKERS (FOR GENERATOR BATTERY CHARGER AND RECEPTACLE (LOCATED BELOW LOAD CENTER) TO BE REMOVED.
- ⑲ EXISTING GENERATOR BATTERY CHARGER TO BE RELOCATED. REFER TO SHEET E6 FOR NEW LOCATION.
- ⑳ EXISTING RECEPTACLE (BELOW LOAD CENTER) TO BE RELOCATED. REFER TO SHEET E6 FOR NEW LOCATION.
- ㉑ EXISTING FIRE EXTINGUISHER TO BE RELOCATED.
- ㉒ EDGE OF EXISTING FUEL TANK CONTAINMENT. NO WORK REQUIRED.



DENOTES AREA/ITEMS TO BE DEMOLISHED

PUMPING STATION BUILDING DEMOLITION PLAN

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

1
E3 | E4



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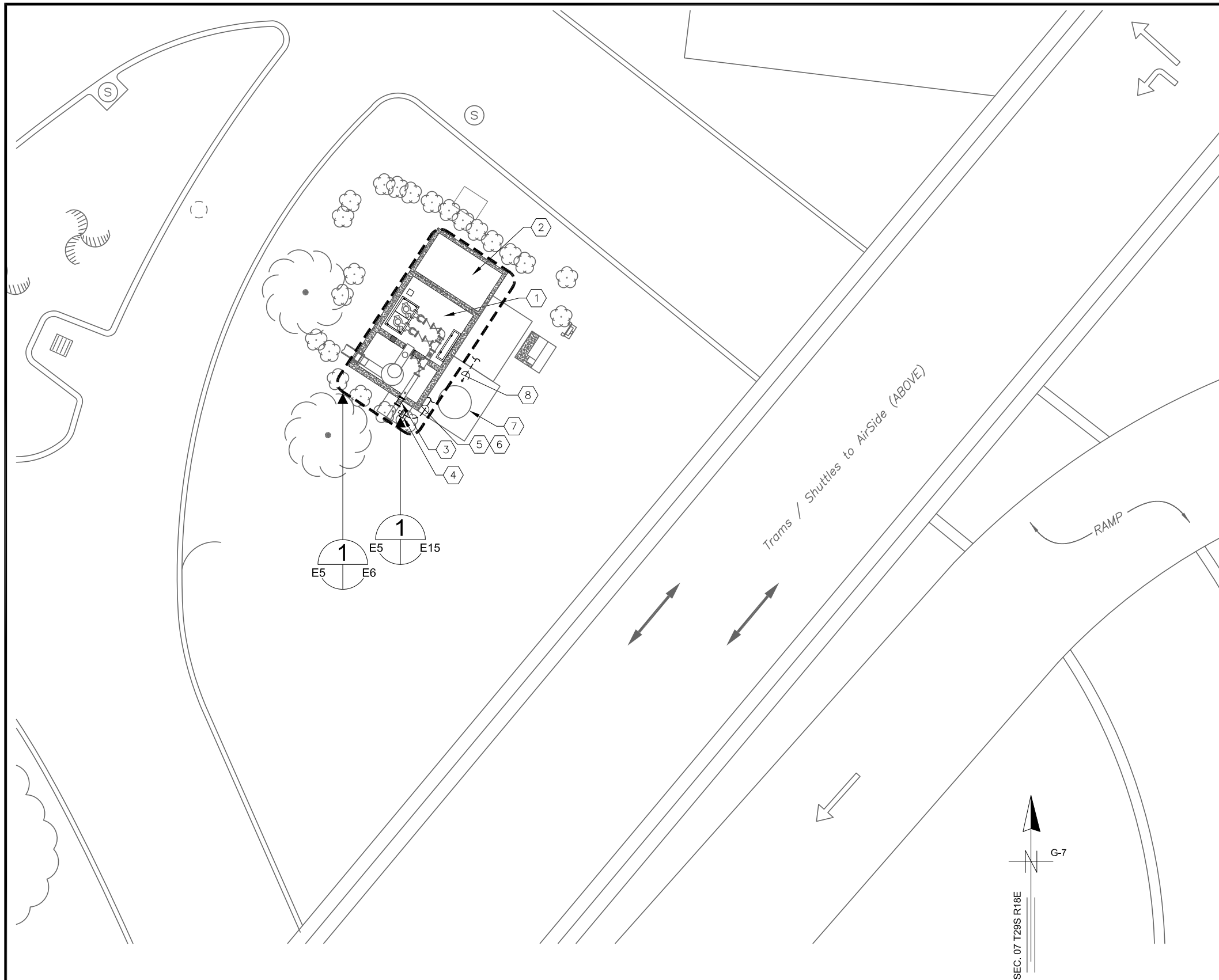
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CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

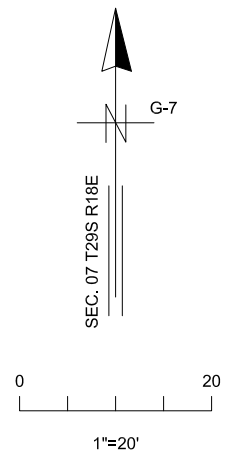
TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
EXISTING FLOOR DEMOLITION PLAN

W.O. 5967
SHEET
E4



- KEYED NOTES:**
- 1 NEW PUMPING STATION TO BE INSTALLED. REFER TO CIVIL SHEETS.
 - 2 EXISTING GENERATOR ROOM TO REMAIN. REFER TO SHEET E4 FOR DEMOLITION WORK REQUIRED. REFER TO SHEET E6 FOR NEW WORK REQUIRED.
 - 3 NEW 10" ABB WATER MASTER FLOW METER.
 - 4 CONTRACTOR SHALL PROVIDE AND INSTALL NEW REMOTE TRANSMITTER CABINET. REFER TO DETAIL ON SHEET E15. PROVIDE AND INSTALL 5/8" X 10'-0" STAINLESS STEEL GROUND ROD EXTERIOR TO REMOTE TRANSMITTER CABINET.
 - 5 CONTRACTOR SHALL PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE IN 3/4"C. TO PUMP CONTROL PANEL FOR FLOW METER REMOTE TRANSMITTER 4-20mA SIGNAL. REFER TO SHEET E8 FOR PUMP CONTROL PANEL LOCATION.
 - 6 CONTRACTOR SHALL PROVIDE AND INSTALL 2-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FROM MINI POWER-ZONE 'LP' TO REMOTE TRANSMITTER FOR 120V POWER. CIRCUIT LP-2. REFER TO SHEET E6 FOR MINI POWER ZONE LOCATION.
 - 7 NEW 10'-0" X 10'-0" CONCRETE SLAB FOR ODOR CONTROL EQUIPMENT.
 - 8 CONTRACTOR TO PROVIDE 2-#12 + 1-#12 GND IN 3/4"C. FROM NEW MIN POWER-ZONE 'LP' TO ODOR CONTROL EQUIPMENT FOR 120V POWER (CIRCUIT LP-5). CONTRACTOR TO COORDINATE EXACT LOCATION OF 120V POWER CONNECTION WITH ODOR CONTROL EQUIPMENT MANUFACTURER. PROVIDE NON-METALLIC, WEATHERPROOF, FLEXIBLE CONNECTION TO THE ODOR CONTROL EQUIPMENT PANEL. REFER TO SHEET E6 FOR NEW MINI POWER-ZONE LOCATION.

PROPOSED SITE PLAN
SCALE : 1" = 20'-0"



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| TIMOTHY THOMAS, P.E. #47079 |
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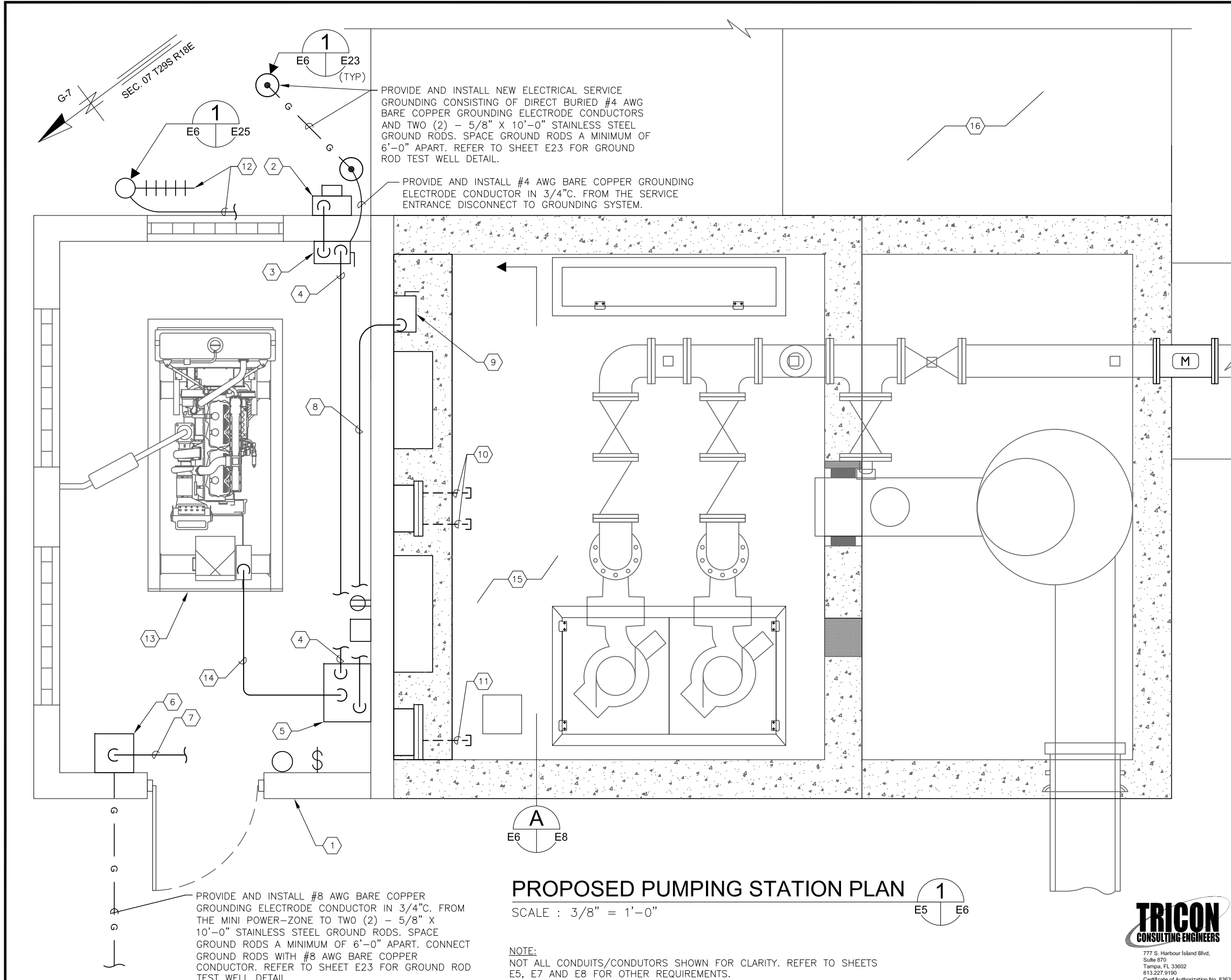
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CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
PROPOSED SITE PLAN

W.O. 5967
SHEET
E5



PROVIDE AND INSTALL NEW ELECTRICAL SERVICE GROUNDING CONSISTING OF DIRECT BURIED #4 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTORS AND TWO (2) - 5/8" X 10'-0" STAINLESS STEEL GROUND RODS. SPACE GROUND RODS A MINIMUM OF 6'-0" APART. REFER TO SHEET E23 FOR GROUND ROD TEST WELL DETAIL.

PROVIDE AND INSTALL #4 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" C. FROM THE SERVICE ENTRANCE DISCONNECT TO GROUNDING SYSTEM.

PROVIDE AND INSTALL #8 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" C. FROM THE MINI POWER-ZONE TO TWO (2) - 5/8" X 10'-0" STAINLESS STEEL GROUND RODS. SPACE GROUND RODS A MINIMUM OF 6'-0" APART. CONNECT GROUND RODS WITH #8 AWG BARE COPPER CONDUCTOR. REFER TO SHEET E23 FOR GROUND ROD TEST WELL DETAIL.

PROPOSED PUMPING STATION PLAN
 SCALE : 3/8" = 1'-0"

NOTE:
 NOT ALL CONDUITS/CONDUCTORS SHOWN FOR CLARITY. REFER TO SHEETS E5, E7 AND E8 FOR OTHER REQUIREMENTS.



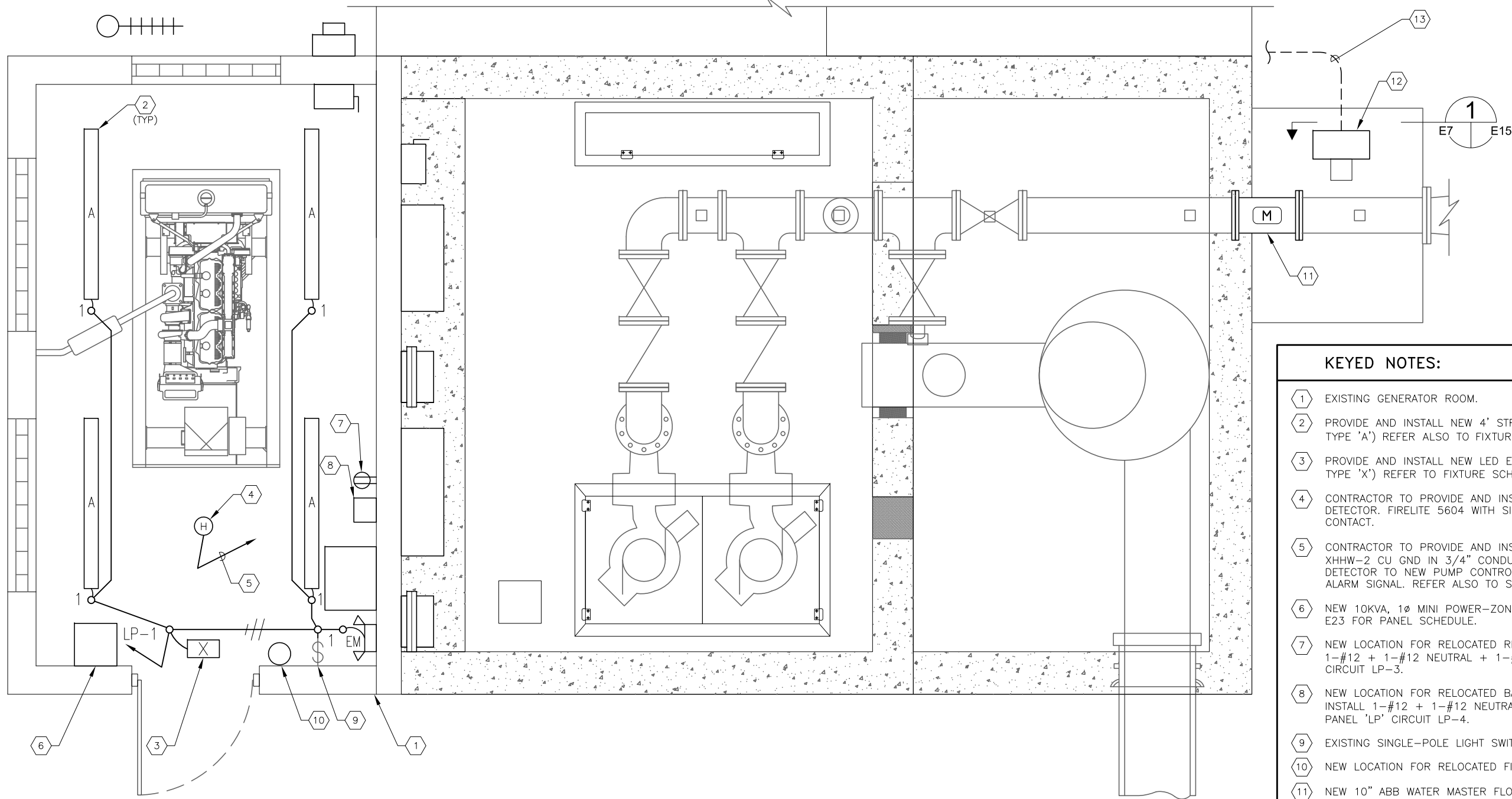
- KEYED NOTES:**
- 1 EXISTING GENERATOR ROOM.
 - 2 EXISTING ELECTRICAL SERVICE METER TO REMAIN. PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" C. TO NEW SERVICE ENTRANCE DISCONNECT INDICATED IN NOTE #3. GROUND METER PER UTILITY SPECIFICATIONS.
 - 3 PROVIDE AND INSTALL 3-POLE, 600V, 150A, 35KAIC CIRCUIT BREAKER TO SERVE AS THE SERVICE ENTRANCE DISCONNECT. SQUARE D CIRCUIT BREAKER HGL36150 IN NEMA 1 SURFACE MOUNT STEEL ENCLOSURE (SQUARE D J250S). PROVIDE GROUND BAR KIT AND SOLID NEUTRAL ASSEMBLY FOR U.L. LISTED SERVICE ENTRANCE EQUIPMENT.
 - 4 PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" C. FROM THE SERVICE ENTRANCE DISCONNECT TO THE NEW AUTOMATIC TRANSFER SWITCH.
 - 5 PROVIDE AND INSTALL 3-POLE, 150A AUTOMATIC TRANSFER SWITCH (ATS) WITH AUXILIARY CONTACTS, TIME DELAYS, ENGINE STARTING CONTACTS, INSULATED NEUTRAL BLOCK, AND PILOT LIGHTS MOUNTED IN A NEMA 1 ENCLOSURE. REFERENCE SPECIFICATIONS.
 - 6 PROVIDE AND INSTALL 480V-120/240V, 1φ, 10KVA MINI POWER-ZONE (PANEL 'LP') WITH INTEGRAL 30A PRIMARY CIRCUIT BREAKER AND 60A SECONDARY CIRCUIT BREAKER IN NEMA 1. REFER TO SHEET E23 FOR PANEL SCHEDULE.
 - 7 PROVIDE AND INSTALL 2-#8 + 1-#8 GND IN 3/4" C. TO MOTOR CONTROL PANEL FOR MINI POWER-ZONE FEEDER.
 - 8 PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" C. TO MOTOR CONTROL PANEL DISCONNECT INDICATED IN NOTE #9.
 - 9 PROVIDE AND INSTALL 3-POLE, 150A, 600V, 35KAIC CIRCUIT BREAKER DISCONNECT IN NEMA 4X 304 STAINLESS STEEL ENCLOSURE. SQUARE-D BREAKER HGL36150 IN SQUARE-D J250DS ENCLOSURE. PROVIDE GROUND BAR KIT AND SOLID NEUTRAL ASSEMBLY.
 - 10 PROVIDE AND INSTALL SUBMERSIBLE PUMP POWER CABLES: 3-#6 PHASE CONDUCTORS + 1-#8 GND + 2-#12 (LEAK/TEMP). INSTALL IN 2" CONDUIT TO WET WELL. CABLE BY PUMP MANUFACTURER.
 - 11 PROVIDE AND INSTALL 3/C-#14 FLOAT SWITCH CABLE AND 3/C-#18 TWISTED SHIELDED CABLE FOR WET WELL LEVEL TRANSMITTER IN 2" CONDUIT TO WET WELL VIA JUNCTION BOX. CABLES BY MANUFACTURERS.
 - 12 EXISTING MOSCAD SCADA RTU ANTENNA TO REMAIN. THE CONTRACTOR SHALL PROVIDE AND INSTALL A NEW COAXIAL ANTENNA CABLE IN A NEW 1" CONDUIT TO THE NEW PUMP STATION CONTROL PANEL. REFER ALSO TO SHEET E8.
 - 13 EXISTING GENERATOR TO REMAIN.
 - 14 PROVIDE AND INSTALL 3-#3 + 1-#4 NEUTRAL + 1-#6 GND IN 1-1/2" C. FROM NEW AUTOMATIC TRANSFER SWITCH TO EXISTING GENERATOR.
 - 15 NEW WET WELL BELOW NEW SLAB.
 - 16 NEW 10'-0" X 10'-0" CONCRETE SLAB FOR ODOR CONTROL EQUIPMENT. REFER TO SHEET E5 FOR 120V ODOR CONTROL CIRCUIT REQUIRED.

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| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS |
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| DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT |
| DRN: J.L.H. | |
| CKD: T.DT. | |
| DATE: 1-27-16 | |

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
 PROPOSED PUMPING STATION PLAN (SHEET 1 OF 2)

W.O. 5967
 SHEET
E6



PROPOSED PUMPING STATION PLAN

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

KEYED NOTES:

- ① EXISTING GENERATOR ROOM.
- ② PROVIDE AND INSTALL NEW 4' STRIP LED LIGHT FIXTURE. (FIXTURE TYPE 'A') REFER ALSO TO FIXTURE SCHEDULE ON SHEET E23.
- ③ PROVIDE AND INSTALL NEW LED EXIT SIGN ABOVE DOOR. (FIXTURE TYPE 'X') REFER TO FIXTURE SCHEDULE ON SHEET E23.
- ④ CONTRACTOR TO PROVIDE AND INSTALL NEW MECHANICAL HEAT DETECTOR. FIRELITE 5604 WITH SINGLE 24V DC, 1.0 AMPERE ALARM CONTACT.
- ⑤ CONTRACTOR TO PROVIDE AND INSTALL 2-#14 XHHW-2 CU + 1-#14 XHHW-2 CU GND IN 3/4" CONDUIT FROM NEW MECHANICAL HEAT DETECTOR TO NEW PUMP CONTROL CABINET FOR HEAT DETECTOR ALARM SIGNAL. REFER ALSO TO SHEET E8.
- ⑥ NEW 10KVA, 1Ø MINI POWER-ZONE (PANEL 'LP'). REFER TO SHEET E23 FOR PANEL SCHEDULE.
- ⑦ NEW LOCATION FOR RELOCATED RECEPTACLE. PROVIDE AND INSTALL 1-#12 + 1-#12 NEUTRAL + 1-#12 GND IN 3/4" CONDUIT TO PANEL 'LP' CIRCUIT LP-3.
- ⑧ NEW LOCATION FOR RELOCATED BATTERY CHARGER. PROVIDE AND INSTALL 1-#12 + 1-#12 NEUTRAL + 1-#12 GND IN 3/4" CONDUIT TO PANEL 'LP' CIRCUIT LP-4.
- ⑨ EXISTING SINGLE-POLE LIGHT SWITCH TO BE REUSED.
- ⑩ NEW LOCATION FOR RELOCATED FIRE EXTINGUISHER.
- ⑪ NEW 10" ABB WATER MASTER FLOW METER.
- ⑫ CONTRACTOR SHALL PROVIDE AND INSTALL NEW REMOTE TRANSMITTER CABINET. REFER TO DETAIL ON SHEET E15.
- ⑬ REFER TO SHEET E-5 FOR CONDUIT/CONDUCTORS REQUIRED FOR REMOTE TRANSMITTER CABINET.

GENERAL NOTES:

- 1. NOT ALL CONDUIT/CONDUCTORS SHOWN FOR CLARITY. REFERENCE SHEETS E5, E6 E8 AND E9 FOR OTHER CONDUIT/CONDUCTORS REQUIRED.



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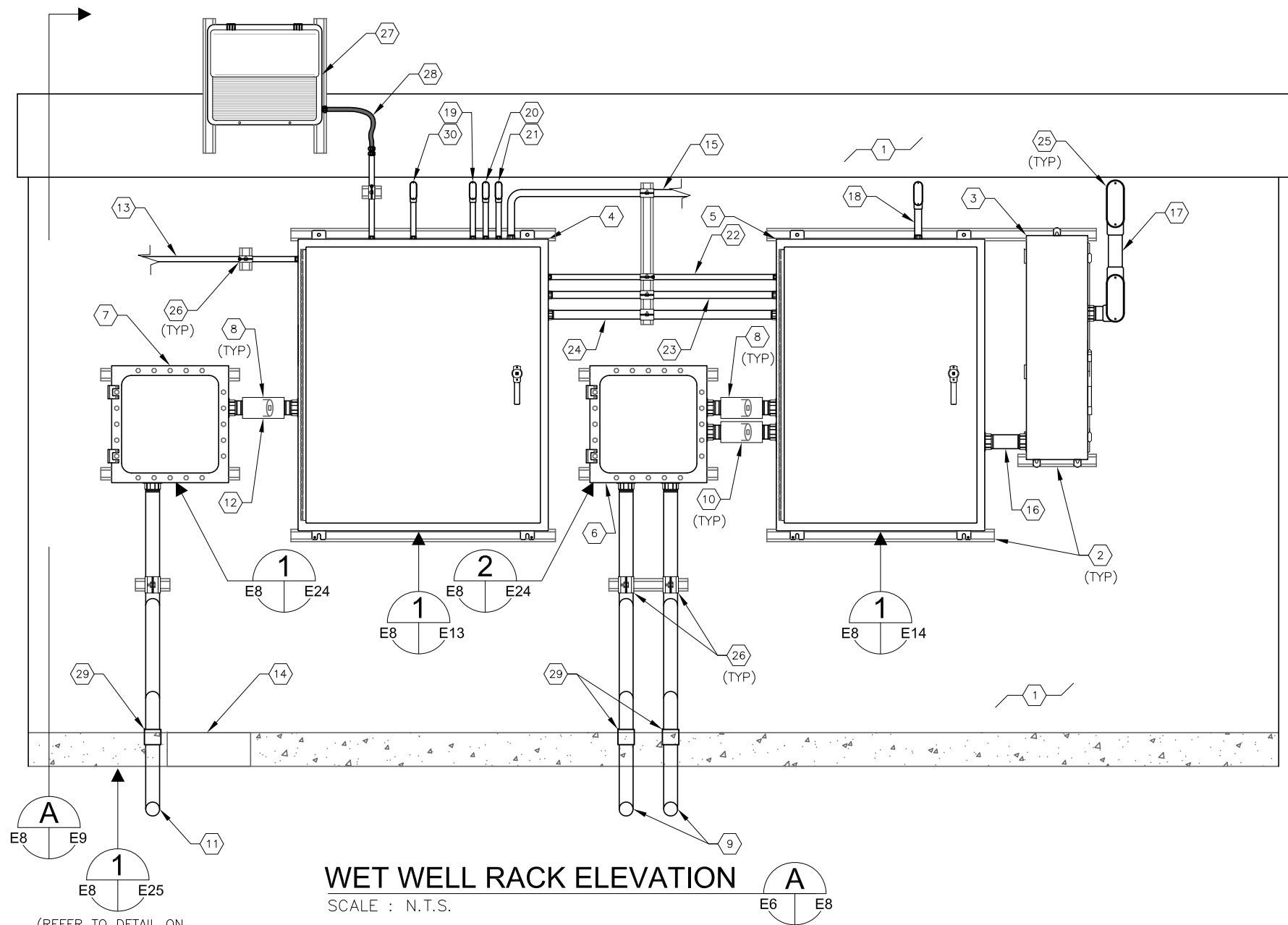
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CITY of TAMPA
 WASTEWATER DEPARTMENT

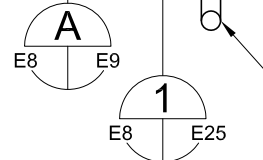
TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
 PROPOSED PUMPING STATION PLAN (SHEET 2 OF 2)

W.O. 5967
 SHEET
E7



WET WELL RACK ELEVATION

SCALE : N.T.S.



(REFER TO DETAIL ON SHEET E25 FOR DB10 MOUNTING BRACKET DETAILS)

KEYED NOTES CONTINUED:

- 23 PROVIDE AND INSTALL 15-#14 XHHW-2 CU + 1-#14 XHHW-2 CU GND IN 1" CONDUIT FOR 24V DC CONTROL SIGNALS. REFER TO MCP TO PCP INTERCONNECTION WIRING DIAGRAM ON SHEET E22.
- 24 PROVIDE AND INSTALL 26-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 1-1/4" CONDUIT FOR 120VAC CONTROL SIGNALS. REFER TO MCP TO PCP INTERCONNECTION WIRING DIAGRAM ON SHEET E22.
- 25 PROVIDE AND INSTALL CONDUIT LB FITTING AS REQUIRED.
- 26 PROVIDE AND INSTALL STAINLESS STEEL CONDUIT STRAPS (TYPICAL).
- 27 PROVIDE AND INSTALL NEW AREA LIGHT FIXTURE (TYPE 'B') REFER ALSO TO FIXTURE SCHEDULE ON SHEET E23.
- 28 PROVIDE AND INSTALL 1-#12 XHHW-2 CU + 1-#12 XHHW-2 CU NEUTRAL + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FOR AREA LIGHT 120V POWER.
- 29 FOR RACEWAYS TO WETWELL, THE CONTRACTOR SHALL UTILIZE PVC COATED ALUMINUM (TYPICAL FOR ALL WET WELL CONDUITS).
- 30 PROVIDE AND INSTALL 4-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FOR NEW AUTOMATIC TRANSFER SWITCH GENERATOR INTERLOCK CIRCUITS.

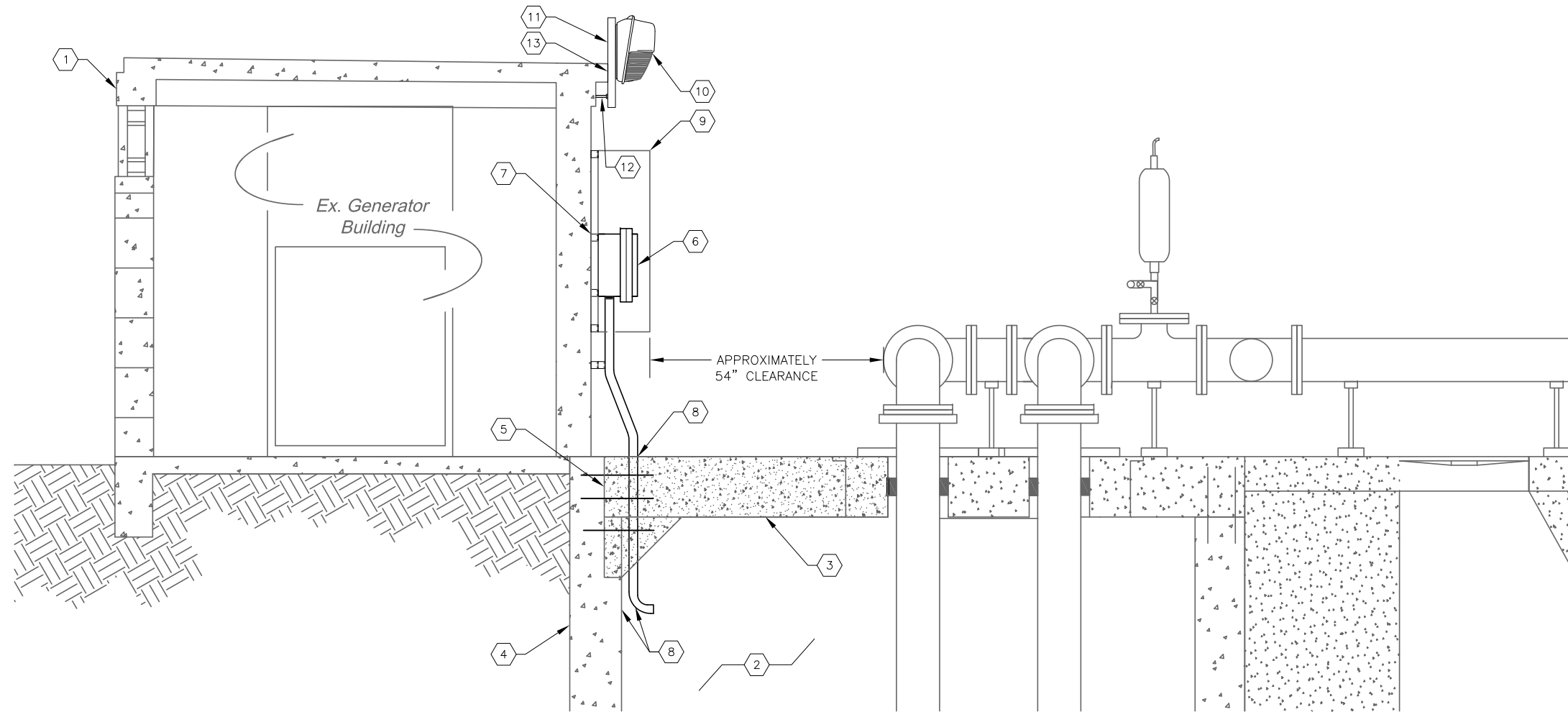
KEYED NOTES:

- 1 EXISTING SOUTH WALL OF GENERATOR BUILDING.
- 2 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE.
- 3 PROVIDE AND INSTALL 3-POLE, 150A, 600V, 35KAIC CIRCUIT BREAKER DISCONNECT IN NEMA 4X 304 STAINLESS STEEL ENCLOSURE. SQUARE-D BREAKER HGL36150 IN SQUARE-D J250DS ENCLOSURE. PROVIDE GROUND BAR KIT AND SOLID NEUTRAL ASSEMBLY.
- 4 PROVIDE AND INSTALL PUMP CONTROL CABINET. REFER TO DETAIL ON SHEET E13.
- 5 PROVIDE AND INSTALL MOTOR CONTROL CABINET. REFER TO DETAIL ON SHEET E14.
- 6 PROVIDE AND INSTALL 12" X 12" X 6" NEMA 7, GROUPS B, C & D, ALUMINUM JUNCTION BOX WITH HINGED DOOR. CROUSE-HINDS CAT # ECP121206. REFERENCE DETAIL ON SHEET E24. PROVIDE NEMA 4X OPTIONAL PROTECTION, WITH STAINLESS STEEL COVER BOLTS AND HINGES.
- 7 PROVIDE AND INSTALL 12" X 12" X 6" NEMA 7, GROUPS B, C & D, ALUMINUM JUNCTION BOX WITH HINGED DOOR AND BACKPLATE. CROUSE-HINDS CAT # ECP121206. JUNCTION BOX ENCLOSURE TO CONTAIN 600 VAC, 60A, TERMINAL BLOCKS WITH END BARRIERS. REFERENCE DETAIL ON SHEET E20. PROVIDE SCREW ON END CLAMPS & STANDARD MOUNTING CHANNELS. ALL TERMINATIONS SHALL BE MADE USING A TERMINAL BLOCK DIN MOUNTED TO THE BACKPLATE. REFERENCE DETAIL ON SHEET E24. PROVIDE NEMA 4X OPTIONAL PROTECTION, WITH STAINLESS STEEL COVER BOLTS AND HINGES.
- 8 PROVIDE AND INSTALL CROUSE-HINDS EYS TYPE SEALS W/CHICO COMPOUNDS.
- 9 SUBMERSIBLE PUMP POWER CABLES: SUPPLIED BY PUMP MANUFACTURER. INSTALL IN 2" CONDUIT TO WET WELL.
- 10 PROVIDE AND INSTALL 3-#6 XHHW-2 CU + 1-#8 XHHW-2 CU GND + 2-#12 XHHW-2 CU (LEAK/TEMP) IN 2" CONDUIT FOR SUBMERSIBLE PUMP POWER.
- 11 MANUFACTURER SUPPLIED CABLES FOR FLOAT SWITCH AND WET WELL LEVEL TRANSMITTER. INSTALL IN 2" CONDUIT TO WET WELL VIA JUNCTION BOX.
- 12 PROVIDE AND INSTALL 3-#14 XHHW-2 CU + 1-#14 XHHW-2 CU GND AND 3/C-#18 TWISTED SHIELDED CABLE IN 2" CONDUIT FOR FLOAT AND WET WELL LEVEL TRANSMITTER.
- 13 PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE IN 3/4" CONDUIT TO FLOW METER REMOTE TRANSMITTER FOR 4-20mA ANALOG SIGNAL. REFER TO SHEET E5 FOR REMOTE TRANSMITTER LOCATION.
- 14 PROPOSED 12" SQUARE ACCESS OPENING FOR BUBBLER TUBE.
- 15 PROVIDE AND INSTALL 1" CONDUIT FOR NEW ANTENNA COAXIAL CABLE. REFER TO SHEET E6 FOR EXISTING ANTENNA TOWER LOCATION.
- 16 PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" CONDUIT TO MOTOR CONTROL PANEL FROM MOTOR CONTROL PANEL DISCONNECT.
- 17 PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" CONDUIT TO NEW AUTOMATIC TRANSFER SWITCH FROM MOTOR CONTROL PANEL DISCONNECT.
- 18 PROVIDE AND INSTALL 2-#8 XHHW-2 CU + 1-#8 XHHW-2 CU GND IN 1" CONDUIT TO NEW MINI POWER-ZONE 'LP' FOR 'LP' 480V FEEDER.
- 19 PROVIDE AND INSTALL 2-#14 XHHW-2 CU + 1-#14 XHHW-2 CU GND IN 3/4" CONDUIT TO NEW MECHANICAL HEAT DETECTOR FOR HEAT DETECTOR ALARM SIGNAL.
- 20 PROVIDE AND INSTALL 2-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FOR NEW AUTOMATIC TRANSFER SWITCH PHASE MONITORING CIRCUIT.
- 21 PROVIDE AND INSTALL 8-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT TO EXISTING GENERATOR CONTROLLER FOR EXISTING GENERATOR RUNNING AND GENERATOR FAULT SIGNALS (4 SPARES).
- 22 PROVIDE AND INSTALL 1-#12 XHHW-2 CU + 1-#12 XHHW-2 CU NEUTRAL 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FROM MOTOR CONTROL PANEL TO PUMP CONTROL PANEL FOR 120V POWER CIRCUIT.



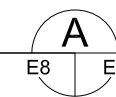
| No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION WET WELL RACK ELEVATION | W.O. 5967 SHEET E8 |
|-----|------|-----------|--|--|--|--------------------------|
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |

TIMOTHY THOMAS, P.E. #47079



PROPOSED WET WELL CONDUIT ACCESS ELEVATION

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



KEYED NOTES:

- | | | |
|---|--|--|
| <p>1 EXISTING GENERATOR BUILDING.</p> <p>2 PROPOSED WET WELL.</p> <p>3 PROPOSED 14" THICK CONCRETE SLAB WITH 3" DRAIN POURED OVER WET WELL.</p> <p>4 EXISTING WET WELL WALL.</p> <p>5 EXISTING WET WELL WALL TO BE NOTCHED TO SUPPORT PROPOSED WET WELL SLAB.</p> <p>6 PROPOSED EXPLOSION PROOF JUNCTION BOX MOUNTED ON EXTERIOR WALL OF GENERATOR BUILDING. REFER TO SHEET E8 FOR ELEVATION.</p> | <p>7 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE. PROVIDE UNISTRUT AS REQUIRED TO ALLOW CONDUIT TO WET WELL TO CLEAR EXISTING WET WELL WALL. CONTRACTOR SHALL HAVE THE OPTION OF PROVIDING OFFSETS IN CONDUIT TO CLEAR WET WELL WALL. REFER ALSO TO NOTE #8.</p> <p>8 PROPOSED 2" CONDUIT TO WET WELL. CONDUIT TO CLEAR EXISTING WET WELL WALL. CONTRACTOR TO PROVIDE OFFSETS AS REQUIRED.</p> <p>9 PROPOSED PUMP CONTROL PANEL (AND OTHER EQUIPMENT) BEHIND. REFER ALSO TO ELEVATION ON SHEET E8 FOR OTHER EQUIPMENT TO BE PROVIDED.</p> | <p>10 PROVIDE AND INSTALL NEW AREA LIGHT FIXTURE (TYPE 'B') REFER ALSO TO ELEVATION ON SHEET E8.</p> <p>11 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE.</p> <p>12 PROVIDE AND INSTALL STAINLESS STEEL 1/2" DIA. X 8" BOLT & STAINLESS STEEL HEX NUTS WITH LOCKWASHER. DRILL CONCRETE & EMBED BOLTS AND ANCHORS IN EPOXY. TYPICAL OF 2 (LOWER BOLTS).</p> <p>13 PROVIDE AND INSTALL STAINLESS STEEL 1/2" DIA. X 2" BOLT & STAINLESS STEEL HEX NUTS WITH LOCKWASHER. DRILL CONCRETE & EMBED BOLTS AND ANCHORS IN EPOXY. TYPICAL OF 2 (UPPER BOLTS).</p> |
|---|--|--|

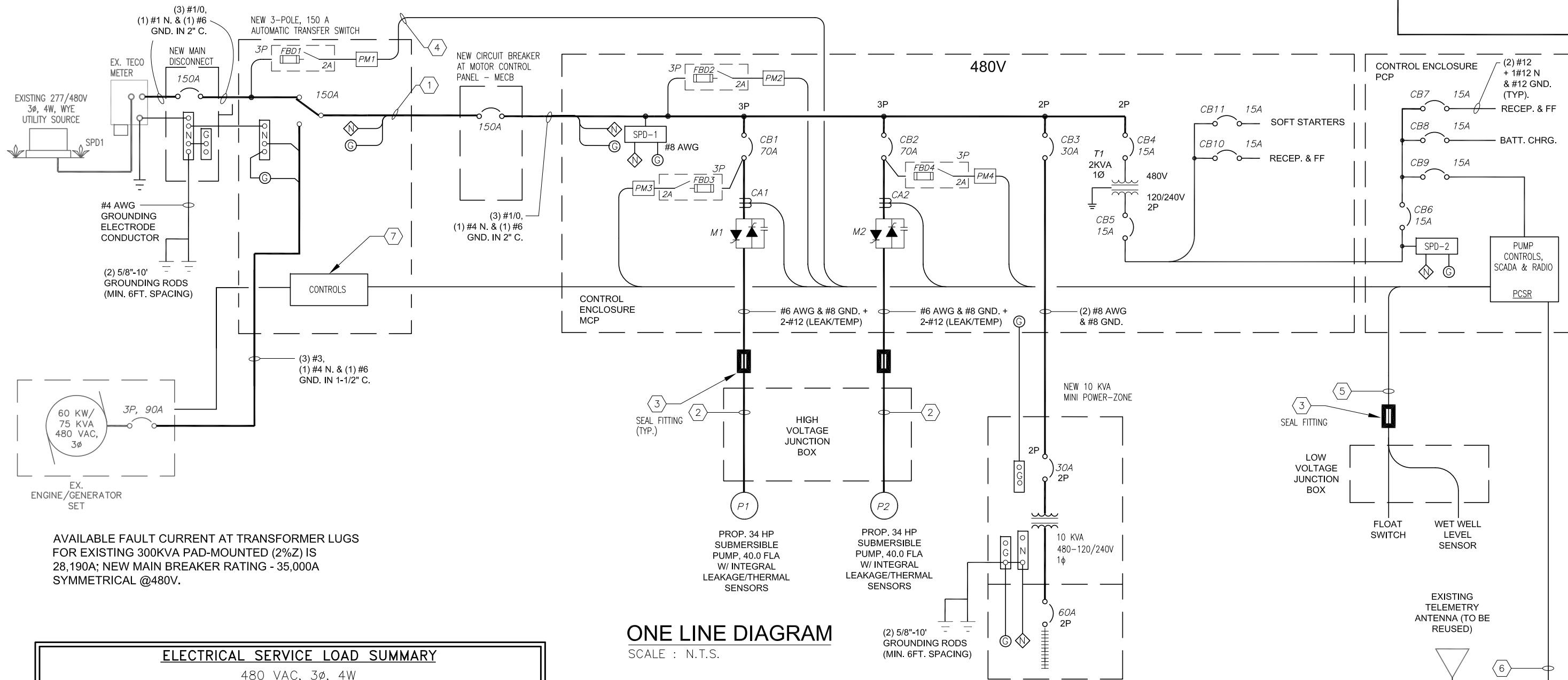
GENERAL NOTES:

- THE ELEVATION SHOWN DOES NOT CONVEY ALL EQUIPMENT TO BE INSTALLED. REFER TO ELEVATION ON SHEET E8 SOUTH WALL ELEVATION OF PROPOSED EQUIPMENT TO BE INSTALLED ON THE EXISTING GENERATOR BUILDING.



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| | | | | | | | |
|-----------------------------|-----|------|-----------|--|---|---|---------------------------------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | <p style="font-size: 1.2em; margin: 0;">CITY of TAMPA</p> <p style="margin: 0;">WASTEWATER DEPARTMENT</p> | <p style="margin: 0;">TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION PROPOSED WET WELL SIDE ELEVATION</p> | W.O. 5967 SHEET E9 |
| | 3 | | | | | | |
| | 2 | | | | | | |
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AVAILABLE FAULT CURRENT AT TRANSFORMER LUGS FOR EXISTING 300KVA PAD-MOUNTED (2%Z) IS 28,190A; NEW MAIN BREAKER RATING - 35,000A SYMMETRICAL @480V.

ELECTRICAL SERVICE LOAD SUMMARY

480 VAC, 3 ϕ , 4W

| LOAD | CONNECTED | DEMAND | APPROX. PHASE CURRENTS | | |
|----------------------|-----------------|-----------------|------------------------|----------------|----------------|
| | | | L1 | L2 | L3 |
| LARGEST OC DEVICE | 33.3 KVA | 33.3 KVA | 70.0 A | 70.0 A | 70.0 A |
| SECOND MOTOR LOAD | 33.3 KVA | 33.3 KVA | 40.0 A | 40.0 A | 40.0 A |
| MINI POWER-ZONE 'LP' | 10.0 KVA | 10.0 KVA | 21.0 A | 21.0 A | 0.0 A |
| PUMP CONTROL PANEL | 2.0 KVA | 2.0 KVA | 0.0 A | 4.0 A | 4.0 A |
| TOTAL | 78.6 KVA | 45.3 KVA | 131.0 A | 135.0 A | 114.0 A |

150 AMPERE SERVICE TO BE PROVIDED

NOTE: ** PUMP 1 AND PUMP 2 SHALL BE INTERLOCKED SO THAT ONLY ONE PUMP CAN RUN AT A TIME WHILE THE STATION IS OPERATED BY THE EMERGENCY GENERATOR.

ONE LINE DIAGRAM

SCALE : N.T.S.

ONE LINE DIAGRAM NOTES:

- 1 PROVIDE AND INSTALL 3-#1/0 + 1-#1 NEUTRAL + 1-#6 GND IN 2" CONDUIT, REFER TO DETAILS ON SHEET E8.
- 2 SUBMERSIBLE PUMP POWER CABLE: 3-#6 CU + #8 GND. POWER; 2-#12 CU (TEMP AND SEAL) CONTROL IN 2" CONDUIT, CABLE BY PUMP VENDOR. REFER TO DETAILS ON SHEET E8.
- 3 PROVIDE SEAL FITTING, REFER TO DETAIL ON SHEET E8.
- 4 REFER TO NOTES ON SHEET E8 FOR PHASE MONITORING SIGNALS REQUIRED FROM NEW AUTOMATIC TRANSFER SWITCH TO PUMP CONTROL PANEL.
- 5 PROVIDE 2" CONDUIT FROM NEW PUMP CONTROL CABINET TO WET WELL FOR FLOAT SWITCH AND LEVEL SENSOR CABLES. REFER TO DETAILS ON SHEET E8.
- 6 PROVIDE 1" CONDUIT FROM NEW PUMP CONTROL CABINET TO EXISTING ANTENNA MAST FOR NEW COAX CABLE, REFER TO DETAIL ON SHEET E25.
- 7 PROVIDE TWO (2) AUXILIARY CONTACTS WHICH ARE CLOSED WHEN THE TRANSFER SWITCH IS THE NORMAL POWER POSITION. CONTACTS ARE REQUIRED FOR PUMP INTERLOCK LOGIC. REFER ALSO TO SHEET E19.

| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|---|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ONE LINE DIAGRAM | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E10 |
| | 1 | | | DATE: 1-27-16 | | | |








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TB1 CONTINUED

| TB1 (□) (120V AC) MOUNTED ON PUMP CONTROL PANEL (PCP) | |
|---|--------------------------------------|
| TERM. | DESCRIPTION |
| 1 | 120V FROM MOTOR CONTROL PANEL |
| 2 | NEUTRAL FROM MOTOR CONTROL PANEL |
| 3 | SOFTSTARTER NO. 1 FAULT FROM M1 |
| 4 | SOFTSTARTER NO. 1 FAULT FROM M1 |
| 5 | SOFTSTARTER NO. 2 FAULT FROM M2 |
| 6 | SOFTSTARTER NO. 2 FAULT FROM M2 |
| 7 | PUMP 1 START COMMAND TO M1 (IN MCP) |
| 8 | PUMP 1 START COMMAND TO M1 (IN MCP) |
| 9 | PUMP 2 START COMMAND TO M2 (IN MCP) |
| 10 | PUMP 2 START COMMAND TO M2 (IN MCP) |
| 11 | P1 "ON" SIGNAL FROM M1 (IN MCP) |
| 12 | P1 "ON" SIGNAL FROM M1 (IN MCP) |
| 13 | P2 "ON" SIGNAL FROM M2 (IN MCP) |
| 14 | P2 "ON" SIGNAL FROM M2 (IN MCP) |
| 15 | PUMP 1 LEAK ALARM FROM MCP |
| 16 | PUMP 1 LEAK ALARM FROM MCP |
| 17 | PUMP 2 LEAK ALARM FROM MCP |
| 18 | PUMP 2 LEAK ALARM FROM MCP |
| 19 | PUMP 1 TEMPERATURE ALARM FROM MCP |
| 20 | PUMP 1 TEMPERATURE ALARM FROM MCP |
| 21 | PUMP 2 TEMPERATURE ALARM FROM MCP |
| 22 | PUMP 2 TEMPERATURE ALARM FROM MCP |
| 23 | PUMP 1 INTERLOCK WITH PUMP 2 |
| 24 | PUMP 1 INTERLOCK WITH PUMP 2 |
| 25 | PUMP 2 INTERLOCK WITH PUMP 1 |
| 26 | PUMP 2 INTERLOCK WITH PUMP 1 |
| 27 | PUMP 1 FAULT RELAY CONTACT |
| 28 | PUMP 1 FAULT RELAY CONTACT |
| 29 | PUMP 2 FAULT RELAY CONTACT |
| 30 | PUMP 2 FAULT RELAY CONTACT |
| 31 | PROCESS METER FOR FLOW - 120V POWER |
| 32 | PROCESS METER FOR FLOW - NEUTRAL |
| 33 | PROCESS METER FOR LEVEL - 120V POWER |
| 34 | PROCESS METER FOR LEVEL - NEUTRAL |

| | |
|----|----------------------|
| 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 | SPD-2 120V LINE OUT |
| L2 | MAIN BREAKER CB6 OUT |
| L3 | CB7 OUT |
| L4 | CB8 OUT |
| L5 | CB9 OUT |

X-Y
 TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR)
 TERMINAL POINT ON PCSR
 TERMINAL POINT IN PUMP CONTROL PANEL (PCP)
 TERMINAL POINT IN MOTOR CONTROL PANEL (MCP)
 TERMINAL POINT IN AUTOMATIC TRANSFER SWITCH (ATS)

TB2 CONTINUED

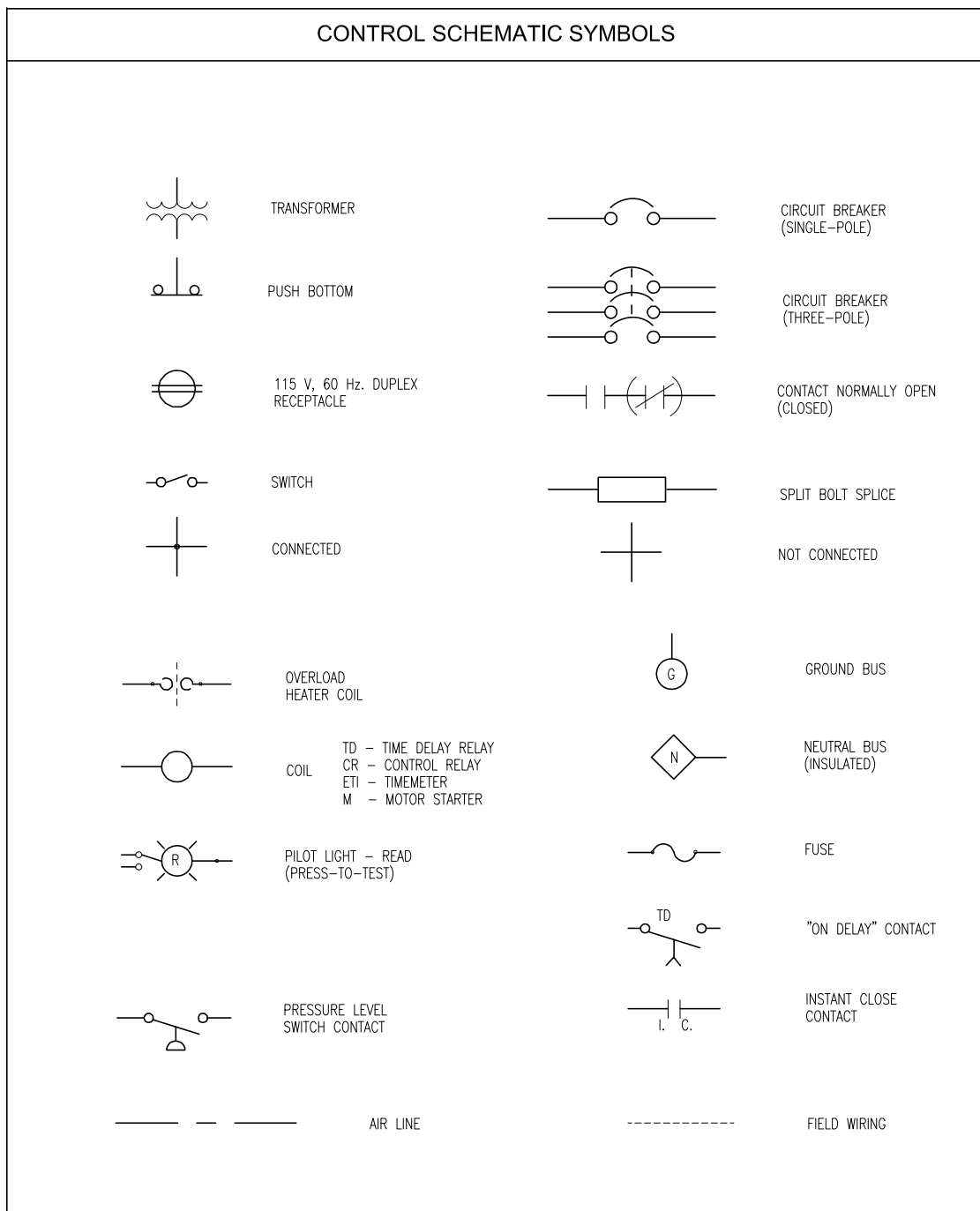
| TB2 (□) (24V DC) MOUNTED ON PUMP CONTROL PANEL (PCP) | |
|--|--|
| TERM. | DESCRIPTION |
| 51 | SLOT 1 PCSR 24V+ |
| 52 | WET WELL HIGH |
| 53 | WET WELL NOT HIGH |
| 54 | PUMP 1 "AUTO" TO PCSR |
| 55 | PUMP 1 "HAND" TO PCSR |
| 56 | PUMP 1 "ON" TO PCSR |
| 57 | PUMP 1 "FAULT" TO PCSR |
| 58 | PUMP 2 "AUTO" TO PCSR |
| 59 | PUMP 2 "HAND" TO PCSR |
| 60 | PUMP 2 "ON" TO PCSR |
| 61 | PUMP 2 "FAULT" TO PCSR |
| 62 | } PUMP CONTROL PANEL INTRUSION |
| 63 | |
| 64 | SLOT 2 PCSR 24V+ |
| 65 | GENERATOR RUN SIGNAL TO PCSR |
| 66 | SLOT 2 PCSR 24V+ |
| 67 | GENERATOR ALARM SIGNAL TO PCSR |
| 68 | SLOT 2 PCSR 24V+ |
| 69 | GENERATOR BLDG HEAT DETECTOR TO PCSR |
| 70 | SLOT 2 PCSR 24V+ |
| 71 | UTIL. POWER AVAILABLE (PM1) TO PCSR |
| 72 | SLOT 2 PCSR 24V+ |
| 73 | MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR |
| 74 | MOTOR CONTROL PANEL PHASE LOSS (PM3) TO PCSR |
| 75 | MOTOR CONTROL PANEL PHASE LOSS (PM4) TO PCSR |
| 76 | } MOTOR CONTROL PANEL INTRUSION |
| 77 | |
| 78 | SLOT 1 PCSR 24V+ |
| 79 | PUMP 1 AMPS |
| 80 | PUMP 2 AMPS |
| 81 | FLOW METER INPUT 4-20mA+ |
| 82 | FLOW METER INPUT 4-20mA- |
| 83 | PROCESS METER OUTPUT 4-20mA+ |
| 84 | PROCESS METER OUTPUT 4-20mA- |

| | |
|--------|--|
| 85 | GENERATOR RUN SIGNAL FROM GENERATOR CONTROLLER |
| 86 | GENERATOR RUN SIGNAL FROM GENERATOR CONTROLLER |
| 87 | GENERATOR ALARM SIGNAL FROM GENERATOR CONTROLLER |
| 88 | GENERATOR ALARM SIGNAL FROM GENERATOR CONTROLLER |
| 89-100 | SPARES |



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CONTROL SCHEMATIC SYMBOLS



TIMOTHY THOMAS, P.E. #47079

| No. | DATE | REVISIONS |
|-----|------|-----------|
| 3 | | |
| 2 | | |
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DES: T.DT.
 DRN: J.L.H.
 CKD: T.DT.
 DATE: 1-27-16

CITY of TAMPA
 WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMPING STATION
 ELECTRICAL SCHEMATIC LEGEND

W.O. 5967
 SHEET
 EII

| TB3 (☒) (120V AC) MOUNTED ON MOTOR CONTROL PANEL (MCP) | |
|--|--|
| TERM. | DESCRIPTION |
| 1 | 120V TO PUMP CONTROL PANEL |
| 2 | NEUTRAL (CONTINUED TO PUMP CONTROL PANEL) |
| 3 | PUMP 1 START COMMAND FROM CR1-1 (IN PCP) |
| 4 | PUMP 1 START COMMAND FROM CR1-1 (IN PCP) |
| 5 | PUMP 2 START COMMAND FROM CR2-1 (IN PCP) |
| 6 | PUMP 2 START COMMAND FROM CR2-1 (IN PCP) |
| 7 | PUMP 1 'ON' SIGNAL TO CR3 (IN PCP) |
| 8 | PUMP 1 'ON' SIGNAL TO CR3 (IN PCP) |
| 9 | PUMP 2 'ON' SIGNAL TO CR4 (IN PCP) |
| 10 | PUMP 2 'ON' SIGNAL TO CR4 (IN PCP) |
| 11 | SOFTSTART 1 FAULT SIGNAL TO PCP |
| 12 | SOFTSTART 1 FAULT SIGNAL TO PCP |
| 13 | SOFTSTART 2 FAULT SIGNAL TO PCP |
| 14 | SOFTSTART 2 FAULT SIGNAL TO PCP |
| 15 | PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP) |
| 16 | PUMP 1 LEAK DETECTED TO PILOT LIGHT 5 (IN PCP) |
| 17 | PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP) |
| 18 | PUMP 2 LEAK DETECTED TO PILOT LIGHT 6 (IN PCP) |
| 19 | PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP) |
| 20 | PUMP 1 TEMPERATURE ALARM TO FM1 (IN PCP) |
| 21 | PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP) |
| 22 | PUMP 2 TEMPERATURE ALARM TO FM2 (IN PCP) |
| 23-39 | SPARE |
| L1 | CB11 OUT MOTOR CONTROL PANEL POWER |

| TB4 (☒) (24V DC) MOUNTED ON MOTOR CONTROL PANEL (MCP) | |
|---|---|
| TERM. | DESCRIPTION |
| 41 | SLOT 2 PCSR 24V+ |
| 42 | MOTOR CONTROL PANEL PHASE LOSS (PM2) TO PCSR |
| 43 | SLOT 2 PCSR 24V+ |
| 44 | MOTOR CONTROL PANEL PHASE LOSS (PM3) TO PCSR |
| 45 | SLOT 2 PCSR 24V+ |
| 46 | MOTOR CONTROL PANEL PHASE LOSS (PM4) TO PCSR |
| 47 | SLOT 2 PCSR 24V+ |
| 48 | } MOTOR CONTROL PANEL INTRUSION |
| 49 | |
| 50 | SLOT 2 PCSR 24V+ |
| 51 | PUMP 1 AMPS |
| 52 | PUMP 2 AMPS |
| 53 | PUMP 1 SEAL LEAK DETECTOR PROBE |
| 54 | PUMP 1 SEAL LEAK DETECTOR PROBE |
| 55 | PUMP 2 SEAL LEAK DETECTOR PROBE |
| 56 | PUMP 2 SEAL LEAK DETECTOR PROBE |
| 57-66 | SPARE |
| X-Y | TERMINAL POINT MOUNTED ON PCP (INTERFACE TO PCSR) |
| ○ | TERMINAL POINT ON PCSR |
| □ | TERMINAL POINT IN PUMP CONTROL PANEL (PCP) |
| ☒ | TERMINAL POINT IN MOTOR CONTROL PANEL (MCP) |
| ■ | TERMINAL POINT IN AUTOMATIC TRANSFER SWITCH (ATS) |



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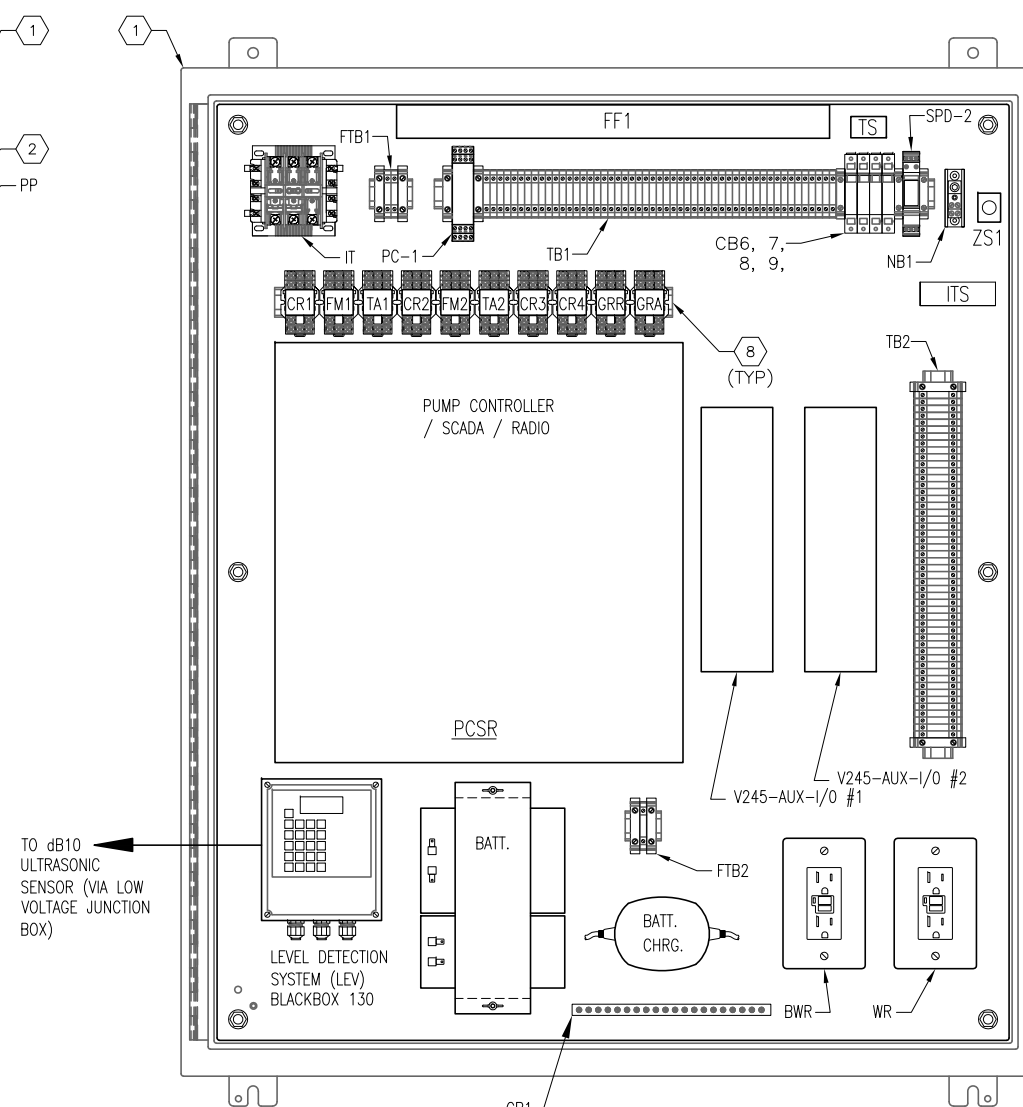
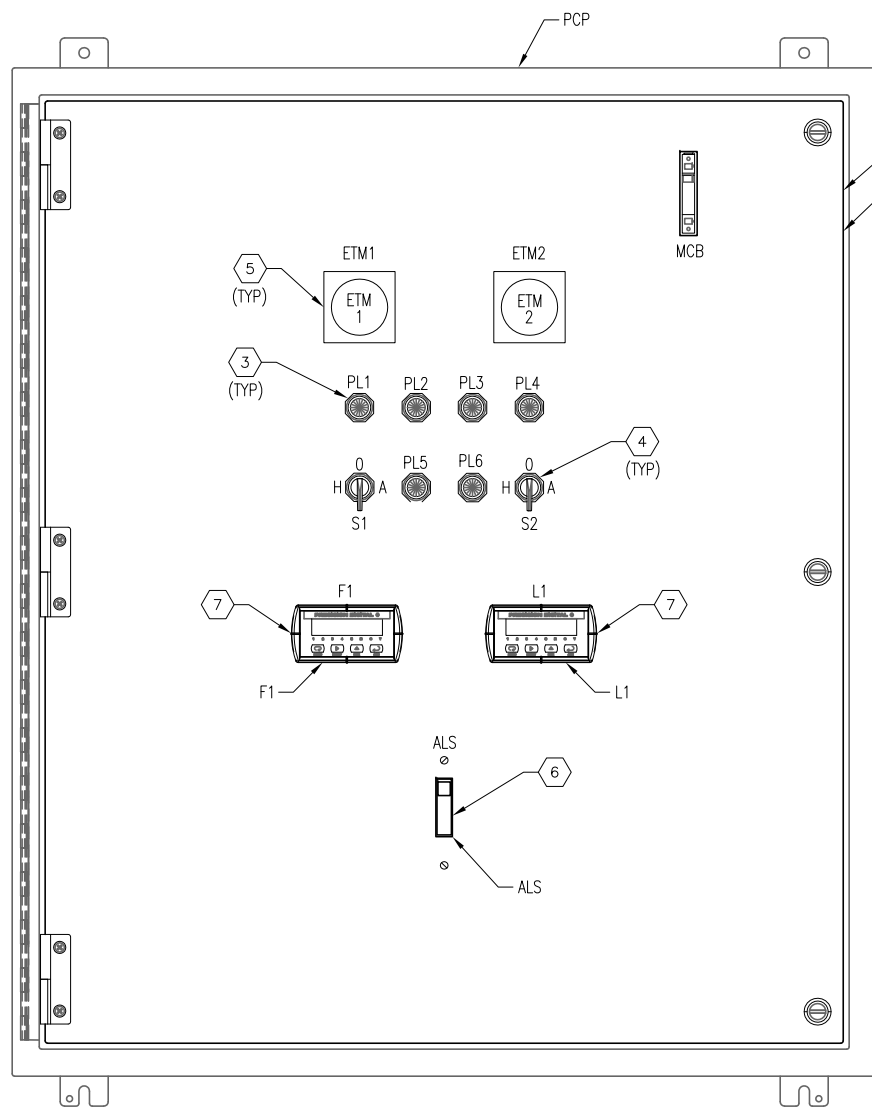
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DES: T.DT.
 DRN: J.L.H.
 CKD: T.DT.
 DATE: 1-27-16

CITY of TAMPA
 WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
 MAIN PUMPING STATION
 ELECTRICAL SCHEMATIC LEGEND (CONTINUED)

W.O. 5967
 SHEET
E12



LEGEND PLATE SCHEDULE

| SYMBOL | DEVICE | LEGEND |
|--------|---|----------------------------|
| ETM1 | ELAPSED TIME METER | PUMP NO. 1 HOURS |
| ETM2 | ELAPSED TIME METER | PUMP NO. 2 HOURS |
| PL1 | YELLOW PILOT LIGHT | PUMP NO. 1 ON |
| PL2 | RED ILLUMINATED PUSH BUTTON | PUMP NO. 1 TEMP ALARM |
| PL3 | RED ILLUMINATED PUSH BUTTON | PUMP NO. 2 TEMP ALARM |
| PL4 | YELLOW PILOT LIGHT | PUMP NO. 2 ON |
| PL5 | RED PILOT LIGHT | PUMP NO. 1 SEAL LEAK ALARM |
| PL6 | RED PILOT LIGHT | PUMP NO. 2 SEAL LEAK ALARM |
| S1 | 3 POSITION SWITCH | PUMP NO. 1 HAND-OFF-AUTO |
| S2 | 3 POSITION SWITCH | PUMP NO. 2 HAND-OFF-AUTO |
| F1 | FLOW METER | FLOW METER |
| L1 | LEVEL TRANSMITTER | WET WELL LEVEL |
| MCB | PUMP CONTROL PANEL MAIN CIRCUIT BREAKER | MAIN CIRCUIT BREAKER |
| ALS | AREA LIGHT SWITCH | AREA LIGHT SWITCH |

PUMP CONTROL PANEL DETAILS

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

NOTE : FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY.

1
E8 E13

PANEL INTERIOR

KEYED NOTES:

- 1 PUMP CONTROL CABINET. 42" X 36 X 12" NEMA 4X SS, PAINTED WHITE.
- 2 PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
- 3 PROVIDE AND INSTALL NEW PILOT LIGHT. REFER ALSO TO PARTS SCHEDULE ON SHEET E16.
- 4 PROVIDE AND INSTALL NEW SELECTOR SWITCH. REFER ALSO TO PARTS SCHEDULE ON SHEET E16.
- 5 PROVIDE AND INSTALL NEW ELAPSED TIME METER. REFER ALSO TO PARTS SCHEDULE ON SHEET E16.
- 6 PROVIDE AND INSTALL NEW SINGLE-POLE 120/277V, 20A LIGHT SWITCH TO CONTROL AREA LIGHT. REFER ALSO TO PARTS SCHEDULE ON SHEET E17.
- 7 PROVIDE AND INSTALL PRECISION DIGITAL PROCESS METER, MODEL PD765-6X3-00 WITH 4-20mA OUTPUT. REFER ALSO TO PARTS SCHEDULE ON SHEET E17.
- 8 PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.



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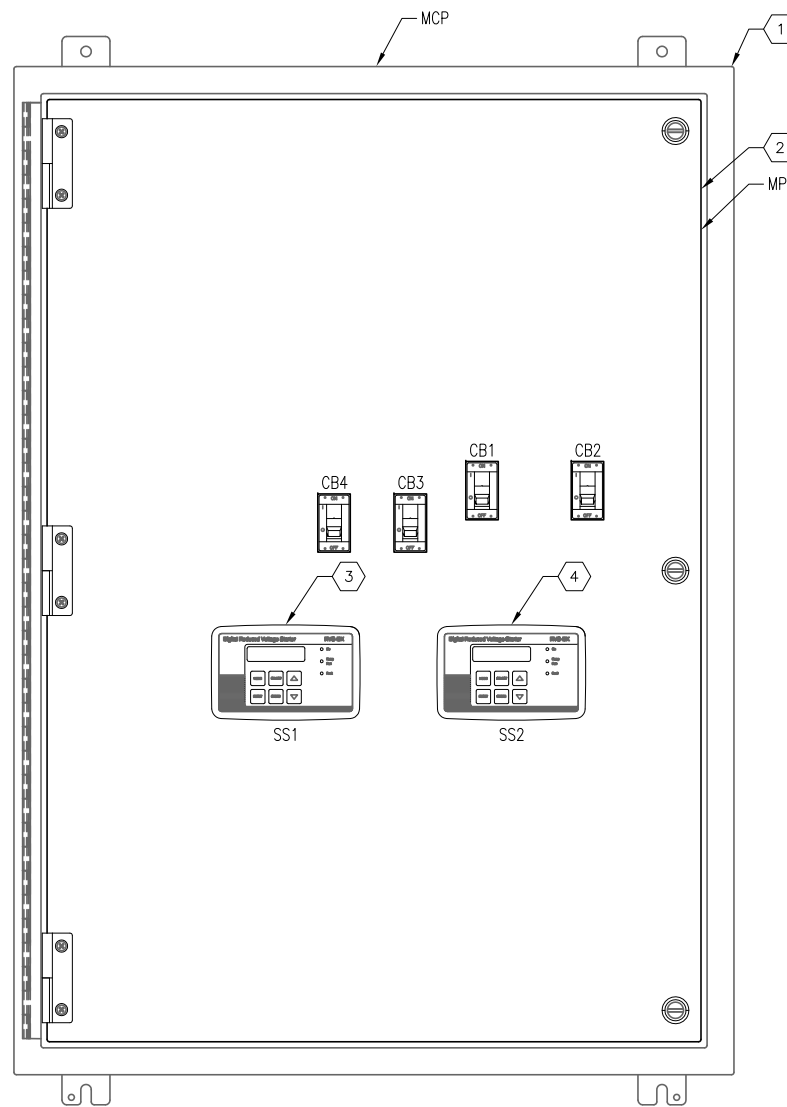
| No. | DATE | REVISIONS |
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DES: T.DT.
DRN: J.L.H.
CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
PUMP CONTROL PANEL DETAILS

W.O. 5967
SHEET
E13

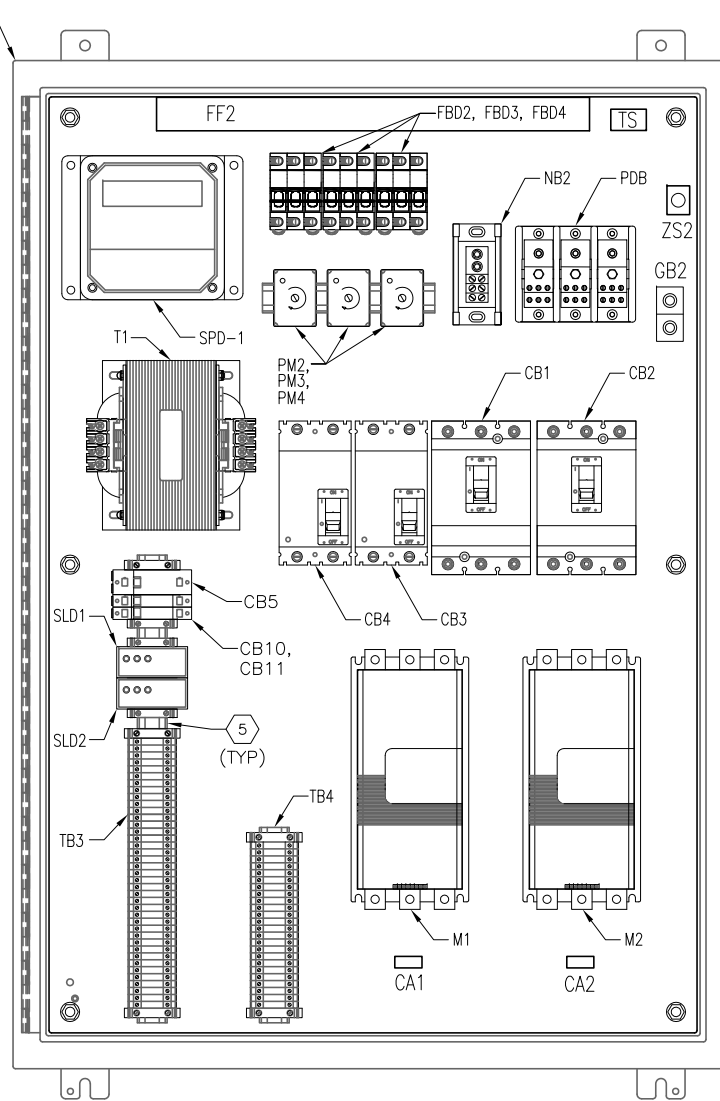


MOTOR CONTROL PANEL DETAILS

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

NOTE : FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY.

1
E8 | E14



PANEL INTERIOR

LEGEND PLATE SCHEDULE

| SYMBOL | DEVICE | LEGEND |
|--------|--------------------|------------------------------|
| CB1 | CIRCUIT BREAKER | PUMP NO. 1 CIRCUIT BREAKER |
| CB2 | CIRCUIT BREAKER | PUMP NO. 2 CIRCUIT BREAKER |
| CB3 | CIRCUIT BREAKER | MINI POWER-ZONE 480V FEEDER |
| CB4 | CIRCUIT BREAKER | TRANSFORMER 'T1' 480V FEEDER |
| SS1 | SOFTSTARTER KEYPAD | SOFTSTARTER NO. 1 KEYPAD |
| SS2 | SOFTSTARTER KEYPAD | SOFTSTARTER NO. 2 KEYPAD |

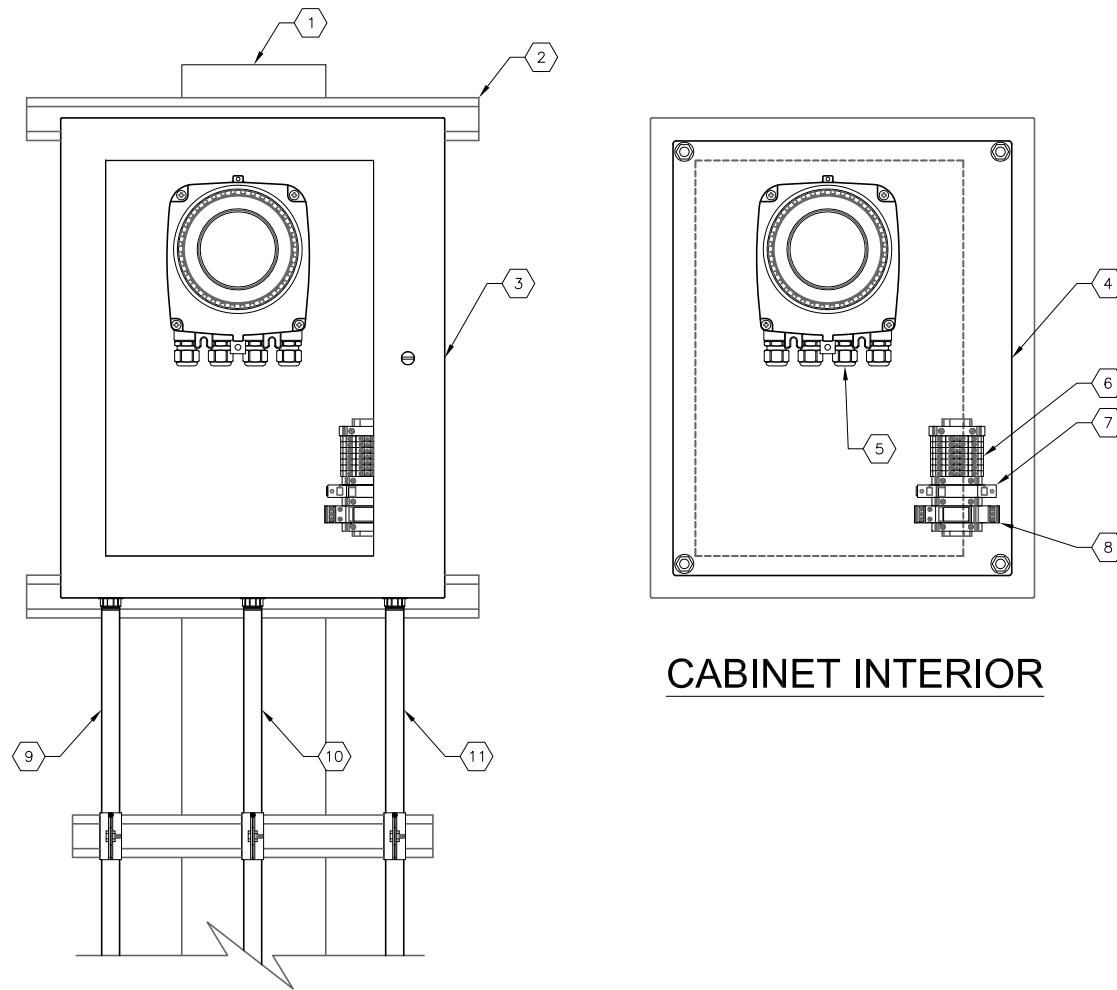
KEYED NOTES:

- 1 MOTOR CONTROL CABINET. 42" X 30 X 12" NEMA 4X SS, POWDER COAT WHITE.
- 2 PROVIDE AND INSTALL ALUMINUM DEADFRONT DOOR WITH STOP KIT.
- 3 PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #1. REFER ALSO TO PARTS SCHEDULE ON SHEET E16.
- 4 PROVIDE AND INSTALL NEW KEYPAD FOR SOFTSTARTER #2. REFER ALSO TO PARTS SCHEDULE ON SHEET E16.
- 5 PROVIDE AND INSTALL ALUMINUM DIN RAIL WHERE REQUIRED.



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| | | | | | | | |
|-----------------------------|-----|------|-----------|--|--|--|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION MOTOR CONTROL PANEL DETAILS | W.O. 5967 |
| | 3 | | | | | | SHEET |
| | 2 | | | | | | E14 |
| | 1 | | | | | | |

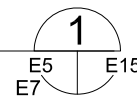


CABINET INTERIOR

- KEYED NOTES:**
- 1 PROVIDE AND INSTALL 6" X 6" X 9' REINFORCED SQUARE CONCRETE POST. POST SHALL BE BURIED A MINIMUM OF 3'-0" IN 12" X 12" 5000 PSI CONCRETE BASE.
 - 2 PROVIDE AND INSTALL 1-5/8" X 1-5/8" STAINLESS STEEL UNISTRUT WITH STAINLESS STEEL HARDWARE. NOTE: INSTALL ALL BOLTS FOR UNISTRUT COMPLETELY THROUGH CONCRETE POSTS.
 - 3 REMOTE TRANSMITTER CABINET. 20" X 16" X 8" NEMA 4X STAINLESS STEEL WITH STAINLESS STEEL STOP KIT AND WINDOW. HOFFMAN CSD201608SS6.
 - 4 HOFFMAN CP2016G BACKPLATE.
 - 5 PROVIDE AND INSTALL ABB WATER MASTER REMOTE TRANSMITTER.
 - 6 PROVIDE AND INSTALL TERMINAL BLOCKS WITH ALUMINUM DIN RAIL. PHOENIX CONTACT UK5N.
 - 7 PROVIDE AND INSTALL SINGLE-POLE CIRCUIT BREAKER. 120V, 15A. SQUARE D QOU-115.
 - 8 PROVIDE AND INSTALL INCOMING 120V POWER SURGE PROTECTION DEVICES. PHOENIX CONTACT #2856812.
 - 9 PROVIDE AND INSTALL 2-#12 XHHW-2 CU + 1-#12 XHHW-2 CU GND IN 3/4" CONDUIT FROM MINI POWER-ZONE 'LP' TO REMOTE TRANSMITTER FOR 120V POWER. CIRCUIT LP-2. REFER TO SHEET E6 FOR MINI POWER ZONE LOCATION.
 - 10 PROVIDE AND INSTALL 2/C-#18 TWISTED SHIELDED CABLE IN 3/4"C. TO PUMP CONTROL PANEL FOR FLOW METER REMOTE TRANSMITTER 4-20mA SIGNAL. REFER TO SHEET E8 FOR PUMP CONTROL PANEL LOCATION.
 - 11 CONTRACTOR SHALL PROVIDE AND INSTALL 3/4" CONDUIT FOR MANUFACTURER SUPPLIED SENSOR CABLE (CONTRACTOR TO VERIFY CONDUIT SIZE REQUIREMENTS WITH MANUFACTURER). PROVIDE NON-METALLIC, WEATHERPROOF, FLEXIBLE CONNECTION TO THE FLOW METER SENSOR. INSTALL CONDUIT/CABLE FROM FLOW METER SENSOR TO REMOTE TRANSMITTER. REFER TO SHEET E5 FOR TRANSMITTER LOCATION.

REMOTE TRANSMITTER DETAILS

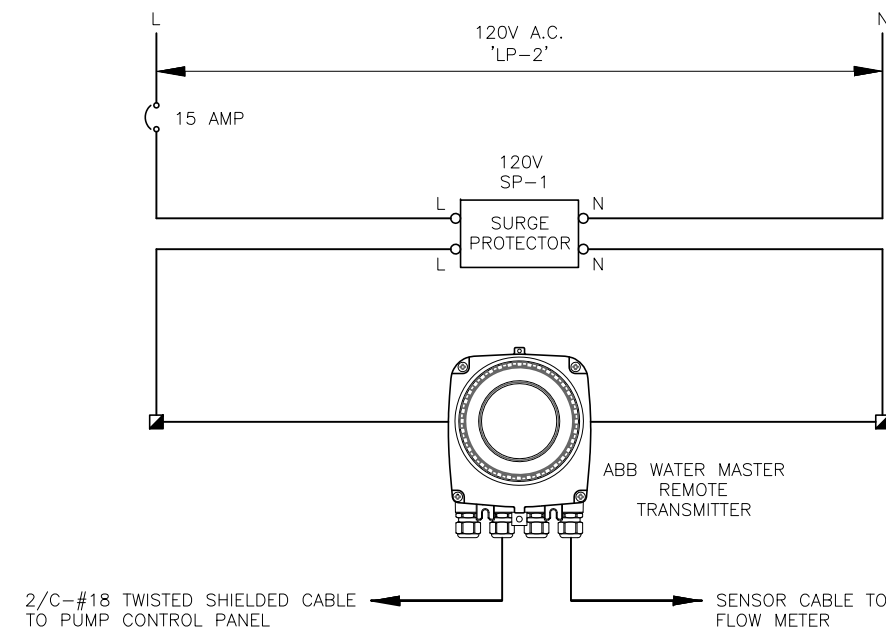
SCALE : 1/8" = 1'-0"



NOTE : FRONT ENCLOSURE DOOR NOT SHOWN FOR CLARITY.

GENERAL NOTES:

1. REFER TO SHEET E26 FOR REMOTER TRANSMITTER WIRING SCHEMATIC WHICH INCLUDES CONNECTIONS TO FLOW METER ELEMENT, PROCESS METER AND PCSR (IN PUMP CONTROL PANEL).



REMOTE TRANSMITTER WIRING SCHEMATIC

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



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| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|--|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION FLOW METER REMOTE TRANSMITTER DETAILS | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E15 |
| | 1 | | | DATE: 1-27-16 | | | |

PARTS SCHEDULE

| SYMBOL | NAME | PART | | | | REMARKS |
|-----------------------|--------------------------------|----------------------------------|--------------------------------|---|--|---|
| | | MAKE | TYPE | MODEL OR CAT. # | RATING | |
| CB 1 | CIRCUIT BREAKER | SQUARE D | THREE POLE | HDL 36070 | 480 V, 70 A | 18 KAIC @ 480VAC |
| CB 2 | CIRCUIT BREAKER | SQUARE D | THREE POLE | HDL 36070 | 480 V, 70 A | |
| CB 3 | CIRCUIT BREAKER | SQUARE D | TWO POLE | HDL 32030 | 480 V, 30A | |
| CB 4 | CIRCUIT BREAKER | SQUARE D | TWO POLE | HDL 32015 | 480 V, 15A | |
| CB 5 | CIRCUIT BREAKER | SQUARE D | TWO POLE | QOU-215 | 240 V, 15A | |
| CB 6, 7, 8, 9, 10, 11 | CIRCUIT BREAKER | SQUARE D | SINGLE POLE | QOU-115 | 120 V, 15A | |
| M1, 2 | MOTOR STARTER | SOLCON | RVSS | RVS-DX 58-480-115-8-U-S | 58 A | PROVIDE REMOTE KEYPAD |
| T1 | TRANSFORMER | SQUARE D | OPEN TYPE | 9070T2000D31 | 480V PRI, 120/240 V SEC. | 2KVA |
| CA1, CA2 | CIRCUIT SENSOR | ENERCORP INSTRUMENTS | 4-20 mA OUTPUT | SC200-1 | 0 - 50A | ADJUSTABLE RANGE |
| PL1, PL4 | INDICATOR LIGHT | SQUARE D | CLASS 9001 | SKT - 38LYA9 | 120 V, LED TYPE | YELLOW LENS & PRESS TEST |
| PL2, PL3 | INDICATOR LIGHT | SQUARE D | CLASS 9001 | SKT - 38LRR9 | 120 V, LED TYPE | RED LENS & PRESS TEST |
| PL5, PL6 | INDICATOR LIGHT | SQUARE D | CLASS 9001 | SKT - 38LRR9 | 120 V, LED TYPE | RED LENS & PRESS TEST |
| S1, S2 | HOA SWITCH ASSEMBLY | SQUARE D | OIL-TIGHT CLASS 9001 | SKS - 43B H2 | 10A @ 120V | |
| ETM1, ETM2 | ELAPSED TIME METER | CRAMER | NON-RESET | 635E&S | 120 V | W.W. GRANGER CAT. NO. 6X144 |
| ZS1, ZS2 | CONTROL PNL INTRUSION SENSOR | OMRON | CYLINDRICAL, SHORT BARREL | E2f-X5E1 (GRAINGER-6C826) | 10-30VDC, 3-WIRE PNP | W/ SQUARE D MTG. BRACKET (GRAINGER - 5B233) |
| FF1, FF2 & TS | LED LIGHTING FIXTURE | HOFFMAN | LED | LEDA1S35 | 120 V, 5W | W/TOGGLE SWITCH-TS |
| WR | WALL RECEPTACLE | HUBBELL | DUPLEX W/GFI | GF5262 | 120V AC, 15A GFI | W/UTILITY BOX AND COVER |
| SPD-1 | SURGE PROTECTIVE DEVICE TYPE 1 | ADVANCED PROTECTION TECHNOLOGIES | MOTOR CONTROL PANEL SPD | TE04XDS104X | 277/480 V, 3ø, 4W | |
| TB1, TB2, TB3, TB4 | TERMINALS | PHOENIX CONTACT | | UK5N TERMINALS | 30 A W/ ALUM. DIN RAIL | 50 CONTACTS (MIN) |
| ITS | INSULATED TERMINAL STRIP | ALLEN-BRADLEY | STYLE AA | 1492-15-T | 600 V AC NEUTRAL BLOCK | 4 CONTACTS (MIN) W/ SHORTING BARS |
| MCP | MOTOR CONTROL PANEL ENCLOSURE | HOFFMAN | NEMA 4X, 3P LATCH, 42"x30"x12" | 42"x30"x12" SS | 304 SS, POWDER COATED WHITE | 3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT. |
| MP | ENCLOSURE PANEL | HOFFMAN | 39" X 27", STEEL | A42P30 | STEEL, 12 GAUGE | |
| GB1 | GROUND BAR SYSTEM | PANDUIT | 12 PORT WITH MAIN LUG | UGB2/0-414-12 | | COPPER CONSTRUCTION |
| GB2 | GROUNDING BLOCK | ILSCO | AS REQUIRED | AS REQUIRED | | |
| IT | ISOLATION TRANSFORMER | SQUARE D | 120V/120V ISOLATION | 9070 T100D23 | | |
| TA1, TA2, CR1, CR2 | CONTROL RELAY | POTTER & BRUMFIELD | 8 PIN PLUG-IN | KRPA-11AG-120 | 120V AC COIL, 10A CONTACTS | DPDT W/ SOCKET AND HOLD DOWN SPRING |
| FM1, FM2, CR3, CR4 | CONTROL RELAY | POTTER & BRUMFIELD | 8 PIN PLUG-IN | KRPA-14AG-120 | 120V AC COIL, 10A CONTACTS | 3PDT W/ SOCKET AND HOLD DOWN SPRING |
| GRR, GRA | CONTROL RELAY | POTTER & BRUMFIELD | 8 PIN PLUG-IN | KRPA-11DG-24 | 24V DC COIL, 10A CONTACTS | DPDT W/ SOCKET AND HOLD DOWN SPRING |
| LEV | WET WELL LEVEL SENSOR | PULSAR, INC. | ULTRASONIC | dB10 TRANSDUCER W/ BLACKBOX 130 TRANSMITTER PART #: 130-110-300-00P-KP-TROP | 1 TD 32.8 FT RANGE 115VAC/24VDC POWERED W/ 4-20MA AND (2) RELAY OUT W/ KEY PAD, DISPLAY, AND TROPICALIZATION | CITY FORCES WILL PROVIDE ASSISTANCE WITH MOUNTING AND CALIBRATION |

NOTES:

1. ALARM FLOAT SWITCH WILL BE SUPPLIED BY WWD AND INSTALLED BY CONTRACTOR.
2. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "*" SHALL BE DETERMINED AFTER EQUIPMENT SELECTION.



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PARTS SCHEDULE IS CONTINUED ON SHEET E17

| | | | | | | | |
|-----------------------------|-----|------|-----------|--|---|--|----------------------------------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION PARTS SCHEDULE | W.O. 5967 SHEET E16 |
| | 3 | | | | | | |
| | 2 | | | | | | |
| | 1 | | | | | | |

PARTS SCHEDULE (CONTINUED)

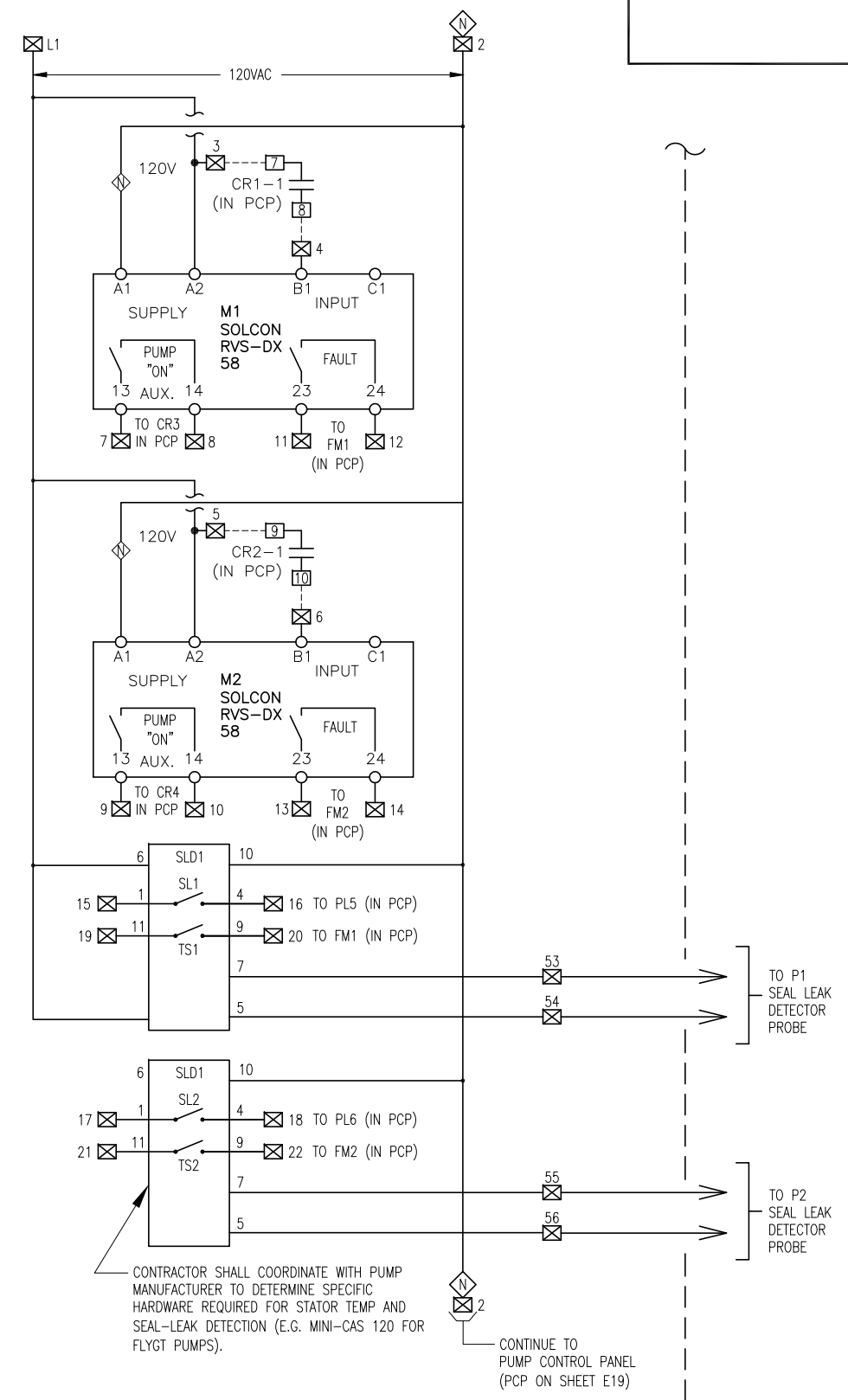
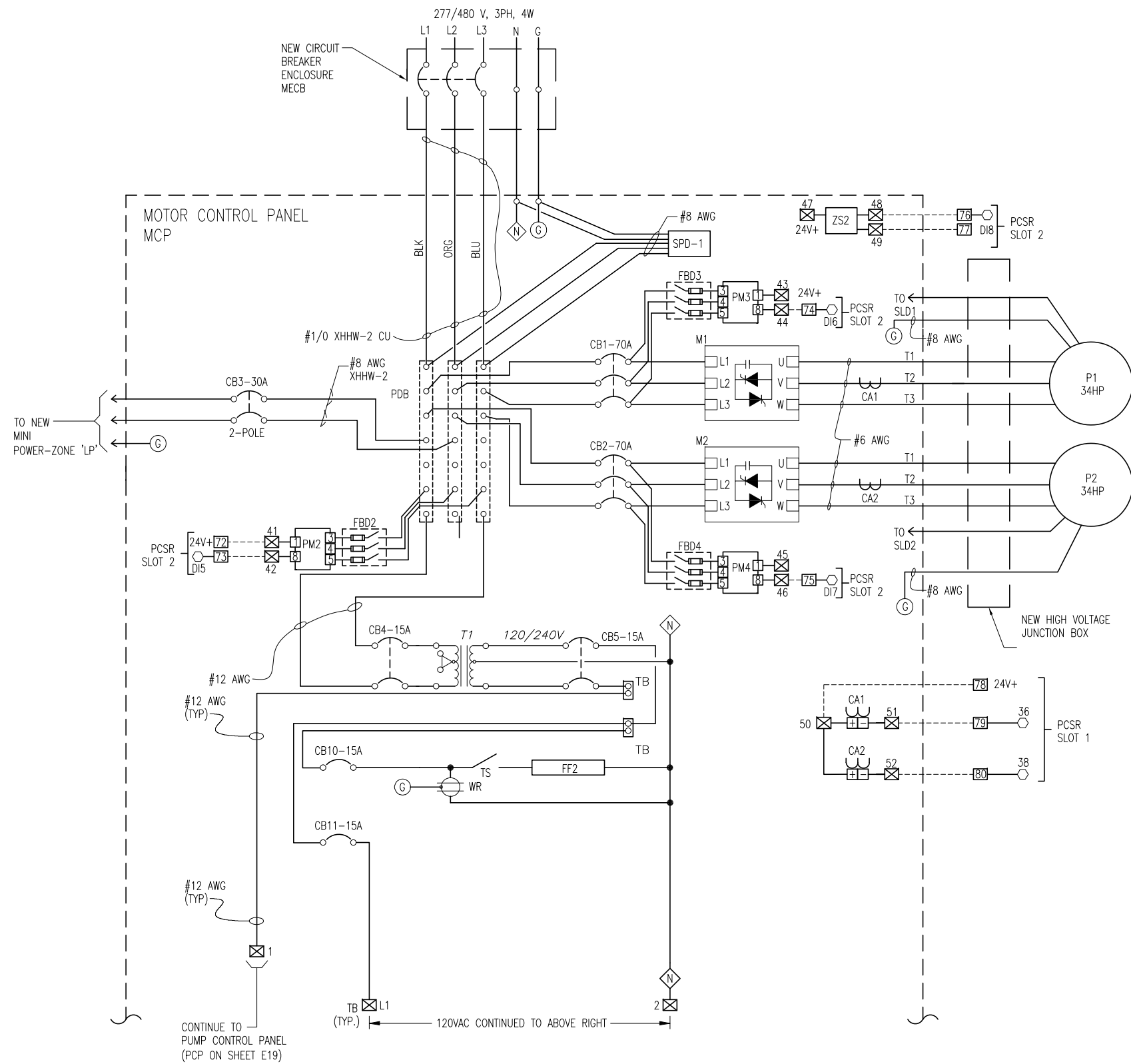
| SYMBOL | NAME | PART | | | | REMARKS |
|--------------------|--|-----------------------------|---|--|--|---|
| | | MAKE | TYPE | MODEL OR CAT. # | RATING | |
| PCSR | PLC BASED PUMP CONTROLLER, SCADA, AND RADIO SYSTEM | MOTOROLA CORP. | DUPLEX PUMP CONTROLLER BASED ON ACE 3600 PROGRAM CONTROLLER | ACE 3600 W/ UHF RADIO CDM 750, 403-512 MHz PART #: F7564 | 1-AC POWER SUPPLY 85-264V W/ BAT CHARGER PAR #: V261 | COORDINATE EFFORT W/ SCADA INTEGRATOR |
| | SLOTS 1 & 2 | MOTOROLA CORP. | 1- MIXED I/O AUXILIARY INTERFACE BOARD PART #: V245-AUX-I/O | 1-40 WIRE CABLE W/TB HOLDER 3M PART #: V358 | 1- ACE CPU3640 PART #: V446 | 1- 10.0 Ah BATTERY PART #: V328 |
| | 1-3 I/O SLOT FRAM PART #: V103 | | 1-20 PIN TB HOLDER KIT PART #: V158 | 1- 14x 14 METAL CHASSIS PART #: V214 | 2-16DI, 4DO(EE), 20mA MODULE PART #: V245 | 1-40 PIN TB HOLDER KIT PART #: V153 |
| | 10.0 Ah BATT. | | | | | |
| PM1, PM2, PM3, PM4 | 3-PHASE POWER MONITOR | ATC DIVERSIFIED ELECTRONICS | 8 PIN PLUG-IN | SUA-440-ASA | 440 VAC | W/ OPTIONAL 5-SEC RELEASE AND DIN RAIL SOCKET |
| PDB | PWR DIST. BLOCK | ILSCO | THREE POLE | PDB-16-175-3 | 600 V, 175 AMP | W/ LEXAN COVER |
| FBD1, 2, 3, 4 | FUSE BLOCK / DISCONNECT | ALLEN BRADLEY | THREE PHASE- HIGH INTER. CAP. | 1492-FB3C30-L | 600 VAC, 200KAIC | W/ BUSSMANN KTK-R-2 FAST ACTING, REJECTION FUSES |
| BATT. | BATTERY | POWERSONIC | ABSORBENT GLASS MAT (AGM) | PS-1270 F2 | 12 VOLT, 7.0 AH | W/ 0.25" x 0.032" TABS |
| BATT. CHR.G. | BATTERY CHARGER | DELTRAN CORP. | BATTERY TENDER | WATERPROOF 800 | 120VOLT, 800 mADC | QUALIFICATION, BULK, & FLOAT CHARGING |
| PC-1 | BACKUP PUMP CONTROLLER | WILKERSON | DUPLEX LIFT STATION | DR1920 | 10 AMP CONTACTS | DIN RAIL MOUNTING |
| FL | FLOAT SWITCH | ANCHOR SCIENTIFIC | SPDT | S20NONC | 10 A @ 120 V | |
| FTB1, 2 | FUSED TERMINAL BLOCKS | PHOENIX CONTACT | | UK 5-HESI | PROVIDE 5A & 4A FUSES | PROVIDE COOPER BUSSMAN GDB SERIES FUSES |
| SLD1, SLD2 | PUMP MONITORING UNIT | XYLEM | | MINI-CAS 120 | 10A AT 240V AC | |
| BWR | BATTERY WALL RECEPTACLE | HUBBELL | DUPLEX W/GFI | GF5262 | 120V AC, 15A GFI | W/UTILITY BOX AND COVER |
| PCP | PUMP CONTROL PANEL ENCLOSURE | HOFFMAN | NEMA 4X, 3P LATCH, 42"x36"x12" | 42"x36"x12" SS | 304 SS, POWDER COATED WHITE | 3P LATCH W/STOP KIT. EXTERNAL FINISH DURABLE RAL 9003 WHITE POWER COAT. |
| PP | ENCLOSURE PANEL | HOFFMAN | 39" X 33", STEEL | A42P36 | STEEL, 12 GAUGE | |
| NB1, 2 | NEUTRAL DISTRIBUTION BLOCK | BUSSMAN | SINGLE POLE | 16220-1 | 600V, 175A | |
| F1 | PROCESS METER FOR FLOW | PRECISION DIGITAL | 4 DIGIT, 1.2" DISPLAY | PD765-6X3-00 | | PROVIDE 4-20mA OUTPUT |
| L1 | PROCESS METER FOR LEVEL | PRECISION DIGITAL | 4 DIGIT, 1.2" DISPLAY | PD765-6X3-00 | | PROVIDE 4-20mA OUTPUT |
| ALS | AREA LIGHT SWITCH | HUBBELL | SINGLE-POLE | HBL1221 | 277V, 20A | |
| SPD-2 | SURGE PROTECTION DEVICE TYPE 3 | PHOENIX CONTACT | 3 CONDUCTOR SYSTEM (L, N, G) | 2856812 | 120V, 25A | |

NOTES:

1. ALARM FLOAT SWITCH WILL BE SUPPLIED BY WWD AND INSTALLED BY CONTRACTOR.
2. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "*" SHALL BE DETERMINED AFTER EQUIPMENT SELECTION.



| | | | | | | | |
|-----------------------------|-----|------|-----------|--|---|--|----------------------------------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION PARTS SCHEDULE (CONTINUED) | W.O. 5967 SHEET E17 |
| | 3 | | | | | | |
| | 2 | | | | | | |
| | 1 | | | | | | |



○ TERMINALS ON ACE I/O MODULE (GENERAL)
 □ TERMINALS IN PUMP CONTROL PANEL
 ⊗ TERMINALS IN MOTOR CONTROL PANEL

MOTOR CONTROL PANEL (MCP) SCHEMATIC DIAGRAMS

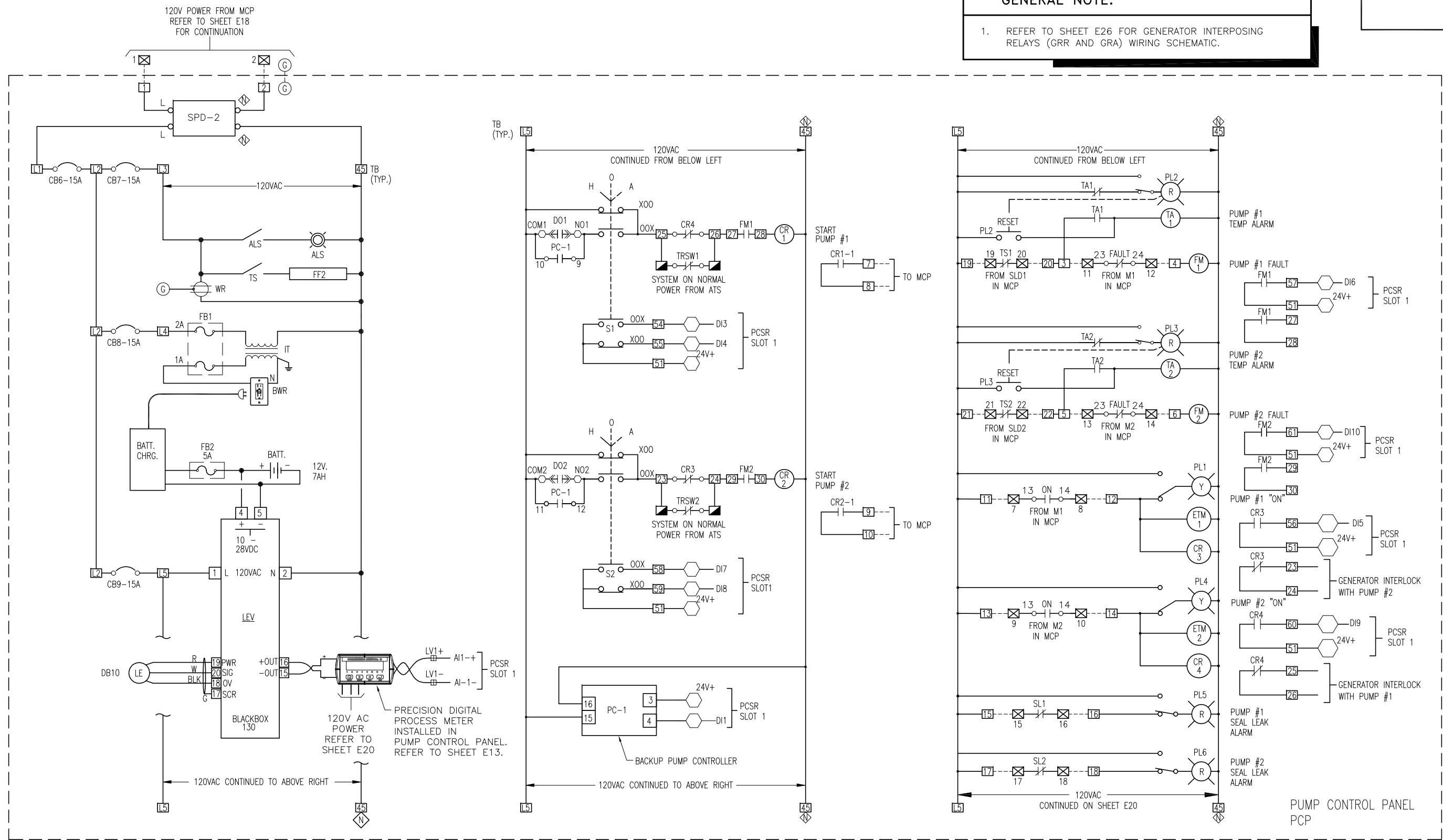
SCALE : N.T.S.



| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|---|---------------------------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ELECTRICAL SCHEMATIC DIAGRAMS (SHEET 1 OF 4) | W.O. 5967 SHEET E18 |
| | 3 | | | DRN: J.L.H. | | | |
| | 2 | | | CKD: T.DT. | | | |
| | 1 | | | DATE: 1-27-16 | | | |

GENERAL NOTE:

1. REFER TO SHEET E26 FOR GENERATOR INTERPOSING RELAYS (GRR AND GRA) WIRING SCHEMATIC.



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

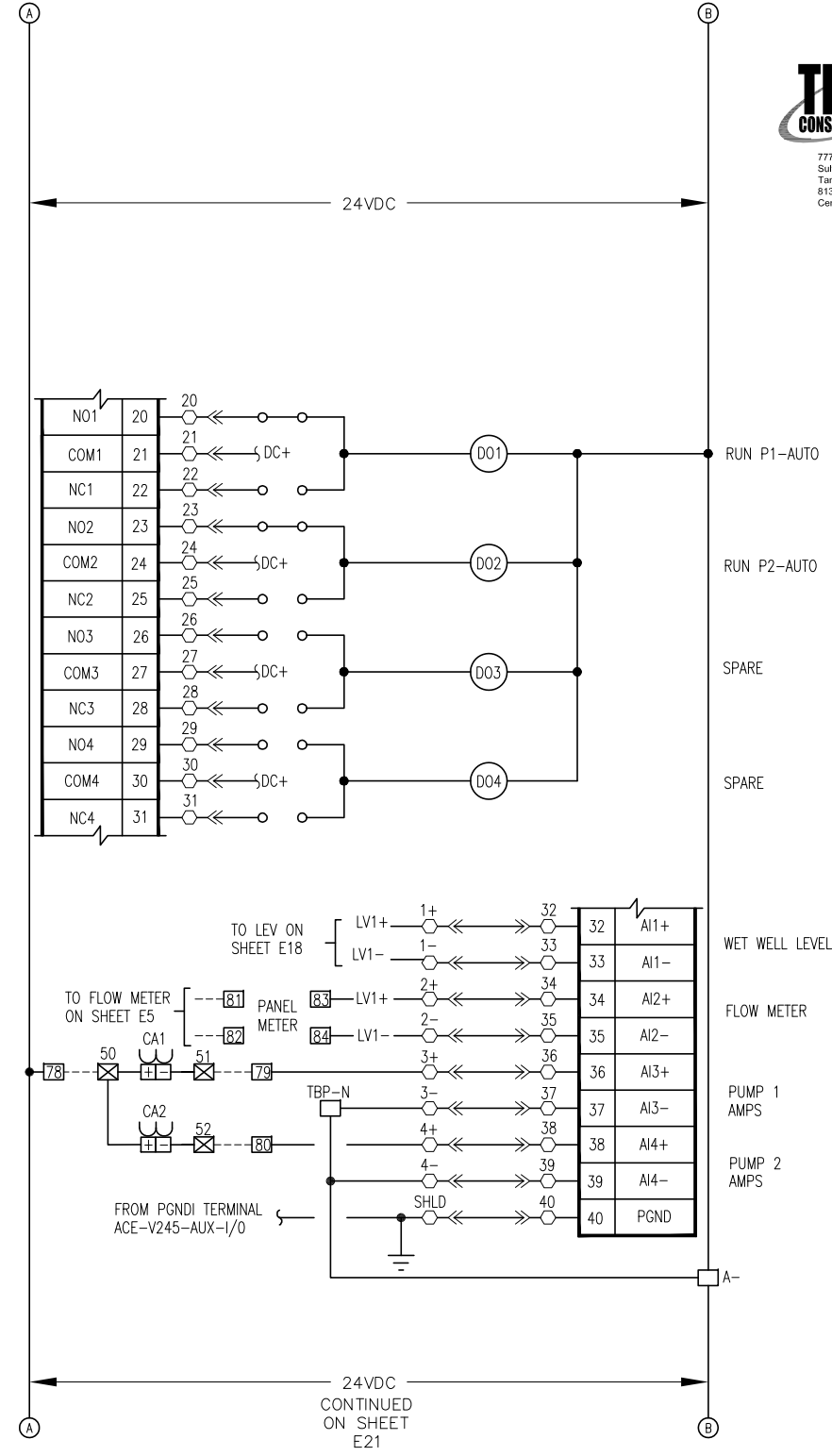
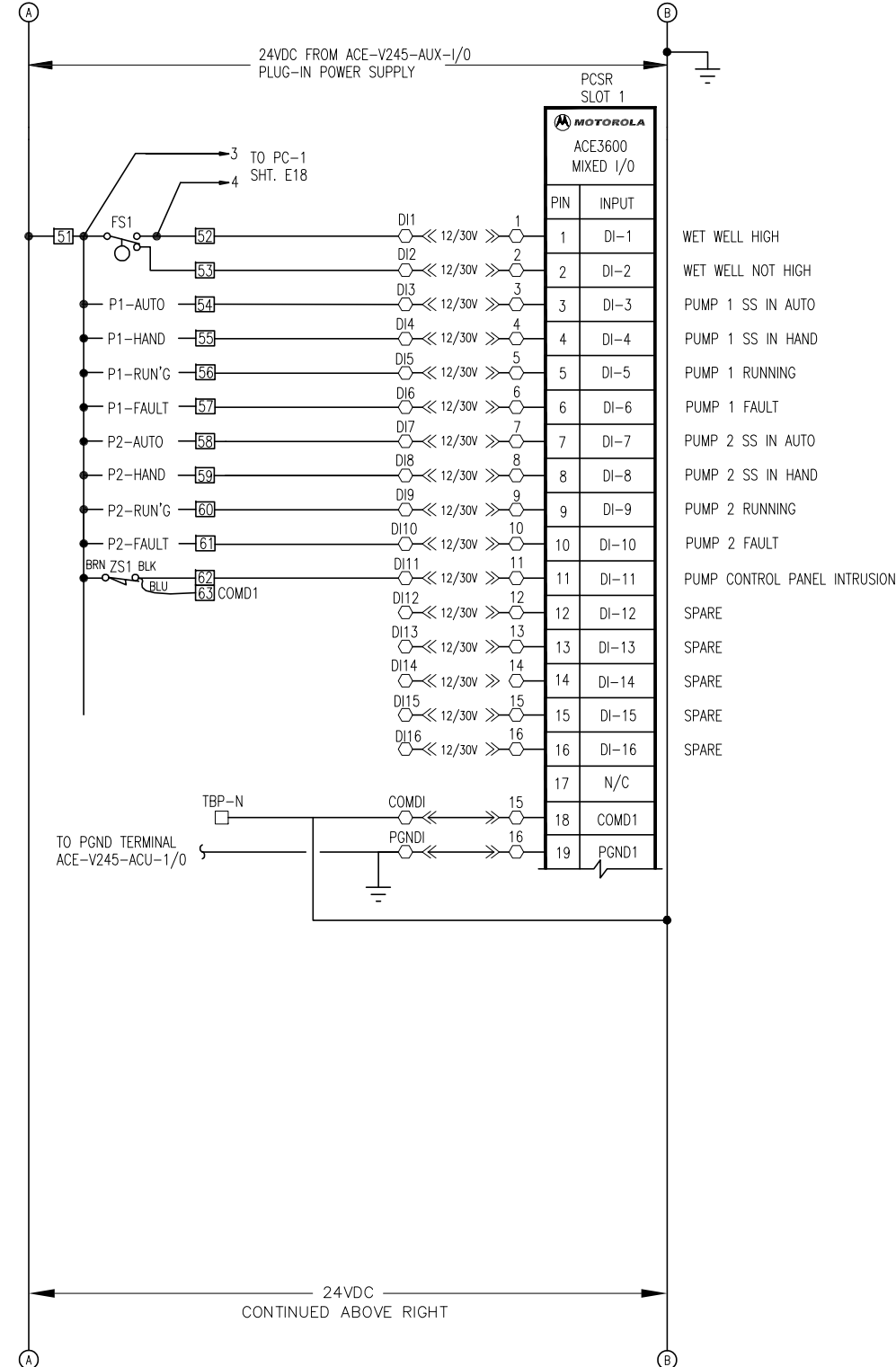
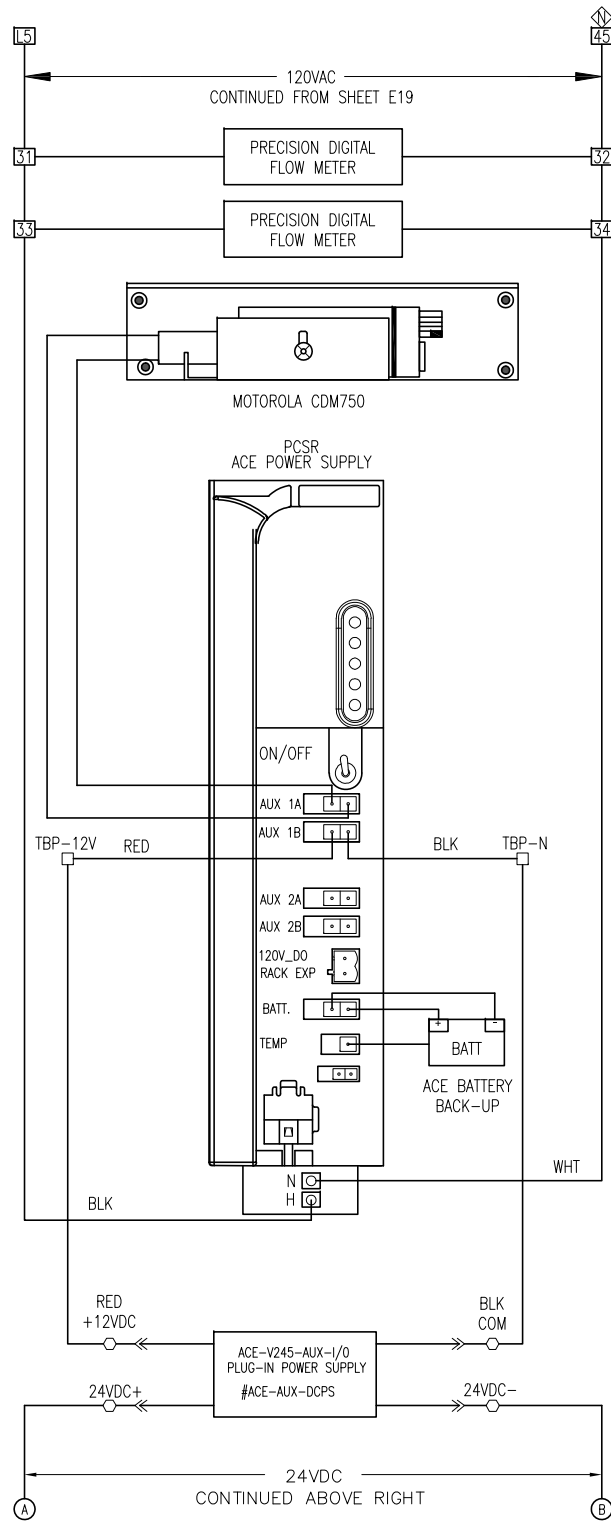
PUMP CONTROL PANEL (PCP) SCHEMATIC DIAGRAMS

SCALE : N.T.S.



| No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ELECTRICAL SCHEMATIC DIAGRAMS (SHEET 2 OF 4) | W.O. 5967 SHEET E19 |
|-----|------|-----------|--|--|---|---------------------------|
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |

TIMOTHY THOMAS, P.E. #47079



PUMP CONTROL PANEL SCHEMATIC DIAGRAMS
SCALE : N.T.S.

○ TERMINALS ON ACE I/O MODULE (GENERAL)
□ TERMINALS IN PUMP CONTROL PANEL
⊗ TERMINALS IN MOTOR CONTROL PANEL

TIMOTHY THOMAS, P.E. #47079

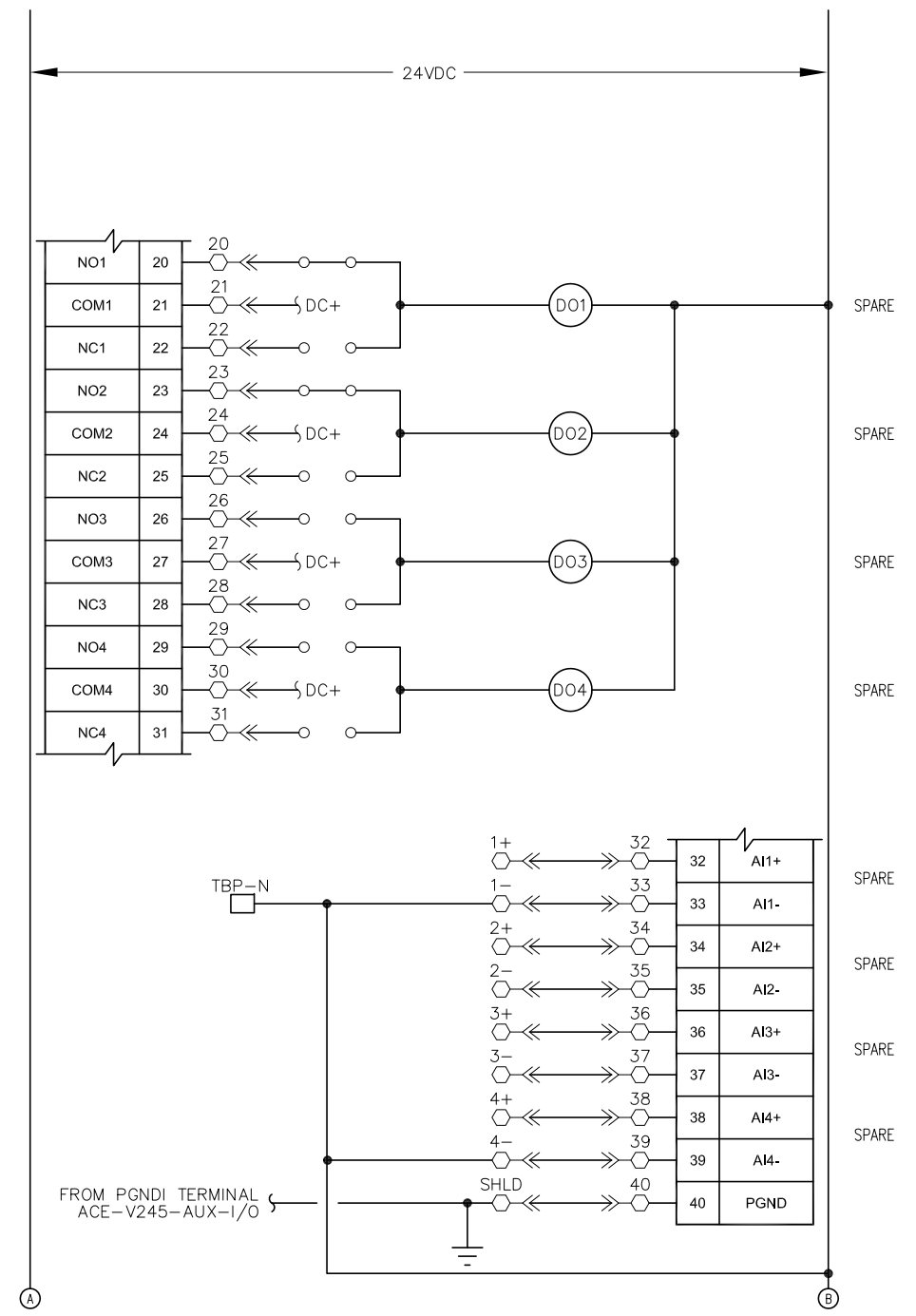
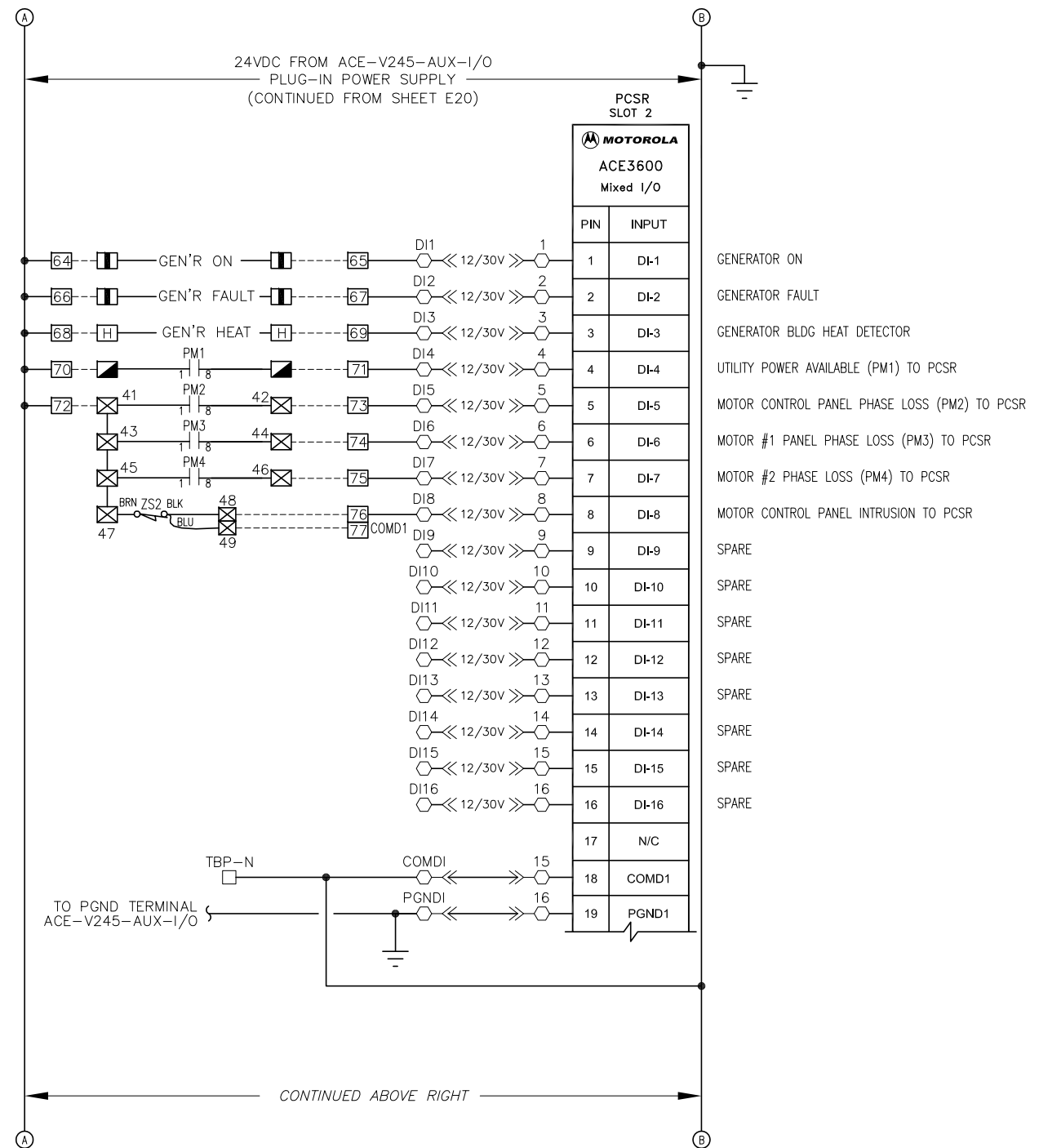
| No. | DATE | REVISIONS |
|-----|------|-----------|
| 3 | | |
| 2 | | |
| 1 | | |

DES: T.DT.
DRN: J.L.H.
CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
ELECTRICAL SCHEMATIC DIAGRAMS (SHEET 3 OF 4)

W.O. 5967
SHEET
E20

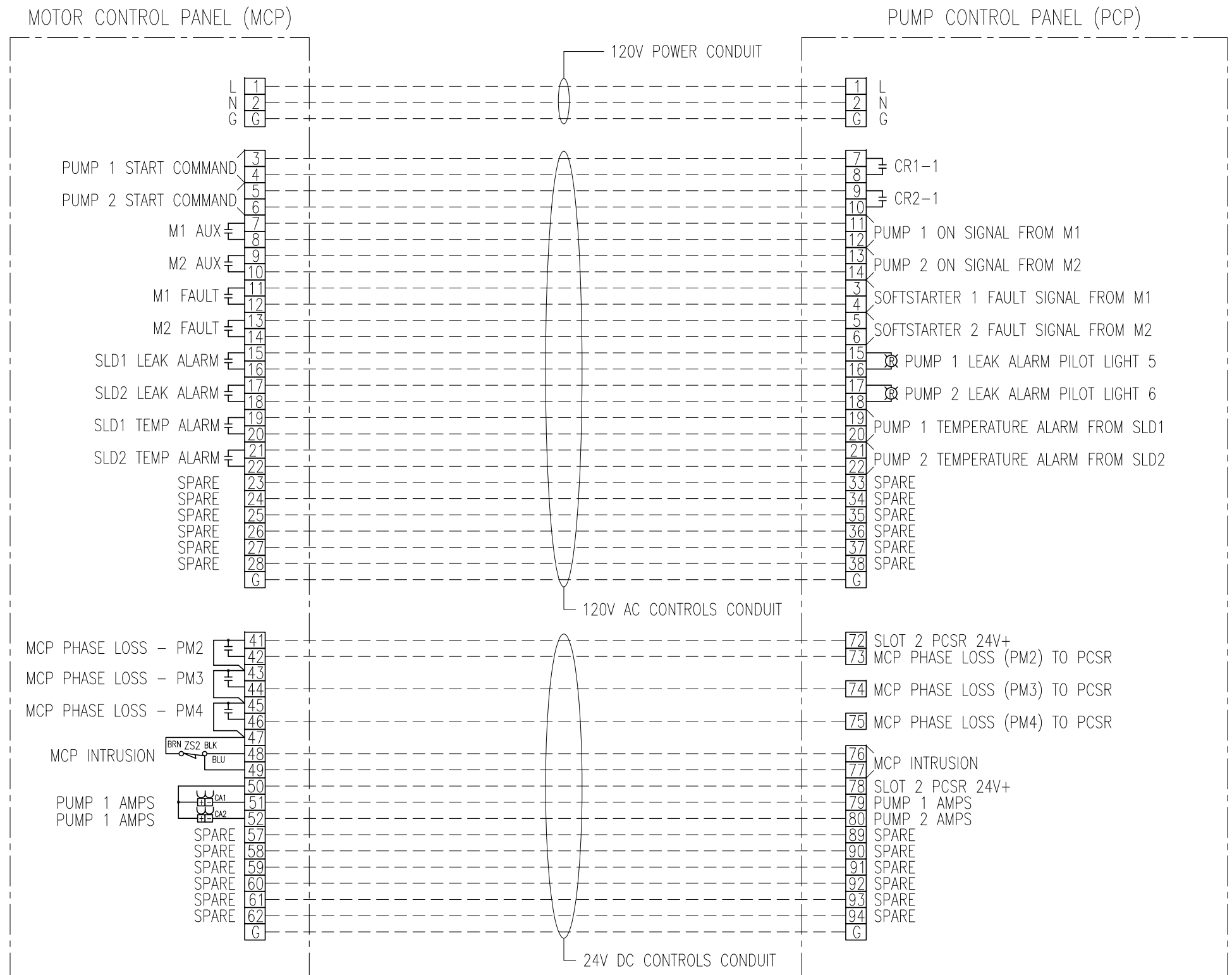


PUMP CONTROL PANEL SCHEMATIC DIAGRAMS
SCALE : N.T.S.

- TERMINALS ON ACE I/O MODULE (GENERAL)
- TERMINALS IN PUMP CONTROL PANEL (PCP)
- ⊗ TERMINALS IN MOTOR CONTROL PANEL (MCP)
- ⊠ TERMINALS IN AUTOMATIC TRANSFER SWITCH (ATS)
- TERMINALS IN GENERATOR CONTROLLER
- ▨ TERMINALS IN GENERATOR BLDG HEAT DETECTOR



| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|---|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ELECTRICAL SCHEMATIC DIAGRAMS (SHEET 4 OF 4) | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E21 |
| | 1 | | | DATE: 1-27-16 | | | |



MCP TO PCP INTERCONNECTION WIRING DIAGRAM



| No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION MCP TO PCP INTERCONNECTION WIRING DIAGRAM | W.O. 5967 SHEET E22 |
|-----|------|-----------|--|--|--|---------------------------|
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |

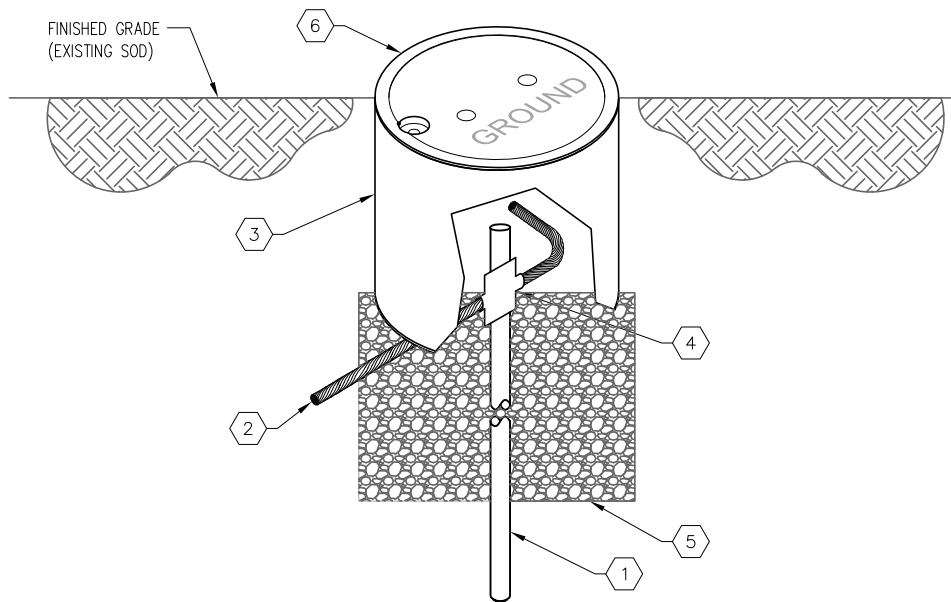
TIMOTHY THOMAS, P.E. #47079

LIGHTING FIXTURE SCHEDULE

| TYPE | MANUFACTURER | CATALOG NUMBER | LAMP(S) | VOLTS | MOUNTING | REMARKS |
|------|--------------|--|---------------|---------|-----------|--|
| A | LITHONIA | ZL2N L48 3000LM MDD MVOLT 40K 80CRI WH | (2) 32W T8 | 120 | CEILING | LED STRIP FIXTURE. |
| EM | LITHONIA | ELM2 LED | (2) 1.6 W LED | 120/277 | WALL | LED EMERGENCY LIGHT |
| X | LITHONIA | LQMP3R120/277ELN | (1) 1W DRIVER | 120/277 | UNIVERSAL | LED EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP |

PROPOSED PANEL SCHEDULE

| PANEL 'LP' ; SQUARE D CO. 120/240 VOLTS, 1Ø, 3W 30 AMP MAIN SURFACE ENCLOSURE MINI POWER-ZONE CIRCUIT BREAKER PROVIDE EQUIPMENT GROUND BAR ; TOP AT 5'-6" AFF | | | | | | | | | | | | | |
|--|-----------------|------|-------|-----------|-----|-----------------------------|-----------|-----------|-----|-----------------|------|-------|---------------------------|
| EQUIPMENT SERVED | CIRCUIT BREAKER | | | KVA/PHASE | | CIRC. NO. | CIRC. NO. | KVA/PHASE | | CIRCUIT BREAKER | | | EQUIPMENT SERVED |
| | POLE | AMPS | FRAME | A | B | | | A | B | POLE | AMPS | FRAME | |
| GENERATOR ROOM LIGHTS | 1 | 20 | QOB | 0.5 | | 1 | 2 | 0.1 | | 1 | 20 | QOB | FLOW METER |
| GENERATOR ROOM RECEPTACLE | 1 | 20 | QOB | | 0.2 | 3 | 4 | | 1.2 | 1 | 20 | QOB | GENERATOR BATTERY CHARGER |
| ODOR CONTROL UNIT POWER | 1 | 20 | QOB | 1.2 | | 5 | 6 | | | | | | SPACE |
| SPACE | | | | | | 7 | 8 | | | | | | SPACE |
| SPACE | | | | | | 9 | 10 | | | | | | SPACE |
| SUB-TOTAL KVA | | | | 1.7 | 0.2 | | | 0.1 | 1.2 | | | | |
| TOTAL CONNECTED LOAD = 3.2 KVA | | | | | | TOTAL DEMAND LOAD = 3.2 KVA | | | | | | | |



GROUND TEST WELL DETAIL KEYED NOTES:

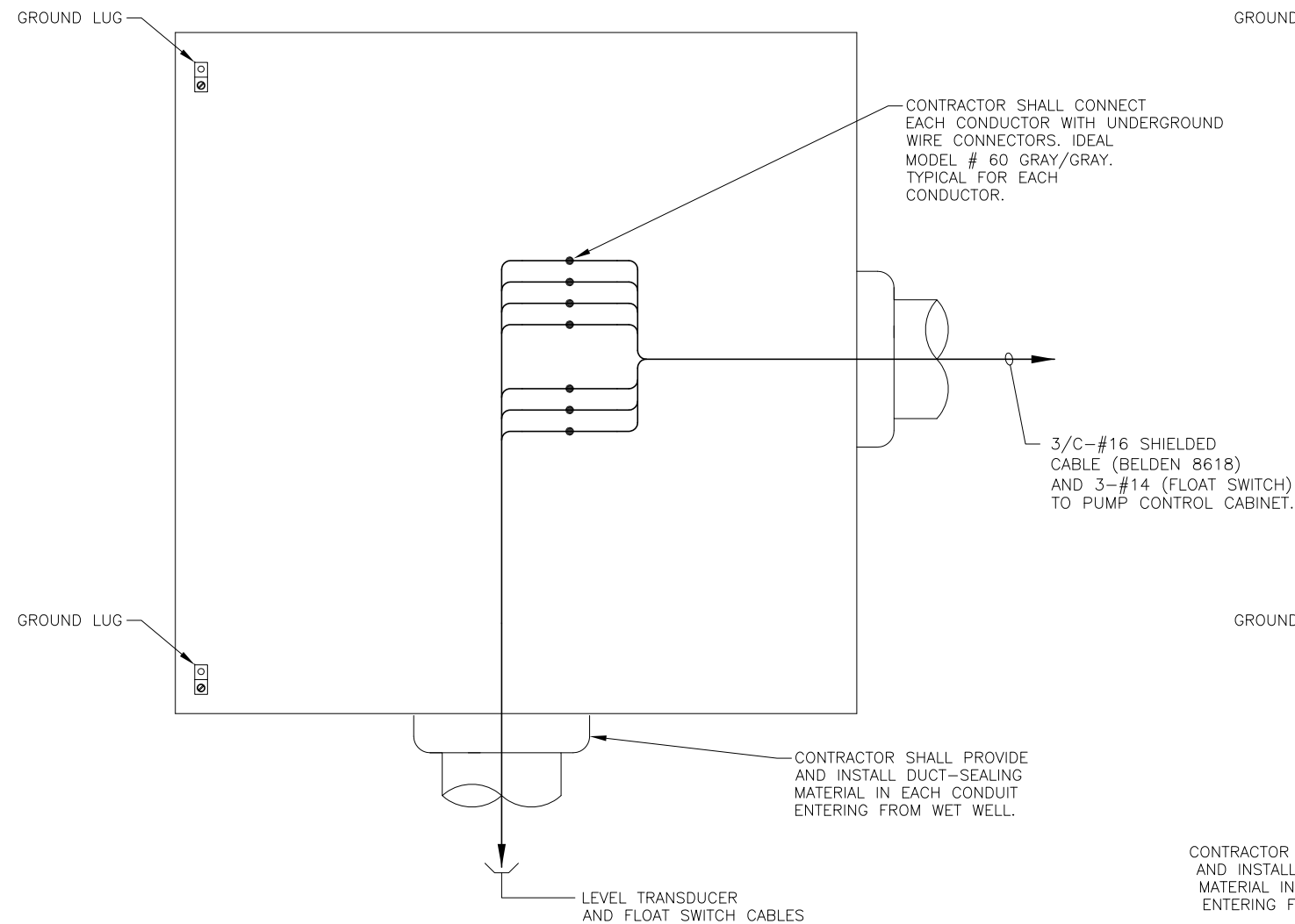
- 1 NEW GROUND ROD, STAINLESS STEEL, 5/8" X 10'-0" (TYP).
- 2 #4 BARE STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR (# 8 FOR MINI POWER-ZONE GROUNDING).
- 3 PROVIDE AND INSTALL HARGER 362PS12CILS80, SCHEDULE 80 PVC GROUND TEST WELL (TYP).
- 4 EXOTHERMIC WELD.
- 5 PROVIDE 6" MINIMUM OF CRUSHED STONE.
- 6 GROUND TEST WELL CAST IRON COVER.

GROUND TEST WELL DETAIL

SCALE : N.T.S.



| | | | | | | | |
|-----------------------------|-----|------|-----------|---------------|--|--|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION SCHEDULES AND DETAILS | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E23 |
| | 1 | | | DATE: 1-27-16 | | | |

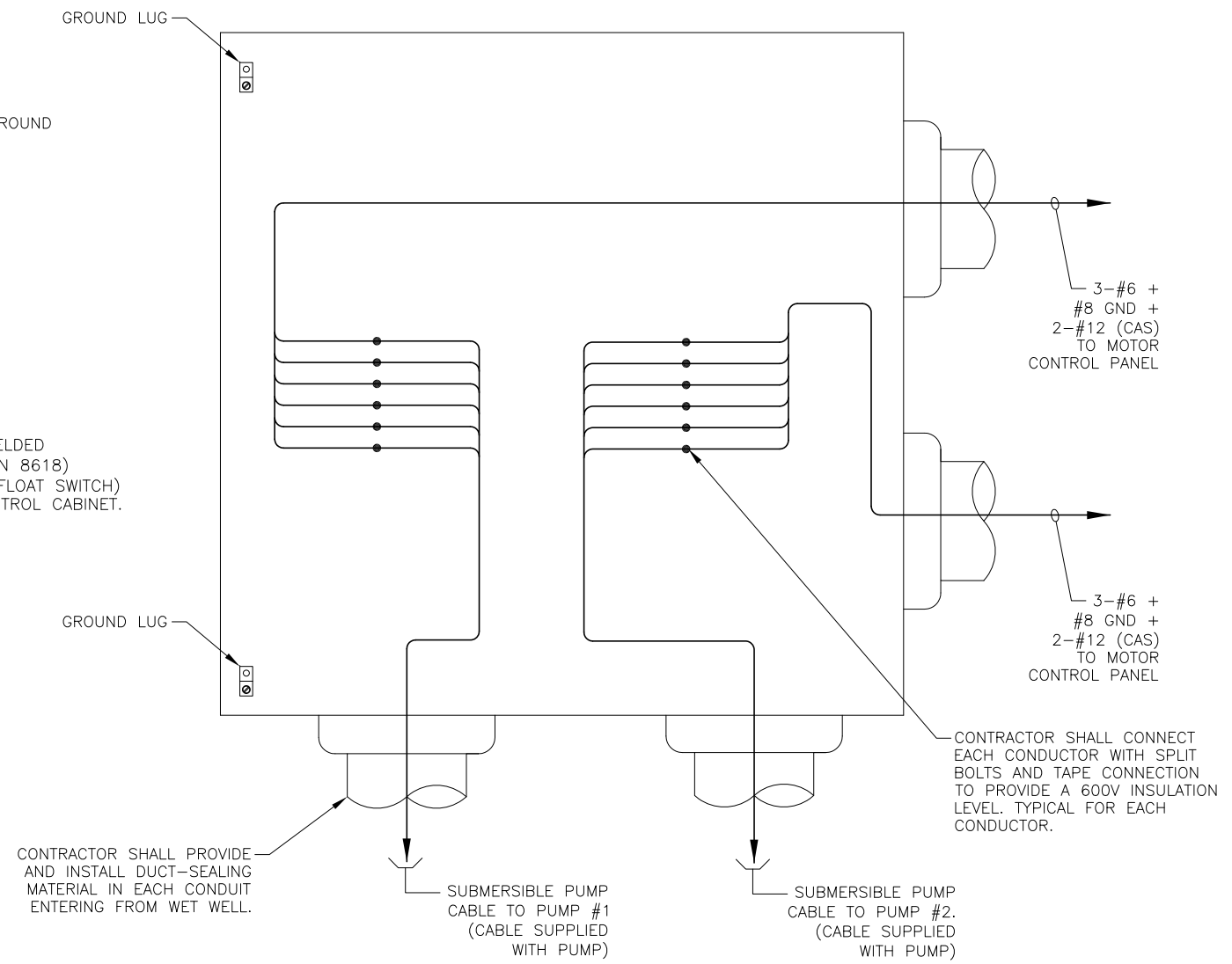
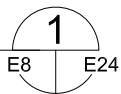


NOTES:

1. COVER NOT SHOWN FOR CLARITY
2. BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.

LOW VOLTAGE JUNCTION BOX DETAIL

SCALE : N.T.S.



NOTES:

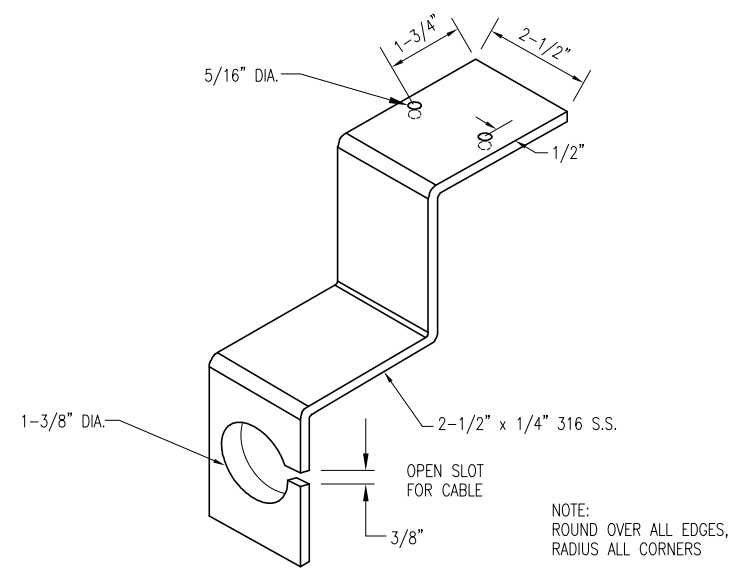
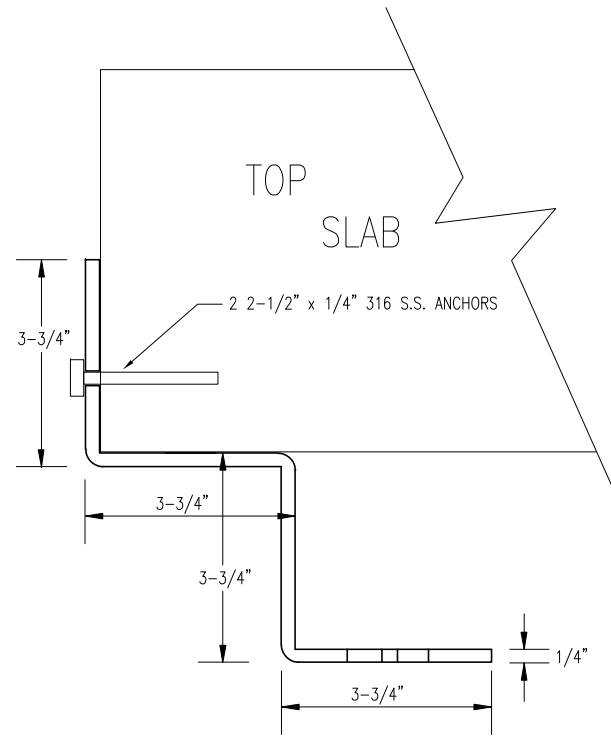
1. COVER NOT SHOWN FOR CLARITY
2. BOND GROUNDING CONDUCTORS TO ENCLOSURE BACK PANEL.

HIGH VOLTAGE JUNCTION BOX DETAIL

SCALE : N.T.S.



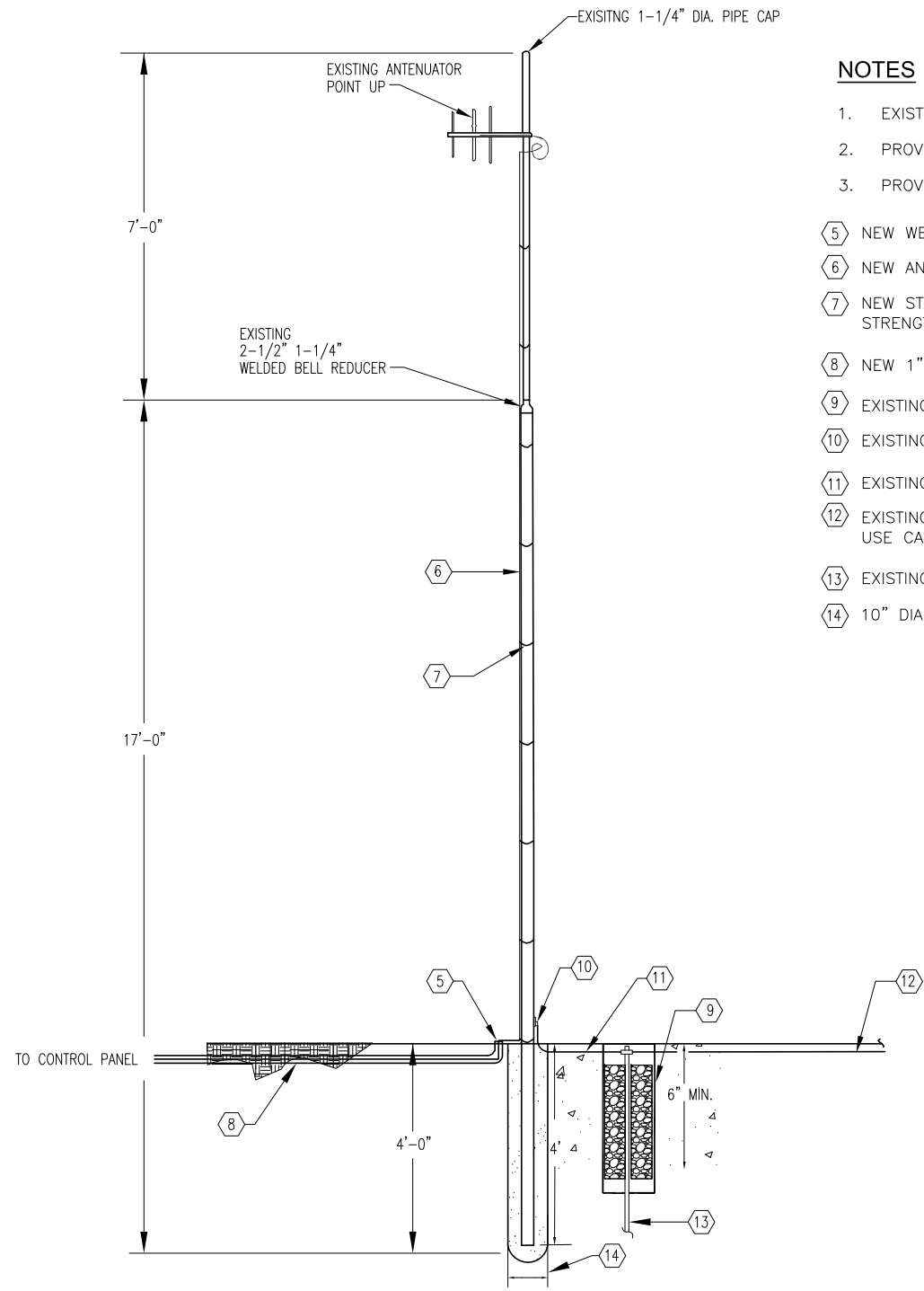
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|-----------------------------|-----|------|-----------|---------------|--|---|-----------|
| TIMOTHY THOMAS, P.E. #47079 | No. | DATE | REVISIONS | DES: T.DT. | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION ELECTRICAL DETAILS | W.O. 5967 |
| | 3 | | | DRN: J.L.H. | | | SHEET |
| | 2 | | | CKD: T.DT. | | | E24 |
| | 1 | | | DATE: 1-27-16 | | | |



DB10 OR PULSAR MOUNTING BRACKET DETAIL

SCALE : NONE

1
E8 | E25



NOTES

1. EXISTING ANTENNA/MAST SHALL BE REUSED.
2. PROVIDE AND INSTALL NEW ANTENNA COAX CABLE, AS REQUIRED.
3. PROVIDE AND INSTALL NEW UNDERGROUND CONDUIT, AS REQUIRED.
5. NEW WEATHERPROOF BUSHING
6. NEW ANTENNA COAXIAL CABLE
7. NEW STANDARD OUTDOOR CABLE TIES, 304 STAINLESS STEEL, TENSILE STRENGTH 100 LB, GRAINGER #6JE35
8. NEW 1" CONDUIT TO CONTROL PANEL
9. EXISTING 4" SCHEDULE 80 PVC CONDUIT, FILLED WITH CRUSHED STONE.
10. EXISTING BURNDY MECHANICAL CONNECTOR #KA25-4-1/0
11. EXISTING #4 AWG-BARE-STRANDED
12. EXISTING GROUND CONDUCTOR TO CONTROL PANEL GROUNDING SYSTEM, USE CADWELD OR BURNDY MECHANICAL CONNECTOR #VT2525
13. EXISTING 5/8" x 10' STAINLESS STEEL GROUND ROD
14. 10" DIA. CONCRETE FILLED HOLE

EXISTING ANTENNA DETAIL

SCALE : NONE

1
E6 | E25



777 S. Harbour Island Blvd.
Suite 870
Tampa, FL 33602
813.227.9190
Certificate of Authorization No. 8363

| No. | DATE | REVISIONS |
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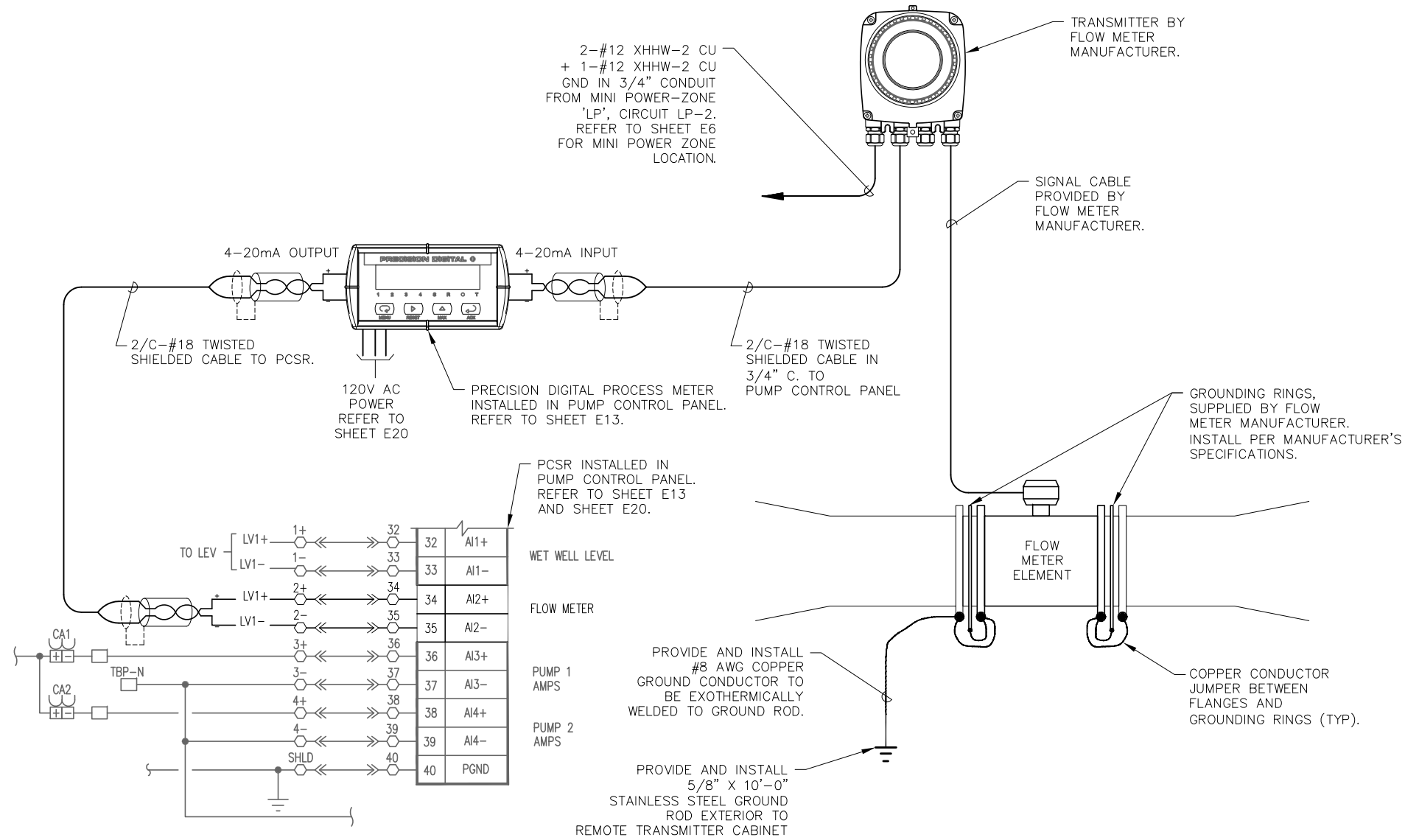
DES: T.DT.
DRN: J.L.H.
CKD: T.DT.
DATE: 1-27-16

CITY of TAMPA
WASTEWATER DEPARTMENT

TAMPA INTERNATIONAL AIRPORT
MAIN PUMPING STATION
ELECTRICAL DETAILS

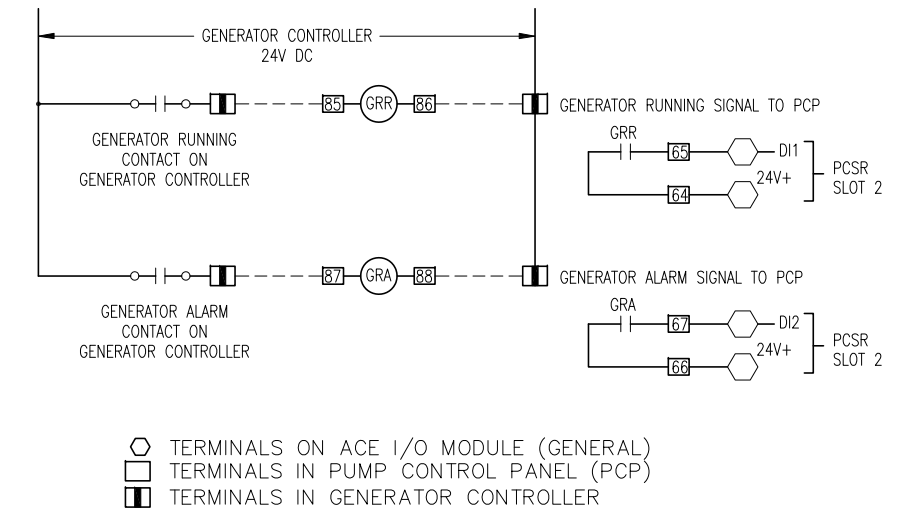
W.O. 5967
SHEET
E25

TIMOTHY THOMAS, P.E. #47079



REMOTE TRANSMITTER WIRING SCHEMATIC

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



RELAY GRR AND GRA WIRING SCHEMATIC



777 S. Harbour Island Blvd.
 Suite 870
 Tampa, FL 33602
 813.227.9190
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| No. | DATE | REVISIONS | DES: T.DT. DRN: J.L.H. CKD: T.DT. DATE: 1-27-16 | CITY of TAMPA WASTEWATER DEPARTMENT | TAMPA INTERNATIONAL AIRPORT MAIN PUMPING STATION MISCELLANEOUS WIRING SCHEMATICS | W.O. 5967 SHEET E26 |
|-----|------|-----------|--|--|--|---------------------------|
| 3 | | | | | | |
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| 1 | | | | | | |

TIMOTHY THOMAS, P.E. #47079