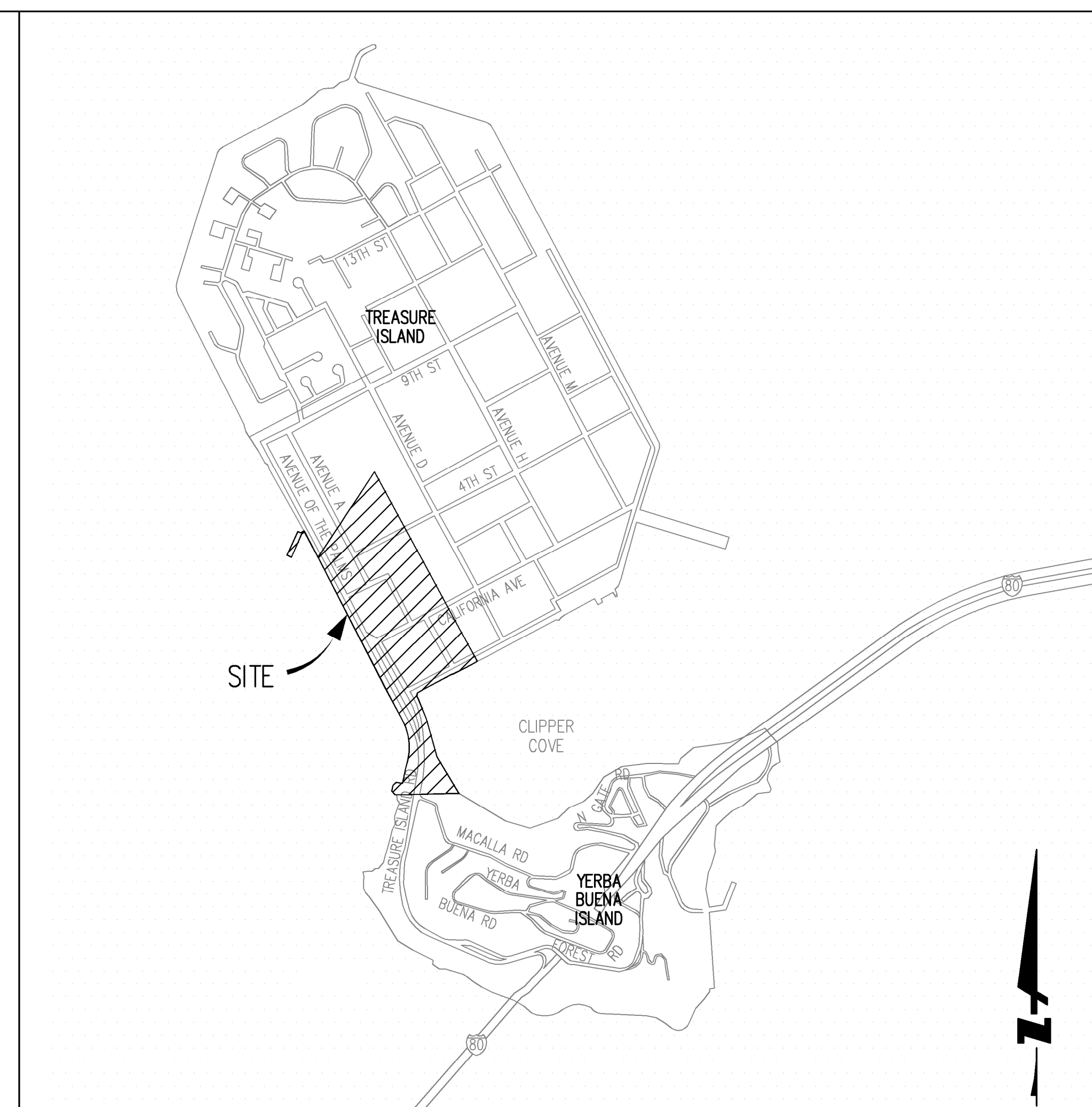
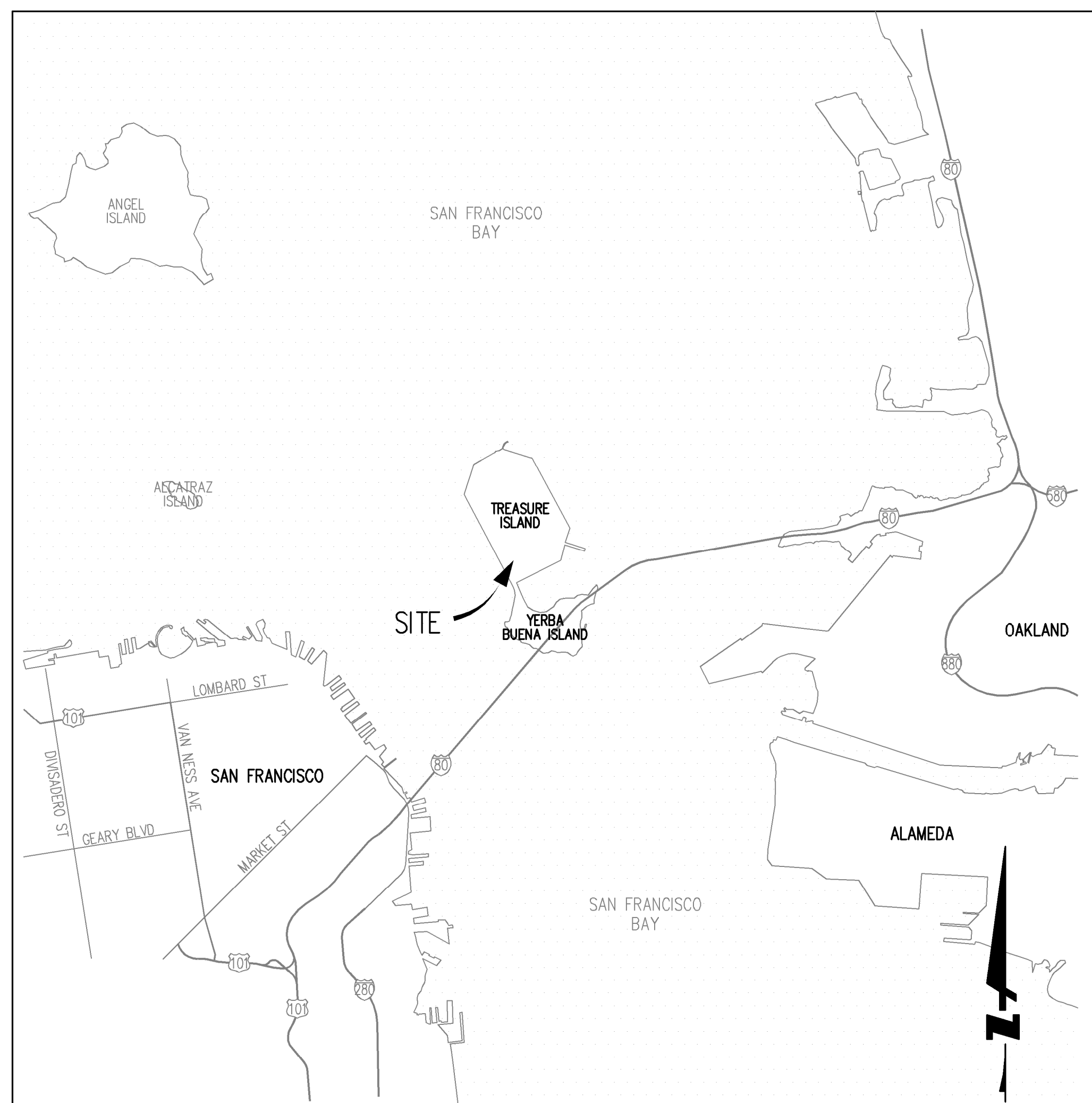


STORM & SEWER PUMP STATION IMPROVEMENT PLANS 100% CD SUBMITTAL

TREASURE ISLAND SUB-PHASE 1B, 1C & 1E IMPROVEMENT PLANS CITY AND COUNTY OF SAN FRANCISCO CALIFORNIA

LOCATION MAP

VICINITY MAP



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PLOT DATE: 05-24-18 PLOTTED BY: mbr1



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PROJECT NO.	CHK:	ML	DATE	REVISIONS	NO.	DESCRIPTION	BY	DATE
20140015-10	AL		5/25/2018					

TITLE SHEET

SHEET TITLE
SCALE AS SHOWN
G.000-1T
1 OF 40
DRAWING NO.



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 PLOT DATE: 05-24-18 PLOTTED BY: mbrt

SHEET INDEX

GENERAL PLANS

1	G.000-1T	TITLE SHEET
2	G.001-1T	SHEET INDEX, LEGEND, AND ABBREVIATIONS
3	G.002-1T	KEY MAP

CIVIL PLANS

4TH STREET SANITARY SEWER PUMP STATION

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5	PS.021-1T	PLAN VIEW
6	PS.022-1T	SECTION A ELEVATION VIEW
7	PS.023-1T	SECTION B ELEVATION VIEW

5TH STREET SANITARY SEWER LIFT STATION

8	PS.030-1T	SITE PLAN
9	PS.031-1T	PLAN & ELEVATION VIEWS
10	PS.032-1T	SEWER LINES PROFILES

COMMON

11	PS.040-1T	CIVIL DETAILS (1/3)
12	PS.041-1T	CIVIL DETAILS (2/3)
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STRUCTURAL PLANS

4TH ST SANITARY SEWER PUMP STATION

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15	S.001-1T	CONCRETE NOTES AND TYPICAL DETAILS
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ELECTRICAL PLANS

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18	E.001-1T	ELECTRICAL KEY PLAN
19	E.002-1T	MISCELLANEOUS CONTROL SCHEMATIC DIAGRAMS
20	E.003-1T	MISCELLANEOUS ELECTRICAL DETAILS

4TH STREET SANITARY SEWER PUMP STATION

21	E.020-1T	ELECTRICAL SITE PLAN
22	E.021-1T	ONE-LINE DIAGRAM
23	E.022-1T	UNDERGROUND CONDUIT, GROUNDING, AND LIGHTING PLAN
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5TH STREET SANITARY SEWER PUMP STATION

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29	E.031-1T	ONE-LINE DIAGRAM
30	E.032-1T	UNDERGROUND CONDUIT, GROUNDING, AND LIGHTING PLAN
31	E.033-1T	MOTOR CONTROL CENTER (MCC) AND SERVICE PEDESTAL (SP) ELEVATION
32	E.034-1T	WET WELL ELEVATIONS
33	E.035-1T	PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
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INSTRUMENTATION & CONTROL PLANS

COMMON

35	I.000-1T	INSTRUMENTATION SYMBOLS AND ABBREVIATIONS
36	I.001-1T	PRESSURE, FLOW, AND LEVEL TRANSMITTER SCHEMATIC DIAGRAM

4TH STREET SANITARY SEWER PUMP STATION

37	I.020-1T	PROCESS AND INSTRUMENTATION DIAGRAM
38	I.021-1T	PLC/SCADA SYSTEM BLOCK DIAGRAM

5TH STREET SANITARY SEWER LIFT STATION

39	I.030-1T	PROCESS AND INSTRUMENTATION DIAGRAM
40	I.031-1T	PLC/SCADA SYSTEM BLOCK DIAGRAM

ABBREVIATIONS

CL, ☉	CENTERLINE / CONTROL LINE
CLR	CLEAR
DI	STORM DRAIN DRAIN INLET
EL	ELEVATION
FG	FINISHED GRADE
FL	FLOW LINE
INV	INVERT
RCP	REINFORCED CONCRETE PIPE
R.O.W.	RIGHT OF WAY
SD	STORM DRAIN
SS	SANITARY SEWER
TRANS	TRANSITION
TYP	TYPICAL
W	WEST, WATER, WIDTH

LEGEND:

	PROPOSED	EXISTING
PROPERTY LINE, RIGHT OF WAY LINE	---	---
EASEMENT	---	---
STORM DRAIN LINE	▬▬▬ XX" SD ▬▬▬	▬▬▬ SD ▬▬▬
SANITARY SEWER LINE	▬▬▬ XX" SS ▬▬▬	▬▬▬ SS ▬▬▬
CURB INLET/FIELD INLET	■	■
STORM DRAIN MANHOLE (SDMH)	⊙	⊙
SANITARY SEWER MANHOLE (SSMH)	⊙	⊙
FIRE HYDRANT	⊙	⊙
STREET LIGHT/ LUMINAIRE	⊙	⊙
LIGHT POLE	⊙	⊙
WATER VALVE	⊙	⊙
UTILITY POLE	⊙	⊙
POST	⊙	⊙



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TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
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 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
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PROJECT NO.	CHK:	ML	DATE:
20140015-10	AL		5/25/2018

NO.	REVISIONS	BY	DATE

SHEET INDEX, LEGEND, AND ABBREVIATIONS

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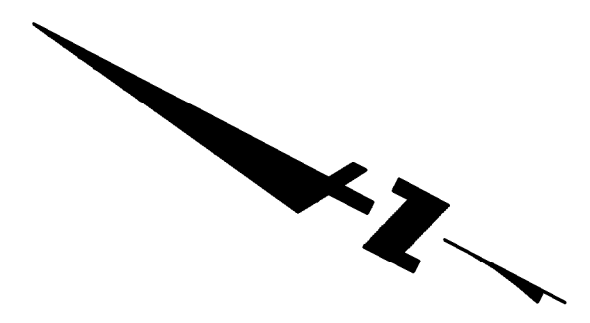
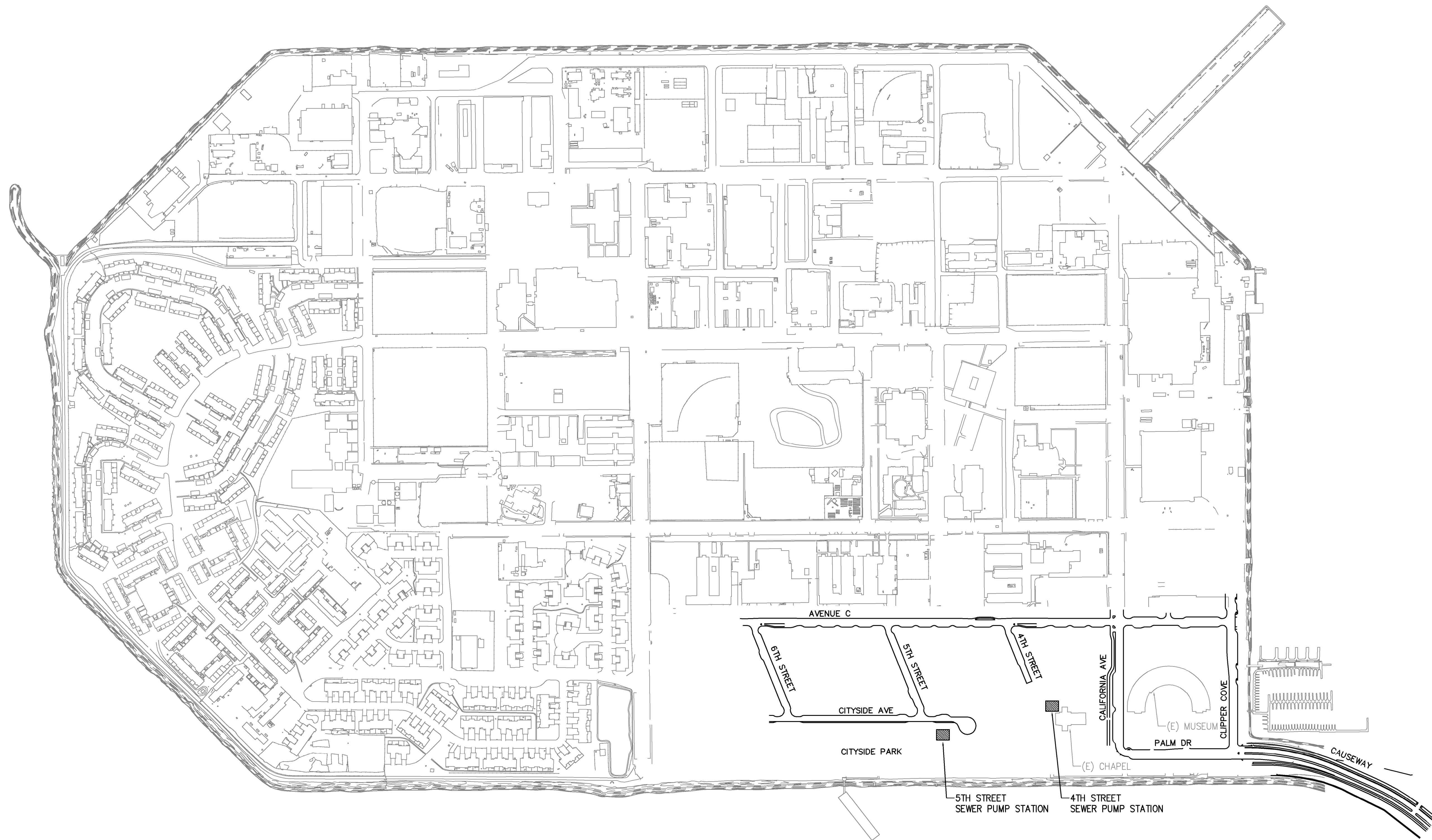
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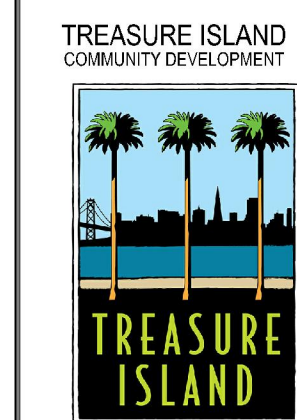


Know what's below.
 Call 811 before you dig.

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**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL
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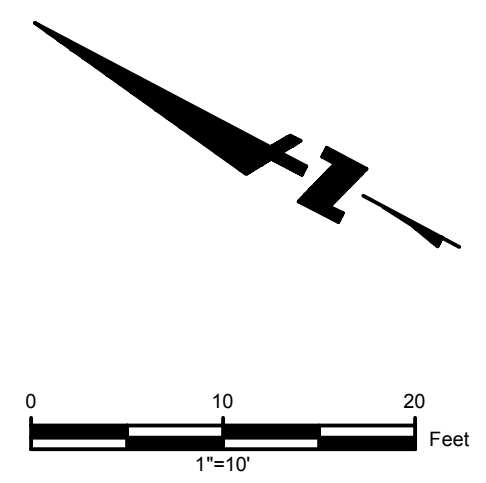
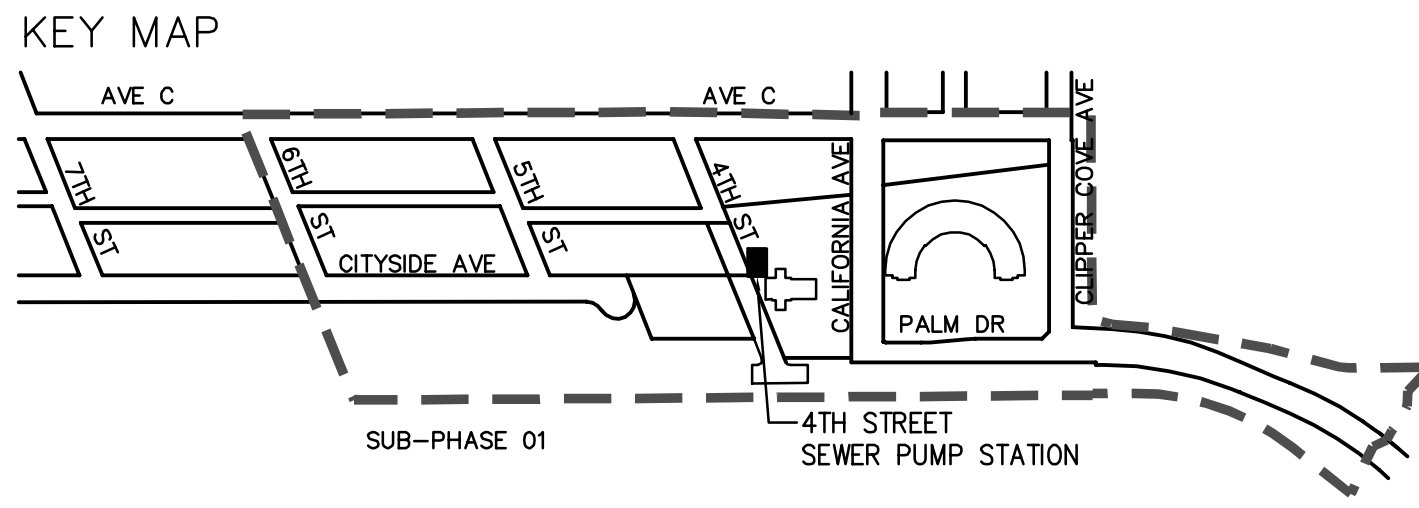
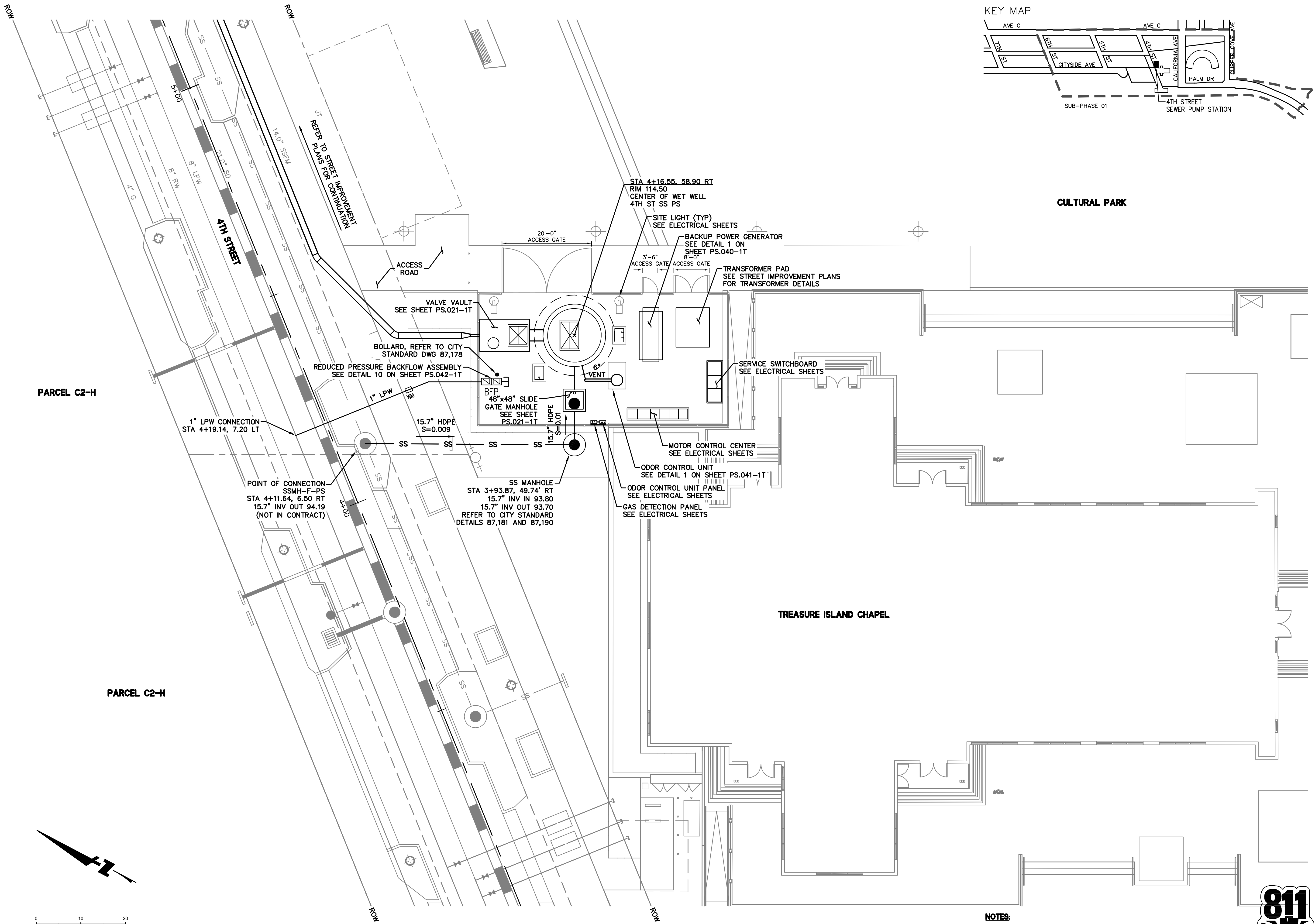
KEY MAP

SHEET TITLE
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3 OF 40
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 PLOT DATE: 05-24-18 PLOTTED BY: mbr



SITE PLAN
 SCALE: 1"=10'

- NOTES:**
- REFER TO STREET AND PARK IMPROVEMENT PLANS FOR GRADING.
 - HDPE PIPE SIZES SHOWN ARE INSIDE DIAMETERS.



TREASURE ISLAND

BKF
 255 SHORELINE DR. SUITE 200
 REDWOOD CITY, CA 94065
 650-462-8300
 650-462-8389 (FAX)

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TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS

CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
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NO.	REVISIONS	DATE	BY	DATE

PROJECT NO. 20140015-10
 CHECKED BY: ML
 DATE: 5/25/2018
 DRAWN BY: AL

4TH STREET SANITARY SEWER PUMP STATION SITE PLAN

SHEET TITLE
 SCALE 1"=20'

PS.020-1T
 4 OF 40
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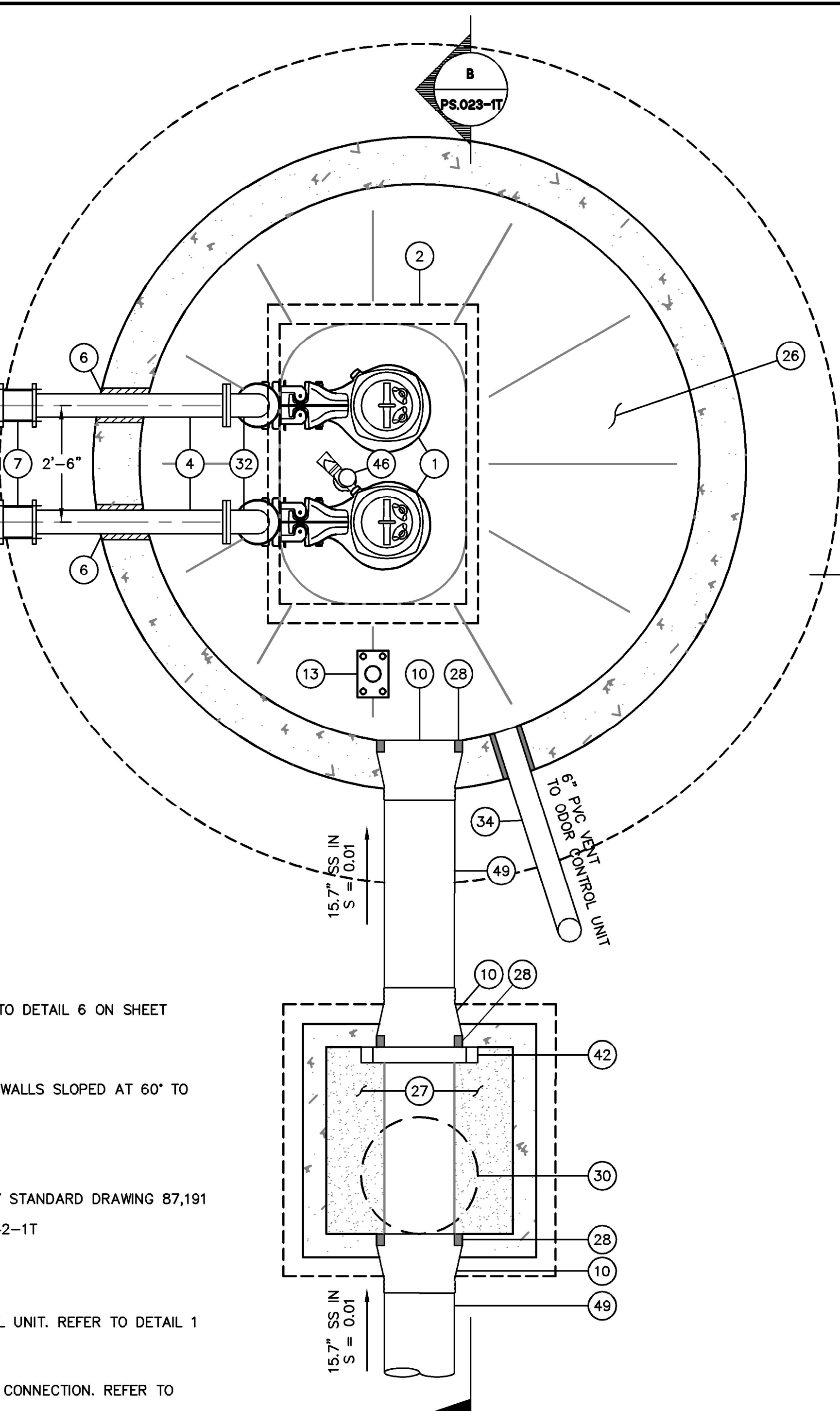
PUMP STATIONS
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PROJECT NO.	DATE	BY	DATE
20140015-10	5/25/2018		
REVISIONS	DESCRIPTION	DATE	
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4TH STREET
 SANITARY SEWER
 PUMP STATION
 PLAN VIEW

SHEET TITLE
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PS.021-1T
 5 OF 40
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1 PLAN
 1" = 2'

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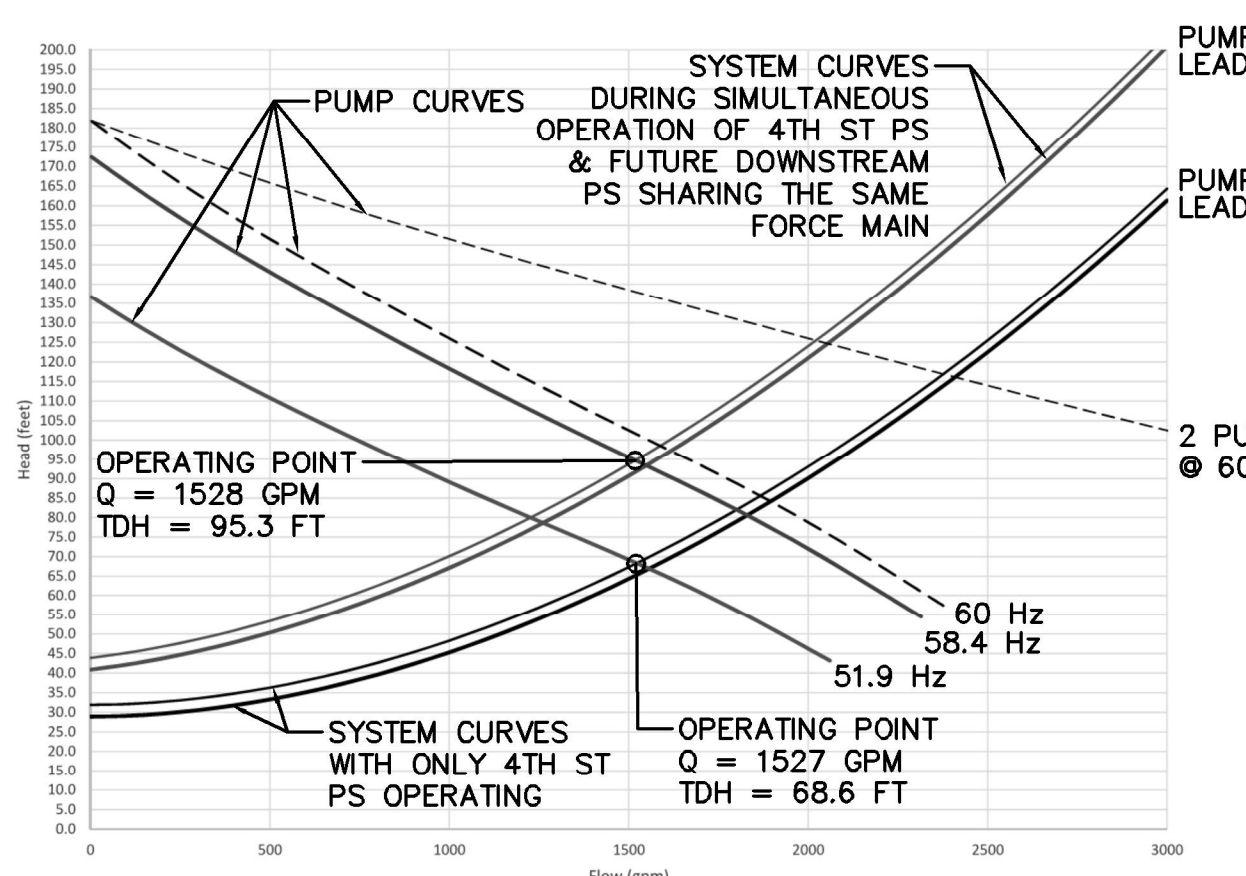
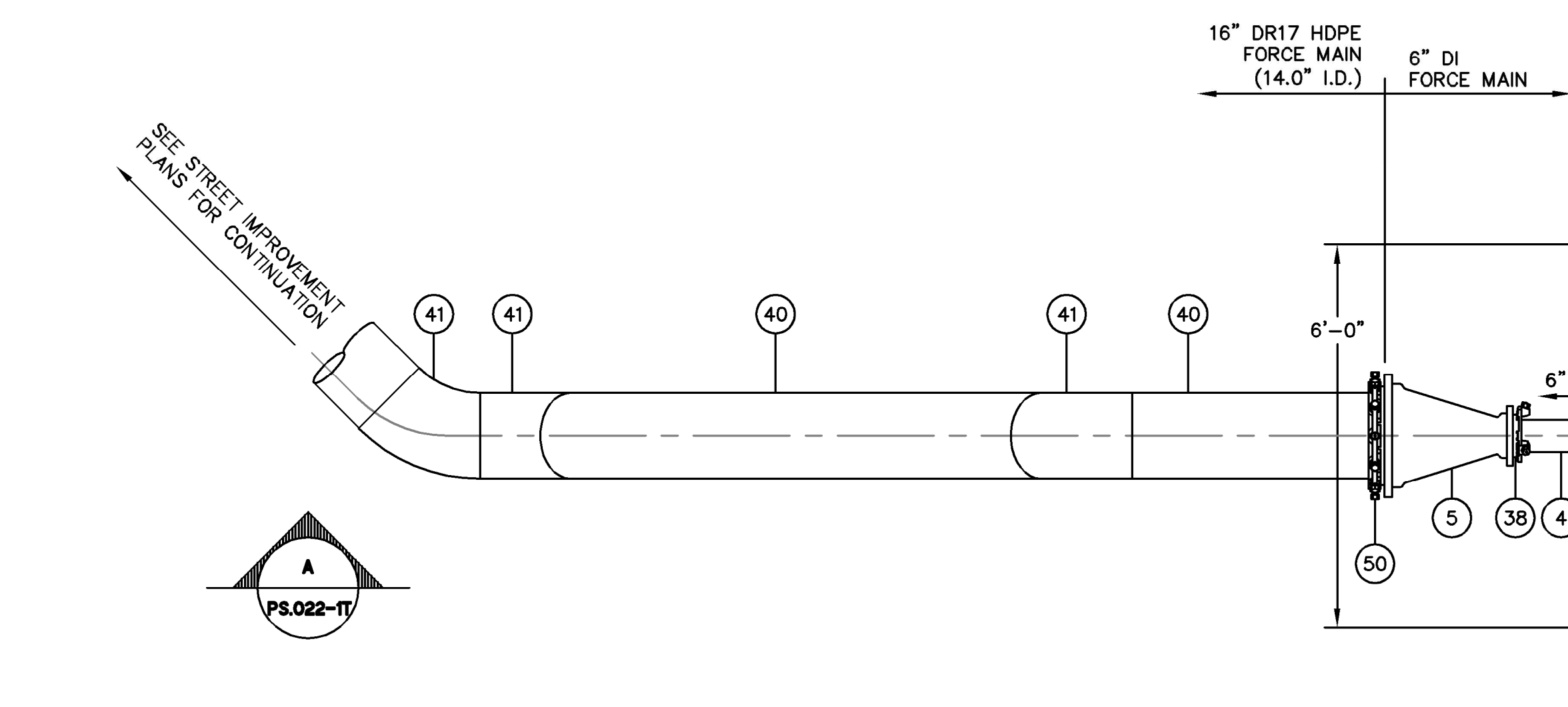
- 1 FLYGT 60 HP SUBMERSIBLE EXPLOSION-PROOF PUMP NP 3202 HT 3~ 458. SEE DETAIL 3 ON SHEET PS.042-1T.
- 2 BILCO 41" x 72" CLEAR OPENING (4'-0" x 6'-0" NOMINAL SIZE), 2-DOOR, H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH W/ LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. SEE DETAIL 3 ON SHEET PS.040-1T.
- 3 144" ID PRECAST REINFORCED CONCRETE MANHOLE. SEE STRUCTURAL SHEETS.
- 4 6" DIP
- 5 16" x 6" MJ x MJ DUCTILE IRON ECCENTRIC REDUCER
- 6 LINK SEAL PIPE TO MANHOLE CONNECTOR. SEE DETAIL 9 ON SHEET PS.042-1T.
- 7 6" KRAUSZ HYMAX GRIP COUPLING
- 8 FLYGT PUMP LIFT SYSTEM, W/ 316SST GUIDE ROPE AND CHAIN SLING
- 9 JOINT W/ RAM-NECK, TYP.
- 10 PSX DIRECT DRIVE PIPE TO MANHOLE CONNECTOR WITH 316SST CLAMP AND FASTENERS
- 11 3/4" CRUSHED DRAIN ROCK
- 12 MIRAFI 140 GEOTEXTILE OR APPROVED EQUAL. FULLY WRAP DRAIN ROCK
- 13 SS FLUSH FLOOR MOUNT SLEEVE FOR PORTABLE HOIST/WINCH SYSTEM, MILLER DH-20SS OR APPROVED EQUAL
- 14 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. CONNECT P-TRAP TO SIOUX CHIEF 695 SERIES AUTOMATIC TRAP PRIMER AND ON-SITE POTABLE WATER SERVICE.
- 15 SCARIFY AND MOISTURE CONDITION NATIVE SOILS TO AT LEAST 2% OVER OPTIMUM MOISTURE CONTENT AND COMPACT TO 95% RC PER ASTM D1557
- 16 PIPE CLAMP. REFER TO DETAIL 8 ON SHEET PS.042-1T
- 17 3" GRADE 316 STAINLESS STEEL GUIDE RAIL W/ INTERMEDIATE BRACKET
- 18 10' x 6' ID PRECAST REINFORCED CONCRETE VALVE VAULT
- 19 BILCO 41" x 48" CLEAR OPENING (4'-0" x 4'-0" NOMINAL SIZE), H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH, LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. CONNECT TO 4" HDPE VALVE VAULT DRAIN USING SCH40 PVC PIPING. SEE DETAIL 3 ON SHEET PS.040-1T.
- 20 6" APCO 250 FLANGED SWING CHECK VALVE W/ LEVER AND WEIGHT, STANDARD
- 21 6" DEZURIK FLANGED PLUG VALVE W/ G-SERIES ACTUATOR AND HANDWHEEL
- 22 6" FLANGED DUCTILE IRON 45° ELBOW
- 23 6" FLANGED DUCTILE IRON WYE W/ 1" NPT TAP. SEE DETAIL 6 ON SHEET PS.042-1T
- 24 6" ROSEMOUNT 8705 MAGMETER FLOW SENSOR. CONTRACTOR TO SUPPLY A 6" DIA, 12" LONG, FLANGED DIP SPOOL TO REPLACE FLOW METER IN CASE IT GOES OUT OF SERVICE
- 25 ROSEMOUNT 2051T PRESSURE TRANSMITTER. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 26 CONCRETE FILL
- 27 CONCRETE FILL WITH SEMI-CIRCULAR CHANNEL AND WALLS SLOPED AT 60° TO HORIZONTAL PLANE
- 28 NON-SHRINK GROUT
- 29 WATERSTOP
- 30 30" CI MANHOLE FRAME AND COVER. REFER TO CITY STANDARD DRAWING 87,191
- 31 PIPE SUPPORT. REFER TO DETAIL 4 ON SHEET PS.042-1T
- 32 6" FLANGED DUCTILE IRON 90° BEND
- 33 6" RESTRAINED FLANGED ADAPTER
- 34 6" SCH40 PVC VENT PIPE. ROUTE TO ODOR CONTROL UNIT. REFER TO DETAIL 1 ON SHEET PS.041-1T
- 35 48"x48" PRECAST REINFORCED CONCRETE MANHOLE
- 36 ROSEMOUNT 1199 DIAPHRAGM SEAL WITH CAPILLARY CONNECTION. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 37 2" DIAMETER 316 SS PIPE. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 38 6" RESTRAINED MECHANICAL JOINT ADAPTER
- 39 1" 316 SS BALL VALVE. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 40 16" DR17 HDPE FORCE MAIN (14.0" I.D.)
- 41 16" DR17 HDPE 45° BEND
- 42 24"x24", 316SST, NON-SELF CONTAINED, RISING STEM, NORMALLY OPEN SLIDE GATE
- 43 STEM AND STEM GUIDE BY SLIDE GATE MANUFACTURER
- 44 MANUAL CRANK OPERATOR FOR SLIDE GATE W/ MANUFACTURER-PROVIDED STEM COVER AND REMOVABLE CRANK
- 45 FIBERGLASS LADDER WITH 316 SS HARDWARE. SEE DETAIL 2 ON SHEET PS.042-1T
- 46 FLYGT FLUSH VALVE
- 47 FLYGT TOP FIBERGLASS BASIN. PROVIDE AND INSTALL (3) HOLD DOWN BRACKETS PER DETAIL 1 ON SHEET PS.042-1T
- 48 APCO 450 SEWAGE AIR RELEASE VALVE W/ 2" NPT INLET. INSTALL WITH SS 316 NPT VALVES PER DETAIL 5 ON SHEET PS.040-1T
- 49 18" DR17 HDPE PIPE (15.7" I.D.)
- 50 16" RESTRAINED MECHANICAL JOINT ADAPTER FOR IPS PIPE, EBAA MEGALUG 2016PV OR EQUIVALENT.

NOTES:

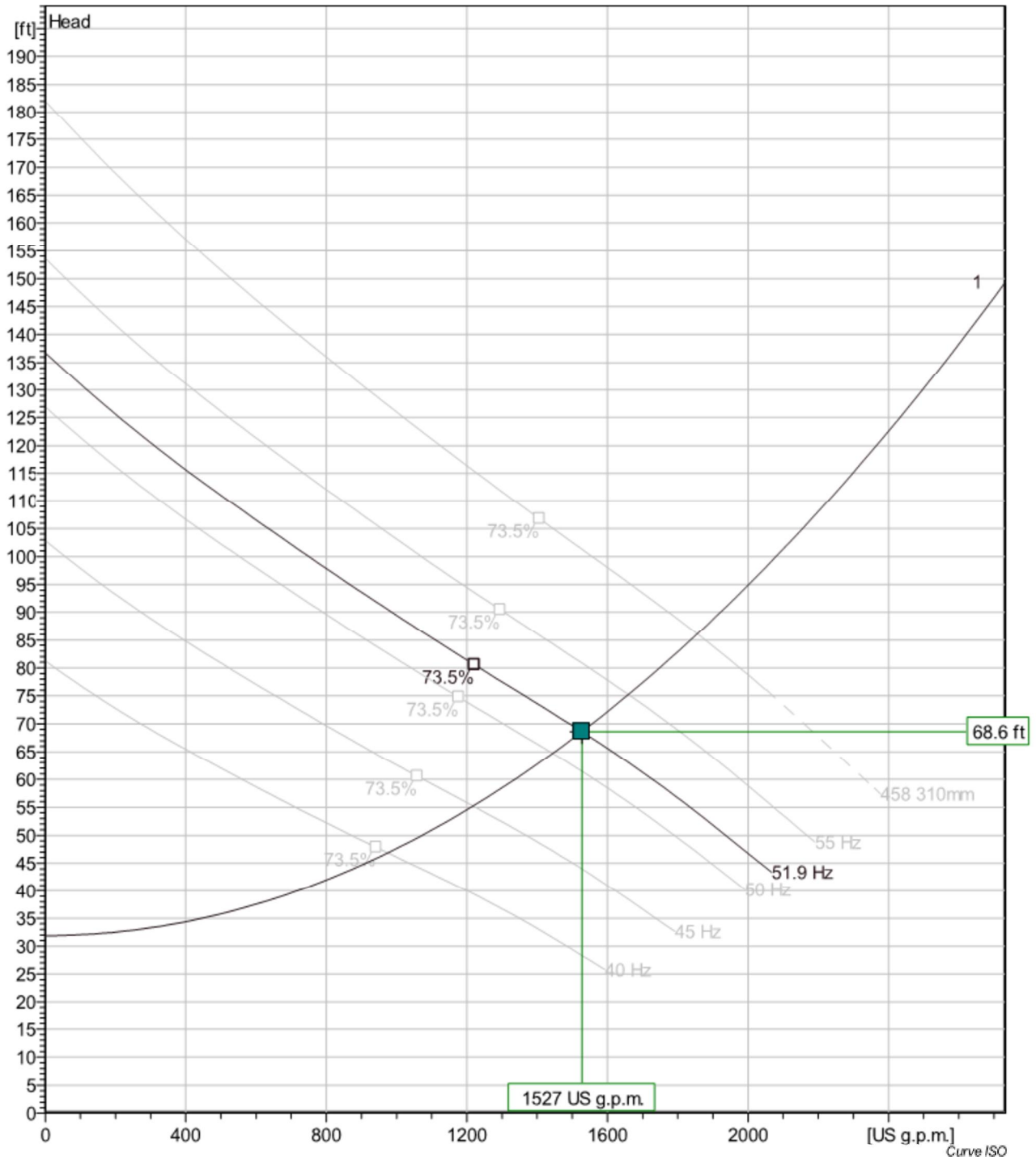
1. PUMP STATION TO BE OWNED AND OPERATED BY SFPUC WVE.
2. WET WELL SHALL BE CONSIDERED CLASS I, DIVISION 1 IN ACCORDANCE WITH NFPA 820. EQUIPMENT INSTALLED INSIDE WET WELL SHALL BE SUITABLE FOR THIS CLASSIFICATION.
3. ALL FASTENING HARDWARE SHALL BE TYPE GRADE 316 STAINLESS STEEL; ALL DI PIPING & FITTINGS SHALL BE PROTECTO CERAMIC EPOXY LINED AND EPOXY COATED.
4. DETAIL SHOWN FOR SCHEMATIC ILLUSTRATIONS ONLY, ACTUAL PUMP MAY VARY FROM DEPICTED. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
5. TWO SETS OF TWO SYSTEM CURVES ARE SHOWN CLOSE TOGETHER WITH A DIFFERENCE OF 3-FT STATIC HEAD, SUCH THAT THE TWO LINES MAY APPEAR AS IF THEY ARE ONE LINE.
6. CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.
7. ALL VALVE VAULT EQUIPMENT AND CONDUITS SHALL BE FLOOD RESILIENT.
8. PROGRAM LOGIC CONTROLLER SHALL BE PROGRAMMED TO AUTOMATICALLY TURN ON PUMP WITH ATTACHED MIX FLUSH VALVE ONCE PER MONTH AND PUMP DOWN TO THE PERIODIC CLEANING SHUTOFF LEVEL (18" DEPTH).

STRUCTURAL NOTES:

1. CONTRACTOR TO LOCATE REINFORCING BARS PRIOR TO DRILLING INTO CONCRETE FOR ADHESIVE ANCHORS.
2. REINFORCING STEEL FOR ALL PRECAST SECTIONS SHOWN HERE SHALL BE ASTM A615, GRADE 60 AND EPOXY COATED IN CONFORMANCE WITH ASTM A775.
3. CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.

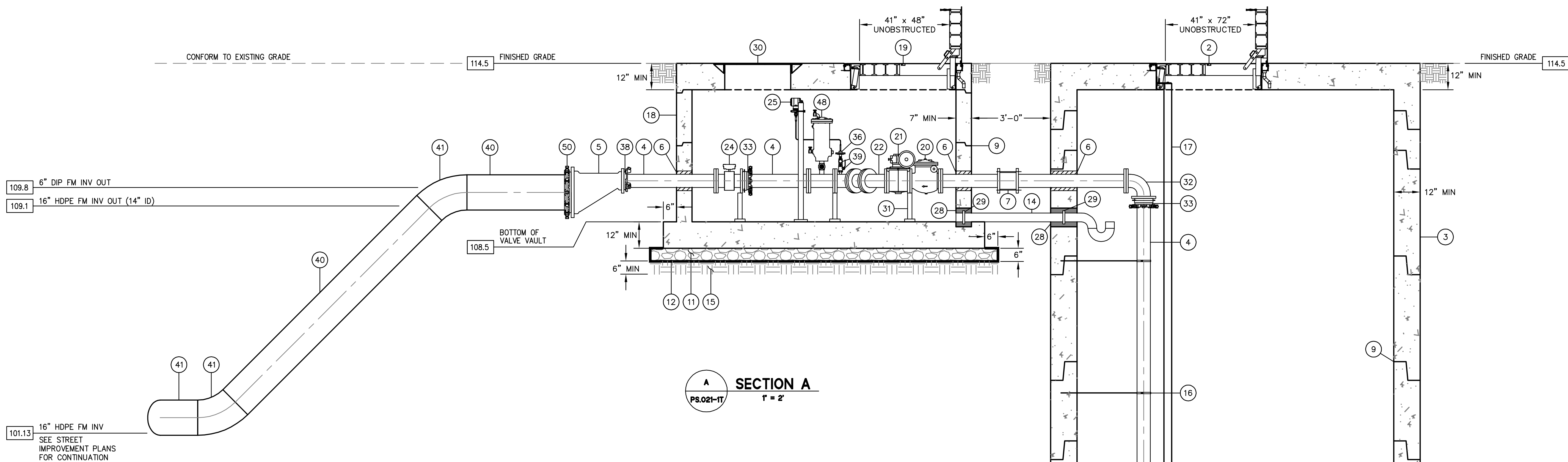


**FLYGT NP 3202 HT 458:
 PUMP VS SYSTEM CURVE**



**FLYGT NP 3202 HT 458:
 PUMP MANUFACTURER CURVES**

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MATERIAL LIST:

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|---|---|
| <p>① FLYGT 60 HP SUBMERSIBLE EXPLOSION-PROOF PUMP NP 3202 HT 3~ 458. SEE DETAIL 3 ON SHEET PS.042-1T.</p> <p>② BILCO 41" x 72" CLEAR OPENING (4'-0" x 6'-0" NOMINAL SIZE), 2-DOOR, H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH W/ LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. SEE DETAIL 3 ON SHEET PS.040-1T.</p> <p>③ 144" ID PRECAST REINFORCED CONCRETE MANHOLE. SEE STRUCTURAL SHEETS.</p> <p>④ 6" DIP</p> <p>⑤ 16" x 6" MJ x MJ DUCTILE IRON ECCENTRIC REDUCER</p> <p>⑥ LINK SEAL PIPE TO MANHOLE CONNECTOR. SEE DETAIL 9 ON SHEET PS.042-1T.</p> <p>⑦ 6" KRAUSZ HYMAX GRIP COUPLING</p> <p>⑧ FLYGT PUMP LIFT SYSTEM, W/ 316SST GUIDE ROPE AND CHAIN SLING</p> <p>⑨ JOINT W/ RAM-NECK, TYP.</p> <p>⑩ PSX DIRECT DRIVE PIPE TO MANHOLE CONNECTOR WITH 316SST CLAMP AND FASTENERS</p> <p>⑪ CRUSHED ROCK WORKING SURFACE. SEE NOTE A SHEET S.002-1T.</p> <p>⑫ MIRAFI 140 GEOTEXTILE OR APPROVED EQUAL. FULLY WRAP DRAIN ROCK</p> <p>⑬ SS FLUSH FLOOR MOUNT SLEEVE FOR PORTABLE HOIST/WINCH SYSTEM, MILLER DH-20SS OR APPROVED EQUAL</p> <p>⑭ 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. CONNECT P-TRAP TO SIOUX CHIEF 695 SERIES AUTOMATIC TRAP PRIMER AND ON-SITE POTABLE WATER SERVICE.</p> <p>⑮ SCARIFY AND MOISTURE CONDITION NATIVE SOILS TO AT LEAST 2% OVER OPTIMUM MOISTURE CONTENT AND COMPACT TO 95% RC PER ASTM D1557</p> <p>⑯ PIPE CLAMP. REFER TO DETAIL 8 ON SHEET PS.042-1T</p> <p>⑰ 3" GRADE 316 STAINLESS STEEL GUIDE RAIL W/ INTERMEDIATE BRACKET</p> <p>⑱ 10' x 6' ID PRECAST REINFORCED CONCRETE VALVE VAULT</p> <p>⑲ BILCO 41" x 48" CLEAR OPENING (4'-0" x 4'-0" NOMINAL SIZE), H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH, LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. CONNECT TO 4" HDPE VALVE VAULT DRAIN USING SCH40 PVC PIPING. SEE DETAIL 3 ON SHEET PS.040-1T.</p> <p>⑳ 6" APCO 250 FLANGED SWING CHECK VALVE W/ LEVER AND WEIGHT, STANDARD</p> <p>㉑ 6" DEZURIK FLANGED PLUG VALVE W/ G-SERIES ACTUATOR AND HANDWHEEL</p> <p>㉒ 6" FLANGED DUCTILE IRON 45° ELBOW</p> <p>㉓ 6" FLANGED DUCTILE IRON WYE W/ 1" NPT TAP. SEE DETAIL 6 ON SHEET PS.042-1T</p> <p>㉔ 6" ROSEMOUNT 8705 MAGMETER FLOW SENSOR. CONTRACTOR TO SUPPLY A 6" DIA, 12" LONG, FLANGED DIP SPOOL TO REPLACE FLOW METER IN CASE IT GOES OUT OF SERVICE</p> | <p>㉕ ROSEMOUNT 2051T PRESSURE TRANSMITTER. REFER TO DETAIL 6 ON SHEET PS.042-1T</p> <p>㉖ CONCRETE FILL</p> <p>㉗ CONCRETE FILL WITH SEMI-CIRCULAR CHANNEL AND WALLS SLOPED AT 60° TO HORIZONTAL PLANE</p> <p>㉘ NON-SHRINK GROUT</p> <p>㉙ WATERSTOP</p> <p>㉚ 30" CI MANHOLE FRAME AND COVER. REFER TO CITY STANDARD DRAWING 87,191</p> <p>㉛ PIPE SUPPORT. REFER TO DETAIL 4 ON SHEET PS.042-1T</p> <p>㉜ 6" FLANGED DUCTILE IRON 90° BEND</p> <p>㉝ 6" RESTRAINED FLANGED ADAPTER</p> <p>㉞ 6" SCH40 PVC VENT PIPE. ROUTE TO ODOR CONTROL UNIT. REFER TO DETAIL 1 ON SHEET PS.041-1T</p> <p>㉟ 48"x48" PRECAST REINFORCED CONCRETE MANHOLE</p> <p>㊱ ROSEMOUNT 1199 DIAPHRAGM SEAL WITH CAPILLARY CONNECTION. REFER TO DETAIL 6 ON SHEET PS.042-1T</p> <p>㊲ 2" DIAMETER 316 SS PIPE. REFER TO DETAIL 6 ON SHEET PS.042-1T</p> <p>㊳ 6" RESTRAINED MECHANICAL JOINT ADAPTER</p> <p>㊴ 1" 316 SS BALL VALVE. REFER TO DETAIL 6 ON SHEET PS.042-1T</p> <p>㊵ 16" DR17 HDPE FORCE MAIN (14.0" I.D.)</p> <p>㊶ 16" DR17 HDPE 45° BEND</p> <p>㊷ 24"x24", 316SST, NON-SELF CONTAINED, RISING STEM, NORMALLY OPEN SLIDE GATE</p> <p>㊸ STEM AND STEM GUIDE BY SLIDE GATE MANUFACTURER</p> <p>㊹ MANUAL CRANK OPERATOR FOR SLIDE GATE W/ MANUFACTURER-PROVIDED STEM COVER AND REMOVABLE CRANK</p> <p>㊺ FIBERGLASS LADDER WITH 316 SS HARDWARE. SEE DETAIL 2 ON SHEET PS.042-1T</p> <p>㊻ FLYGT FLUSH VALVE</p> <p>㊼ FLYGT TOP FIBERGLASS BASIN. PROVIDE AND INSTALL (3) HOLD DOWN BRACKETS PER DETAIL 1 ON SHEET PS.042-1T</p> <p>㊽ APCO 450 SEWAGE AIR RELEASE VALVE W/ 2" NPT INLET. INSTALL WITH SS 316 NPT VALVES PER DETAIL 5 ON SHEET PS.040-1T</p> <p>㊾ 18" DR17 HDPE PIPE (15.7" I.D.)</p> <p>㊿ 16" RESTRAINED MECHANICAL JOINT ADAPTER FOR IPS PIPE, EBAA MEGALUG 2016PV OR EQUIVALENT.</p> |
|---|---|

NOTES:

- PUMP STATION TO BE OWNED AND OPERATED BY SFPUC WEE.
- WET WELL SHALL BE CONSIDERED CLASS I, DIVISION 1 IN ACCORDANCE WITH NFPA 820. EQUIPMENT INSTALLED INSIDE WET WELL SHALL BE SUITABLE FOR THIS CLASSIFICATION.
- ALL FASTENING HARDWARE SHALL BE TYPE GRADE 316 STAINLESS STEEL; ALL DI PIPING & FITTINGS SHALL BE PROTECTO CERAMIC EPOXY LINED AND EPOXY COATED.
- DETAIL SHOWN FOR SCHEMATIC ILLUSTRATIONS ONLY, ACTUAL PUMP MAY VARY FROM DEPICTED. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- TWO SYSTEM CURVES ARE SHOWN CLOSE TOGETHER WITH A DIFFERENCE OF 3.5-FT STATIC HEAD, SUCH THAT THE TWO LINES APPEAR AS IF THEY ARE ONE LINE.
- CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.
- ALL VALVE VAULT EQUIPMENT AND CONDUITS SHALL BE FLOOD RESILIENT.

NOTES (CONTINUED):

- PROGRAM LOGIC CONTROLLER SHALL BE PROGRAMMED TO AUTOMATICALLY TURN ON PUMP WITH ATTACHED MIX FLUSH VALVE ONCE PER MONTH AND PUMP DOWN TO THE PERIODIC CLEANING SHUTOFF LEVEL (18" DEPTH).

STRUCTURAL NOTES:

- CONTRACTOR TO LOCATE REINFORCING BARS PRIOR TO DRILLING INTO CONCRETE FOR ADHESIVE ANCHORS.
- REINFORCING STEEL FOR ALL PRECAST SECTIONS SHOWN HERE SHALL BE ASTM A615, GRADE 60 AND EPOXY COATED IN CONFORMANCE WITH ASTM A775.
- CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

NO.	REVISIONS	DATE	BY

4TH STREET
SANITARY SEWER
PUMP STATION
SECTION A
ELEVATION VIEW

SHEET TITLE
SCALE AS SHOWN

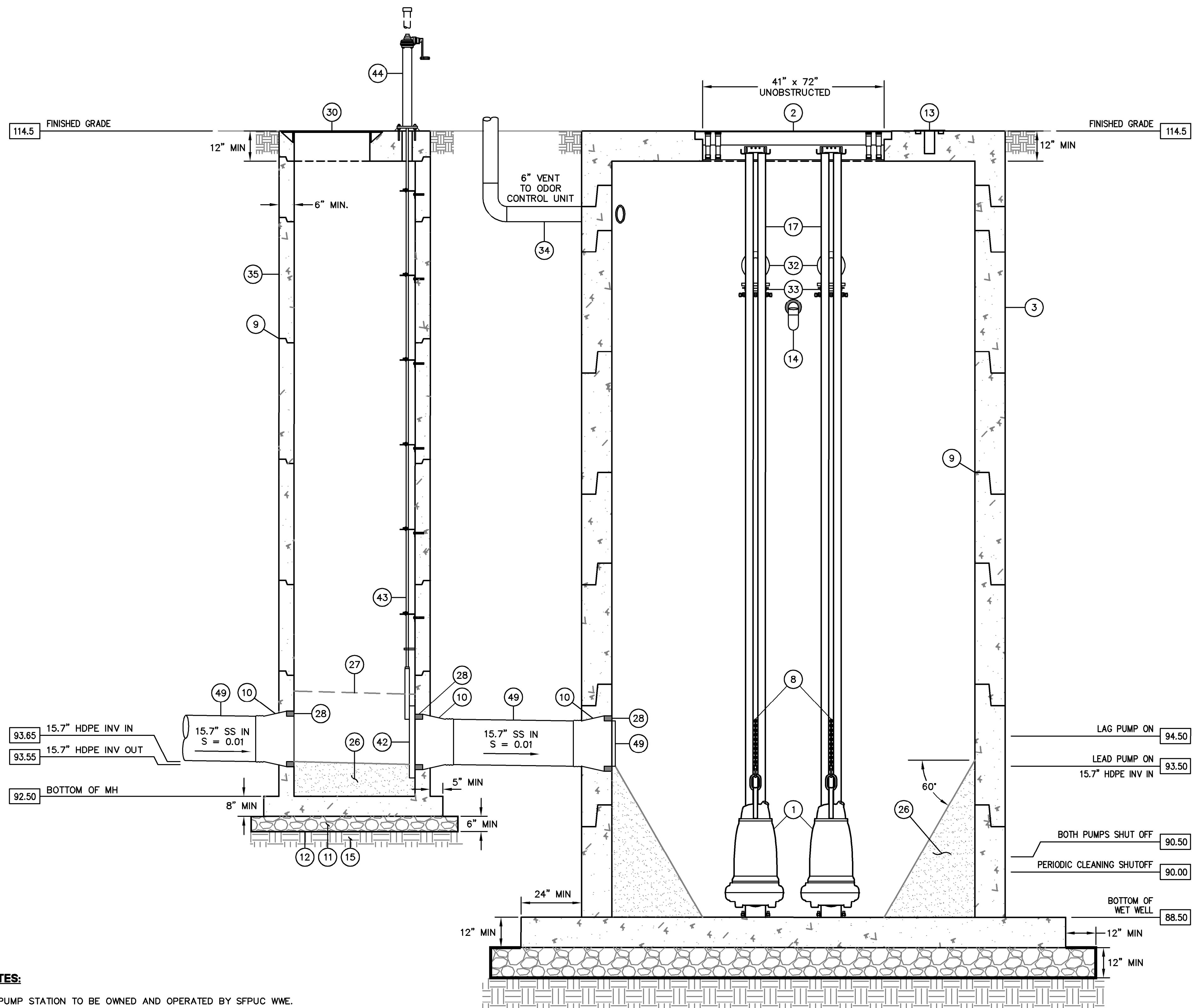
PS.022-1T
6 OF 40
DRAWING NO.



DRAWING NAME: K:\Eng1\140015\DWG\10_Subphase 01\4.2_Infrastructure Improvement Plans\PS-Package\PS.023-1T_SSPS 4th Street.dwg
PLOT DATE: 05-24-18 PLOTTED BY: mbr

MATERIAL LIST:

- 1 FLYGT 60 HP SUBMERSIBLE EXPLOSION-PROOF PUMP NP 3202 HT 3~ 458. SEE DETAIL 3 ON SHEET PS.042-1T.
- 2 BILCO 41" x 72" CLEAR OPENING (4'-0" x 6'-0" NOMINAL SIZE), 2-DOOR, H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH W/ LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. SEE DETAIL 3 ON SHEET PS.040-1T.
- 3 144" ID PRECAST REINFORCED CONCRETE MANHOLE. SEE STRUCTURAL SHEETS.
- 4 6" DIP
- 5 16" x 6" MJ x MJ DUCTILE IRON ECCENTRIC REDUCER
- 6 LINK SEAL PIPE TO MANHOLE CONNECTOR. SEE DETAIL 9 ON SHEET PS.042-1T.
- 7 6" KRAUSZ HYMAX GRIP COUPLING
- 8 FLYGT PUMP LIFT SYSTEM, W/ 316SSST GUIDE ROPE AND CHAIN SLING
- 9 JOINT W/ RAM-NECK, TYP.
- 10 PSX DIRECT DRIVE PIPE TO MANHOLE CONNECTOR WITH 316SSST CLAMP AND FASTENERS
- 11 3/4" CRUSHED DRAIN ROCK
- 12 MIRAFI 140 GEOTEXTILE OR APPROVED EQUAL. FULLY WRAP DRAIN ROCK
- 13 SS FLUSH FLOOR MOUNT SLEEVE FOR PORTABLE HOIST/WINCH SYSTEM, MILLER DH-20SS OR APPROVED EQUAL
- 14 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. 4" DR17 HDPE VALVE VAULT DRAIN W/ P-TRAP. CONNECT P-TRAP TO SIOUX CHIEF 695 SERIES AUTOMATIC TRAP PRIMER AND ON-SITE POTABLE WATER SERVICE.
- 15 SCARIFY AND MOISTURE CONDITION NATIVE SOILS TO AT LEAST 2% OVER OPTIMUM MOISTURE CONTENT AND COMPACT TO 95% RC PER ASTM D1557
- 16 PIPE CLAMP. REFER TO DETAIL 8 ON SHEET PS.042-1T
- 17 3" GRADE 316 STAINLESS STEEL GUIDE RAIL W/ INTERMEDIATE BRACKET
- 18 10' x 6' ID PRECAST REINFORCED CONCRETE VALVE VAULT
- 19 BILCO 41" x 48" CLEAR OPENING (4'-0" x 4'-0" NOMINAL SIZE), H-20 LOADING RATED, CHANNEL FRAME, ALUMINUM HINGED ACCESS HATCH, LIFT ASSIST, LOCK, AND SAFETY GRATE SYSTEM. ALL HARDWARE GRADE 316 STAINLESS STEEL. CONNECT TO 4" HDPE VALVE VAULT DRAIN USING SCH40 PVC PIPING. SEE DETAIL 3 ON SHEET PS.040-1T.
- 20 6" APCO 250 FLANGED SWING CHECK VALVE W/ LEVER AND WEIGHT, STANDARD
- 21 6" DEZURIK FLANGED PLUG VALVE W/ G-SERIES ACTUATOR AND HANDWHEEL
- 22 6" FLANGED DUCTILE IRON 45° ELBOW
- 23 6" FLANGED DUCTILE IRON WYE W/ 1" NPT TAP. SEE DETAIL 6 ON SHEET PS.042-1T
- 24 6" ROSEMOUNT 8705 MAGMETER FLOW SENSOR. CONTRACTOR TO SUPPLY A 6" DIA, 12" LONG, FLANGED DIP SPOOL TO REPLACE FLOW METER IN CASE IT GOES OUT OF SERVICE
- 25 ROSEMOUNT 2051T PRESSURE TRANSMITTER. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 26 CONCRETE FILL
- 27 CONCRETE FILL WITH SEMI-CIRCULAR CHANNEL AND WALLS SLOPED AT 60° TO HORIZONTAL PLANE
- 28 NON-SHRINK GROUT
- 29 WATERSTOP
- 30 30" CI MANHOLE FRAME AND COVER. REFER TO CITY STANDARD DRAWING 87,191
- 31 PIPE SUPPORT. REFER TO DETAIL 4 ON SHEET PS.042-1T
- 32 6" FLANGED DUCTILE IRON 90° BEND
- 33 6" RESTRAINED FLANGED ADAPTER
- 34 6" SCH40 PVC VENT PIPE. ROUTE TO ODOR CONTROL UNIT. REFER TO DETAIL 1 ON SHEET PS.041-1T
- 35 48"x48" PRECAST REINFORCED CONCRETE MANHOLE
- 36 ROSEMOUNT 1199 DIAPHRAGM SEAL WITH CAPILLARY CONNECTION. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 37 2" DIAMETER 316 SS PIPE. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 38 6" RESTRAINED MECHANICAL JOINT ADAPTER
- 39 1" 316 SS BALL VALVE. REFER TO DETAIL 6 ON SHEET PS.042-1T
- 40 16" DR17 HDPE FORCE MAIN (14.0" I.D.)
- 41 16" DR17 HDPE 45° BEND
- 42 24"x24", 316SSST, NON-SELF CONTAINED, RISING STEM, NORMALLY OPEN SLIDE GATE
- 43 STEM AND STEM GUIDE BY SLIDE GATE MANUFACTURER
- 44 MANUAL CRANK OPERATOR FOR SLIDE GATE W/ MANUFACTURER-PROVIDED STEM COVER AND REMOVABLE CRANK
- 45 FIBERGLASS LADDER WITH 316 SS HARDWARE. SEE DETAIL 2 ON SHEET PS.042-1T
- 46 FLYGT FLUSH VALVE
- 47 FLYGT TOP FIBERGLASS BASIN. PROVIDE AND INSTALL (3) HOLD DOWN BRACKETS PER DETAIL 1 ON SHEET PS.042-1T
- 48 APCO 450 SEWAGE AIR RELEASE VALVE W/ 2" NPT INLET. INSTALL WITH SS 316 NPT VALVES PER DETAIL 5 ON SHEET PS.040-1T
- 49 18" DR17 HDPE PIPE (15.7" I.D.)
- 50 16" RESTRAINED MECHANICAL JOINT ADAPTER FOR IPS PIPE, EBAA MEGALUG 2016PV OR EQUIVALENT.

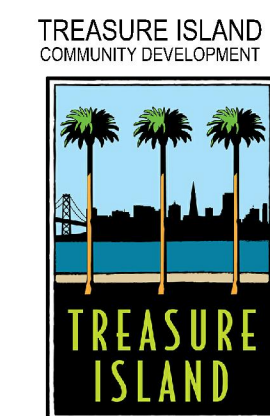


NOTES:

1. PUMP STATION TO BE OWNED AND OPERATED BY SFPUC WWE.
2. WET WELL SHALL BE CONSIDERED CLASS I, DIVISION 1 IN ACCORDANCE WITH NFPA 820. EQUIPMENT INSTALLED INSIDE WET WELL SHALL BE SUITABLE FOR THIS CLASSIFICATION.
3. ALL FASTENING HARDWARE SHALL BE TYPE GRADE 316 STAINLESS STEEL; ALL DI PIPING & FITTINGS SHALL BE PROTECTO CERAMIC EPOXY LINED AND EPOXY COATED.
4. DETAIL SHOWN FOR SCHEMATIC ILLUSTRATIONS ONLY, ACTUAL PUMP MAY VARY FROM DEPICTED. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
5. TWO SYSTEM CURVES ARE SHOWN CLOSE TOGETHER WITH A DIFFERENCE OF 3.5-FT STATIC HEAD, SUCH THAT THE TWO LINES APPEAR AS IF THEY ARE ONE LINE.
6. CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.
7. ALL VALVE VAULT EQUIPMENT AND CONDUITS SHALL BE FLOOD RESILIENT.
8. PROGRAM LOGIC CONTROLLER SHALL BE PROGRAMMED TO AUTOMATICALLY TURN ON PUMP WITH ATTACHED MIX FLUSH VALVE ONCE PER MONTH AND PUMP DOWN TO THE PERIODIC CLEANING SHUTOFF LEVEL (18" DEPTH).

STRUCTURAL NOTES:

1. CONTRACTOR TO LOCATE REINFORCING BARS PRIOR TO DRILLING INTO CONCRETE FOR ADHESIVE ANCHORS.
2. REINFORCING STEEL FOR ALL PRECAST SECTIONS SHOWN HERE SHALL BE ASTM A615, GRADE 60 AND EPOXY COATED IN CONFORMANCE WITH ASTM A775.
3. CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

NO.	REVISIONS	DATE	BY	DATE

4TH STREET
SANITARY SEWER
PUMP STATION
SECTION B
ELEVATION VIEW

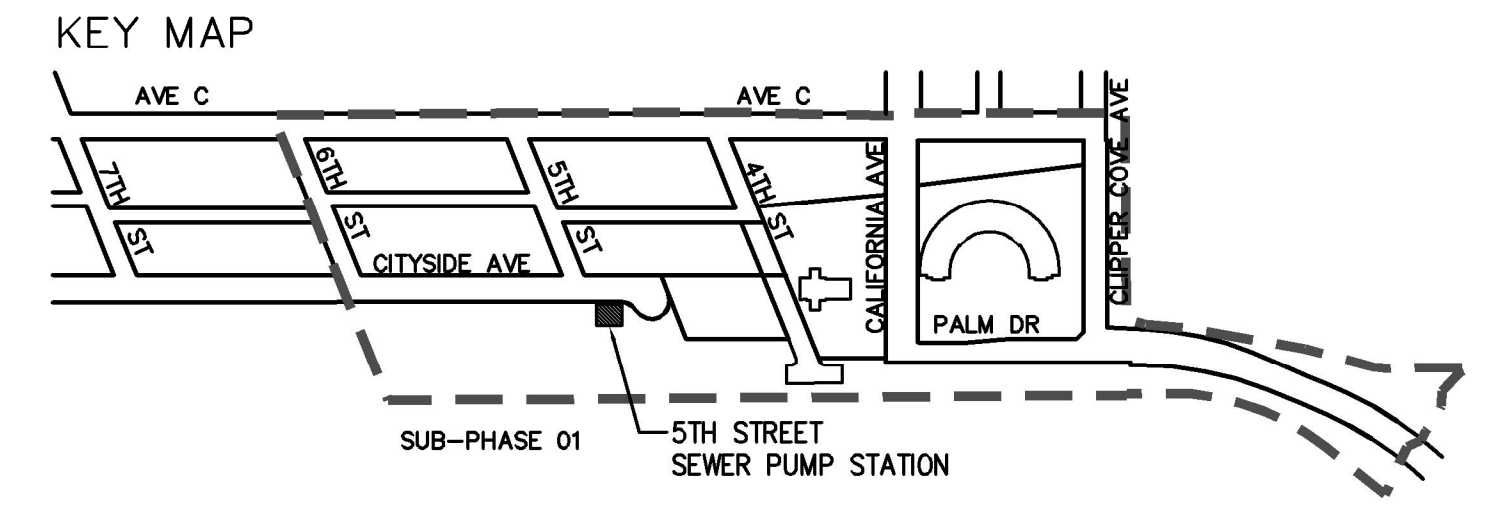
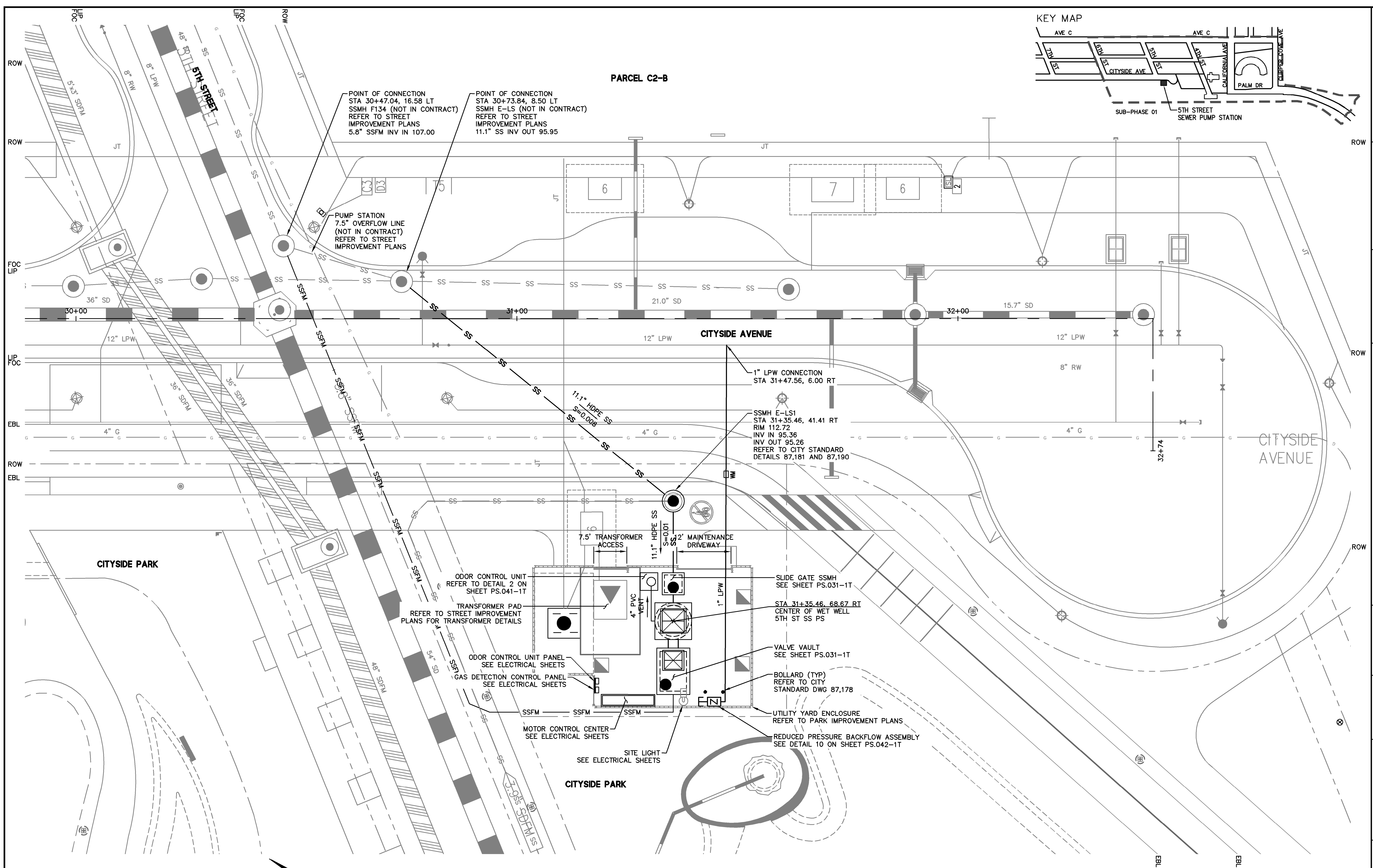
SHEET TITLE
SCALE AS SHOWN

PS.023-1T
7 OF 40

DRAWING NO.



DRAWING NAME: K:\Eng1\140015\DWG\10_Subphase 01\4.2_Infrastructure Improvement Plans\PS-Package\PS_030-1T_SSPS 5th Plan.dwg
 PLOT DATE: 05-24-18 PLOTTED BY: mbrt



POINT OF CONNECTION
 STA 30+47.04, 16.58 LT
 SSMH F134 (NOT IN CONTRACT)
 REFER TO STREET
 IMPROVEMENT PLANS
 5.8" SSFM INV IN 107.00

POINT OF CONNECTION
 STA 30+73.84, 8.50 LT
 SSMH E-LS (NOT IN CONTRACT)
 REFER TO STREET
 IMPROVEMENT PLANS
 11.1" SS INV OUT 95.95

PUMP STATION
 7.5" OVERFLOW LINE
 (NOT IN CONTRACT)
 REFER TO STREET
 IMPROVEMENT PLANS

1" LPW CONNECTION
 STA 31+47.56, 6.00 RT

SSMH E-LS1
 STA 31+35.46, 41.41 RT
 RIM 112.72
 INV IN 95.36
 INV OUT 95.26
 REFER TO CITY STANDARD
 DETAILS 87,181 AND 87,190

ODOR CONTROL UNIT
 REFER TO DETAIL 2 ON
 SHEET PS.041-1T

TRANSFORMER PAD
 REFER TO STREET IMPROVEMENT
 PLANS FOR TRANSFORMER DETAILS

ODOR CONTROL UNIT PANEL
 SEE ELECTRICAL SHEETS

GAS DETECTION CONTROL PANEL
 SEE ELECTRICAL SHEETS

MOTOR CONTROL CENTER
 SEE ELECTRICAL SHEETS

SITE LIGHT
 SEE ELECTRICAL SHEETS

SLIDE GATE SSMH
 SEE SHEET PS.031-1T

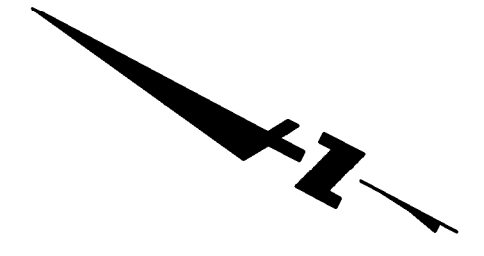
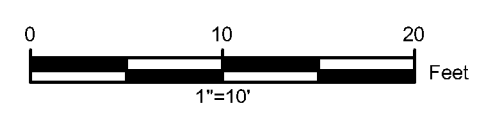
STA 31+35.46, 68.67 RT
 CENTER OF WET WELL
 5TH ST SS PS

VALVE VAULT
 SEE SHEET PS.031-1T

BOLLARD (TYP)
 REFER TO CITY
 STANDARD DWG 87,178

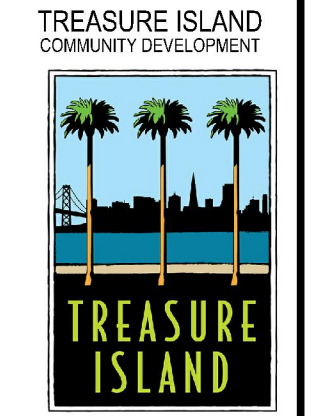
UTILITY YARD ENCLOSURE
 REFER TO PARK IMPROVEMENT PLANS

REDUCED PRESSURE BACKFLOW ASSEMBLY
 SEE DETAIL 10 ON SHEET PS.042-1T



SITE PLAN
 SCALE: 1"=10'

- NOTES**
- REFER TO STREET AND PARK IMPROVEMENT PLANS FOR GRADING.
 - HDPE PIPE SIZES SHOWN ARE INSIDE DIAMETERS.



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL
 FOR REVIEW

PROJECT NO.	CHK. IML	DATE	REVISIONS	DESCRIPTION	BY	DATE
20140015-10	AL	5/25/2018				

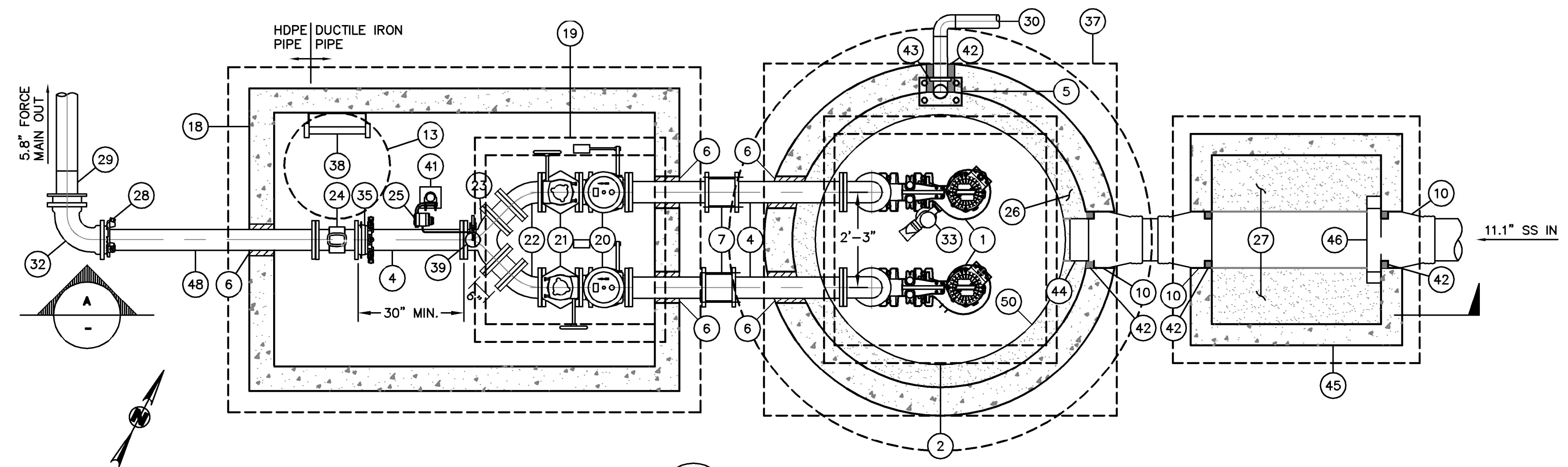
5TH STREET
 SANITARY SEWER
 PUMP STATION
 SITE PLAN

SHEET TITLE
 SCALE 1"=10'

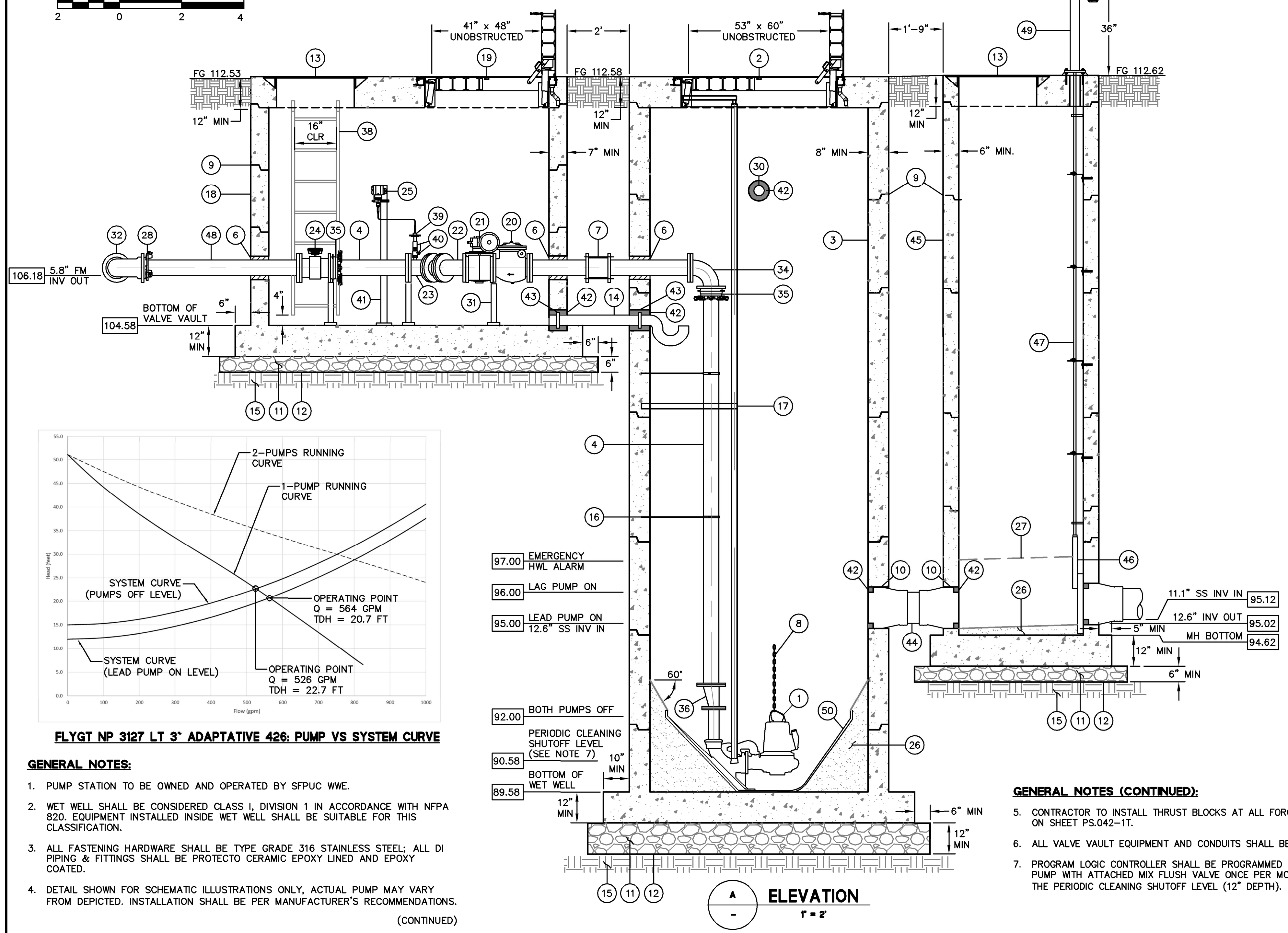
PS.030-1T
 8 OF 40
 DRAWING NO.



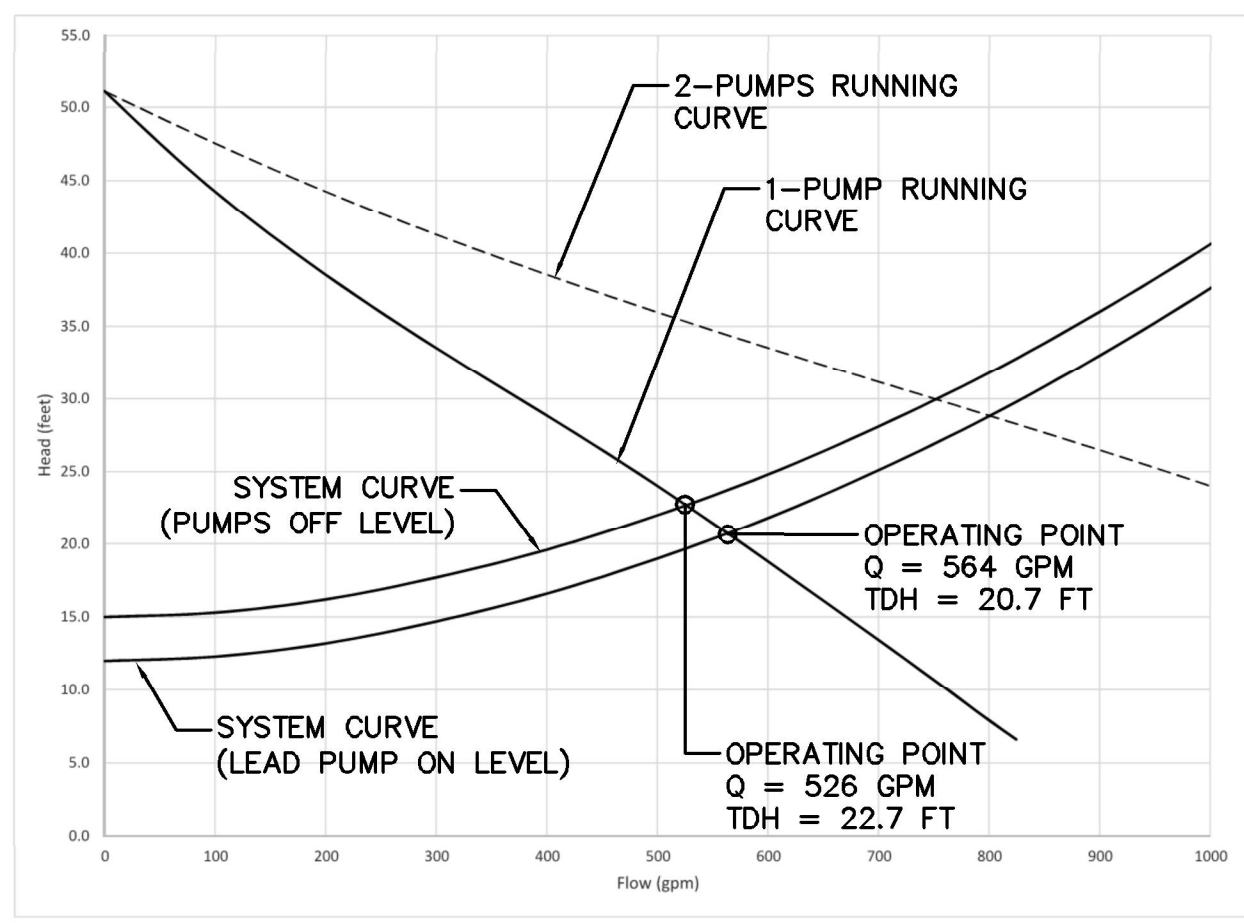
DRAWING NAME: K:\Eng1\140015\DWG\10_Subphase 01\4.2_Infrastructure Improvement Plans\PS-031-1T_SSPS 5th.dwg
PLOT DATE: 05-24-18 PLOTTED BY: mbr



1 PLAN
r = 2'



A ELEVATION
r = 2'



FLYGT NP 3127 LT 3\"/>

GENERAL NOTES:

- PUMP STATION TO BE OWNED AND OPERATED BY SFPUC WVE.
- WET WELL SHALL BE CONSIDERED CLASS I, DIVISION 1 IN ACCORDANCE WITH NFPA 820. EQUIPMENT INSTALLED INSIDE WET WELL SHALL BE SUITABLE FOR THIS CLASSIFICATION.
- ALL FASTENING HARDWARE SHALL BE TYPE GRADE 316 STAINLESS STEEL; ALL DI PIPING & FITTINGS SHALL BE PROTECTO CERAMIC EPOXY LINED AND EPOXY COATED.
- DETAIL SHOWN FOR SCHEMATIC ILLUSTRATIONS ONLY, ACTUAL PUMP MAY VARY FROM DEPICTED. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

(CONTINUED)

GENERAL NOTES (CONTINUED):

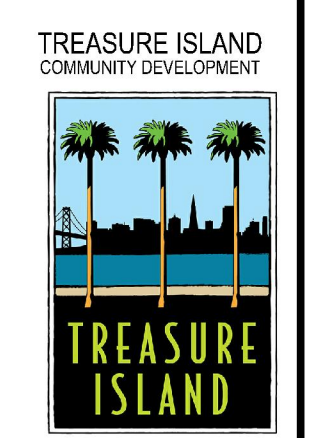
- CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.
- ALL VALVE VAULT EQUIPMENT AND CONDUITS SHALL BE FLOOD-RESILIENT.
- PROGRAM LOGIC CONTROLLER SHALL BE PROGRAMMED TO AUTOMATICALLY TURN ON PUMP WITH ATTACHED MIX FLUSH VALVE ONCE PER MONTH AND PUMP DOWN TO THE PERIODIC CLEANING SHUTOFF LEVEL (12\"/>

STRUCTURAL NOTES:

- REINFORCING STEEL FOR ALL PRECAST SECTIONS SHOWN HERE SHALL BE ASTM A615, GRADE 60 AND EPOXY COATED IN CONFORMANCE WITH ASTM A775.
- CONTRACTOR TO LOCATE REINFORCING BARS PRIOR TO DRILLING INTO CONCRETE FOR ADHESIVE ANCHORS.
- CONTRACTOR TO INSTALL THRUST BLOCKS AT ALL FORCE MAIN BENDS PER DETAIL 7 ON SHEET PS.042-1T.

MATERIAL LIST:

- FLYGT 5 HP SUBMERSIBLE EXPLOSION-PROOF PUMP NP 3102 MT 3~ ADAPTIVE 463 WITH ELBOW (EPOXY COATED) AND ZINC ANODES. SEE DETAIL 1 & 3 ON SHEET PS.042-1T
- BILCO 60\"/>



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

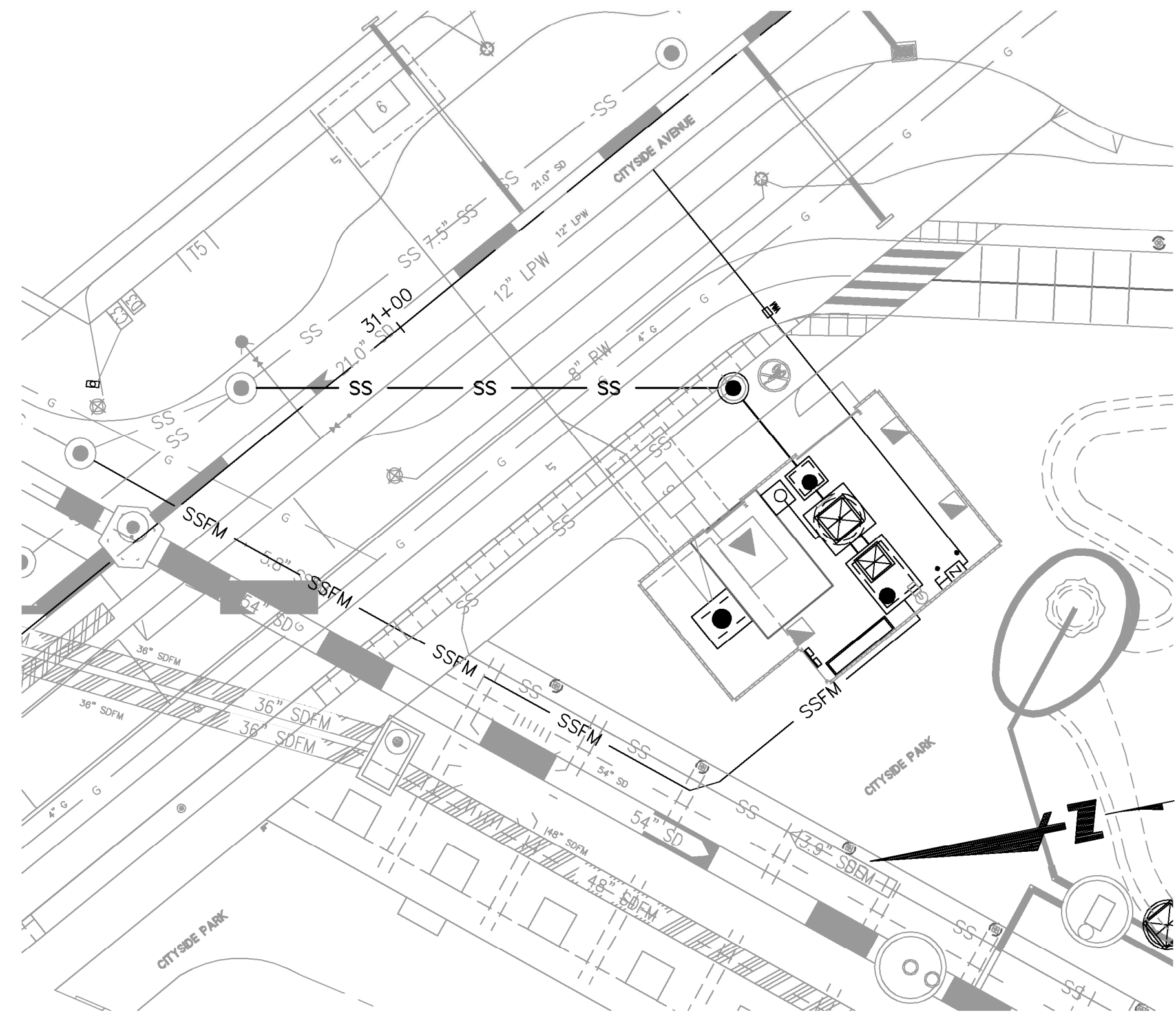
NO.	REVISIONS	DATE	BY	DATE

PROJECT NO. 20140015-10
DRAWN BY: AL
DATE: 5/25/2018
5TH STREET SANITARY SEWER PUMP STATION PLAN & ELEVATION VIEWS
SHEET TITLE
SCALE AS SHOWN
PS.031-1T
9 OF 40
DRAWING NO.

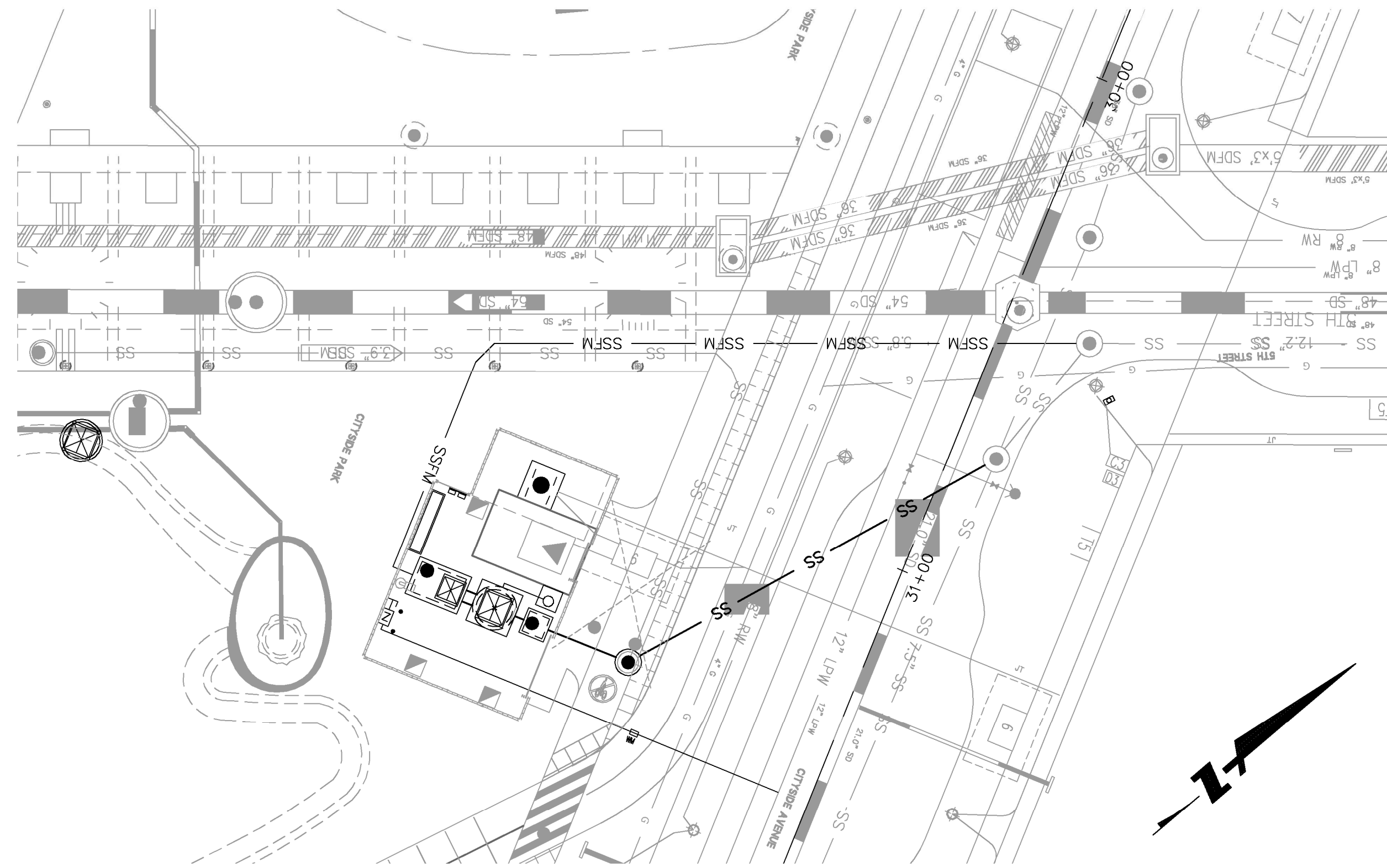


CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

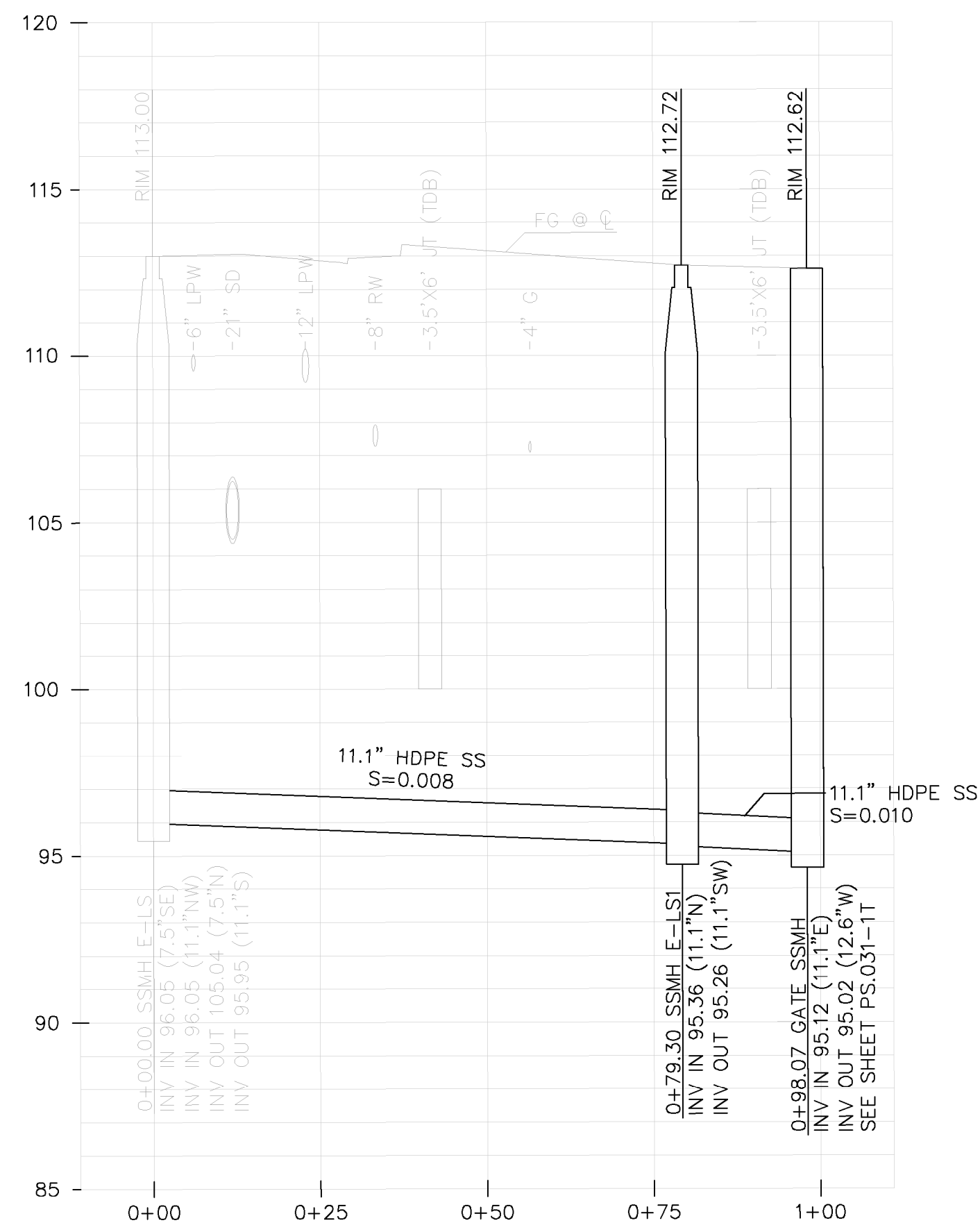
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 PLOT DATE: 05-24-18 PLOTTED BY: mbr



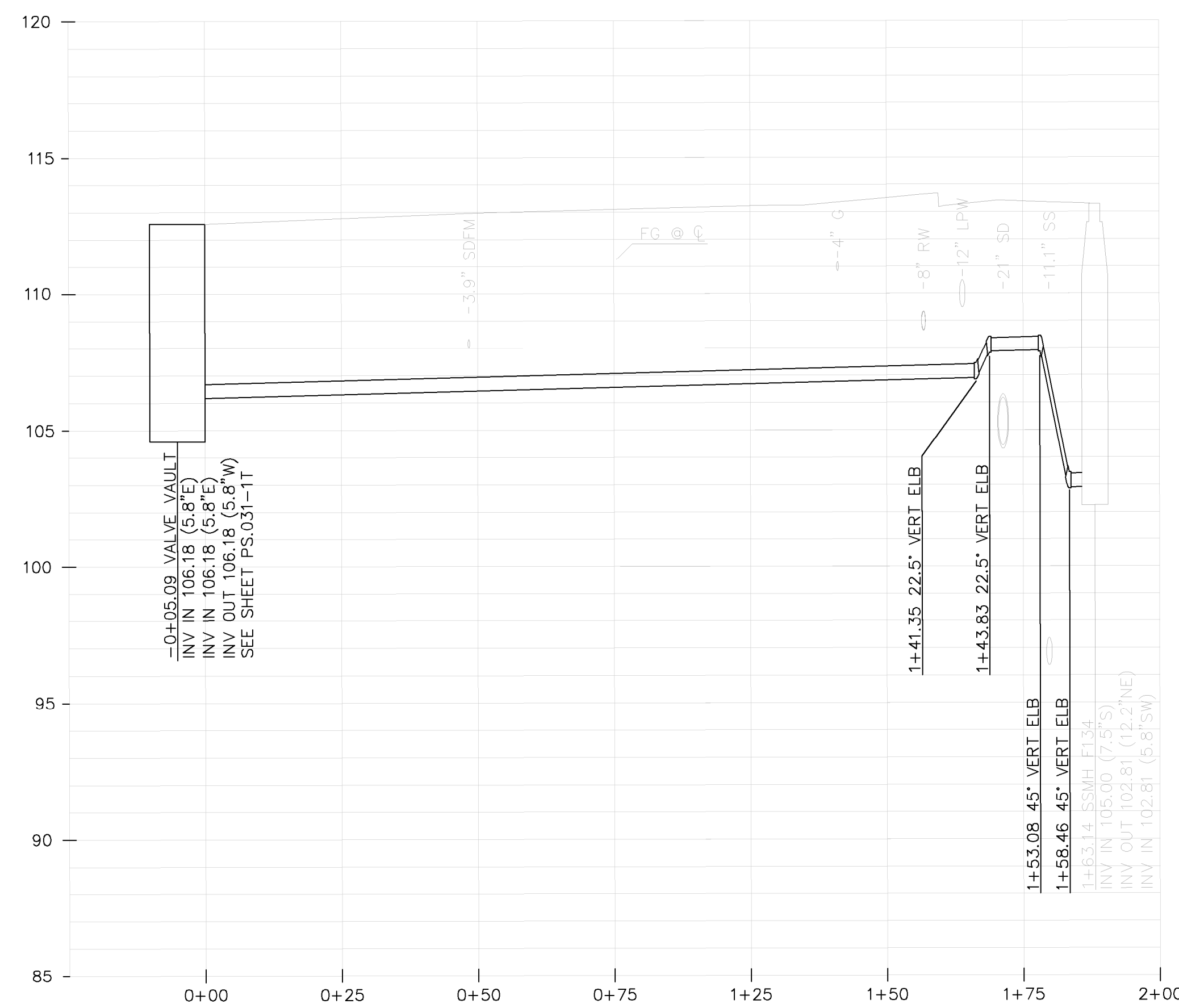
4TH ST. PUMP STATION PLAN
 SCALE: 1"=20'



5TH ST. PUMP STATION PLAN
 SCALE: 1"=20'



PROFILE
 SCALE: HORIZONTAL 1"=20'
 VERTICAL 1"=4'



PROFILE
 SCALE: HORIZONTAL 1"=20'
 VERTICAL 1"=4'



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
 PUMP STATION IMPROVEMENTS
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

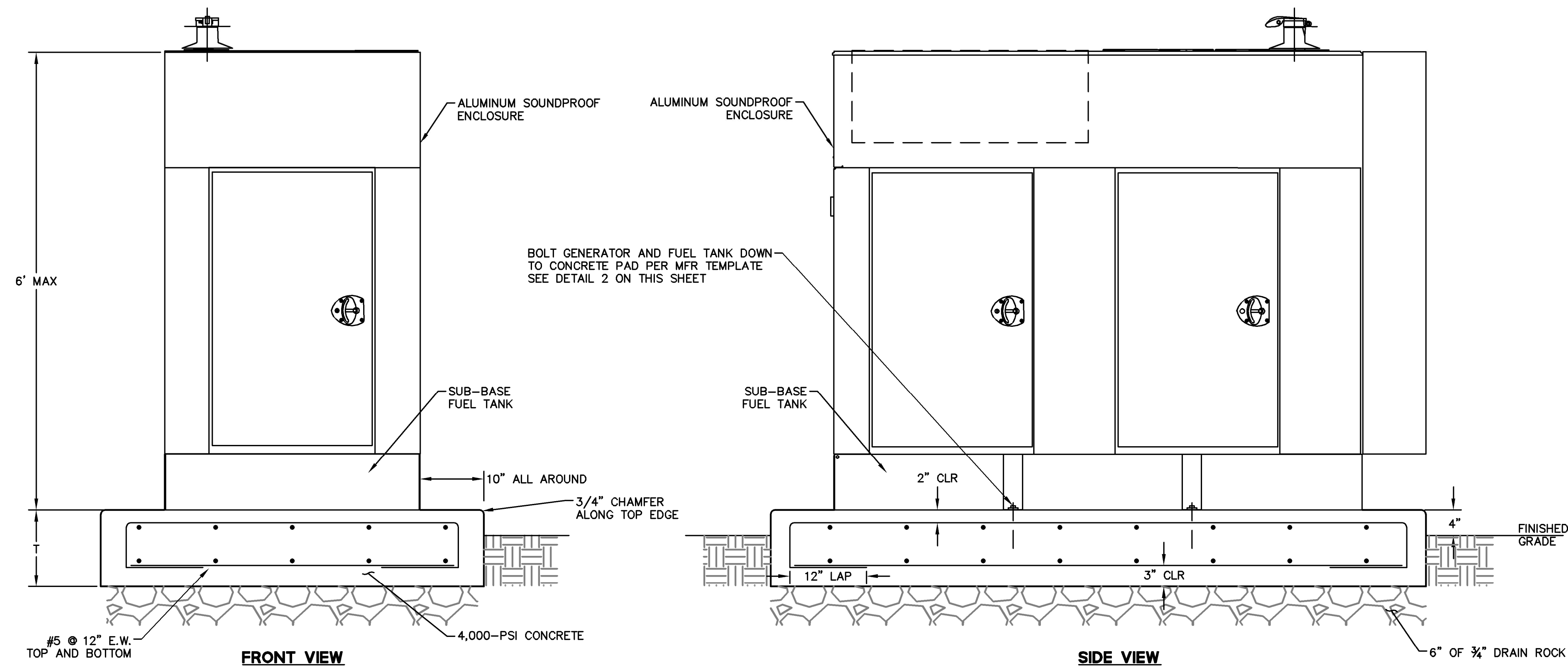
NO.	REVISIONS	DATE	BY	DATE

5TH STREET
 SANITARY SEWER
 PUMP STATION
 SEWER LINES
 PROFILES

SHEET TITLE
 SCALE AS SHOWN
PS.032-1T
 10 OF 40
 DRAWING NO.



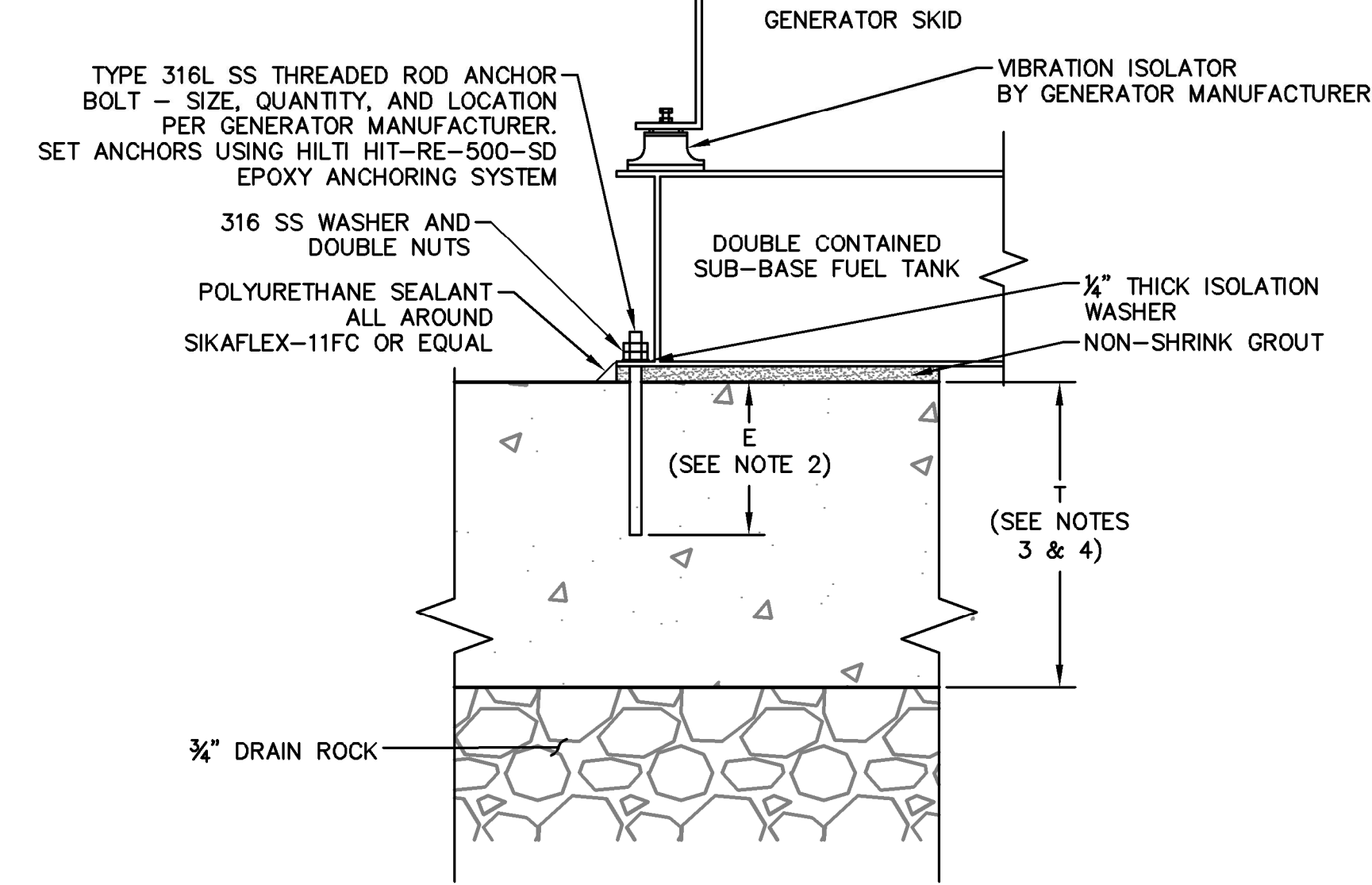
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PLOT DATE: 05-24-18 PLOTTED BY: mbr



NOTES:

- STANDARD GENERATOR PAD DESIGN SHOWN HERE SUITABLE FOR GENERATOR OVERALL HEIGHT AND WEIGHT OF 6 FEET AND 5,000 LBS RESPECTIVELY.
- CONTRACTOR SHALL VERIFY OVERALL DIMENSIONS AND WEIGHT OF SELECTED GENERATOR PRIOR TO CONSTRUCTION.
- CONTRACTOR TO REVISE PAD DESIGN AS NEEDED IF SELECTED GENERATOR EXCEEDS THESE CRITERIA.
- CONTRACTOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS SIGNED BY A CIVIL ENGINEER LICENSED IN CALIFORNIA FOR REVISED PAD REINFORCEMENT PRIOR TO CONSTRUCTION.

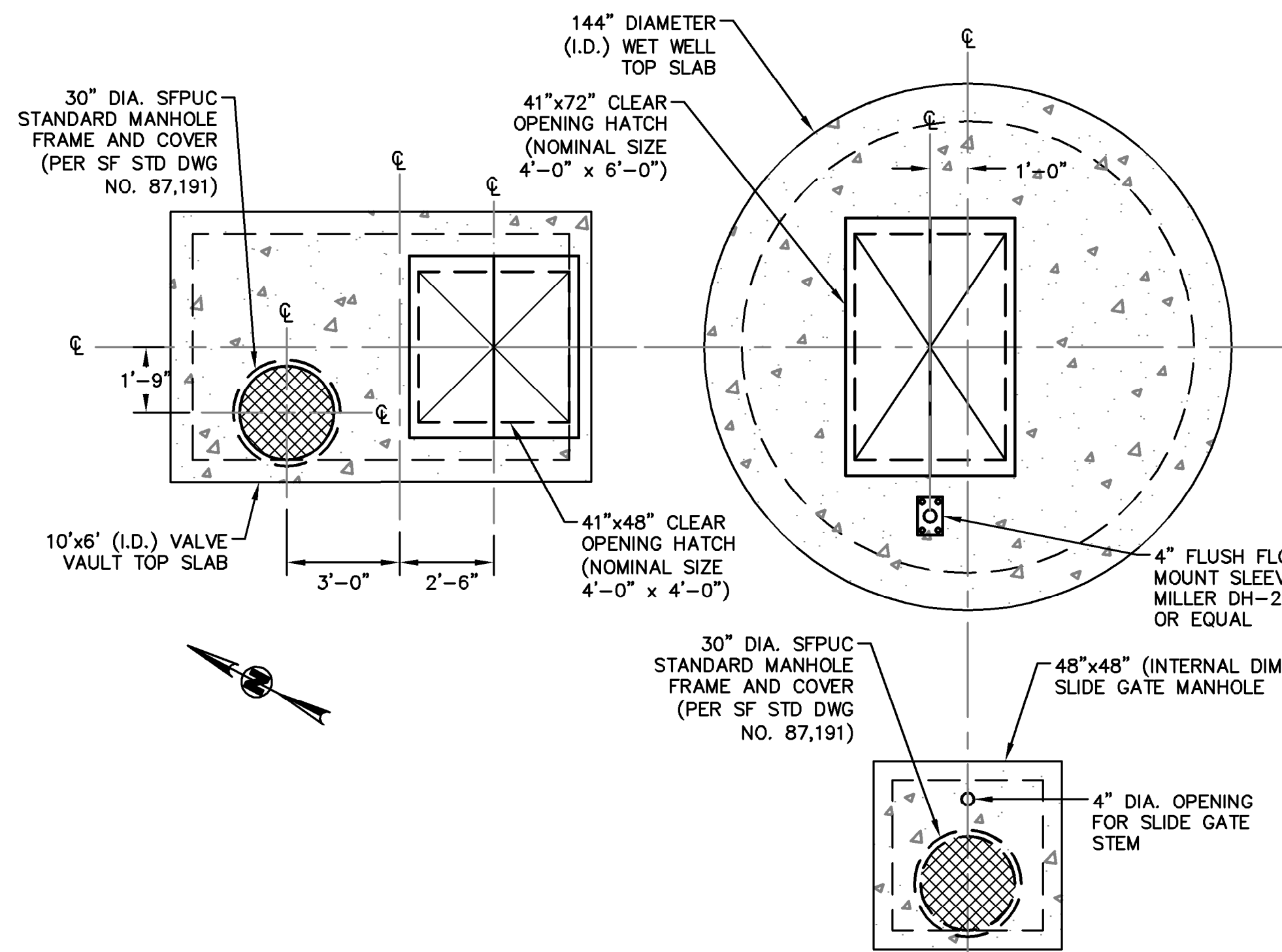
1 STANDARD GENERATOR PAD REINFORCEMENT DETAIL
NTS



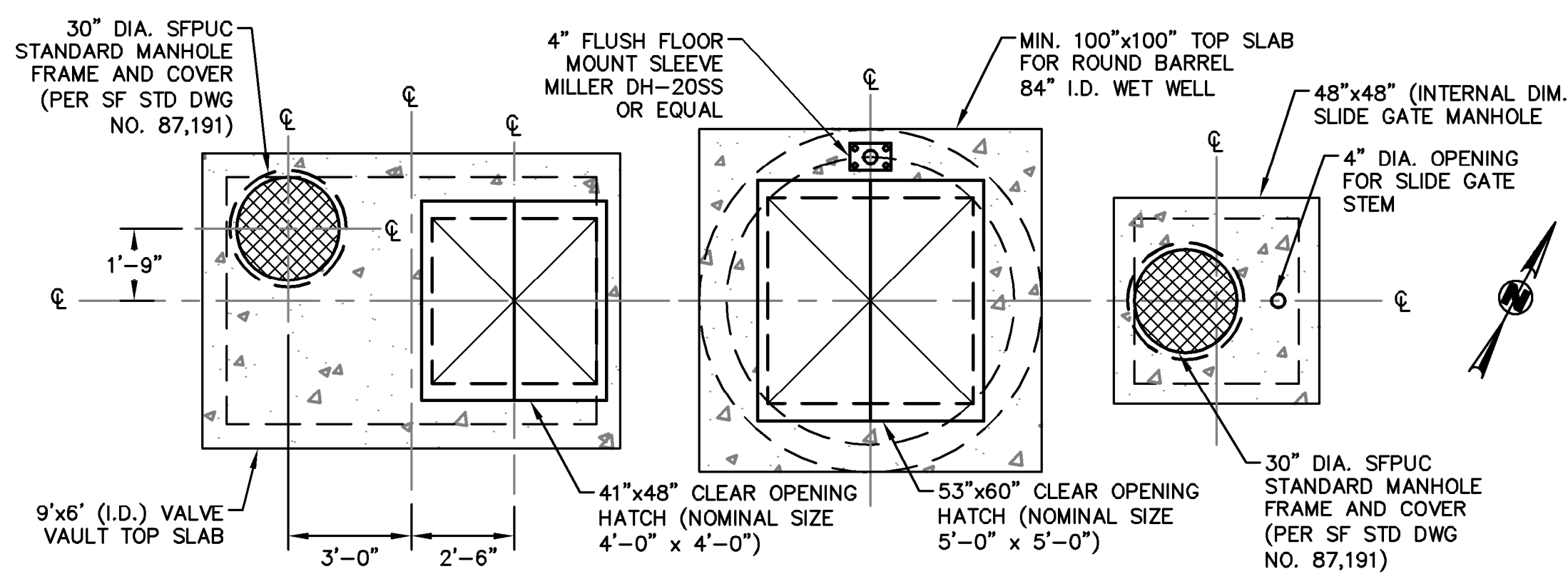
NOTES:

- CONTRACTOR SHALL SUBMIT MINIMUM ANCHOR EMBEDMENT CALCULATIONS SIGNED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA FOR APPROVAL PRIOR TO CONSTRUCTION.
- E: SHALL EQUAL OR EXCEED MINIMUM EMBEDMENT AS CALCULATED BY CONTRACTOR.
- T: SHALL BE EQUAL TO OR GREATER THAN TWO TIMES E AND SHOULD NOT BE LESS THAN 12".
- T SHALL ALSO BE SUCH THAT THE WEIGHT OF THE PAD IS EQUAL TO OR GREATER THAN 125 PERCENT OF THE GENERATOR WEIGHT (FUEL WEIGHT INCLUDED).

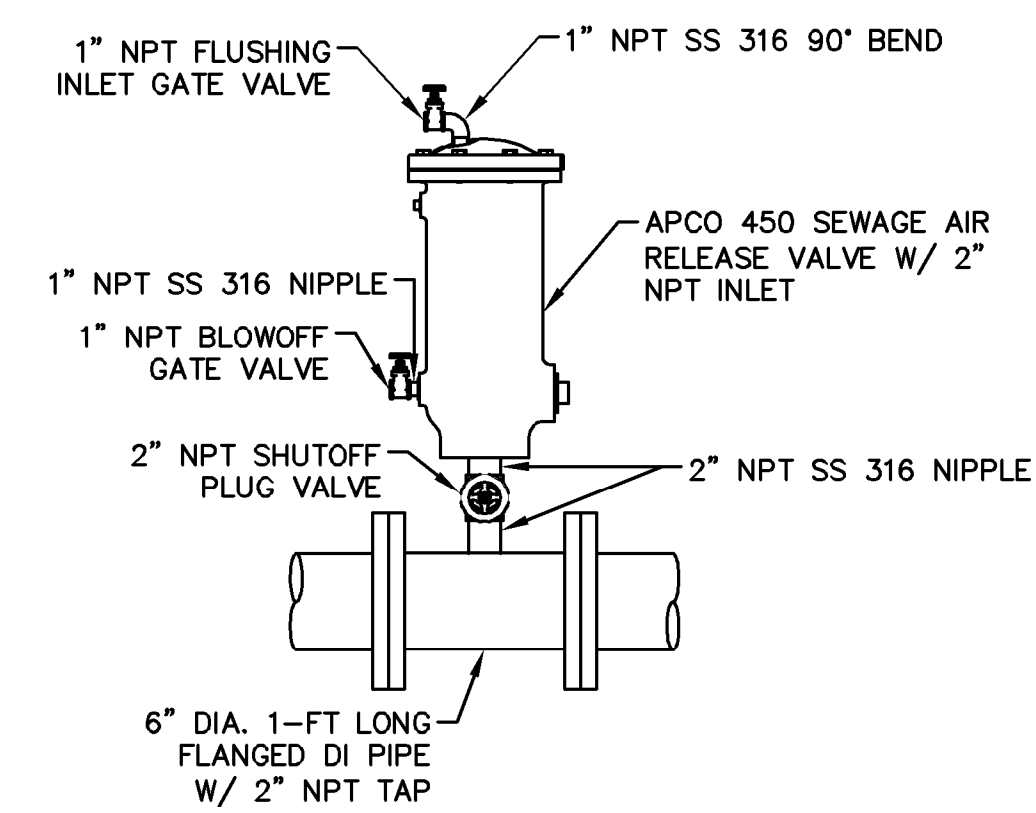
2 STANDARD GENERATOR ANCHOR DETAIL
SCALE 1"=1'



3 4TH STREET HATCH LAYOUT
NTS



4 5TH STREET HATCH LAYOUT
NTS



NOTES:

- PROVIDE 1" NPT HOSES FOR PERIODIC FLUSHING TO REMOVE SEDIMENT.
- DRAIN BLOWOFF VALVE TO PUMP STATION WET WELL OR FORCE MAIN OUTFALL MANHOLE DURING FLUSHING.

5 AIR RELEASE VALVE
NTS



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

NO.	REVISIONS	DATE	BY	DATE

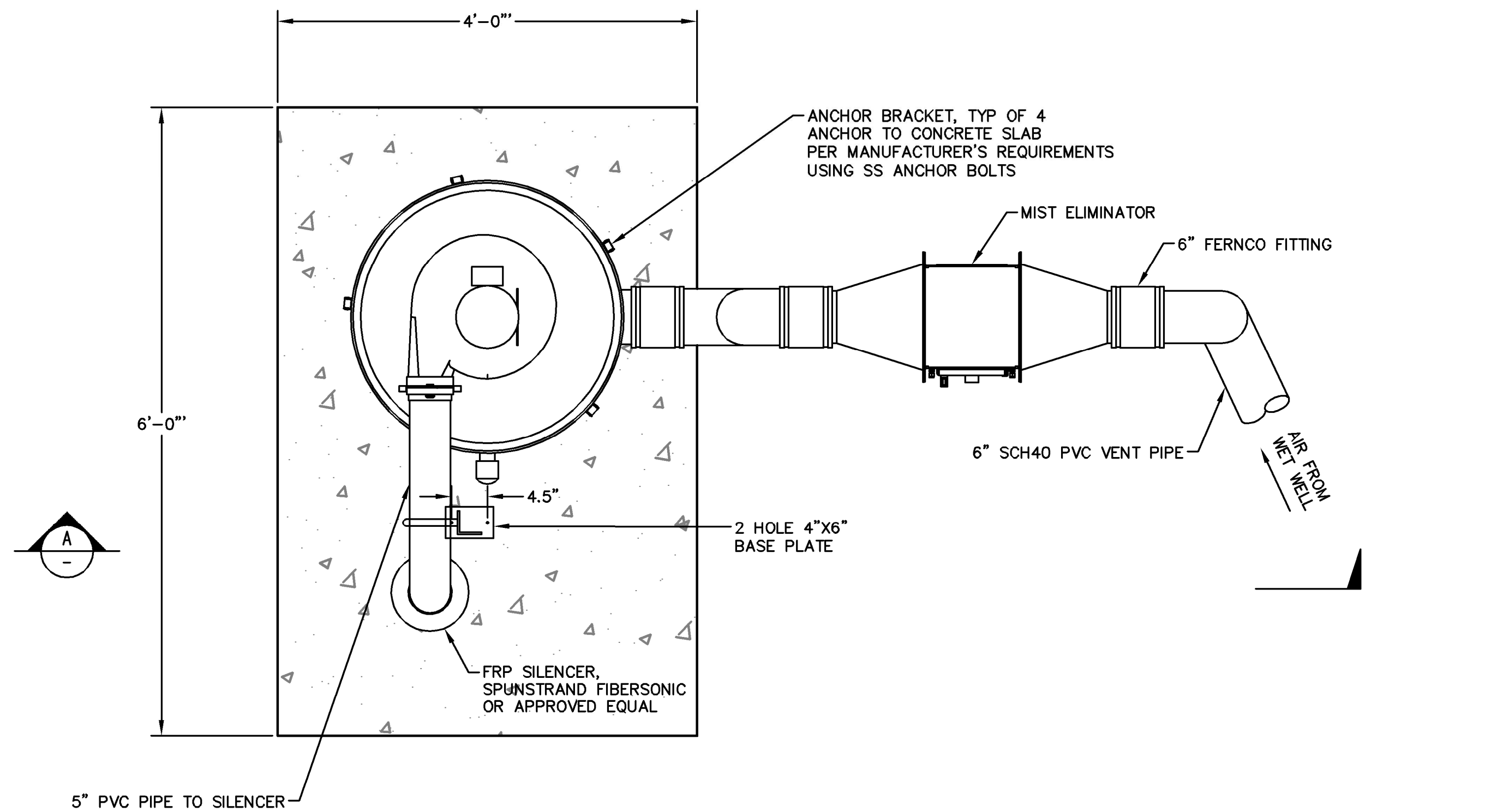
4TH & 5TH STREET
SANITARY SEWER
PUMP STATION
CIVIL DETAILS (1/4)

SHEET TITLE
SCALE AS SHOWN

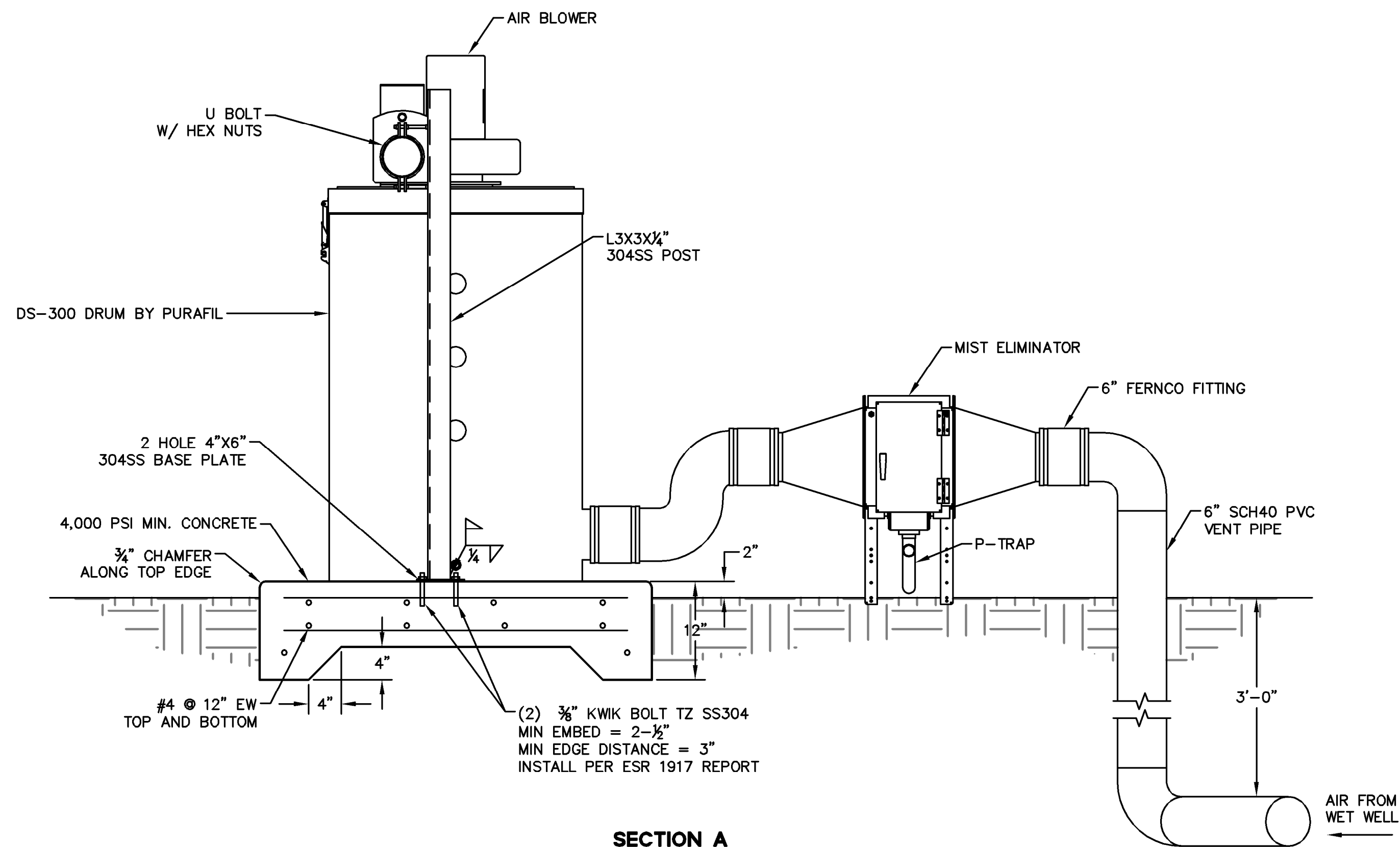
PS.040-1T
11 OF 40
DRAWING NO.



DRAWING NAME: K:\Eng1\140015\DWG\10_Subphase 01\4.2 Infrastructure Improvement Plans\PS-Package\PS.041-1T_SSPS_Details.dwg
 PLOT DATE: 05-24-18 PLOTTED BY: mbrt



PLAN

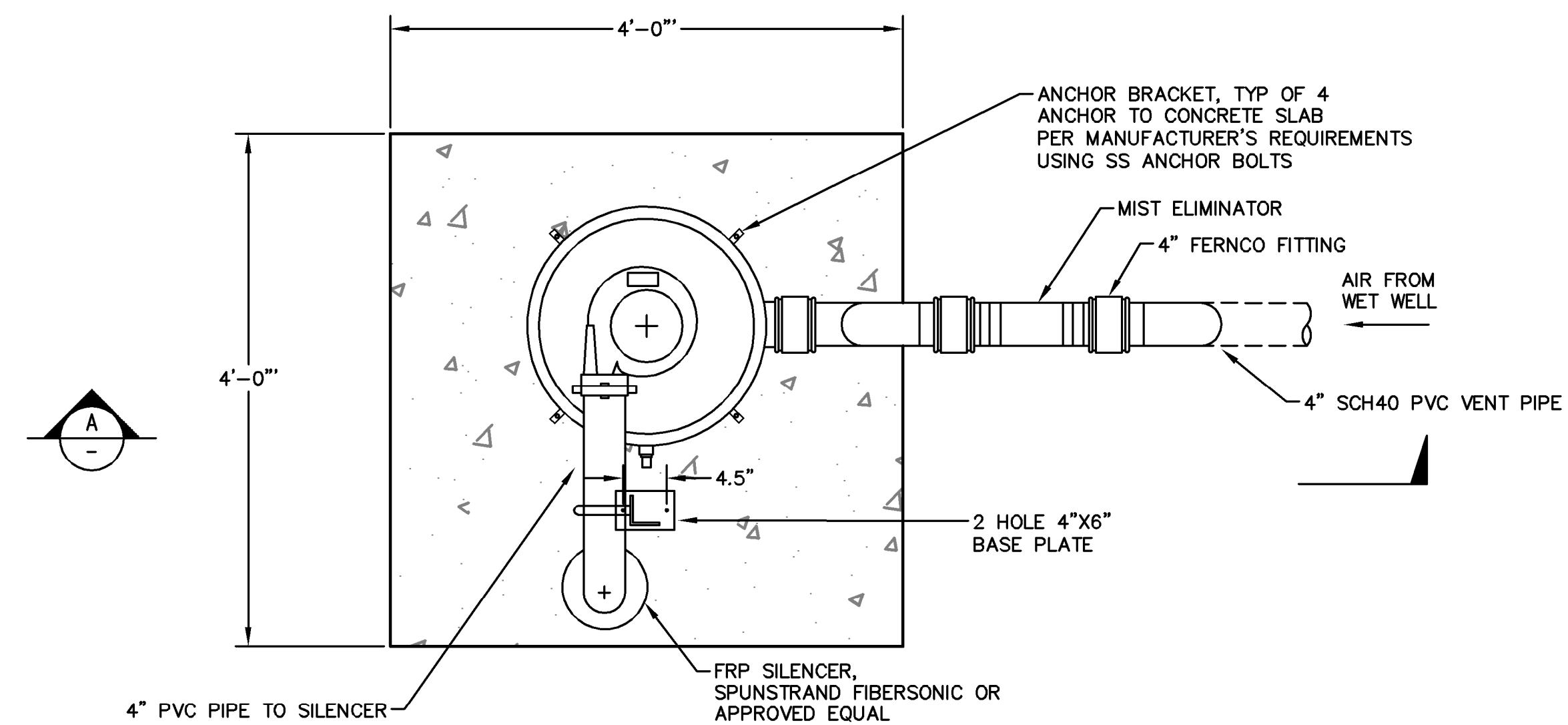


SECTION A

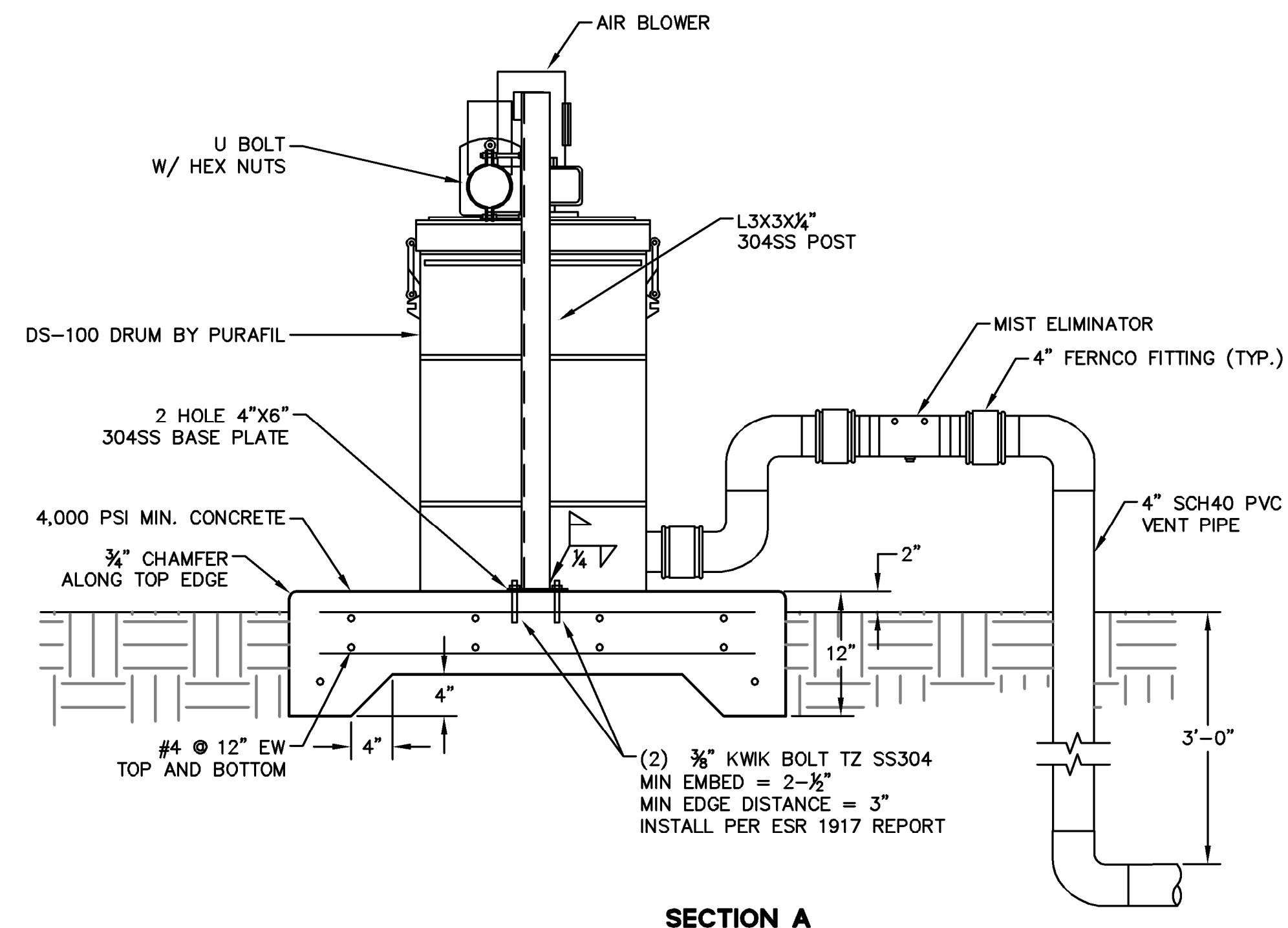
NOTES:

- SILENCER NOT SHOWN IN SECTION VIEW FOR CLARITY.
- PAINT ABOVE-GRADE PVC PIPING WITH A WHITE WATER-BASED LATEX PAINT

1 4TH STREET ODOR CONTROL UNIT
 PS.020-IT NTS



PLAN

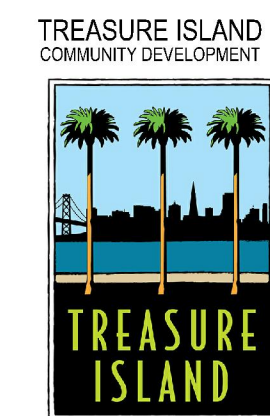


SECTION A

NOTES:

- SILENCER NOT SHOWN IN SECTION VIEW FOR CLARITY.
- PAINT ABOVE-GRADE PVC PIPING WITH A WHITE WATER-BASED LATEX PAINT

2 5TH STREET ODOR CONTROL UNIT
 PS.030-IT NTS



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
 PUMP STATION IMPROVEMENTS
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

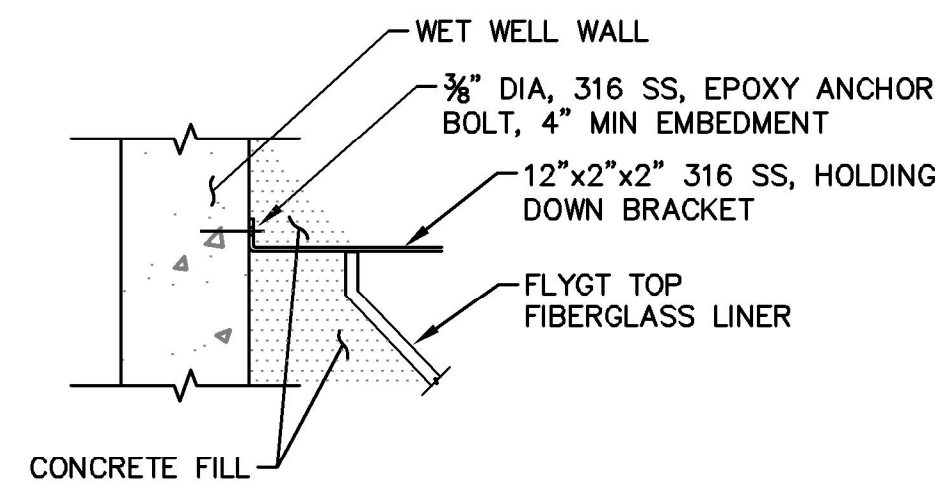
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4TH & 5TH STREET
 SANITARY SEWER
 PUMP STATION
 CIVIL DETAILS (2/4)

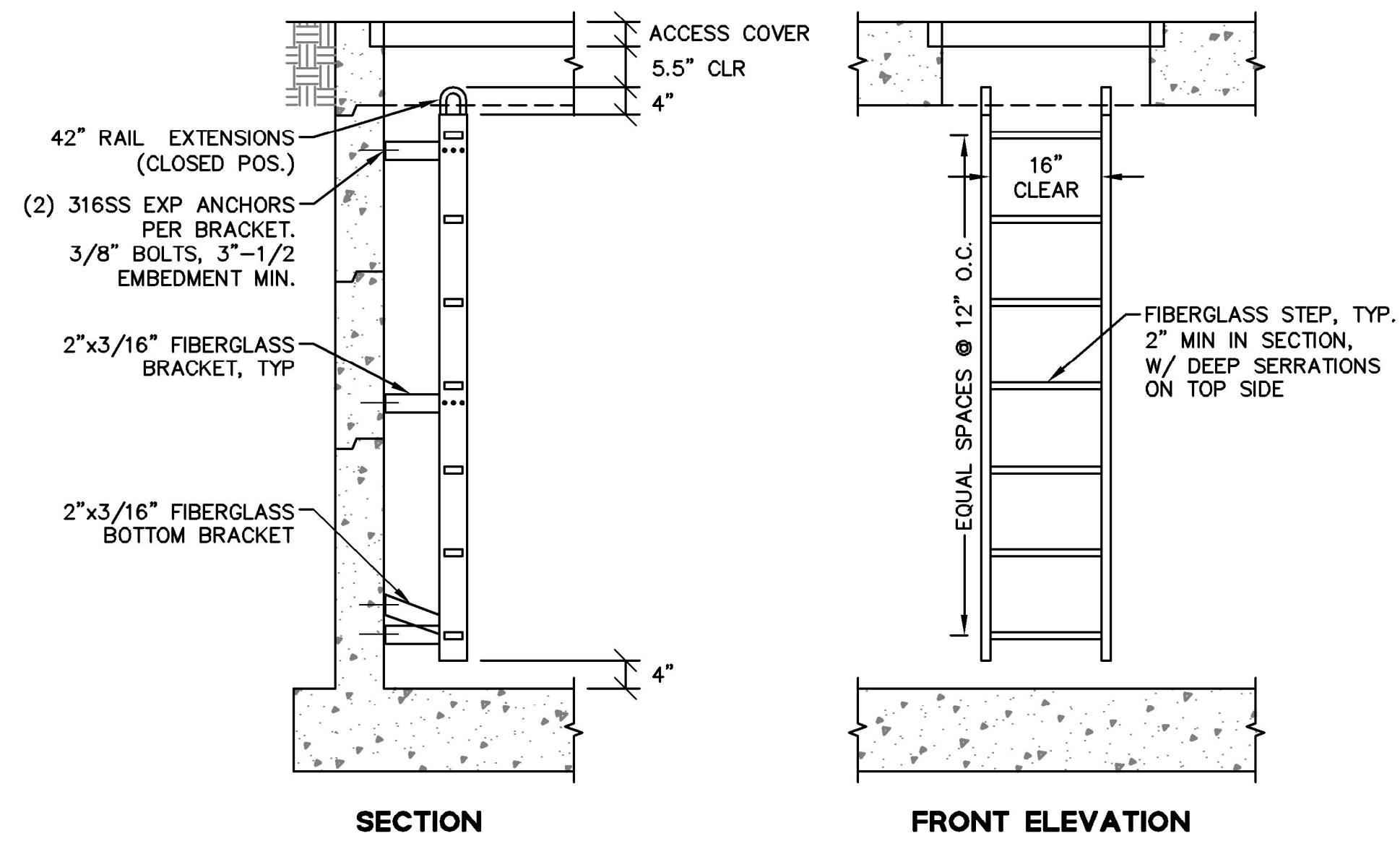
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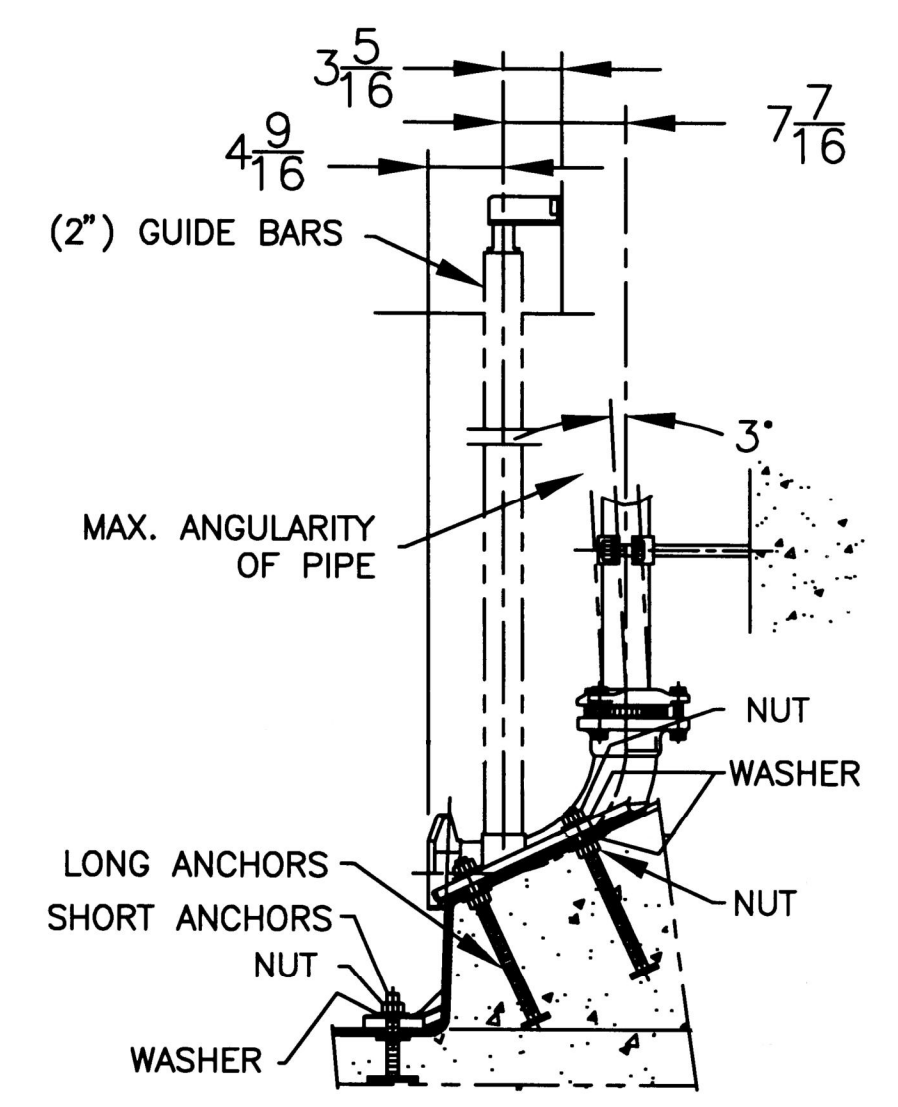




1 STANDARD TOP INSERT ANCHOR DETAIL
NTS

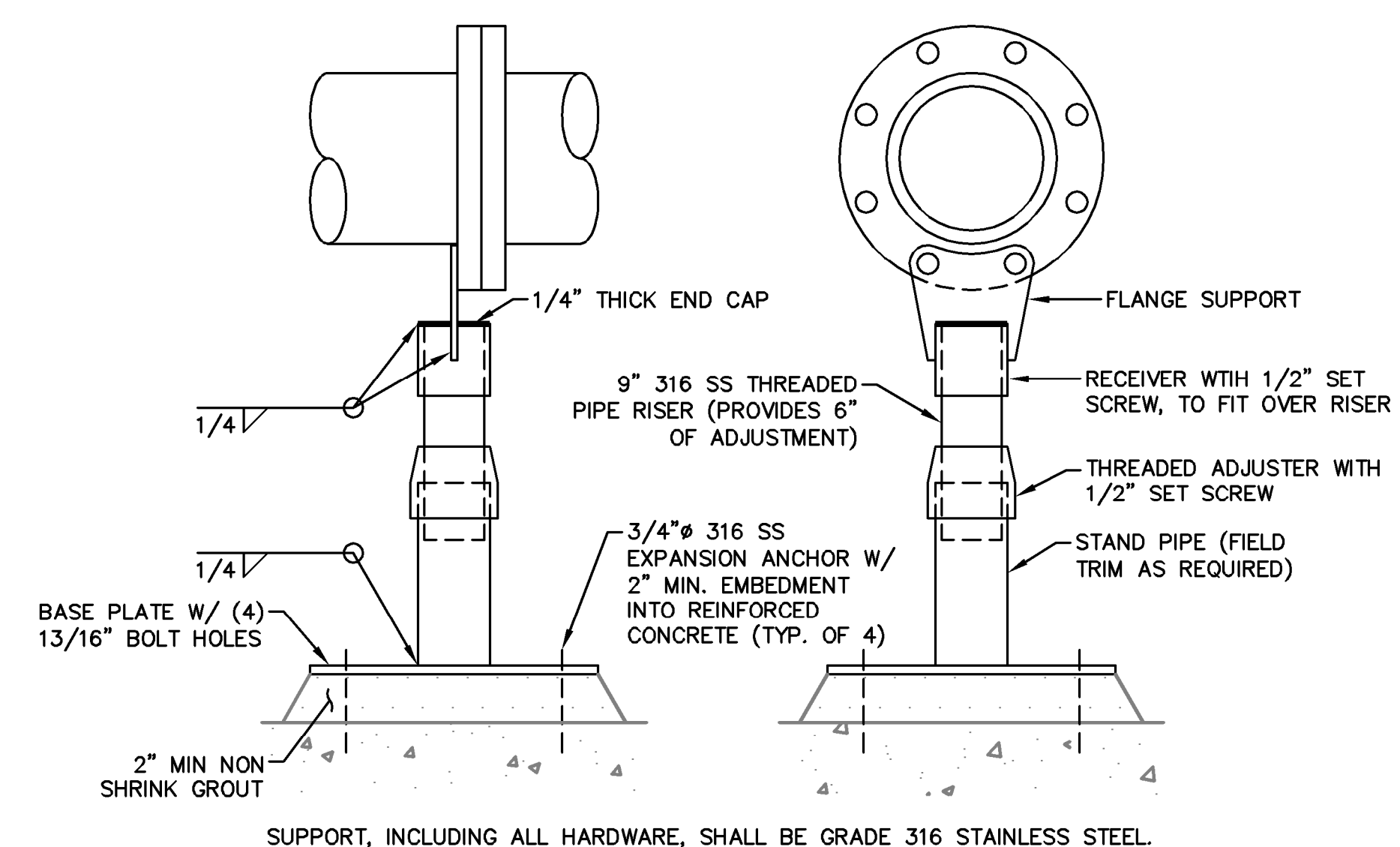


2 LADDER DETAIL
NTS



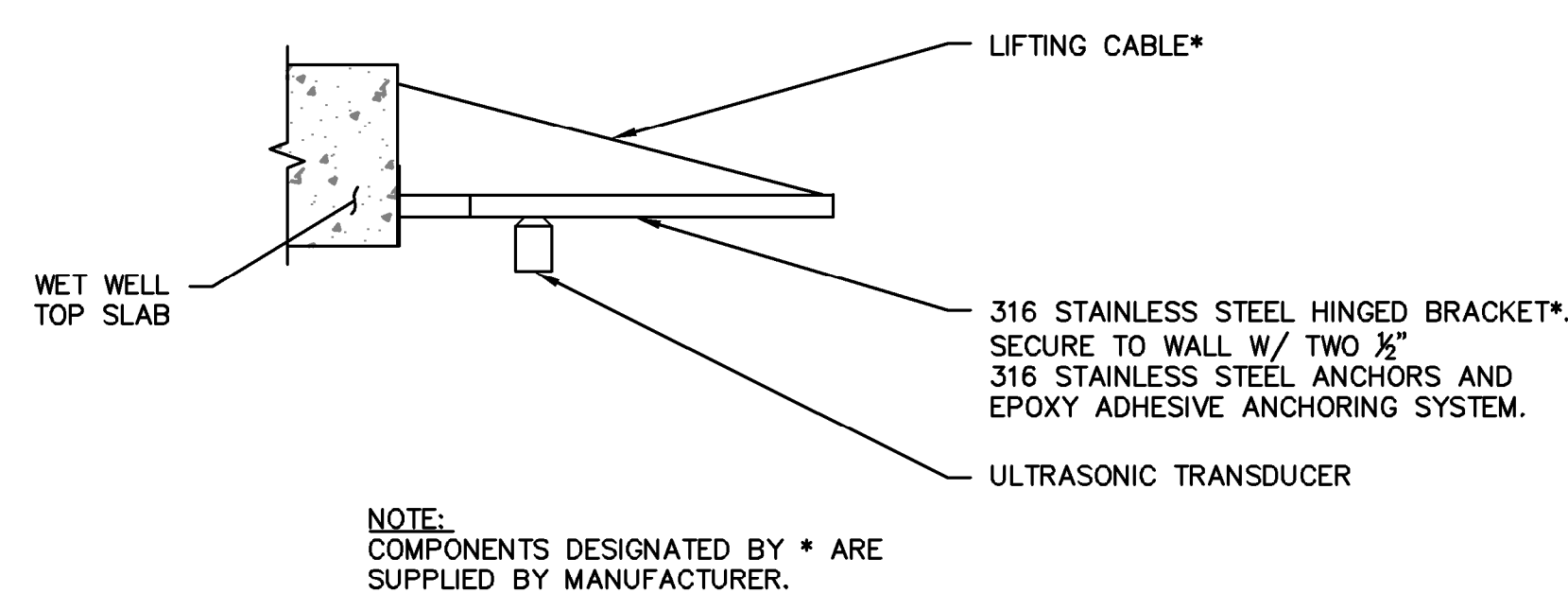
3 PUMP ELBOW ANCHORING DETAIL
NTS

- NOTES:**
1. ANCHORING KIT FOR EACH DISCHARGE CONNECTION SHALL BE DESIGNED AND SUPPLIED BY THE PUMP MANUFACTURER.
 2. ANCHOR CALCULATIONS SHALL BE SUBMITTED BY PUMP MANUFACTURER FOR REVIEW PRIOR TO INSTALLATION. CALCULATIONS SHALL BE SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER.
 3. ALL ANCHOR HARDWARE SHALL BE 316 STAINLESS STEEL.



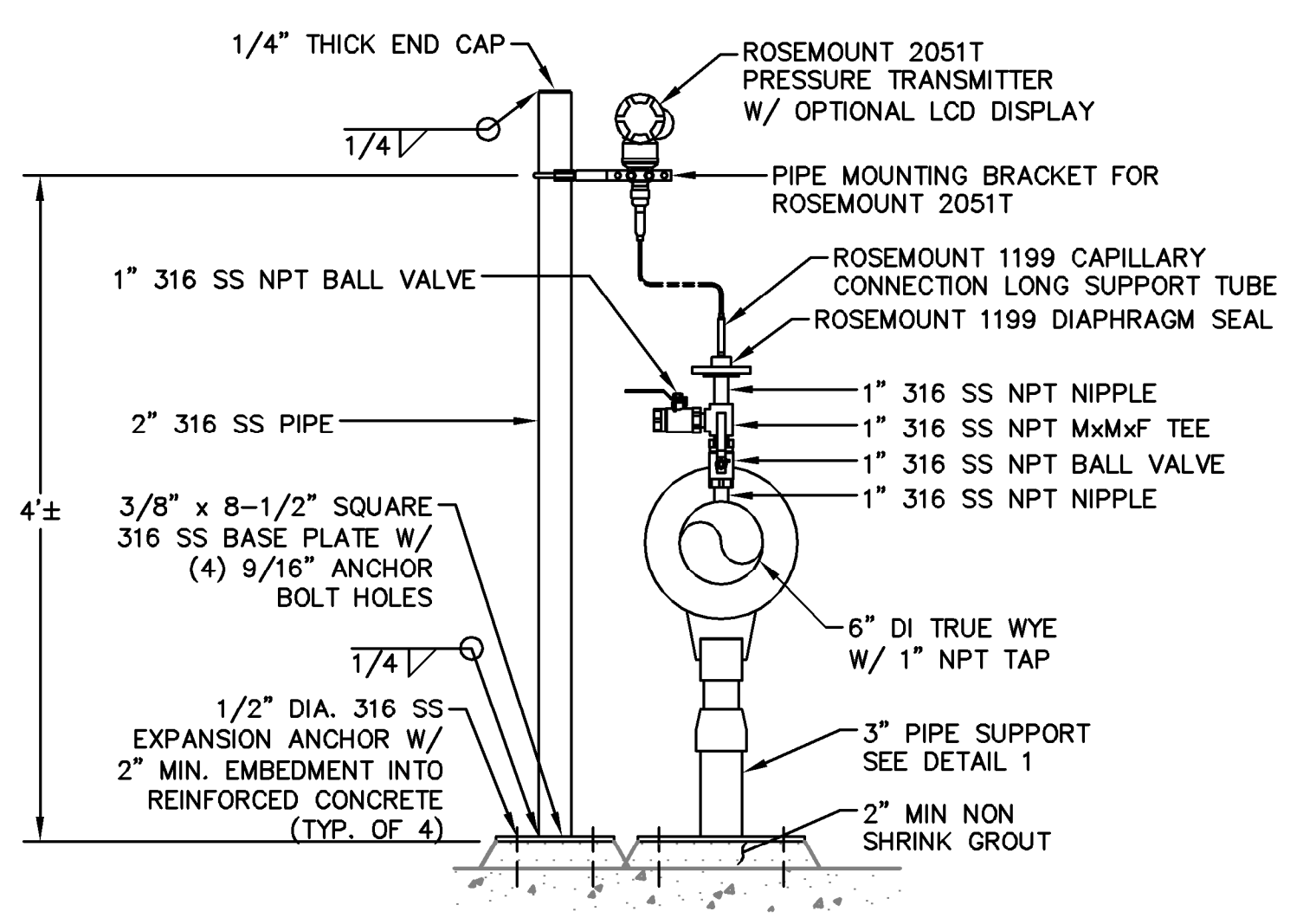
PIPE DIAMETER	THREADED ADJUSTER PIPE Ø	ADJUSTER SIZE	STAND PIPE Ø	BASE PLATE	BOLT HOLE Ø
6"	2-1/2"	2-1/2" x 3"	3"	12" x 12"	13/16"

4 PIPE SUPPORT DETAIL
NTS

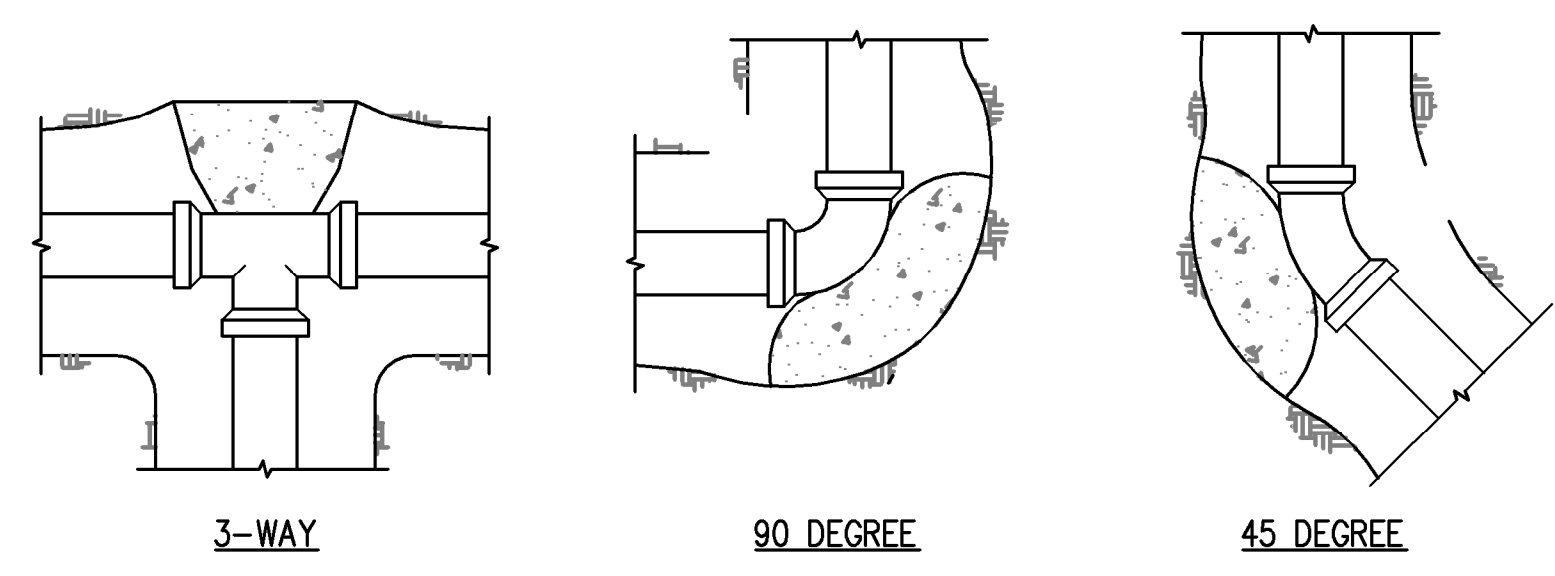


NOTE: COMPONENTS DESIGNATED BY * ARE SUPPLIED BY MANUFACTURER.

5 ULTRASONIC TRANSDUCER INSTALLATION DETAIL
NTS



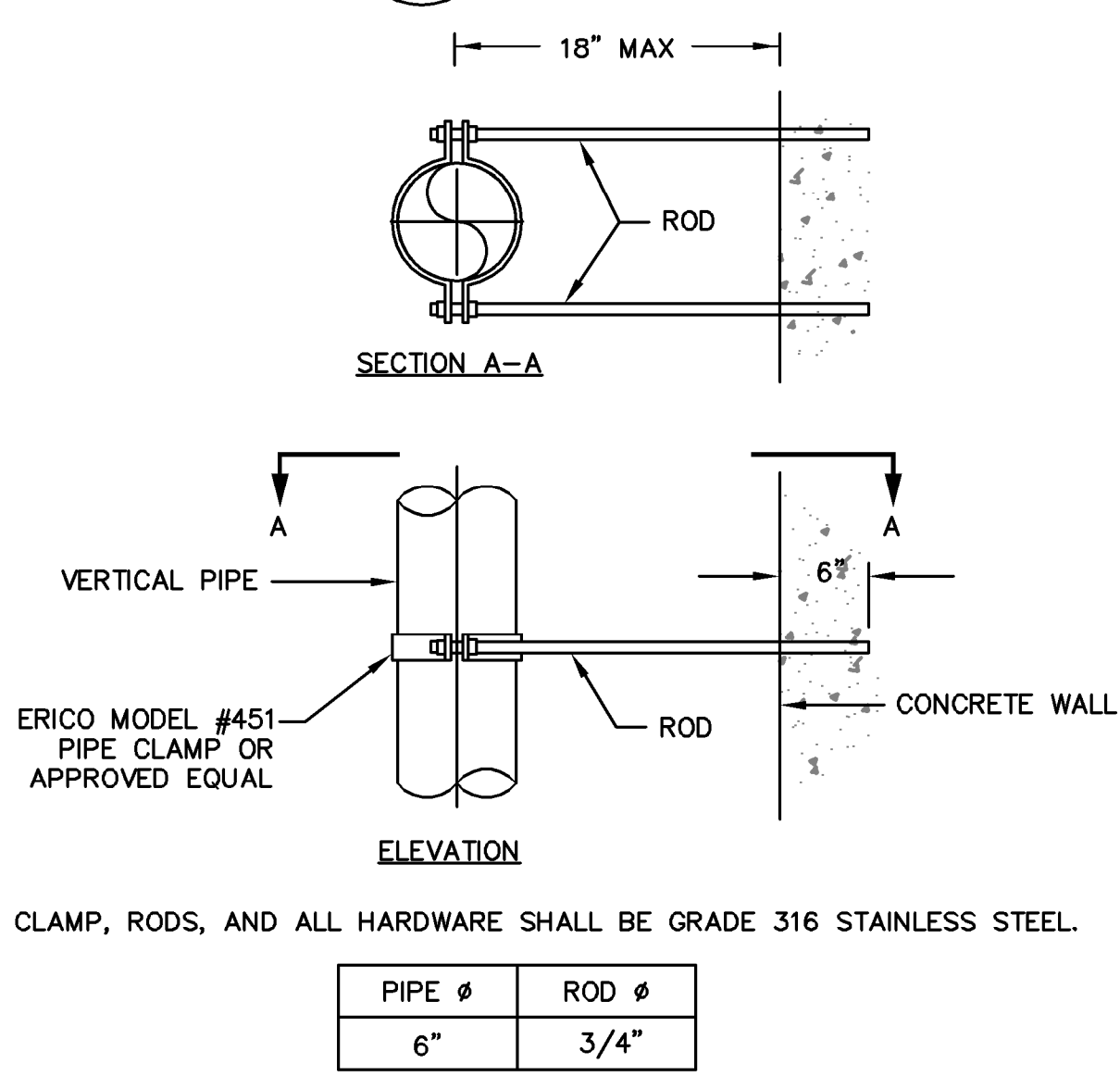
6 PRESSURE TRANSMITTER MOUNTING DETAIL
NTS



SQ FT OF THRUST BLOCK BEARING AREA			
PIPE DIAMETER	TEE, WYE, OR CAP	90-DEG BEND	45-DEG BEND
6"	5	6	4

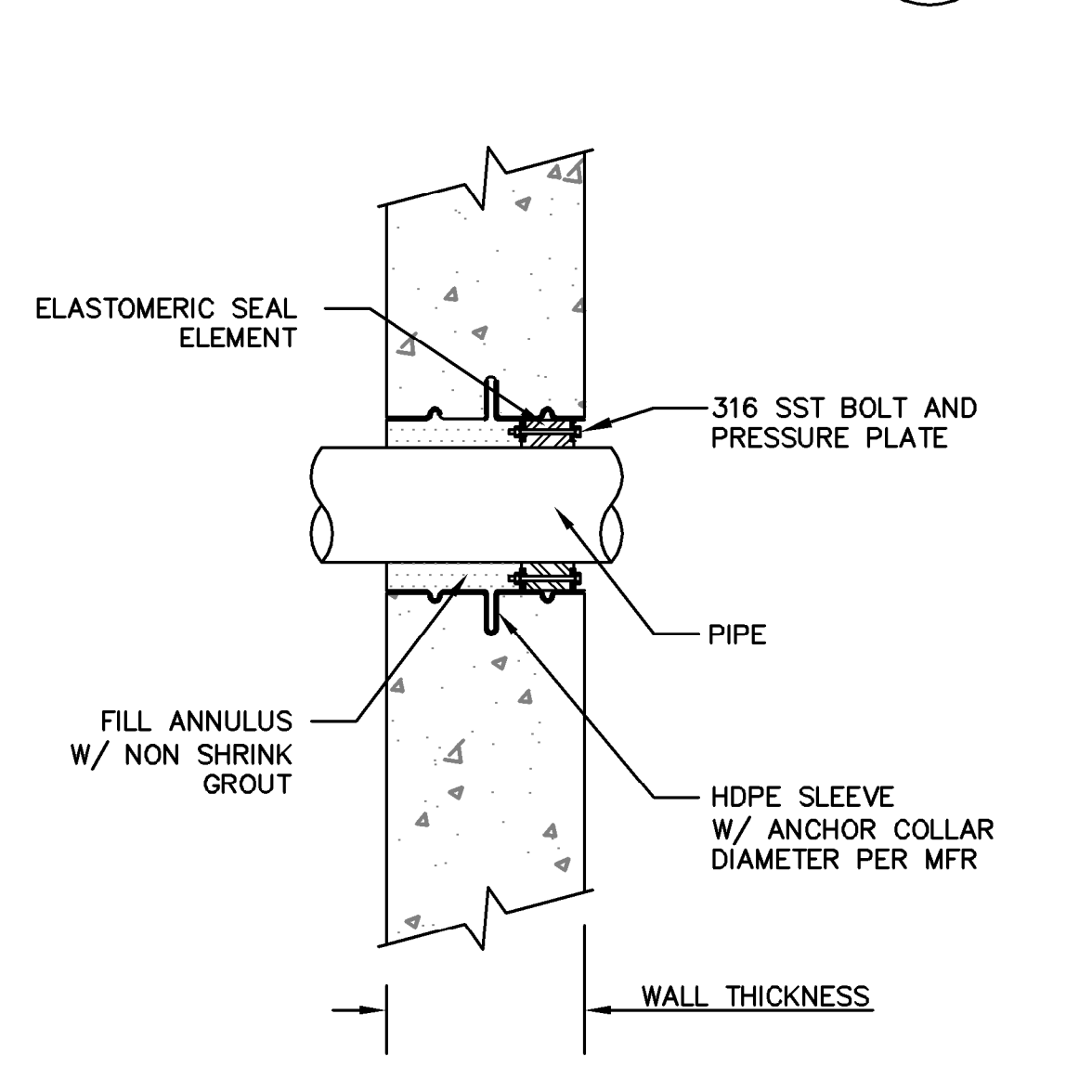
- NOTES:**
1. CONCRETE STRENGTH SHALL BE MINIMUM 3,000 PSI
 2. CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST FIRM, UNDISTURBED EARTH OR STRUCTURAL BACKFILL.
 3. CONCRETE SHALL BE KEPT CLEAR OF ALL JOINTS AND ACCESSORIES.
 4. ALL BURIED PIPE SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL DIRECTIONAL CHANGES UNLESS OTHERWISE NOTED.
 5. THRUST BLOCKS SHALL NOT BE LOCATED OR SIZED TO ENCASE ADJACENT PIPES OR FITTINGS.

7 THRUST BLOCK DETAIL
NTS

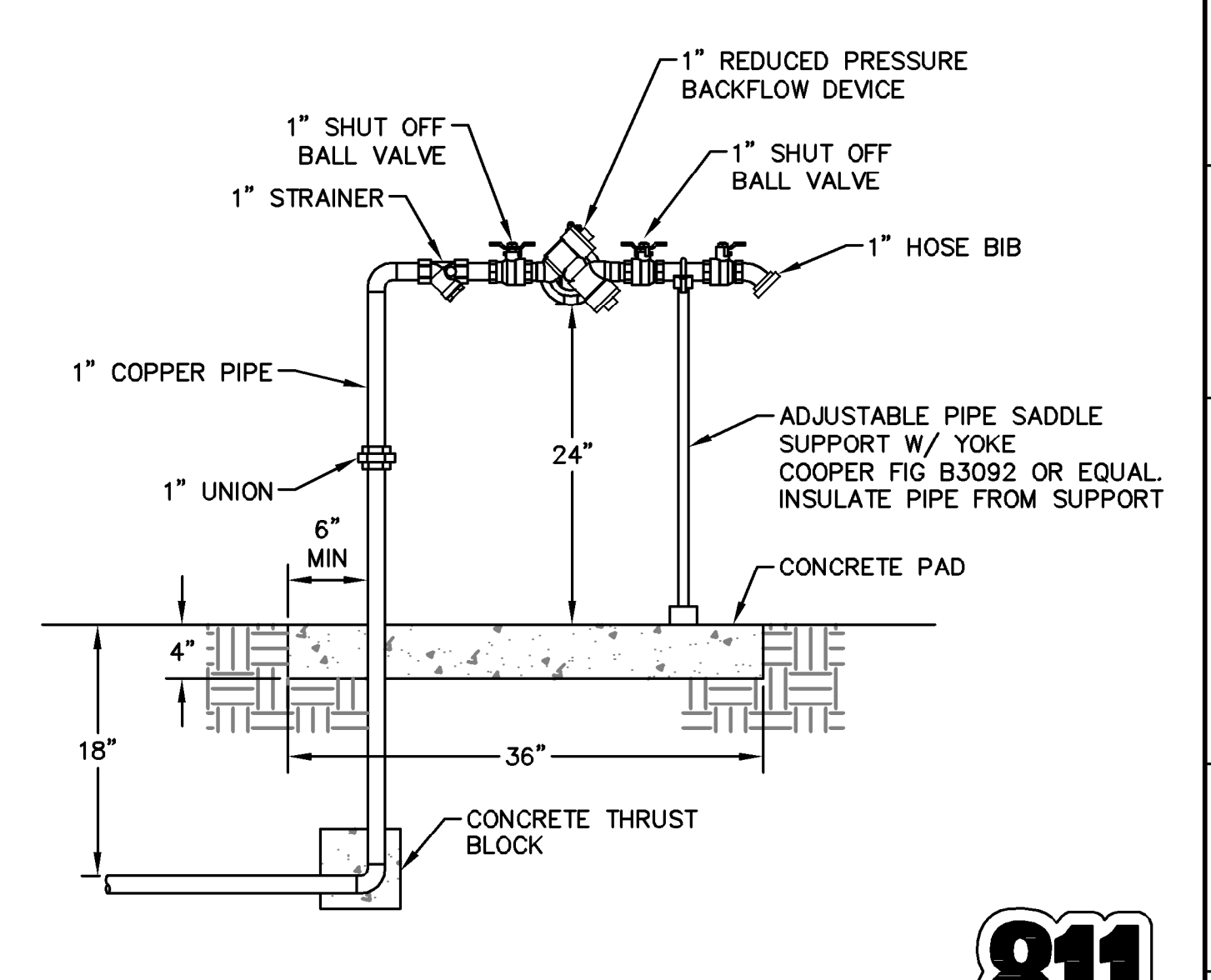


PIPE Ø	ROD Ø
6"	3/4"

8 PIPE CLAMP DETAIL
NTS



9 PIPE TO MANHOLE CONNECTOR DETAIL
NTS



10 REDUCED BACKFLOW PRESSURE ASSEMBLY
NTS

DRAWING NAME: K:\Eng1\140015\DWG\10_Subphase 01\4.2 Infrastructure Improvement Plans\PS-Package\PS_042-1T_SSPS_Details.dwg
PLOT DATE: 05-24-18
PLOTTED BY: mbr



LICENSE STAMP
TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

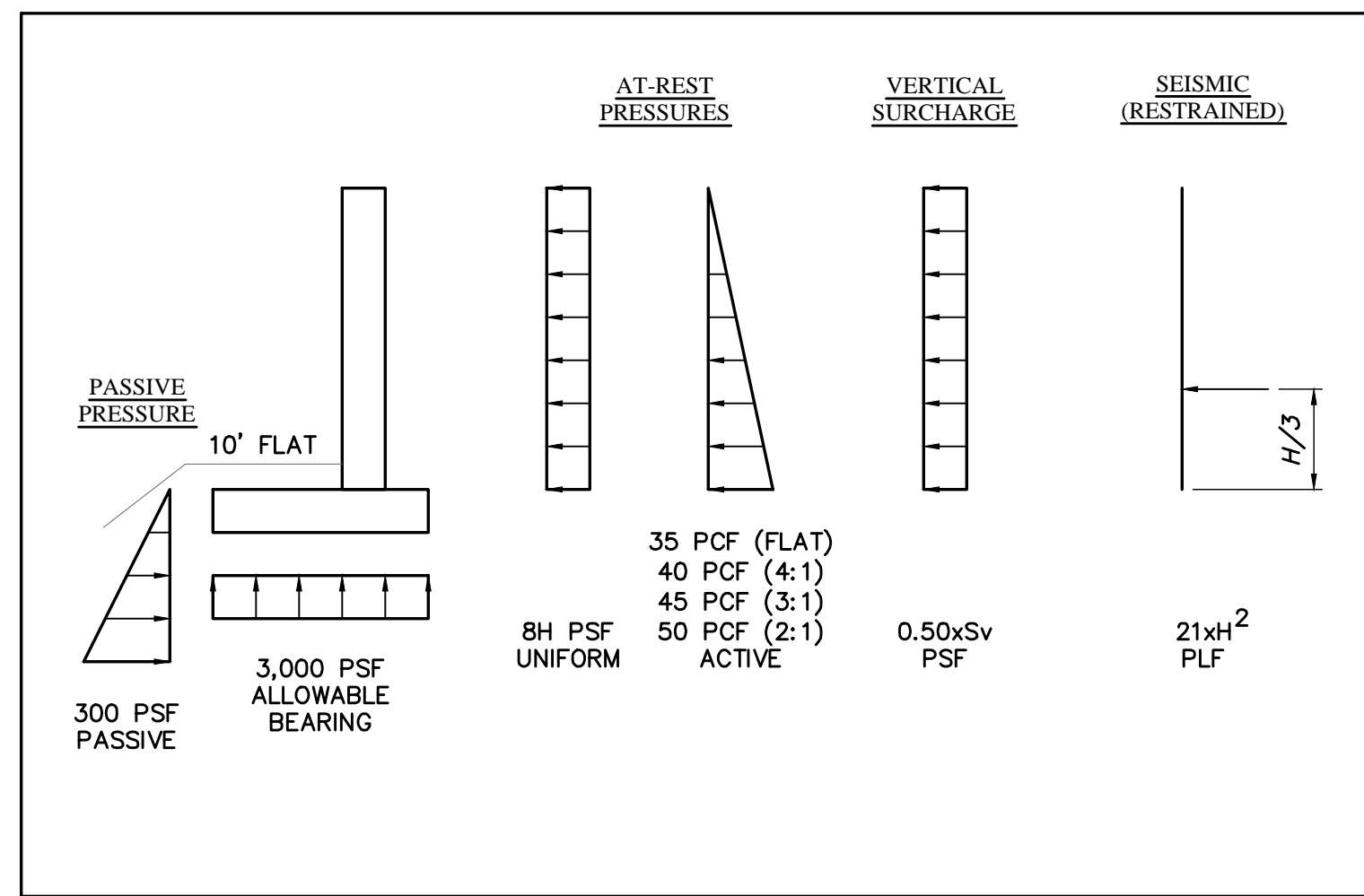
PROJECT NO.	DATE	REVISIONS	DESCRIPTION	BY	DATE
20140015-10	5/25/2018	AL			

4TH & 5TH STREET
SANITARY SEWER
PUMP STATION
CIVIL DETAILS (3/3)

SHEET TITLE
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13 OF 40
DRAWING NO.



TREASURE ISLAND PUMP STATION IMPROVEMENT PLANS



LOADING CRITERIA

<p>AB ANCHOR BOLT ALT ALTERNATE BN BOUNDARY NAILING CJ CONSTRUCTION JOINT CL CENTERLINE CLR CLEAR CMU CONCRETE MASONRY UNIT CONC CONCRETE CONT CONTINUOUS CS COUNTER SINK DET DETAIL DIA DIAMETER DWG DRAWINGS (E) EXISTING EF EACH FACE EOC EDGE OF CONCRETE EN EDGE NAILING EX.A. EXTERIOR FACE E.J. EXPANSION JOINT EL ELEVATION EW EACH WAY FB FLAT BLOCK FG FINISHED GRADE FH FLUSH HEADER FN FIELD NAILING FOC FACE OF CONCRETE FOS FACE OF STUD FTG FOOTING</p>	<p>GALV GALVANIZE COATING I.F. INTERIOR FACE KIP 1,000 POUNDS MB MACHINE BOLT LB POUND (N) NEW OC ON CENTER OH OPPOSITE HAND P POST PCF POUNDS PER CUBIC FOOT PSF POUNDS PER SQUARE FOOT REBAR REINFORCING STEEL REQ'D REQUIRED RGT ROOF GIRDER TRUSS RJ ROOF JOIST RR ROOF RAFTER RT ROOF TRUSS SAD SEE ARCHITECTURAL DRAWINGS SB SOLID BLOCKING SCD SEE CIVIL DRAWINGS SED SEE ELECTRICAL DRAWINGS</p>	<p>SHT SHEET SIM SIMILAR SMD SEE MECHANICAL DRAWINGS SPD SEE PLUMBING DRAWINGS SYM SYMMETRICAL T&B TOP AND BOTTOM TN TOE NAIL TOC TOP OF CONCRETE TOS TOP OF STRUCTURE TYP TYPICAL UNO UNLESS NOTED OTHERWISE VF VERIFY IN FIELD WS WATER STOP WWF WELDED WIRE FABRIC W/ WITH UNO UNLESS NOTED OTHERWISE</p>
--	--	---

ABBREVIATIONS

TABLE 1 - REQUIRED INSPECTIONS		
INSPECTIONS REQUIRED	TYPE OF INSPECTION	NOTES
YES	BUILDING DEPARTMENT	INSPECTIONS REQUIRED BY BUILDING DEPARTMENT AS OUTLINED IN THE PERMIT DOCUMENTS.
NO (UNLESS REQUIRED BY BUILDING DEPARTMENT)	STRUCTURAL OBSERVATION	THE OWNER SHALL EMPLOY THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN TO PERFORM VISUAL STRUCTURAL OBSERVATION OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND AT THE COMPLETION OF THE STRUCTURAL SYSTEM. OBSERVED DEFICIENCIES SHALL BE REPORTED TO THE OWNER, CONTRACTOR, AND BUILDING OFFICIAL IN WRITING.
SPECIAL INSPECTIONS		
YES	CAST-IN-PLACE CONCRETE	REQUIRED WHEN THE DESIGN IS BASED ON A COMPRESSIVE STRENGTH THAT EXCEEDS 2,500 PSI.

- 1. CODE:**
- 1.1 THE CODE IS TO BE THE **2016 SAN FRANCISCO BUILDING CODE WITH CITY AMENDMENTS** WHERE APPLICABLE.
 - 1.2 THE CODE LISTED ABOVE IS TO BE USED WHERE "CBC", "CURRENT BUILDING CODE", OR "CURRENT CODE" IS NOTED.
 - 1.3 THE CURRENT CODE IS TO INCLUDE ALL REVISIONS AND ERRATA AS ADOPTED BY THE GOVERNING AGENCY.
- 2. GENERAL PROJECT REQUIREMENTS:**
- 2.1 THE PLANS AND DETAILS TAKE PRECEDENCE OVER THE GENERAL NOTES, FRAMING NOTES, AND TYPICAL DETAILS.
 - 2.2 SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - 2.3 TYPICAL DETAILS SHALL APPLY AS OCCUR WITHOUT SPECIFIC DETAIL "CUTS" ON PLANS.
 - 2.4 DETAILS OF CONSTRUCTION NOT SPECIFICALLY "CUT" SHALL BE SIMILAR TO "CUT" DETAILS; IF BUILDER IS UNSURE HE SHALL REQUEST CLARIFICATION FROM THE ENGINEER.
 - 2.5 DEVIATIONS FROM THE STRUCTURAL DRAWINGS ARE NOT ALLOWED EXCEPT BY WRITTEN STRUCTURAL ADDENDA ISSUED BY THE ENGINEER OF RECORD.
 - 2.6 PRIOR TO THE START OF ANY WORK THE GENERAL CONTRACTOR SHALL CHECK THESE STRUCTURAL DRAWINGS WITH THE OTHER DESIGN DOCUMENTS AND NOTIFY THE ENGINEER OF RECORD IN WRITING OF ANY ERRORS, OMISSIONS, ETC. (WITH PARTICULAR ATTENTION REGARDING DIMENSIONS) FOR THE ENGINEER TO RESPOND BY STRUCTURAL ADDENDA AND/OR REVISIONS AS REQUIRED.
 - 2.7 CHANGE AND/OR OPTION REQUESTS MUST BE ROUTED THROUGH THE GENERAL CONTRACTOR THEN TO THE OWNER/DEVELOPER ON THE "REQUEST FOR CHANGE TO STRUCTURAL PLANS" FORM (FORMS AVAILABLE FROM OWNER/DEVELOPER).
 - 2.8 CONTRACTOR IS TO PROVIDE ALL TEMPORARY SHORING AND BRACING. THE DRAWINGS AND DETAILS SHOW THE REQUIREMENTS FOR THE FINISHED PRODUCT ONLY. CONSTRUCTION PROCEDURES AND SEQUENCING ARE NOT OUTLINED IN THESE DOCUMENTS.

- 3. BUILDING PAD, BASE ROCK, MOISTURE MEMBRANE, AND SAND:**
- 3.1 BUILDING PAD, BASE ROCK, MOISTURE MEMBRANE, AND SAND SHALL BE GRADED AND PREPARED PER CURRENT CODE.
 - 3.2 PLACEMENT OF BUILDING TO BE WITHIN PROPERTY LIMITS AND SETBACKS (BY OTHERS).
- 4. SOILS:**
- 4.1 ALL SOILS WORK SHALL BE PER THE SOILS REPORT AND CURRENT CODE WHICH FORMS A PART OF THE CONSTRUCTION DOCUMENTS.
 - 4.2 THE SOILS ENGINEER SHALL BE PROVIDED THE OPPORTUNITY TO INSPECT THE FOUNDATION, GRADING, DRAINAGE AND OTHER ITEMS AS OUTLINED IN THE SOILS REPORT. SOILS ENGINEER TO SUBMIT A LETTER DOCUMENTING HIS/HER FINDINGS TO THE BUILDING DEPARTMENT OUTLINING FINDINGS.
 - 4.3 SOILS REPORT PREPARED BY:
ENGEQ INCORPORATED
332 PINE STREET, SUITE 300
SAN FRANCISCO, CA 94104
PHONE: (415) 284-9800
REPORT No: 7091.000.000-11 REV 00 (SEPTEMBER 8, 2015)

- 5. DESIGN CRITERIA:**
- 5.1 LOADS AND LOADING CRITERIA USED IN THE DESIGN OF THIS PROJECT ARE AS SHOWN ON THESE PLANS.
- 6. SPECIAL INSPECTION:**
- 6.1 SEE TABLE-1 FOR REQUIRED INSPECTIONS. WHEN SPECIAL INSPECTION INSPECTION IS REQUIRED, THE FOLLOWING APPLIES:

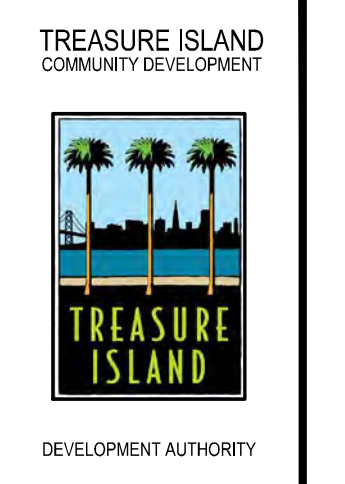
THE SPECIAL INSPECTOR IS TO HAVE ALL NECESSARY CERTIFICATIONS AS REQUIRED BY THE CURRENT CODE (CBC).

THE SPECIAL INSPECTOR IS TO PROVIDE A WRITTEN REPORTS OF ALL INSPECTIONS TO THE BUILDING DEPARTMENT AS REQUIRED BY THE GOVERNING AGENCY.

THE SPECIAL INSPECTOR IS TO PROVIDE A WRITTEN REPORTS TO THE ENGINEER OF RECORD TO THE FOLLOWING ADDRESS (NOTE THAT EMAIL REPORTS ARE NOT ACCEPTED):
AKC ENGINEERING INC.
1200 INDUSTRIAL ROAD, SUITE 13
SAN CARLOS, CA 94070.

SCHEDULE OF STRUCTURAL DRAWINGS

S.000-1T	PROJECT INFORMATION
S.001-1T	CONCRETE NOTES AND TYPICAL DETAILS
S.002-1T	SECTION (FOUNDATION AT PRECAST WET WELL)



**AKC
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INC.**
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SUITE 13
SAN CARLOS
CALIFORNIA
TEL. (650) 591-3050

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TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENT PLAN**
CALIFORNIA 94130

STRUCTURAL

2ND SUBMITTAL
FOR REVIEW

PROJECT NO. 20140015-10 (REVISED 01)	CHK: ML
DRAWN BY: RL	DATE: 5/25/2018
REVISIONS	BY DATE
NO. DESCRIPTION	NO. DATE

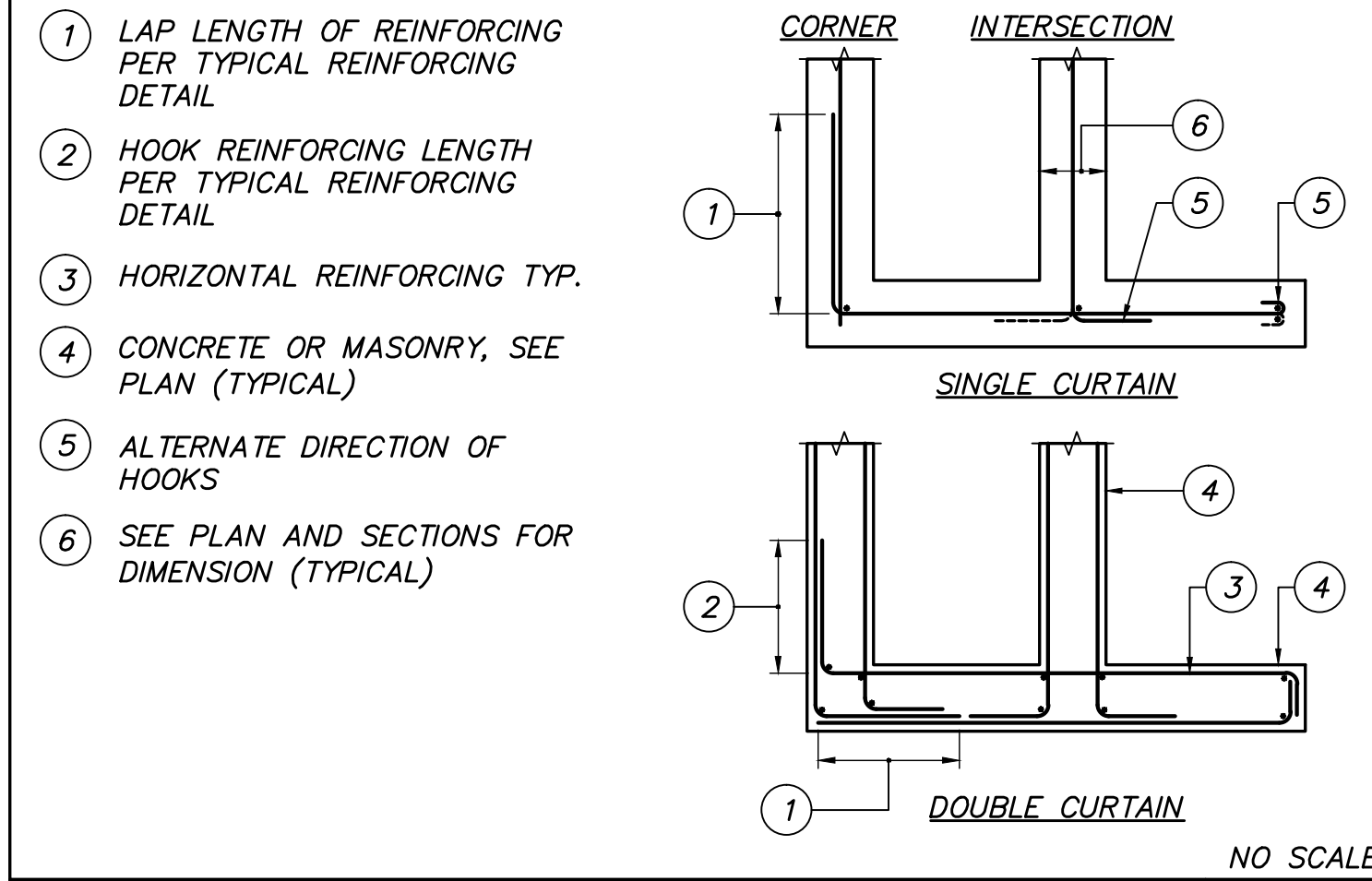
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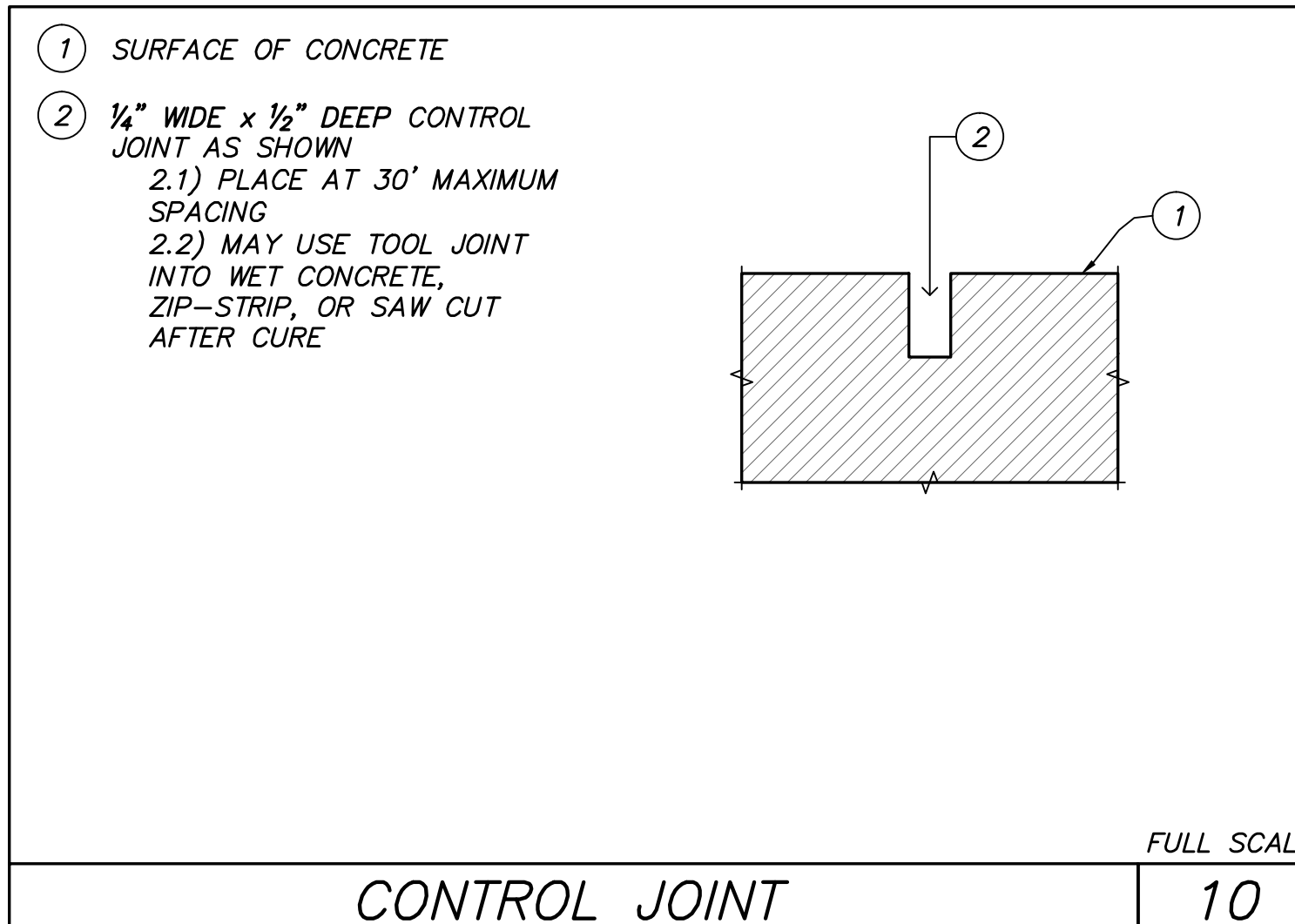
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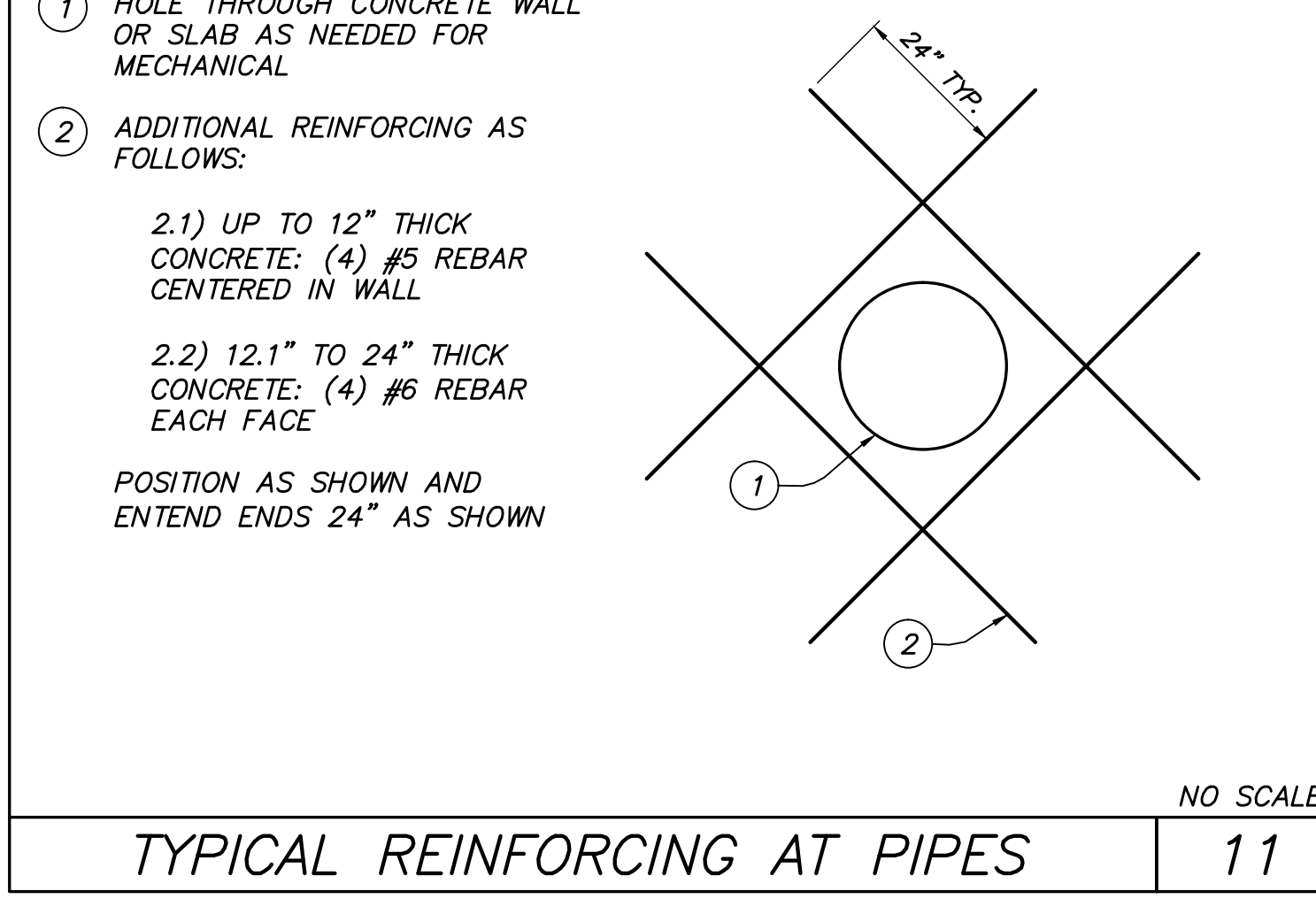
14 OF 40
DRAWING NO.



REINFORCING AT INTERSECTIONS 9



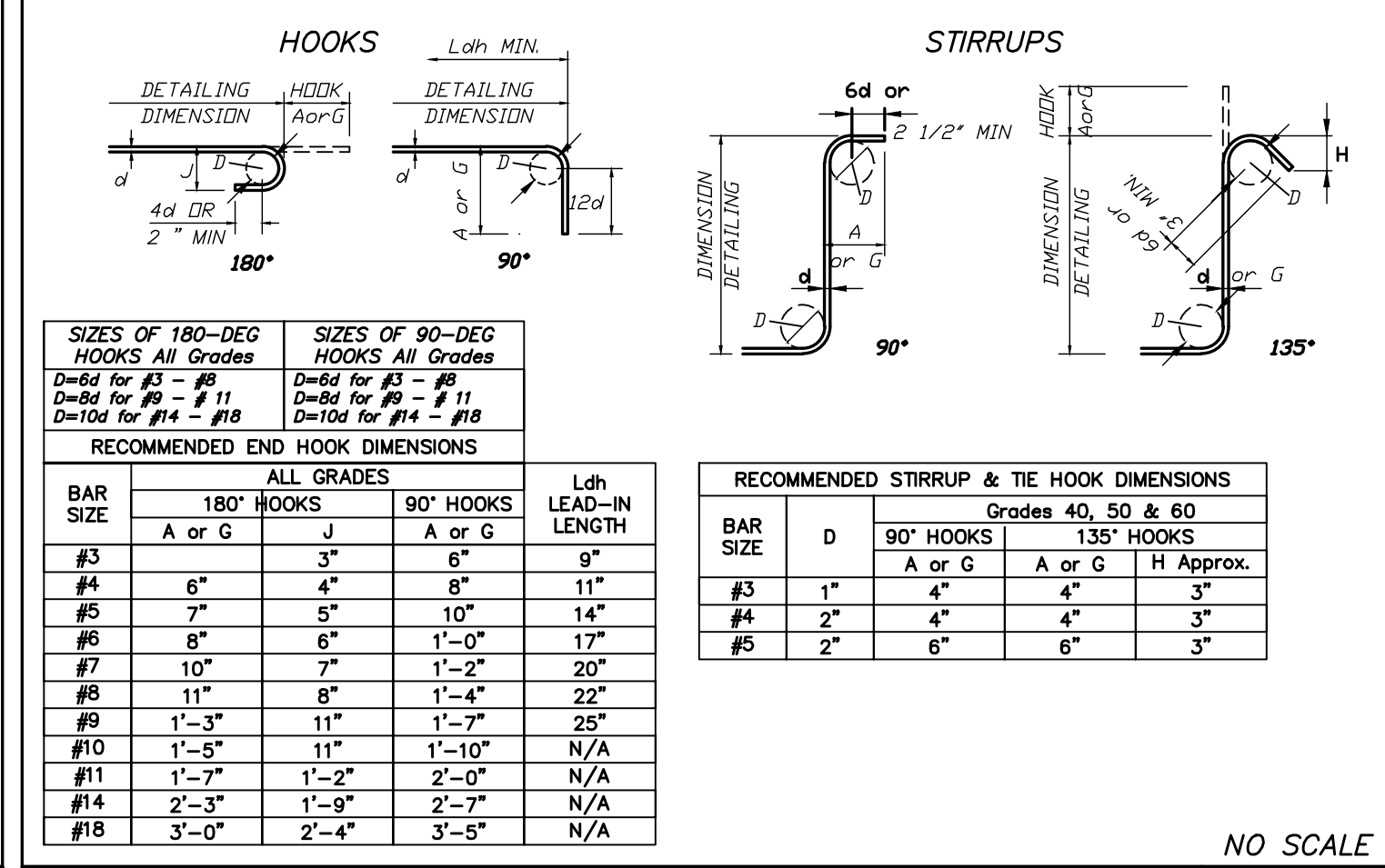
CONTROL JOINT 10



TYPICAL REINFORCING AT PIPES 11

1. PRECAST NOTES:
- 1.1 PRECAST CONCRETE FOR MANHOLES, VAULT STRUCTURES AND BASE SLABS IS TO BE PER MANUFACTURER WITH MINIMUM REQUIREMENTS AS NOTED BELOW. SEE CIVIL DRAWING FOR LOCATIONS.
 - 1.2 DESIGN LOAD: UNLESS NOTED OTHERWISE, DESIGN PER ASTM C-478 AND AASHTO M-199. FLAT TOP AND BASE SLABS ARE TO BE DESIGNED FOR H-20 TRAFFIC LOADING.
 - 1.3 PROVIDE BAR REINFORCEMENT STEEL #4 OR LARGER.
 - 1.4 COORDINATE WITH CIVIL DRAWINGS FOR PENETRATIONS AND OPENINGS..
 - 1.5 SUBMIT SHOP DRAWINGS FOR APPROVAL.
- NO SCALE

PRECAST CONCRETE NOTES 11



TYPICAL REINFORCING BENDS 5

TABLE 3 - CLASS B TENSION LAP SPlice LENGTHS (CASE 1)

BAR SIZE	LAP CLASS	f'c = 3,000 PSI		f'c = 4,000 PSI		f'c = 5,000 PSI		f'c = 6,000 PSI	
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	B	28"	22"	24"	19"	22"	17"	20"	16"
#4	B	37"	29"	32"	25"	29"	22"	26"	20"
#5	B	47"	36"	40"	31"	36"	28"	33"	25"
#6	B	56"	43"	48"	37"	43"	33"	40"	31"
#7	B	81"	63"	70"	54"	63"	49"	58"	44"
#8	B	93"	72"	80"	62"	72"	55"	66"	51"
#9	B	105"	81"	91"	70"	81"	63"	74"	57"
#10	B	118"	91"	102"	79"	91"	70"	83"	64"
#11	B	131"	101"	113"	87"	101"	78"	93"	71"

NOTES: 1) GRADE 60 REBAR. 2) BASED ON ACI-318-11. 3) COVER IS AT LEAST 1.0db AND c-c SPACING IS AT LEAST 2.0d. 4) LAP SPICES ARE MULTIPLES OF THE DEVELOPMENT LENGTH: CLASS A = 1.0Ld AND CLASS B = 1.3Ld. 5) USE MECHANICAL SPICES FOR #14 AND #18 REBAR. 6) TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" CAST BELOW THE BARS. 7) FOR LIGHTWEIGHT AGGREGATE, MULTIPLY THE VALUES BY 1.3. 8) FOR EPOXY COATED BARS, MULTIPLY THE VALUES BY 1.50.

TABLE D3.1 - REINFORCING BAR SIZES

STANDARD BARS AS SPECIFIED IN DRAWINGS			METRIC BARS		
BAR SIZE	DIAMETER (IN)	AREA (SQ IN)	BAR SIZE	DIAMETER (mm)	AREA (SQ mm)
#3	0.375"	0.11	M#10	9.5 mm	71
#4	0.500"	0.20	M#13	12.7 mm	129
#5	0.625"	0.31	M#16	15.9 mm	199
#6	0.750"	0.44	M#19	19.1 mm	284
#7	0.875"	0.60	M#22	22.2 mm	387
#8	1.000"	0.79	M#25	25.4 mm	510
#9	1.128"	1.00	M#29	28.7 mm	645
#10	1.127"	1.27	M#32	32.3 mm	819
#11	1.141"	1.56	M#36	35.8 mm	1006

NOTES: 1. USE GRADE 60 REBAR UNLESS UNO. 2) GRADE 40 LIMITED TO BAR SIZES #3-#6. 3) ASTM A615

NOTES: 1. USE GRADE 420 REBAR UNO. 2) GRADE 300 LIMITED TO BAR SIZES #10-#19. 3) ASTM A615M

TABLE D3.2 - TOTAL AIR CONTENT FOR FRONT-RESISTANT CONCRETE

MAXIMUM AGGREGATE SIZE	AIR CONTENT, PERCENT	
	SEVERE EXPOSURE	MODERATE EXPOSURE
3/8"	7.5%	6.0%
1/2"	7.0%	5.5%
3/4"	6.0%	5.0%
1"	6.0%	4.5%
1-1/2"	5.5%	4.5%

NOTES: 1) SEE CONCRETE MIX REQUIREMENTS FOR MAXIMUM AGGREGATE SIZE. 2) SEE ASTM C33 FOR TOLERANCES TO AGGREGATE SIZE

1. CONCRETE:
- 1.1 MIX DESIGNS SHALL BE DESIGNED BY AN APPROVED LABORATORY PER THE FOLLOWING ASTM STANDARDS (CURRENT EDITION) AS APPLICABLE: C150, C33, C94, C260, C618. TESTING OF THE CONCRETE SHALL BE BY AN APPROVED TEST LABORATORY PER THE FOLLOWING ASTM STANDARDS (CURRENT EDITION) AS APPLICABLE: C31, C39, C192, E6.
 - 1.2 USE CLASS-A CONCRETE FOR ALL STRUCTURAL CONCRETE UNLESS NOTED OTHERWISE. CONCRETE MIX SPECIFICATIONS ARE SHOWN ON TABLE-2.
2. CONCRETE REINFORCING STEEL:
- 2.1 BARS SHALL CONFORM TO ASTM A615 (BILLET) OR ASTM 616 (RAIL) OR ASTM 617 (AXLE) AND CBC 1903.5.3 GRADE 60 FOR #4 AND LARGER OTHERWISE GRADE 40 AND DEFORMATIONS PER ASTM A305.
 - 2.2 BAR MATS SHALL CONFORM TO ALL ABOVE ASTM'S FOR GRADE 70.
 - 2.3 WELDED SMOOTH WIRE FABRIC SHALL CONFORM TO ASTM A185 GRADE 60 AND THE WIRE SHALL CONFORM TO CBC #21-10 PART II.
 - 2.4 BENDING OF REINFORCING STEEL SHALL BE PER ACI AND TYPICAL DETAILS.
 - 2.5 SPLICE LAP LENGTH SHALL BE CLASS-B PER ACI OR TABLE 3 FOR BARS AND BAR MATS.
 - 2.6 W.W.F. SHALL LAP 12" MIN.
 - 2.7 STAGGER LAPS IN SLAB PER ACI RECOMMENDATIONS.
 - 2.8 PLACE STEEL ON HIGH CHAIRS AND SECURE PRIOR TO PLACING CONCRETE.
 - 2.9 MINIMUM COVERAGE TO BE PER ACI, CHAPTER 7.
 - 2.10 MINIMUM CONCRETE COVER FOR FOOTING BARS SHALL BE 3" AGAINST THE EARTH AND 2" ELSEWHERE.
 - 2.11 USE EPOXY COATED STEEL.

TABLE 2 - CONCRETE MIX REQUIREMENTS

CONCRETE CLASS	COMPRESSIVE STRENGTH (f'c)	USE	CEMENT TYPE (CONTENT)	AGGREGATE SIZE (MAX)	MAXIMUM SLUMP	MAX W/C RATIO
CLASS A	5,000 PSI	STRUCTURAL SLABS, FOOTINGS, BEAMS, PRECAST	TYPE 2 (658 LBS/CY)	3/4"	4"	0.43
CLASS B	4,000 PSI	GROUT FILL AND NON-STRUCTURAL SLABS	TYPE 2 (564 LBS/CY)	1/2"	--	0.45
CLASS CLSM (SLURRY)	50-100 PSI (TARGET)	REPLACEMENT FOR COMPACTED BACKFILL	BY MFG. (ESTIMATED 1/2 TO 1 SACK MIX)	BY MFG.	BY MFG.	BY MFG.

NOTE (1): MINIMUM CEMENT CONTENT SHALL BE 6 SACKS PER CUBIC YARD. WATER CURE MINIMUM 7 DAYS OR DOUBLE SEAL W/ CURING COMPOUND IMMEDIATELY AFTER FINISHING. PROTECT CONCRETE FROM WIND AND DIRECT HOT SUN UNTIL FINISHED, CURED OR SEALED.

NOTE (2): CONCRETE THAT WILL BE EXPOSED TO FREEZING AND THAWING OR DEICING CHEMICALS SHALL BE AIR ENTRAINED IN ACCORDANCE WITH THE CURRENT ACI-318 (REFERENCE ACI SECTION 4.2).

NOTE (3): CONCRETE MIX IS TO BE DESIGNED BY THE MANUFACTURER USING THE CRITERIA IN THIS TABLE AND ACI-318. MIX DESIGN IS TO MINIMIZE SHRINKAGE: ASTM C-157, 4"x4"x11" SAMPLES, LIMITED TO 0.050% OF LENGTH IN 21 DAYS.

NOTE (4): UNLESS A DETERMINATION OF SULFATE EXPOSURE IS MADE BY A SOILS ENGINEER, THE WATER-CEMENT RATIO (W/C) SHALL NOT EXCEED 0.45. IF SOILS ENGINEER DETERMINES THERE IS NO SULFATE EXPOSURE THEN REDUCED W/C RATIOS MAY BE USED AS OUTLINED IN ACI-318, SECTION 4.3.

NOTE (5): FLY ASH, ASTM 0618, CLASS F, AS SUPPLIED BY POZZOLANIC INTERNATIONAL, WESTERN ASH OR EQUAL, SHALL BE ADDED TO ALL CONCRETE AT THE RATE OF 15% REPLACEMENT BY WEIGHT OF SCHEDULED CEMENT (U.N.O.).

ALL CONCRETE TO BE DESIGNED BY THE SUPPLIER TO MINIMIZE DRYING SHRINKAGE.

STRUCTURAL

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PROJECT NO. 20140015-10 (REVISED 01/12/2011) CHK: ML
 DRAWN BY: RL DATE: 5/25/2018
 REVISIONS
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 DATE BY

1. STREET
 2. SANITARY SEWER
 3. PUMP STATION
 4. ON-RETE NOTES
 5. AND T. P. AL
 6. DETAILS

SHEET TITLE
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S.001-1T
 15 OF 40
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TREASURE ISLAND
 COMMUNITY DEVELOPMENT

DEVELOPMENT AUTHORITY

AKC
 ENGINEERING
 INC.
 1200 INDUSTRIAL ROAD
 SUITE 133
 SAN CARLOS
 CALIFORNIA
 TEL. (650) 591-3050

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 COUNTY OF SAN FRANCISCO CALIFORNIA 94130

STRUCTURAL

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PROJECT NO. 20140015-10 (REVISED 01/12/2011) CHK: ML
 DRAWN BY: RL DATE: 5/25/2018
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 NO. DESCRIPTION
 DATE BY

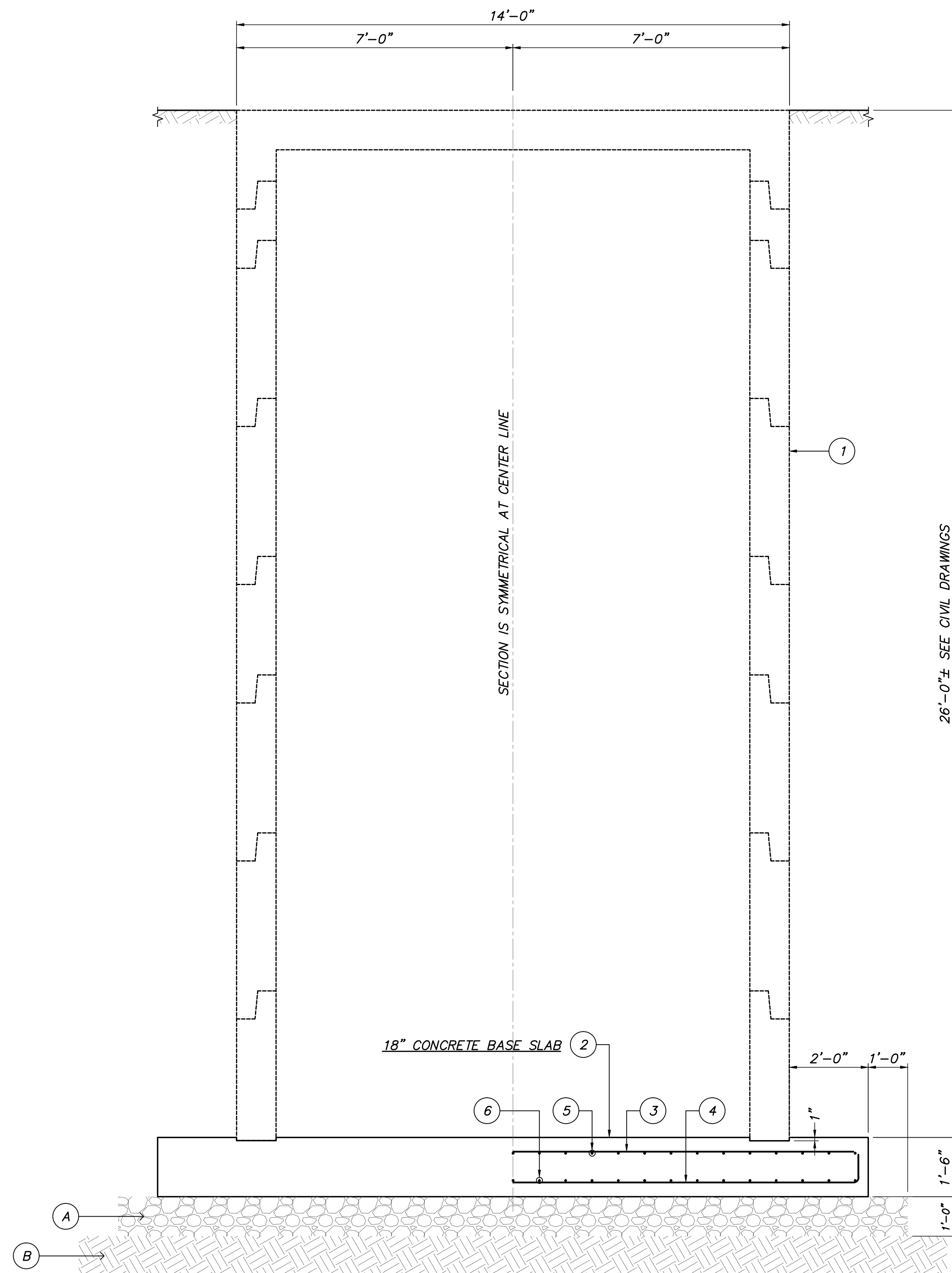
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 2. SANITARY SEWER
 3. PUMP STATION
 4. ON-RETE NOTES
 5. AND T. P. AL
 6. DETAILS

SHEET TITLE
 SCALE AS SHOWN

S.001-1T
 15 OF 40
 DRAWING NO.

SUBGRADE

- (A) 12" THICK LAYER OF CRUSHED ROCK WORKING SURFACE, SUBMIT ROCK TYPE AND GRADATION TO SOILS ENGINEER FOR REVIEW AND APPROVAL
 - L.1) COMPLETELY COVER/WRAP CRUSHED ROCK WITH FILTER FABRIC AS DIRECTED BY SOILS ENGINEER
 - L.2) USE MIRAFI 140NG (OR EQUIVALENT AS APPROVED BY SOILS ENGINEER)
- (B) UNDISTURBED SOIL



18" CONCRETE BASE SLAB

- (1) 144" I.D. PRECAST REINFORCED CONCRETE MANHOLE BY MFG.
 - 1.1) SEE CIVIL DRAWINGS FOR SIZE, CUTOUTS AND DIMENSIONS
 - 1.2) REINFORCING STEEL BY MANUFACTURER
 - 1.3) ATTACH TO CONCRETE BASE SLAB PER MFG. REQUIREMENTS
- (2) 18" THICK CONCRETE BASE SLAB WITH REINFORCING STEEL CONTINUOUS FULL LENGTH
 - 2.1) REINFORCE TOP AND BOTTOM AND IN BOTH DIRECTIONS
 - 2.2) PROVIDE HOOKS AT ENDS AS SHOWN
 - 2.3) MAY USE PRECAST OR POURED-IN-PLACE CONCRETE
 - 2.4) EXTEND SLAB 24" BEYOND OUTSIDE DIAMETER OF MANHOLE
- (3) #6 @ 8" o.c. TOP BARS
- (4) #6 @ 8" o.c. BOTTOM BARS, CONTINUOUS WITH 12" HOOK
- (5) #6 @ 8" o.c. TOP BARS
- (6) #6 @ 8" o.c. BOTTOM BARS, CONTINUOUS WITH 12" HOOK



AKC ENGINEERING INC.
 1200 INDUSTRIAL ROAD
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 SAN CARLOS
 CALIFORNIA
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LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENT PLAN
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

STRUCTURAL
 2ND SUBMITTAL FOR REVIEW

NO.	REVISIONS	DATE	BY	DATE

PROJECT NO. 20140015-10 (IMP1212.01)
 DRAWN BY: RL
 CHECKED BY: ML
 DATE: 5/25/2018

SHEET TITLE
 SCALE AS SHOWN

S.002-1T

16 OF 40
 DRAWING NO.

STRUCTURAL SECTION (FOUNDATION AT PRECAST WET WELL)

1/2" = 1'-0"

4

GENERAL SYMBOLS AND LEGEND

- KEY INTERLOCK
- DISCONNECTING MEANS
- FENCE
- CENTERLINE, STRUCTURE OR EQUIPMENT

ELECTRICAL SYMBOLS

DEVICES AND EQUIPMENT

- DUPLEX RECEPTACLE, FLUSH MOUNTED, NEMA 5-20R, 20 AMP, 125V, +18" AFF UON. SUBSCRIPT "GFCI" DENOTES WITH GROUND FAULT CIRCUIT INTERRUPTER WHERE INDICATED ON PLAN
- DUPLEX RECEPTACLE, FLUSH MOUNTED, NEMA 5-20R, 20 AMP, 125V, +18" AFF UON
- GENERATOR RECEPTACLE
- JUNCTION BOX, LOCATE IN AN ACCESSIBLE LOCATION, CEILING MOUNTED, WALL MOUNTED +18" AFF UON
- HEAVY DUTY NON-FUSED DISCONNECT SWITCH, SEE DWGS FOR EXACT TYPE AND SIZE, HORSEPOWER RATED, +48" AFF UON
- HEAVY DUTY FUSED DISCONNECT SWITCH, SEE DWGS FOR EXACT TYPE AND SIZE. SIZE FUSES PER EQUIPMENT MANUFACTURERS NAMEPLATE, +48" AFF UON
- DELTA CONNECTIONS OR DELTA CONNECTED WINDINGS
- OPEN DELTA CONNECTIONS
- WYE CONNECTIONS OR WYE CONNECTED WINDINGS
- GROUND, GROUND CONNECTION
- POWER TRANSFORMER, TWO WINDING
- VOLTAGE TRANSFORMER, "3-VT" INDICATES NUMBER OF TRANSFORMERS, "100:1" INDICATES RATIO
- CURRENT TRANSFORMER WITH RATIO AND NUMBER OF UNITS INDICATED, "MR" INDICATES MULTI-RATIO
- SWITCH
- SWITCH, FUSED
- TEMPERATURE SWITCH, CLOSED AT LOW TEMPERATURE
- TEMPERATURE SWITCH, OPEN AT LOW TEMPERATURE
- FLOAT SWITCH, CLOSED AT LOW WATER LEVEL
- FLOAT SWITCH, OPEN AT LOW WATER LEVEL
- OVERLOAD ELEMENT
- LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER
- POWER CAPACITOR BANK, 3-PHASE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- FUSE
- LIGHTNING ARRESTER
- RESISTOR, IN CONTROL CIRCUIT
- SOLENOID VALVE OPERATING COIL
- INDICATING LIGHT, G-GREEN, R-RED, W-WHITE, A-AMBER
- CONTROL RELAY
- UNDERVOLTAGE RELAY
- ANNUNCIATOR POINT
- BATTERY BANK
- MECHANICAL INTERLOCK
- UTILITY COMPANY REVENUE METER
- ELECTRONIC DISPLAY MULTI-METER
- SURGE PROTECTIVE DEVICE
- POWER FAILURE RELAY

ELECTRICAL SYMBOLS (CONTINUED)

LIGHT FIXTURE SWITCH DEVICES

- CEILING MOUNTED FLUORESCENT LIGHT FIXTURE
- CEILING MOUNTED OCCUPANCY SENSOR WITH POWER PACK.
- SINGLE POLE SWITCH AND BOX, 20A/277V, LOWER CASE LETTER INDICATES CIRCUIT OR LAMPS CONTROLLED BY SWITCH, +48"
- THREE WAY SWITCH AND BOX, 20A/277V, +48"
- DIMMING SWITCH 120/277V, +48"
- THREE WAY DIMMING SWITCH 120/277V +48"
- TIME SWITCH, SPRING WOUND, 20A, 125VAC, SPST, +48"0-60 MIN., BRUSHED METAL PLATE.
- MOTOR TOGGLE DISCONNECT WITH THERMAL OVERLOAD
- KEY OPERATED SELECTOR SWITCH
- EMERGENCY-STOP
- POLE-MOUNTED HID OR LED TYPE LIGHTING FIXTURE (LOWER CASE LETTER INDICATES CIRCUIT OR LAMPS CONTROLLED BY SWITCH)
- GAS DETECTION PANEL

IDENTIFICATION TAGS

- DETAIL IDENTIFICATION TAG, SEE DETAIL 1 OF DRAWING E.022-1T
- SHEET NOTE IDENTIFICATION TAG, SEE SHEET NOTE 1
- MECHANICAL EQUIPMENT IDENTIFICATION TAG, SEE MECHANICAL DRAWINGS.

FIRE ALARM DEVICES AND EQUIPMENT

- FIRE ALARM CONTROL PANEL
- FIRE ALARM TERMINAL CABINET
- END OF LINE RESISTOR
- ADDRESSABLE INPUT MONITOR MODULE # INDICATES NUMBER OF INPUTS
- SMOKE DETECTOR AND HEAT DETECTOR COMBINATION
- HEAT DETECTOR
- SMOKE DETECTOR
- MANUAL PULL STATION, +48" AFF
- FLOW SWITCH
- TAMPER SWITCH
- COMBINATION HORN/STROBE, CANDELA AS INDICATED, +80" AFF
- STROBE, CANDELA AS INDICATED, +80" AFF

CONDUIT AND WIRING

- LOW VOLTAGE WIRING SYSTEM
- FLEXIBLE WIRING AND EQUIPMENT CONNECTION.
- EXISTING EQUIPMENT TO BE REMOVED
- 3/4" CONDUIT WITH #12 AWG WIRES (U.O.N.), HOMERUN TO PANELBOARD
- CIRCUIT IDENTIFICATION; IN THIS CASE, PANEL "P1", CIRCUITS "2" AND "4"

UNDERGROUND DISTRIBUTION AND GROUNDING

- UNDERGROUND CONDUITS
- GROUND GRID, BURIED OR IN MH/VAULT
- UNDERGROUND CONDUIT, CAPPED
- GROUNDING PIGTAILS
- UNDERGROUND THERMO-WELD CONNECTIONS
- 3/4" DIA X 10' LONG COPPERCLAD GROUND ROD
- 3/4" DIA X 10' LONG COPPERCLAD GROUND ROD IN ACCESSIBLE CONCRETE GROUND ROD BOX
- CONDUIT STUB-UPS

ABBREVIATIONS

- A**
 - A AMPERE
 - A.C. ALTERNATING CURRENT
 - AI ANALOG INPUT
 - AIC AMPS INTERRUPTING CURRENT
 - ANN ANNUNCIATOR
 - AO ANALOG OUTPUT
 - AS AMMETER SWITCH
 - ATS AUTOMATIC TRANSFER SWITCH
 - AUX. AUXILIARY
 - AWG AMERICAN WIRE GAUGE
- B**
 - BAL BALANCE
 - BATT. BATTERY
 - BCW BARE COPPER WIRE
 - BKR BREAKER
 - BLDG. BUILDING
 - BOT BOTTOM
- C**
 - C CONDUIT
 - CB CIRCUIT BREAKER
 - CAB CABINET
 - CAP CAPACITOR
 - CDF CONTROLLED DENSITY FILL
 - CHGR. CHARGER
 - CKT CIRCUIT
 - CL, CLE CURRENT LIMITING, CURRENT LIMITING "E" FUSE
 - COL COLUMN
 - COMP COMPARTMENT
 - CONT. CONTROL
 - CNTLR CONTROLLER
 - CO CONDUIT ONLY
 - CONC CONCRETE
 - COND. CONDUCTOR
 - CP CONTROL PANEL
 - CPT CONTROL POWER TRANSFORMER
 - C.S. CONTROL SWITCH
 - CSU CHANNEL SERVICE UNIT
 - CT CURRENT TRANSFORMER
 - CU COPPER
 - CUB CUBICLE
- D**
 - D DEEP
 - DB DUCT BANK
 - DC DIRECT CURRENT
 - DCS DISTRIBUTED CONTROL SYSTEM
 - D.E. DEAD END
 - DI DIGITAL INPUT
 - DIA DIAMETER
 - DIM DIMENSION
 - DISC DISCONNECT
 - DIST. DISTRIBUTION
 - DO DIGITAL OUTPUT
 - DP DISTRIBUTION PANEL
 - DSU DATA SERVICE UNIT
 - DTIS DEPARTMENT OF TELECOMMUNICATION INFORMATION AND SERVICES
 - DW DRY WEATHER
 - DWG DRAWING
- E**
 - EA EACH
 - EDM ELECTRONIC DISPLAY MULTIMETER
 - EF EXHAUST FAN
 - EO ELECTRICALLY OPERATED
 - ELEC ELECTRICAL
 - ELEV ELEVATION
 - EPR ETHYLENE PROPYLENE RUBBER
 - EQUIP EQUIPMENT
 - ETM ELAPSED TIME METER
- F**
 - FACP FIRE ALARM CONTROL PANEL
 - FDR FEEDER
 - F, FU FUSE
 - FLC FULL LOAD CURRENT
 - FLD FIELD
 - FLS FLOAT SWITCH
 - FT FOOT, FEET
 - FS FLOW SWITCH
 - FUT. FUTURE
 - FVR FULL VOLTAGE REVERSING
 - FVNR FULL VOLTAGE NON-REVERSING
- G**
 - GAL GALLONS
 - GALV GALVANIZED
 - GFI, GFCI GROUND FAULT CIRCUIT INTERRUPTER
 - G.L. GRADE LEVEL
 - GND GROUND
- H**
 - HI HIGH
 - HT HEIGHT
 - HH HANDHOLE
 - H-H HETCH-HETCHY
 - HTR HEATER
 - HOA HAND-OFF-AUTO
 - HV HIGH VOLTAGE
- I**
 - IC INTERRUPTING CAPACITY
 - INC INCOMING
 - IND INDICATION
 - INS INSULATOR
 - IRR IRRIGATION
 - ISR INTRINSICALLY SAFE RELAY
- J**
 - JB JUNCTION BOX
 - JWH JACKET WATER HEATER
- K**
 - KCM THOUSAND CIRCULAR MILS
 - KV KILOVOLT
 - KW KILOWATT
 - KVA KILOVOLT AMPERE
 - KVAR KILOVOLT AMPERE REACTIVE

SYMBOLS AND ABBREVIATIONS ARE FOR GENERAL USE. DISREGARD THOSE WHICH ARE NOT USED ON THE DRAWINGS.

ABBREVIATIONS (CONTINUED)

- L**
 - L LONG, LENGTH
 - L.A. LIGHTNING ARRESTER
 - LB LOAD BANK
 - LBS POUNDS
 - LCP LIGHTING CONTROL PANEL
 - LED LIGHT EMITTING DIODE
 - L-L LINE TO LINE
 - L-N LINE TO NEUTRAL
 - L.T.C. LOAD TAP CHANGER
 - LTG LIGHTING
 - LO LOW
 - LVL LEVEL
 - LxWxH LENGTH, WIDTH AND HEIGHT
 - LPS LOW PRESSURE SODIUM
 - LV LOW VOLTAGE
- M**
 - MAX MAXIMUM
 - MCC MOTOR CONTROL CENTER
 - MCCB MOLDED CASE CIRCUIT BREAKER
 - MCP MOTOR CIRCUIT PROTECTOR
 - MCS MOLDED CASE SWITCH
 - MED MEDIUM
 - MFR. MANUFACTURER
 - MH MANHOLE
 - MI MECHANICAL INTERLOCK
 - MIN MINIMUM
 - MISC MISCELLANEOUS
 - MO MANUALLY OPERATED
 - MR MULTI-RATIO
 - MTD MOUNTED
 - MV MEDIUM VOLTAGE
 - MVA MEGA-VOLT AMPERE
 - MW MEGAWATT
- N**
 - N.C. NORMALLY CLOSED
 - N.I.C. NOT IN CONTRACT
 - N.O. NORMALLY OPEN
 - NTS NOT TO SCALE
 - NP NAMEPLATE
- O**
 - OC ON CENTER
 - O/C OVERCURRENT
 - OCU ODOR CONTROL UNIT
 - O.H. OVERHEAD
 - OL OVERLOAD
 - OPER. OPERATING
- P**
 - PB PULL BOX
 - PCB POLYCHLORINATED BIPHENYLS
 - PCC PORTLAND CEMENT CONCRETE
 - PF POWER FACTOR
 - PFR POWER FAIL RELAY
 - PG&E PACIFIC GAS & ELECTRIC
 - PH PHASE
 - PLC PROGRAMMABLE LOGIC CONTROLLER
 - PMP PUMP
 - PNL. PANEL
 - PT POTENTIAL TRANSFORMER
 - PTT PUSH-TO-TEST
 - PVC POLYVINYL CHLORIDE
 - PWR POWER
- R**
 - R RADIUS
 - REM REMOTE
 - RSC, RSG RIGID STEEL CONDUIT, GALVANIZED
 - REQ'D REQUIRED
- S**
 - S.A. SURGE ARRESTERS
 - SB SHORTING BLOCK
 - SBC SBC COMMUNICATIONS, INC.
 - SCH SCHEDULE
 - SCTB SHORT CIRCUITING TERMINAL BLOCK
 - SEC SECONDARY
 - SFPUC SAN FRANCISCO PUBLIC UTILITIES COMMISSION
 - SHLD. SHIELDED
 - SHT SHEET
 - SPR SPARE
 - SPD SURGE PROTECTION DEVICE
 - SS STAINLESS STEEL
 - SSFM SANITARY SEWER FORCED MAIN
 - SSRVS SOLID STATE REDUCED VOLTAGE STARTER
 - STA. STATION
 - STD STANDARD
 - SUB SUBSTATION
 - SVCE SERVICE
 - SV SOLENOID VALVE
 - SW SWITCH
 - SWBD SWITCHBOARD
 - SWGR SWITCHGEAR
 - SYM SYMMETRICAL
- T**
 - TEL TELEPHONE
 - TELEM TELEMETERING
 - TEMP TEMPORARY
 - TERM TERMINAL
 - TOC TOP OF CONCRETE
 - TS TEST SWITCH
 - TSP TWISTED SHIELDED PAIR
 - TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
 - TYP. TYPICAL
- U**
 - U/G UNDERGROUND
 - UON UNLESS OTHERWISE NOTED
 - UL UNDERWRITER LABORATORIES
 - UPS UNINTERRUPTIBLE POWER SUPPLY
 - UV UNDERVOLTAGE
 - UVR UNDERVOLTAGE RELAY

ABBREVIATIONS (CONTINUED)

- V**
 - V VOLT
 - V.C.B. VACUUM CIRCUIT BREAKER
 - VF VENTILATING FAN
 - VFD VARIABLE FREQUENCY DRIVE
 - VS VOLTMETER SWITCH
 - V.T. VOLTAGE TRANSFORMER
- W**
 - W/ WITH
 - WT WEIGHT
 - WP WEATHERPROOF
- X**
 - XDCR TRANSDUCER
 - XFMR TRANSFORMER
 - XFR TRANSFER
 - XMTR TRANSMITTER

DRAWING INDEX

ELECTRICAL PLANS

COMMON

- E.000-1T GENERAL NOTES, SYMBOLS, ABBREVIATIONS, AND DRAWING INDEX
- E.001-1T ELECTRICAL KEY PLAN
- E.002-1T MISCELLANEOUS CONTROL SCHEMATIC DIAGRAMS
- E.003-1T MISCELLANEOUS ELECTRICAL DETAILS
- 4TH STREET SANITARY SEWER PUMP STATION**
- E.020-1T ELECTRICAL SITE PLAN
- E.021-1T ONE-LINE DIAGRAM
- E.022-1T UNDERGROUND CONDUIT, GROUNDING, AND LIGHTING PLAN
- E.023-1T MOTOR CONTROL CENTER (MCC) AND MAIN SWITCHBOARD (MSB) ELEVATION
- E.024-1T WET WELL ELEVATIONS
- E.025-1T SEWER PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
- E.026-1T CONDUIT AND CIRCUIT SCHEDULE
- 5TH STREET SANITARY SEWER PUMP STATION**
- E.030-1T ELECTRICAL SITE PLAN
- E.031-1T ONE-LINE DIAGRAM
- E.032-1T UNDERGROUND CONDUIT, GROUNDING, AND LIGHTING PLAN
- E.033-1T MOTOR CONTROL CENTER (MCC) AND SERVICE PEDESTAL ELEVATION
- E.034-1T WET WELL ELEVATIONS
- E.035-1T PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
- E.036-1T CONDUIT AND CIRCUIT SCHEDULE

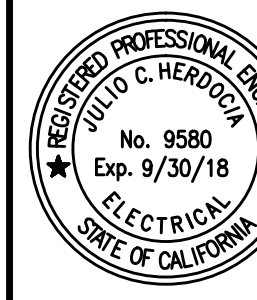
INSTRUMENTATION AND CONTROL PLANS

COMMON

- I.000-1T INSTRUMENTATION SYMBOLS AND ABBREVIATIONS
- I.001-1T IPRESSURE, FLOW, AND LEVEL TRANSMITTER SCHEMATIC DIAGRAMS
- 4TH STREET SANITARY SEWER PUMP STATION**
- I.020-1T PROCESS AND INSTRUMENTATION DIAGRAM
- I.021-1T PLC/SCADA SYSTEM BLOCK DIAGRAM
- 5TH STREET SANITARY SEWER PUMP STATION**
- I.030-1T PROCESS AND INSTRUMENTATION DIAGRAM
- I.031-1T PLC/SCADA SYSTEM BLOCK DIAGRAM

GENERAL NOTES:

1. THE COMPLETE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CALIFORNIA ELECTRICAL CODE, THE LATEST RULES AND REGULATIONS OF THE SAFETY ORDERS ISSUED BY THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL FIRE PROTECTION ASSOCIATION AND ALL APPLICABLE STATE AND LOCAL CODES ISSUED BY AUTHORITIES HAVING JURISDICTION.
2. LOCATION(S) OF CONTROLLERS, CONDUIT, PULL BOXES AND OTHER EQUIPMENT AS SHOWN ON THE PLAN IS APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. PULL ROPE SHALL BE PROVIDED IN ALL EMPTY CONDUITS.
4. ELECTRICAL EQUIPMENT AND FEEDER SHALL BE SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH 2016 CBC SEISMIC REQUIREMENTS.
5. ALL CONDUCTORS SHALL BE 600 VOLT, STRANDED COPPER, WITH TYPE XHHW-2 INSULATION, UNLESS OTHERWISE NOTED. THE MINIMUM SIZE CONDUCTORS SHALL BE #12 AWG UNLESS OTHERWISE NOTED.



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

PROJECT NO. 20140015-10	DATE: 5/25/2018	BY:	DATE:
DRAWN BY: VM	REVISIONS	DESCRIPTION	
NO.			

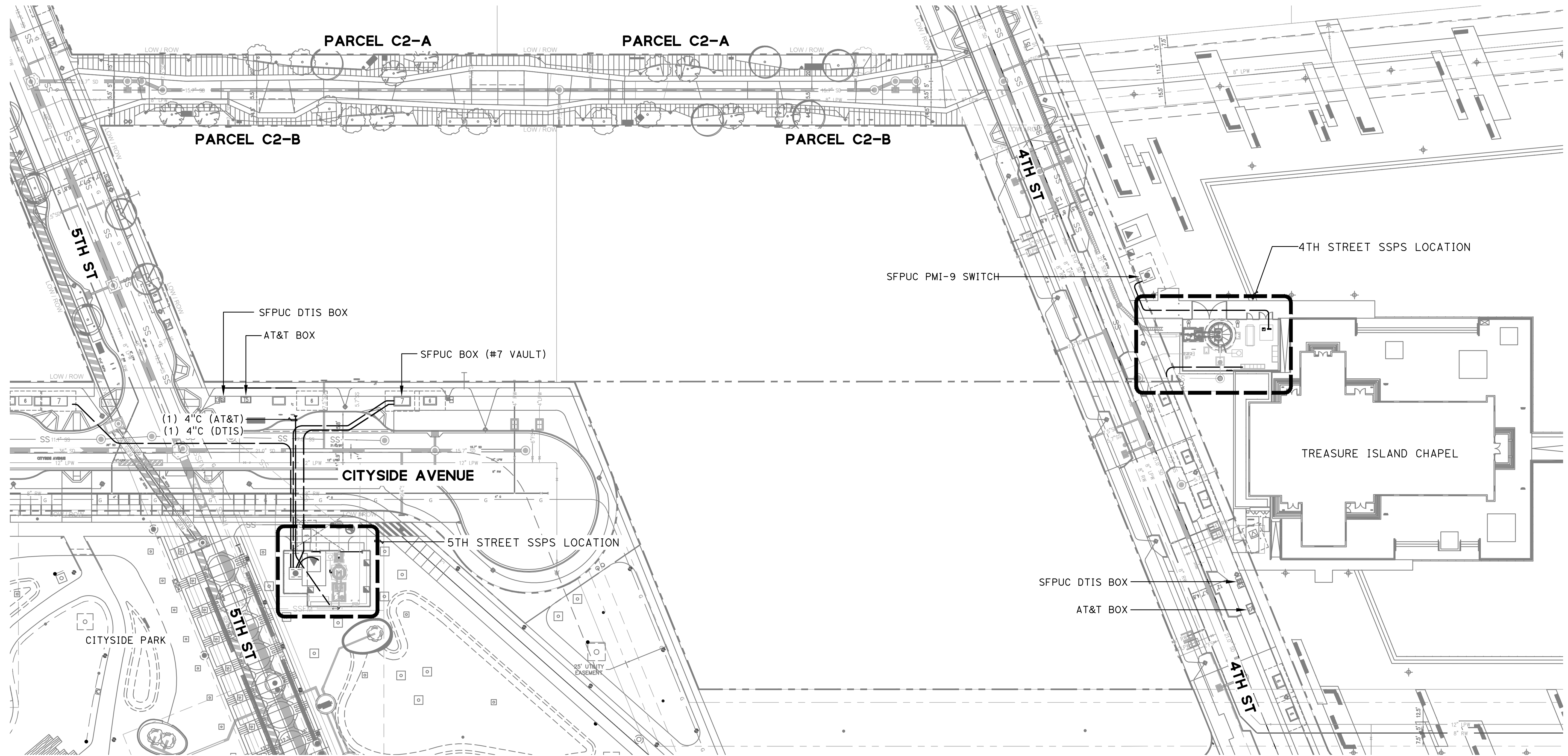
4TH & 5TH STREET SANITARY SEWER PUMP STATION
 GENERAL NOTES, SYMBOLS, ABBREVIATIONS AND DRAWING INDEX
 SHEET TITLE
 SCALE NONE

E.000-1T
 17 OF 40

DRAWING NO.



Know what's below.
 Call 811 before you dig.



5TH STREET SSPS

4TH STREET SSPS

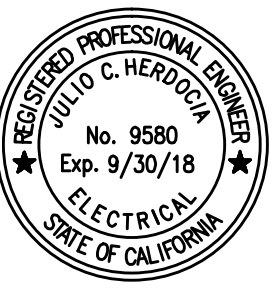
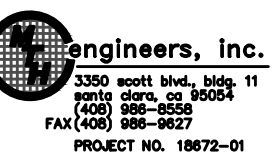
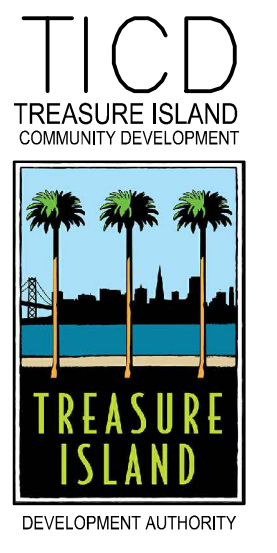
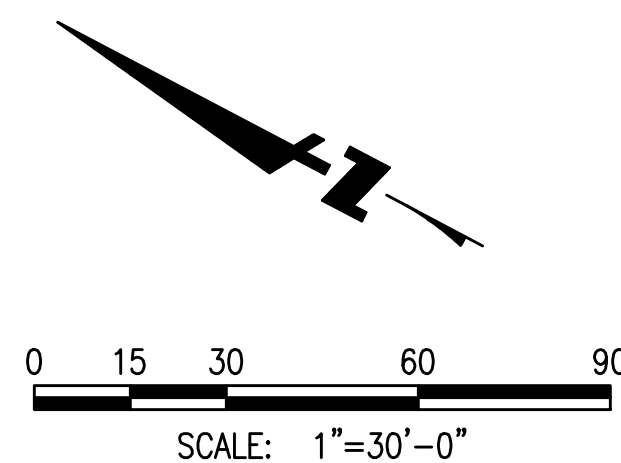
1

ELECTRICAL KEY PLAN

SCALE: 1" = 30'-0"



Know what's below.
Call 811 before you dig.



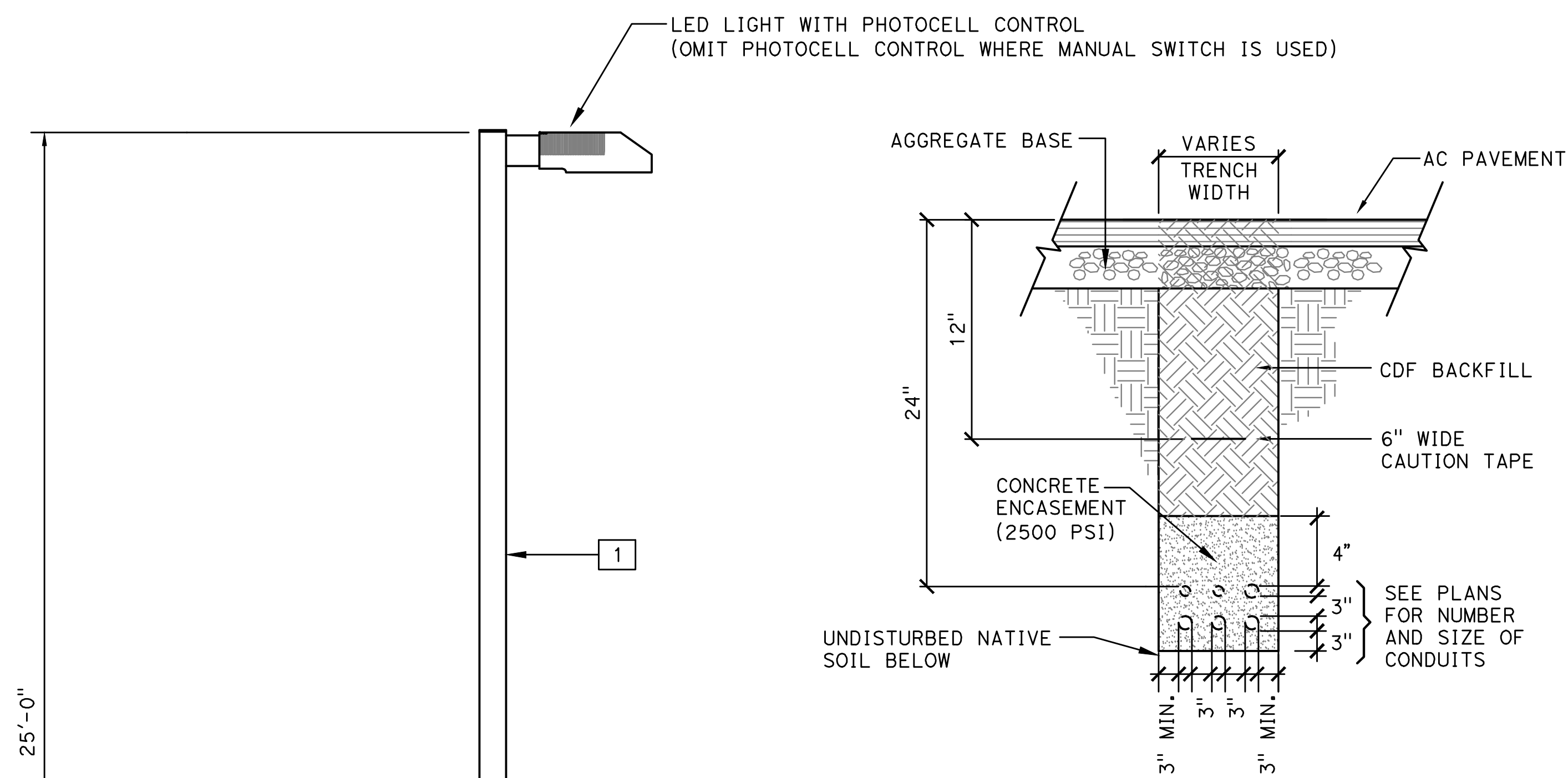
LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

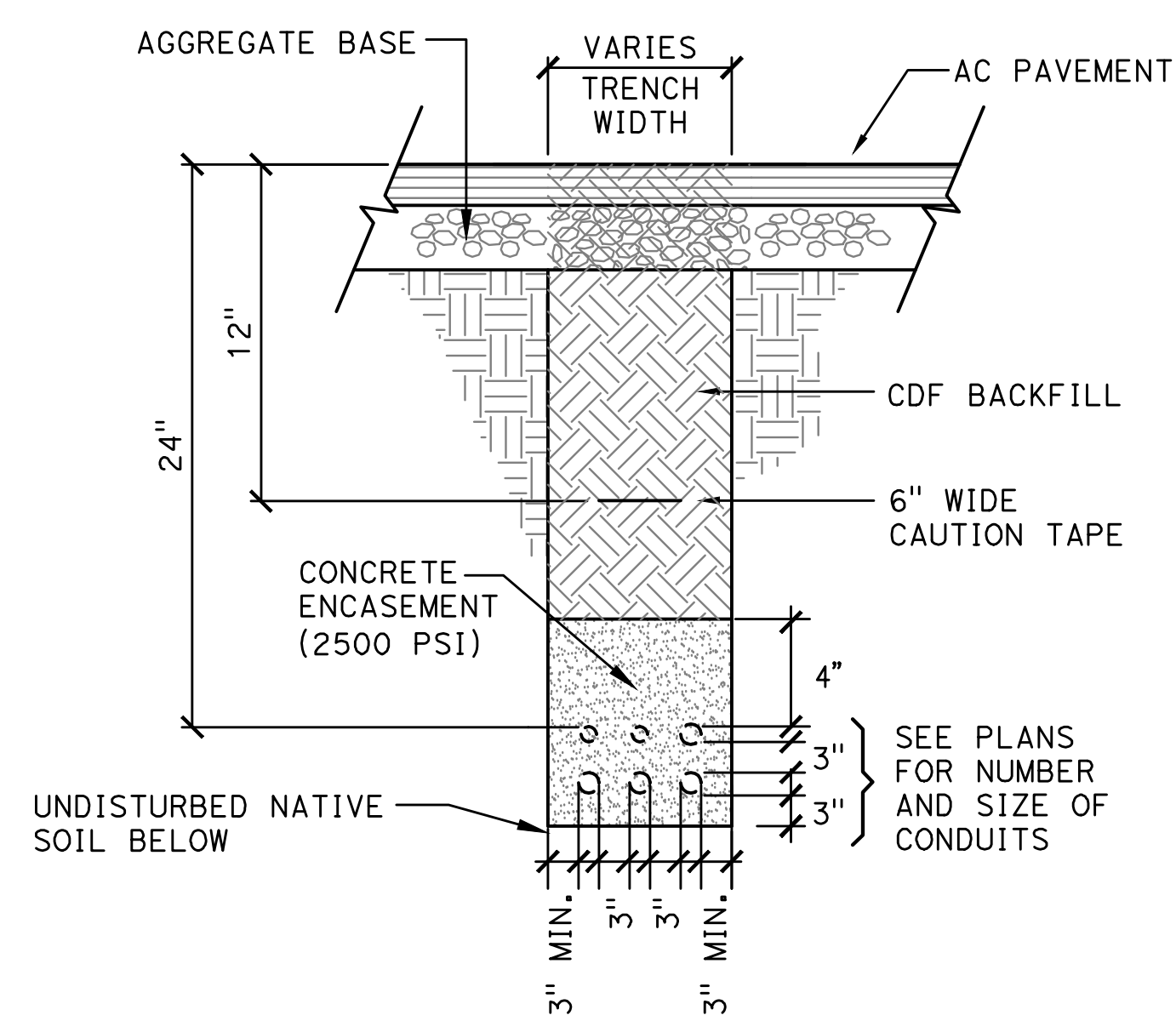
**PUMP STATIONS
 2ND SUBMITTAL
 FOR REVIEW**

PKG.	JH	DATE	REVISIONS	BY	DATE
PROJECT NO. 20140015-10		5/25/2018			
DRAWN BY: VM			DESCRIPTION		
INC.					

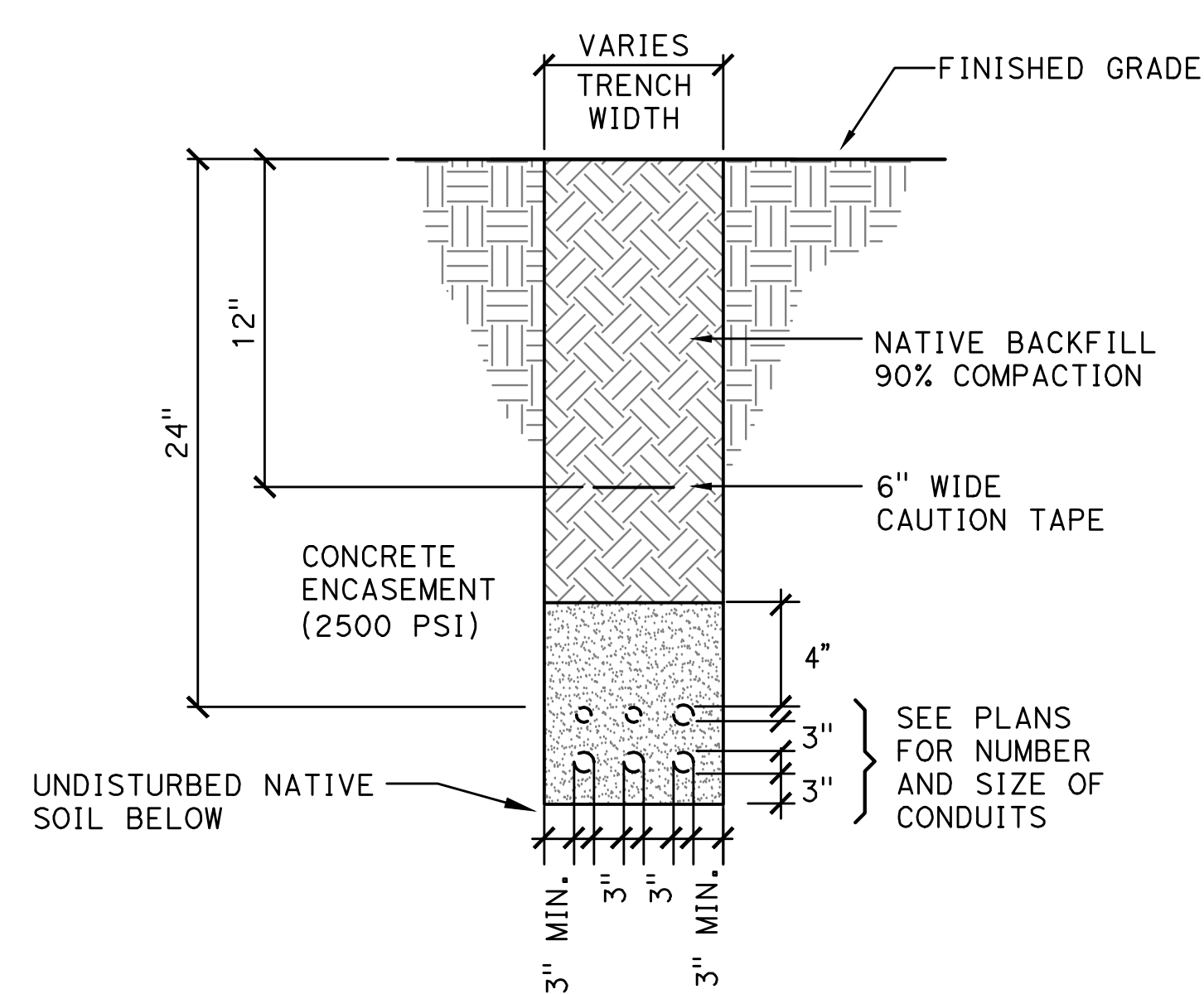
4TH & 5TH STREET
 SANITARY SEWER
 PUMP STATION
 ELECTRICAL
 KEY PLAN
 SHEET TITLE
 SCALE NONE
E.001-1T
 18 OF 40
 DRAWING NO.



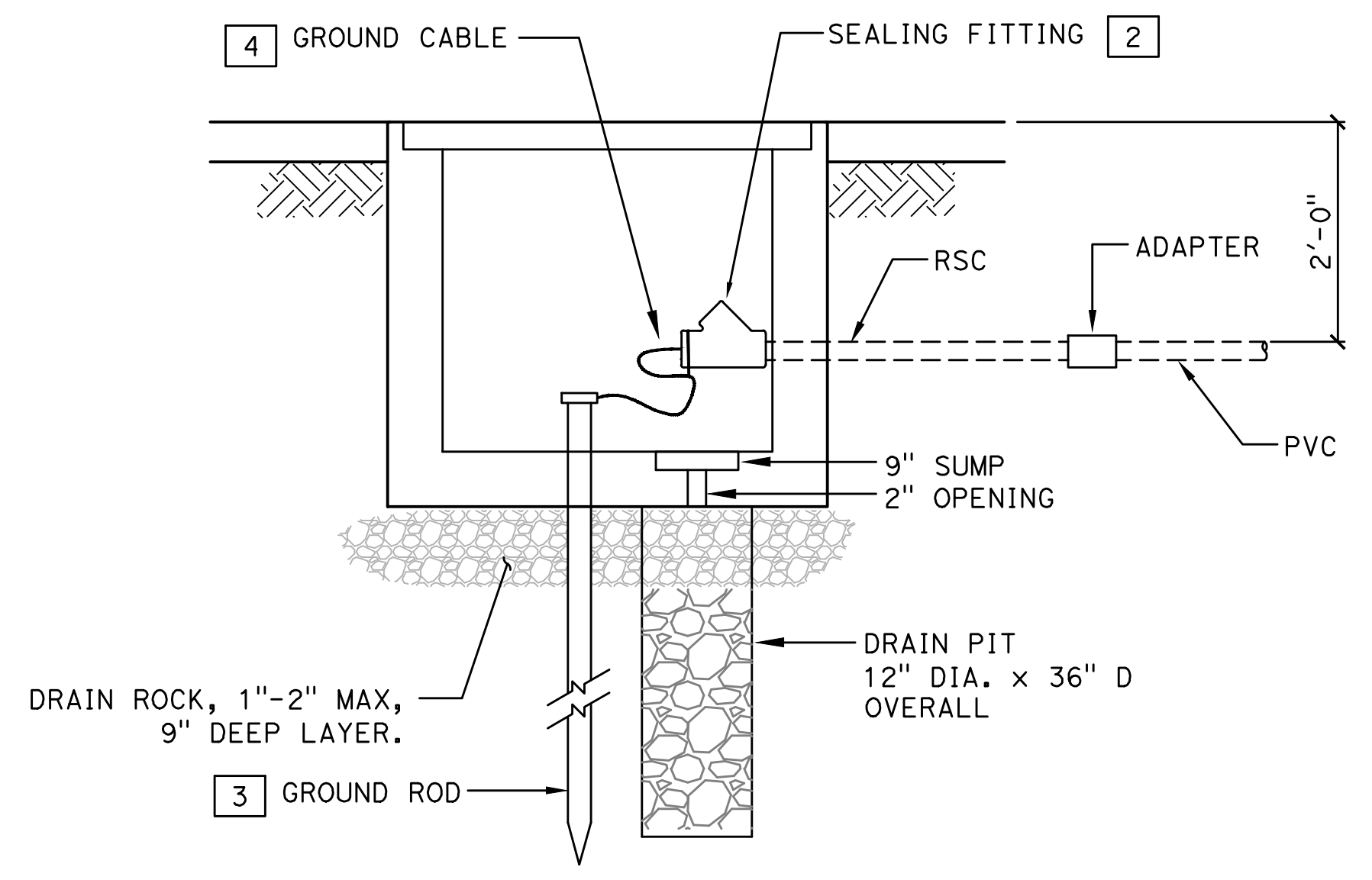
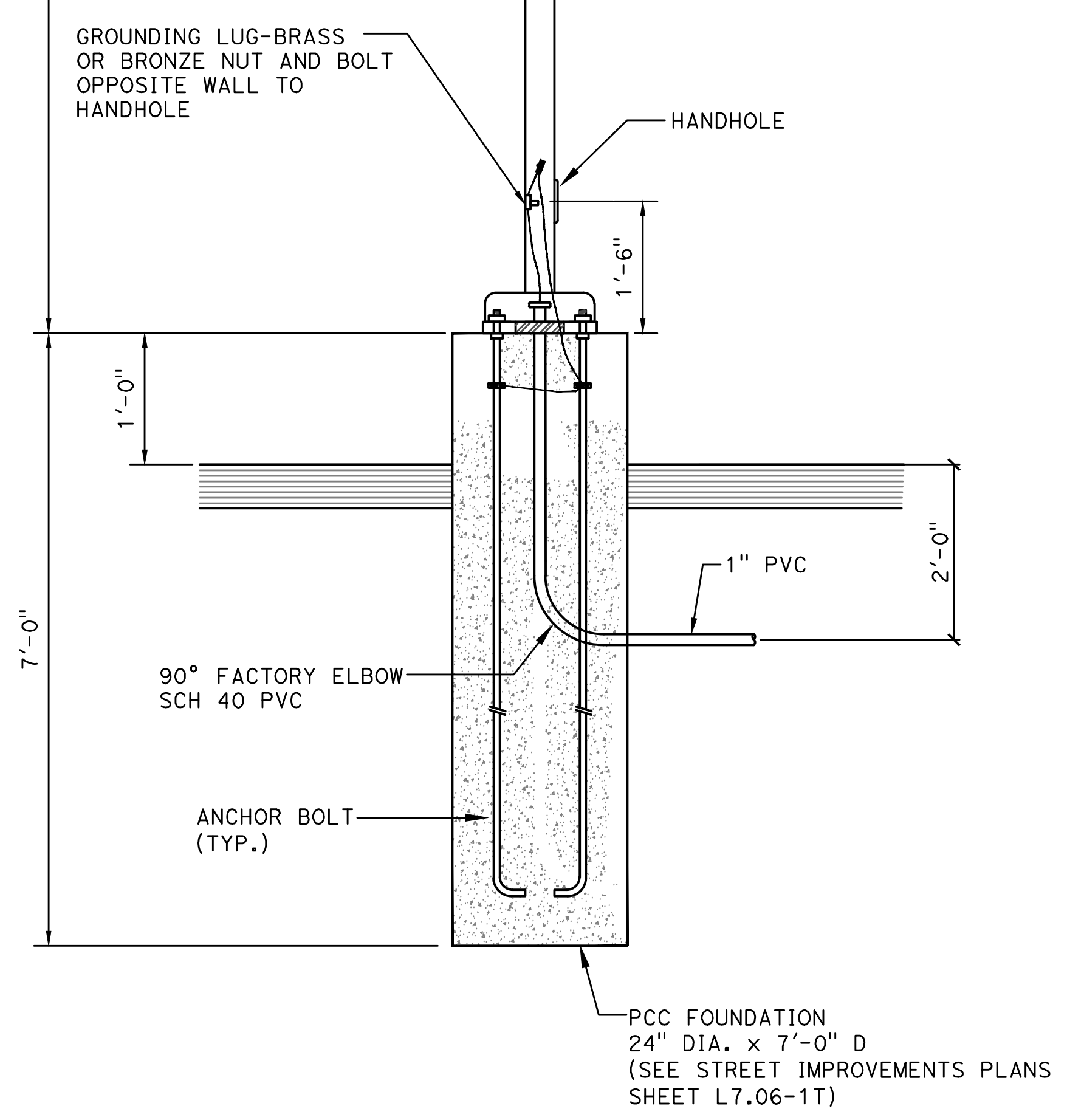
1
—
LIGHTING FIXTURE MOUNTING DETAIL
SCALE: NTS



2
—
TYPICAL UNDERGROUND CONDUIT DETAIL
(PAVED AREAS)
SCALE: NTS



3
—
TYPICAL UNDERGROUND CONDUIT DETAIL
(UNPAVED AREAS)
SCALE: NTS



4
—
PULLBOX - DETAIL
SCALE: NTS

SHEET NOTES

- 1** LED SITE LIGHTING.
KIM LIGHTING ARCHETYPE
CAT. # 1A-AR2-E35-120L-4K-120V-DB-A25-SF-LS-TL
POLE #PRA25-6188-SA-DB
- 2** CLASS 1, DIV. 1 SEALING FITTINGS WITH CLOSE NIPPLE AND INSULATED GROUNDING BUSHING.
- 3** 3/4" x 10'-0" L COPPER CLAD GROUNDING ROD WITH GROUND ROD CLAMP.
- 4** GROUND CABLE SIZE PER ONE-LINE DIAGRAM CONNECT TO INSULATED GROUND BUSHING ON CONDUIT TO MCC.



TICD
TREASURE ISLAND
COMMUNITY DEVELOPMENT

TREASURE ISLAND
DEVELOPMENT AUTHORITY

BKF
Business/Professional Planning
200 SHREVE DR., SUITE 200
REDWOOD CITY, CA 94065
650-482-8300
650-482-8399 (FAX)

Engineers, Inc.
2300 north Blvd., Box 11
Redwood City, CA 94061
(415) 962-2525
(415) 962-2522
PROJECT NO. 18872-01

REGISTERED PROFESSIONAL ENGINEER
No. 9580
Exp. 9/30/18
ELECTRICAL
STATE OF CALIFORNIA

LICENSE STAMP

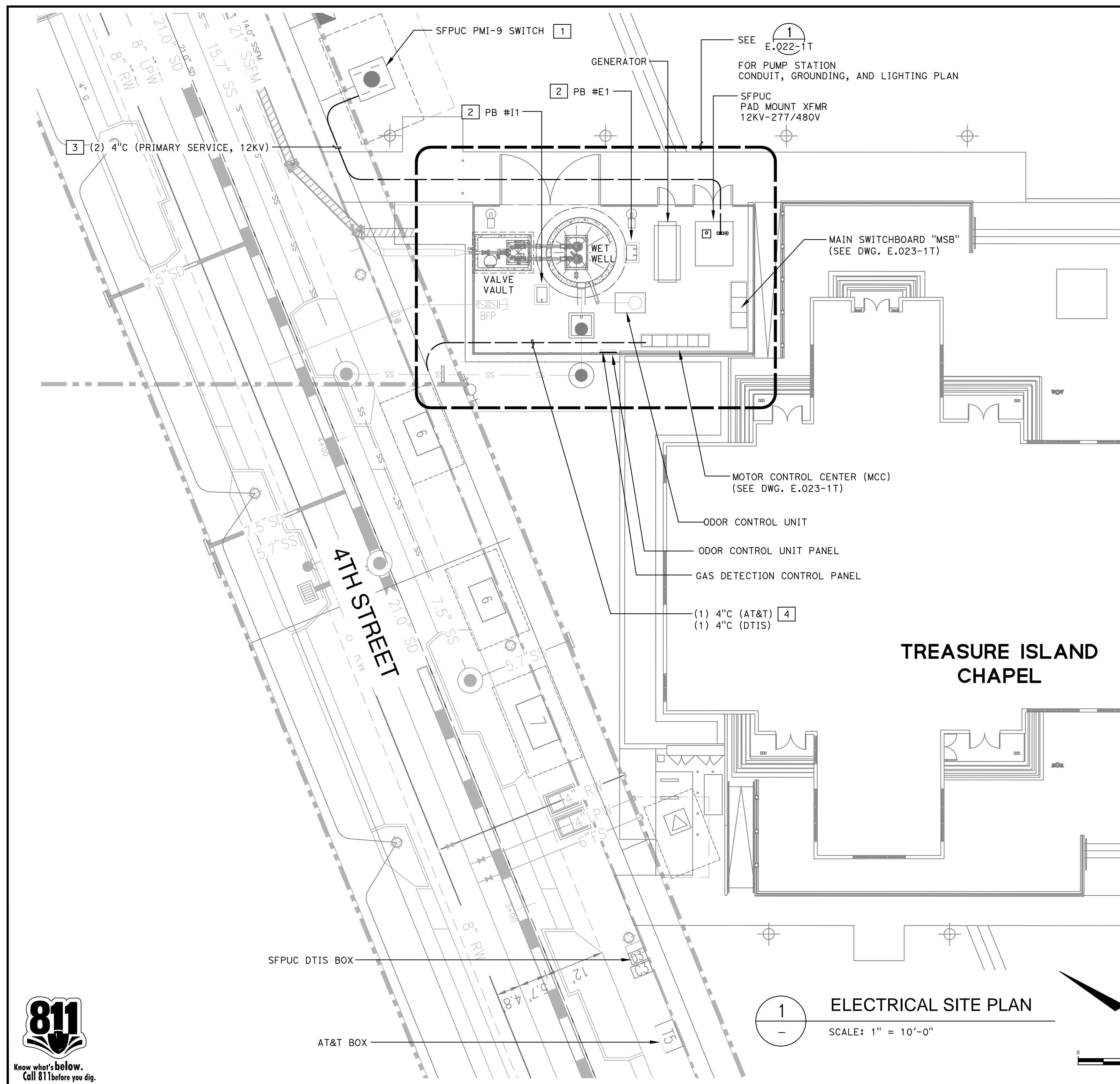
TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PKG.	JH	DATE	REVISIONS	DESCRIPTION	DATE	BY
PROJECT NO. 20140015-10		5/25/2018				
DRAWN BY: VMI						

4TH & 5TH STREET
SANITARY SEWER
PUMP STATION
MISCELLANEOUS
ELECTRICAL
DETAILS
SHEET TITLE
SCALE: NONE

E.003-1T
20 OF 40
DRAWING NO.



GENERAL NOTES

1. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 EXCEPT AS OTHERWISE NOTED.
2. SEE ONE-LINE DIAGRAM FOR FEEDER SIZES.
3. FOR CONDUIT AND CIRCUIT SCHEDULE, SEE DWG. E.026-1T.

SHEET NOTES

1. SEE STREET IMPROVEMENTS PLANS (DWG. E3.0-1T) FOR ADDITIONAL INFORMATION.
2. CONCRETE PULLBOX 2'-0" x 3'-0" x 3'-0" D INSIDE DIMENSIONS WITH H2O LOADING, ADJUSTABLE HEIGHT ALUMINUM COVER, TORSION ASSISTED WITH RECESSED PAD LOCKED PROVISIONS. PROVIDE 9" CONCRETE COLLAR AROUND PULLBOX WITH A #4 BAR CONTINUOUS REINFORCEMENT.
3. CONNECT TO SFPUC PRIMARY CONDUIT FROM JOINT TRENCH.
4. CONNECT TO AT&T AND DTIS CONDUITS FROM T5 AND D3 BOXES. SEE STREET IMPROVEMENTS PLANS FOR ADDITIONAL INFORMATION.

1 ELECTRICAL SITE PLAN
SCALE: 1" = 10'-0"

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

**PUMP STATIONS
2ND SUBMITTAL
FOR REVIEW**

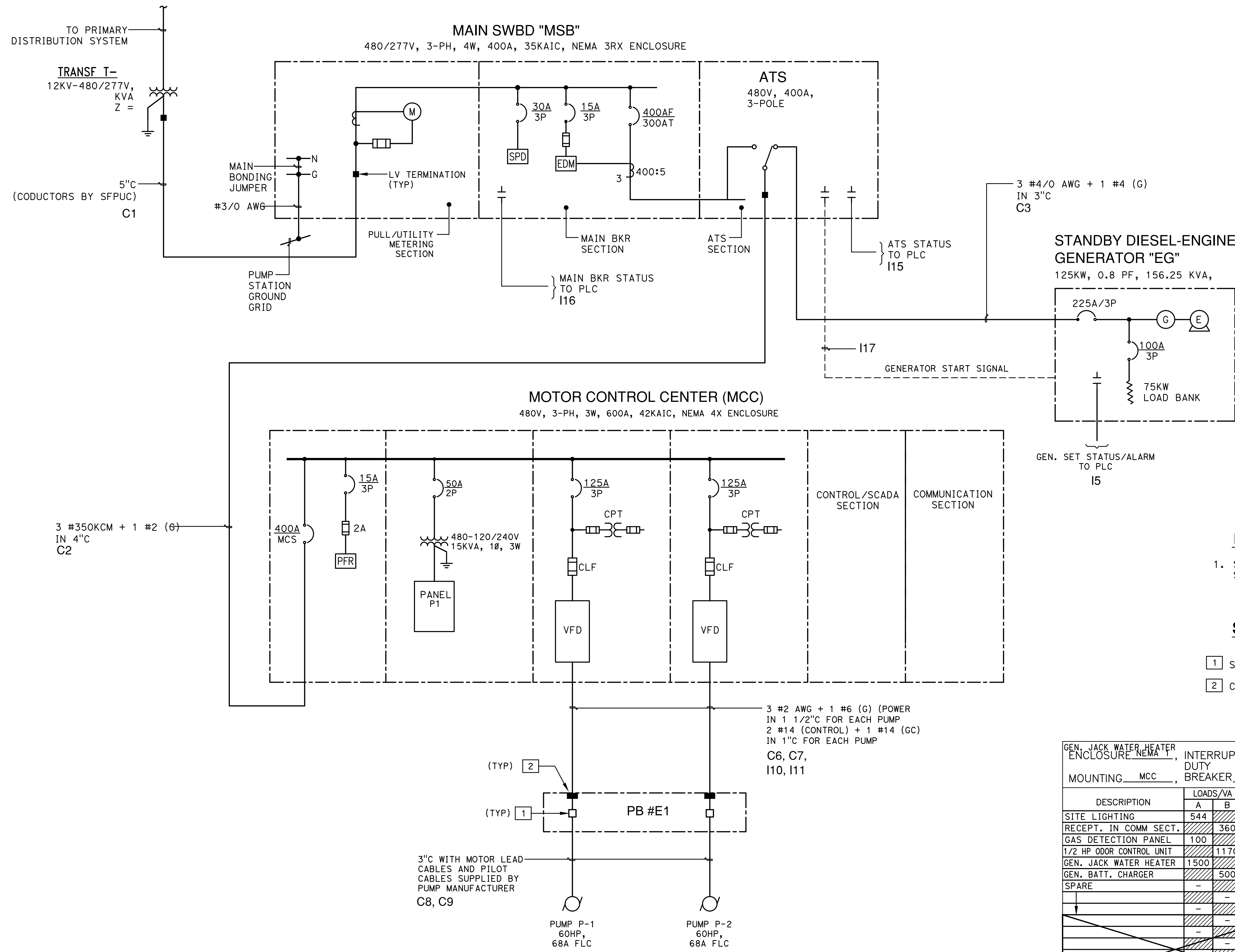
PKG.	JH	DATE	BY	DATE
PROJECT NO. 20140015-10	VM	5/25/2018		
REVISIONS		DESCRIPTION		
NO.				

4TH STREET
SANITARY SEWER
PUMP STATION
ELECTRICAL
SITE PLAN

SHEET TITLE
SCALE NONE

E.020-1T
21 OF 40
DRAWING NO.





4TH STREET PUMP STATION
LOAD ANALYSIS

LOAD DESCRIPTION	POWER (KVA)
PUMP P1 (60.0 HP)	56.6
PUMP P2 (60.0 HP)	56.6
PANEL "P1"	7.82
SUBTOTAL	121.02
25% LARGEST MOTOR	14.15
25% CONTINUOUS	1.96
TOTAL	137.13
480/277V, 3 PHASE	164.9 (AMP)

GENERAL NOTES

- SEE DWG. E.026-1T FOR CONDUIT AND CIRCUIT SCHEDULE.

SHEET NOTES

- SUBMERSIBLE SPLICE.
- CLASS 1, DIVISION 1 SEALING FITTINGS.

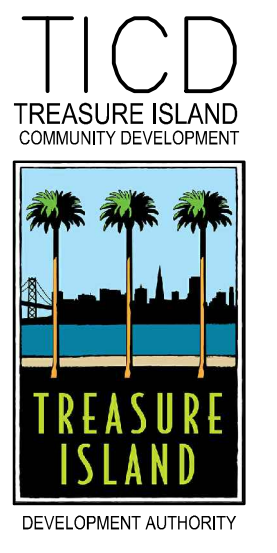
GEN. JACK WATER HEATER ENCLOSURE NEMA 1, INTERRUPTING 120/240 VOLT, 1 PHASE, 3 WIRE DUTY MOUNTING MCC, BREAKER 10 KAIC, 80 A. MAIN BREAKER, 100 A. BUS

DESCRIPTION	LOADS/VA		BKR POLE	CKT. NO.	PHASE	BKR POLE	LOADS/VA		DESCRIPTION
	A	B					A	B	
SITE LIGHTING	544	360	20/1	1	A	2	300	-	MCC EHX FANS
RECEPT. IN COMM SECT.	-	-	-	3	B	4	-	-	SPARE
GAS DETECTION PANEL	100	-	-	5	A	6	2000	-	UPS
1/2 HP ODOR CONTROL UNIT	-	1170	-	7	B	8	-	750	MCC HEATERS
GEN. JACK WATER HEATER	1500	-	-	9	A	10	100	-	MCC LIGHTS
GEN. BATT. CHARGER	-	500	-	11	B	12	-	450	SWBD. HEATERS
SPARE	-	-	-	13	A	14	50	-	SWBD. LIGHTS
	-	-	-	15	B	16	-	-	SPARE
	-	-	-	17	A	18	-	-	
	-	-	-	19	B	20	-	-	
	-	-	-	21	A	22	-	-	
	-	-	-	23	B	24	-	-	
	-	-	-	25	A	26	-	-	
	-	-	-	27	B	28	-	-	
	-	-	-	29	A	30	-	-	
	2144	2030					2450	1200	

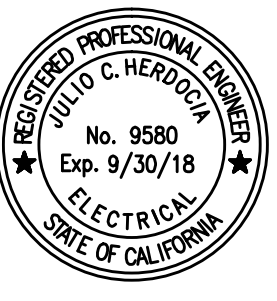
TOTAL: 7.82 KVA PANEL # P1 FEEDER SIZE MANUFACTURER

1 ONE-LINE DIAGRAM
SCHEMATIC

BY MCC MANUFACTURER



Engineers, Inc.
2300 North Blvd, Suite 110
Redwood City, CA 94065
415-442-8300
415-442-8322
PROJECT NO. 18872-01



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

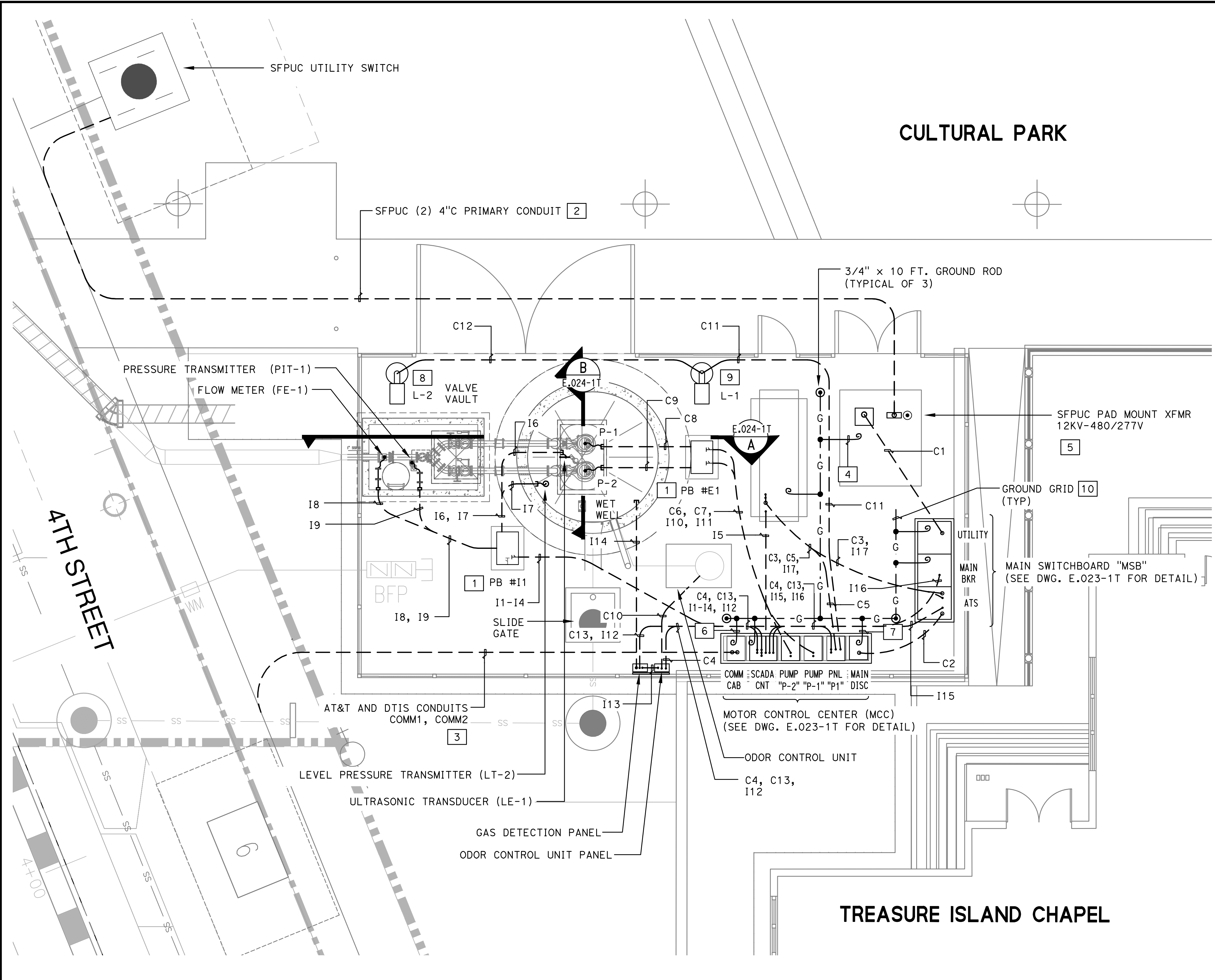
PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PK	JH	DATE	REVISIONS
DATE	DATE	DATE	DESCRIPTION
NO.	NO.	NO.	NO.

4TH STREET SANITARY SEWER PUMP STATION ONE-LINE DIAGRAM

E.021-1T
22 OF 40





CULTURAL PARK

TREASURE ISLAND CHAPEL

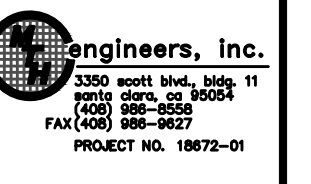
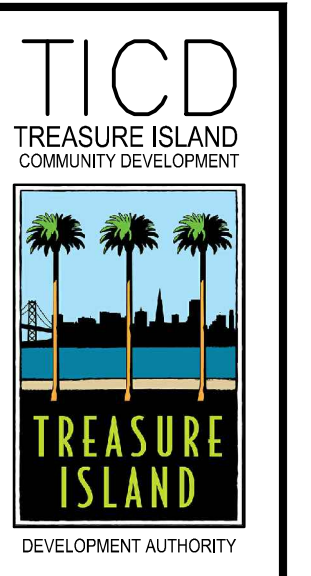
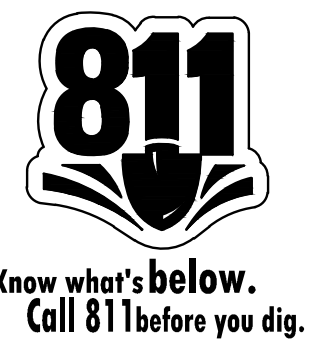
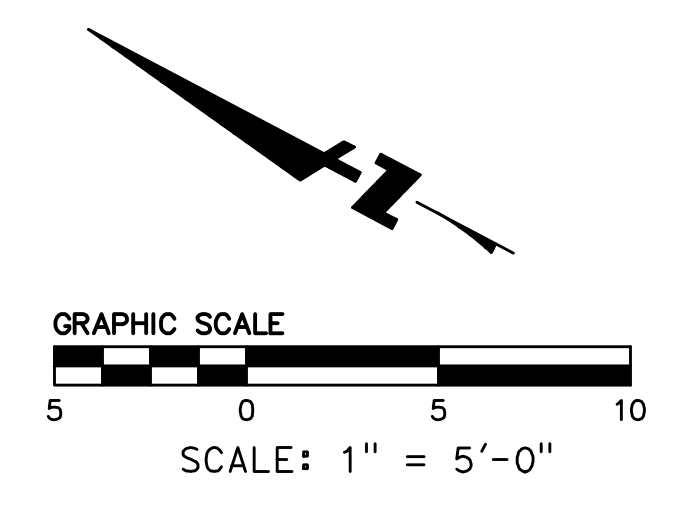
GENERAL NOTES

1. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 EXCEPT AS OTHERWISE NOTED.
2. SEE ONE-LINE DIAGRAM FOR FEEDER SIZES.
3. FOR CONDUIT AND CIRCUIT SCHEDULE, SEE DWG. E.026-1T.

SHEET NOTES

1. CONCRETE PULLBOX 2'-0" x 3'-0" x 3'-0" D INSIDE DIMENSIONS WITH H2O LOADING, ADJUSTABLE HEIGHT ALUMINUM COVER, TORSION ASSISTED WITH RECESSED PAD LOCKED PROVISIONS. PROVIDE 9" CONCRETE COLLAR AROUND PULLBOX WITH A #4 BAR CONTINUOUS REINFORCEMENT.
2. CONNECT TO SFPUC PRIMARY CONDUIT FROM JOINT TRENCH.
3. CONNECT TO AT&T AND DTIS CONDUITS FROM T5 AND D3 BOXES. SEE STREET IMPROVEMENTS PLANS FOR ADDITIONAL INFORMATION.
4. SIZE CONDUCTOR PER SFPUC REQUIREMENTS.
5. PROVIDE PAD AND GROUNDING IN ACCORDANCE WITH SFPUC STANDARDS AND SPECIFICATIONS.
6. #6 AWG BCW SOLID.
7. #2 AWG BCW.
8. POLE MOUNTED LED LIGHT WITH PHOTOCELL CONTROL. SEE DETAIL 1 ON DWG. E.003-1T FOR LIGHT FIXTURE MOUNTING DETAIL.
9. POLE MOUNTED LED MAINTENANCE LIGHT (NO PHOTOCELL CONTROL), MANUALLY SWITCHED AT CONTROL PANEL. SEE DETAIL 1 ON DWG. E.003-1T FOR LIGHT FIXTURE MOUNTING DETAIL.
10. #3/0 AWG BCW BURIED 24" BELOW FINISHED GRADE.

1 UNDERGROUND CONDUIT AND GROUNDING PLAN
SCALE: 1" = 5'-0"



LICENSE STAMP

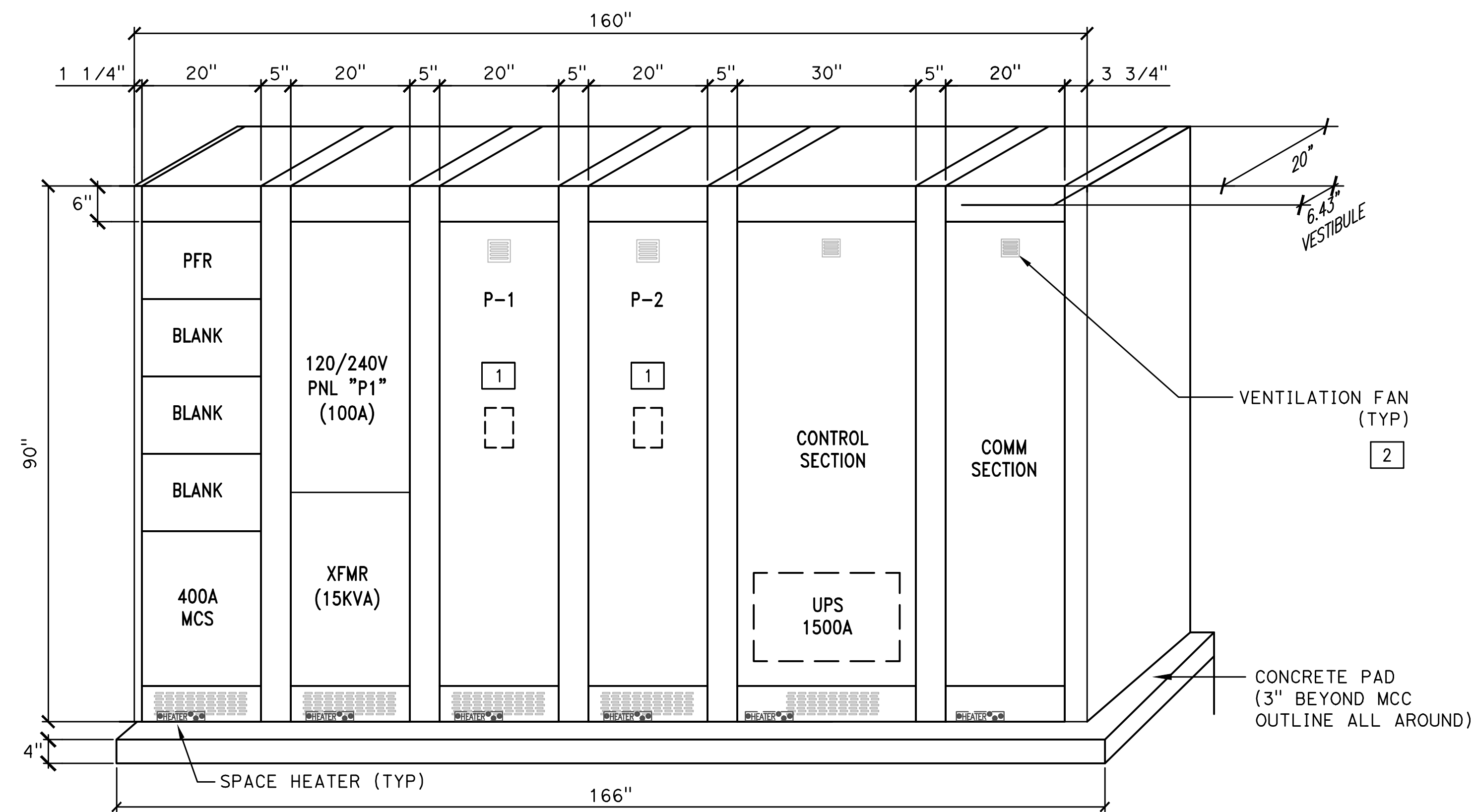
TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

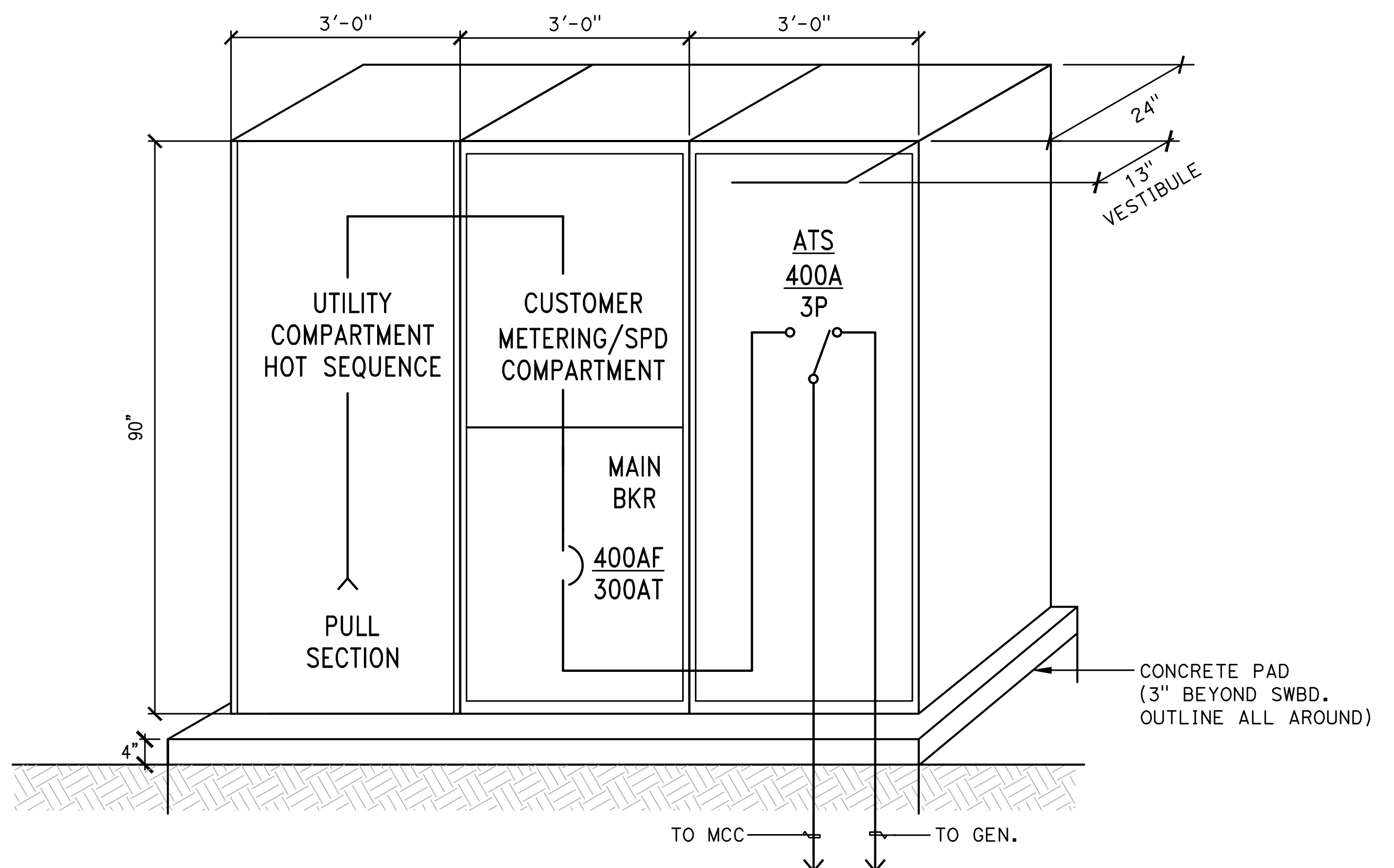
PKG.	JH	DATE	BY	DATE
PROJECT NO. 20140015-10		5/25/2018		
DRAWN BY: VMI				
REVISIONS				
NO.				

4TH STREET
SANITARY SEWER
PUMP STATION
UNDERGROUND
CONDUIT AND
GROUNDING PLAN
SHEET TITLE
SCALE NONE

E.022-1T
23 OF 40
DRAWING NO.



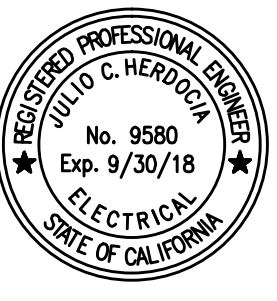
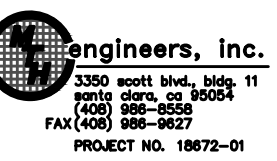
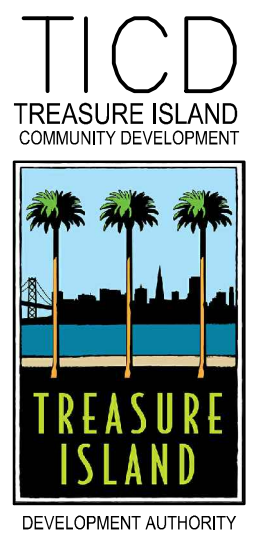
1 MOTOR CONTROL CENTER "MCC" ELEVATION



2 MAIN SWITCHBOARD "MSB" ELEVATION
NOT TO SCALE

SHEET NOTES

- 1 FLYGT MINICAS (FURNISHED BY PUMP MANUFACTURER).
- 2 VENTILATION FAN.



LICENSE STAMP

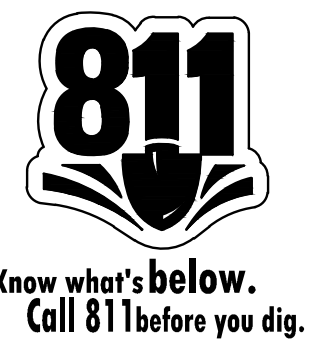
TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

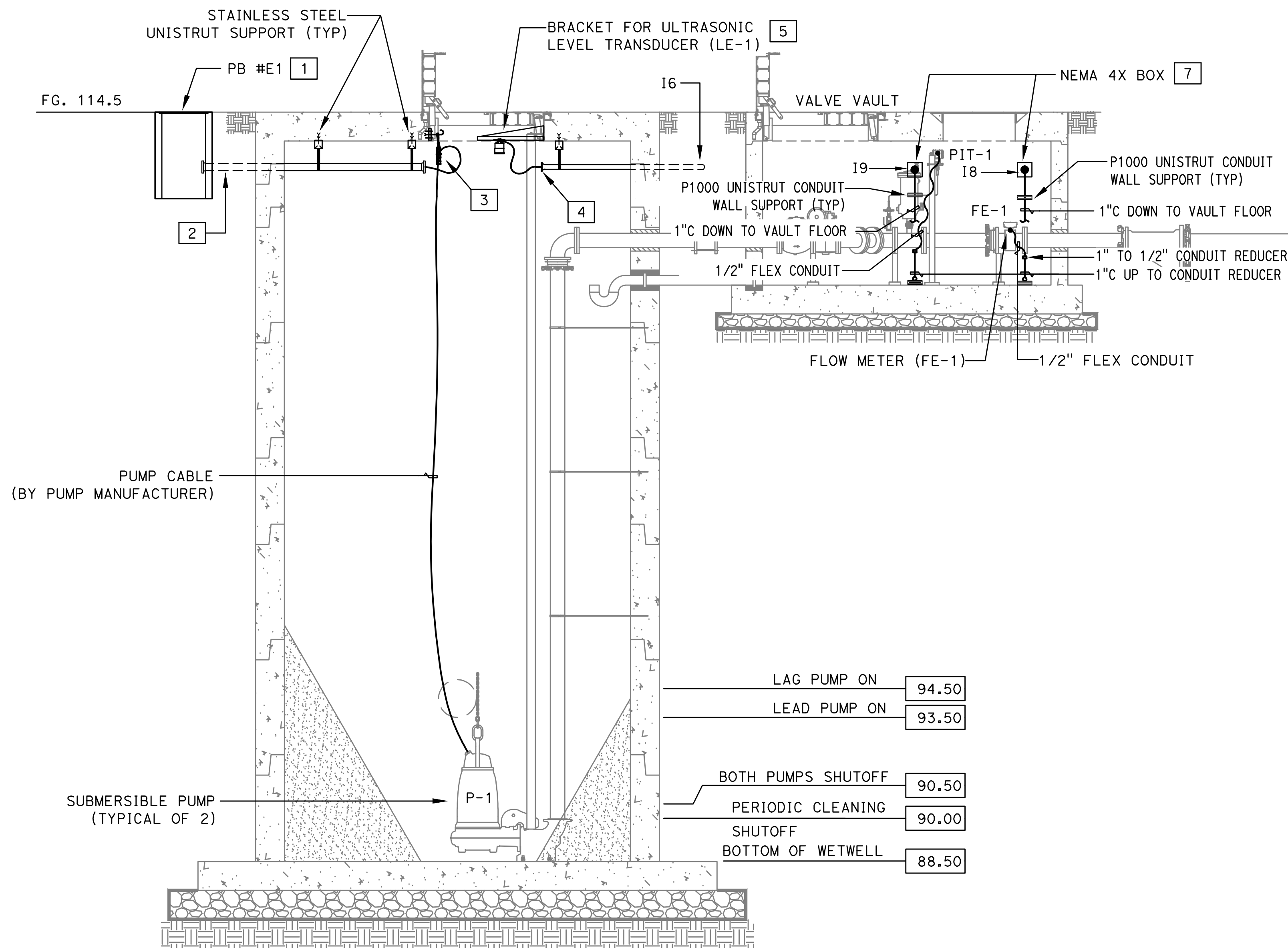
PKG.	JH	DATE	REVISIONS	DESCRIPTION	DATE
20140015-10	VM	5/25/2018			

4TH STREET
 SANITARY SEWER
 PUMP STATION
 ELEVATION OF
 MCC AND
 MAIN SWITCHBOARD
 SHEET TITLE
 SCALE N.T.S.

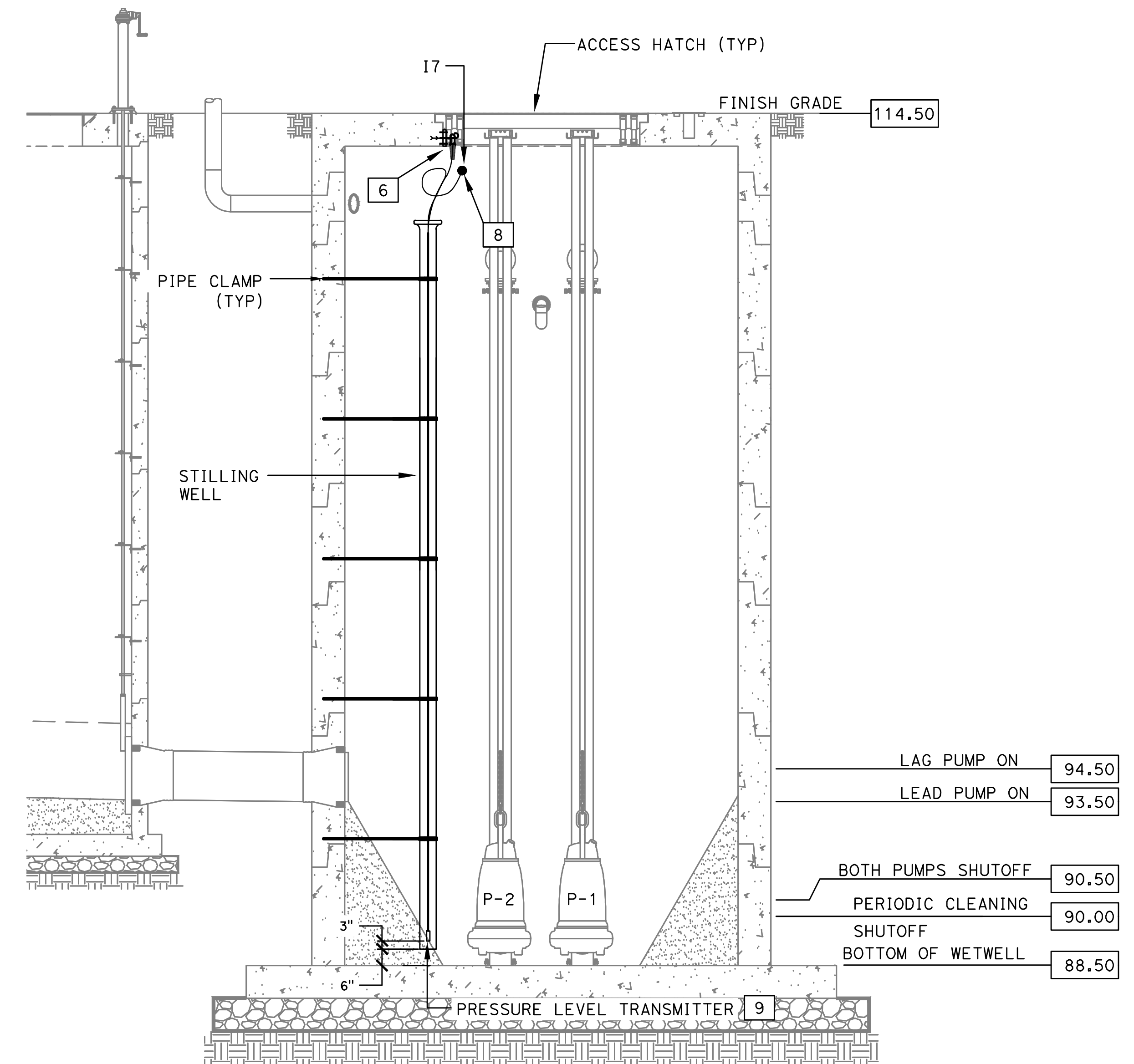
E.023-1T
 24 OF 40
 DRAWING NO.



NOT FOR CONSTRUCTION



A WET WELL ELEVATION AT ULTRASONIC TRANSDUCER
E.024-1T SCALE: 3/8" = 1'-0"



B WET WELL ELEVATION AT PRESSURE LEVEL TRANSMITTER
E.024-1T SCALE: 3/8" = 1'-0"

GENERAL NOTES

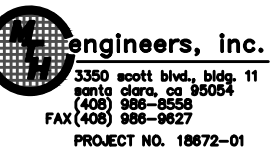
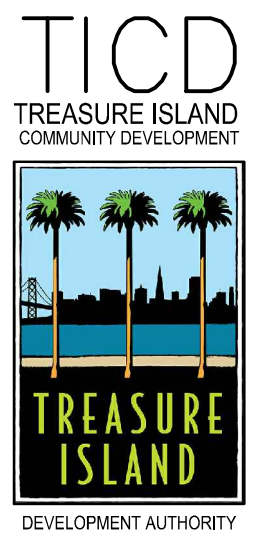
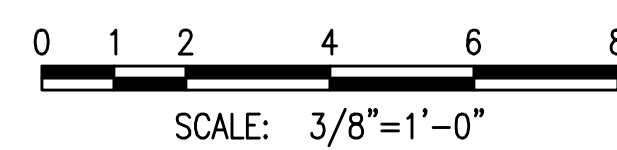
- SEE DWG. E.026-1T FOR CONDUIT AND CIRCUIT SCHEDULE.

SHEET NOTES

- CONCRETE PULLBOX, 2'-0" x 3'-0" x 3'-0" D INSIDE DIMENSIONS WITH H2O LOADING, ADJUSTABLE HEIGHT ALUMINUM COVER, TORSION ASSISTED WITH RECESSED PAD LOCKED PROVISIONS. PROVIDE 9" CONCRETE COLLAR AROUND PULLBOX WITH A #4 BAR CONTINUOUS REINFORCEMENT.
- (1) 3" (PUMP FEEDER CABLE). INSTALL WITH BELL ENDS AND SEAL BOTH ENDS AFTER CABLE INSTALLATION.
- STAINLESS STEEL HOOK, STAINLESS STEEL CHANNEL, STAINLESS STEEL ANCHOR BOLTS, AND STAINLESS STEEL CABLE GRIP.
- (1) 1 1/2" (WET WELL ULTRASONIC LEVEL TRANSDUCER). INSTALL WITH BELL ENDS AND SEAL BOTH ENDS AFTER CABLE INSTALLATION.
- POSITION ULTRASONIC LEVEL TRANSDUCER SUCH THAT THERE IS NO OBSTRUCTION THAT CAN ERRONEOUSLY REFLECT THE TRANSDUCER SIGNAL. SEE DETAIL 5 ON DRAWING PS.042-1T FOR ULTRASONIC HINGED BRACKET DETAIL.
- STAINLESS STEEL HOOK, BOLT AND CABLE HANGER.
- PROVIDE STAINLESS STEEL NEMA 4X BOX, 6" x 6" x 4" D WITH SCREW CLAMPS COVER.
- (1) 1 1/2" (WET WELL PRESSURE LEVEL TRANSMITTER) INSTALL WITH BELL ENDS AND SEAL BOTH ENDS AFTER CABLE INSTALLATION.
- PRESSURE LEVEL TRANSMITTER INSIDE A 6" PVC SCHED. 80 STILLING WELL. SEE DWG. PS.042-1T FOR STILLING WELL SUPPORTS. PROVIDE BELL END AT TOP OF STILLING WELL PIPE.



Know what's below.
Call 811 before you dig.



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

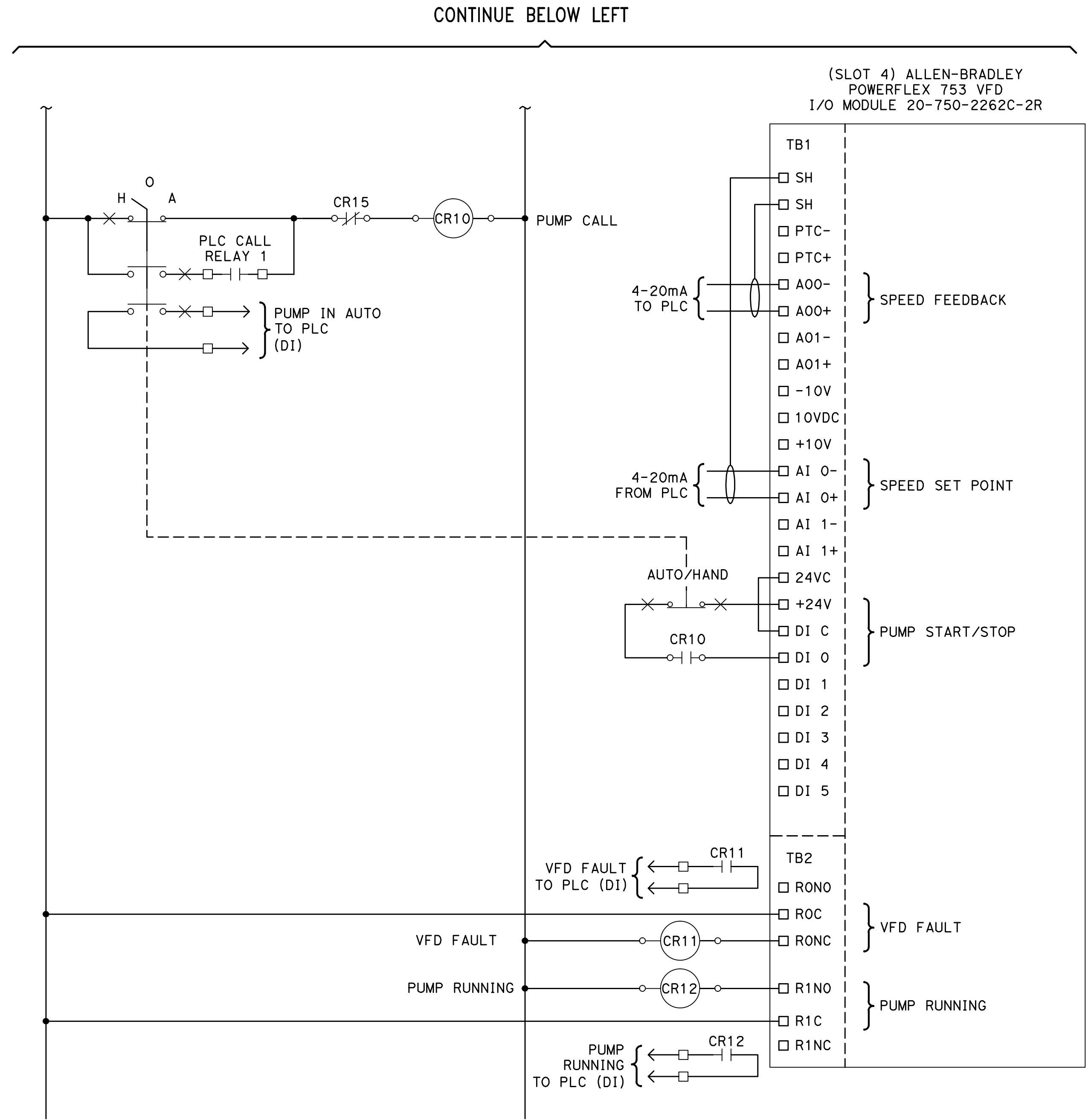
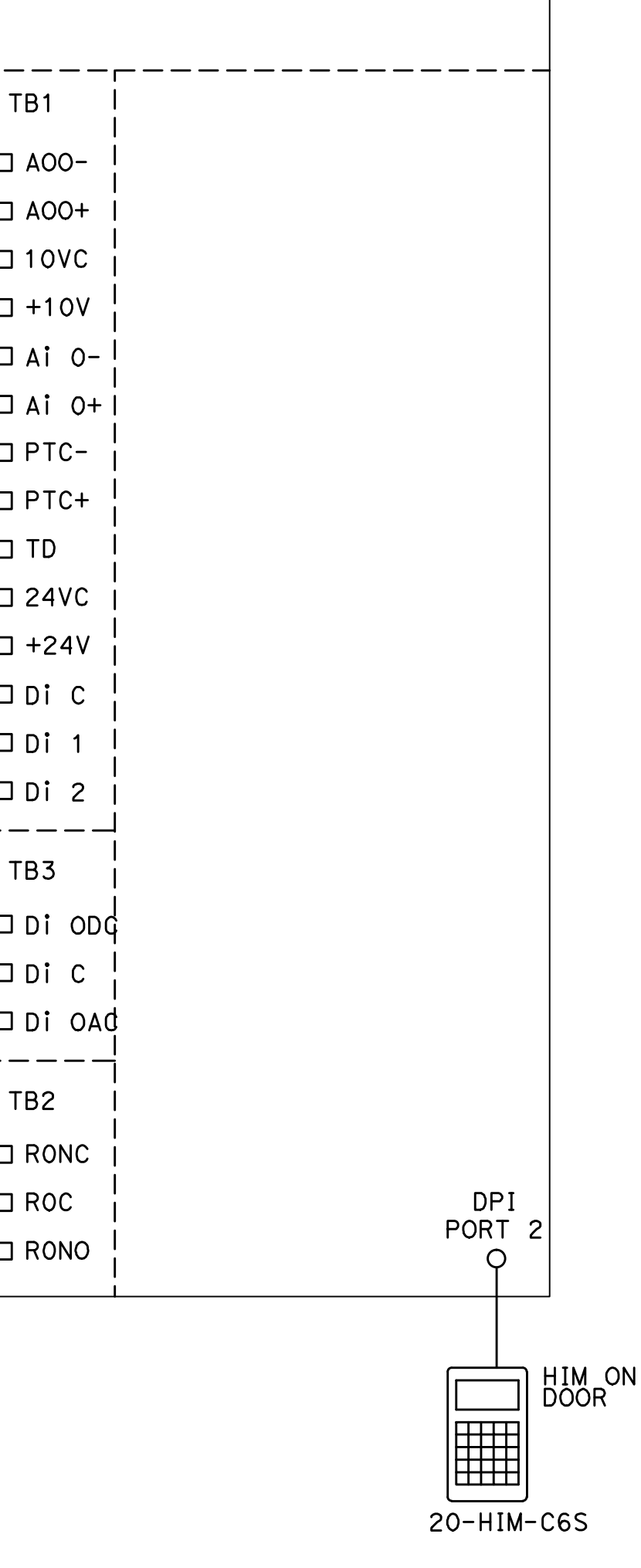
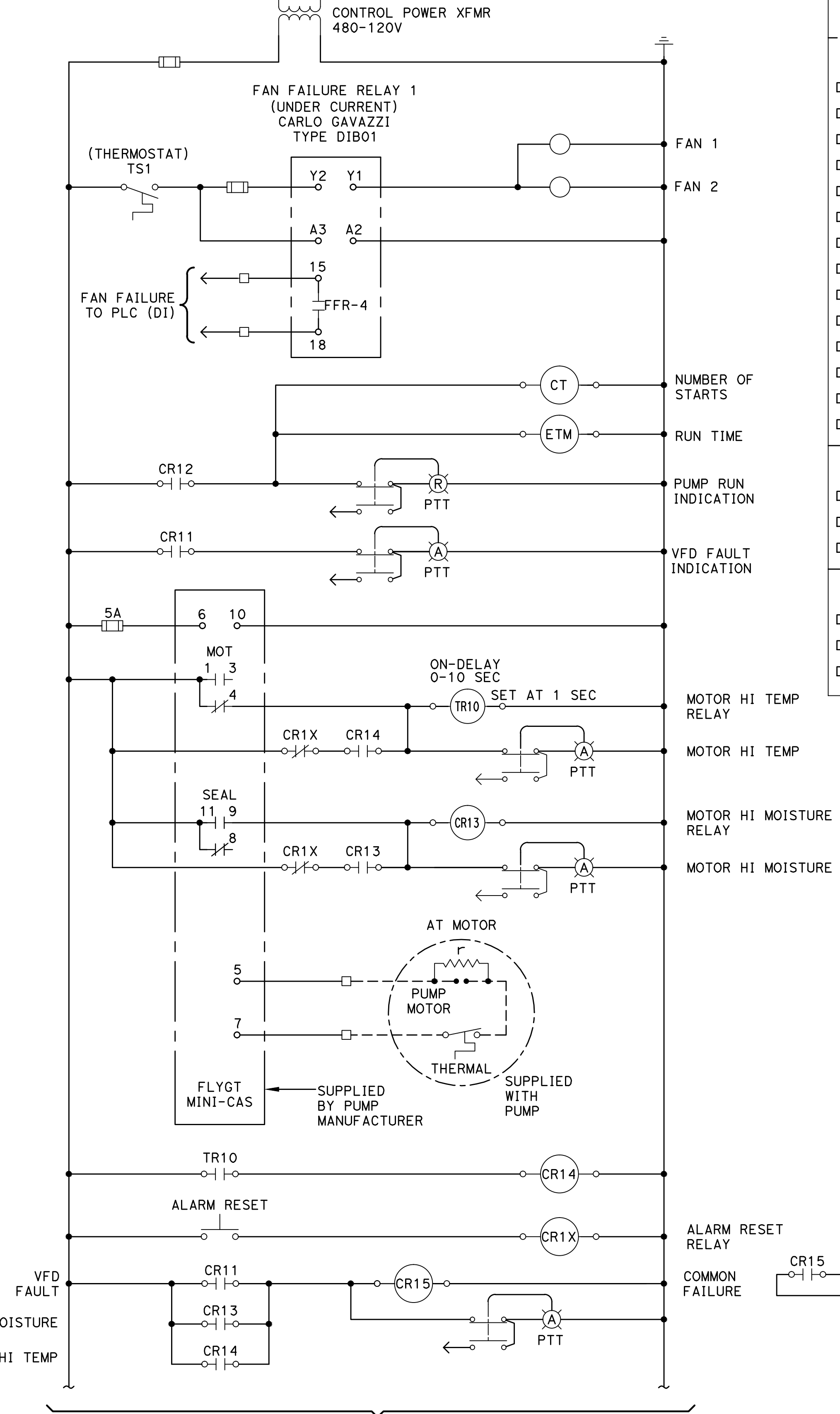
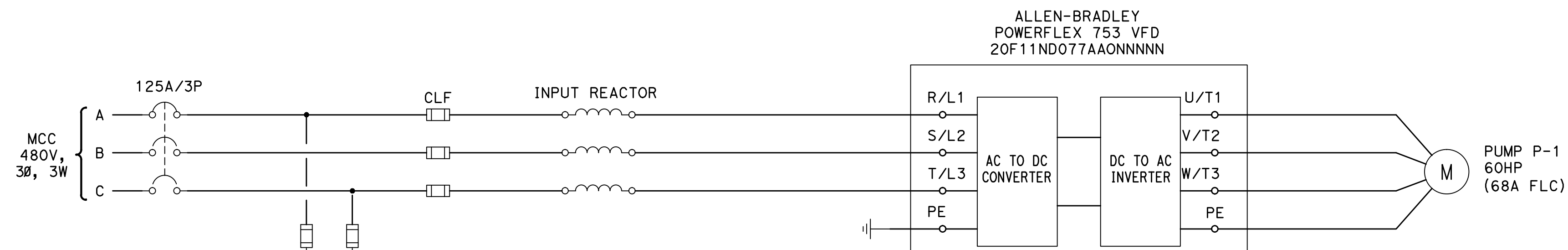
PKG.	JH	DATE	REVISIONS	DESCRIPTION
PROJECT NO. 20140015-10	DATE: 5/25/2018	BY:		
DRAWN BY: VM				

4TH STREET
SANITARY SEWER
PUMP STATION
SECTIONS
AND DETAILS

SHEET TITLE
SCALE AS SHOWN

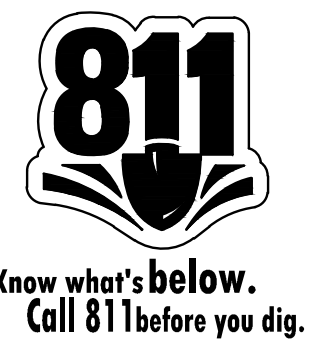
E.024-1T
25 OF 40

DRAWING NO.



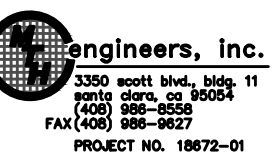
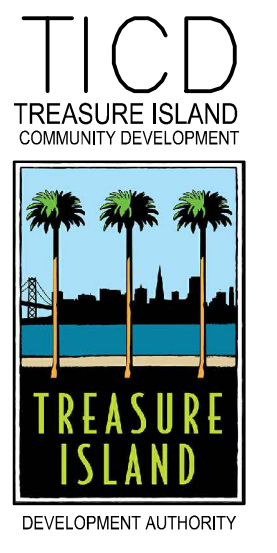
PUMP CALL SIGNAL FROM PLC	
SEWER PUMP No. 1	RLY-1
SEWER PUMP No. 2	RLY-2

SEWER PUMP P-1 CONTROL SCHEMATIC DIAGRAM
(SIMILAR FOR PUMP P-2)



CONTINUE ABOVE RIGHT

CONTINUE BELOW LEFT



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

**PUMP STATIONS
2ND SUBMITTAL
FOR REVIEW**

PKG.	JH	DATE	REVISIONS	DESCRIPTION	DATE	BY
PROJECT NO. 20140015-10		5/25/2018				
DRAWN BY: VMI						
NO.						

4TH STREET
SANITARY/SEWER
PUMP STATION
SEWER PUMP No. 1
CONTROL
SCHEMATIC DIAGRAM
SHEET TITLE
SCALE NONE

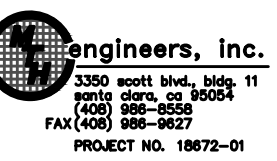
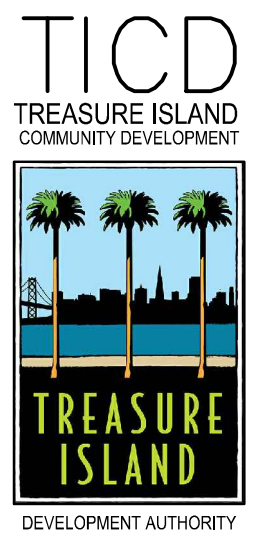
E.025-1T
26 OF 40
DRAWING NO.

CONDUIT AND CIRCUIT SCHEDULE

RACEWAY DATA			CABLE DATA							
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
C1	SFPUC XFMR SEC	MSB / MAIN BKR	PVC	5"	-	-	-	-	-	SERVICE FROM SFPUC
C2	MSB / ATS	MCC / MAIN DISC.	PVC	4"	XHHW-2	3	#350 KCM	#2	600	FEEDER TO MCC
C3	GENERATOR "EG"	MSB / ATS	PVC/RSC	3"	XHHW-2	3	#4/O AWG	#4	600	EMERGENCY POWER
C4	MCC / PNL "P1"	ODOR CONTROL UNIT PANEL	PVC/RSC	1"	XHHW-2	2	#10 AWG	#10	600	FEEDER TO ODOR CONTROL UNIT
C5	MCC / PNL "P1"	GENERATOR "EG"	PVC/RSC	1"	XHHW-2	2	#10 AWG	#10	600	JACKET WATER HEATER
C6	MCC / PUMP P1 STARTER	PB #E1	PVC/RSC	1 1/2"	XHHW-2	3	#2 AWG	#6	600	BATTERY CHARGER
C7	MCC / PUMP P2 STARTER	PB #E1	PVC/RSC	1 1/2"	XHHW-2	3	#2 AWG	#6	600	FEEDER TO PUMP P-2
C8	PB #E1	PUMP P-1	PVC	3"			MFR SUPPLIED CABLE			PUMP P1 POWER AND MONITORING
C9	PB #E1	PUMP P-2	PVC	3"			MFR SUPPLIED CABLE			PUMP P2 POWER AND MONITORING
C10	ODOR CONTROL UNIT PANEL	ODOR CONTROL UNIT	PVC/RSC/FLEX	1"	XHHW-2	2	#10 AWG	#10	600	FEEDER TO ODOR CONTROL UNIT
C11	MCC / PNL "P1"	SITE LIGHT L-1	PVC	1"	XHHW-2	4	#10 AWG	#10	600	FEEDER TO SITE LIGHT (L-1, L-2)
C12	SITE LIGHT L-1	SITE LIGHT L-2	PVC	1"	XHHW-2	2	#10 AWG	#10	600	FEEDER TO SITE LIGHT (L-2)
C13	MCC / PNL "P1"	GAS DETECTION PANEL	PVC/RSC	1"	XHHW-2	2	#10 AWG	#10	600	FEEDER TO GAS DETECTION PANEL

CONDUIT AND CIRCUIT SCHEDULE

RACEWAY DATA			CABLE DATA							
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
I1	MCC CONTROL/SCADA SECTION	PB #11	PVC/RSC	1 1/2"		1	MFR SUPPLIED CABLE			ULTRASONIC LEVEL XDCR LE-1
I2	MCC CONTROL/SCADA SECTION	PB #11	PVC/RSC	1 1/2"		1	MFR SUPPLIED CABLE			PRESSURE LEVEL TRANSMITTER LT-2 4-20ma SIGNAL
I3	MCC CONTROL/SCADA SECTION	PB #11	PVC/RSC	1"	TSP	1	#20		300	FE-1 SIGNAL
I4	MCC CONTROL/SCADA SECTION	PB #11	PVC/RSC	1"	TSP	1	#14		600	FE-1 COIL DRIVE
I5	MCC CONTROL/SCADA SECTION	GENERATOR "EG"	PVC/RSC	1"	XHHW-2	14	#14	#14	600	GENERATOR ALARM/ GEN BKR STATUS
I6	PB #I1	ULTRASONIC LVL XDCR LE-1	PVC	1 1/2"		1	MFR SUPPLIED CABLE			ULTRASONIC LEVEL XDCR LE-1
I7	PB #I1	PRESSURE LEVEL XMTR LT-2	PVC	1 1/2"		1	MFR SUPPLIED CABLE			PRESSURE LEVEL TRANSMITTER LT-2
I8	PB #I1	FLOW METER FE-1	PVC/RSC/FLEX	1"	TSP	1	#20		300	FE-1 SIGNAL
I9	PB #I1	PRESSURE TRANSMITTER PIT-1	PVC/RSC/FLEX	1"	TSP	1	#16		600	FE-1 COIL DRIVE
I10	MCC / PUMP P-1 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-1 MONITORING
I11	MCC / PUMP P-2 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-2 MONITORING
I12	MCC CONTROL/SCADA SECTION	GAS DETECTION PANEL	PVC	1"	XHHW-2	4	#14	#14	600	ALARM GAS DETECTION PANEL
I13	ODOR CONTROL UNIT PANEL	GAS DETECTION PANEL	RSC	3/4"	XHHW-2	2	#14	#14	600	OCU CONTROL INTERLOCK
I14	WET WELL	GAS DETECTION PANEL	PVC/RSC	1"		2	MFR SUPPLIED TUBING			GAS SAMPLING TUBES
I15	MSB / ATS	MCC CONTROL/SCADA SECTION	PVC	1"	XHHW-2	4	#14	#14	600	ATS STATUS
I16	MSB / MAIN BKR	MCC CONTROL/SCADA SECTION	PVC	1"	XHHW-2	2	#14	#14	600	MAIN BKR STATUS
I17	MSB / ATS	GENERATOR "EG"	PVC/RSC	1"	XHHW-2	2	#12	#12	600	GENERATOR START SIGNAL
COMM1	PB D3	MCC/COMMUNICATION SECTION	PVC	4"						SFPUC DTIS TELEPHONE SERVICE
COMM2	PB T5	MCC/COMMUNICATION SECTION	PVC	4"						AT&T ASE LINE



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

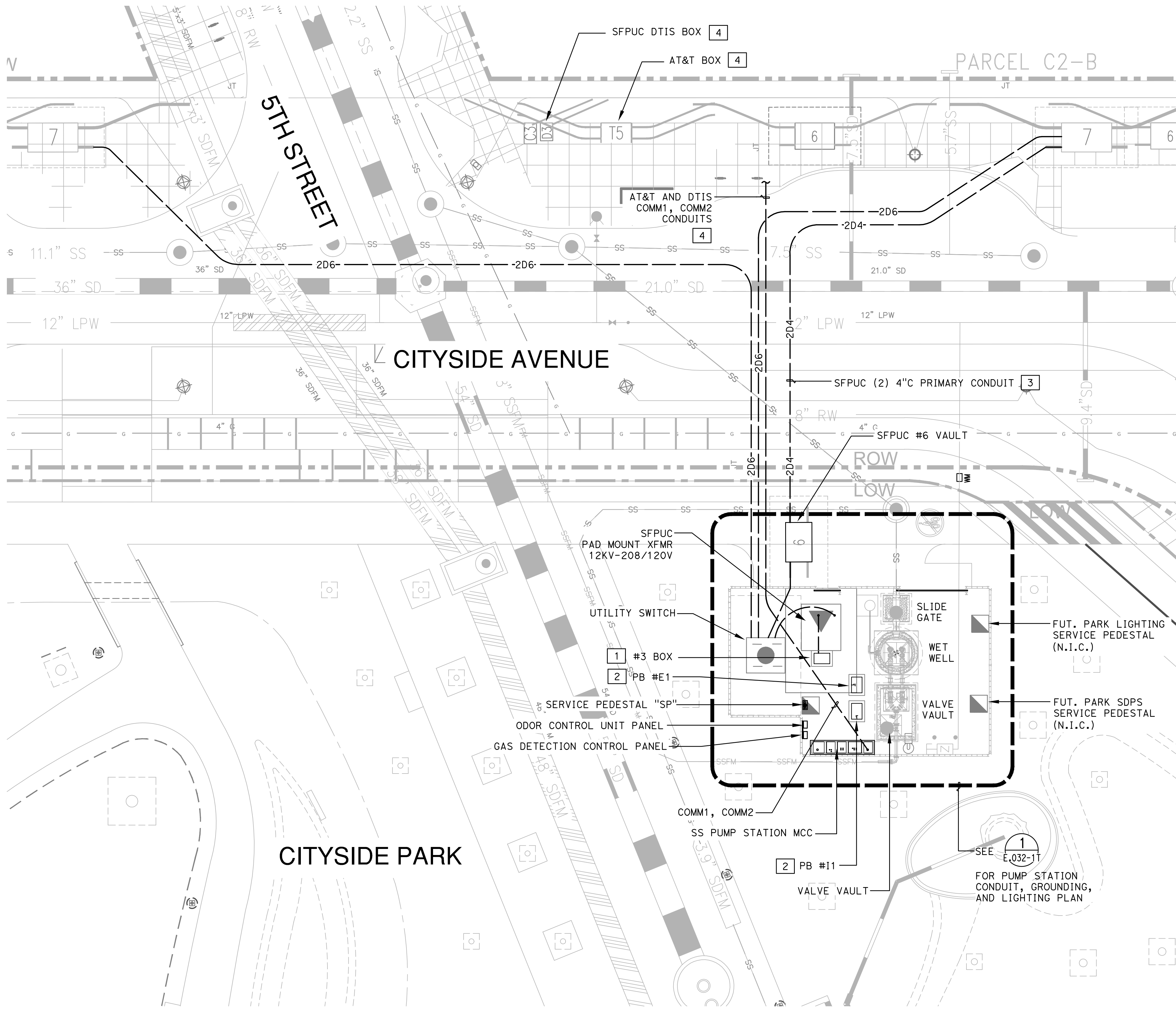
PROJECT NO. 20140015-10	DATE: 5/25/2018	DATE
DRAWN BY: VM	REVISIONS	BY
	DESCRIPTION	DATE

4TH STREET
 SANITARY SEWER
 PUMP STATION
 CONDUIT AND
 CIRCUIT SCHEDULE

SHEET TITLE
 SCALE NONE

E.026-1T
 27 OF 40

DRAWING NO.



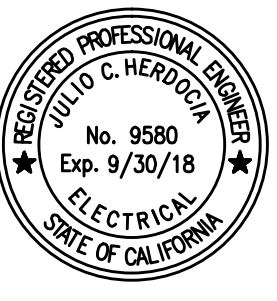
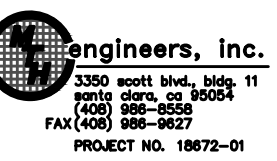
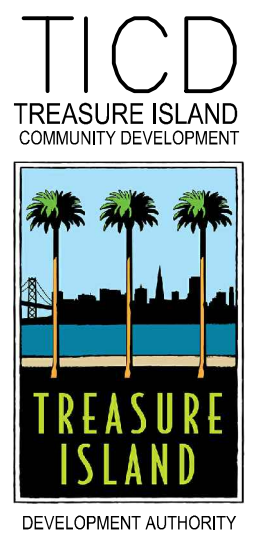
1 ELECTRICAL SITE PLAN
SCALE: 1" = 10'-0"

GENERAL NOTES

1. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 EXCEPT AS OTHERWISE NOTED.
2. SEE ONE-LINE DIAGRAM FOR FEEDER SIZES.
3. FOR CONDUIT AND CIRCUIT SCHEDULE, SEE DWG. E.036-1T.

SHEET NOTES

1. INSTALL #3 CONCRETE PULLBOX 2'-0" x 3'-0" x 26" D INSIDE DIMENSION PER SFPUC STANDARDS.
2. CONCRETE PULLBOX 2'-0" x 3'-0" x 3'-0" D INSIDE DIMENSIONS WITH H2O LOADING, ADJUSTABLE HEIGHT ALUMINUM COVER, TORSION ASSISTED WITH RECESSED PAD LOCKED PROVISIONS. PROVIDE 9" CONCRETE COLLAR AROUND PULLBOX WITH A #4 BAR CONTINUOUS REINFORCEMENT.
3. CONNECT TO SFPUC PRIMARY CONDUIT FROM JOINT TRENCH.
4. CONNECT TO AT&T AND DTIS CONDUITS FROM T5 AND D3 BOXES. SEE STREET IMPROVEMENTS PLANS FOR ADDITIONAL INFORMATION.

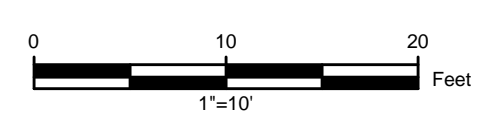


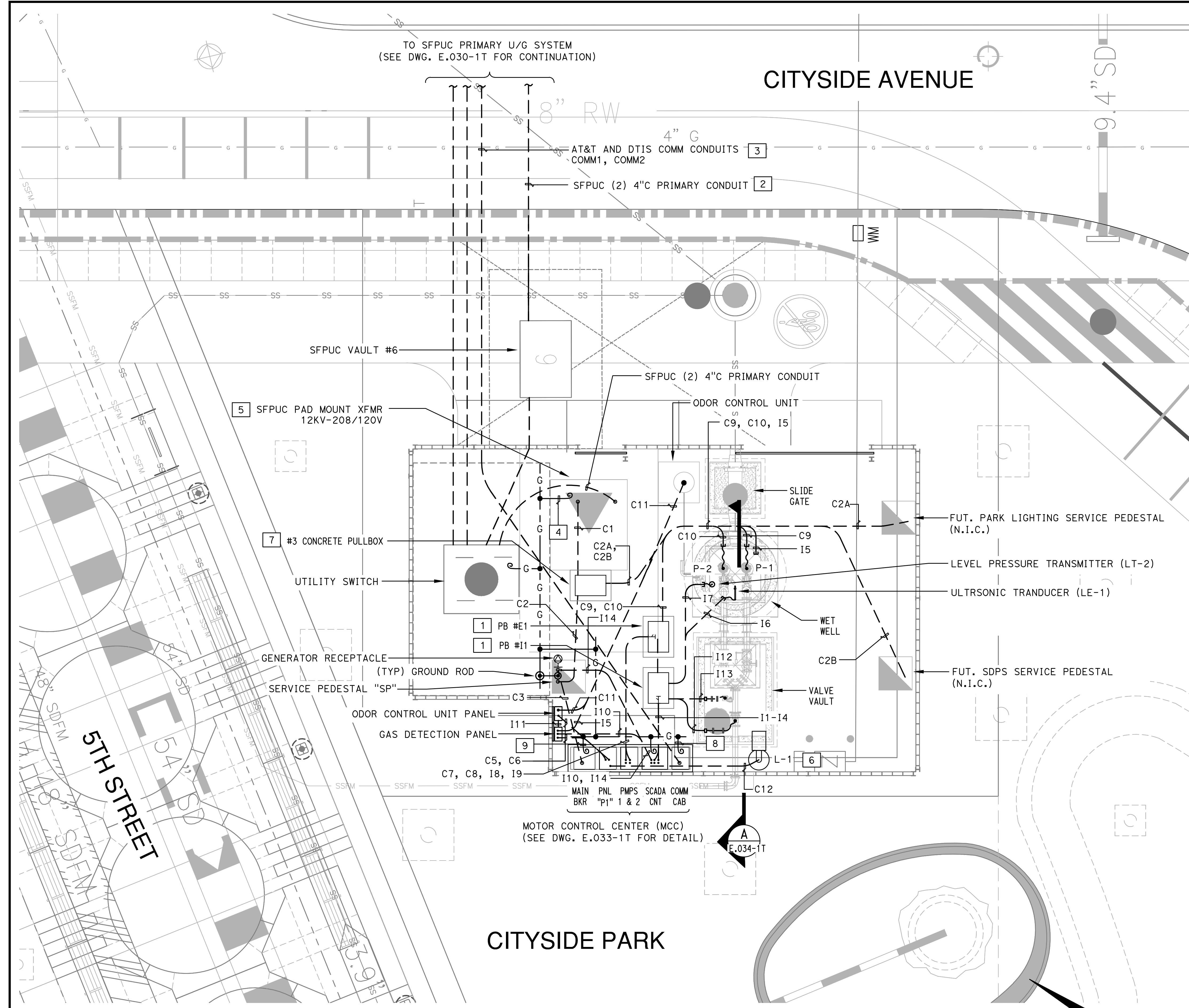
TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

**PUMP STATIONS
2ND SUBMITTAL
FOR REVIEW**

PKG.	JH	DATE	BY	DATE
PROJECT NO. 20140015-10		5/25/2018		
DRAWN BY: VM		REVISIONS		
		DESCRIPTION		

5TH STREET
SANITARY SEWER
PUMP STATION
ELECTRICAL
SITE PLAN
SHEET TITLE
SCALE 1" = 10'-0"
E.030-1T
28 OF 40
DRAWING NO.





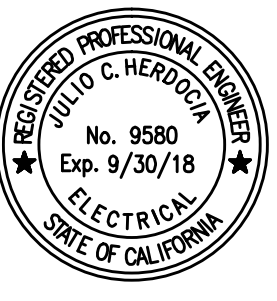
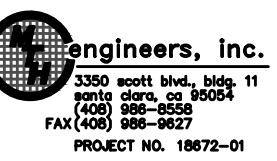
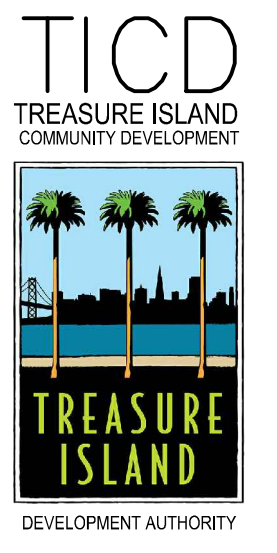
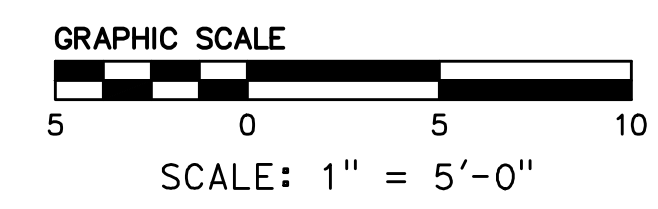
GENERAL NOTES

1. ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 EXCEPT AS OTHERWISE NOTED.
2. SEE ONE-LINE DIAGRAM FOR FEEDER SIZES.
3. FOR CONDUIT AND CIRCUIT SCHEDULE, SEE DWG. E.036-1T.

SHEET NOTES

1. CONCRETE PULLBOX 2'-0" x 3'-0" x 3'-0" D INSIDE DIMENSIONS WITH H2O LOADING, ADJUSTABLE HEIGHT ALUMINUM COVER, TORSION ASSISTED WITH RECESSED PAD LOCKED PROVISIONS. PROVIDE 9" CONCRETE COLLAR AROUND PULLBOX WITH A #4 BAR CONTINUOUS REINFORCEMENT.
2. CONNECT TO SFPUC PRIMARY CONDUIT FROM JOINT TRENCH.
3. CONNECT TO AT&T AND DTIS CONDUITS FROM T5 AND D3 BOXES. SEE STREET IMPROVEMENTS PLANS FOR ADDITIONAL INFORMATION.
4. SIZE CONDUCTOR PER SFPUC REQUIREMENTS.
5. PROVIDE PAD AND GROUNDING IN ACCORDANCE WITH SFPUC STANDARDS AND SPECIFICATIONS.
6. POLE MOUNTED LED LIGHT WITH PHOTOCELL CONTROL. SEE DETAIL 1 ON DWG. E.003-1T FOR LIGHT FIXTURE MOUNTING DETAIL.
7. INSTALL #3 CONCRETE PULLBOX 2'-0" x 3'-0" x 26" D INSIDE DIMENSIONS PER SFPUC STANDARD.
8. #6 AWG BCW SOLID.
9. #2 AWG BCW.

2 PUMP STATION - UNDERGROUND CONDUIT, GROUNDING, AND LIGHTING PLAN
SCALE: 1" = 5'-0"



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

**PUMP STATIONS
2ND SUBMITTAL
FOR REVIEW**

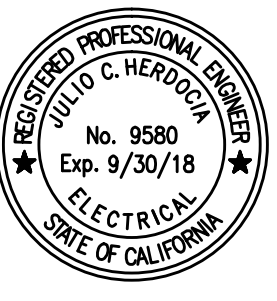
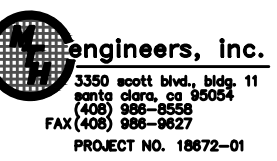
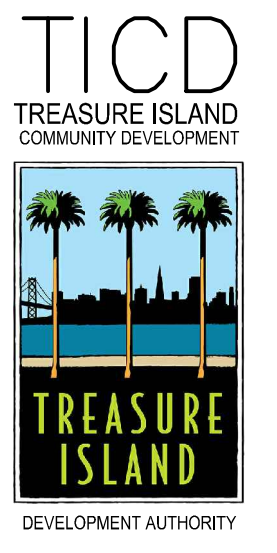
PKG.	JH	DATE	DATE
PROJECT NO. 20140015-10		5/25/2018	
DRAWN BY: VMI	REVISIONS	BY	DATE
	DESCRIPTION		

5TH STREET
SANITARY SEWER
PUMP STATION
UNDERGROUND
CONDUIT, GROUNDING,
AND LIGHTING PLAN
SHEET TITLE
SCALE 1" = 5'-0"

E.032-1T
30 OF 40
DRAWING NO.

SHEET NOTES

- 1 FLYGT MINICAS (FURNISHED BY PUMP MANUFACTURER).



LICENSE STAMP

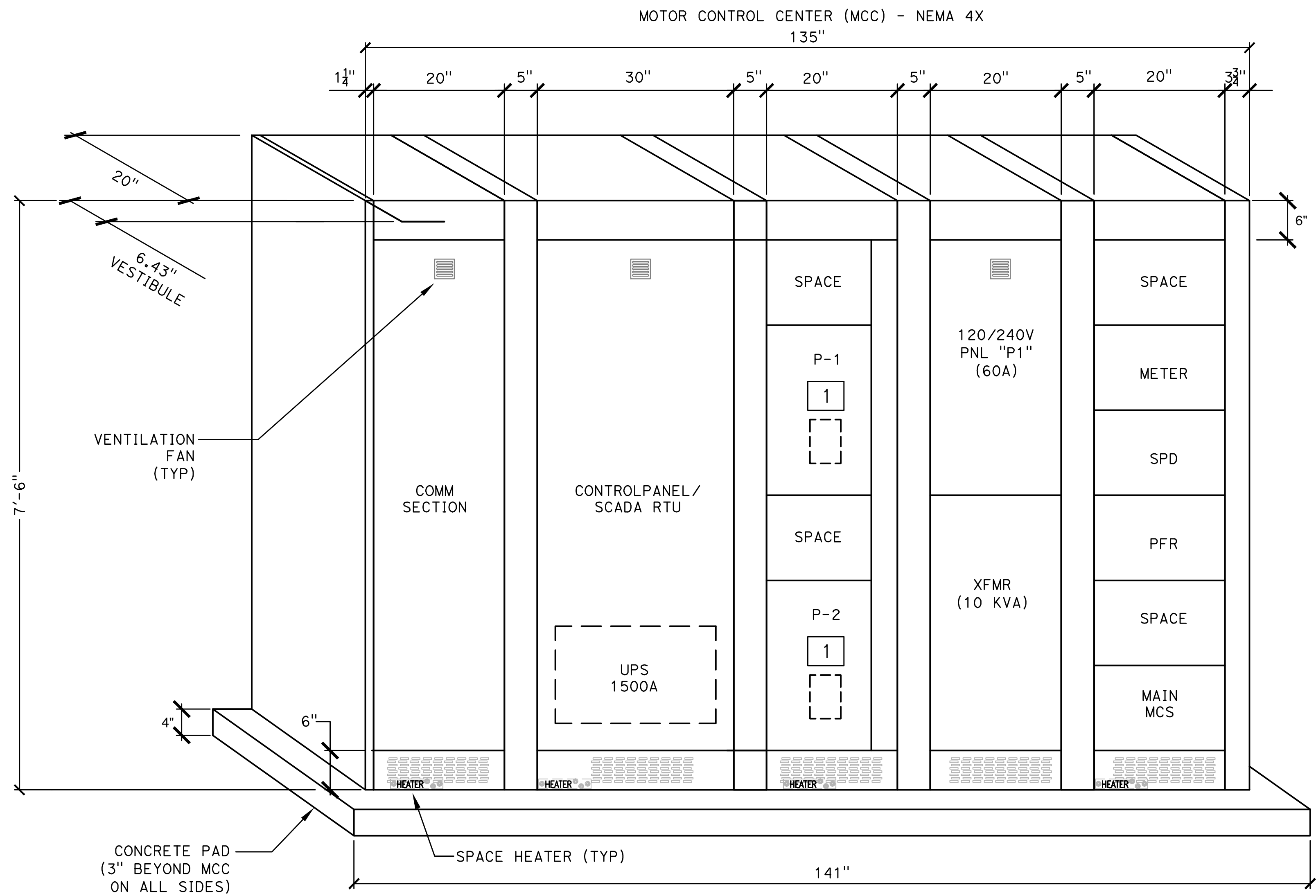
TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 COUNTY OF SAN FRANCISCO CALIFORNIA 94130
 CITY OF SAN FRANCISCO

PUMP STATIONS
 2ND SUBMITTAL FOR REVIEW

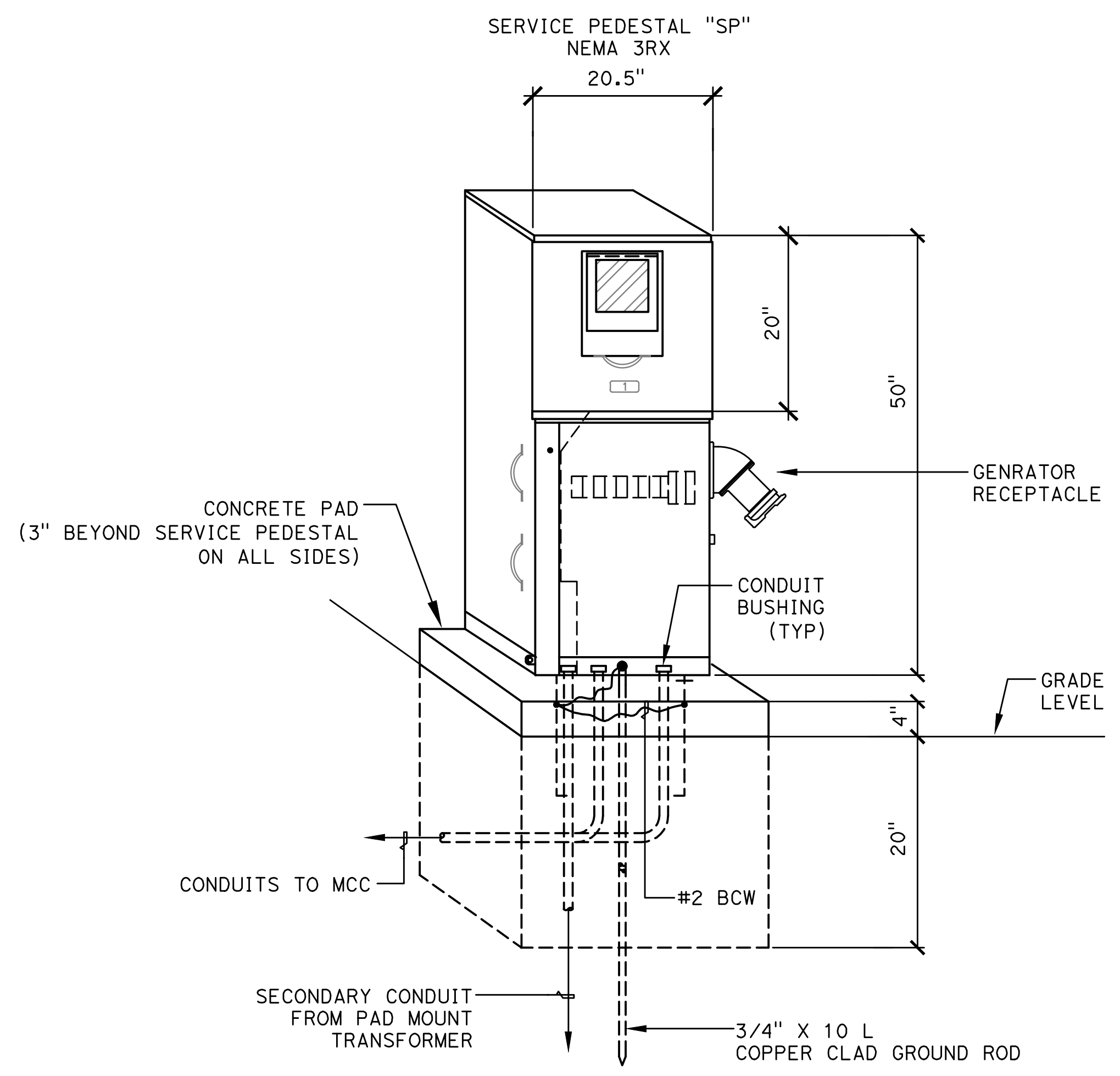
PKG	JH	DATE	5/25/2018
PROJECT NO.	20140015-10	REVISIONS	
DRAWN BY	VM	DESCRIPTION	
NO.			

5TH STREET
 SANITARY SEWER
 PUMP STATION
 MOTOR CONTROL CENTER
 (MCC) AND SERVICE
 PEDESTAL ELEVATIONS
 SHEET TITLE

SCALE NONE
E.033-1T
 31 OF 40
 DRAWING NO.



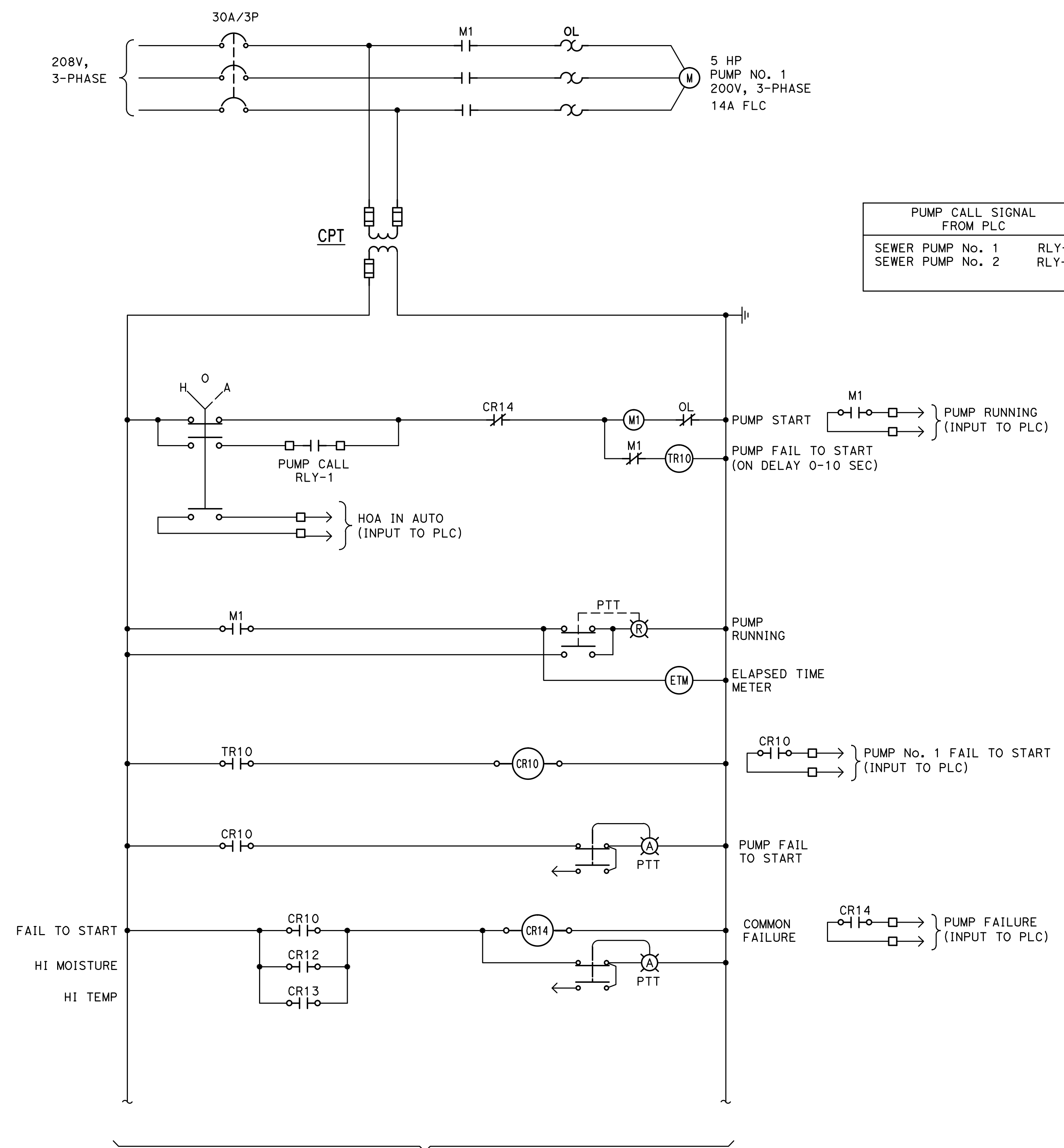
1 MOTOR CONTROL CENTER (MCC) ELEVATION
 (SHOWN WITH OUTER DOORS REMOVED)



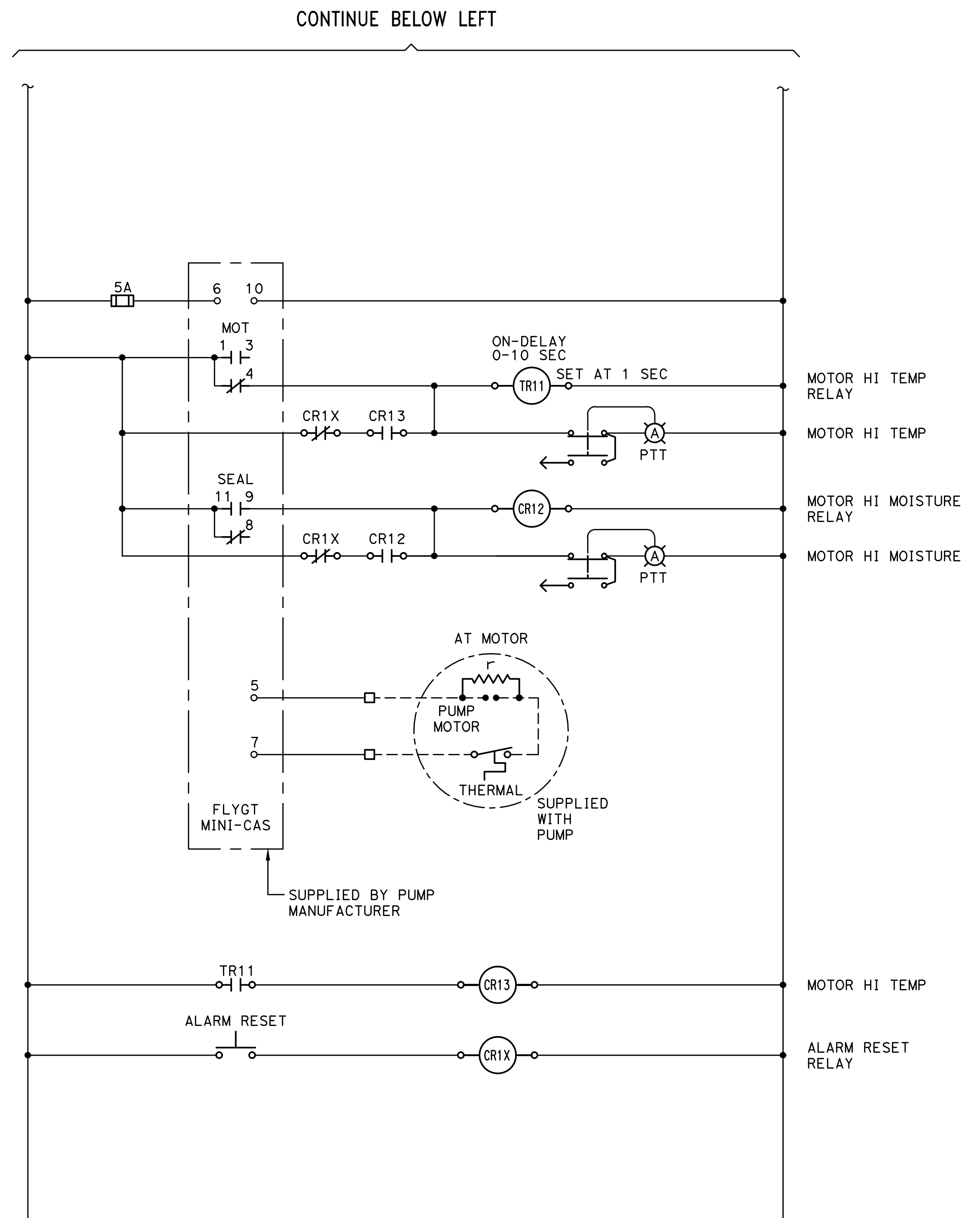
2 SERVICE PEDESTAL DETAIL



NOT FOR CONSTRUCTION



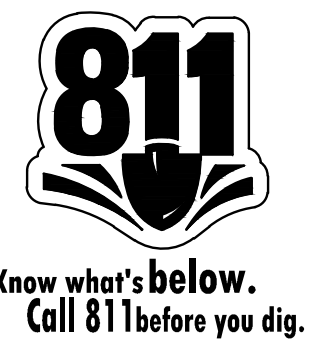
PUMP CALL SIGNAL FROM PLC	
SEWER PUMP No. 1	RLY-1
SEWER PUMP No. 2	RLY-2



CONTINUE ABOVE RIGHT

CONTINUE BELOW LEFT

PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
(SIMILAR FOR PUMP No. 2)



TICD
TREASURE ISLAND
COMMUNITY DEVELOPMENT

TREASURE ISLAND
DEVELOPMENT AUTHORITY

BKF
Business/Professional Planning
200 SHORELINE DR., SUITE 200
REDWOOD CITY, CA 94065
650-482-8300
650-482-8399 (FAX)

Engineers, Inc.
2300 north Blvd, Box 11
San Jose, CA 95131
(408) 298-2828
(408) 298-2827
PROJECT NO. 18872-01

REGISTERED PROFESSIONAL ENGINEER
No. 9580
Exp. 9/30/18
ELECTRICAL
STATE OF CALIFORNIA

LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PKG.	JH	DATE	REVISIONS	DATE
PROJECT NO. 20140015-10	DATE: 5/25/2018	BY:	DESCRIPTION:	
DRAWN BY: VM				

5TH STREET
SANITARY SEWER
PUMP STATION
PUMP No. 1
CONTROL SCHEMATIC
DIAGRAM
SHEET TITLE
SCALE NONE

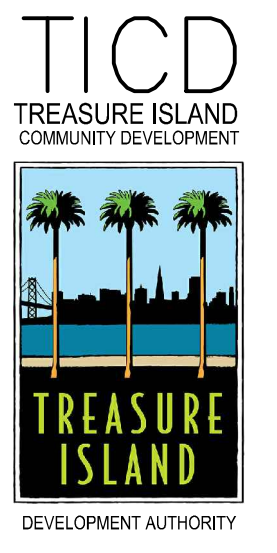
E.035-1T
33 OF 40
DRAWING NO.

CONDUIT AND CIRCUIT SCHEDULE										
RACEWAY DATA			CABLE DATA							
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
C1	SFPUC XRMR	#3 PULL BOX	PVC	5"	-	-	-	-	-	SERVICE FROM SFPUC
C2	#3 PULL BOX	SERVICE PEDESTAL "SP"	PVC	3"	-	-	-	-	-	SECONDARY SERVICE FROM SFPUC
C2A	#3 PULL BOX	FUT. PARKS LIGHTING SERVICE PEDESTAL	PVC	3"	-	-	-	-	-	(EMPTY COUIT)
C2B	#3 PULL BOX	FUT. STORM DRAIN PS SERVICE PEDESTAL	PVC	3"	-	-	-	-	-	(EMPTY COUIT)
C3	SERVICE PEDESTAL "SP"	MCC / MCS BKR	PVC	3"	XHHW-2	3	#2	#8	600	UTILITY POWER
C4										NOT USED
C5	MCC / PANEL "P1"	OCU CONTROL PANEL	PVC/RSC	1"	XHHW-2	2	#10	#10	600	FEEDER TO ODOR CONTROL UNIT
C6	MCC / PANEL "P1"	GAS DETECTION PANEL	PVC/RSC	1"	XHHW-2	2	#10	#10	600	FEEDER GAS DETECTION PANEL
C7	MCC / PUMP P-1 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	3	#10	#10	600	PUMP P-1 POWER
C8	MCC / PUMP P-2 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	3	#10	#10	600	PUMP P-2 POWER
C9	PB #E1	PUMP P-1	PVC	3"		1				MFR SUPPLIED CABLE PUMP P-1 POWER AND MONITORING
C10	PB #E1	PUMP P-2	PVC	3"		1				MFR SUPPLIED CABLE PUMP P-2 POWER AND MONITORING
C11	OCU CONTROL PANEL	ODOR CONTROL UNIT	PVC/RSC/FLEX	1"	XHHW-2	2	#10	#10	600	FEEDER TO ODOR CONTROL UNIT
C12	MCC / PANEL "P1"	OUTDOOR LIGHT "L-1"	PVC	1"	XHHW-2	2	#10	#10	600	FEEDER TO LIGHT POLE "L-1"

CONDUIT AND CIRCUIT SCHEDULE										
RACEWAY DATA			CABLE DATA							
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
I1	MCC CONTROL/SCADA SECTION	PB #I1	PVC/RSC	1 1/2"		1				MFR SUPPLIED CABLE ULTRASONIC LEVEL XDCR LE-1
I2	MCC CONTROL/SCADA SECTION	PB #I1	PVC/RSC	1 1/2"		1				MFR SUPPLIED CABLE PRESSURE LEVEL TRANSMITTER LT-2 4-20mA SIGNAL
I3	MCC CONTROL/SCADA SECTION	PB #I1	PVC/RSC	1"	TSP	1	#20	#14	300	FE-1 SIGNAL
					TSP	1	#14		600	FE-1 COIL DRIVE
I4	MCC CONTROL/SCADA SECTION	PB #I1	PVC/RSC	1"	TSP	1	#16		600	PIT-1 SIGNAL 4-20mA
I5	WET WELL	GAS DETECTION PANEL	PVC/RSC	1"		2				MFR SUPPLIED TUBING GAS SAMPLING TUBES
I6	PB #I1	ULTRASONIC LVL XDCR LE-1	PVC	1 1/2"		1				MFR SUPPLIED CABLE ULTRASONIC LEVEL XDCR LE-1
I7	PB #I1	PRESSURE LEVEL XMTR LT-2	PVC	1 1/2"		1				MFR SUPPLIED CABLE PRESSURE LEVEL TRANSMITTER LT-2
I8	MCC / PUMP P-1 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-1 MONITORING
I9	MCC / PUMP P-2 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-2 MONITORING
I10	MCC CONTROL/SCADA SECTION	GAS DETECTION PANEL	PVC/RSC	1"	XHHW-2	4	#14	#14	600	ALARM GAS DETECTION PANEL
I11	ODOR CONTROL UNIT	GAS DETECTION PANEL	RSC	3/4"	XHHW-2	2	#14	#14	600	OCU CONTROL INTERLOCK
I12	PB #I1	FLOW METER FE-1 (VIA NEMA 4X BOX)	PVC/RSC/FLEX	1"	TSP	1	#20	#14	300	FE-1 SIGNAL
					TSP	1	#14		600	FE-1 COIL DRIVE
I13	PB #I1	PRESSURE TRANSMITTER PIT-1 (VIA NEMA 4X BOX)	PVC/RSC/FLEX	1"	TSP	1	#16		600	PIT-1 SIGNAL 4-20mA
I14	MCC CONTROL/SCADA SECTION	SERVICE PEDESTAL "SP"	PVC	1"	XHHW-2	4	#14	#14	600	BREAKERS STATUS
COMM1	PB D3	MCC/COMMUNICATION SECTION	PVC	4"						SFPUC DTIS TELEPHONE SERVICE
COMM2	PB T5	MCC/COMMUNICATION SECTION	PVC	4"						AT&T ASE LINE



Know what's below.
Call 811 before you dig.



Engineers, Inc.
2300 North Blvd, Suite 11
Redwood City, CA 94063
415-962-8000
415-962-8001
FAX 415-962-8001
PROJECT NO. 18872-01



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
TREASURE ISLAND
PUMP STATION IMPROVEMENTS
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

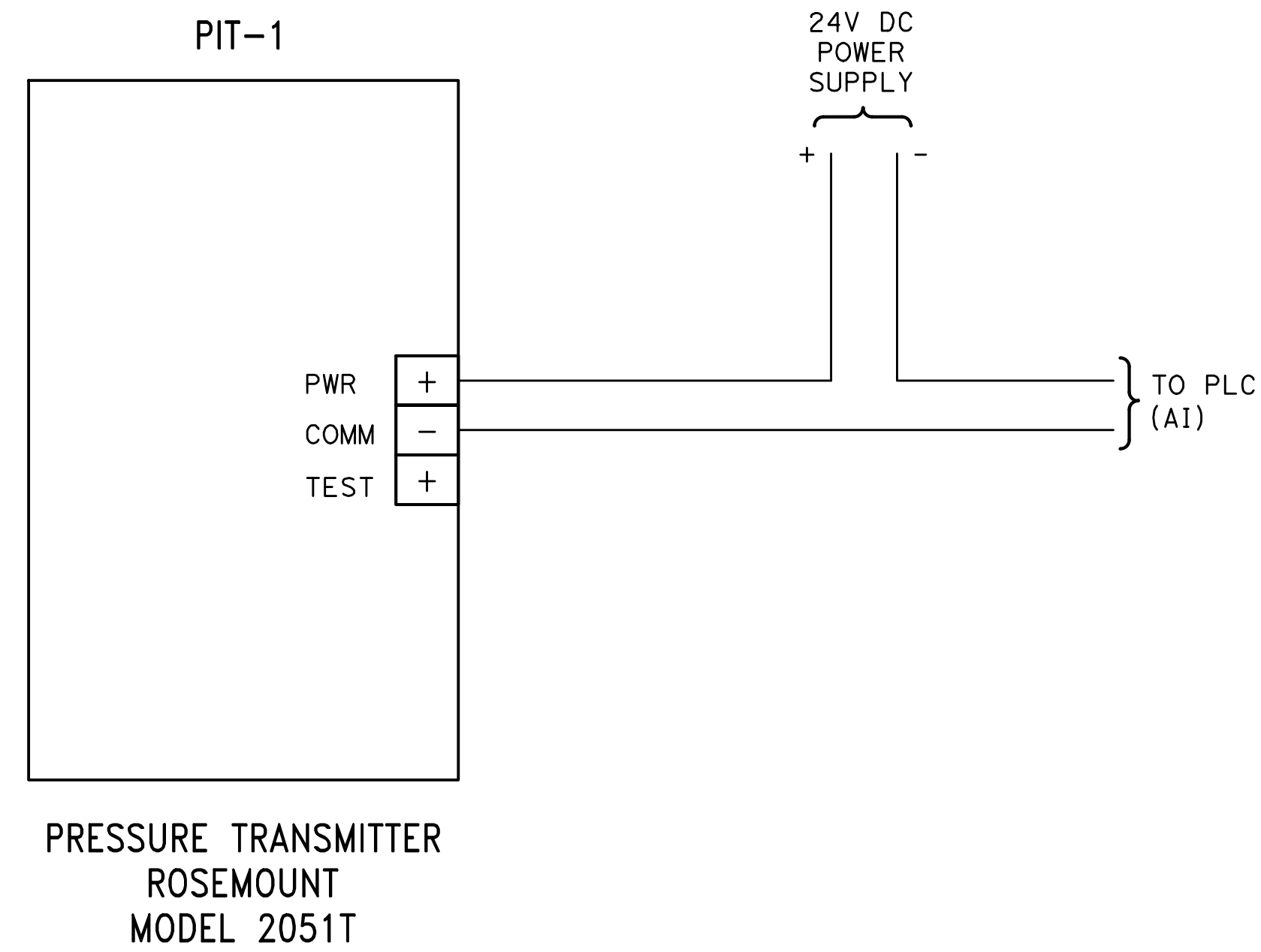
PROJECT NO. 20140015-10	DATE: 5/25/2018	DATE
DRAWN BY: VM	REVISIONS	BY
	DESCRIPTION	

5TH STREET
SANITARY SEWER
PUMP STATION
CONDUIT AND
CIRCUIT SCHEDULE

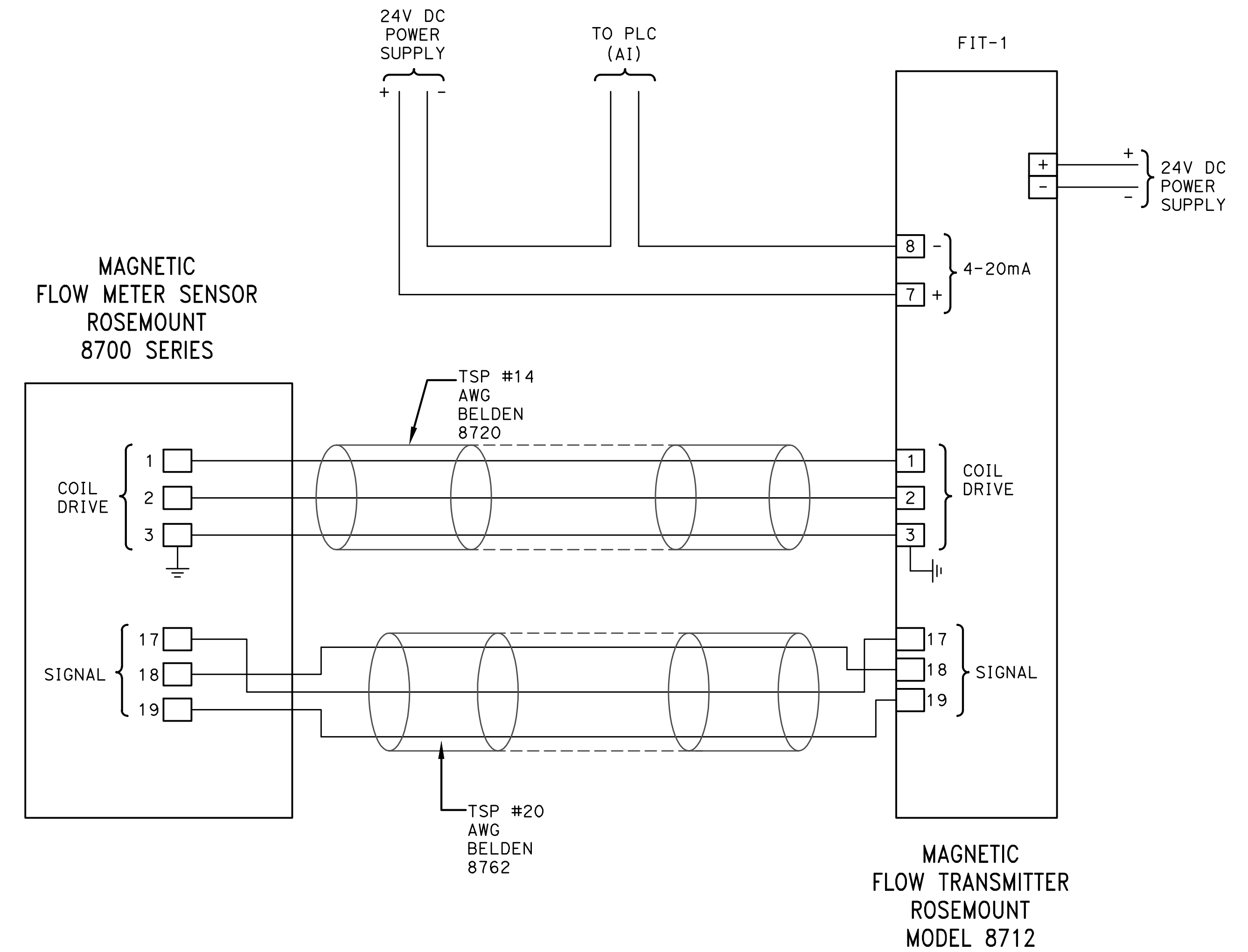
SHEET TITLE
SCALE NONE

E.036-1T

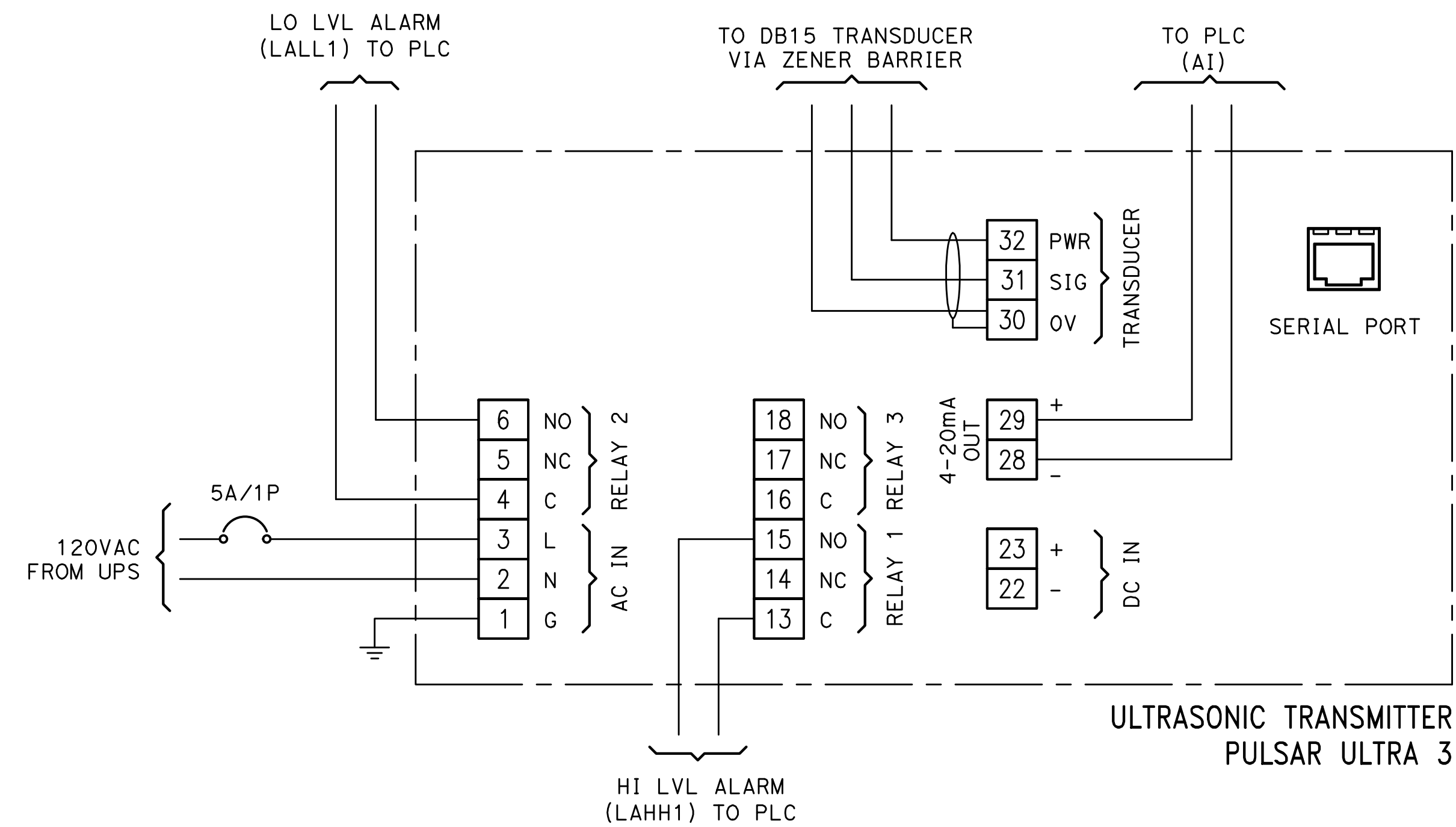
34 OF 40
DRAWING NO.



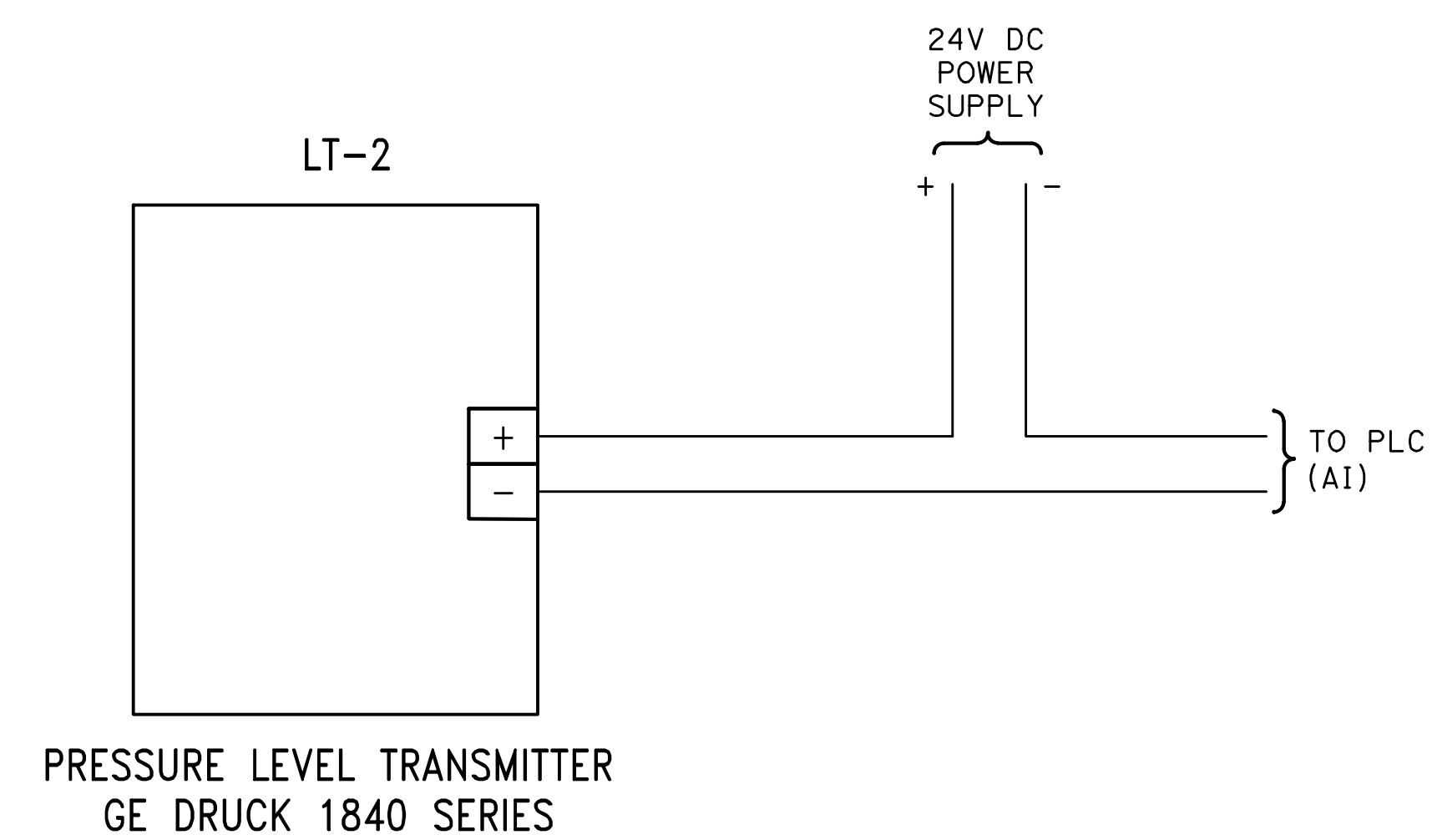
PRESSURE TRANSMITTER PIT-1 SCHEMATIC



FLOW TRANSMITTER FIT-1 SCHEMATIC



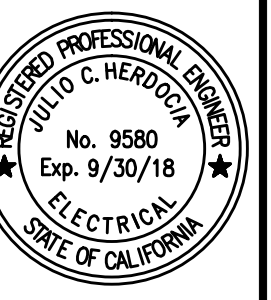
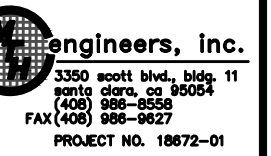
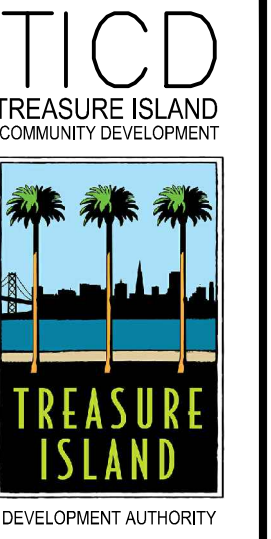
WET WELL - ULTRASONIC LEVEL TRANSMITTER (LIT-1)



WET WELL PRESSURE LEVEL TRANSMITTER (LT-2)



Know what's below.
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 2ND SUBMITTAL FOR REVIEW

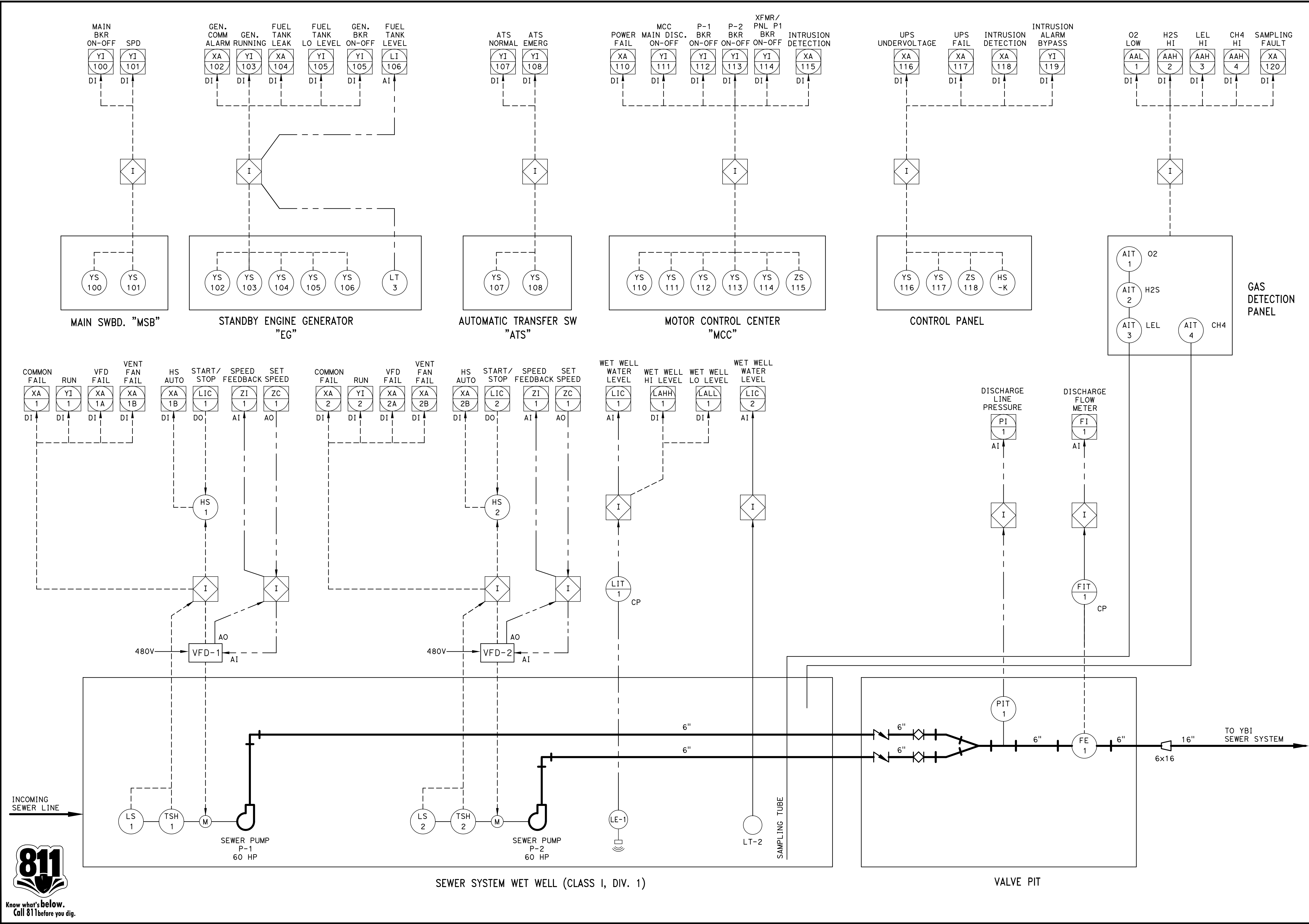
PKG.	JH	DATE	DESCRIPTION	BY	DATE
PROJECT NO. 20140015-10		5/25/2018			
DRAWN BY: VM					
NO.					

4TH & 5TH STREET
 SANITARY SEWER
 PUMP STATION
 PRESSURE, FLOW,
 LEVEL TRANSMITTERS
 SCHEMATIC DIAGRAM
 SHEET TITLE

SCALE NONE

I.001-1T

36 OF 40
 DRAWING NO.



TICD
TREASURE ISLAND
COMMUNITY DEVELOPMENT
AUTHORITY

BKF
Business/Professional Planning
200 SHORELINE DR., SUITE 200
REDWOOD CITY, CA 94065
650-482-8300
650-482-8399 (FAX)

Engineers, Inc.
2300 north Blvd., Suite 11
Redwood City, CA 94061
(415) 881-2222
FAX (415) 881-2222
PROJECT NO. 18872-01

REGISTERED PROFESSIONAL ENGINEER
JULIO C. HERRERA
No. 9580
Exp. 9/30/18
ELECTRICAL
STATE OF CALIFORNIA

LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL
FOR REVIEW

PKG.	JH	DATE	REVISIONS	DATE
20140015-10	VM	5/25/2018		
DESCRIPTION				

PROJECT NO. 20140015-10
DRAWN BY: VM
NO.

4TH STREET
SANITARY SEWER
PUMP STATION
PROCESS AND
INSTRUMENTATION
DIAGRAM
SHEET TITLE
SCALE NONE

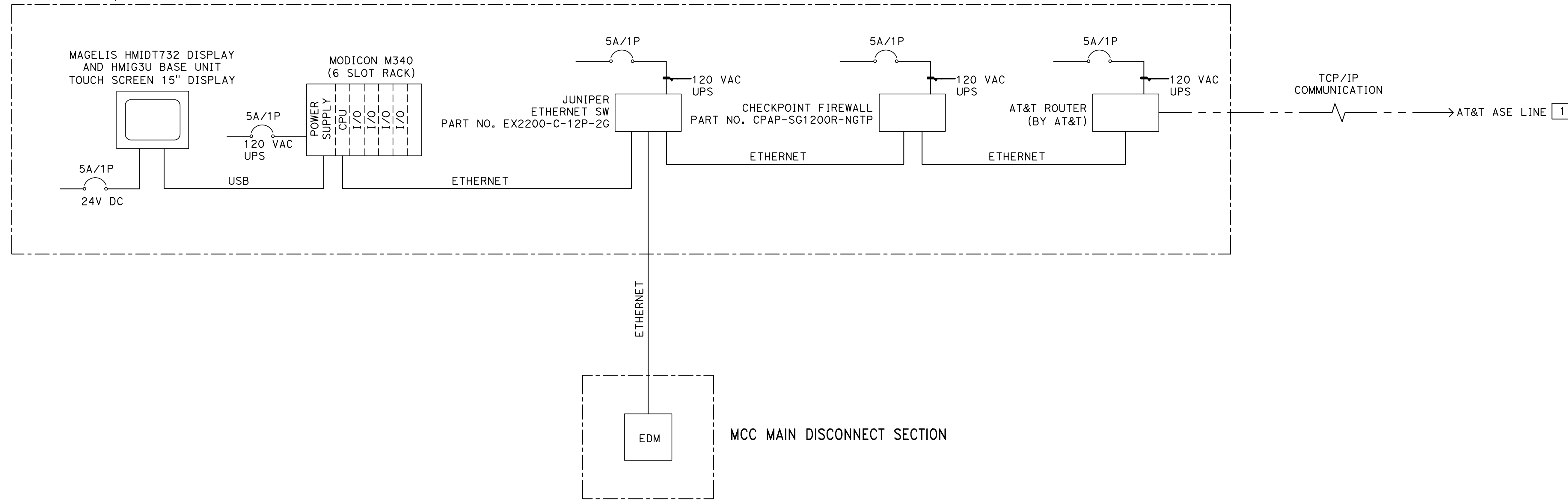
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37 OF 40
DRAWING NO.



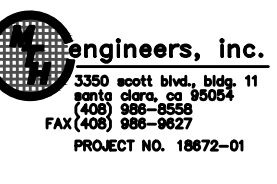
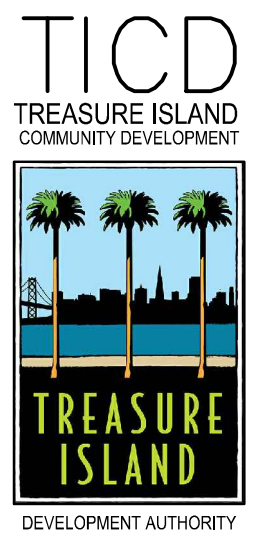
SHEET NOTES:

1 CONTRACTOR TO COORDINATE WITH THE PHONE COMPANY.

MCC CONTROL / SCADA SECTION



1 PLC/SCADA SYSTEM BLOCK DIAGRAM
SCHEMATIC



LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PKG	JH	DATE	REVISIONS	BY	DATE
PROJECT NO. 20140015-10		5/25/2018			
DRAWN BY: VM					
NO.					

4TH STREET
SANITARY SEWER
PUMP STATION
PLC / SCADA SYSTEM
BLOCK DIAGRAM

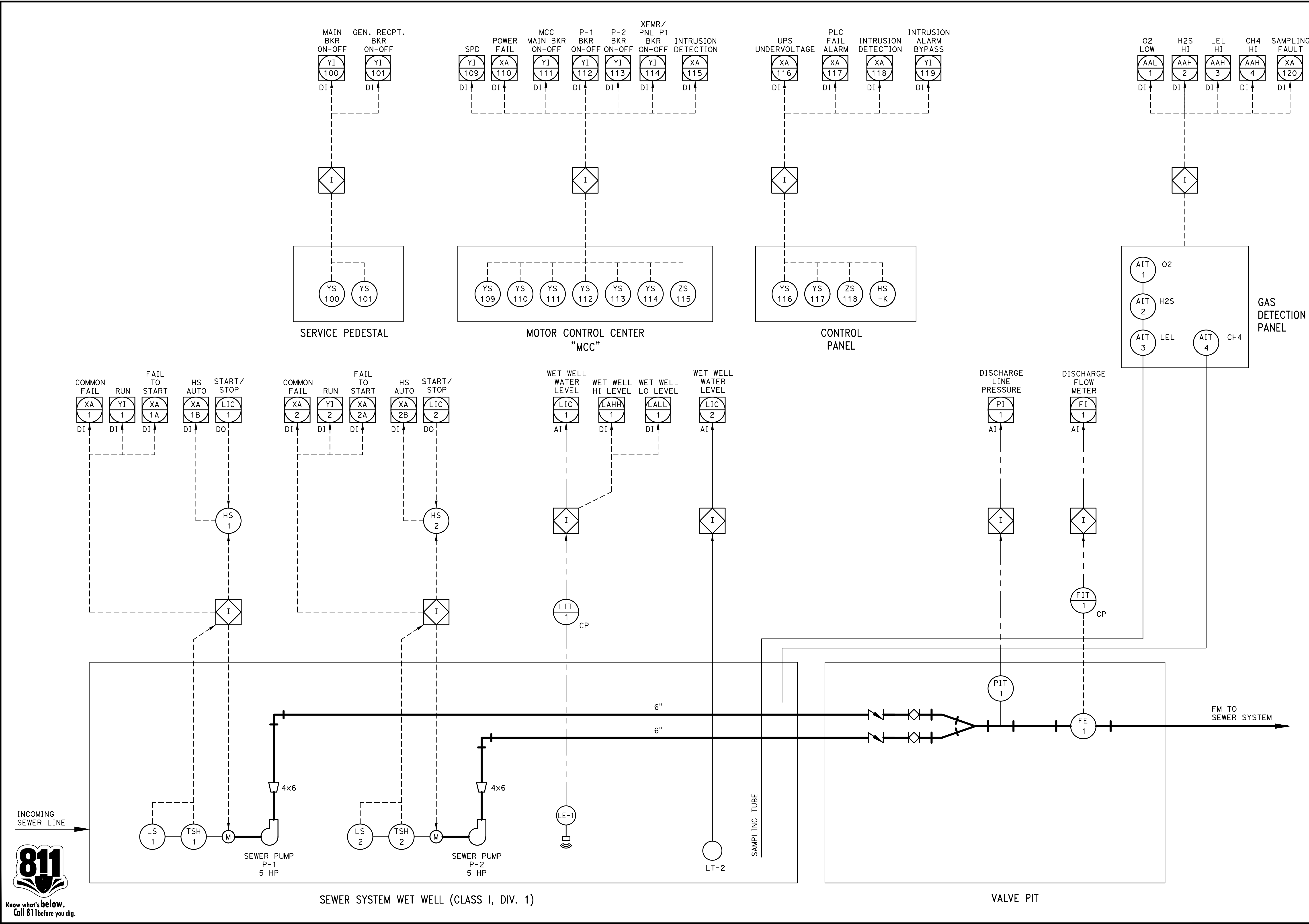
SHEET TITLE
SCALE NONE

I.021-1T
38 OF 40

DRAWING NO.



NOT FOR CONSTRUCTION



SERVICE PEDESTAL

MOTOR CONTROL CENTER "MCC"

CONTROL PANEL

GAS DETECTION PANEL

SEWER SYSTEM WET WELL (CLASS I, DIV. 1)

VALVE PIT



TICD
TREASURE ISLAND
COMMUNITY DEVELOPMENT
DEVELOPMENT AUTHORITY

BKF
Business/Professional Planning
200 SHORELINE DR., SUITE 200
REDWOOD CITY, CA 94065
650-482-8300
650-482-8399 (FAX)

Engineers, Inc.
2300 north Blvd., Room 11
San Jose, CA 95131
(408) 298-2828
(408) 298-2827
FAX (408) 298-2827
PROJECT NO. 18872-01

PROFESSIONAL ENGINEER
REGISTERED UNDER THE STATE OF CALIFORNIA
No. 9580
Exp. 9/30/18
ELECTRICAL

LICENSE STAMP

TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
PUMP STATION IMPROVEMENTS**
CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

PUMP STATIONS
2ND SUBMITTAL FOR REVIEW

PK#	JH	DATE	REVISIONS	BY	DATE
20140015-10	VM	5/25/2018			

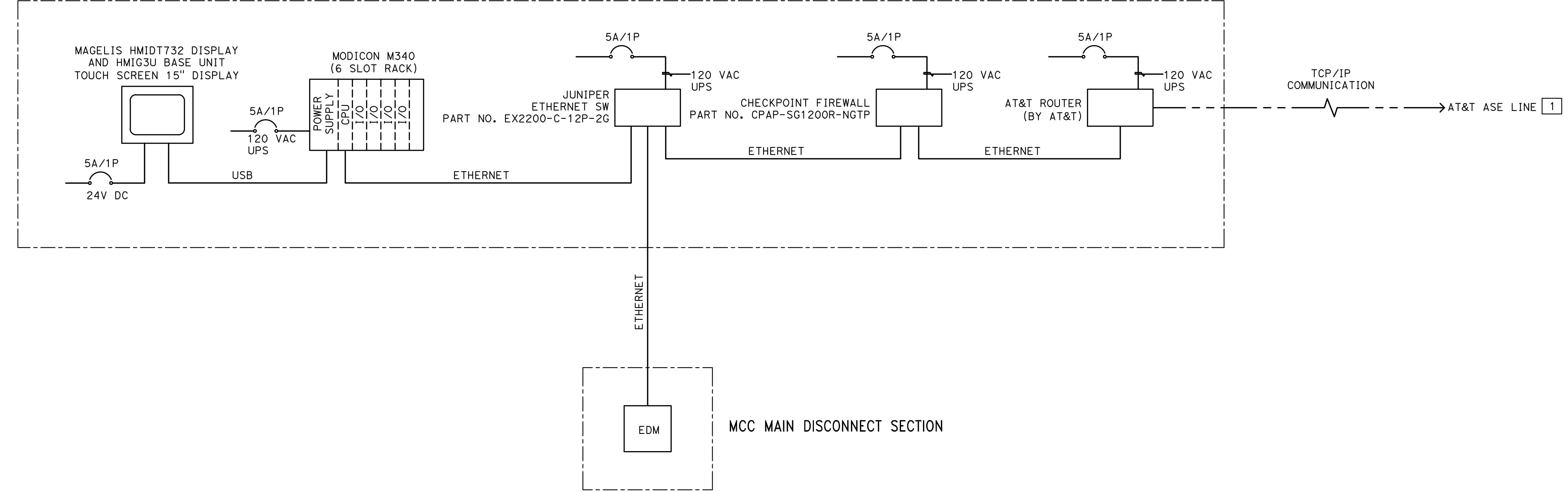
PROJECT NO. 20140015-10
DRAWN BY: VM
INSTRUMENTATION DIAGRAM SHEET TITLE
SCALE NONE

5TH STREET
SANITARY SEWER
PUMP STATION
PROCESS AND
INSTRUMENTATION
DIAGRAM
SHEET TITLE
SCALE NONE

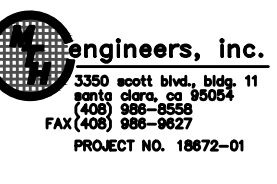
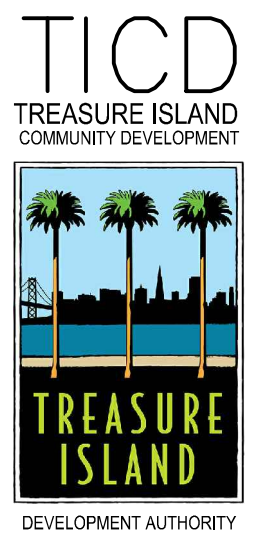
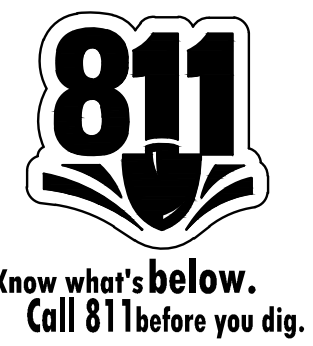
1.030-1T
39 OF 40
DRAWING NO.

SHEET NOTES:
 1 CONTRACTOR TO COORDINATE WITH THE PHONE COMPANY.

MCC CONTROL / SCADA SECTION



1 PLC/SCADA SYSTEM BLOCK DIAGRAM
 SCHEMATIC



TREASURE ISLAND DEVELOPMENT AUTHORITY
**TREASURE ISLAND
 PUMP STATION IMPROVEMENTS**
 CITY OF SAN FRANCISCO COUNTY OF SAN FRANCISCO CALIFORNIA 94130

**PUMP STATIONS
 2ND SUBMITTAL
 FOR REVIEW**

PKG.	JH	DATE	REVISIONS	DATE
PROJECT NO. 20140015-10		5/25/2018		
DRAWN BY: VM			DESCRIPTION	
NO.				

5TH STREET
 SANITARY SEWER
 PUMP STATION
 PLC / SCADA
 SYSTEM BLOCK
 DIAGRAM
 SHEET TITLE

SCALE NONE
1.031-1T
 40 OF 40
 DRAWING NO.