

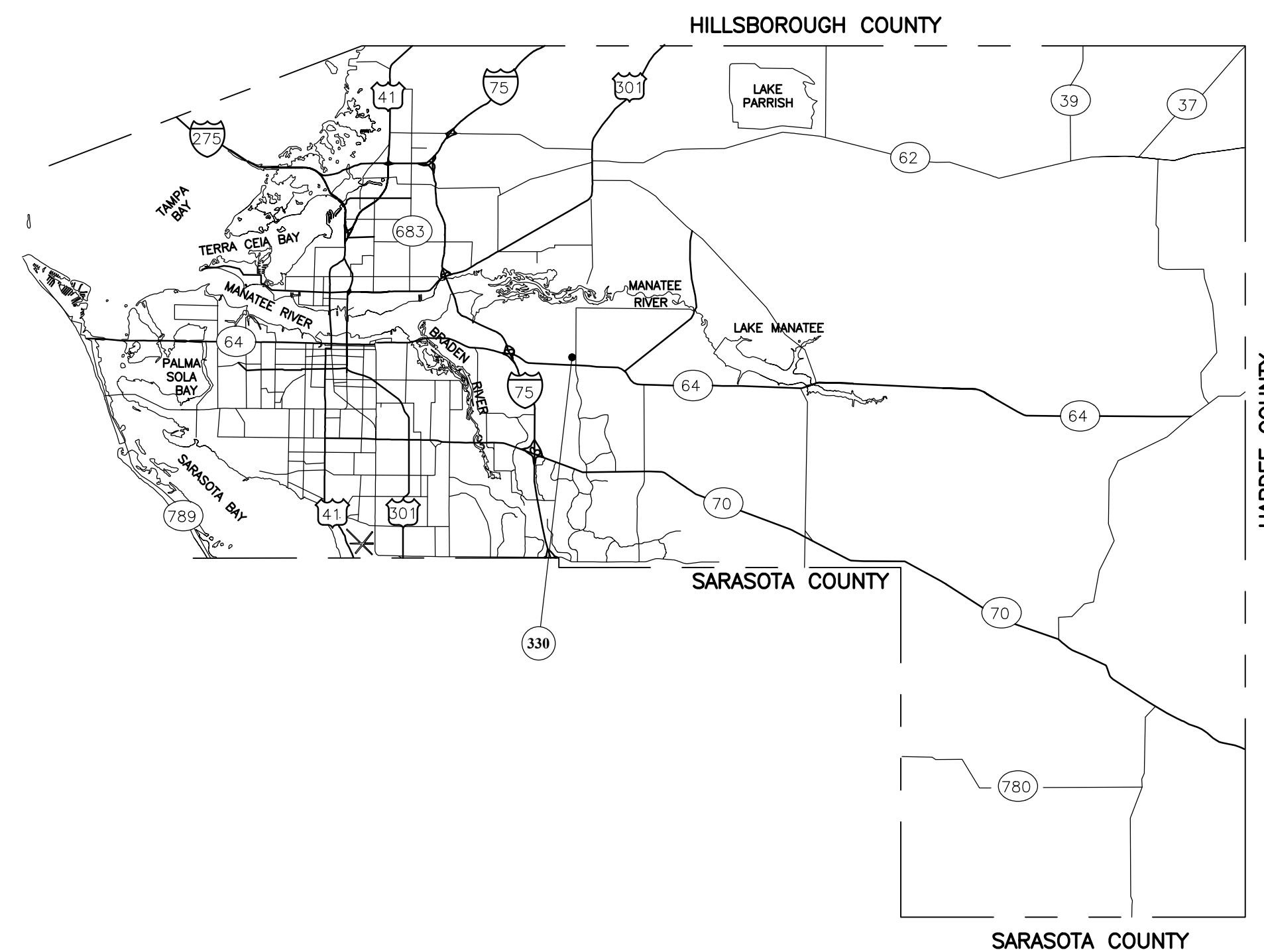


SATELLITE LIFT STATION R&R SLS UPPER MANATEE RIVER ROAD (UMRR) 6117680

March 2024

BID PLANS

L.S. NAME	RTU	ADDRESS	INFLUENT MH
UPPER MANATEE RIVER ROAD	330	1010 UPPER MANATEE RIVER RD., BRADENTON	PUBLIC



NO.	INDEX OF SHEETS
01	COVER
02	GENERAL NOTES & LEGEND
03	VICINITY MAP
04	UMRR REHABILITATION PLAN
05	UMRR SITE PLAN (REHAB)
06	DETAILS
07	DETAILS
08	DETAILS
09	EROSION CONTROL DETAILS

PROJECT DESCRIPTION

REHABILITATE SEWAGE LIFT STATIONS (AND/OR MANHOLES) TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, UPGRADE OR FULL REPLACEMENT OF THE ELECTRICAL CONTROL EQUIPMENT, WET WELL CLEANING, THE REPLACEMENT OF DISCHARGE PIPING, FITTINGS, VALVES, SWING CHECK VALVES, GUIDE RAILS, PIPE BRACINGS, BASE ELLS, AND/OR MOUNTING PLATES. EXISTING WET WELL LINER SHALL BE REMOVED AND REPLACED.

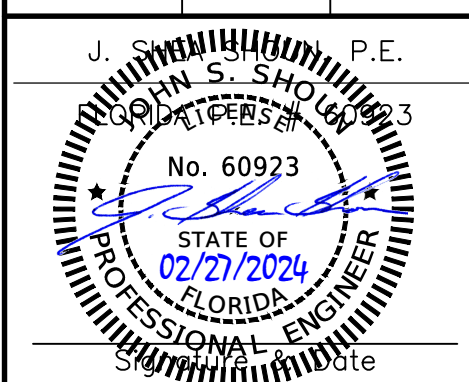


Know what's below
Call before you dig

**SLS UPPER MANATEE RIVER ROAD
1010 UPPER MANATEE RIVER ROAD
COVER**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	N.T.S.
BY	DATE
SURVEYED	NA NA
DESIGNED	JSS 2/22
DRAWN	JKW 2/22
CHECKED	JSS -



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PROJECT SITE

UPPER MANATEE RIVER ROAD, RTU 330
 1010 UPPER MANATEE RIVER ROAD, BRADENTON
 27.488927° N (LAT.)
 82.433945° W (LONG.)

- NOTE(S):
1. LIFT STATION SITE VISITS MAY BE COORDINATED WITH ERIK GIBSON, 941-792-8811 x5377.
 2. DATA ON THE COUNTY'S UTILITY INFRASTRUCTURE MAY BE RESEARCHED AND VIEWED BY UTILIZING THE PUBLIC ACCESS TO THE COUNTY'S GIS SYSTEM. USE AN INTERNET BROWSER AND ENTER THE FOLLOWING URL, "https://www.mymanatee.org/gisapps/mobile/index.html?type=utilities-public".

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R
 SLS UPPER MANATEE RIVER ROAD
 1010 UPPER MANATEE RIVER ROAD
 VICINITY MAP**



PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 2/22
DRAWN	JKW 2/22
CHECKED	JSS -

J. SHEA SHOUN, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

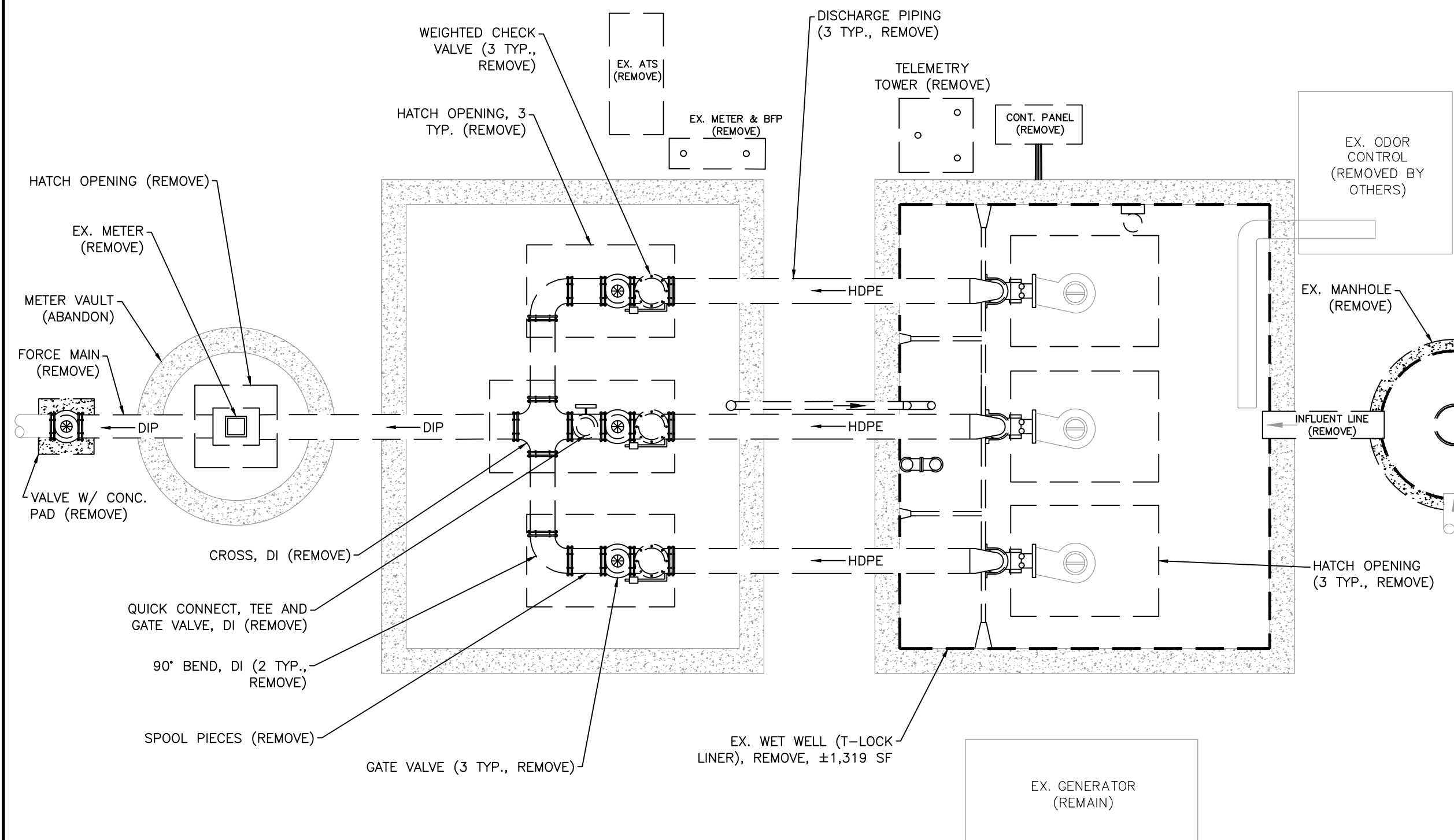
SHEET 03 OF 09

I:\Users\design\PROJ\sum swr - 18 upgrade\vis 16r umrr\DWG\SLS R&R UPPER MANATEE RIVER 1010.dwg, UC=MAP, 2/22/2024 11:33 AM Shea Shoun, P.E. ANS ILL Sheet D (34.00 x 22.00 inches), UC=2018.SIS

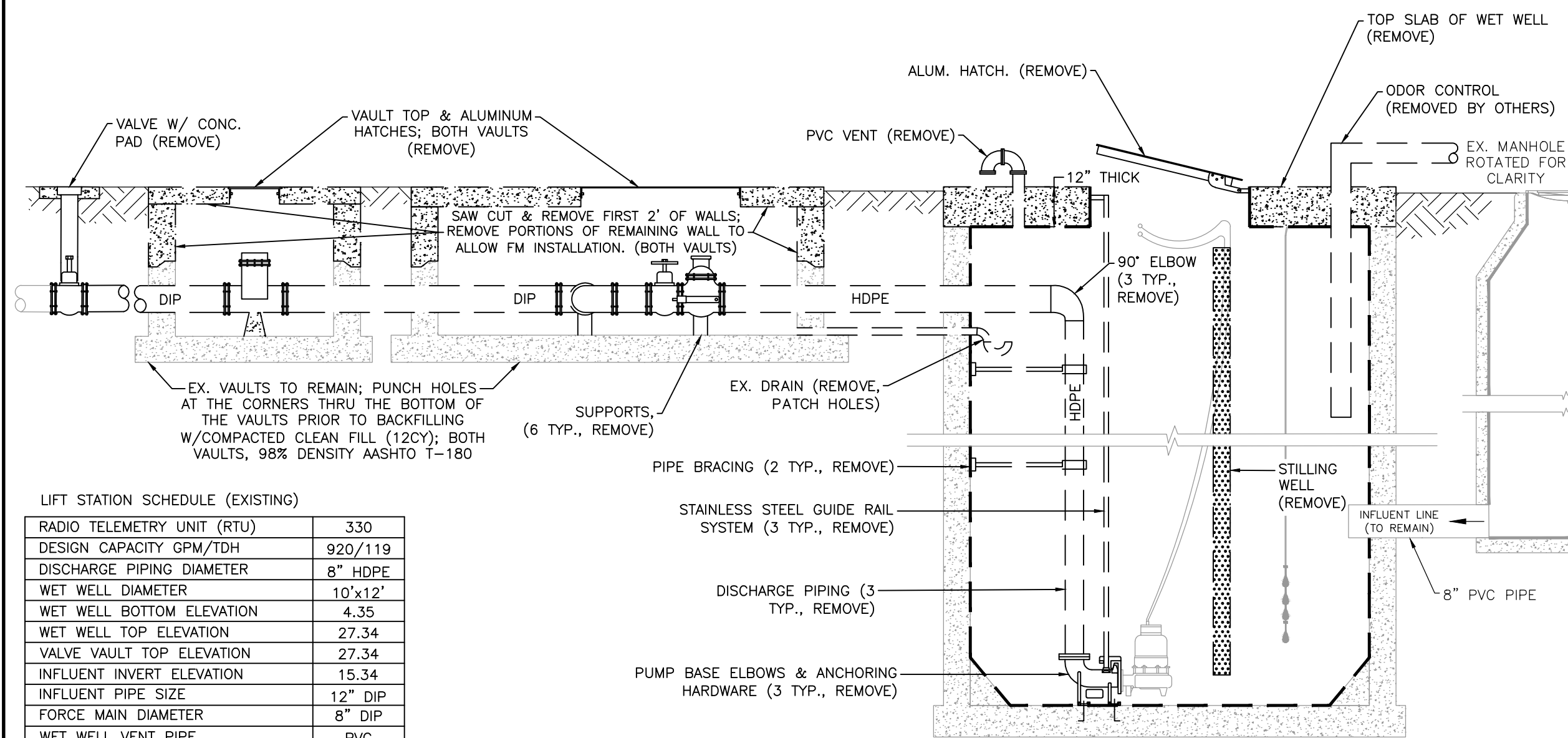
EXISTING

NOTES:

- THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
- REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR.
- BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
- THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION
NTS
ITEMS MAY BE ROTATED FOR CLARITY

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	330
DESIGN CAPACITY GPM/TDH	920/119
DISCHARGE PIPING DIAMETER	8" HDPE
WET WELL DIAMETER	10'x12'
WET WELL BOTTOM ELEVATION	4.35
WET WELL TOP ELEVATION	27.34
VALVE VAULT TOP ELEVATION	27.34
INFLUENT INVERT ELEVATION	15.34
INFLUENT PIPE SIZE	12" DIP
FORCE MAIN DIAMETER	8" DIP
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	480/3
ELECT. SERVICE SIZE, AMPS	200
PUMP TYPE, HORSE POWER	HYDROMATIC/30
EX. FORCE MAIN TIE-IN	FM
FLOOD ZONE	X

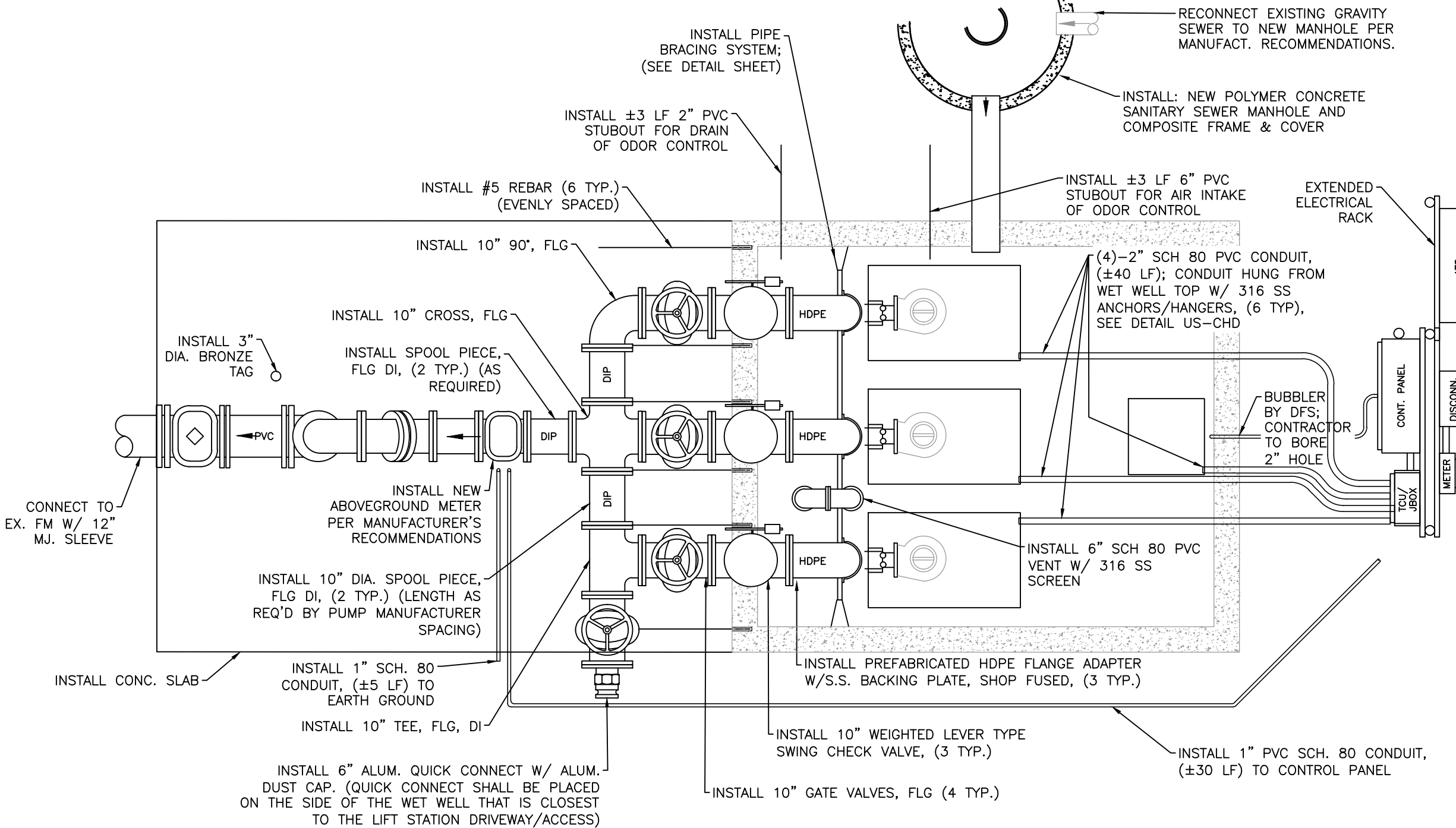
* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

NO.	REVISION DESCRIPTION	BY	DATE

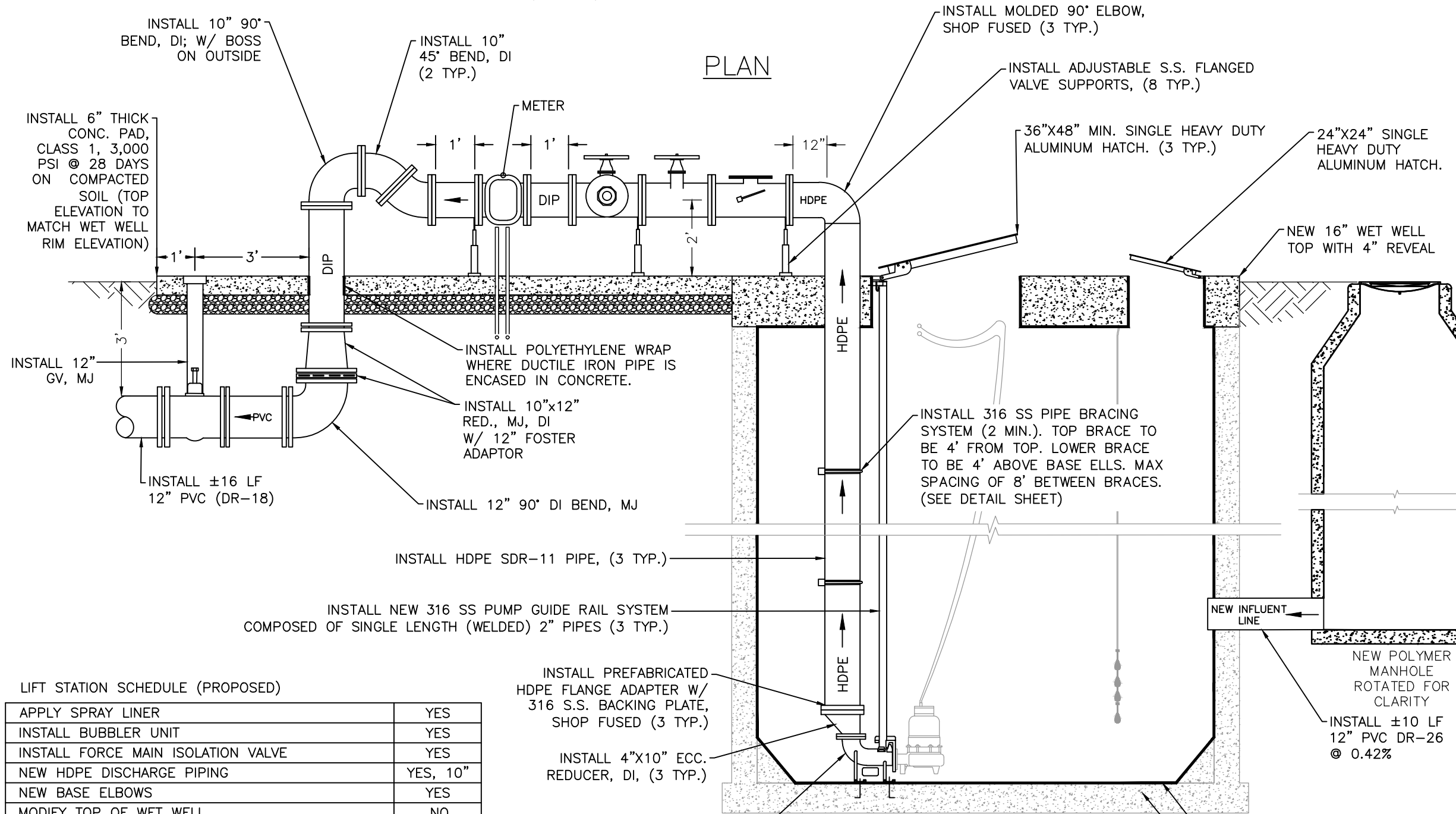
PROPOSED

GENERAL NOTES:

- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
- THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
- ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION
NTS
ITEMS MAY BE ROTATED FOR CLARITY

LIFT STATION SCHEDULE (PROPOSED)	
APPLY SPRAY LINER	YES
INSTALL BUBBLER UNIT	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 10"
NEW BASE ELBOWS	YES
MODIFY TOP OF WET WELL	NO
MODIFY TOP OF VALVE VAULT	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE LINE, 1" OR 2"	NO
INSTALL NEW WATER SERVICE ASSEMBLY, STD OR 2"	YES, 2"
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

CONSTRUCTION NOTES:

- ALL INTERNAL/ EXTERNAL PUMPS AND DISCHARGE PIPING SHALL BE ORIENTED TO THE SOUTH. DISCHARGE SHALL POINT SOUTH.
 - INSTALL ±10 LF NEW ELECTRICAL SERVICE WITH CONDUIT. THE COUNTY WILL SUPPLY ANY REQUIRED HANDHOLES.
 - REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
- A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
- THE LIFT STATION SITE HAS AUXILIARY BACKUP EQUIPMENT. INSTALL TWO ADDITIONAL 20 AMP BREAKERS IN THE CONTROL PANEL TO POWER A BATTERY CHARGER AND WATER JACKET HEATER.
- AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 - SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
 - INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 - REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL. 2-INCH MIN. THICK OVER EXISTING REBAR, (±660 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
 - DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
 - INSTALL WASHED SHELL & WEED BARRIER (±120 SY); GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.
 - INSTALL A 16-FEET WIDE 6-INCH THICK REINFORCE CONCRETE THROUGHFARE DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL, (±114 SY).
 - REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
 - ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH OTHERS.
 - INSTALL A NEW ABOVE-GROUND FLOW METER PER DETAIL US-27 IN THE DETAIL SHEETS. SITE SPECIFIC CONFIGURATION MAY VARY FROM DETAIL. COORDINATE WITH COUNTY PERSONNEL.
 - INSTALL BY ROTARY CORE BORING, A 6 INCH PVC AND A 2 INCH PVC DIAMETER PIPES THROUGH THE WET WALL WITH HYDRAULIC NON-SHRINK GROUT TO ACCOMMODATE THE ODOR CONTROL EQUIPMENT CONNECTIONS. BOTH SHALL BE CAPPED AT EACH END; BOTH TO BE APPROX. 3 LF LONG. FIELD VERIFY LOCATION AND DEPTH WITH COUNTY PERSONNEL.
 - THE COUNTY SHALL RETAIN OWNERSHIP OF THE EXISTING VALVE ASSEMBLY, ALL VALVES AND FITTINGS.
 - THIS POLYMER MANHOLE IS A REPLACEMENT OF AN EXISTING PRECAST PORTLAND MANHOLE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEASUREMENTS PRIOR TO ORDERING WITH THE COUNTY TO ENSURE THIS REPLACEMENT MANHOLE SHALL FUNCTION PROPERLY PER THE CURRENT COUNTY STANDARDS.

QUESTIONS / COMMENTS:

- WATER DISTRIBUTION IS PUBLIC.
- SEWER COLLECTION IS PUBLIC.

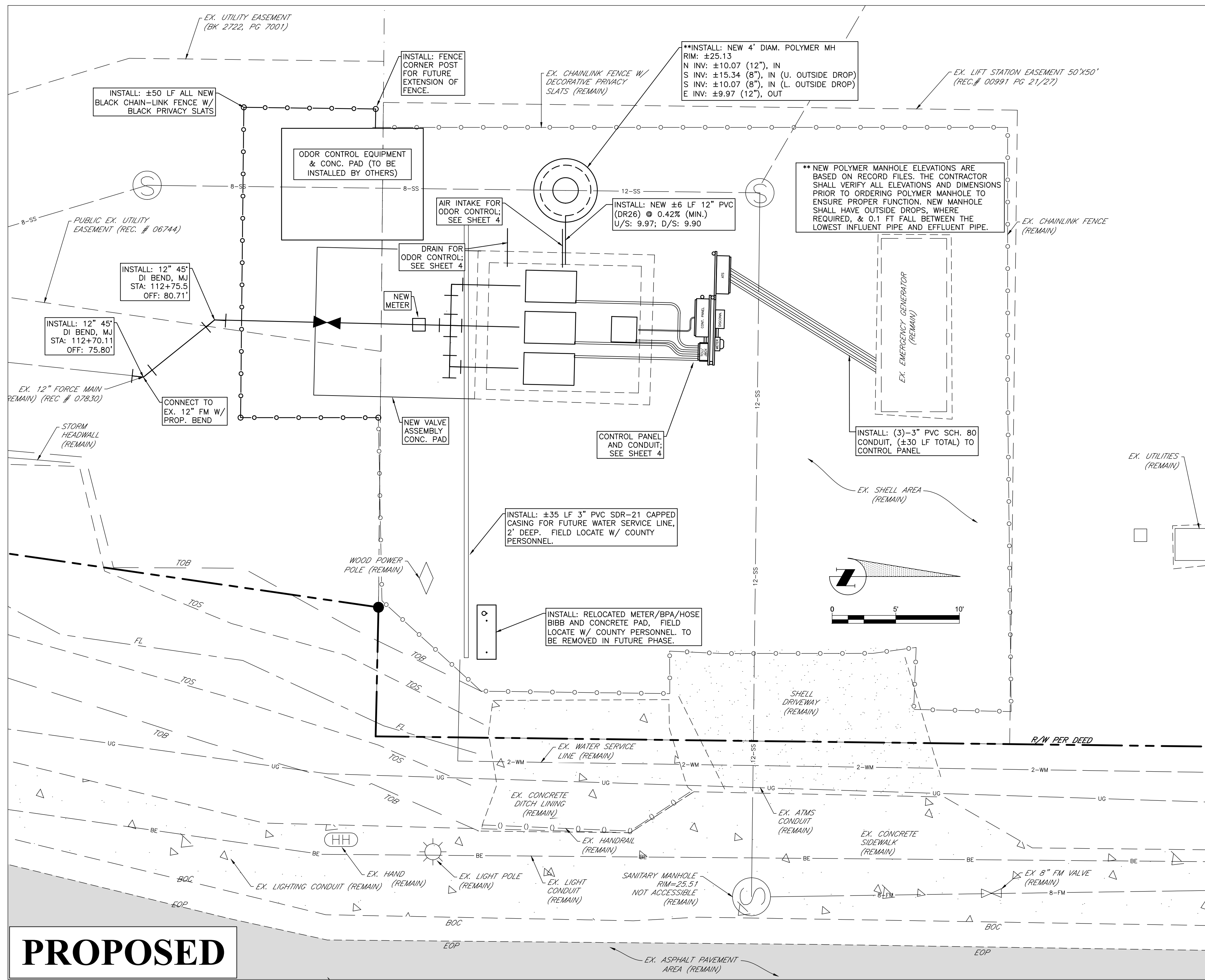
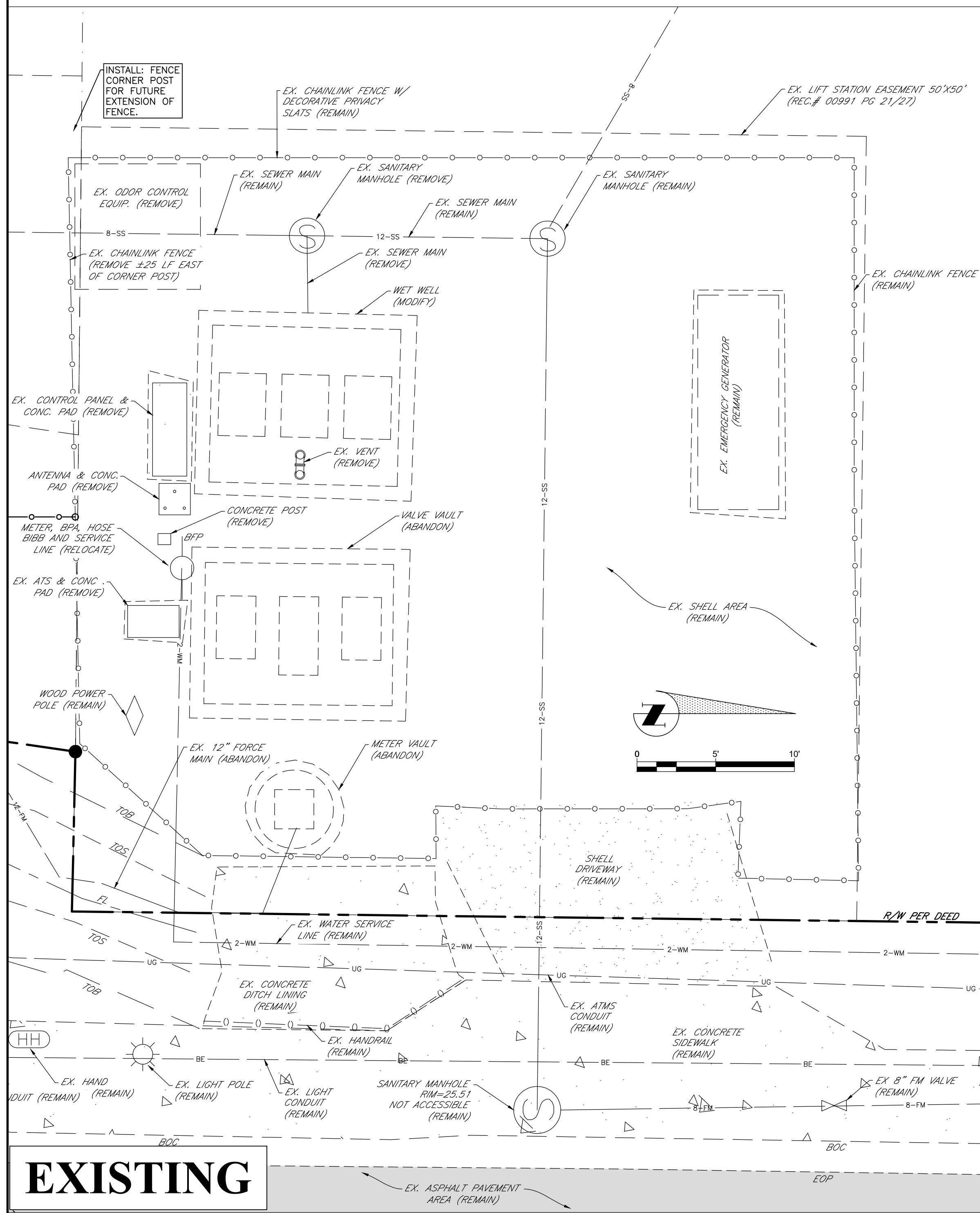
**SATELLITE LIFT STATION R&R
SLS UPPER MANATEE RIVER ROAD
1010 UPPER MANATEE RIVER ROAD
UMRR REHABILITATION PLAN**



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	N.T.S.
SURVEYED	NA
DESIGNED	JSS 2/22
DRAWN	JKW 2/22
CHECKED	JSS -

J. SHEA SHOUN, P.E.	
FLORIDA STATE BOARD OF PROFESSIONAL ENGINEERS	
No. 60923	
STATE OF FLORIDA	
02/21/2024	
Professional Engineer	



EXISTING

PROPOSED

- SITE PLAN CONSTRUCTION NOTES:**
- GENERAL:**
- ALL EQUIPMENT, PIPING, ETC. SHALL BE WITHIN THE COUNTY RIGHT-OF-WAY AND/OR IN THE UTILITY EASEMENTS. NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER & MANATEE COUNTY. IF NECESSARY, THE CONTRACTOR SHALL HIRE A LICENSED SURVEYOR TO STAKE OUT EXISTING EASEMENTS BOUNDARIES PRIOR TO COMMENCING WORK.
 - THESE SITE PLANS ARE FOR REFERENCE ONLY. ALL ITEMS ARE CONSIDERED APPROXIMATE. CONTRACTOR SHALL CONSULT WITH AND COORDINATE WITH THE COUNTY INSPECTOR PRIOR TO ALL INSTALLATIONS.
 - ALL NEW STRUCTURES, PIPING, FITTINGS, CONDUIT, ETC. INSTALLED SHALL BE PROPERLY MARKED AND LOCATED PER THE COUNTY'S RECORD DRAWING REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH COUNTY STAFF IN ACQUIRING ALL THE NECESSARY AS-BUILT INFORMATION TO CREATE THE RECORD DRAWING PLANS. ANY ASSOCIATED COSTS SHALL BE INCLUDED IN THE APPROPRIATE BID ITEMS.
 - ODOR CONTROL UNIT TO BE HANDLED BY OTHERS.
 - CONTRACTOR TO UTILIZE EXISTING FENCE/GATE OR INSTALL AND MAINTAIN 6-FT HIGH TEMPORARY SECURITY FENCE AND GATE(S) AROUND THE SITE AT THE CONTRACTOR EXPENSE. THE LIFT STATION SITE SHALL BE SECURED AT ALL TIMES EACH DAY.
- GENERATOR REHAB. NOTES:**
- INSTALL ALL NEW 3-INCH CONDUIT FROM THE EXISTING GENERATOR TO THE NEW AUTOMATIC TRANSFER SWITCH, (±45 LF).
 - PULL NEW WIRING FROM GENERATOR TO NEW ATS AND CONNECT ALL WIRING, EXCEPT THOSE TO THE DATA FLOW SYSTEMS (DFS) TELEMETRY CONTROL UNIT (TCU) SYSTEMS, COUNTY TO CONNECT.
 - CONTRACTOR SHALL ENSURE THE EXISTING GENERATOR IS FULLY FUNCTIONAL AND OPERATING AS EXPECTED. COORDINATE WITH COUNTY TO ENSURE PROPER FUNCTION.
 - SEE SHEET 4 FOR MORE DETAILED REHABILITATION DESIGNS.

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R
SLS UPPER MANATEE RIVER ROAD
1010 UPPER MANATEE RIVER ROAD
UMRR SITE PLAN (REHAB)**

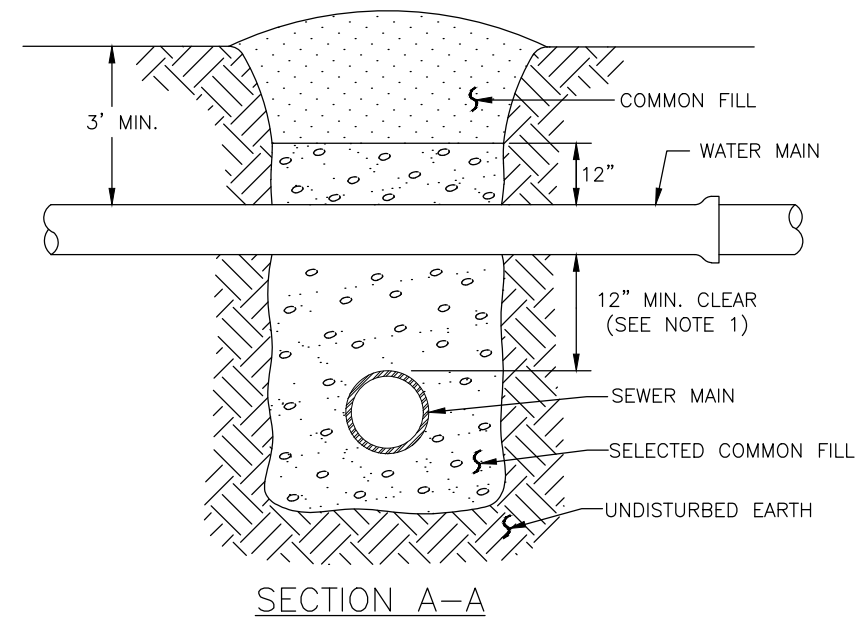
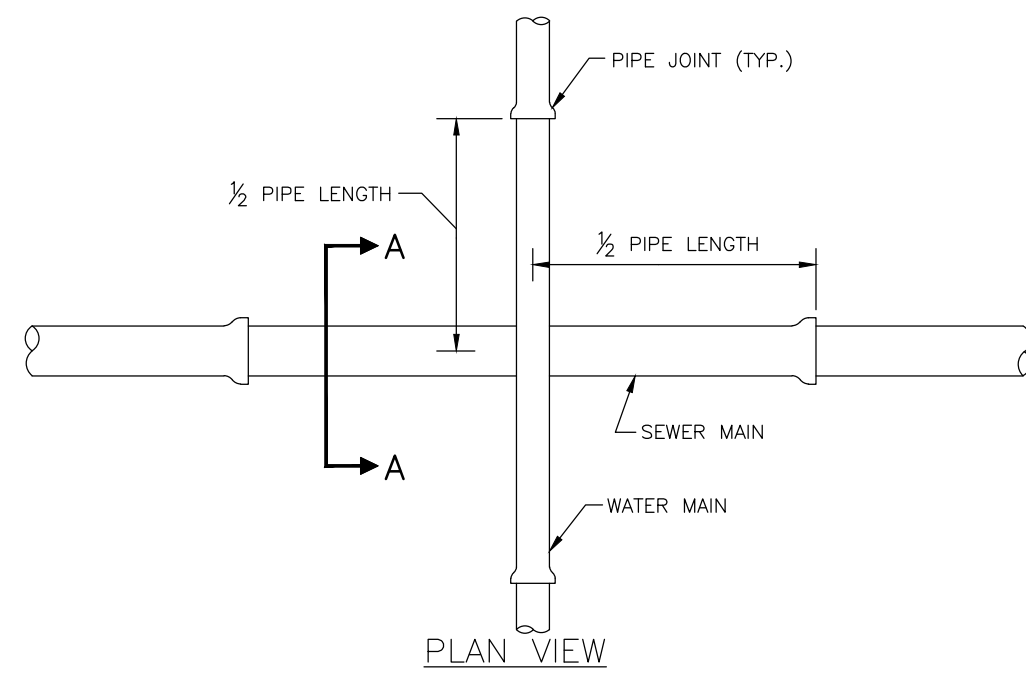


PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	SEE SCALE BAR
SURVEYED	BY DATE
DESIGNED	JSS NA
DRAWN	JKW 2/22
CHECKED	JSS -

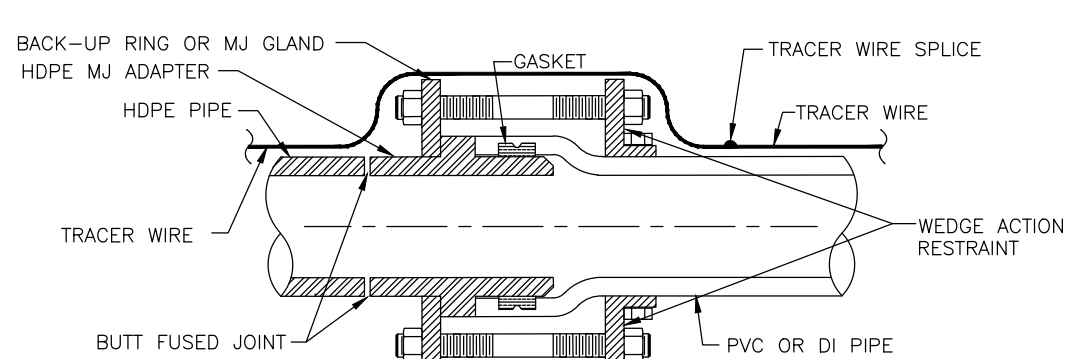
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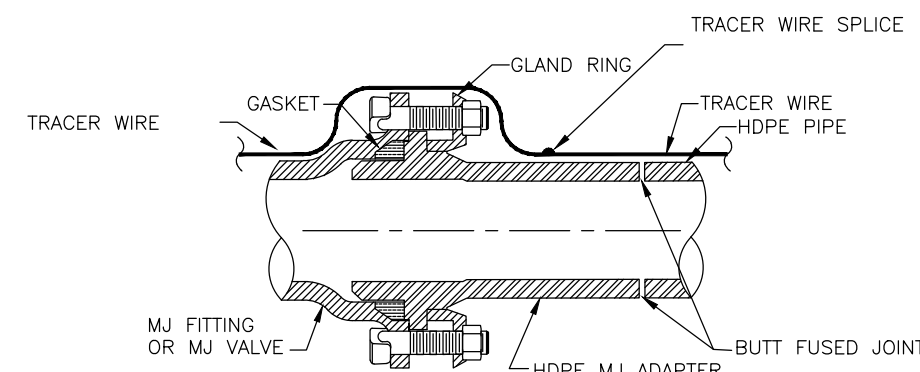
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- NOTES:
- CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON.
 - PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY, SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.

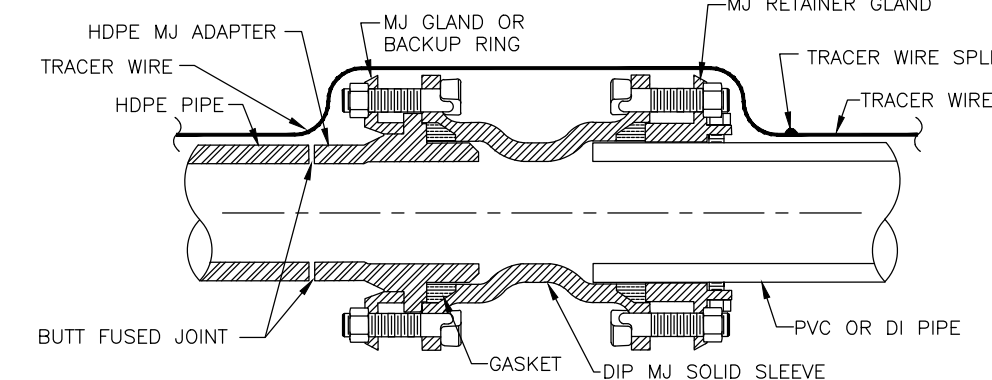


HDPE PIPE TO PVC PIPE / SPIGOT TO BELL CONNECTION



NOTE: SCHEMATIC SHOWN FOR STANDARD MJ FITTINGS AND GATE VALVES.

HDPE PIPE TO MJ FITTING TRANSITION



HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

- NOTES:
- ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.
 - CONTRACTOR SHALL NOT USE MECHANICAL MEANS TO ALIGN PIPE AND FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING" LOADED.

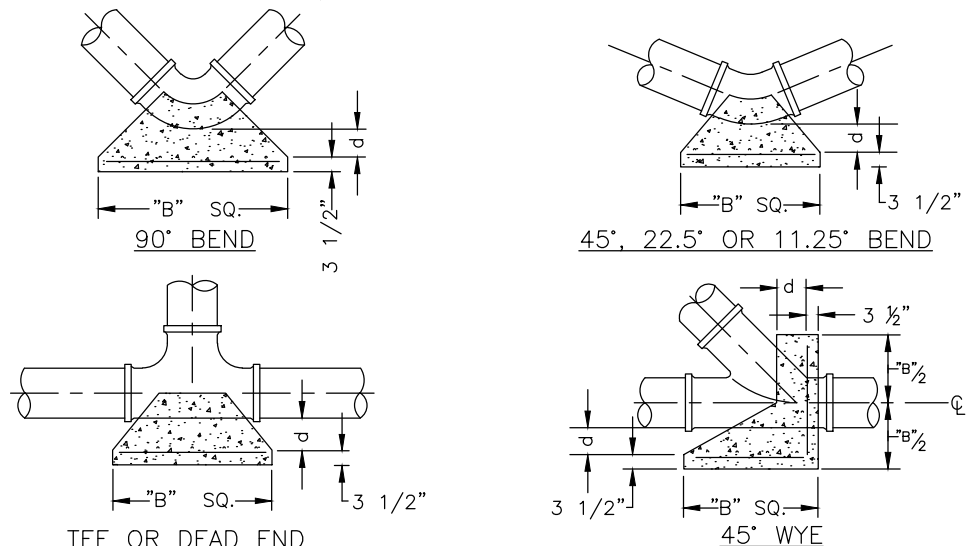
PIPE SIZE (N.)	90° BEND		45° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
	B	d	B	d	B	d	B	d	B	d
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/2	1.6	3 3/4	1.2	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 3/4	2.4	5 1/2	2.0	4 3/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	3.5	8 1/4	3.0	7 1/4
14	4.9	11 3/4	3.6	8 3/4	2.6	6 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	5.2	12 3/4	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	5.8	14	4.9	11 1/2
24	8.2	19 1/4	6.0	14 1/2	4.3	10 3/4	7.1	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	10.2	24 1/2	8.6	20 3/4

REINFORCEMENT MAT SCHEDULE

FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY

FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

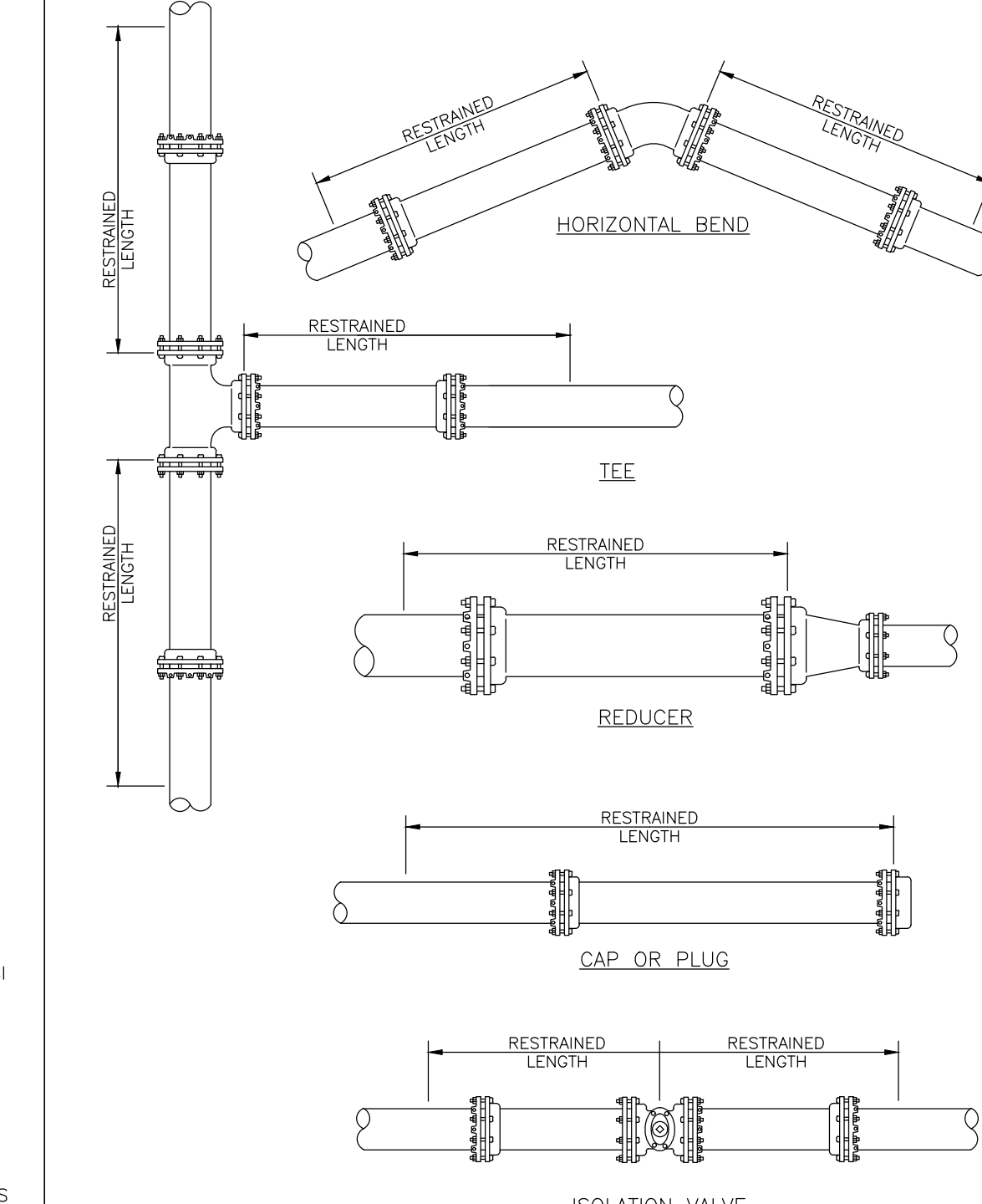
- NOTES:
- ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
 - THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH f_c =3000 PSI, REINFORCEMENT f_y =60,000 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
 - FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.
 - RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS TO SAVE SPACE. HOWEVER, WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE CALLED OUT/ILLUSTRATED IN THE DETAILS, BOTH SHALL BE INSTALLED.



REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	HORIZ. BENDS	TEES		REDUCERS		PLUGS & VALVES
		SIZE	LENGTH	SIZE	LENGTH	
24	90° 45° 22.5°	K24	K20	K16	K12	214
20	90° 45° 22.5°	K20	K16	K12	K8	184
16	90° 45° 22.5°	K16	K12	K8	K6	151
12	90° 45° 22.5°	K12	K8	K6	K4	118
10	90° 45° 22.5°	K10	K8	K6	K4	100
8	90° 45° 22.5°	K8	K6	K4	K3	83
6	90° 45° 22.5°	K6	K4	K3	K2	63
4	90° 45° 22.5°	K4	K3	K2	K1	45

- NOTES:
- RESTRAIN 11.25° BENDS 50% OF LENGTH FOR 22.5° BENDS.
 - ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
 - ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
 - PIPE SIZES ARE GIVEN IN INCHES.
 - RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
 - LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
 - THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
 - RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
 - ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
 - ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.



NOTE: SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

TYPICAL NEW WATER & SEWER LINE CROSSING

UG-2

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

HDPE TO PVC OR DI PIPE ADAPTER

UG-6

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

CONCRETE THRUST BLOCKS

UG-7

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

RESTRAINED LENGTHS FOR PVC PIPE

UG-8

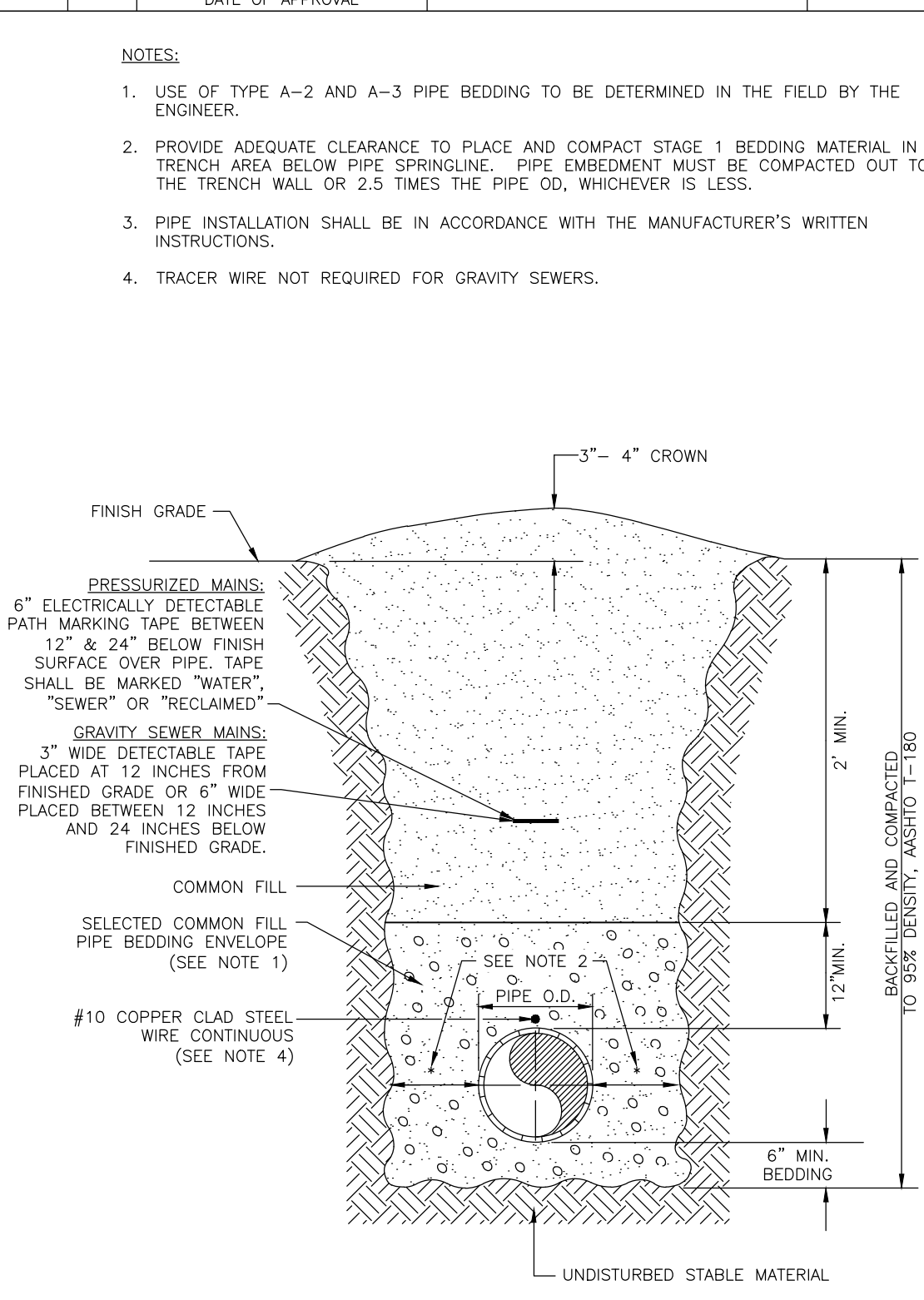
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

RESTRAINED LENGTHS FOR PIPE

UG-10



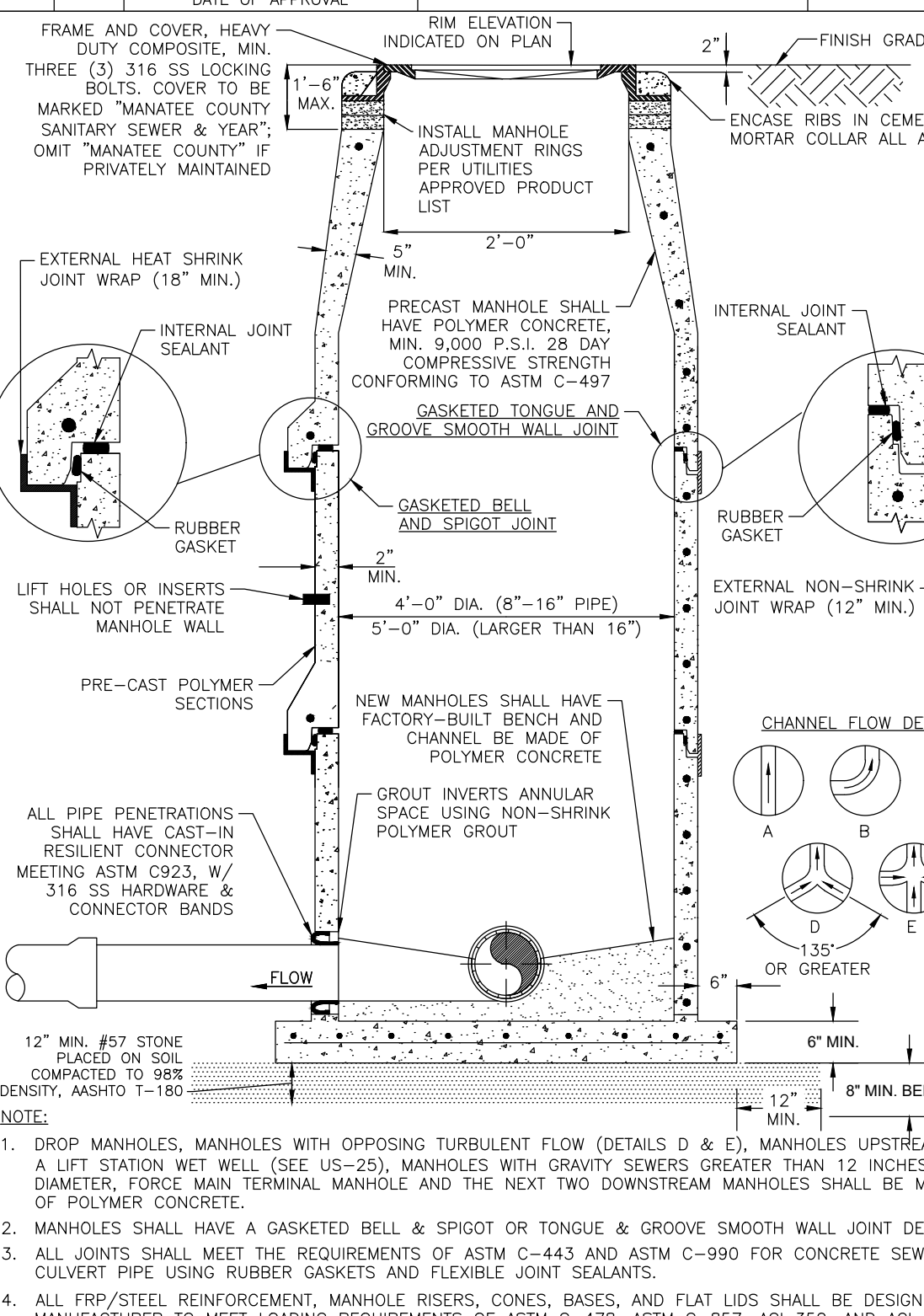
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING

UG-11



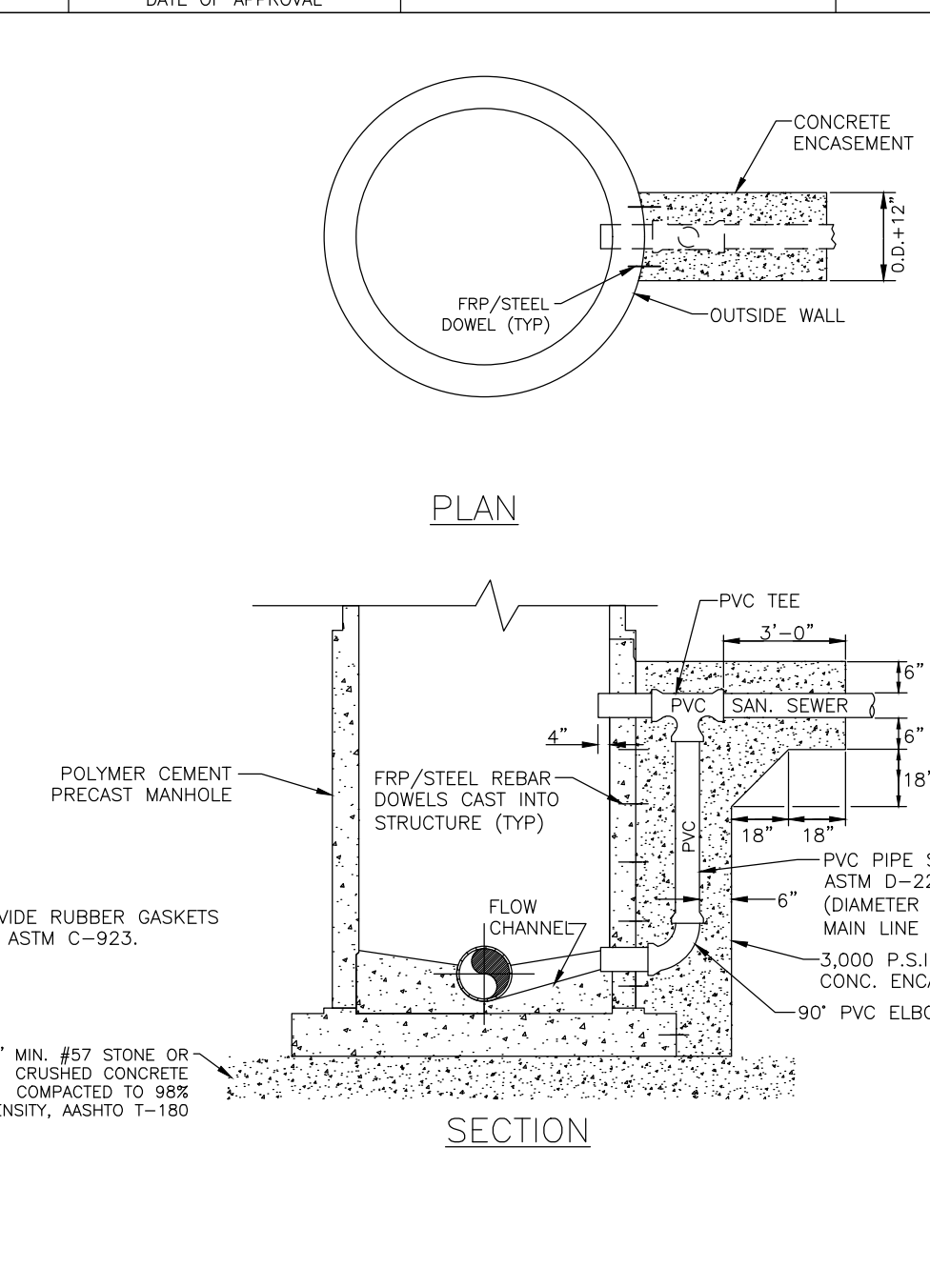
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

STANDARD PRECAST POLYMER CONCRETE SANITARY SEWER MANHOLE FOR TURBULENT FLOW

US-3



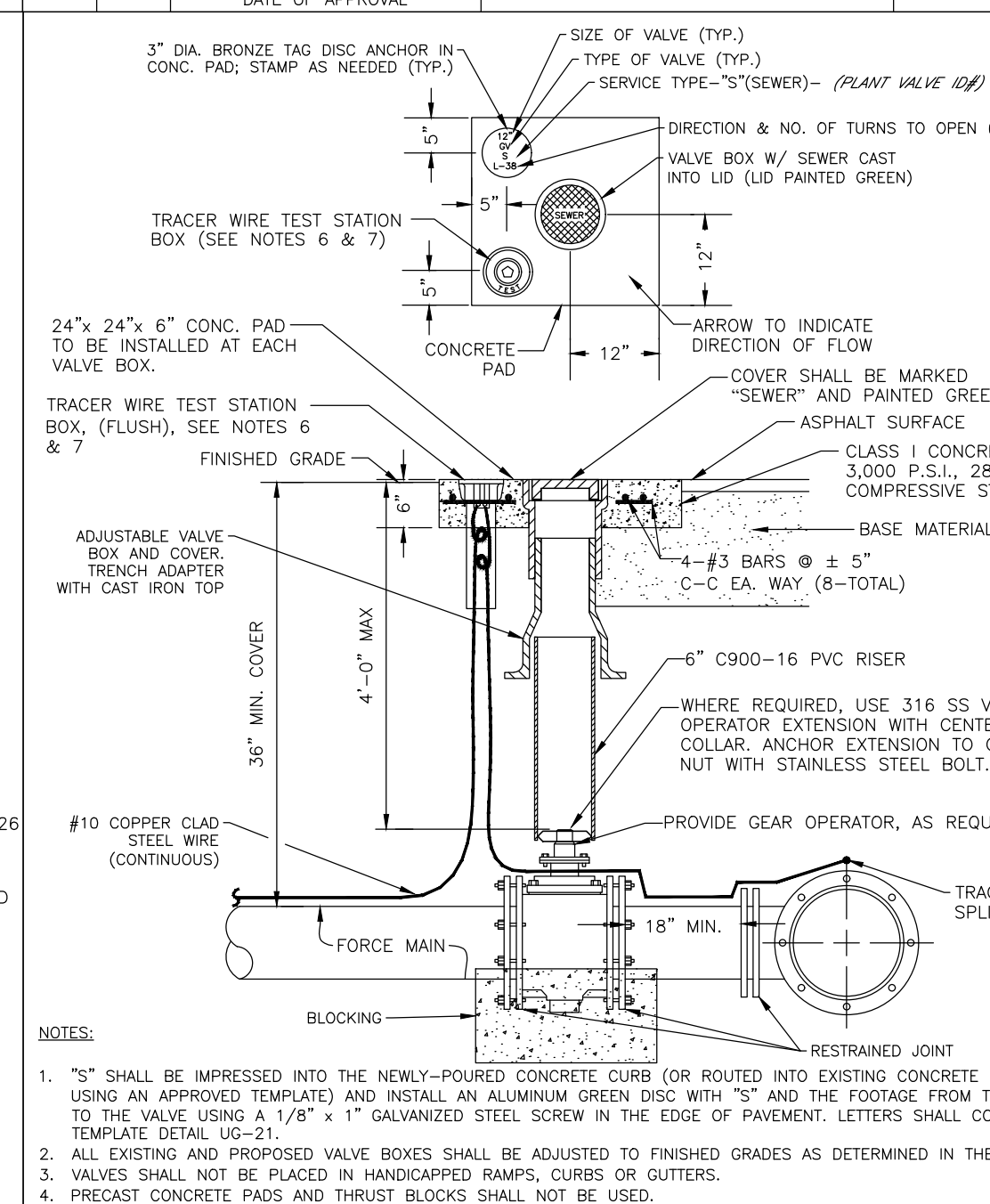
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

OUTSIDE DROP GRAVITY CONNECTION TO POLYMER CONCRETE MANHOLE

US-7



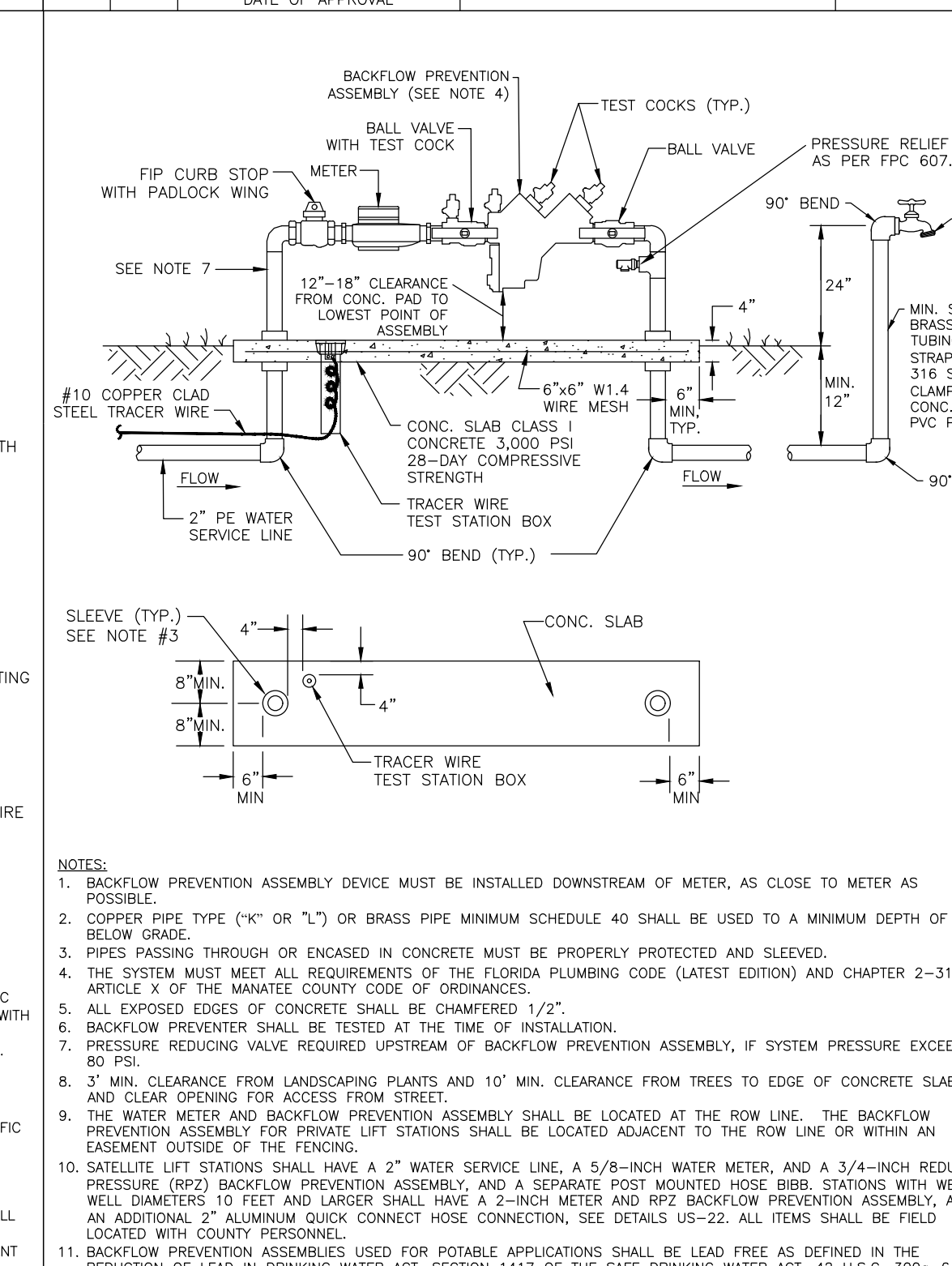
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

VALVE, BOX, COVER AND TAG

US-14



MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY DATE DATE OF APPROVAL

SEPT 12, 2023

5/8" WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS

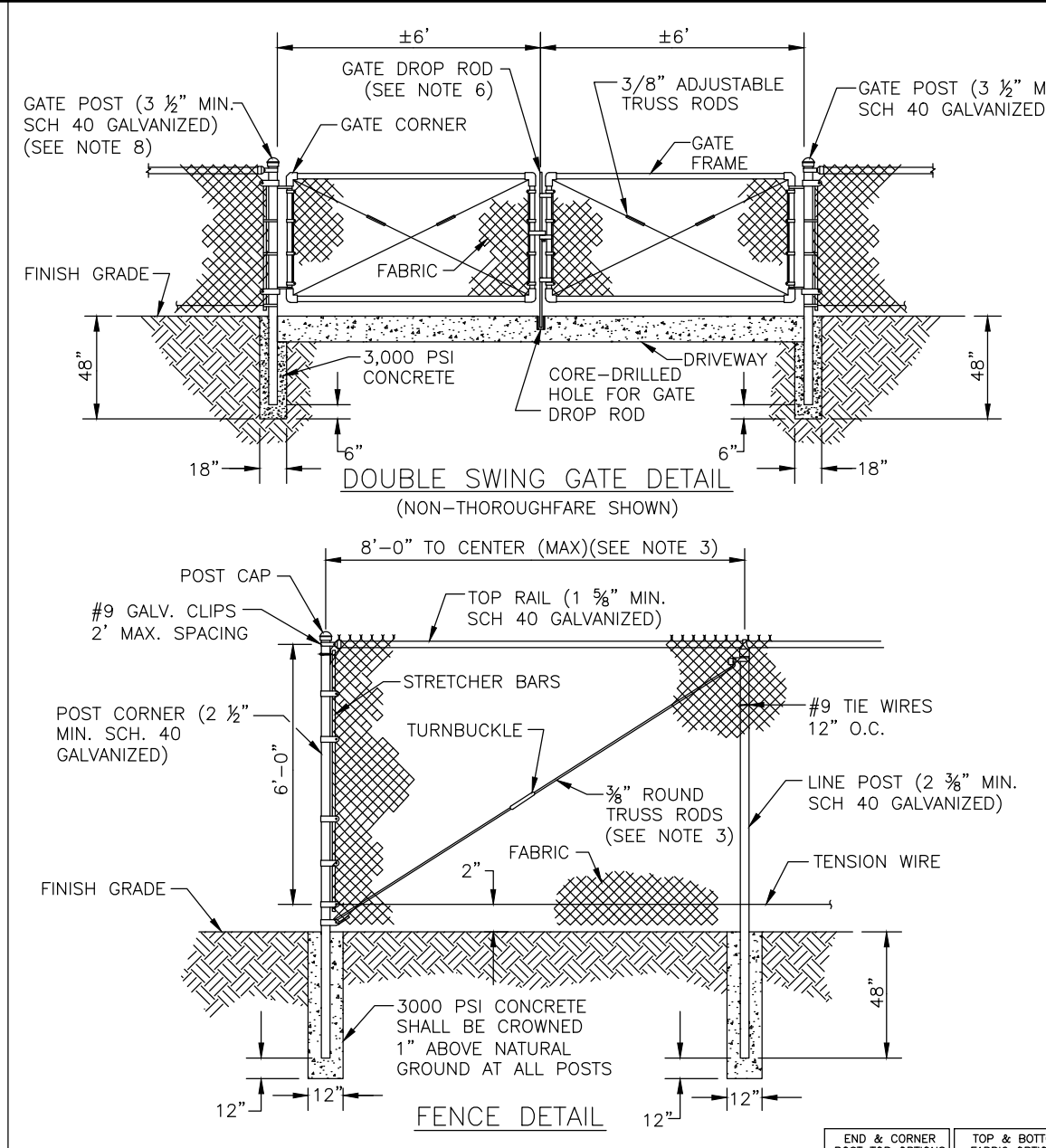
US-21

**SATELLITE LIFT STATION R&R
SLS UPPER MANATEE RIVER ROAD
1010 UPPER MANATEE RIVER ROAD
DETAILS**

PROJECT #	6117680	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA STATE ENGINEERING LICENSE No. 60923
SEC./TWN./RGE	30/34/19	DATE OF 02/21/2024
SCALE	N.T.S.	PROFESSIONAL ENGINEER
SURVEYED	NA	DATE
DESIGNED	JSS	2/22
DRAWN	JKW	2/22
CHECKED	JSS	-

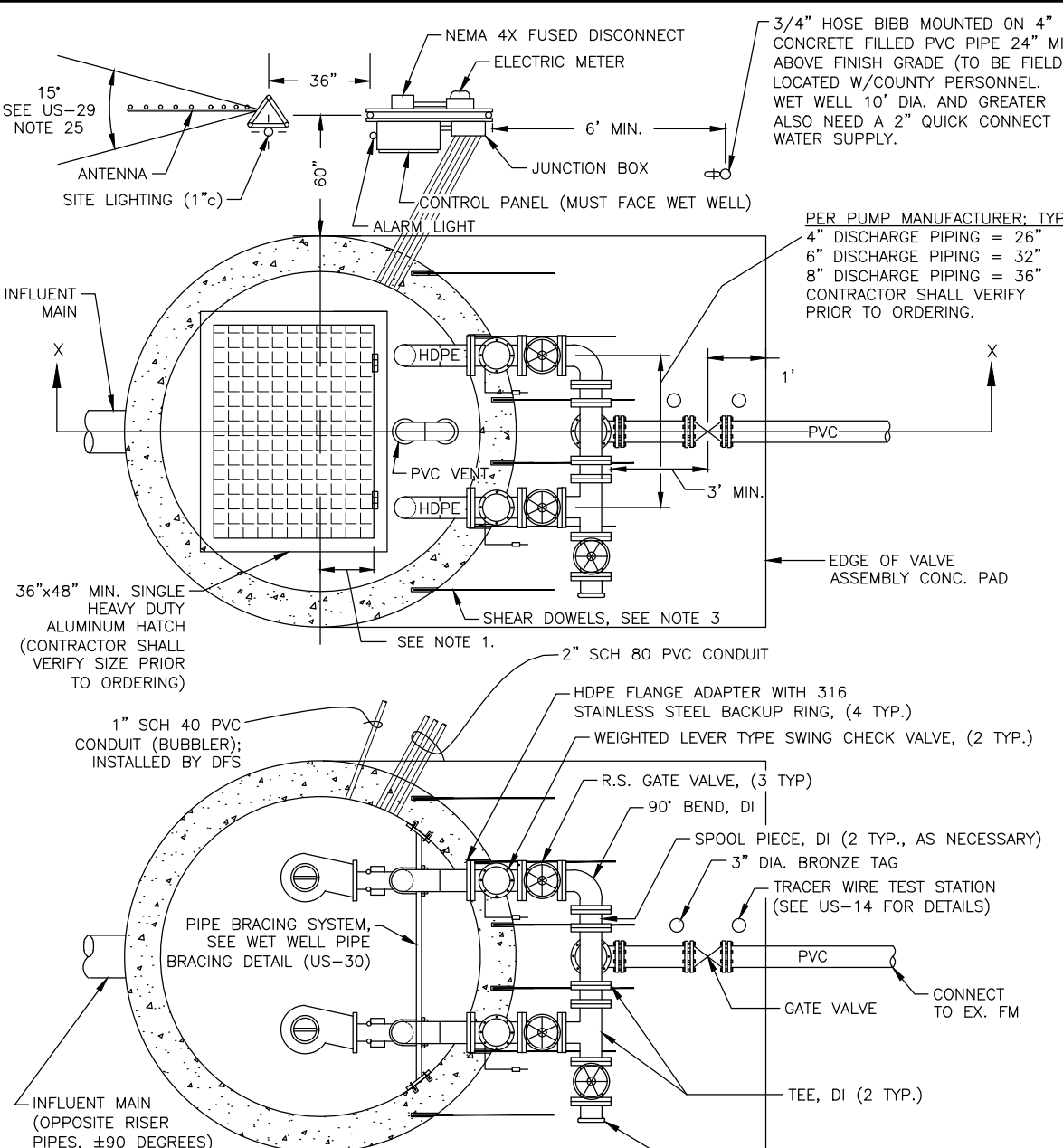
SHEET 06 OF 09





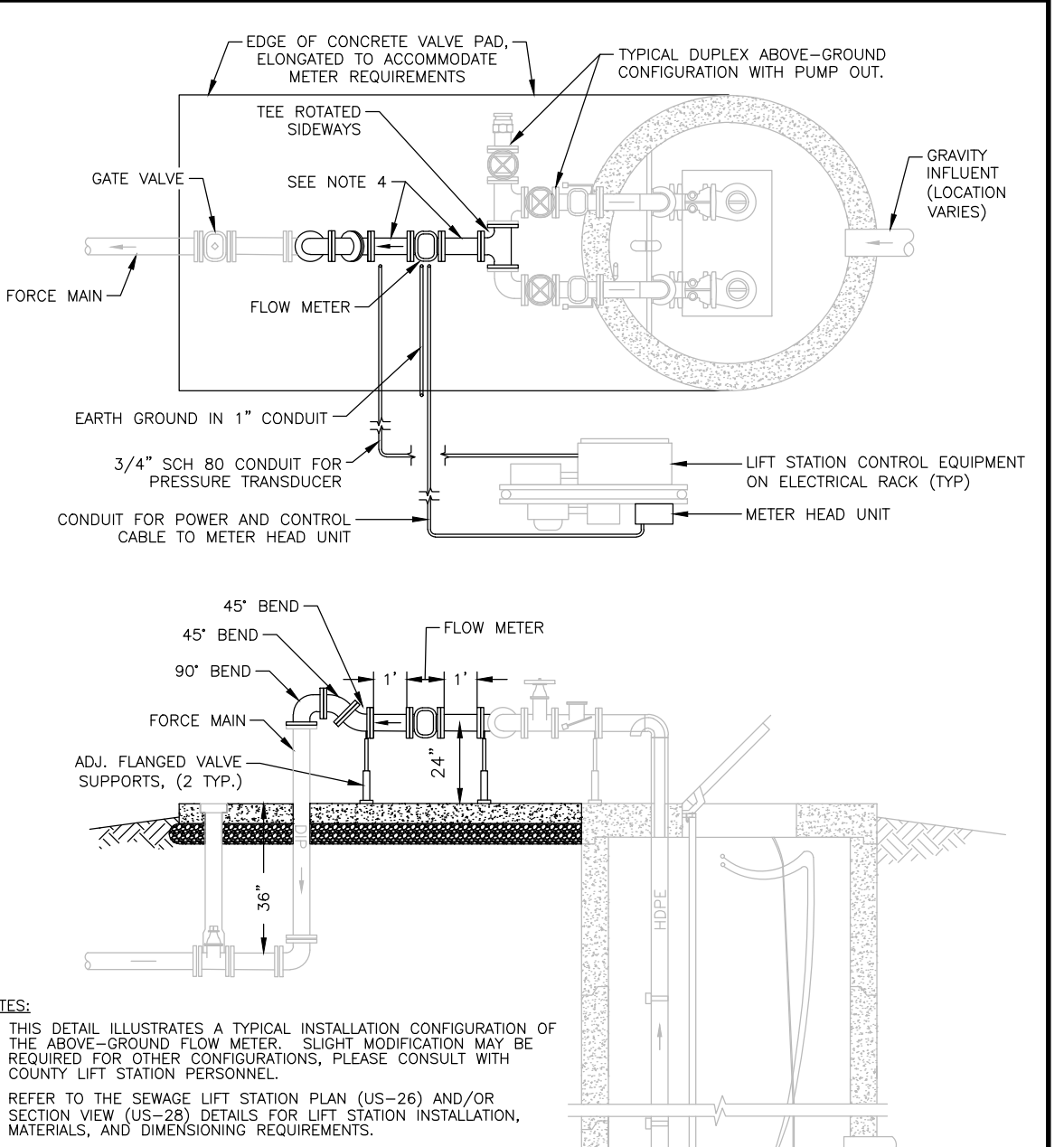
- NOTES:**
- FENCING SHALL BE CHAIN LINK, W/ COLOR MATCHED PRIVACY DECORATIVE SLATS.
 - CHAIN LINK FENCING SHALL BE #9 GAUGE, GALVANIZED STEEL WITH VINYL COATING (BLACK OR GREEN).
 - TRUSS BARS ON CHAIN LINK FENCES ARE REQUIRED FOR THE FIRST SPAN ON EACH SIDE OF THE CORNER POST AND FOR EACH GATE SECTION.
 - LANDSCAPE SCREENING SHALL BE LOCATED ON THE EXTERIOR OF LIFT STATION FENCING.
 - SWING GATES SHALL BE CAPABLE OF SWINGING BOTH INWARDS AND OUTWARDS AND SHALL HAVE 1/2\"/>

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SECURITY FENCING	US-24
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



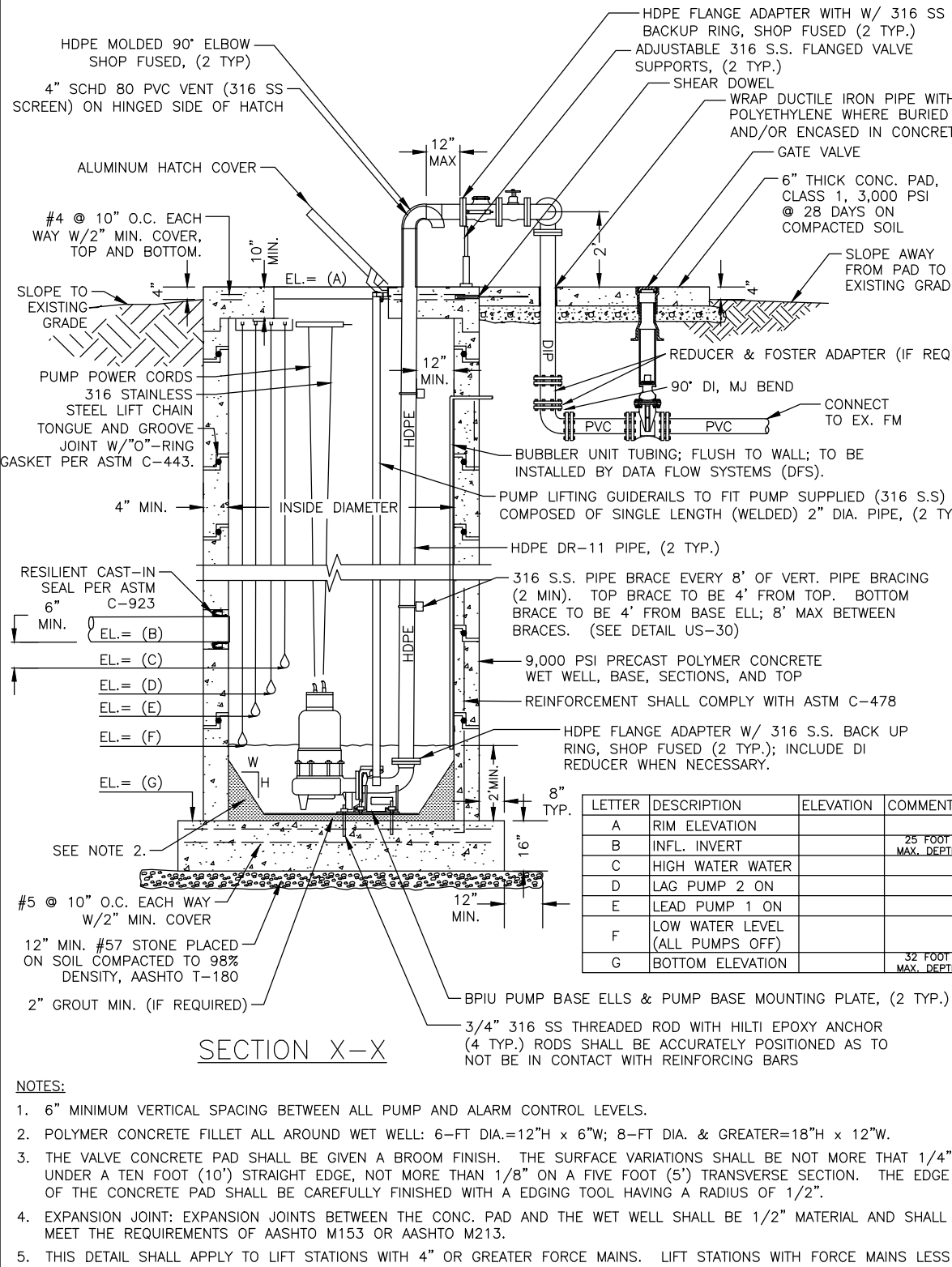
- NOTES:**
- FOR 6\"/>

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION PLAN VIEW	US-26
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



- NOTES:**
- THIS DETAIL ILLUSTRATES A TYPICAL INSTALLATION CONFIGURATION OF THE ABOVE-GROUND FLOW METER. SLIGHT MODIFICATION MAY BE REQUIRED FOR OTHER CONFIGURATIONS, PLEASE CONSULT WITH COUNTY LIFT STATION PERSONNEL.
 - REFER TO THE SEWAGE LIFT STATION PLAN (US-26) AND/OR SECTION VIEW (US-29) DETAILS FOR LIFT STATION INSTALLATION, MATERIALS, AND DIMENSIONING REQUIREMENTS.
 - UNDERGROUND PIPING AND FITTINGS SHALL BE FULLY RESTRAINED USING RESTRAINTS AS FITTINGS SHALL BE PLACED UPSTREAM AND DOWNSTREAM OF THE METER, OR AS SPECIFIED BY THE MANUFACTURER, WHICHEVER IS MORE STRINGENT.
 - METER HEAD SHALL BE INSTALLED ON THE ELECTRICAL RACK, FIELD LOCATE THE METER HEAD WITH COUNTY PERSONNEL. USE 1\"/>

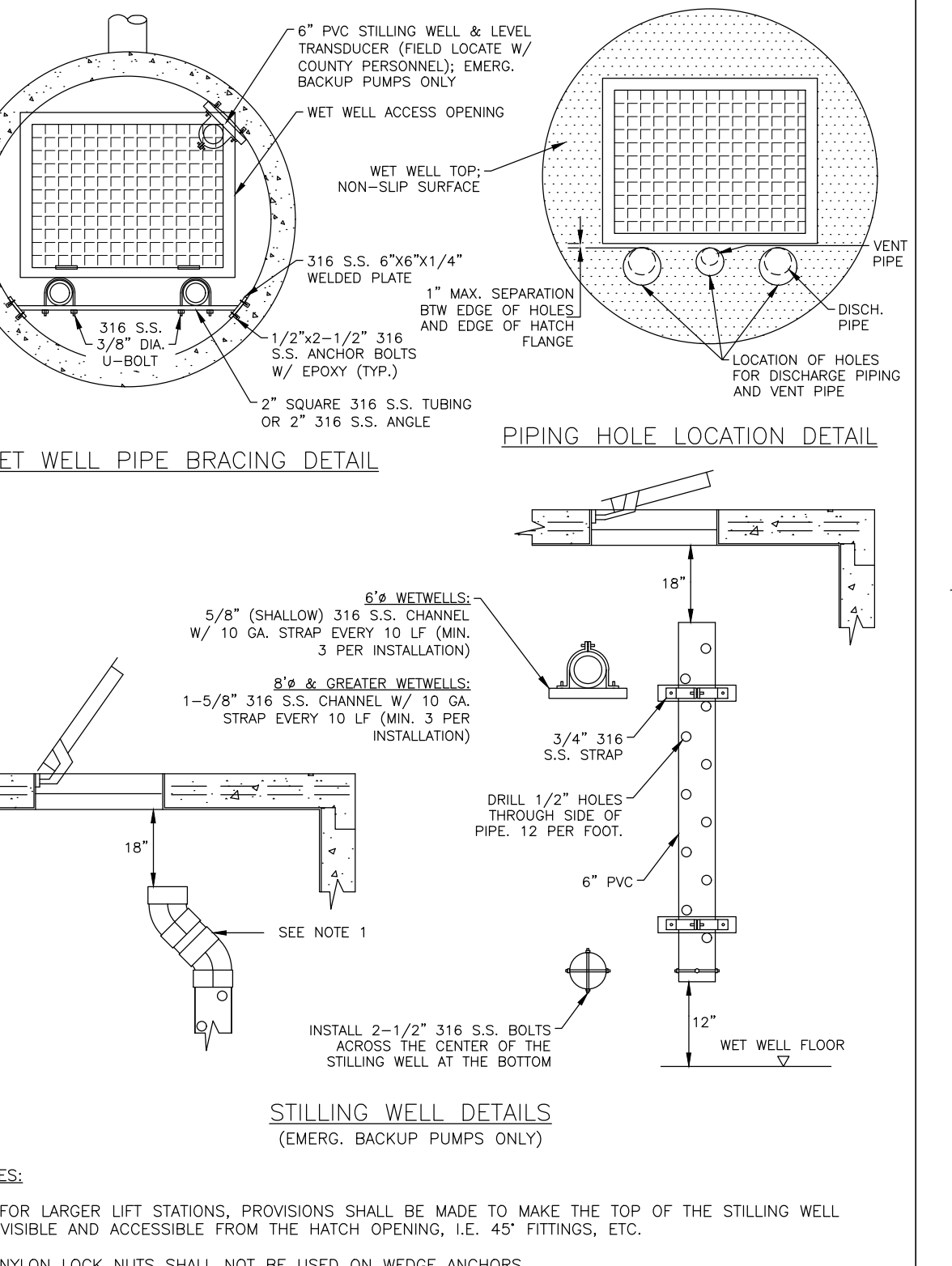
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		ABOVE-GROUND FLOW METER	US-27
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



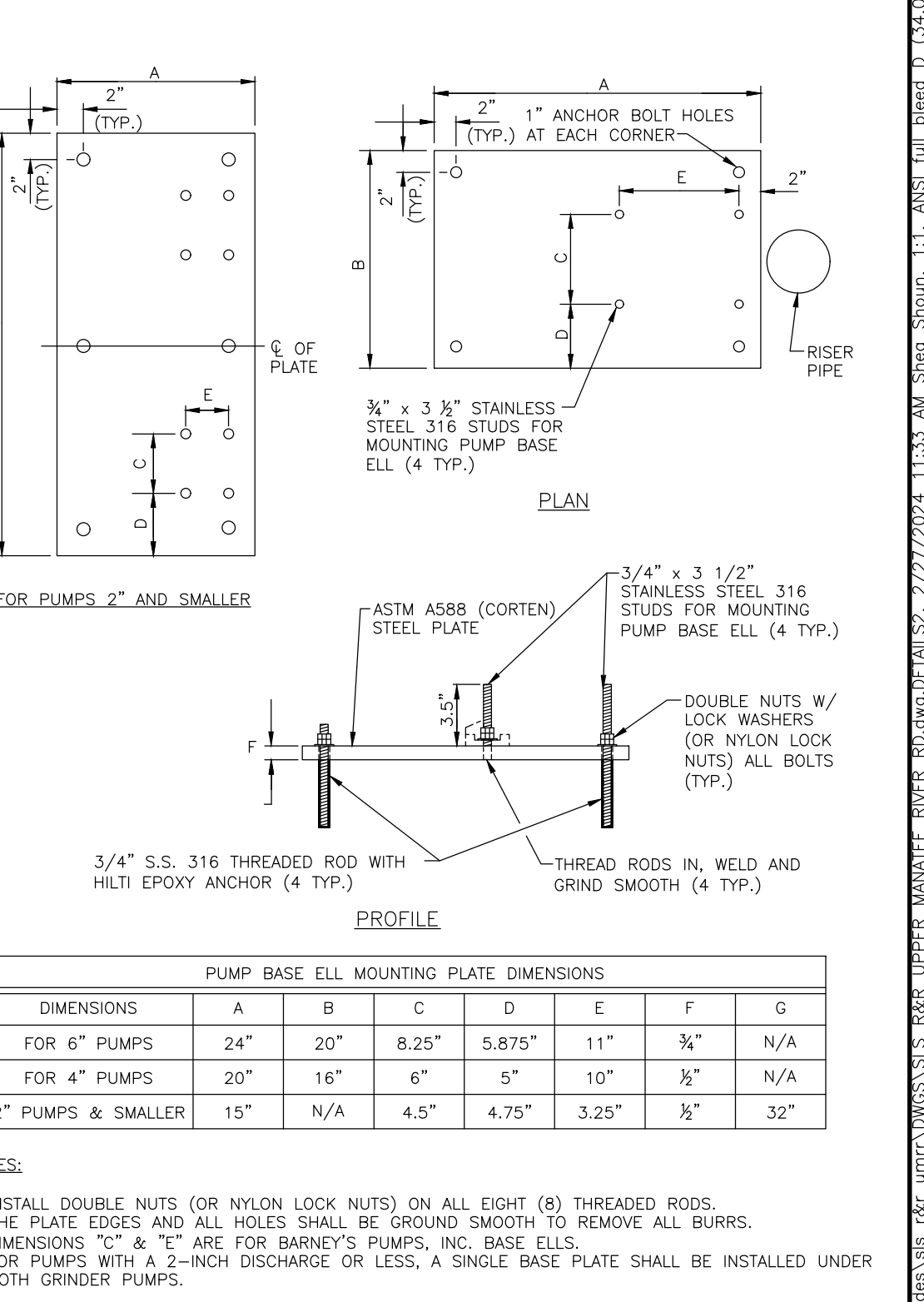
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION SECTION VIEW	US-28
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		LIFT STATION NOTES	US-29
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		LIFT STATION PIPE BRACING, & STILLING WELL DETAILS	US-30
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



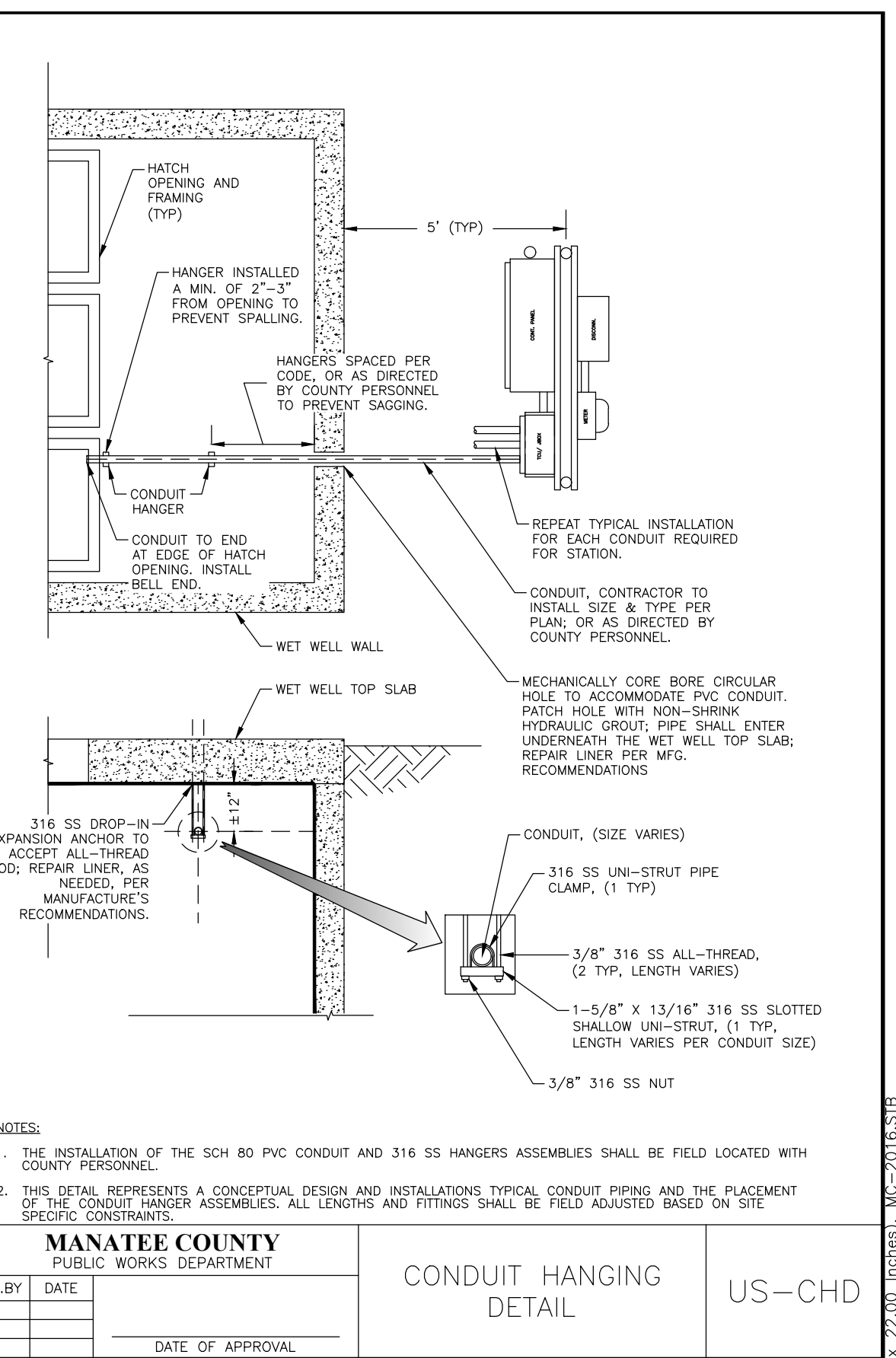
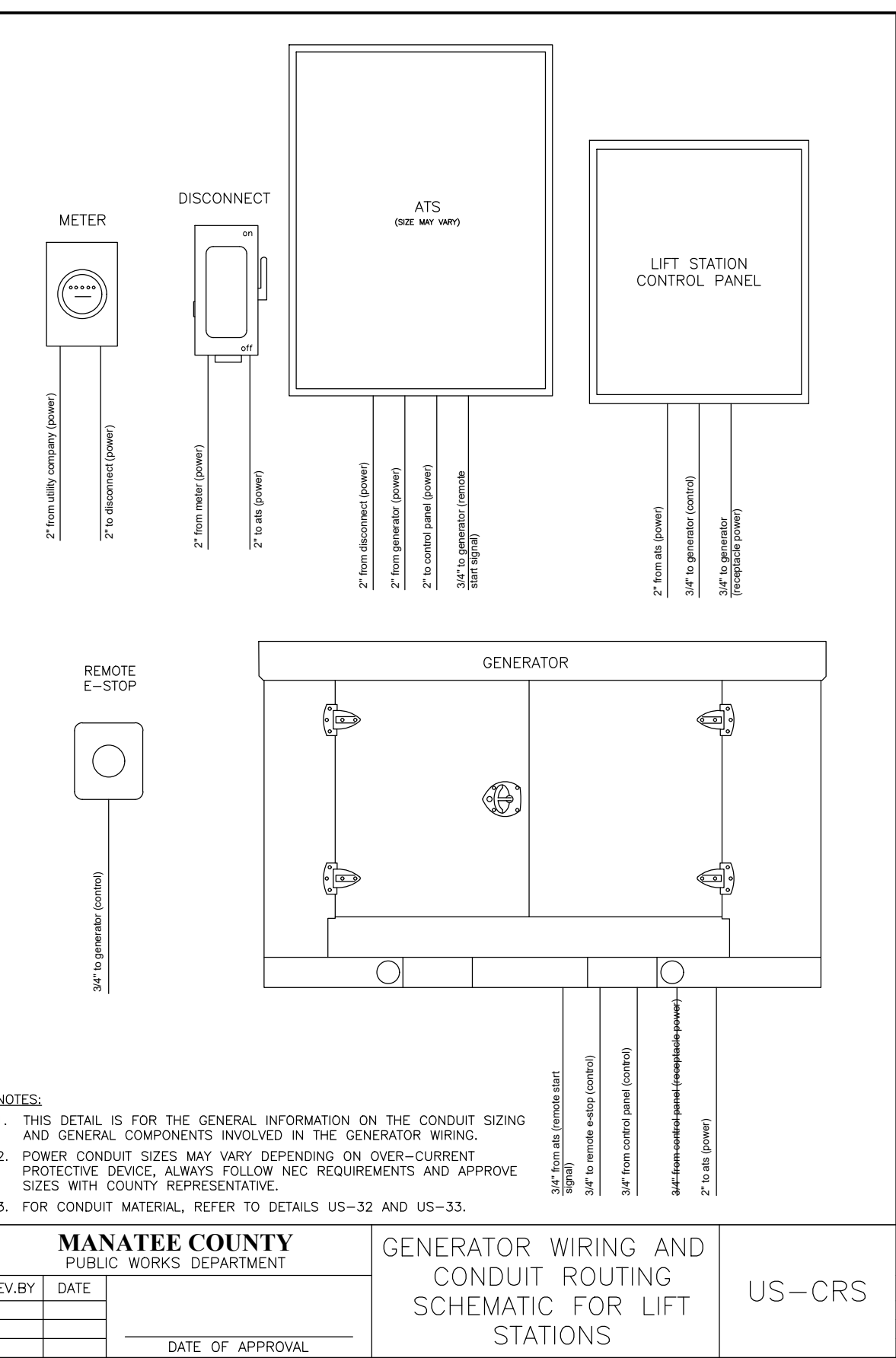
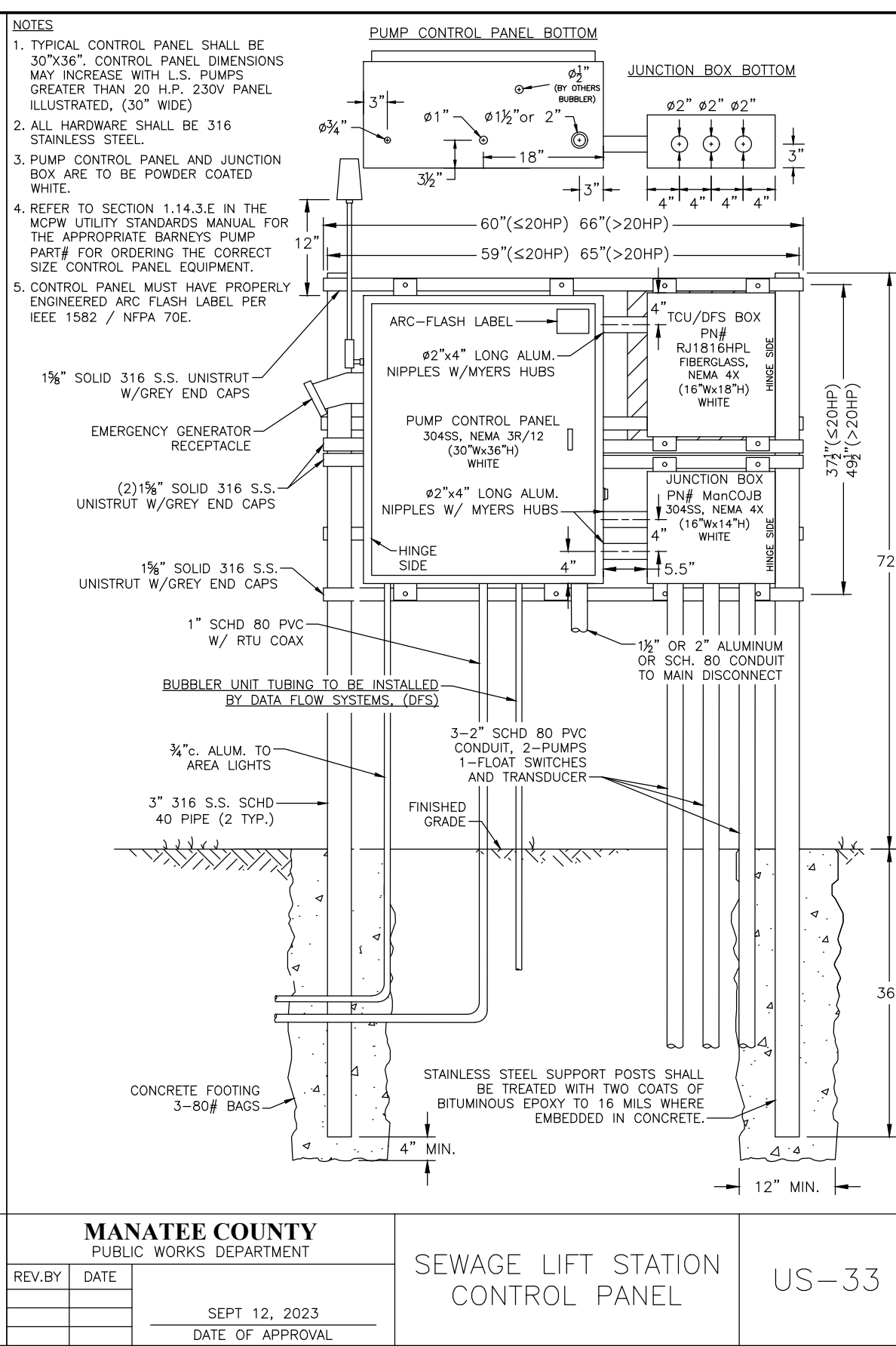
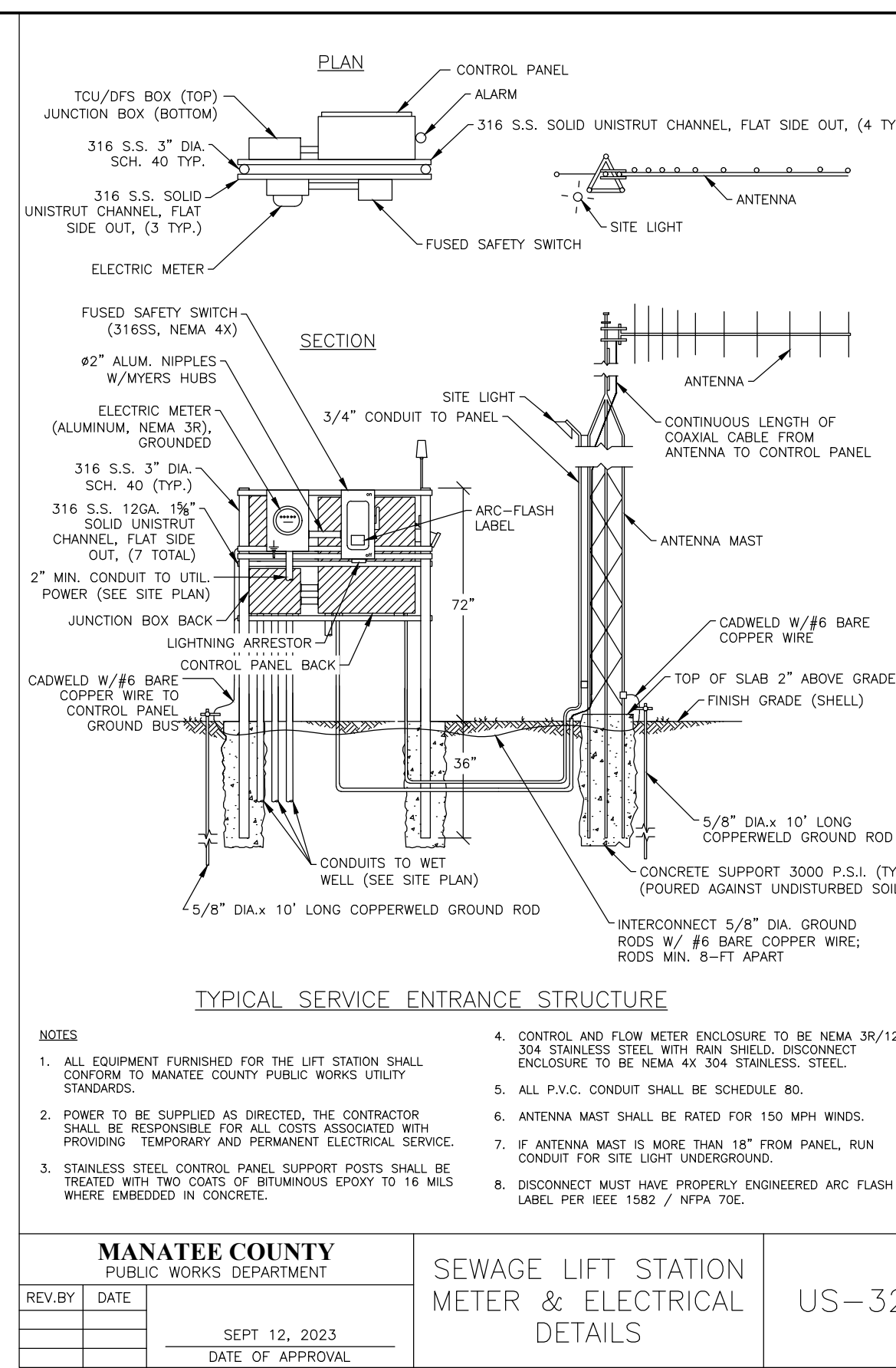
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		PUMP BASE ELL MOUNTING PLATE	US-31
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R SLS UPPER MANATEE RIVER ROAD 1010 UPPER MANATEE RIVER ROAD DETAILS



PROJECT #	6117680	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	30/34/19	STATE OF FLORIDA PROFESSIONAL ENGINEER
SCALE	N.T.S.	DATE 02/21/2024
SURVEYED	NA	DESIGNED
DESIGNED	JSS	2/22
DRAWN	JKW	2/22
CHECKED	JSS	-



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	
REV. BY	DATE
	SEPT 12, 2023
DATE OF APPROVAL	

SEWAGE LIFT STATION METER & ELECTRICAL DETAILS US-32

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	
REV. BY	DATE
	SEPT 12, 2023
DATE OF APPROVAL	

SEWAGE LIFT STATION CONTROL PANEL US-33

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	
REV. BY	DATE
	DATE OF APPROVAL

GENERATOR WIRING AND CONDUIT ROUTING SCHEMATIC FOR LIFT STATIONS US-CRS

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	
REV. BY	DATE
	DATE OF APPROVAL

CONDUIT HANGING DETAIL US-CHD

NO.	REVISION DESCRIPTION	BY	DATE

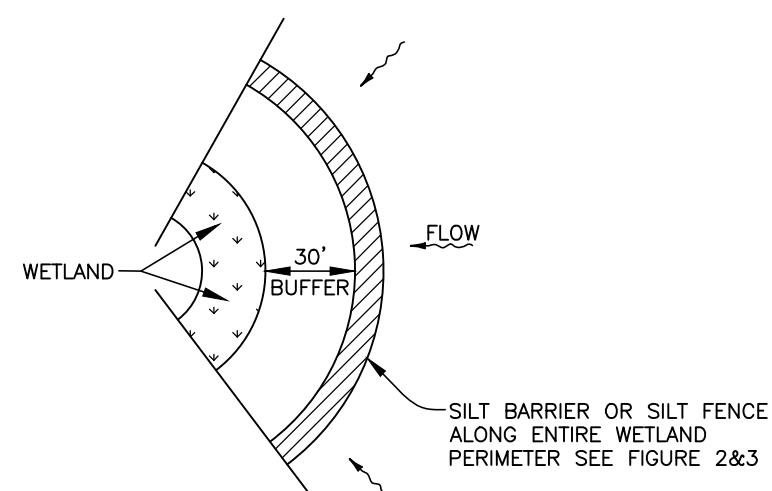
SATELLITE LIFT STATION R&R SLS UPPER MANATEE RIVER ROAD 1010 UPPER MANATEE RIVER ROAD DETAILS



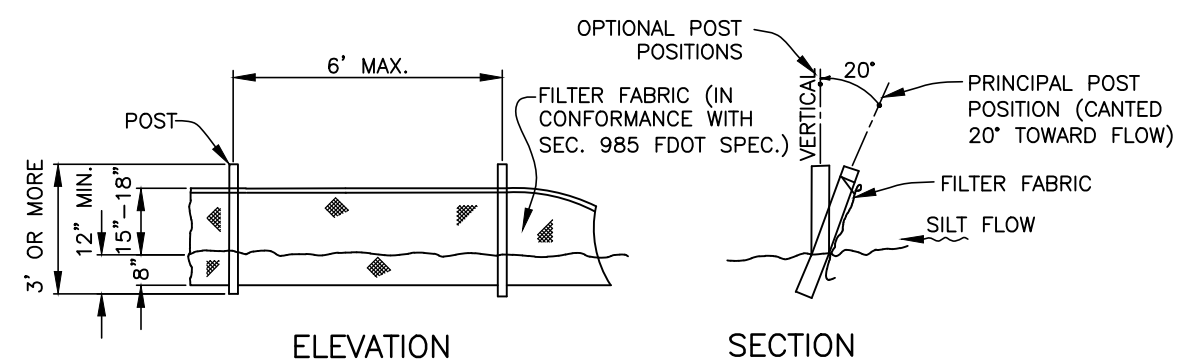
PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 2/22
DRAWN	JKW 2/22
CHECKED	JSS -

J. SHEA SHOUN, P.E.
FLORIDA STATE ENGINEER
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
02/21/2024
SHEET 08 OF 09

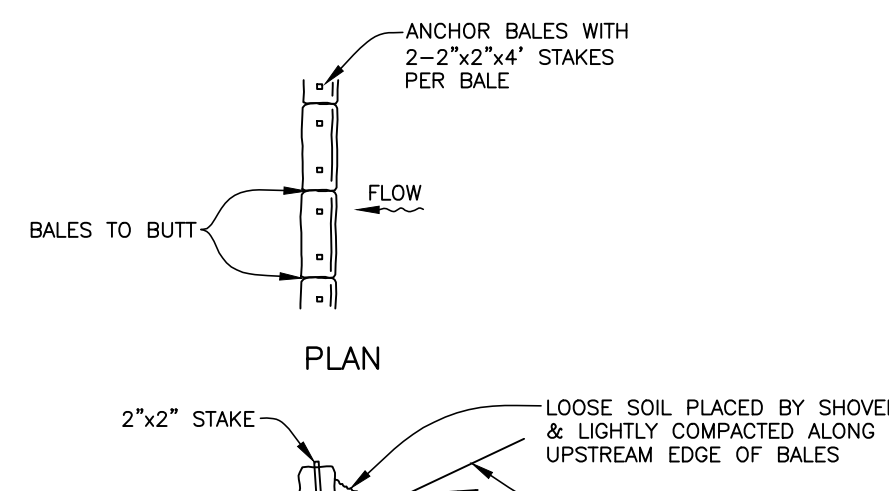
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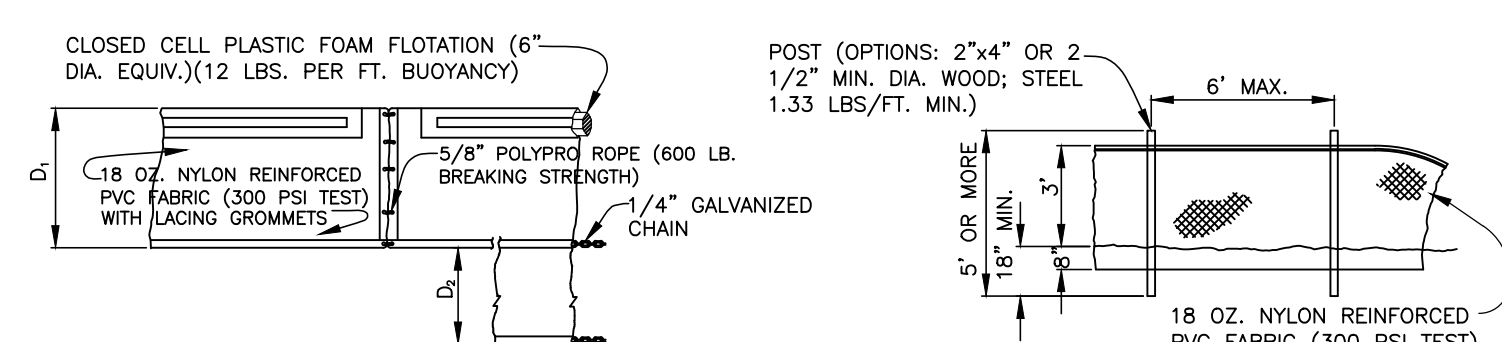
WETLAND BUFFER
FIGURE 1



TYPICAL SILT FENCE
FIGURE 2



TYPICAL BALE SILT BARRIER
FIGURE 3

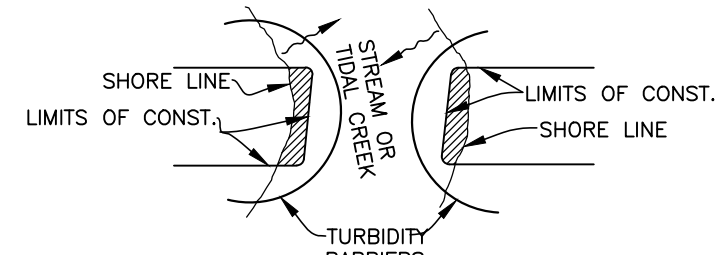


FLOATING TURBIDITY BARRIERS

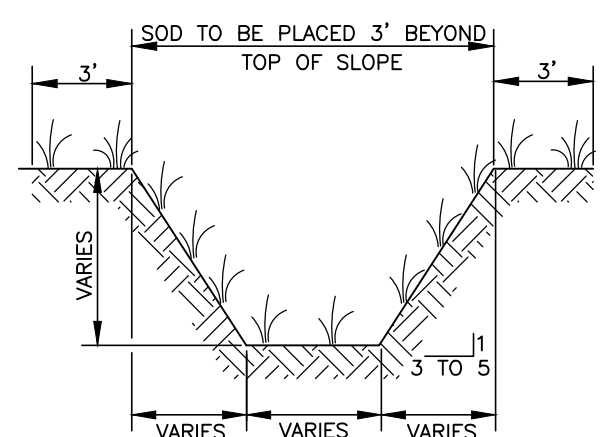
STAKED TURBIDITY BARRIER

D₁ = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

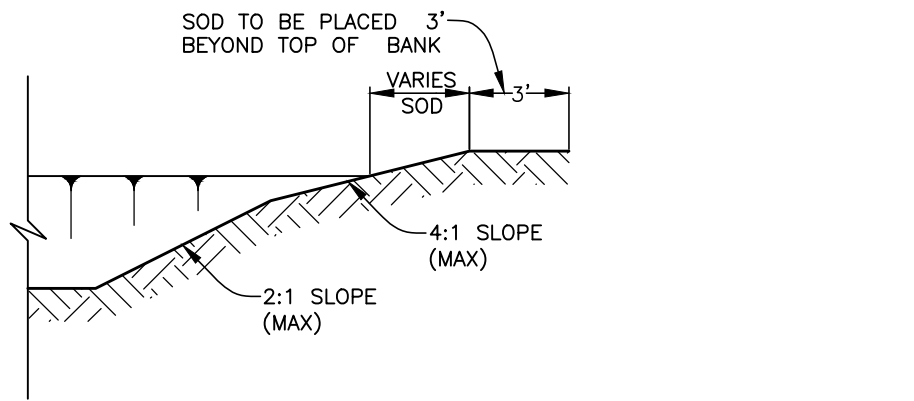
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



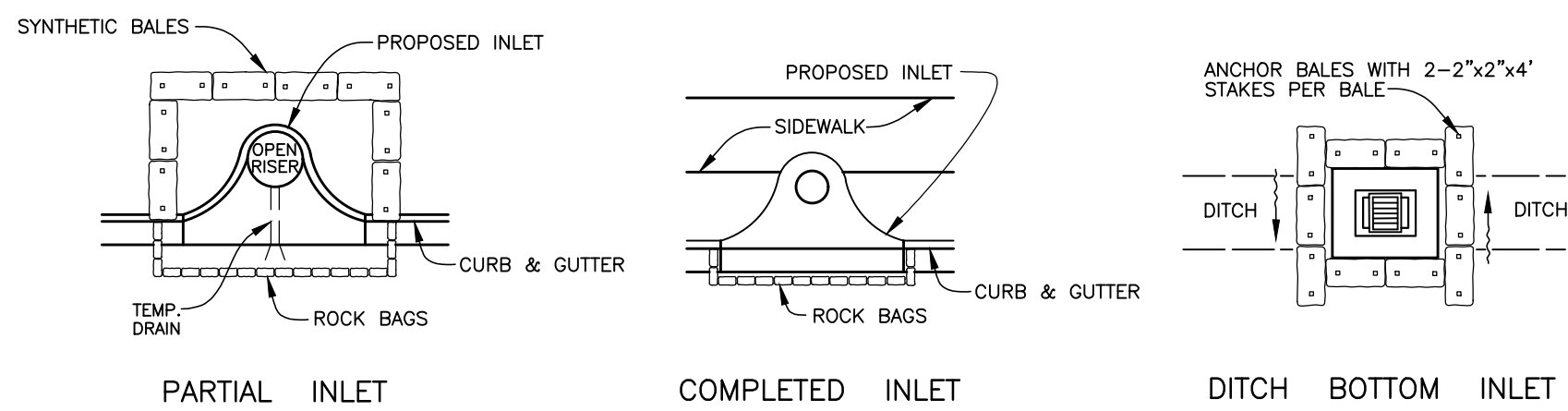
TURBIDITY BARRIERS
FIGURE 4



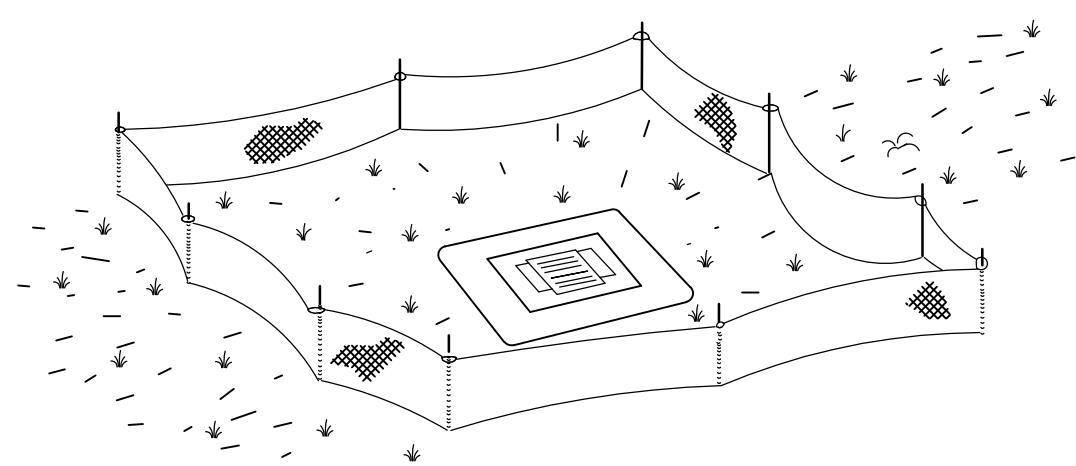
TYPICAL SWALE SECTION
FIGURE 5



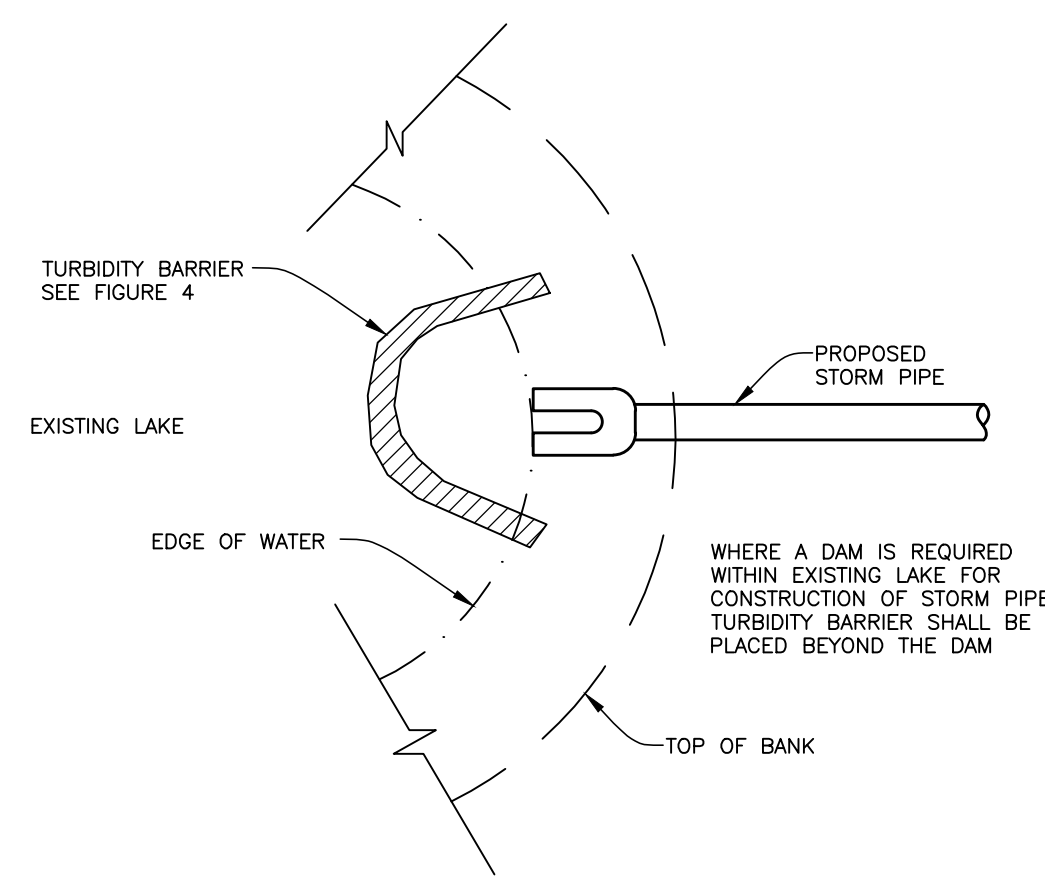
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



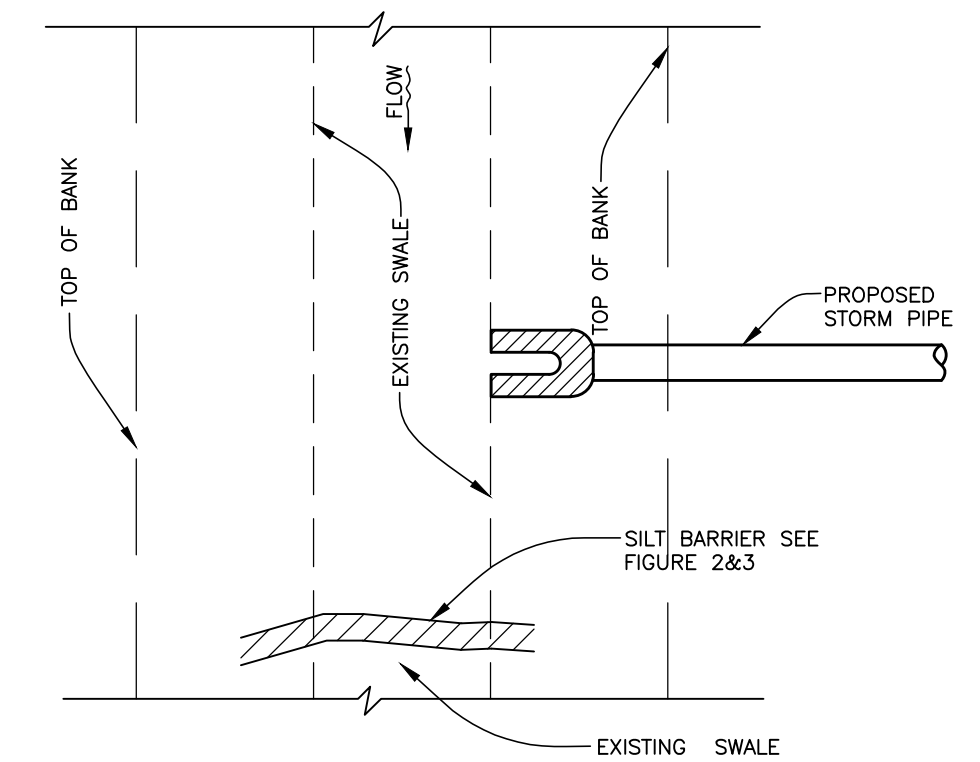
SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7



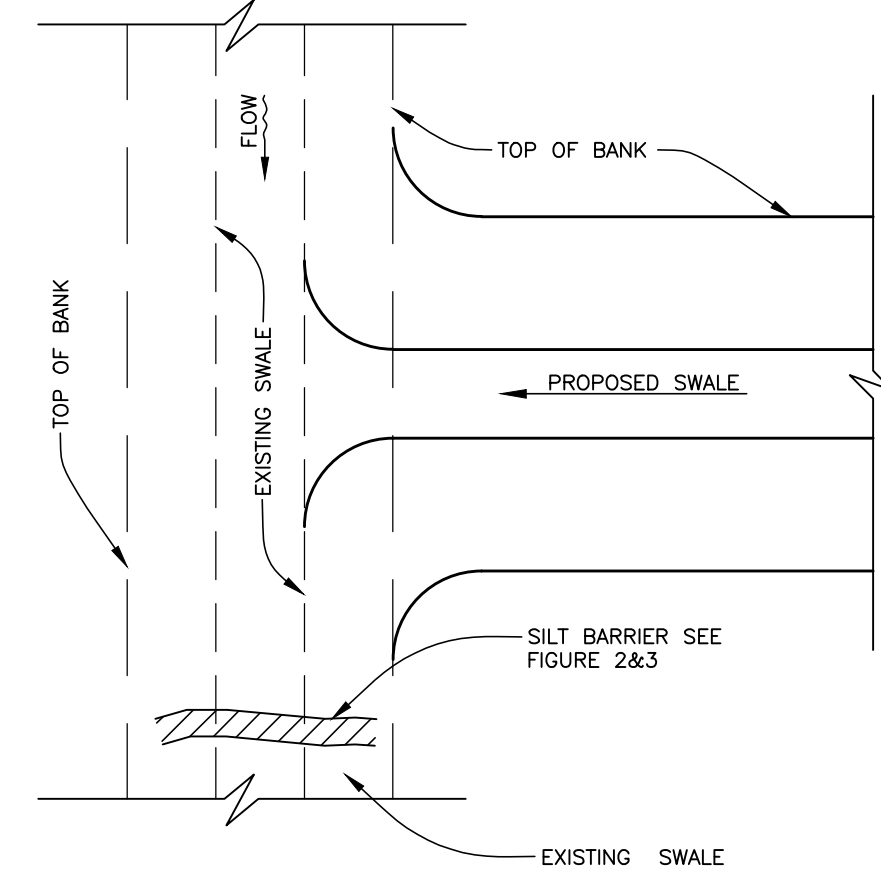
TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



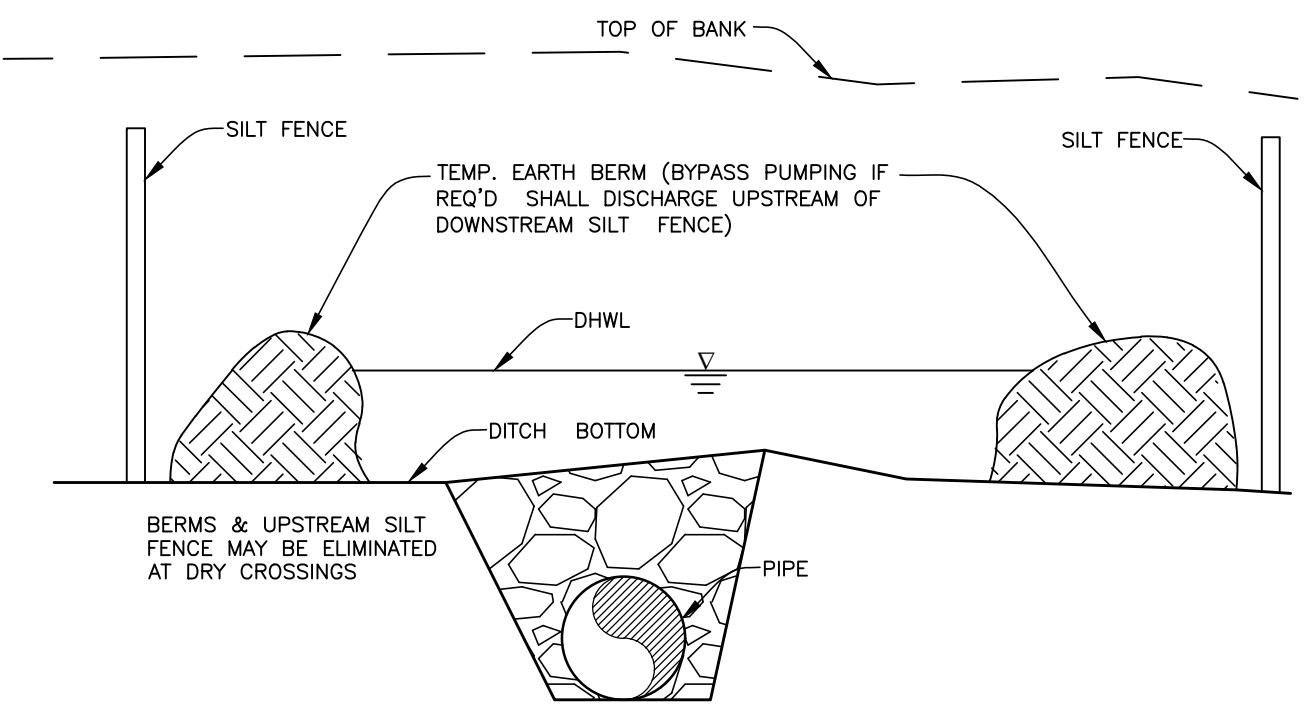
TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9



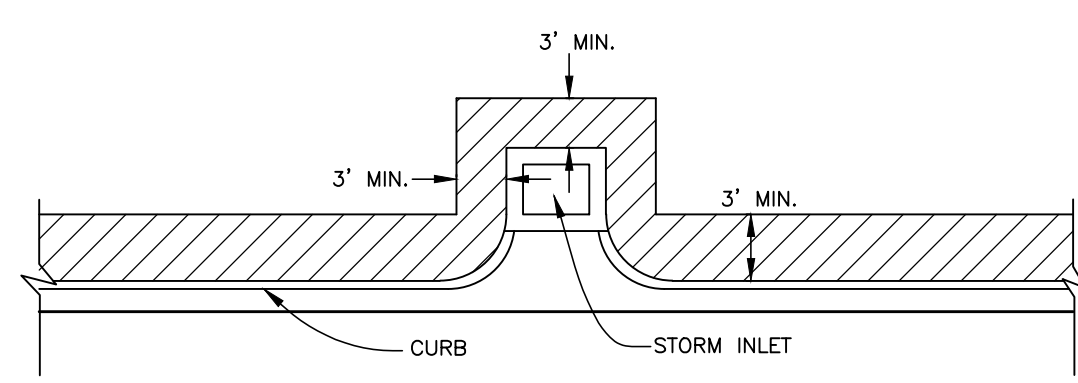
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



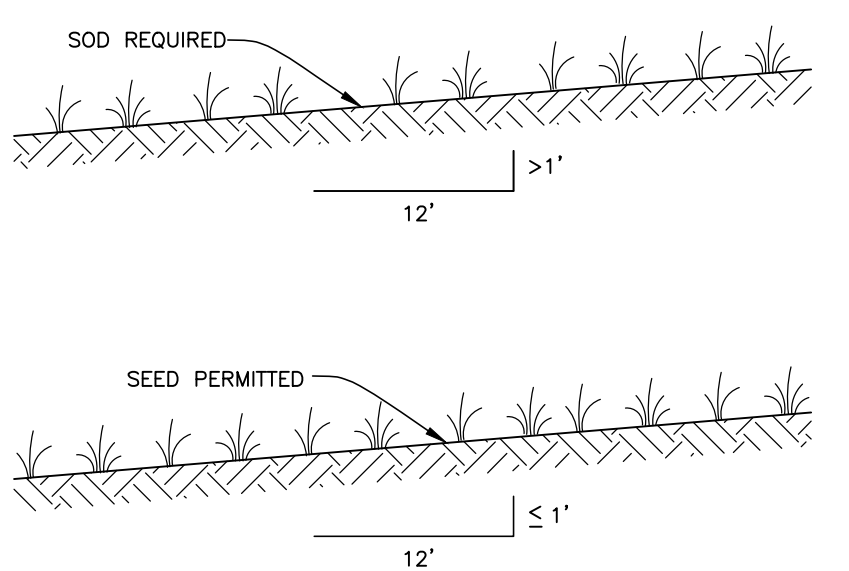
SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11



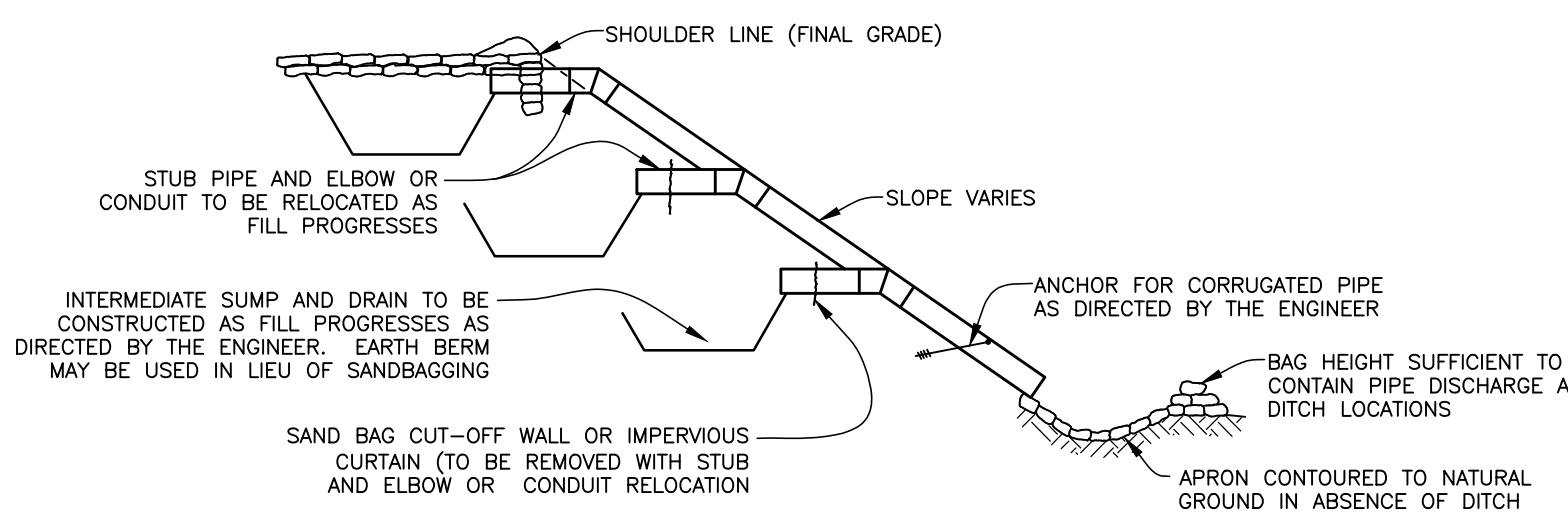
UNDERGROUND PIPE CROSSING
FIGURE 12



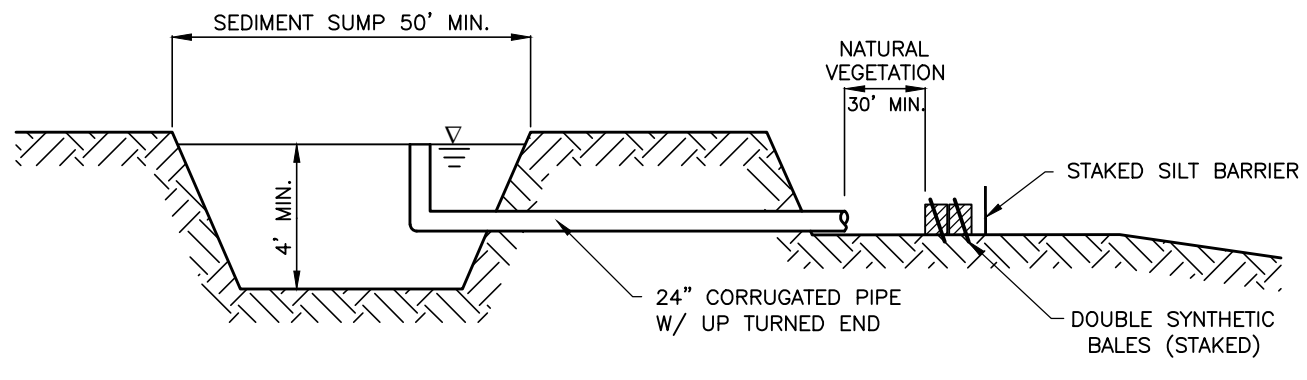
SOD ALONG CURB
AND AROUND INLET
FIGURE 14



GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



SEDIMENT SUMP SECTION
FIGURE 16

NOTE:
REFERENCE THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION, FOR ALL TEMPORARY EROSION CONTROL MEASURES

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R
SLS UPPER MANATEE RIVER ROAD
1010 UPPER MANATEE RIVER ROAD
EROSION CONTROL DETAILS**



PROJECT #	6117680
SURVEY #	NA
SEC./TWN./RGE	30/34/19
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 2/22
DRAWN	JKW 2/22
CHECKED	JSS -

J. SHEA SHOUN, P.E.
FLORIDA LICENSE NO. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 60923
02/21/2024



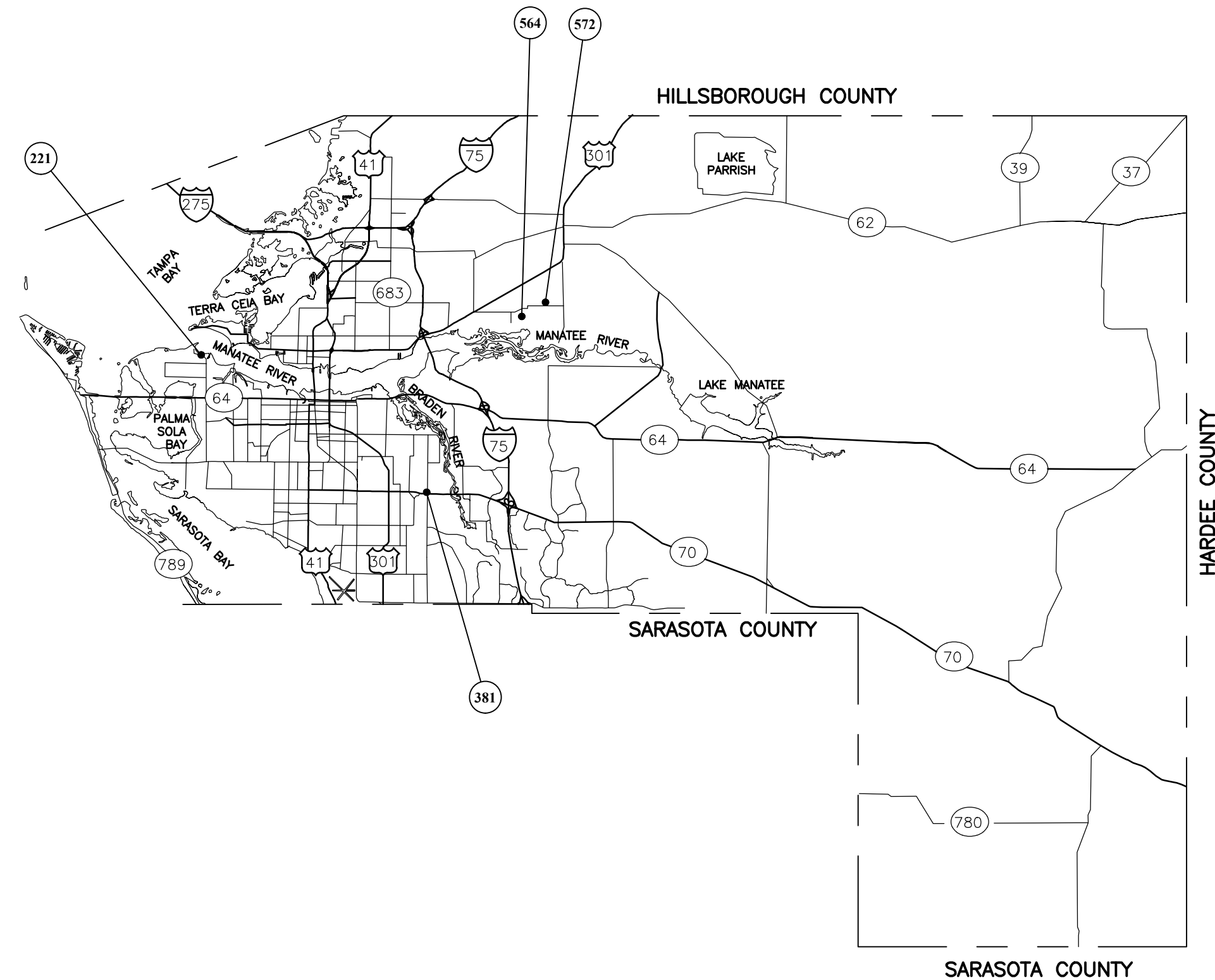
SATELLITE LIFT STATION R&R 2024 GROUP 1 402-0019707 / 5001301

March 2024

BID PLANS

**SATELLITE LIFT STATION R&R
2024 GROUP 1
COVER**

L.S. NAME	RTU	ADDRESS	PROJECT JL NO.	INFLUENT MH
12-D	221	7830 DESOTO MEMORIAL DR., BRADENTON	402-5163888	PUBLIC
SR-70	381	5236 45TH ST. E., BRADENTON	402-5163887	PUBLIC
RIVERWOODS 1	564	3202 RIVERWOODS DR., PARRISH	402-5163886	PUBLIC
KINGSFIELDS GROVES 1	572	11710 OLD TAMPA RD., PARRISH	402-5163885	PUBLIC



NO.	INDEX OF SHEETS
01	COVER
02	GENERAL NOTES & LEGEND
03	VICINIY MAPS
04	12-D, RTU 221
05	SR-70, RTU 381
06	RIVERWOODS 1, RTU 564
07	KINGSFIELD GROVES 1, RTU 572
08	DETAILS1
09	DETAILS2
10	DETAILS3
11	EROSION CONTROL DETAILS

PROJECT DESCRIPTION

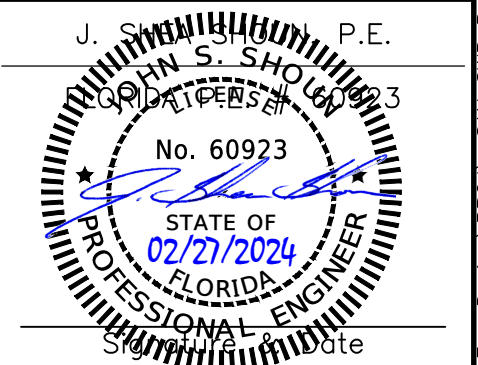
REHABILITATE SEWAGE LIFT STATIONS (AND/OR MANHOLES) TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, UPGRADE OR FULL REPLACEMENT OF THE ELECTRICAL CONTROL EQUIPMENT, WET WELL CLEANING, THE REPLACEMENT OF DISCHARGE PIPING, FITTINGS, VALVES, SWING CHECK VALVES, GUIDE RAILS, PIPE BRACINGS, BASE ELLS, AND/OR MOUNTING PLATES. WET WELL LINER MAY NEED TO BE INSTALLED, REPAIRED OR REPLACED. SEE INDIVIDUAL PLAN SHEETS FOR SPECIFIC REHABILITATION AND INSTALLATIONS REQUIREMENTS FOR EACH LIFT STATION.

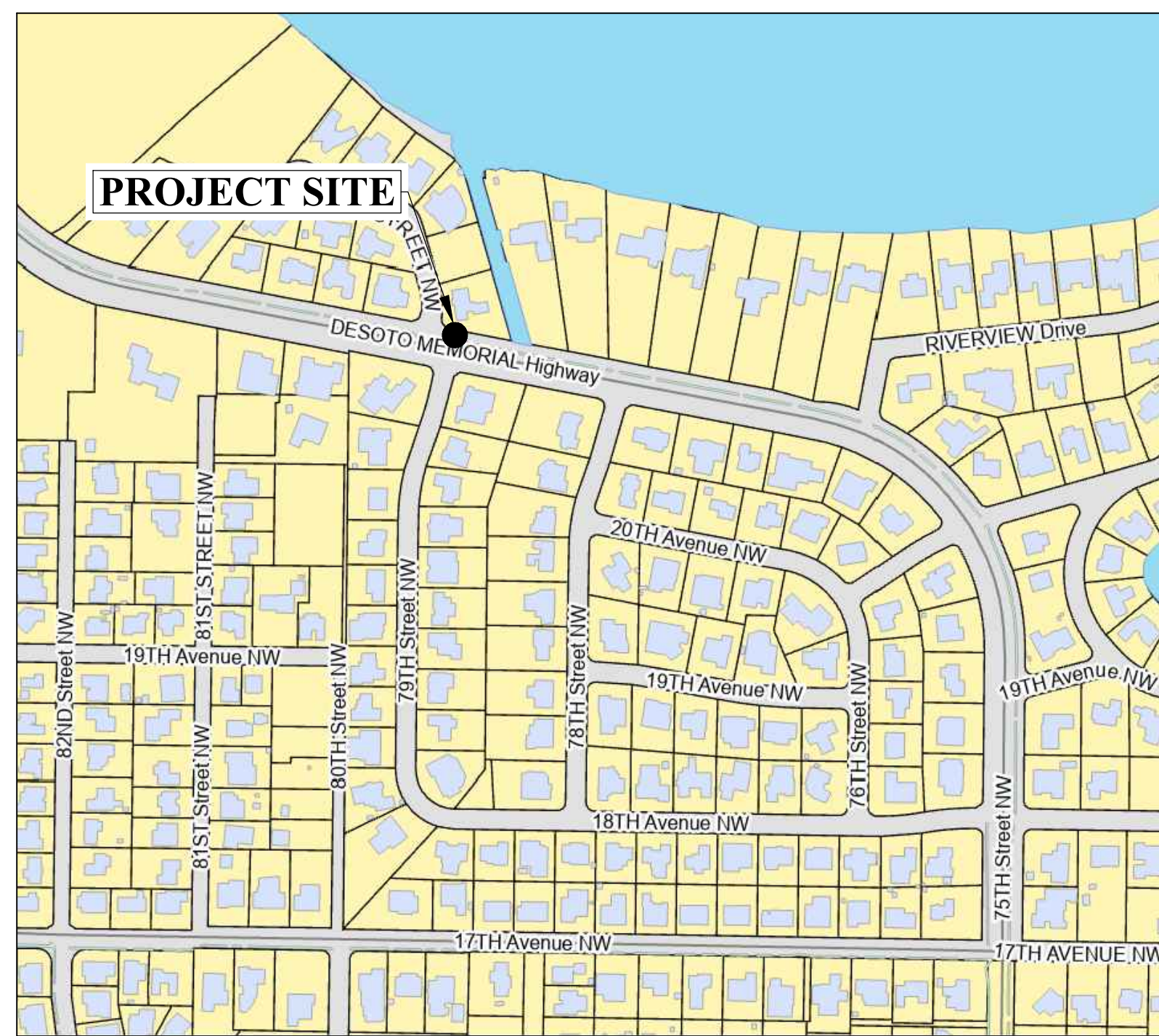


Know what's below
Call before you dig

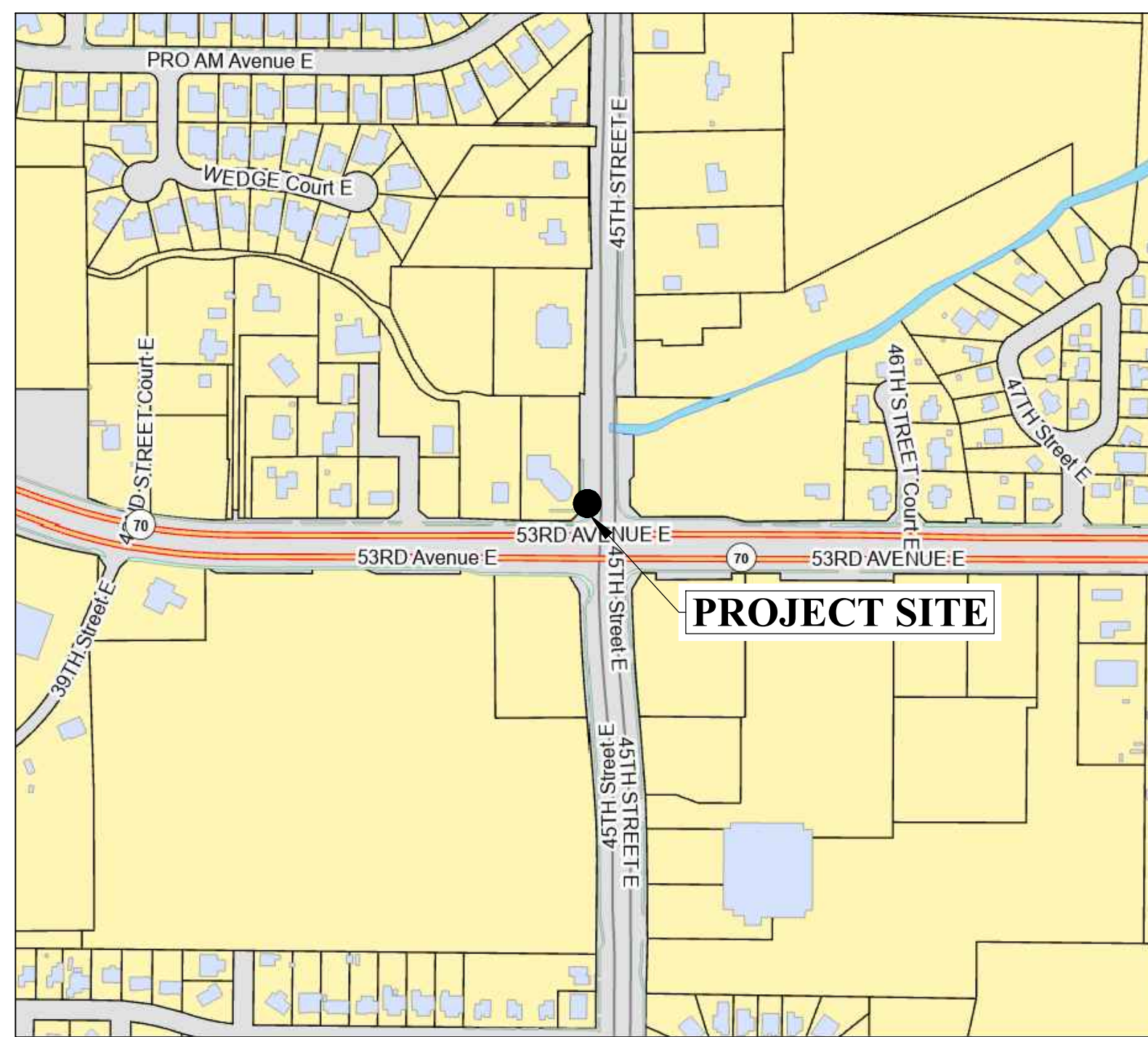
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	402-0019707 / 5001301
SURVEY #	NA
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
	BY DATE
SURVEYED	NA NA
DESIGNED	JSS 5/2023
DRAWN	JKW 5/2023
CHECKED	JSS -





12-D, RTU 221
 7830 DESOTO MEMORIAL DR., BRADENTON
 LAT N: 27.518517°
 LONG W: -82.640636°



SR-70, RTU 381,
 5236 45TH ST E., BRADENTON
 LAT N: 27.446484°
 LONG W: -82.505701°



RIVERWOODS 1, RTU 564,
 3202 RIVERWOODS DR., PARRISH
 LAT N: 27.542560°
 LONG W: -82.450347°



KINGSFIELD GROVES 1, RTU 572,
 11710 OLD TAMPA RD., PARRISH
 LAT N: 27.548659°
 LONG W: -82.436499°

NOTE(S):

- LIFT STATION SITE VISITS MAY BE COORDINATED WITH ERIK GIBSON, 941-792-8811 x5377.
- DATA ON THE COUNTY'S UTILITY INFRASTRUCTURE MAY BE RESEARCHED AND VIEWED BY UTILIZING THE PUBLIC ACCESS TO THE COUNTY'S GIS SYSTEM. USE AN INTERNET BROWSER AND ENTER THE FOLLOWING URL, "<https://www.myanatee.org/gisapps/mobile/index.html?type=utilities-public>".

NO.	REVISION DESCRIPTION	BY	DATE



Know what's below
 Call before you dig

SATELLITE LIFT STATION R&R
2024 GROUP 1
VICINTY MAPS



PUBLIC WORKS DEPARTMENT
 ENGINEERING SERVICES
 1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-0019707 / 5001301
SURVEY #	NA
SEC./TWN./RGE	VARIABLES
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 5/2023
DRAWN	JKW 5/2023
CHECKED	JSS -

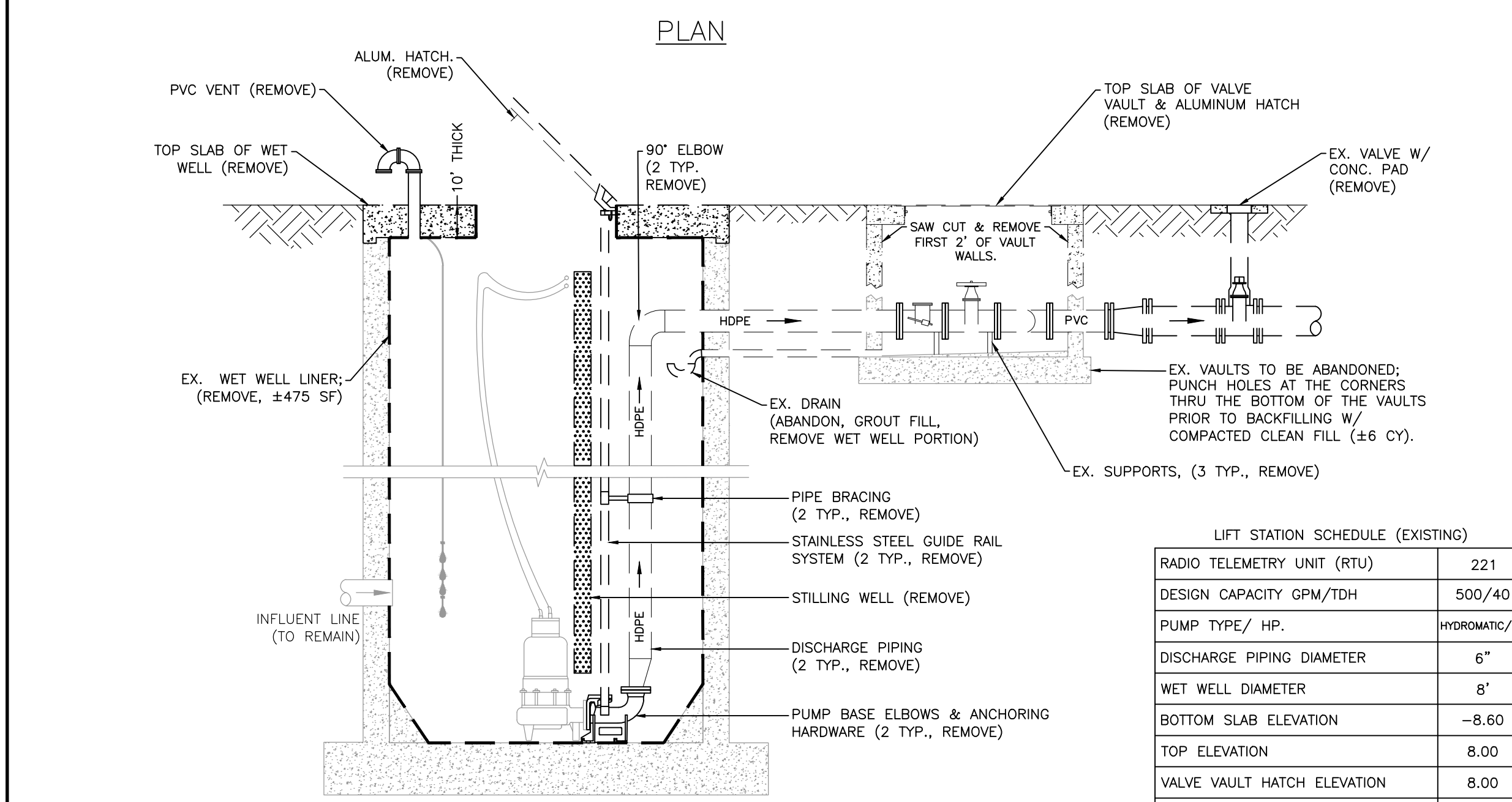
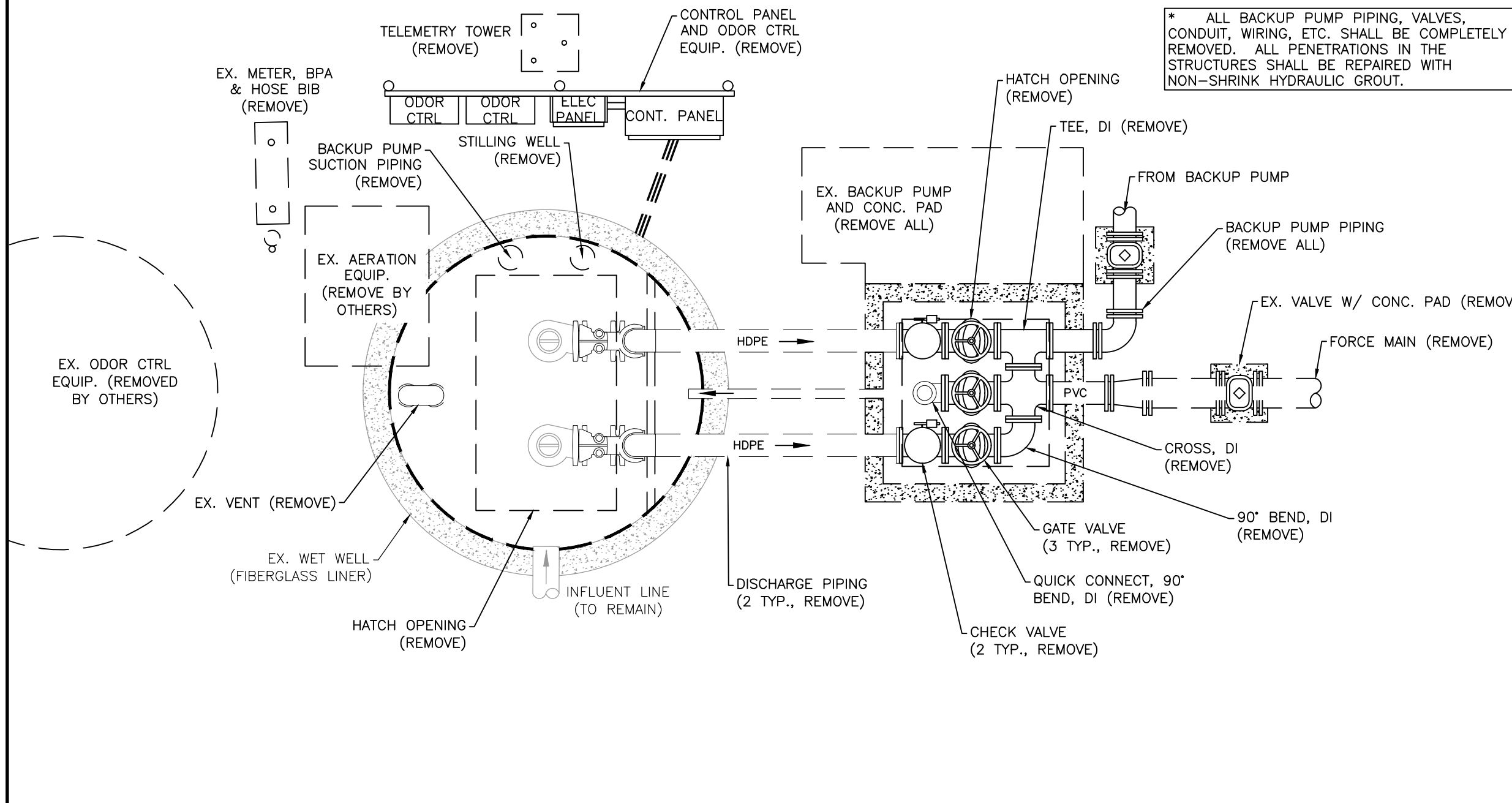
J. SHEA SHOUN, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

\P\Utility Eng Design\PROJ\2024 Group 1\VICINTY MAPS\2024-10-15-11:13 AM Shear Shoun - P1 - ANSI Full Sheet D (8.500 x 22.000 inches) - MC-2016.S16

EXISTING

NOTES:

- THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
- REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
- BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
- THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

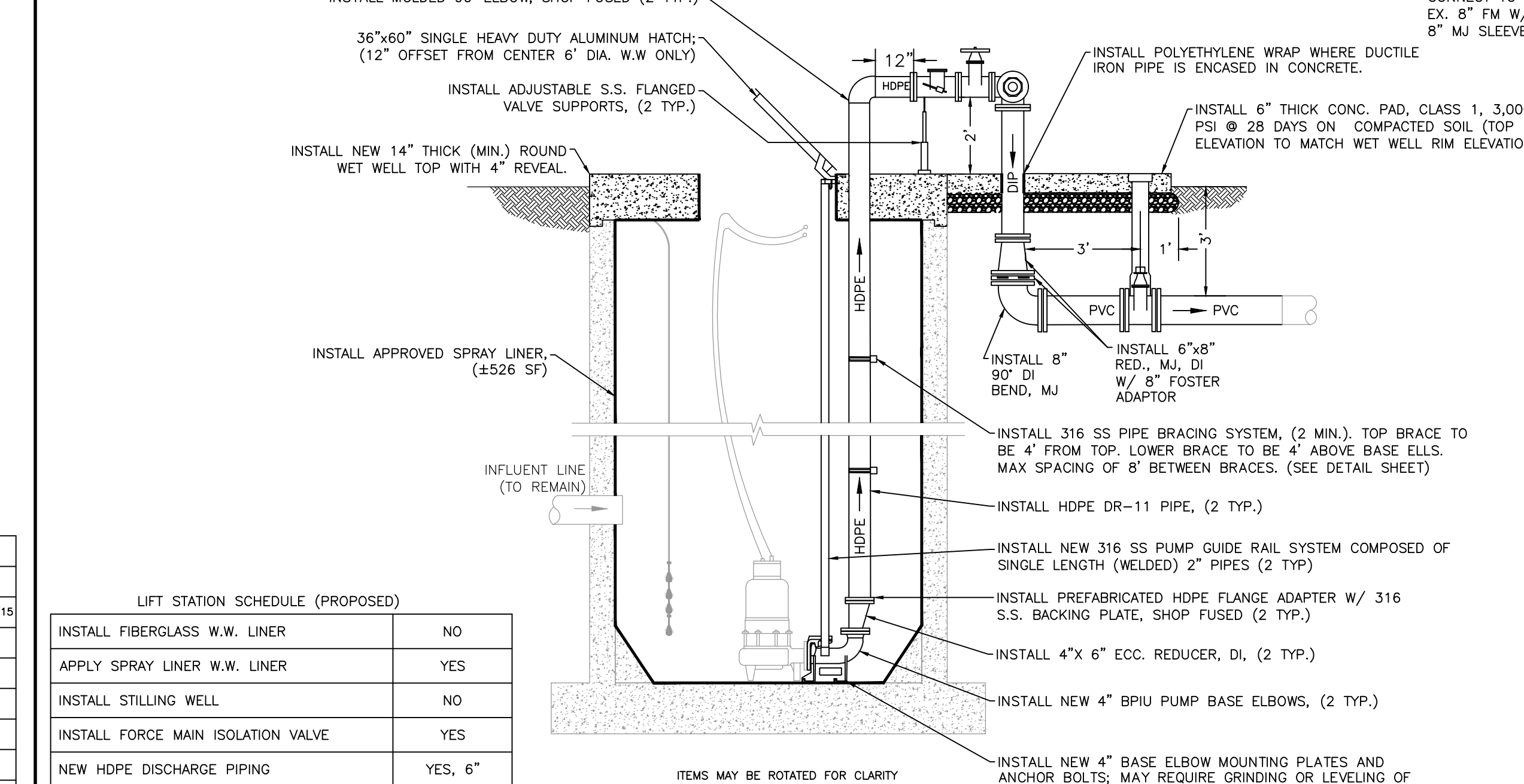
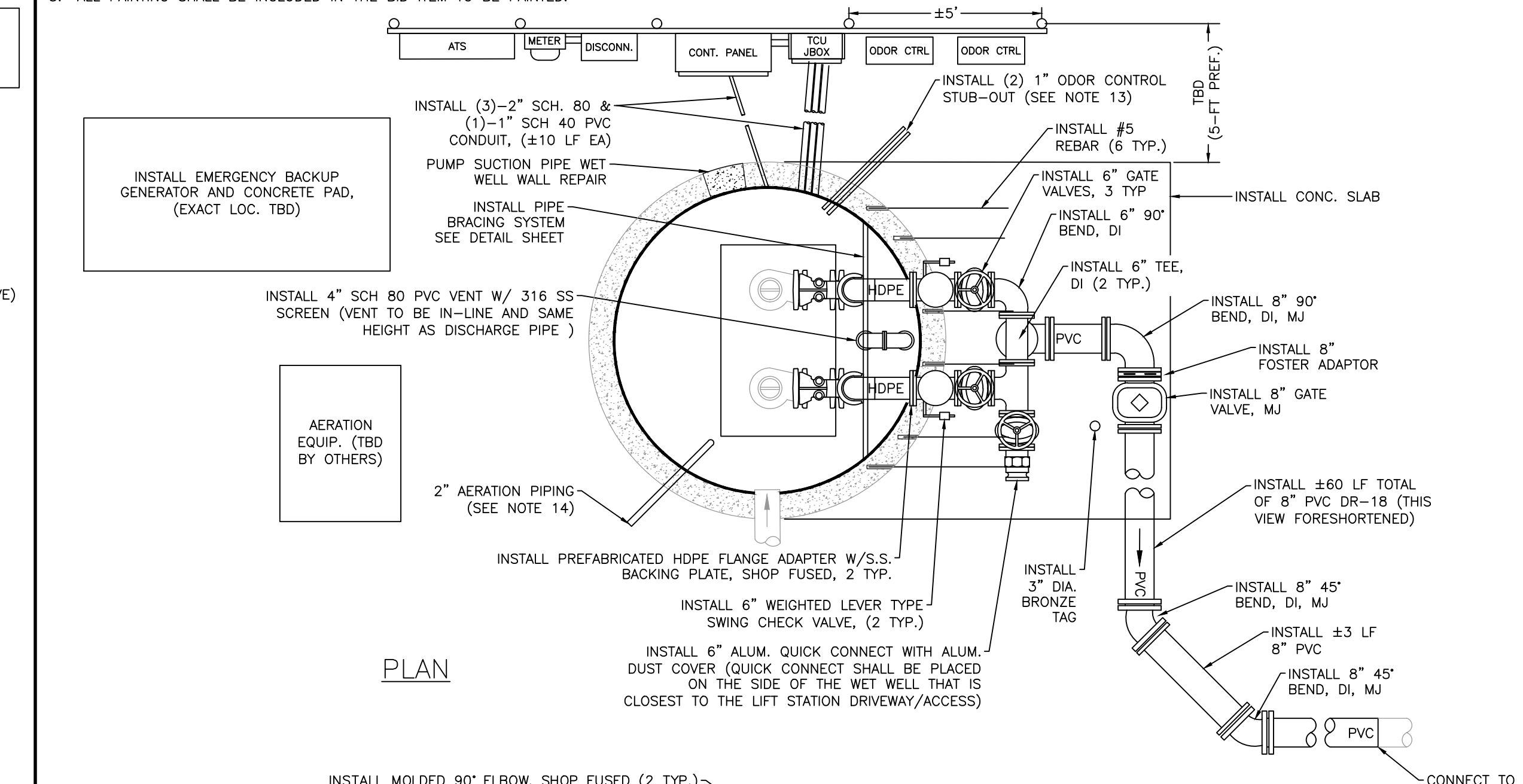


LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	221
DESIGN CAPACITY GPM/TD	500/40
PUMP TYPE/ HP.	HYDROMATIC/15
DISCHARGE PIPING DIAMETER	6"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	-8.60
TOP ELEVATION	8.00
VALVE VAULT HATCH ELEVATION	8.00
INFLUENT INVERT ELEVATION	-2.69
INFLUENT PIPE SIZE	10" CIP
FORCE MAIN DIAMETER	8"
WET WELL VENT PIPE	6" PVC
ELECT. POWER, VOLTS/PH	240/3
ELECT. SERVICE SIZE, AMPS	150
EX. FORCEMAIN TIE-IN	MH

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

GENERAL NOTES:

- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
- THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
- ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



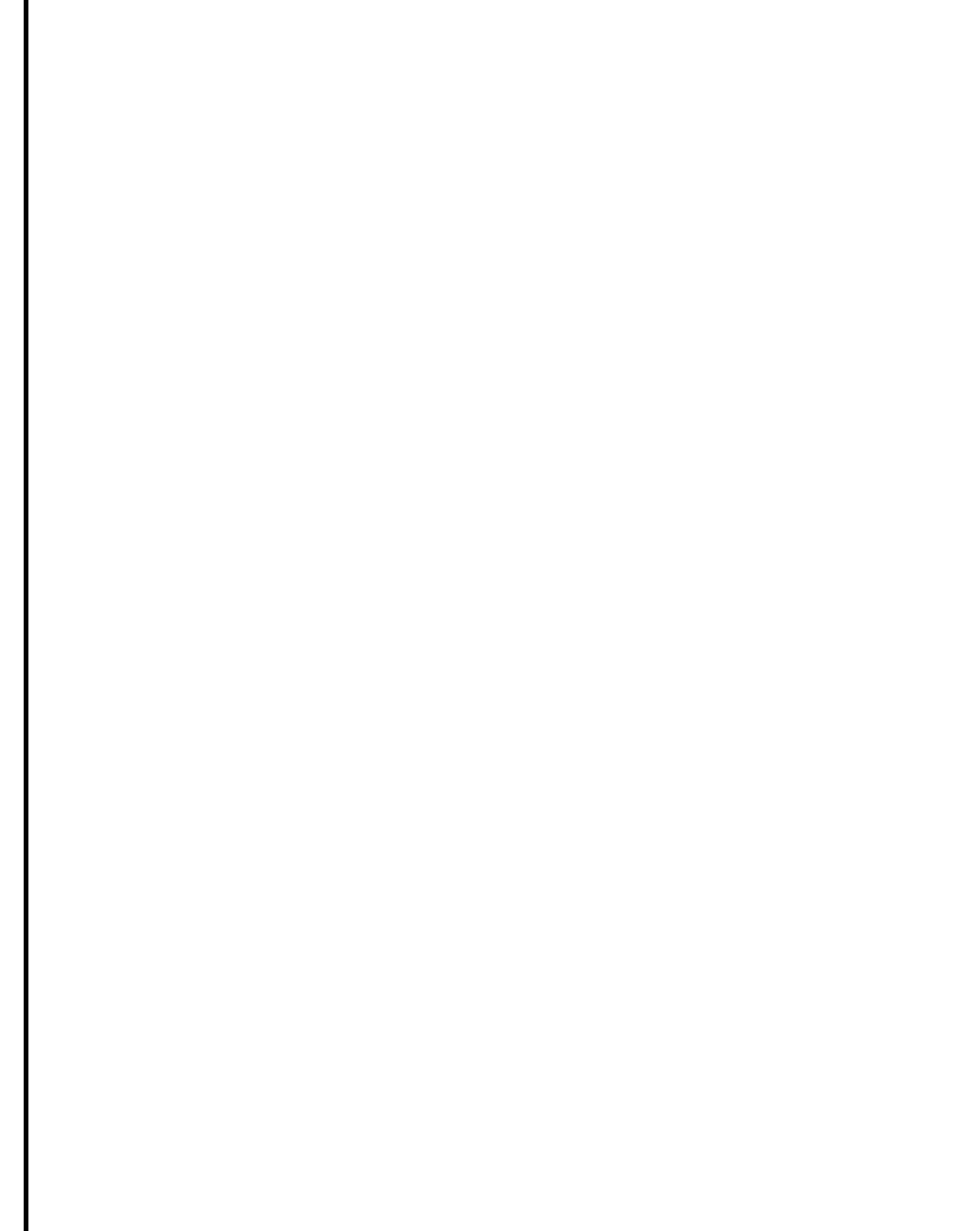
LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 6"
NEW BASE ELL	4" BPIU-14
MODIFY WET WELL WALLS (RAISE/LOWER) RIM:	NO
MODIFY TOP OF VALVE VAULT	NO
INSTALL WET WELL VENT PIPE	YES, 6"
INSTALL NEW WATER SERVICE ASSEMBLY	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

CONSTRUCTION NOTES:

- CONTRACTOR TO CALL 811 PRIOR TO COMMENCING WORK. PROTECT AND SUPPORT ALL EXISTING UNDERGROUND UTILITIES (MANATEE COUNTY / OTHERS) IN THE ROW OR ADJACENT AREAS.
- INSTALL NEW 200 AMP ELECTRICAL SERVICE ENTRANCE FEEDER TO ACCOMMODATE NEW MAIN DISCONNECT SIZE REQUIREMENTS ±150 LF NEW ELECTRICAL SERVICE WITH CONDUIT FROM OTHER SIDE OF THE ROADWAY VIA DIRECTIONAL DRILLING.
- REMOVE AND INSTALL ALL NEW ONE-SIDED ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. GENERATOR RECEPTACLE SHALL BE INSTALLED IN A REMOTE LOCATION. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.
- A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
- THE LIFT STATION SITE HAS AUXILIARY EQUIPMENT. INSTALL SIX (6) ADDITIONAL BREAKERS; THREE 20 AMP BREAKERS (BATTERY CHARGER, WATER JACKET HEATER, & SPACE HEATER); ONE 3-POLE 20 AMP BREAKER (THIOGUARD); ONE 3-POLE 30 AMP BREAKER (AERATION); AND ONE 1-POLE 120V 20 AMP BREAKER (BIOMP) IN THE CONTROL PANEL.
- AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
- SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD(S). COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
- INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
- WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
- REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±131 SF). ALL REPAIRS TO BE VERIFIED WITH COUNTY PERSONNEL PRIOR TO WORK.
- INSTALL A NEW 2-INCH WATER SERVICE AND 6"x2" TAPPING SADDLE; A STANDARD METER/BPA ASSEMBLY; AND A 3/4-INCH HOSE BIB ASSEMBLY PER COUNTY STANDARDS VIA HORIZONTAL DIRECTIONAL DRILL. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE OTHER SIDE OF THE ROADWAY. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE / EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL, (±60 LF).
- ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
- REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
- ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH OTHERS.
- INSTALL TWO (2) CAPPED STUB-OUTS; 3 LF EACH OF (2)-1" PVC PIPES BY CORE BORING THROUGH THE WET WELL WALL. USE HYDRAULIC NON-SHRINK GROUT TO REPAIR THE HOLES FOR THE ODOR CONTROL EQUIPMENT CONNECTIONS. FIELD VERIFY LOCATE WITH COUNTY PERSONNEL.
- AERATION UNIT TO BE REMOVED BY OTHERS. CONTRACTOR TO INSTALL A 2-INCH AERATION PIPING (ALL 316 SS) BY CORE BORING THROUGH THE WET WELL WALL, USE HYDRAULIC NON-SHRINK GROUT TO REPAIR THE HOLE FOR THIS STATION ONLY. THE AERATION PIPING SHALL RUN FROM THE AERATION UNIT TO THE INSIDE OF THE WET WELL. SEE SHEET 10 FOR A CONCEPTUAL LAYOUT AND DESIGN. ALL SHALL BE FIELD LOCATED AND COORDINATED WITH COUNTY PERSONNEL.



QUESTIONS / COMMENTS:
 1. WATER DISTRIBUTION IS PUBLIC.
 2. SEWER COLLECTION IS PUBLIC.

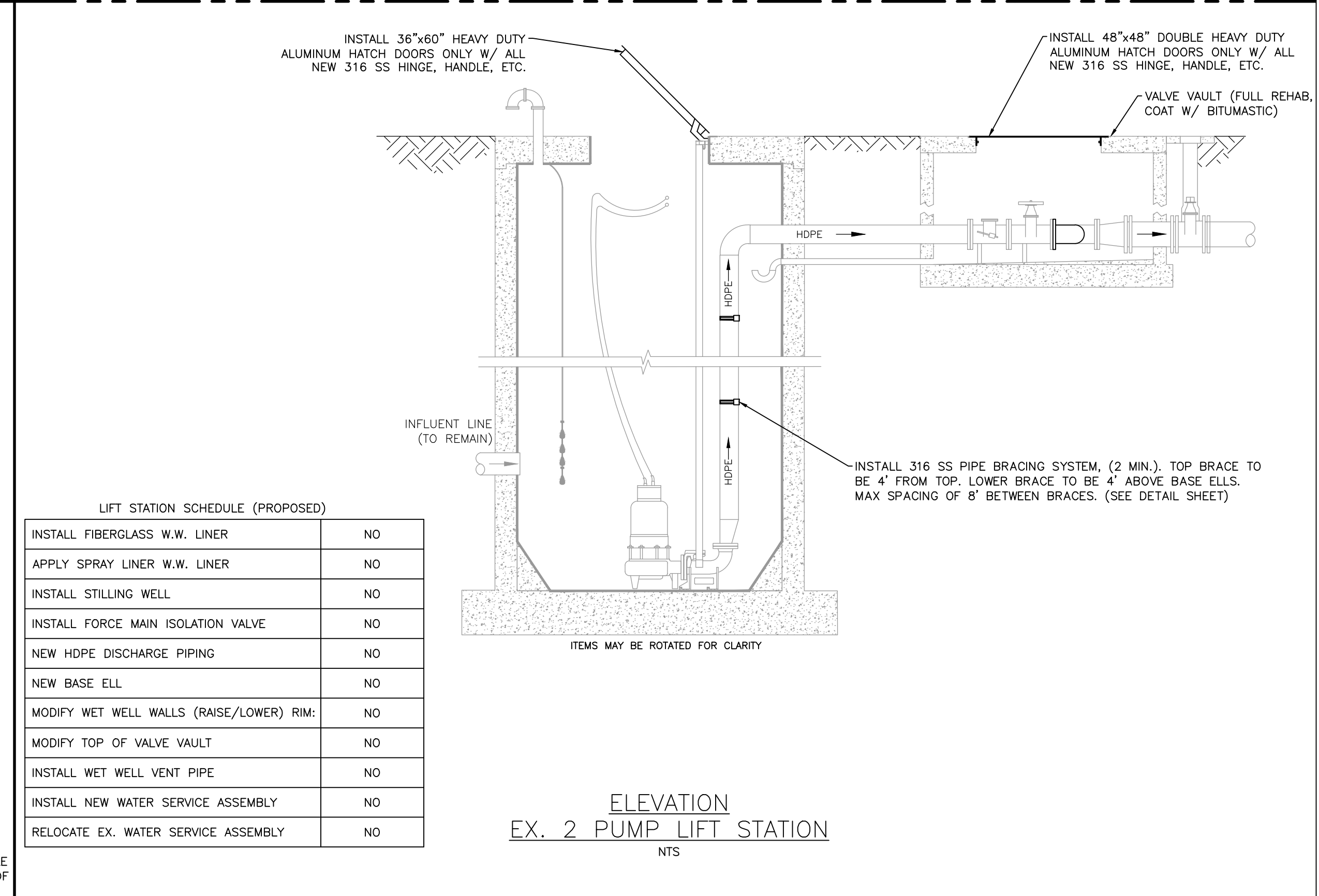
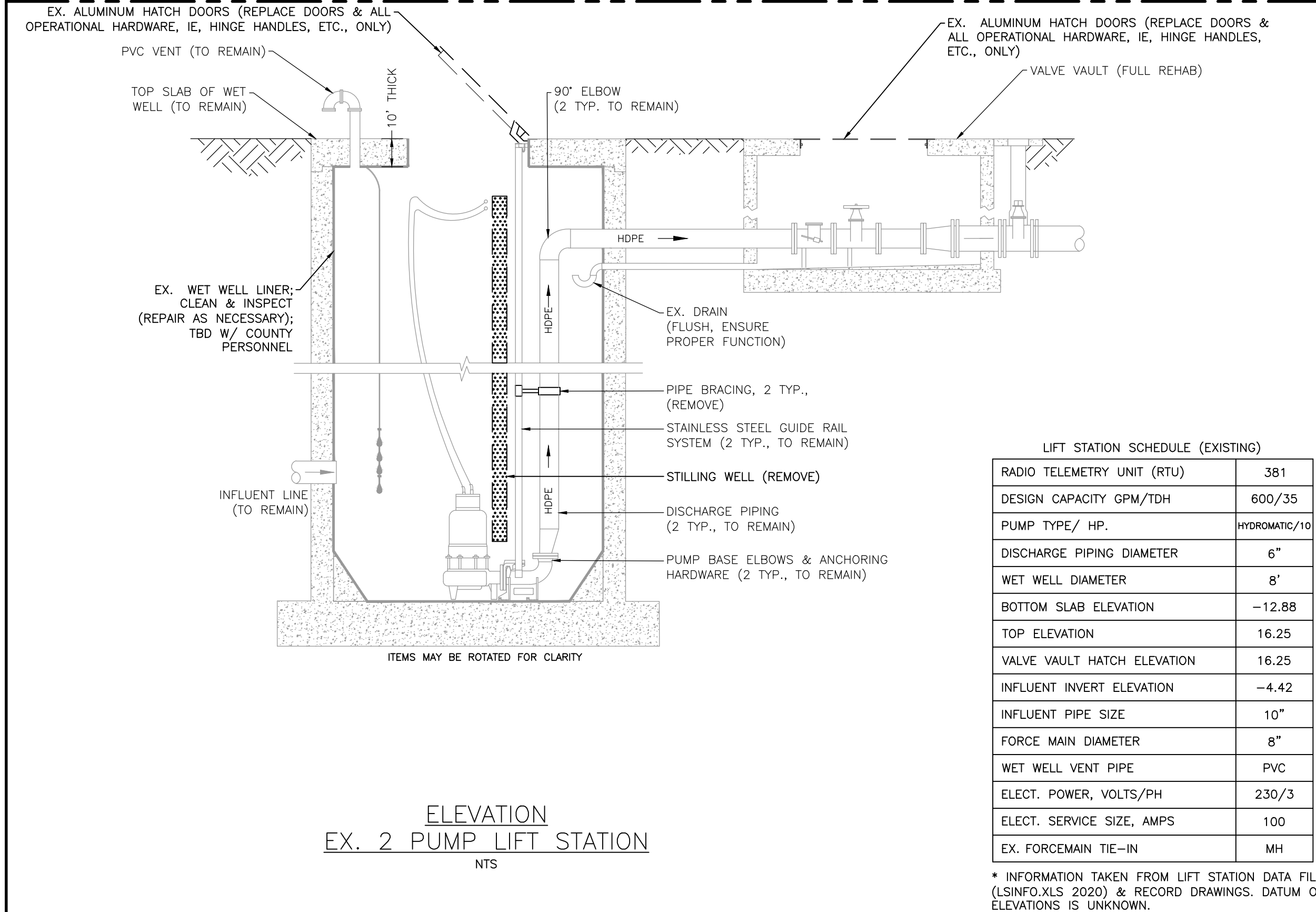
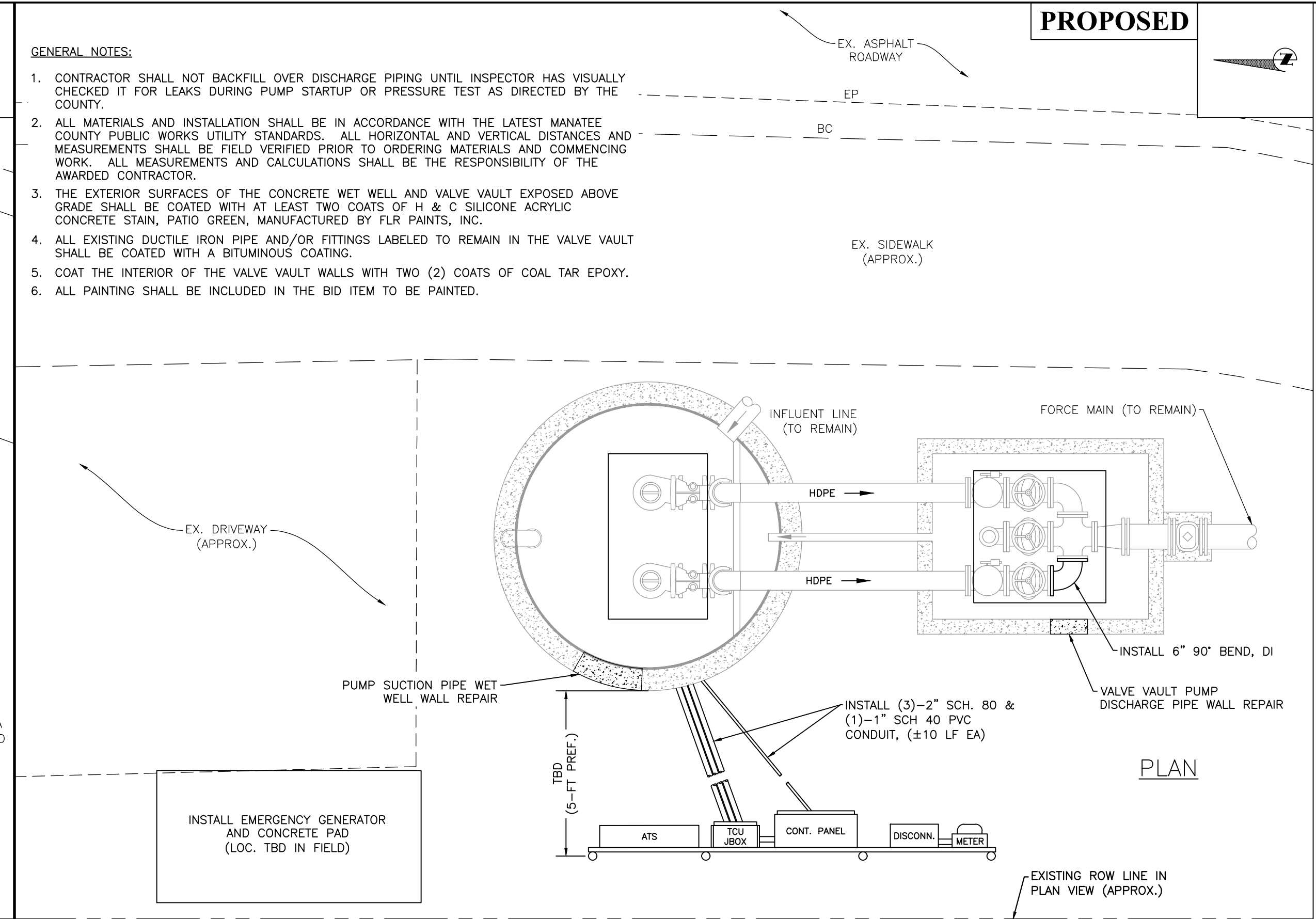
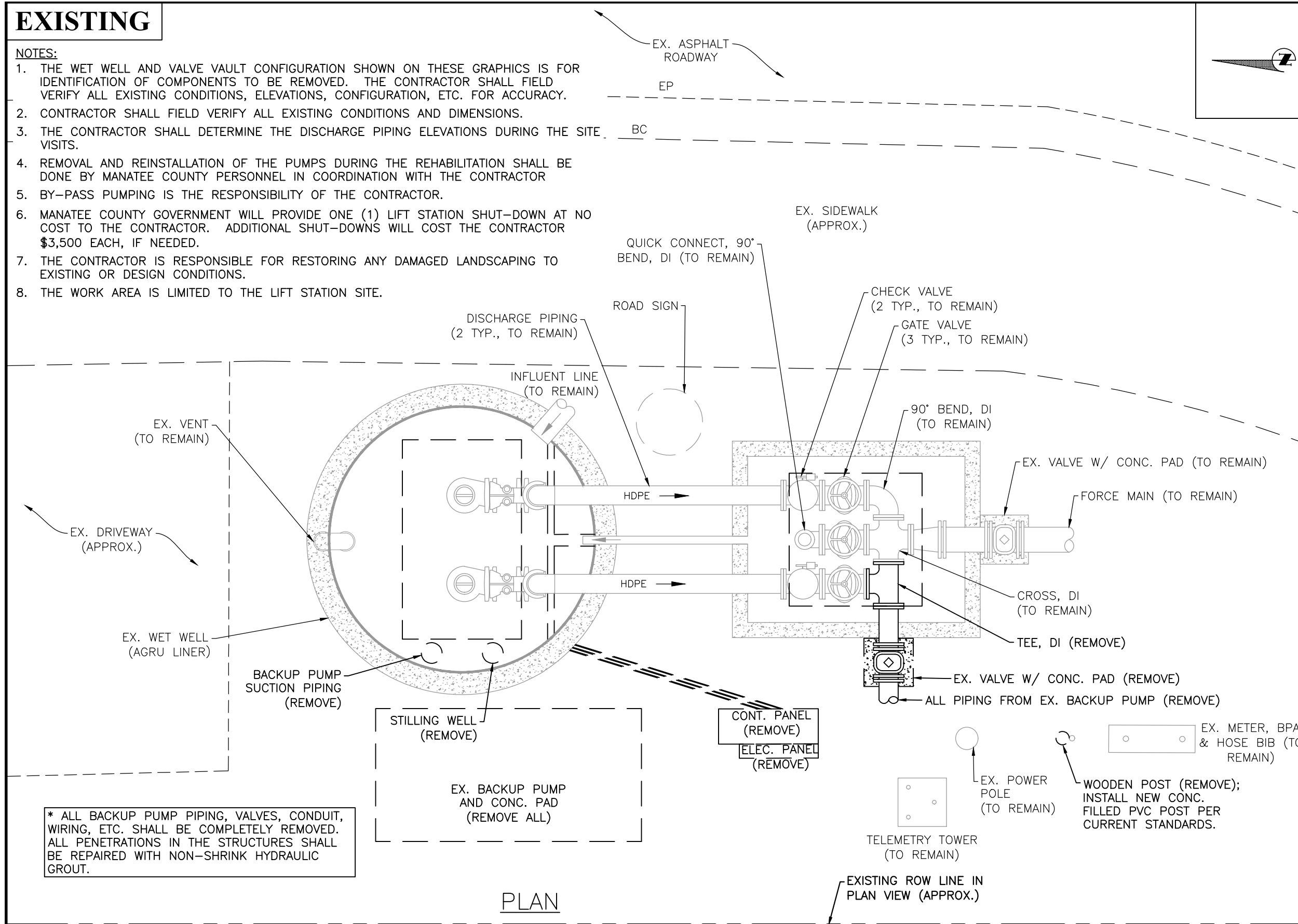
NO.	REVISION DESCRIPTION	BY	DATE



SATELLITE LIFT STATION R&R
2024 GROUP 1
12-D, RTU 221



PROJECT #		402-5163888	J. SHEA SHOUN, P.E.	
SURVEY #		NA	FLORIDA STATE ENGINEERING LICENSE No. 60923	
SEC./TWN./RGE		19/34/17	DATE OF 02/21/2024	
SCALE		N.T.S.	PROFESSIONAL ENGINEER	
SURVEYED	BY	DATE		
NA	NA	NA		
DESIGNED	BY	DATE		
JSS	JSS	5/2023		
DRAWN	BY	DATE		
JKW	JKW	5/2023		
CHECKED	BY	DATE		
JSS	JSS	-		



CONSTRUCTION NOTES:

- CONTRACTOR TO CALL 811 PRIOR TO COMMENCING WORK. PROTECT AND SUPPORT ALL EXISTING UNDERGROUND UTILITIES (MANATEE COUNTY / OTHERS) IN THE ROW OR ADJACENT AREAS.
- ANY ELECTRICAL WIRING THAT IS INSTALLED THROUGH THE LIFT STATION WET WELL AND VAULTS SHALL BE INSTALLED IN A CARRIER PIPE THAT IS STRAPPED TO THE STRUCTURE.
- REMOVE AND INSTALL ALL NEW ONE-SIDED ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. GENERATOR RECEPTACLE SHALL BE INSTALLED IN A REMOTE LOCATION. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.
- A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
- THE LIFT STATION SITE HAS AUXILIARY BACKUP EQUIPMENT. INSTALL THREE ADDITIONAL 20 AMP BREAKERS IN THE CONTROL PANEL TO POWER A BATTERY CHARGER, WATER JACKET HEATER, SPACER HEATER.
- AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC HAZARDS CALCULATIONS" SHALL BE PROVIDED.
- DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
- CONTRACTOR TO INSTALL WELDED JOINT CAP SEALS ON EXISTING LINER JOINTS (4 TYP.) PER THE MANUFACTURER'S RECOMMENDATION. COORDINATE WITH COUNTY PERSONNEL PRIOR TO INSTALLATION.
- REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
- INSTALL NEW PVC HOSE BIBB POST TO BE COORDINATED WITH COUNTY PERSONNEL.

QUESTIONS / COMMENTS:

- WATER DISTRIBUTION IS PUBLIC.
- SEWER COLLECTION IS PUBLIC.

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R

2024 GROUP 1

SR-70, RTU 381

Know what's below
Call before you dig

Manatee County
FLORIDA

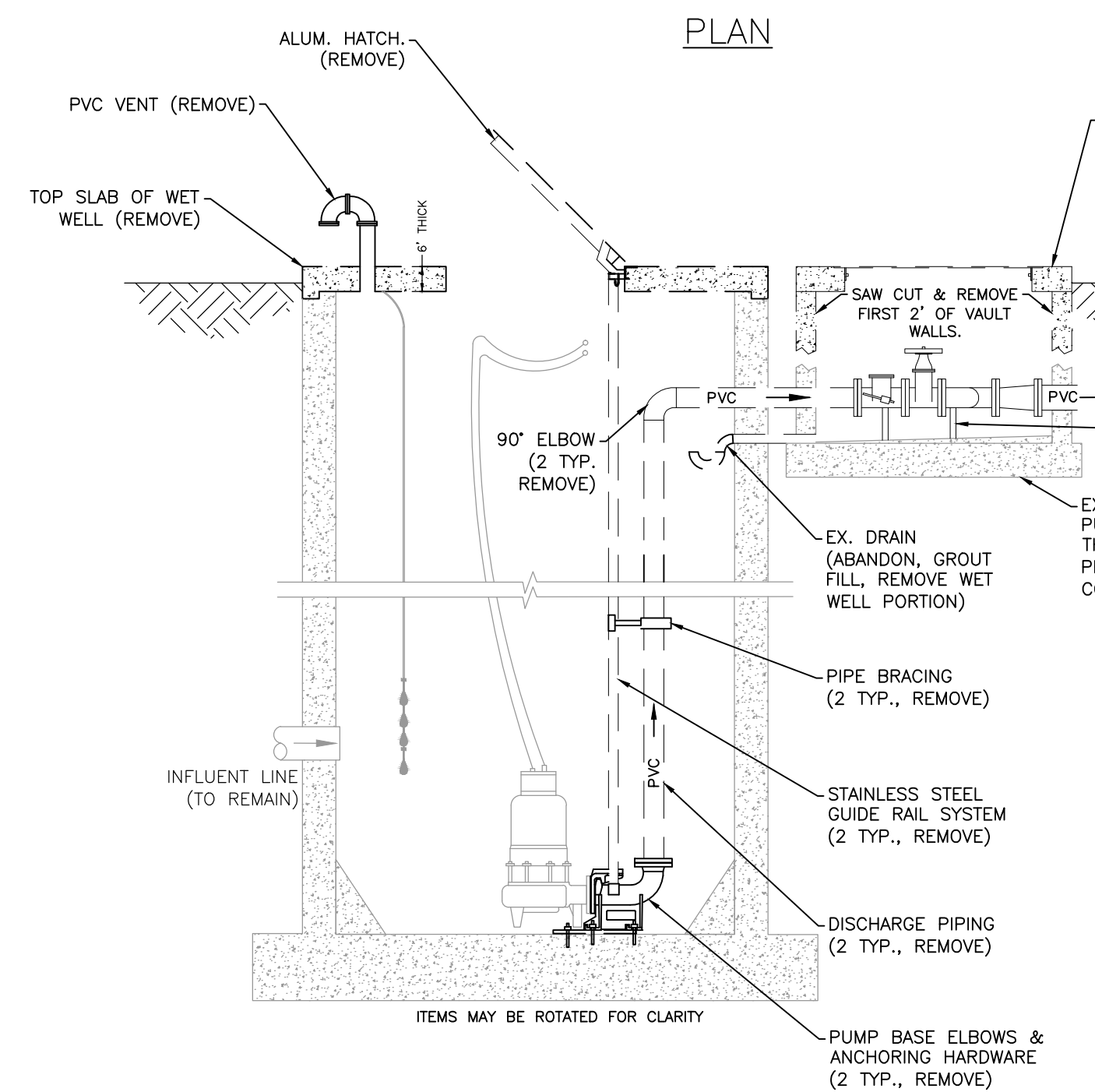
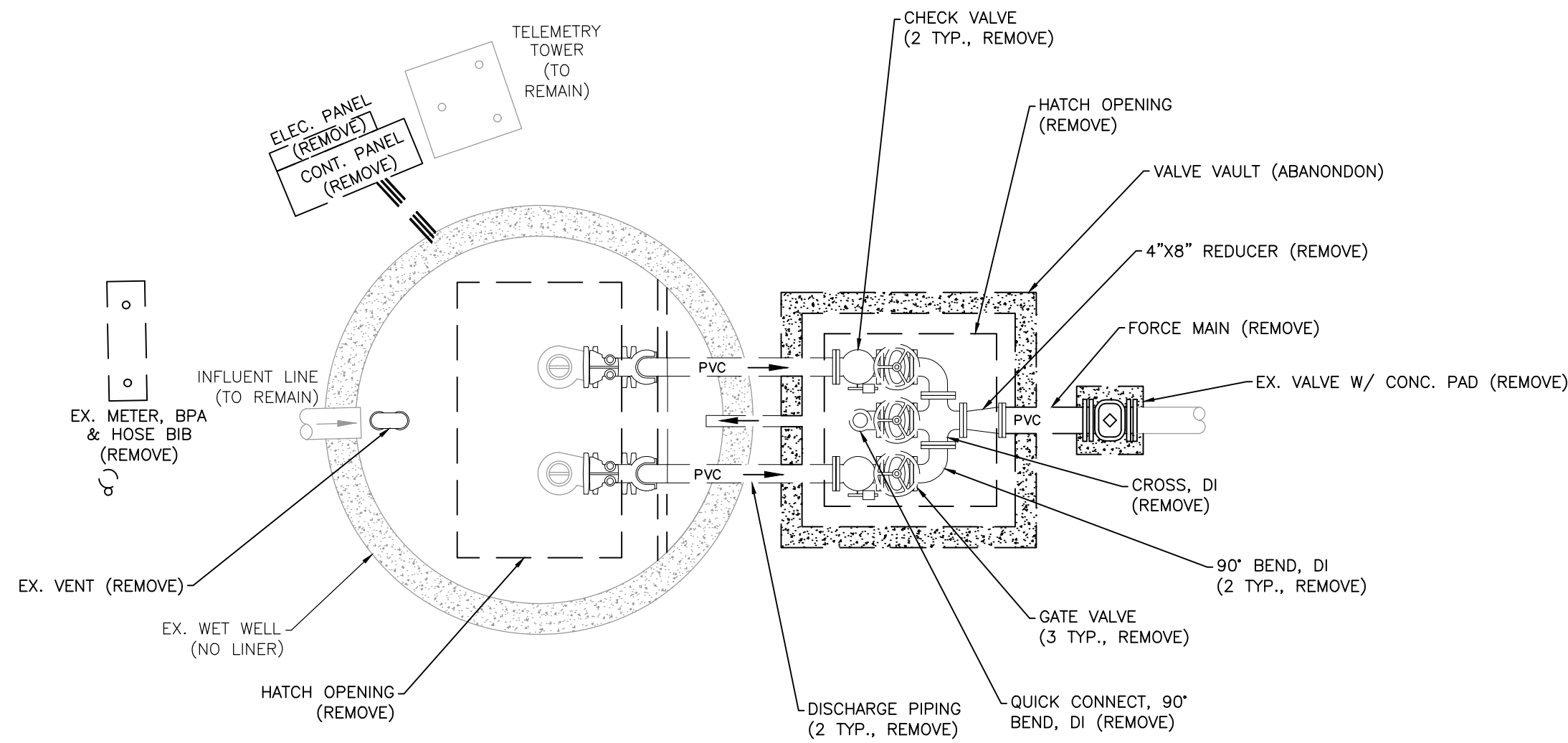
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-5163887	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA STATE BOARD OF PROFESSIONAL ENGINEERS No. 60923 02/21/2024
SEC./TWN./RGE	16/35/18	SCALE N.T.S.
SURVEYED	NA	DATE
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

SHEET 05 OF 11

EXISTING

- NOTES:**
- THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 - CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 - THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
 - REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 - BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 - THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 - THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



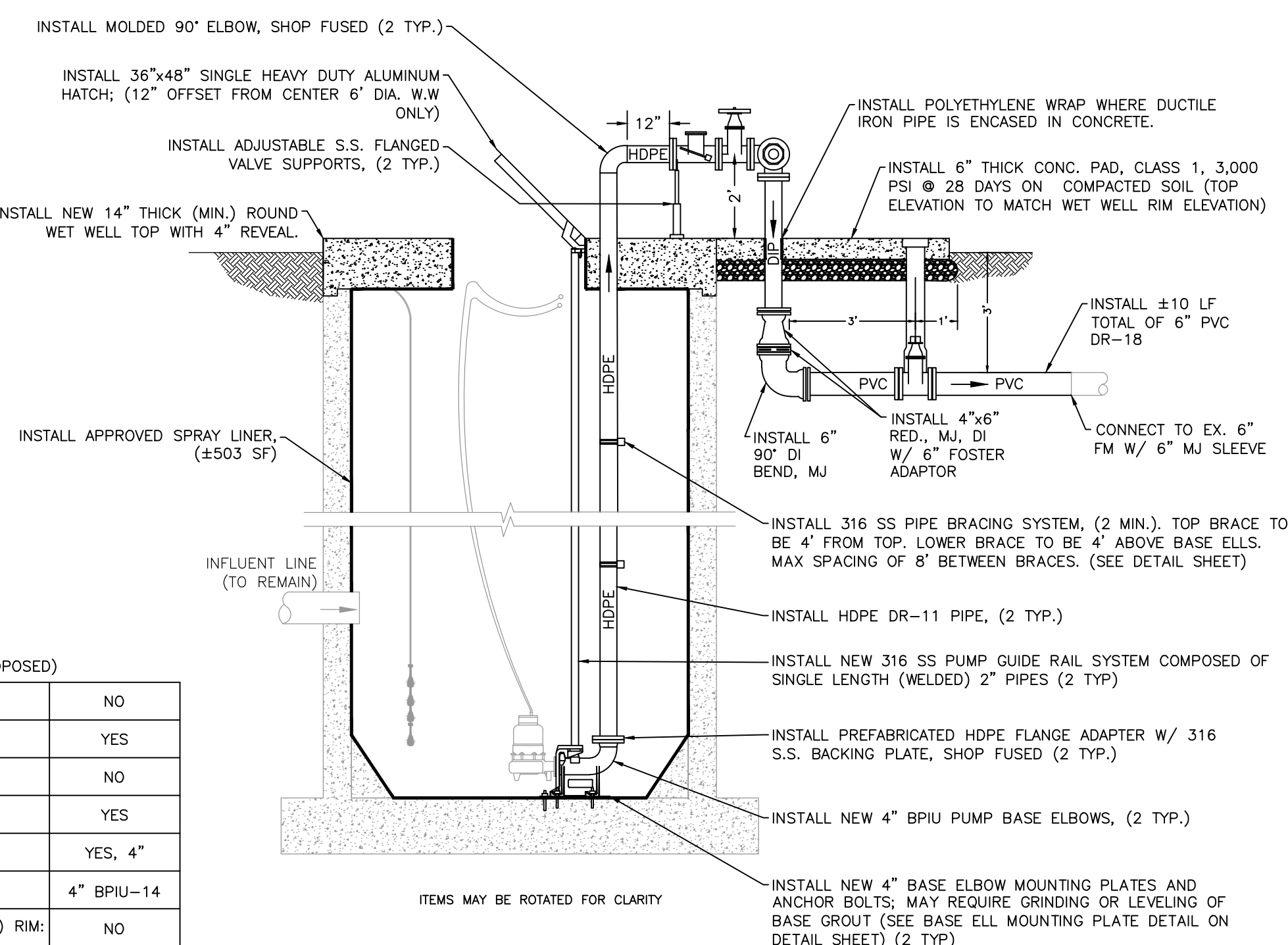
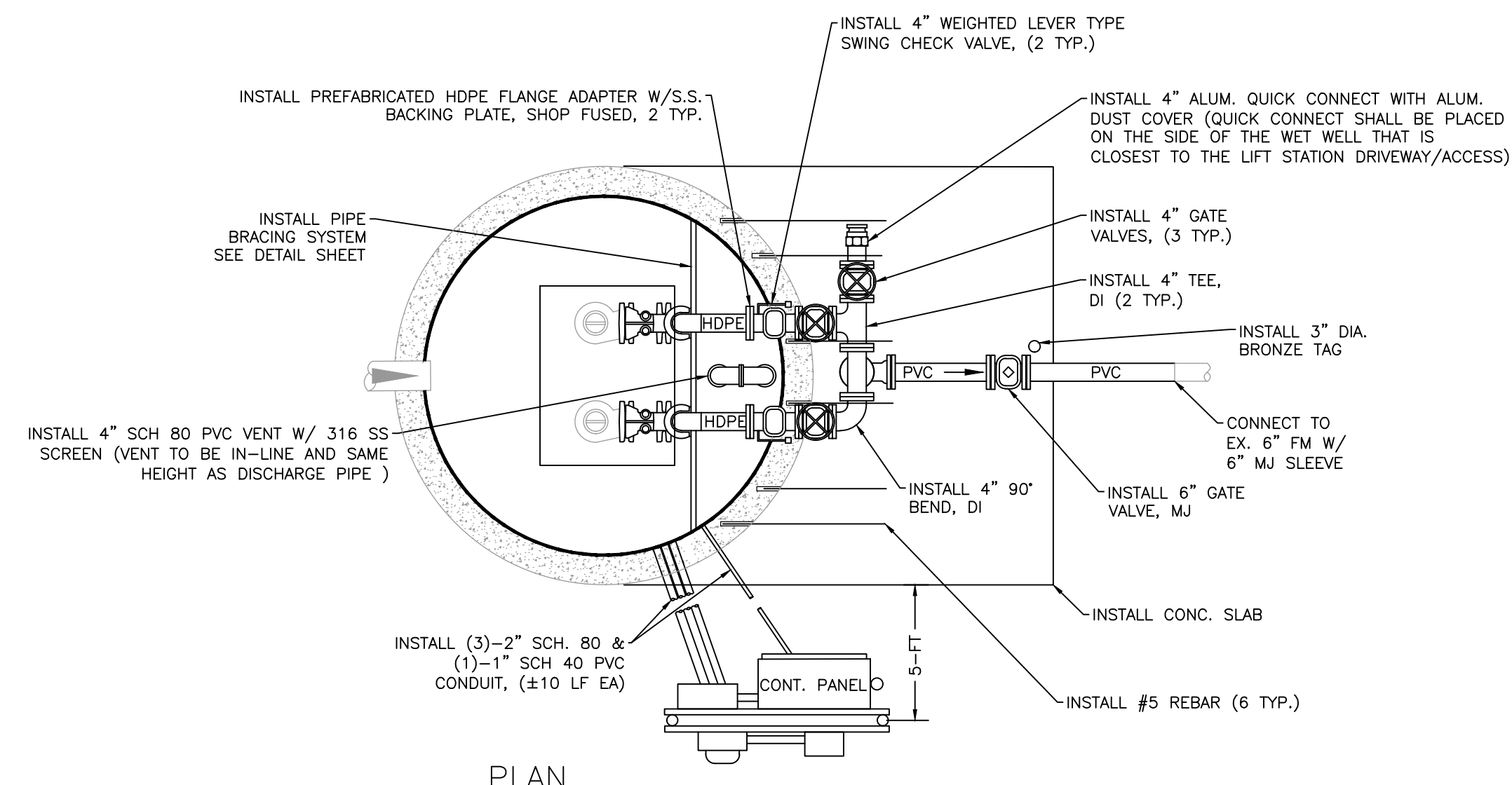
**ELEVATION
EX. 2 PUMP LIFT STATION**
NTS

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	564
DESIGN CAPACITY GPM/TDH	264/89
PUMP TYPE/ HP.	HYDROMATIC/20
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	12.50
TOP ELEVATION	28.50
VALVE VAULT HATCH ELEVATION	28.50
INFLUENT INVERT ELEVATION	16.65
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	6"
WET WELL VENT PIPE	PVC, 6"
ELECT. POWER, VOLTS/PH	240/3
ELECT. SERVICE SIZE, AMPS	200
EX. FORCEMAIN TIE-IN	FM

INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

- GENERAL NOTES:**
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
 - THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAT 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
 - EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
 - THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
 - ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



**ELEVATION
EX. 2 PUMP LIFT STATION**
NTS

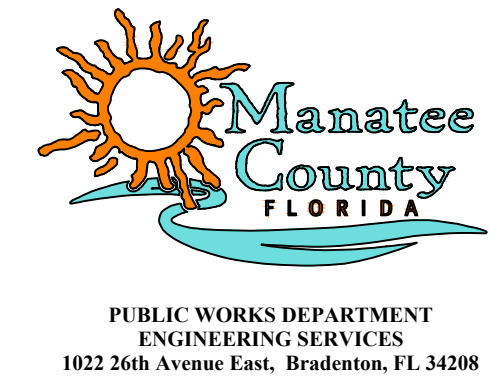
LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 4"
NEW BASE ELL	4" BPIU-14
MODIFY WET WELL WALLS (RAISE/LOWER) RIM:	NO
MODIFY TOP OF VALVE VAULT	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
- INSTALL ±50 LF NEW ELECTRICAL SERVICE WITH CONDUIT. COUNTY WILL SUPPLY ALL REQUIRED HANDHOLES.
 - REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
 - AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 - INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 - REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±252 SF). ALL REPAIRS TO BE VERIFIED WITH COUNTY PERSONNEL PRIOR TO WORK.
 - WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
 - INSTALL A NEW 2-INCH WATER SERVICE AND 8"x2" TAPPING SADDLE; A 2-INCH METER/BPA ASSEMBLY, A 3/4-INCH HOSE BIB ASSEMBLY, AND A 2-INCH QUICK CONNECT PER COUNTY STANDARDS VIA HORIZONTAL DIRECTIONAL DRILL. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE OTHER SIDE OF THE ROADWAY. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE / EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL, (±83 LF).
 - ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT THE MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
 - INSTALL A 12-FT WIDE 6-INCH THICK REINFORCE CONCRETE STANDARD DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL, (±45 SY).
 - REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.

- NOTES:**
- LIFT STATION LOCATED IN ITS OWN AREA
 - WATER IS PUBLIC
 - SEWER IS PUBLIC

NO.	REVISION DESCRIPTION	BY	DATE

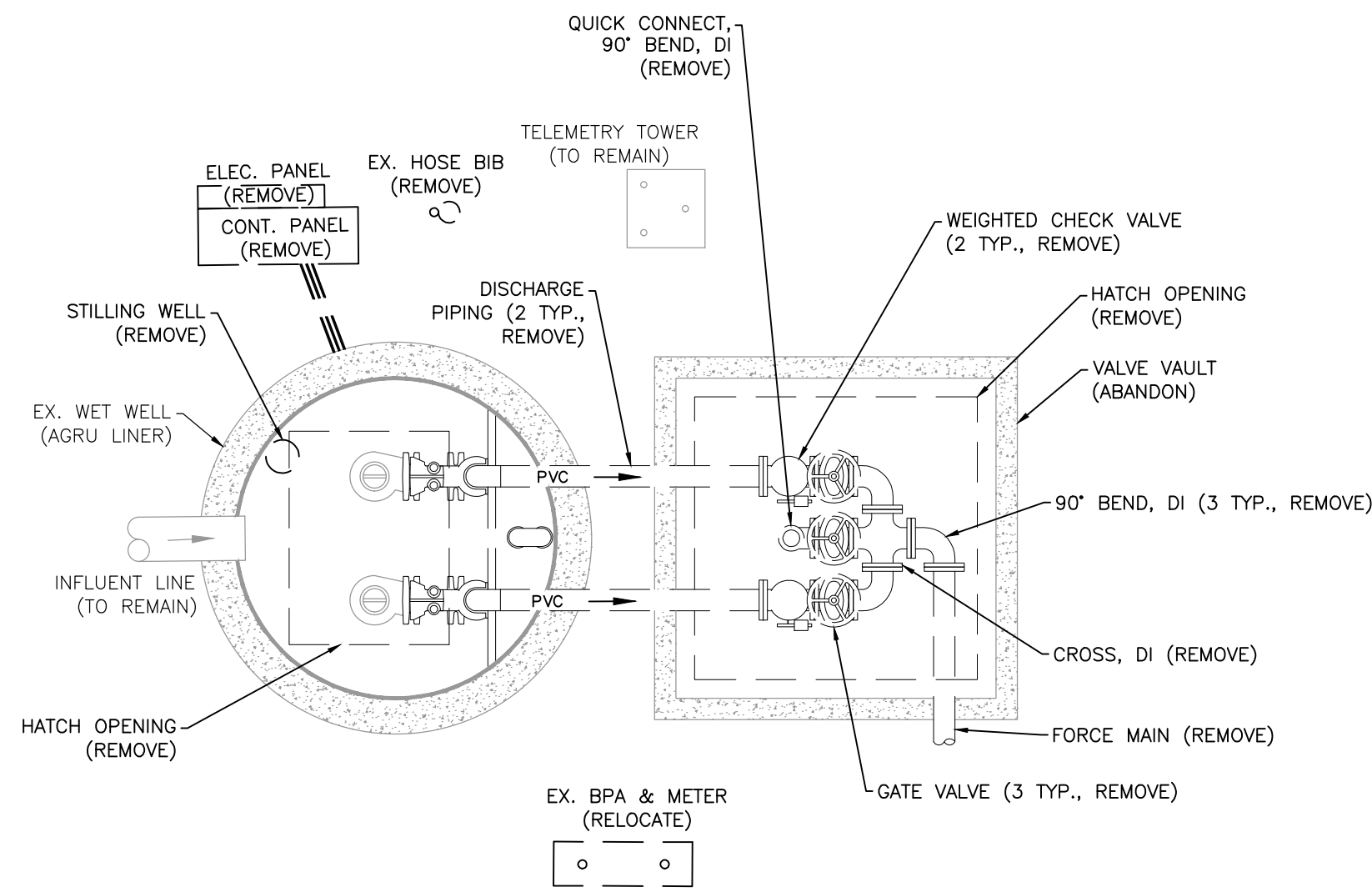
**SATELLITE LIFT STATION R&R
2024 GROUP 1
RIVERWOODS 1, RTU 564**



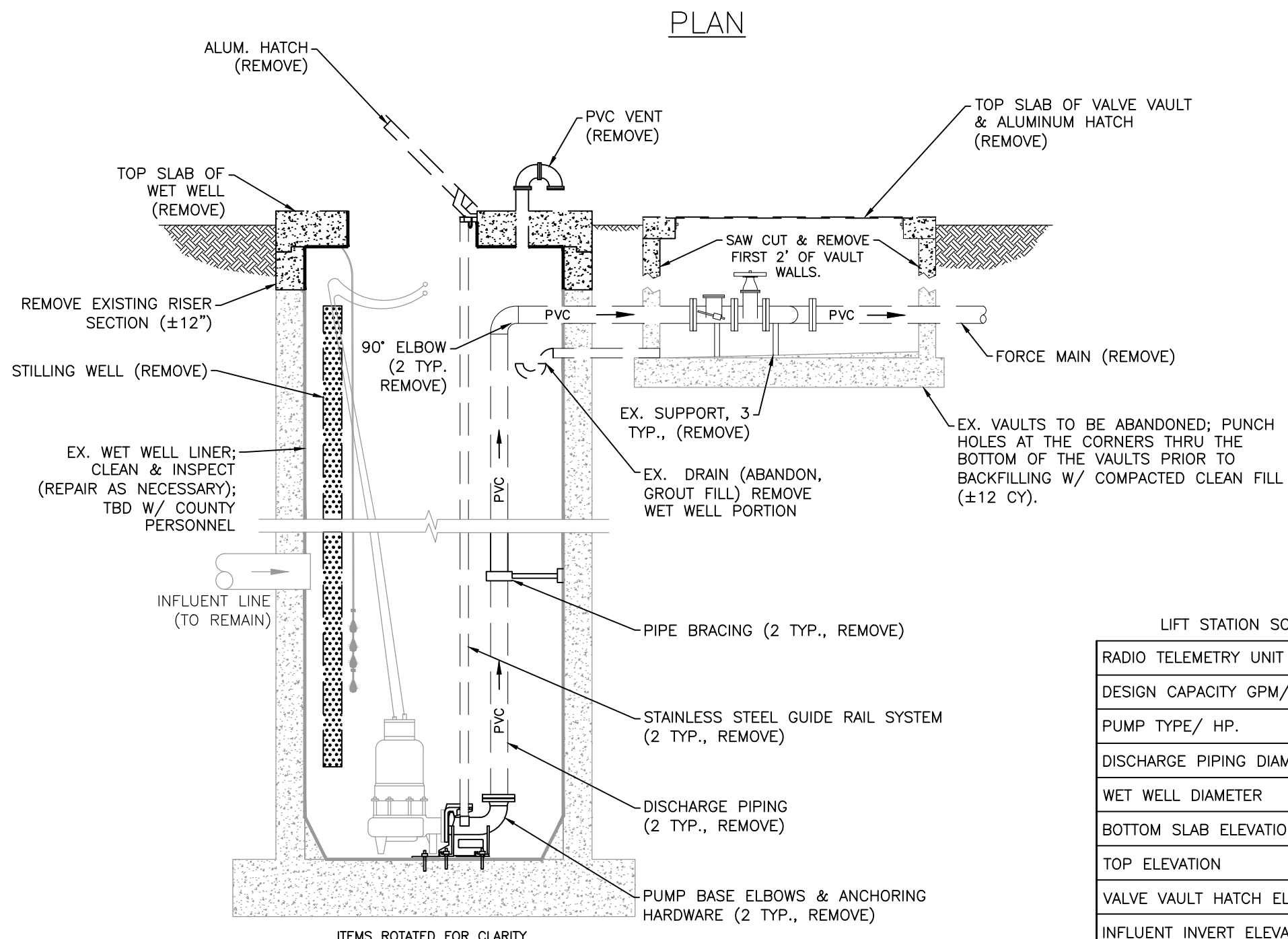
PROJECT #	402-5163886	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE NO. 60923
SEC./TWN./RGE	12/34/18	DATE 02/21/2024
SCALE	N.T.S.	STATE OF FLORIDA
SURVEYED	NA	PROFESSIONAL ENGINEER
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

EXISTING

- NOTES:**
1. THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 3. THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
 4. REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 5. BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION
NTS

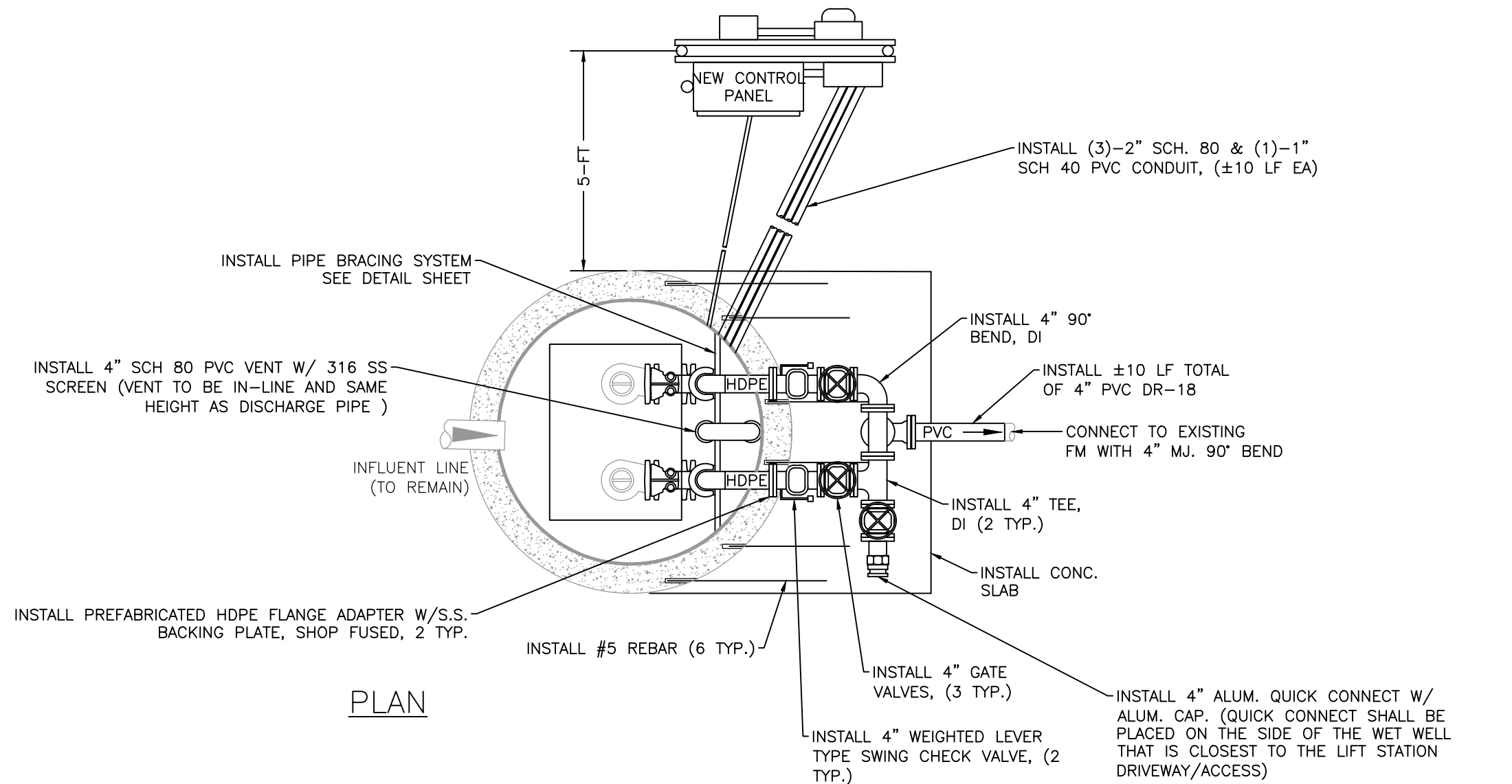
LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	572
DESIGN CAPACITY GPM/TDH	200/86
PUMP TYPE/ HP.	ABS/10.4
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	20.60
TOP ELEVATION	40.75
VALVE VAULT HATCH ELEVATION	40.75
INFLUENT INVERT ELEVATION	25.71
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC, 6"
ELECT. POWER, VOLTS/PH	240/3
ELECT. SERVICE SIZE, AMPS	150
EX. FORCEMAIN TIE-IN	FM

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

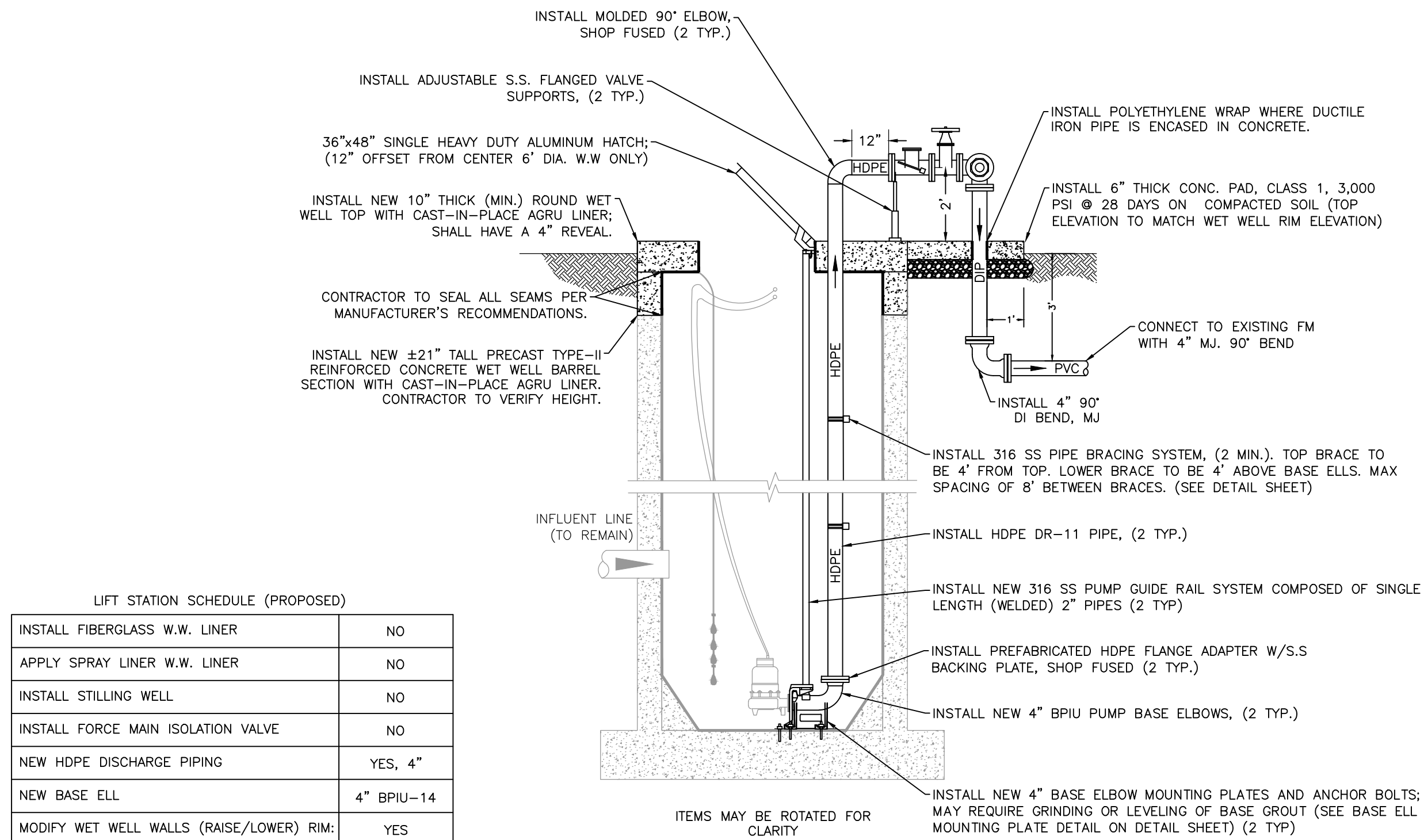
GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
4. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.

PROPOSED



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION
NTS

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	NO
NEW HDPE DISCHARGE PIPING	YES, 4"
NEW BASE ELL	4" BPIU-14
MODIFY WET WELL WALLS (RAISE/LOWER) RIM:	YES
MODIFY TOP OF VALVE VAULT	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	NO
RELOCATE EX. WATER SERVICE ASSEMBLY	YES

- CONSTRUCTION NOTES:**
1. INSTALL ±10 LF NEW ELECTRICAL SERVICE WITH CONDUIT. COUNTY TO SUPPLY ANY REQUIRED HANDHOLES.
 2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS.
A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
 3. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 4. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 5. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±118 SF). ALL REPAIRS TO BE VERIFIED WITH COUNTY PERSONNEL PRIOR TO WORK.
 6. DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
 7. RELOCATE THE EXISTING METER, BPA, & HOSE BIB ASSEMBLY. THE METER AND BPA SHALL BE RELOCATED AS CLOSE AS POSSIBLE TO THE FENCE / EASEMENT / RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL, (±15 LF).
 8. REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
 9. REMOVE EX. PALM TREE ADJACENT TO VALVE VAULT AND SIDEWALK.

- NOTES:**
1. SEWER IS PUBLIC
 2. WATER IS PUBLIC
 3. ASSUME EX. 4" TAPPING VALVE BY EX. 10" FM CAN BE USED AS AN ISOLATION VALVE.

NO.	REVISION DESCRIPTION	BY	DATE



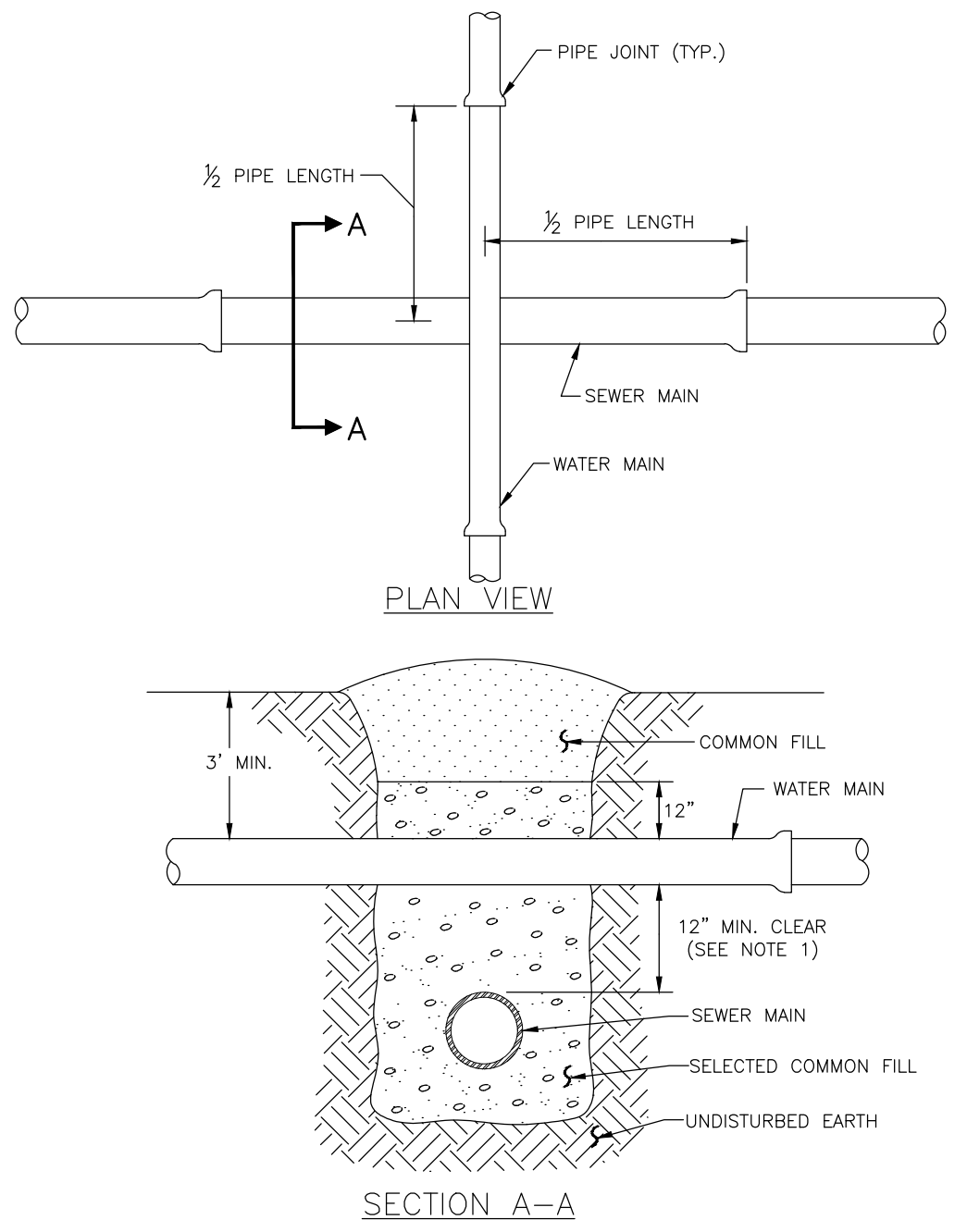
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Call before you dig

**SATELLITE LIFT STATION R&R
2024 GROUP 1
KINGSFIELD GROVES 1, RTU 572**



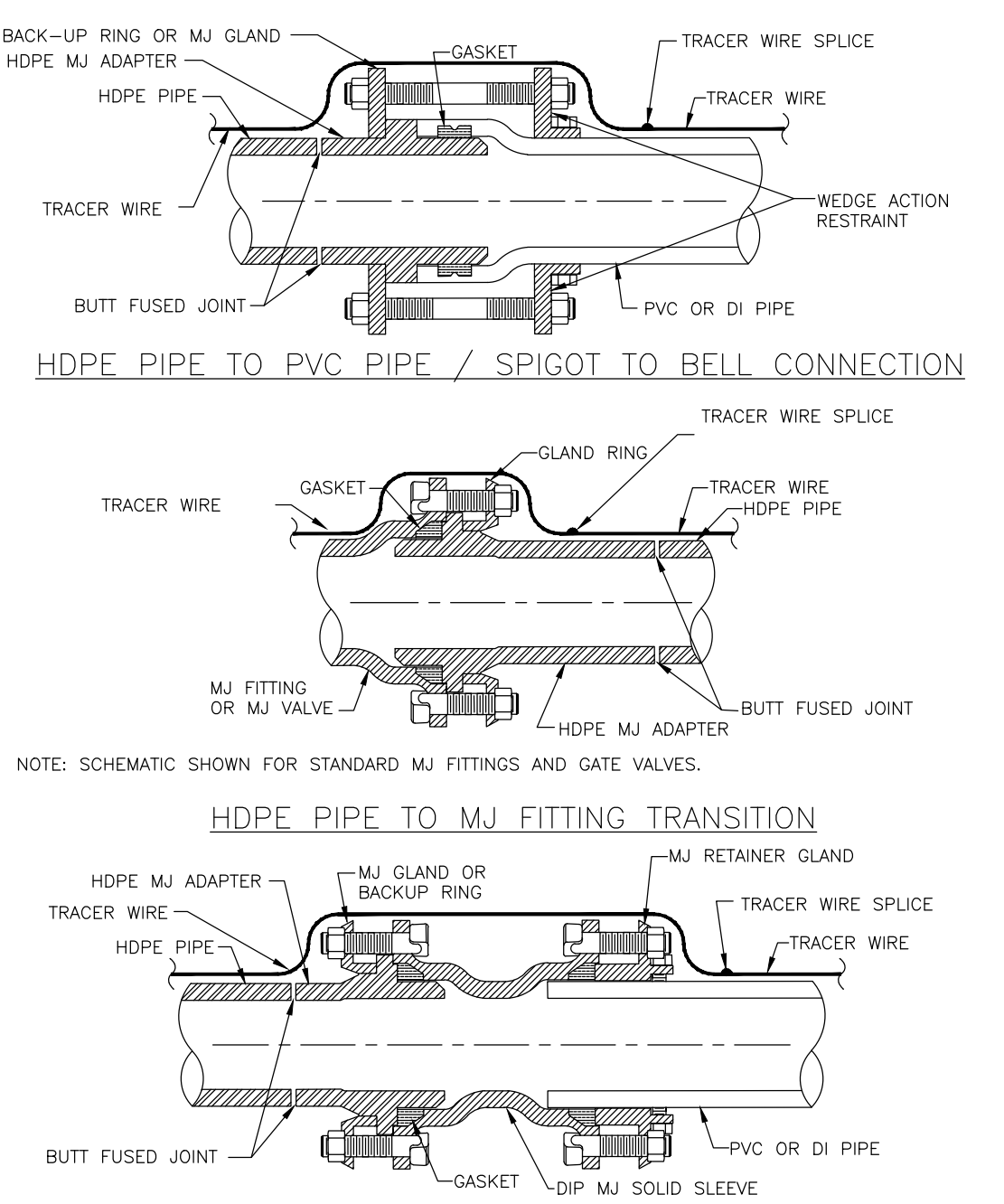
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-5163885	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA STATE BOARD OF PROFESSIONAL ENGINEERS No. 60923 02/21/2024
SEC./TWN./RGE	06/34/19	
SCALE	N.T.S.	
SURVEYED	BY: NA DATE: NA	
DESIGNED	JSS 5/2023	
DRAWN	JKW 5/2023	
CHECKED	JSS -	



NOTES:
 1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON.
 2. PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY, SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



NOTES:
 1. ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.
 2. CONTRACTOR SHALL NOT USE MECHANICAL MEANS TO ALIGN PIPE AND FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING" LOADED.

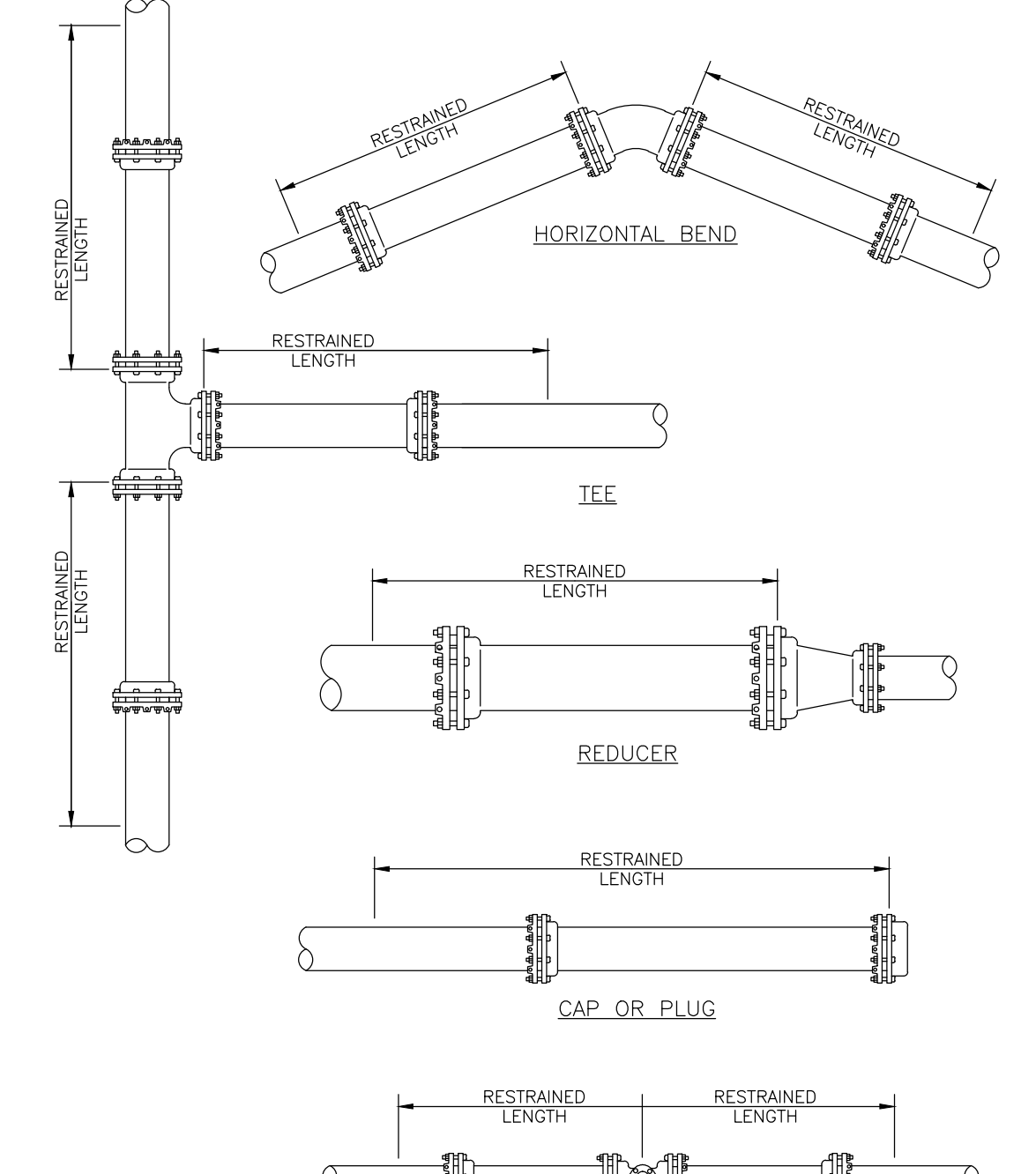
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		HDPE TO PVC OR DI PIPE ADAPTER	UG-6
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	HORIZ. BENDS			TEES			REDUCERS			PLUGS & VALVES
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	
24	90	38	18	X24	109	X20	32	X20	64	214
20	78	32	16	X20	141	X16	32	X16	64	184
16	66	27	13	X16	111	X12	24	X12	48	151
12	52	22	10	X12	80	X10	24	X10	36	118
10	44	18	9	X10	63	X8	12	X8	24	100
8	37	15	7	X8	49	X6	8	X6	16	83
6	29	12	6	X6	39	X4	6	X4	12	63
4	21	8	4	X4	27	X3	4	X3	8	45

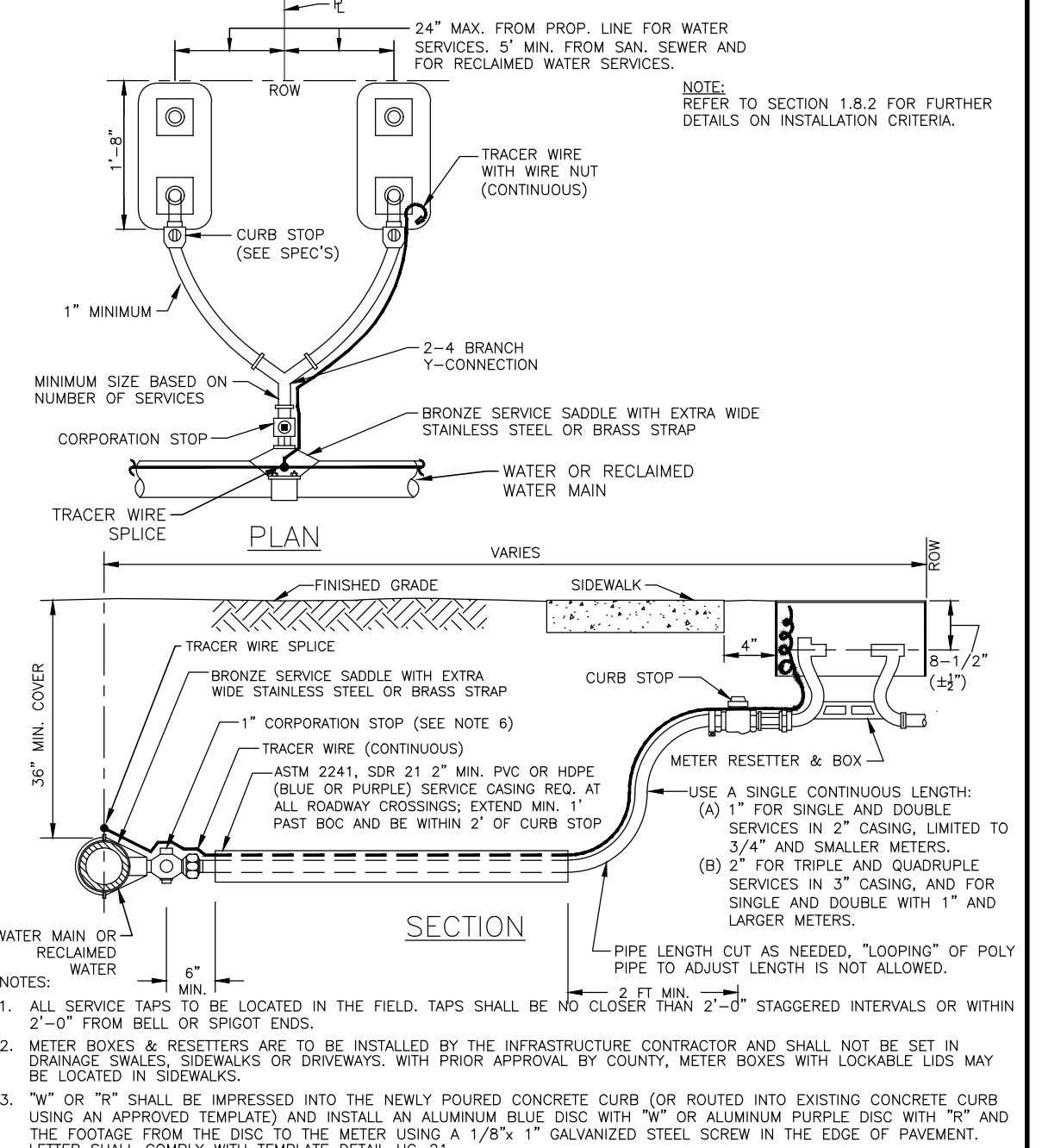
NOTES:
 1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5° BENDS.
 2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
 3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
 4. PIPE SIZES ARE GIVEN IN INCHES.
 5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
 6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
 7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWMA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
 8. RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
 9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
 10. ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PVC PIPE	UG-8
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



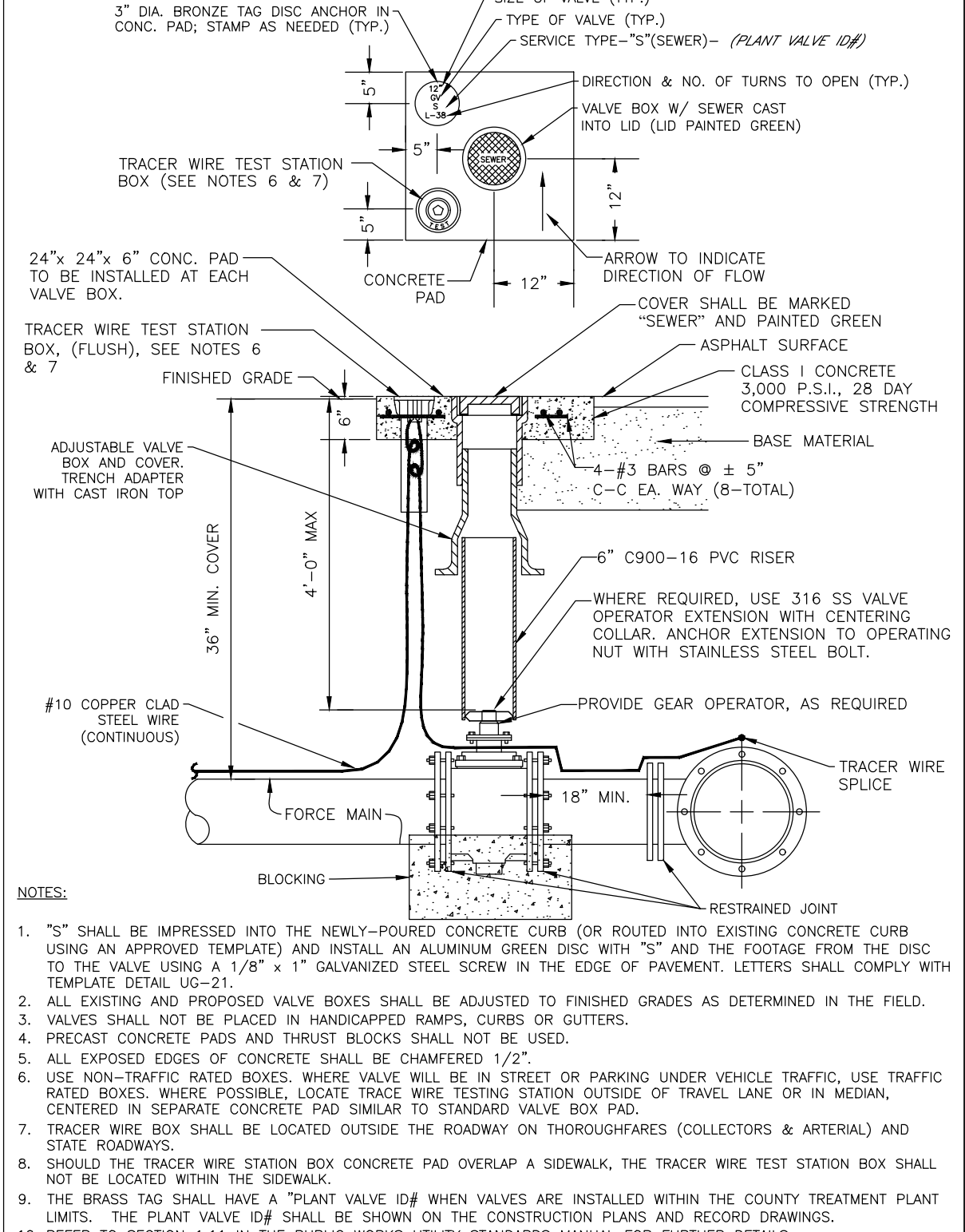
NOTE:
 1. SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR PIPE	UG-10
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



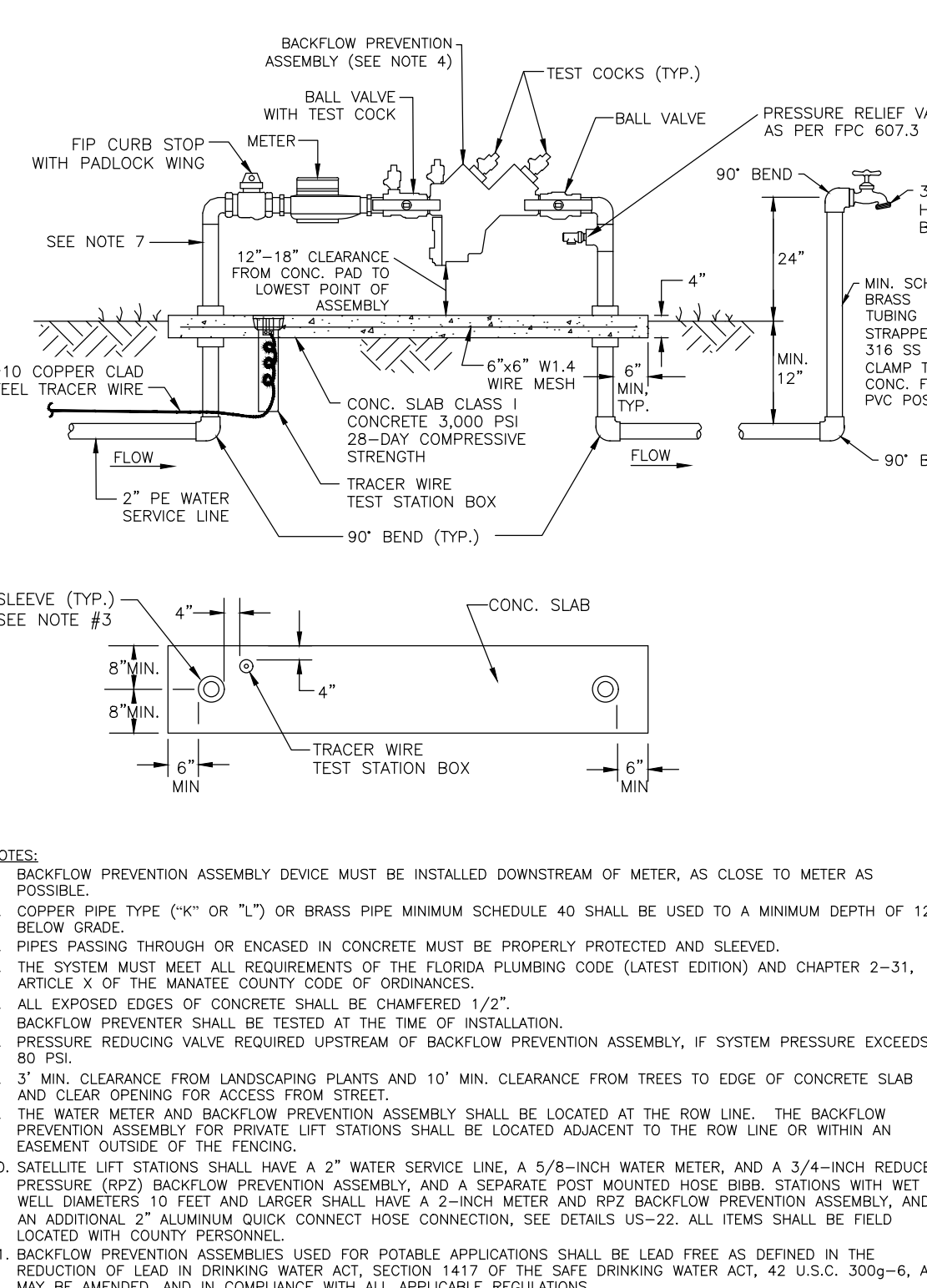
NOTES:
 1. ALL SERVICE TAPS TO BE LOCATED IN THE FIELD. TAPS SHALL BE NO CLOSER THAN 2'-0" STAGGERED INTERVALS OR WITHIN 2'-0" FROM BELL OR SPIGOT ENDS.
 2. METER BOXES & RE-SETTERS ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS. WITH PRIOR APPROVAL BY COUNTY, METER BOXES WITH LOCKABLE LIDS MAY BE LOCATED IN SIDEWALKS.
 3. "W" OR "R" SHALL BE IMPRESSED INTO THE NEWLY POURED CONCRETE CURB (OR ROUTED INTO EXISTING CONCRETE CURB USING AN APPROVED TEMPLATE) AND INSTALL AN ALUMINUM BLUE DISC WITH "W" OR ALUMINUM PURPLE DISC WITH "R" AND THE FOOTAGE FROM THE DISC TO THE METER USING A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT. LETTER SHALL COMPLY WITH TEMPLATE DETAIL UG-21.
 4. COLOR CODED TRACER WIRE SHALL BE INSTALLED WITH WATER AND RECLAIMED MAIN AND ALL SERVICES. SERVICE WIRE SHALL BE CONNECTED TO THE TRACER WIRE ALONG THE MAIN ON DOUBLE SERVICES. WHEN SECOND METER IS OVER 8 FT APART, TWO TRACER WIRES SHALL BE INSTALLED; ONE FOR EACH METER.
 5. WATER AND RECLAIMED WATER SERVICE LINES TO BE 5" MINIMUM FROM SEWER SERVICE LINES.
 6. FOR 2" SERVICES, REPLACE CORPORATION STOP WITH A 2" RESILIENT WEDGE FIP GATE VALVE W/BOX, LID & TAG. WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE ROW IS ONE FOOT (CUL-DE-SAC W/MEDIAN) A 10-FOOT-WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
 7. TEMPORARY RESIDENTIAL USE CAN BE PROVIDED BY CONTACTING THE UTILITY CUSTOMER SERVICE. SEE DETAIL UG-21.
 8. SERVICE TUBING SHALL NOT BE CRIMPED OR KINKED TO RE-ADJUST CURB STOP LOCATION.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL SERVICE CONNECTION	UG-23
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



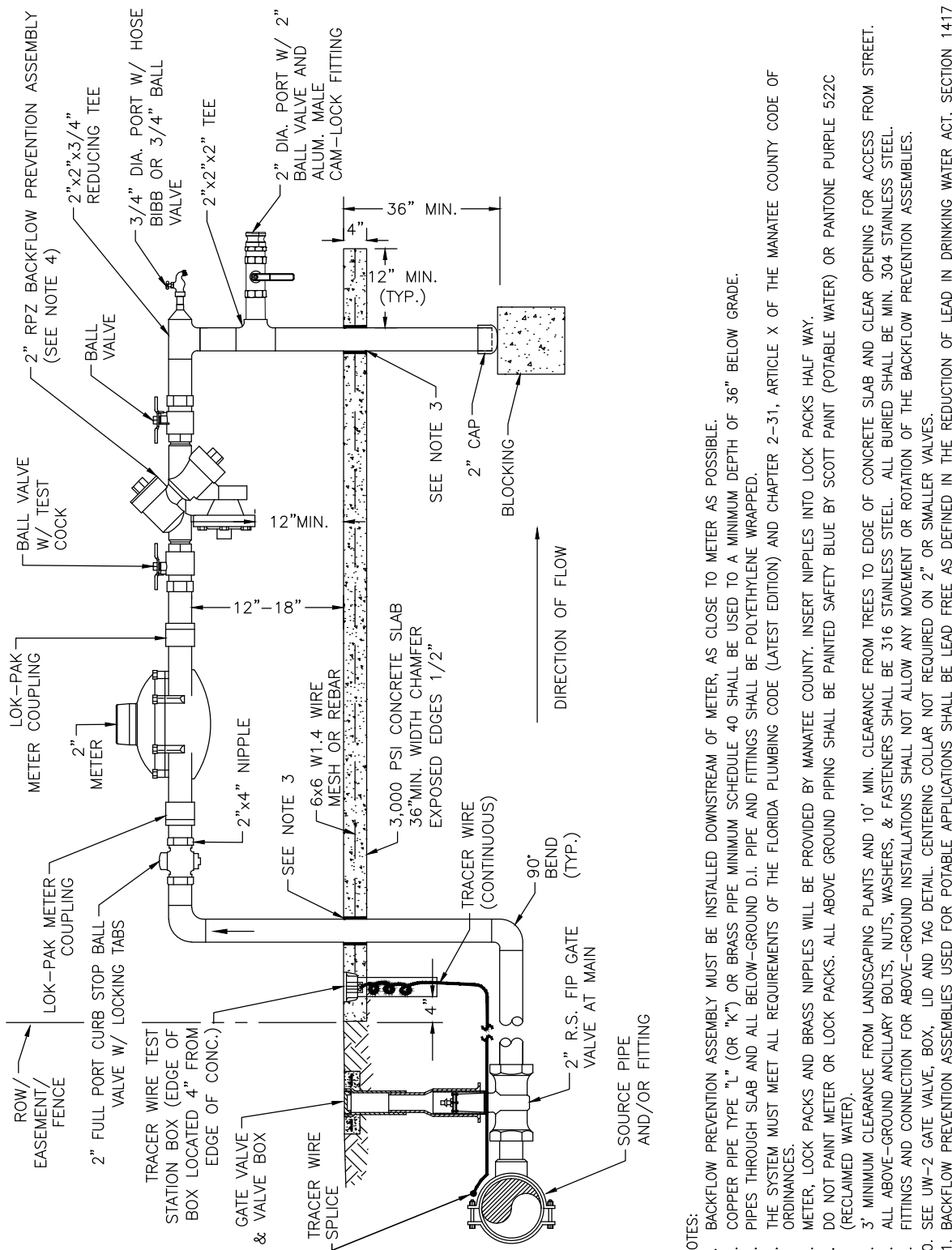
NOTES:
 1. "S" SHALL BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB (OR ROUTED INTO EXISTING CONCRETE CURB USING AN APPROVED TEMPLATE) AND INSTALL AN ALUMINUM GREEN DISC WITH "S" AND THE FOOTAGE FROM THE DISC TO THE VALVE USING A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT. LETTERS SHALL COMPLY WITH TEMPLATE DETAIL UG-21.
 2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
 3. VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS OR GUTTERS.
 4. PRECAST CONCRETE PADS AND THRUST BLOCKS SHALL NOT BE USED.
 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 6. USE NON-Traffic RATED BOXES WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC. USE TRAFFIC RATED BOXES, WHERE POSSIBLE, LOCATE TRACER WIRE TESTING STATION OUTSIDE OF TRAVEL LANE OR IN MEDIAN, CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.
 7. TRACER WIRE BOX SHALL BE LOCATED OUTSIDE THE ROADWAY ON THOROUGHFARES (COLLECTORS & ARTERIAL) AND STATE ROADWAYS.
 8. SHOULD THE TRACER WIRE STATION BOX CONCRETE PAD OVERLAP A SIDEWALK, THE TRACER WIRE TEST STATION BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.
 9. THE BRASS TAG SHALL HAVE A "PLANT VALVE ID# WHEN VALVES ARE INSTALLED WITHIN THE COUNTY TREATMENT PLANT LIMITS. THE PLANT VALVE ID# SHALL BE SHOWN ON THE CONSTRUCTION PLANS AND RECORD DRAWINGS.
 10. REFER TO SECTION 1.1.1 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		VALVE, BOX, COVER AND TAG	US-14
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



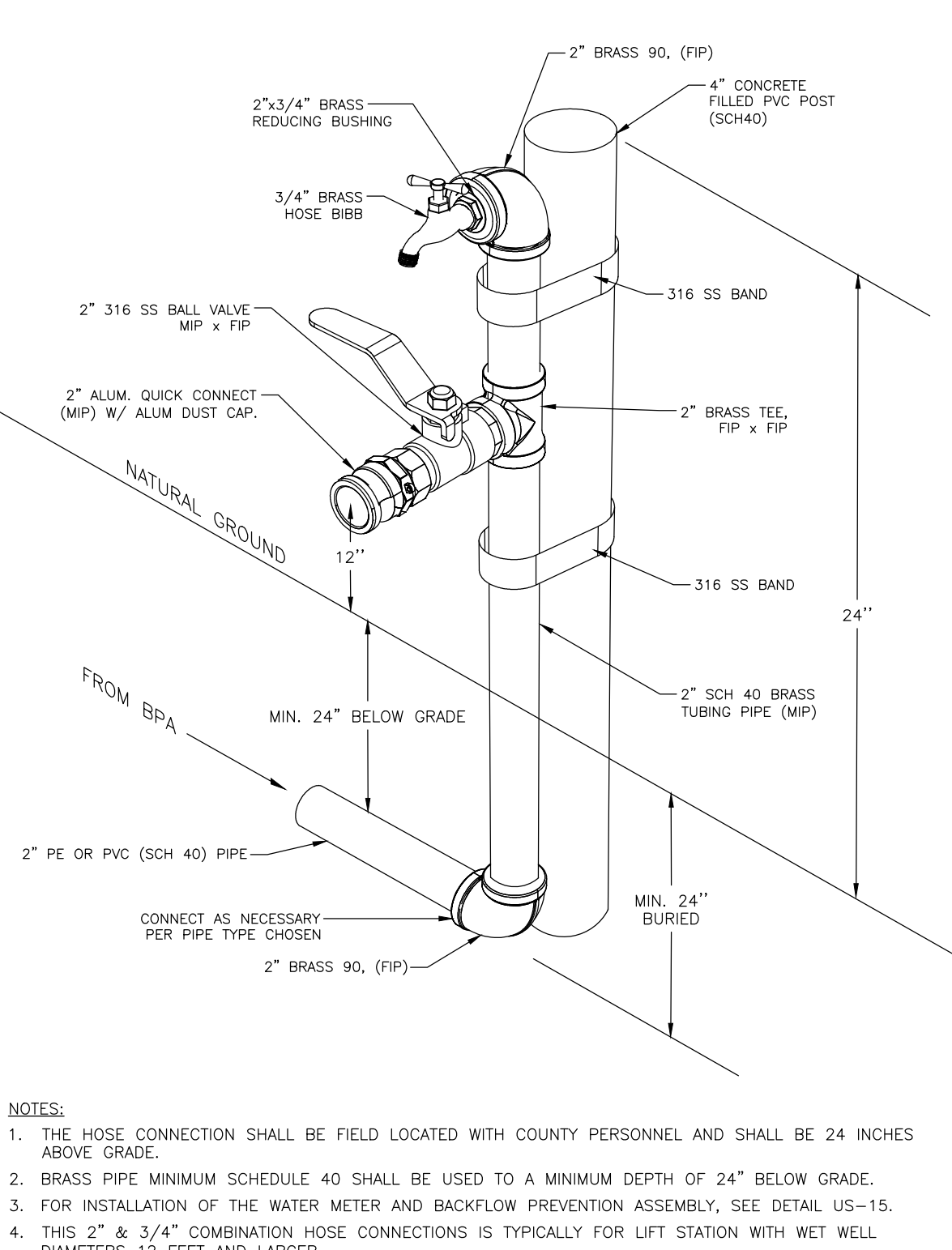
NOTES:
 1. BACKFLOW PREVENTION ASSEMBLY DEVICE MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
 2. COPPER PIPE TYPE "K" OR "L" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 12" BELOW GRADE.
 3. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
 4. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND CHAPTER 2-31, ARTICLE X OF THE MANATEE COUNTY CODE OF ORDINANCES.
 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 6. BACKFLOW PREVENTER SHALL BE TESTED AT THE TIME OF INSTALLATION.
 7. PRESSURE REDUCING VALVE REQUIRED UPSTREAM OF BACKFLOW PREVENTION ASSEMBLY, IF SYSTEM PRESSURE EXCEEDS 80 PSI.
 8. 3" MIN. CLEARANCE FROM LANDSCAPING PLANTS AND 10' MIN. CLEARANCE FROM TREES TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
 9. THE WATER METER AND BACKFLOW PREVENTION ASSEMBLY SHALL BE LOCATED AT THE ROW LINE. THE BACKFLOW PREVENTION ASSEMBLY FOR PRIVATE LIFT STATIONS SHALL BE LOCATED ADJACENT TO THE ROW LINE OR WITHIN AN EASEMENT OUTSIDE OF THE FENCING.
 10. SATELLITE LIFT STATIONS SHALL HAVE A 2" WATER SERVICE LINE, A 5/8-INCH WATER METER, AND A 3/4-INCH REDUCED PRESSURE (RP2) BACKFLOW PREVENTION ASSEMBLY AND A SEPARATE POST MOUNTED HOSE BIBB. STATIONS WITH WET WELL DIAMETERS 10 FEET AND LARGER SHALL HAVE A 2-INCH METER AND RP2 BACKFLOW PREVENTION ASSEMBLY, AND AN ADDITIONAL 2" ALUMINUM QUICK CONNECT HOSE CONNECTION, SEE DETAILS US-22. ALL ITEMS SHALL BE FIELD LOCATED WITH COUNTY PERSONNEL.
 11. BACKFLOW PREVENTION ASSEMBLIES USED FOR POTABLE APPLICATIONS SHALL BE LEAD FREE AS DEFINED IN THE REDUCTION OF LEAD IN DRINKING WATER ACT, SECTION 1417 OF THE SAFE DRINKING WATER ACT, 42 U.S.C. 300g-6. AS MAY BE AMENDED, AND IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		5/8" WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-21
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	




NOTES:
 1. BACKFLOW PREVENTION ASSEMBLY MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
 2. COPPER PIPE TYPE "K" OR "L" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 36" BELOW GRADE.
 3. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
 4. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND CHAPTER 2-31, ARTICLE X OF THE MANATEE COUNTY CODE OF ORDINANCES.
 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 6. DO NOT PAINT METER OR LOCK PADS. ALL ABOVE GROUND PIPING SHALL BE PAINTED SAFETY BLUE BY SCOTT PAINT (POTABLE WATER) OR PANTONE PURPLE 522C (RECLAIMED WATER).
 7. 3" MINIMUM CLEARANCE FROM LANDSCAPING PLANTS AND 10' MIN. CLEARANCE FROM TREES TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
 8. FITTINGS AND CONNECTION FOR ABOVE-GROUND INSTALLATIONS SHALL NOT ALLOW ANY MOVEMENT OR ROTATION OF THE BACKFLOW PREVENTION ASSEMBLY.
 9. TO SEE UG-2 GATE VALVE, BOX, LID AND TAG DETAIL, CENTERING COLLAR NOT REQUIRED ON 2" OR SMALLER VALVES.
 10. REFER TO SECTION 1.1.1 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS.
 11. OF THE SAFE DRINKING WATER ACT, 42 U.S.C. 300g-6. AS MAY BE AMENDED, AND IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		2" WATER METER AND BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-22
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	



NOTES:
 1. THE HOSE CONNECTION SHALL BE FIELD LOCATED WITH COUNTY PERSONNEL AND SHALL BE 24 INCHES ABOVE GRADE.
 2. BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 24" BELOW GRADE.
 3. FOR INSTALLATION OF THE WATER METER AND BACKFLOW PREVENTION ASSEMBLY, SEE DETAIL US-15.
 4. THIS 2" & 3/4" COMBINATION HOSE CONNECTIONS IS TYPICALLY FOR LIFT STATION WITH WET WELL DIAMETERS 12 FEET AND LARGER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		2" & 3/4" COMBINATION REMOTE HOSE CONNECTION FOR LIFT STATIONS	US-RHC
REV. BY	DATE	SEPT 12, 2023 DATE OF APPROVAL	

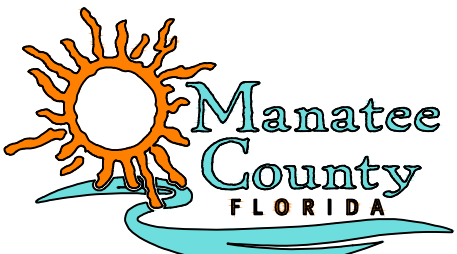


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SATELLITE LIFT STATION R&R

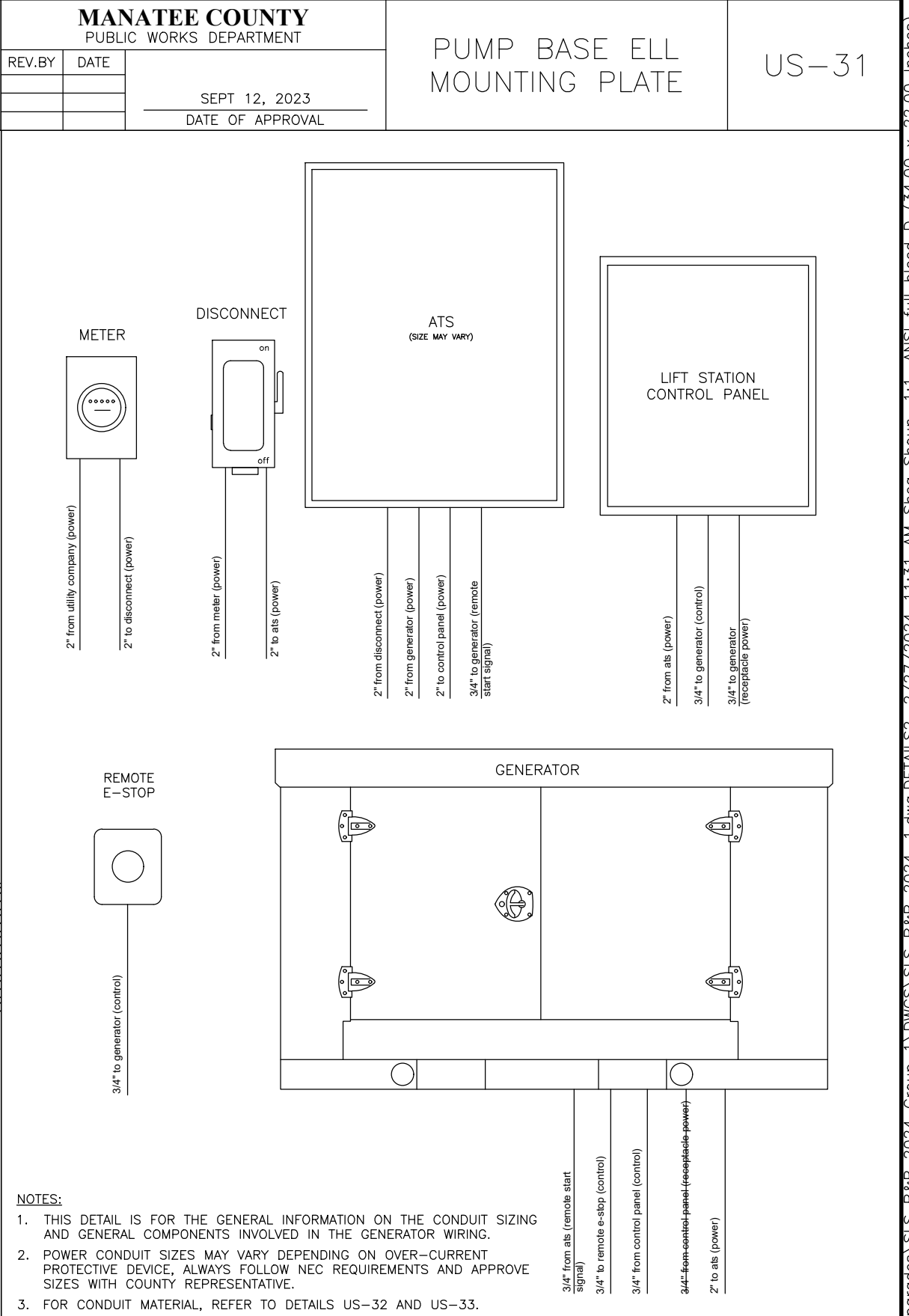
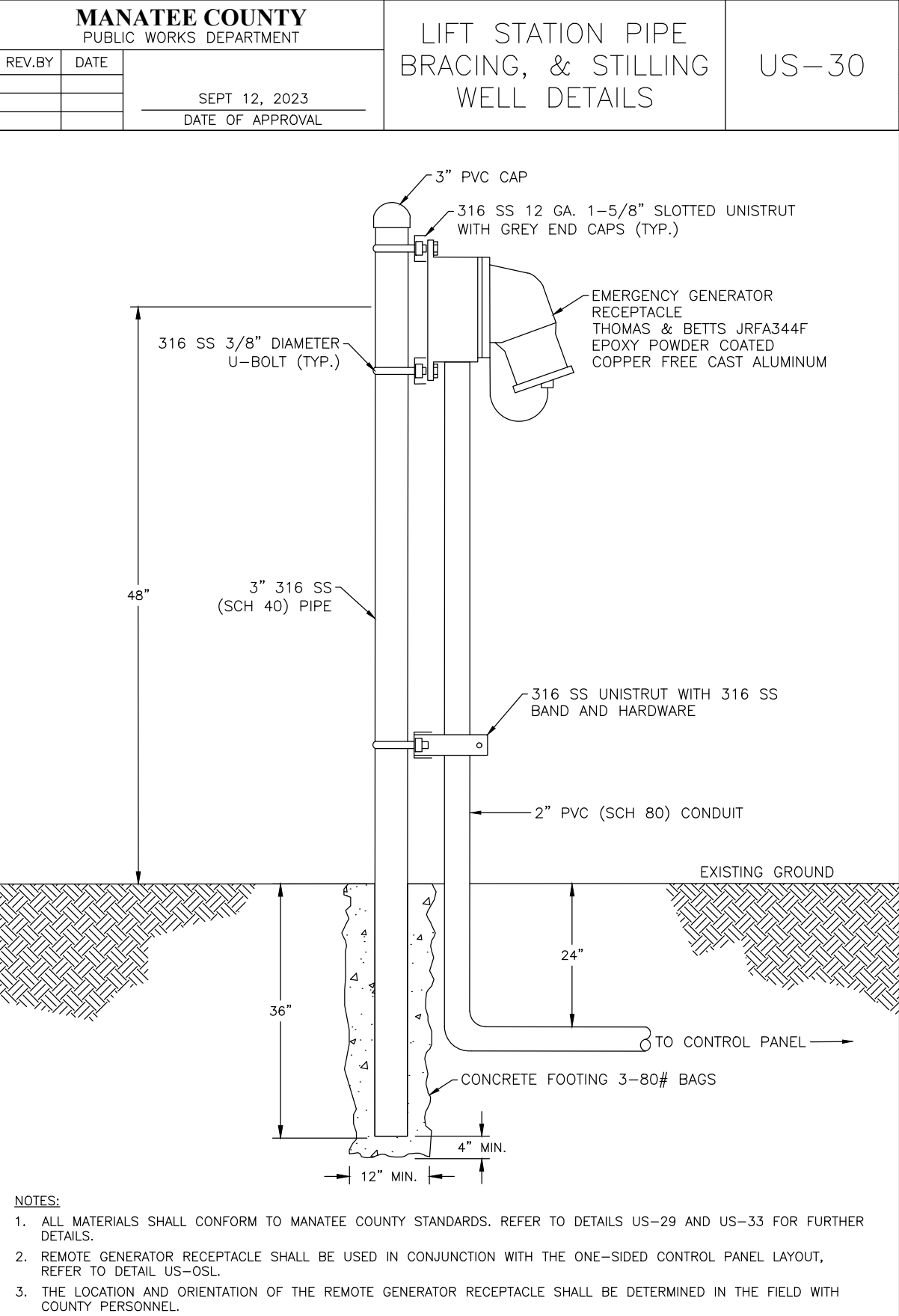
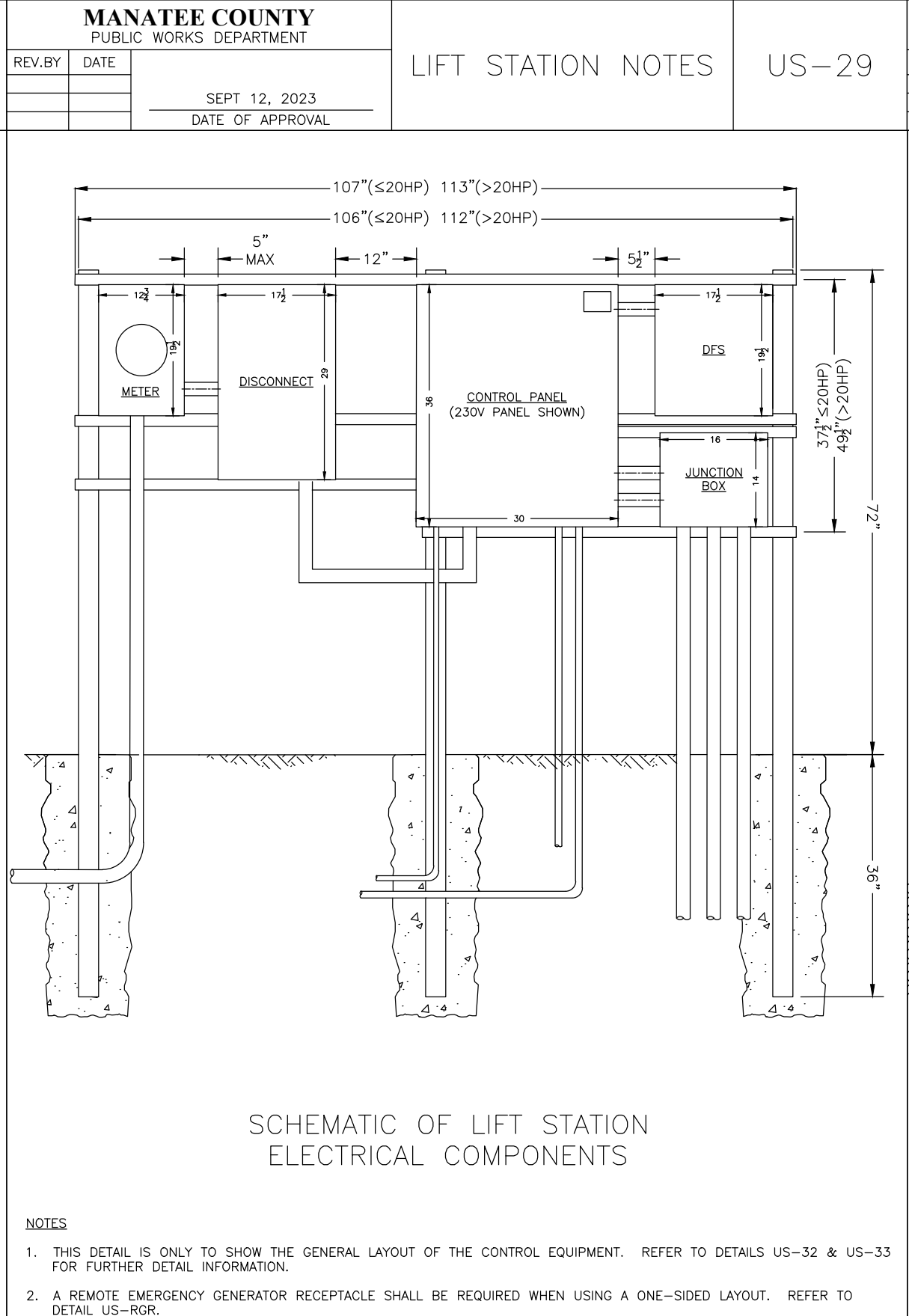
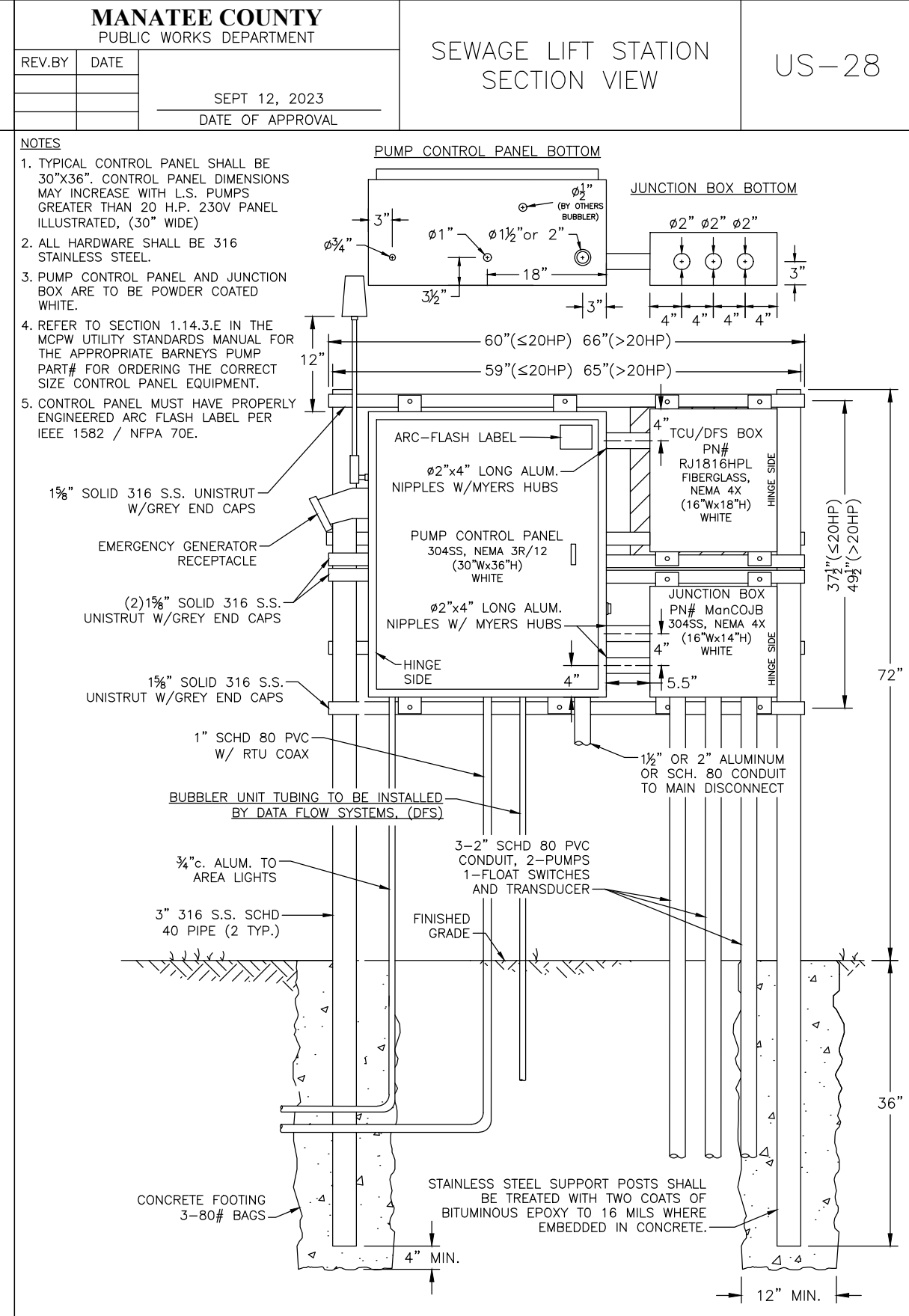
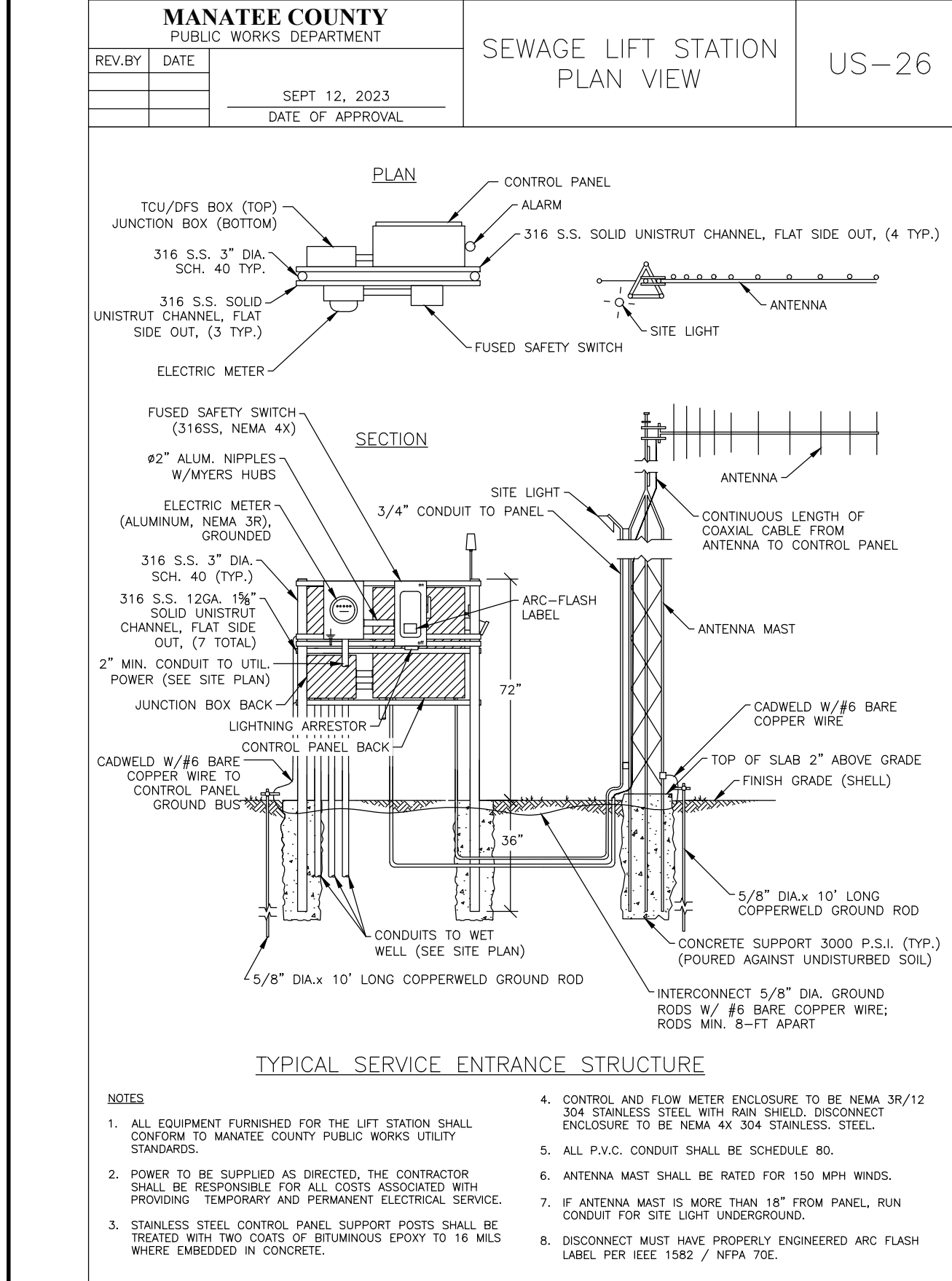
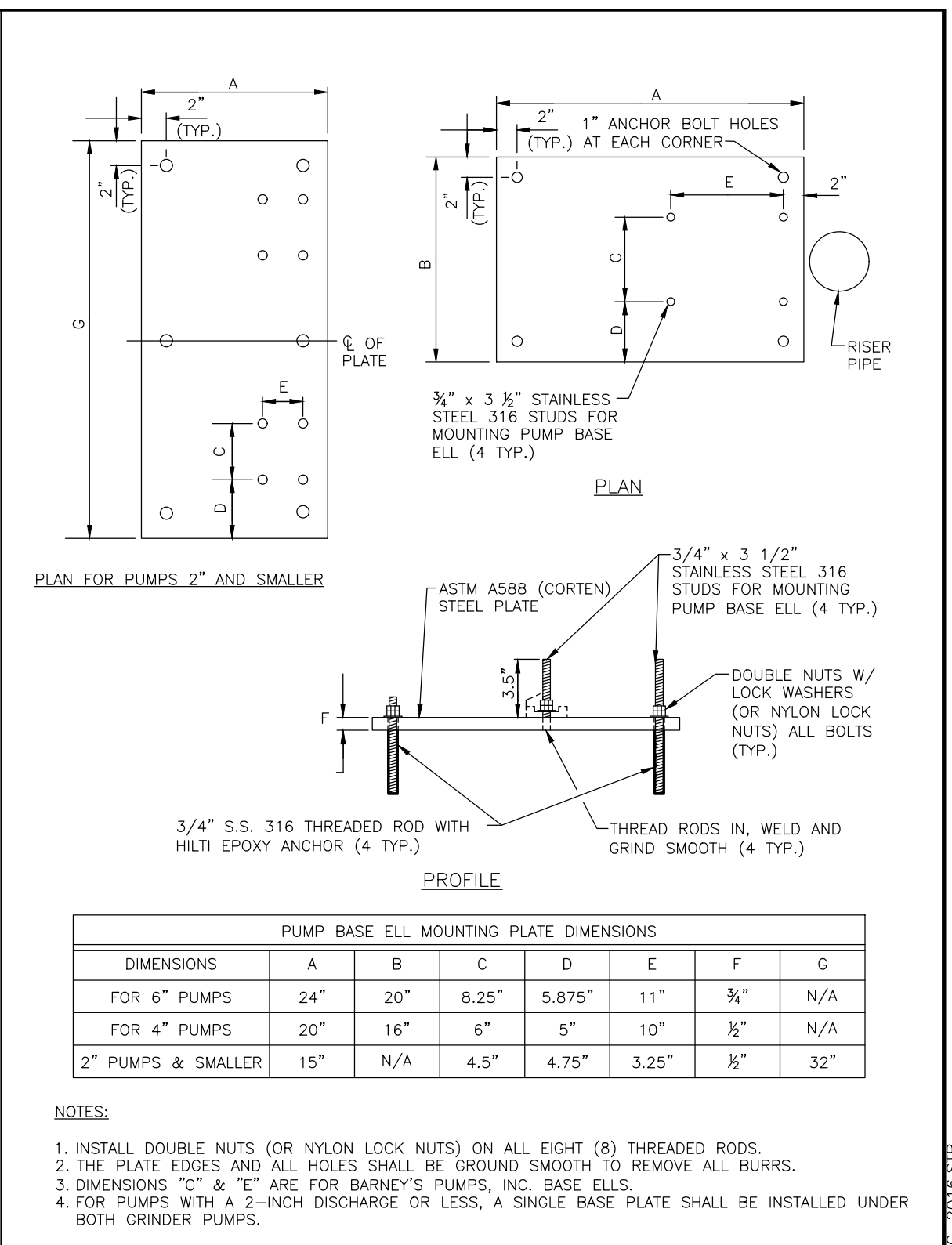
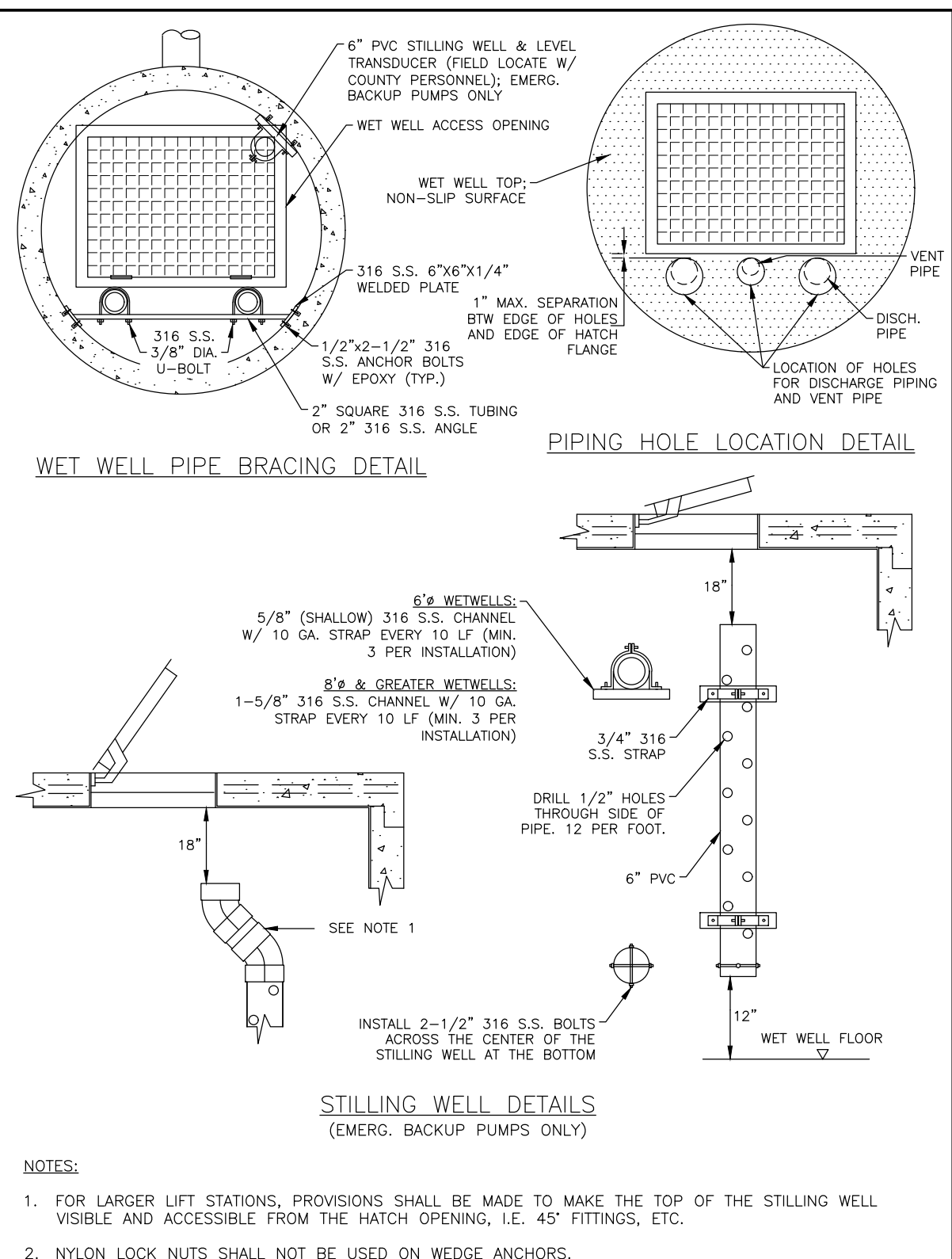
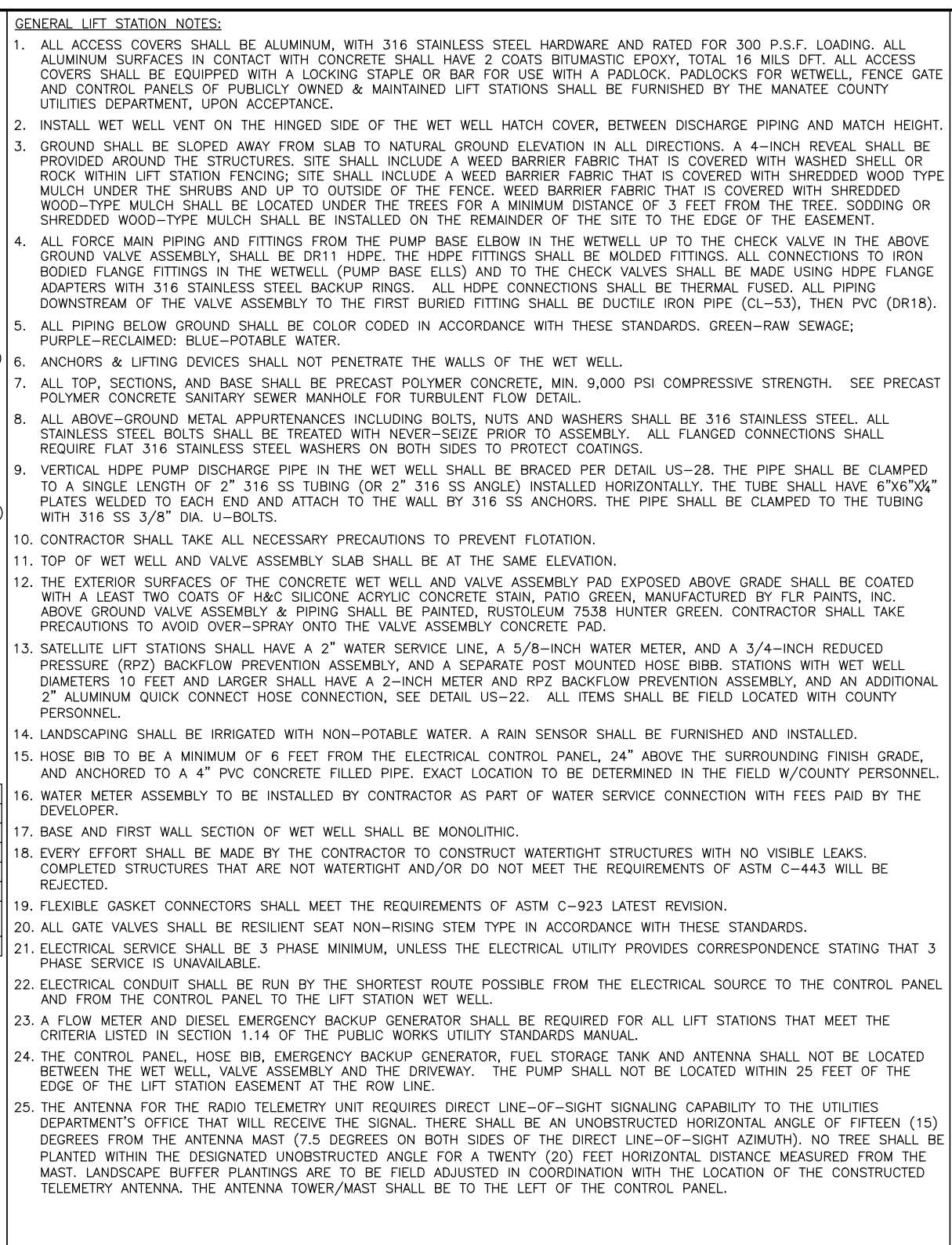
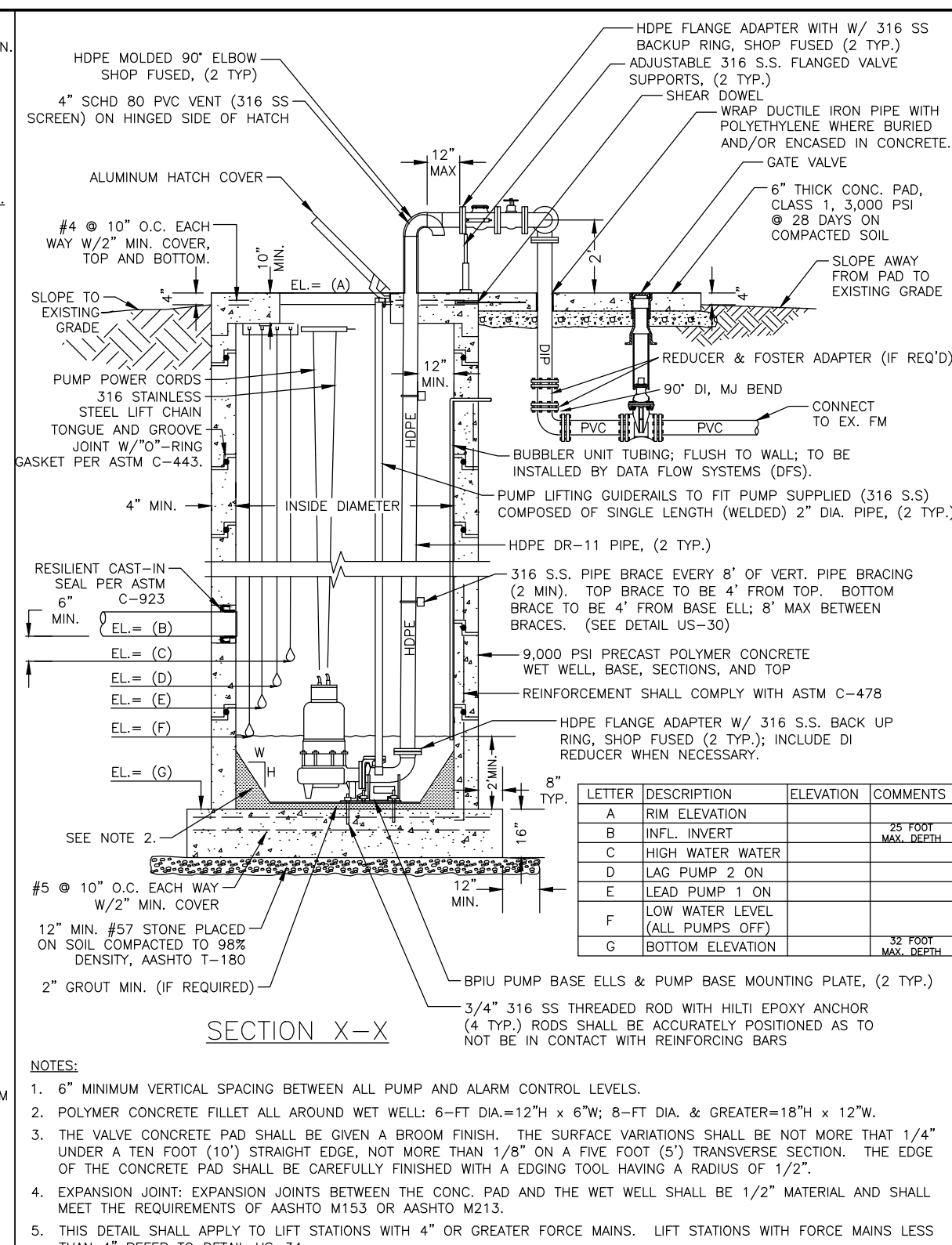
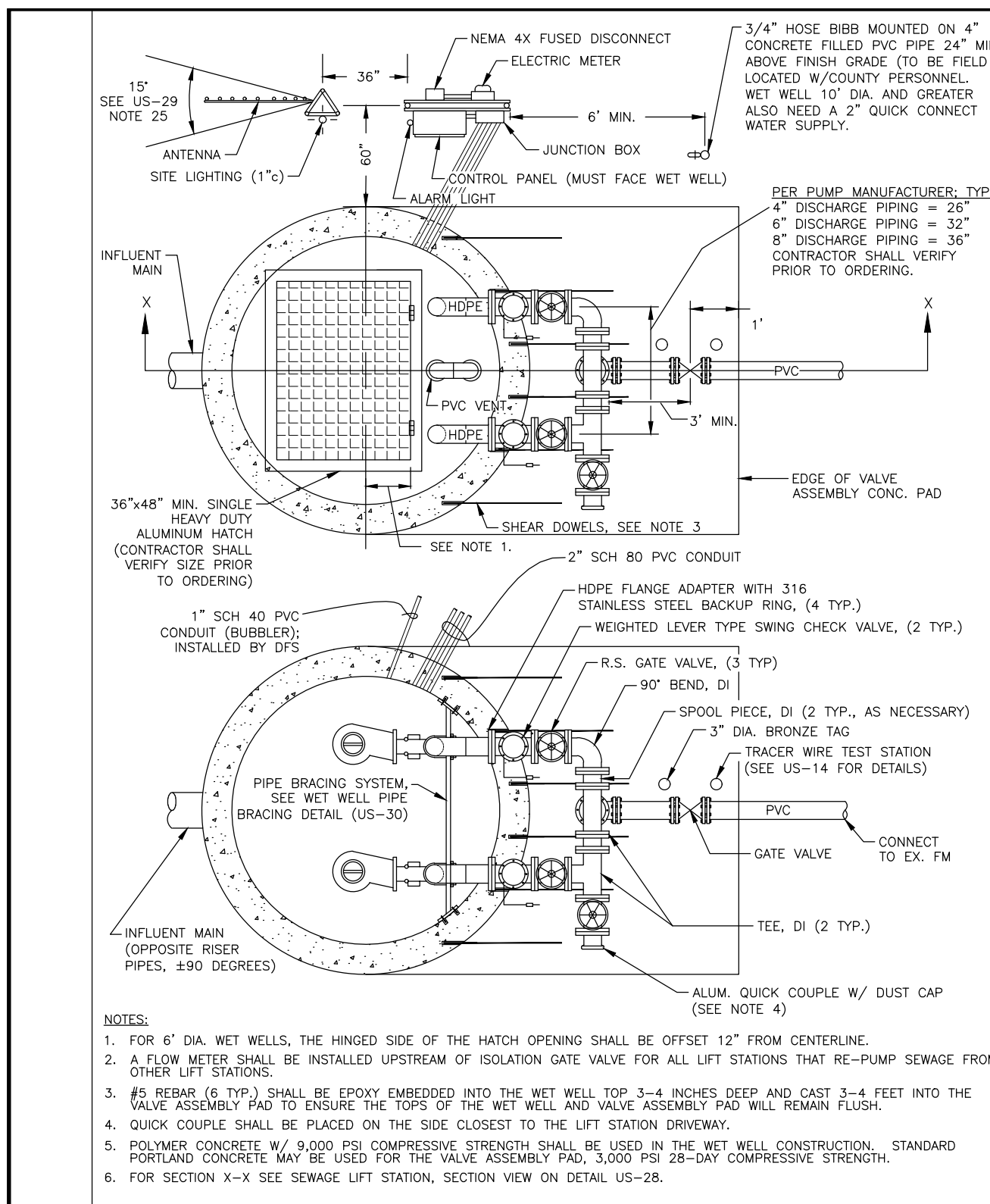
2024 GROUP 1

DETAILS1



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-0019707 / 5001301	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	VARIES	STATE OF FLORIDA PROFESSIONAL ENGINEER
SCALE	N.T.S.	DATE: 02/21/2024
SURVEYED	NA	DESIGNED
DESIGNED	JSS 5/2023	DRAWN
DRAWN	JKW 5/2023	CHECKED
CHECKED	JSS -	



NO.	REVISION DESCRIPTION	BY	DATE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION METER & ELECTRICAL DETAILS	US-32
REVISION	DESCRIPTION	DATE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE PUMP STATION CONTROL PANEL (ONE-SIDED LAYOUT)	US-OSL
REVISION	DESCRIPTION	DATE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	REMOTE EMERGENCY GENERATOR RECEPTACLE	US-RGR
REVISION	DESCRIPTION	DATE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	GENERATOR WIRING AND CONDUIT ROUTING SCHEMATIC FOR LIFT STATIONS	US-CRS
REVISION	DESCRIPTION	DATE

SATELLITE LIFT STATION R&R

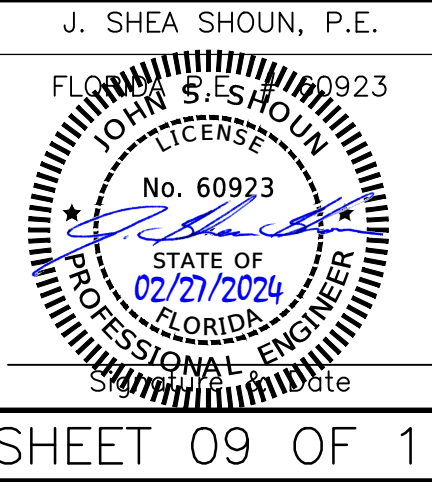
2024 GROUP 1 DETAILS2



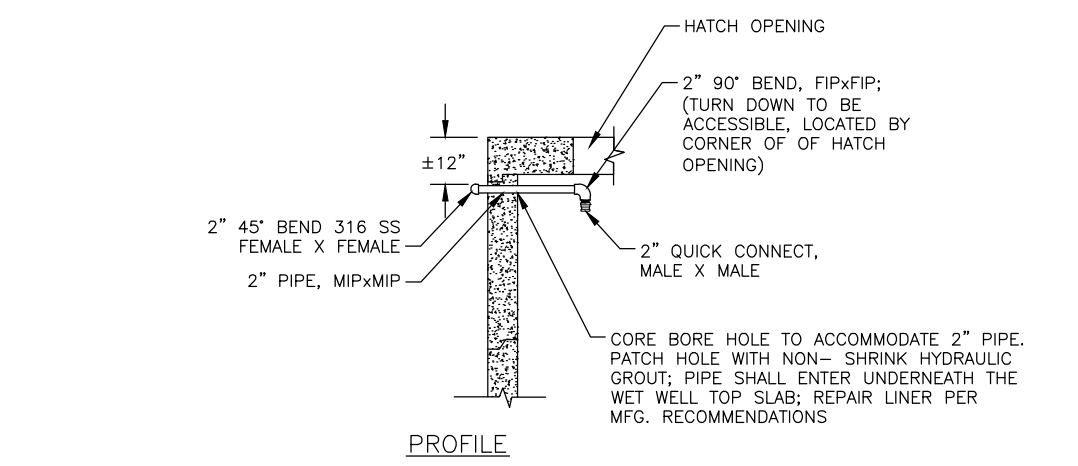
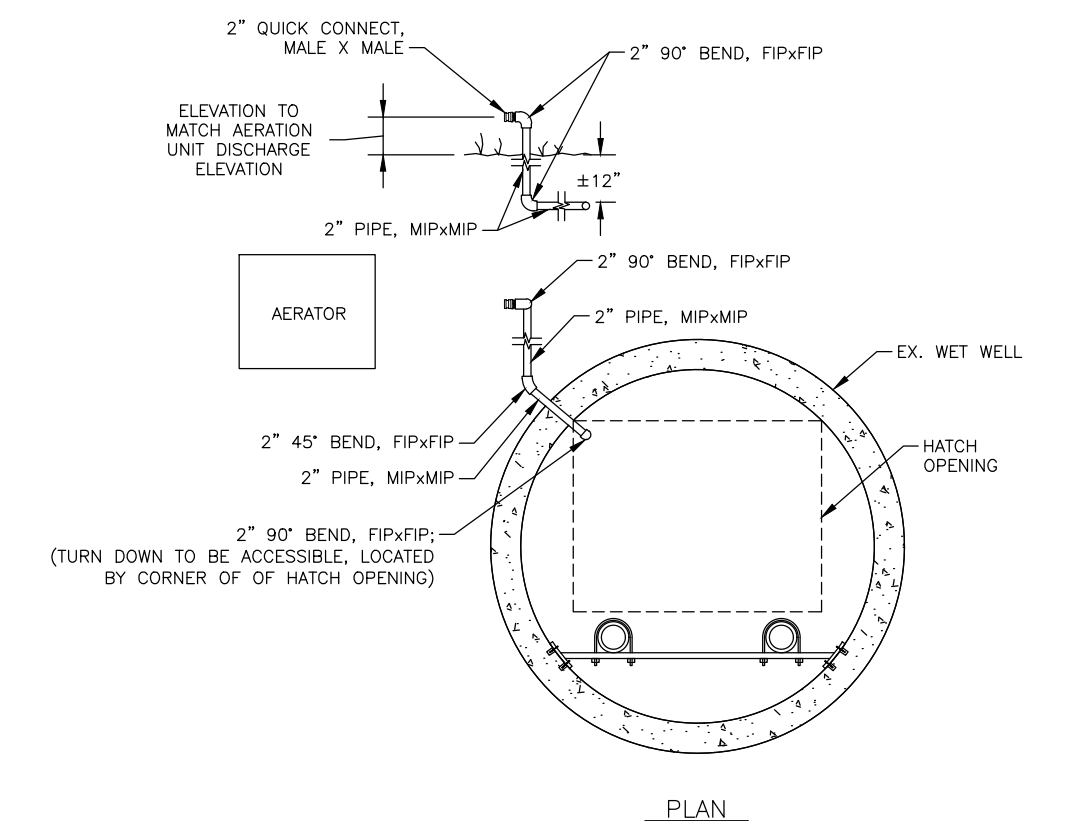
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PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



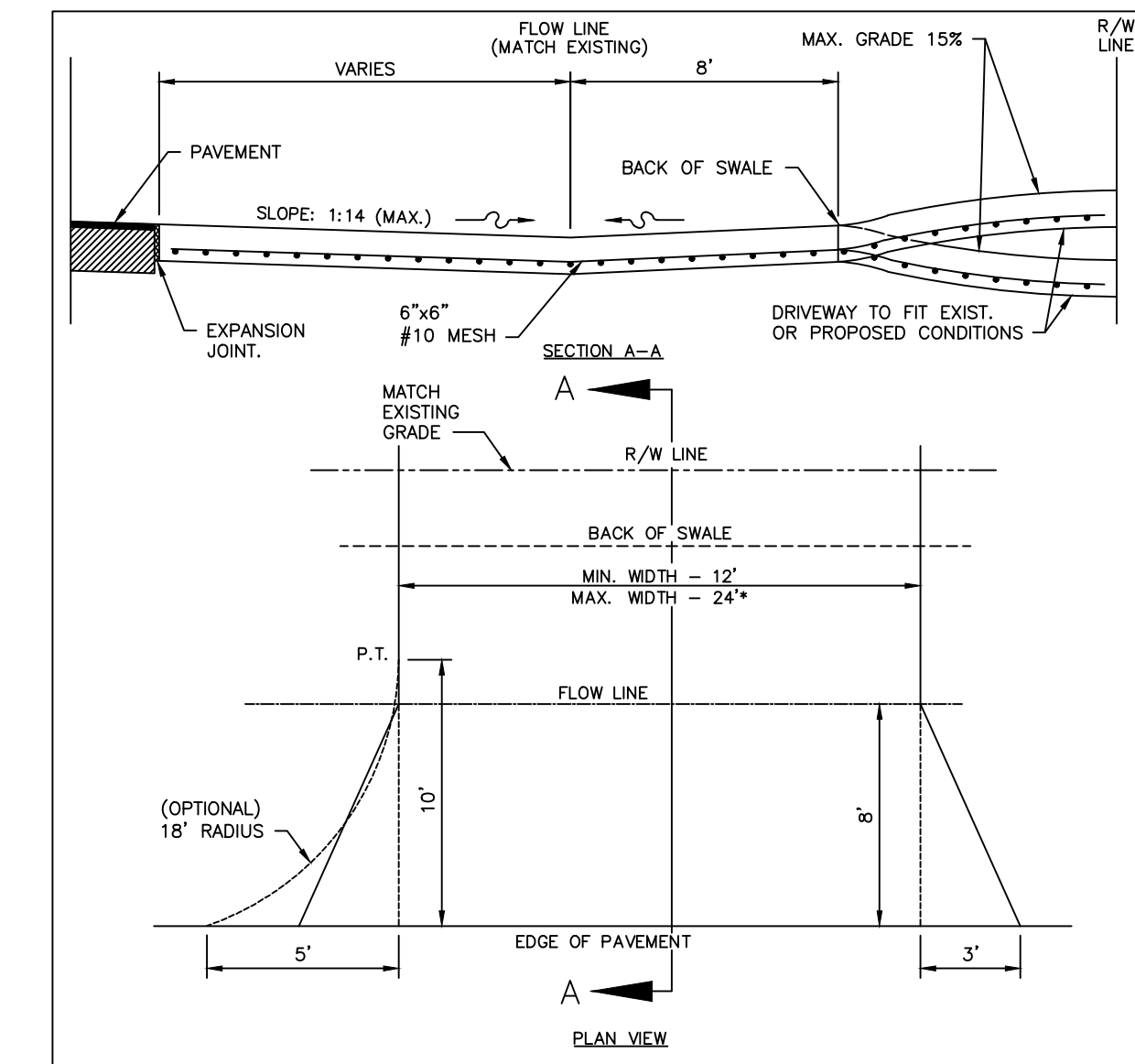
PROJECT #	402-0019707 / 5001301	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE NO. 60923
SEC./TWN./RGE	VARIES	STATE OF FLORIDA
SCALE	N.T.S.	PROFESSIONAL ENGINEER
SURVEYED	NA	DATE: 02/21/2024
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-



- ITEMS (ALL 316 STAINLESS STEEL)**
- 2" PIPE, MIPxMIP ±20 LF
 - 2" QUICK CONNECTION MALE TO MALE 2 EA
 - 2" 90° BENDS, FIPxPIP 3 EA
 - 2" 45° BEND, FIPxPIP 1 EA

- NOTES:**
- THE INSTALLATION OF THE 2" AERATION PIPING SHALL BE FIELD LOCATED W/ COUNTY PERSONNEL.
 - THIS DETAIL REPRESENTS THE CONCEPTUAL DESIGN AND INSTALLATION OF AERATION PIPING. ALL LENGTHS & FITTINGS SHALL BE FIELD ADJUSTED, BASED ON SITE SPECIFIC CONSTRAINTS.

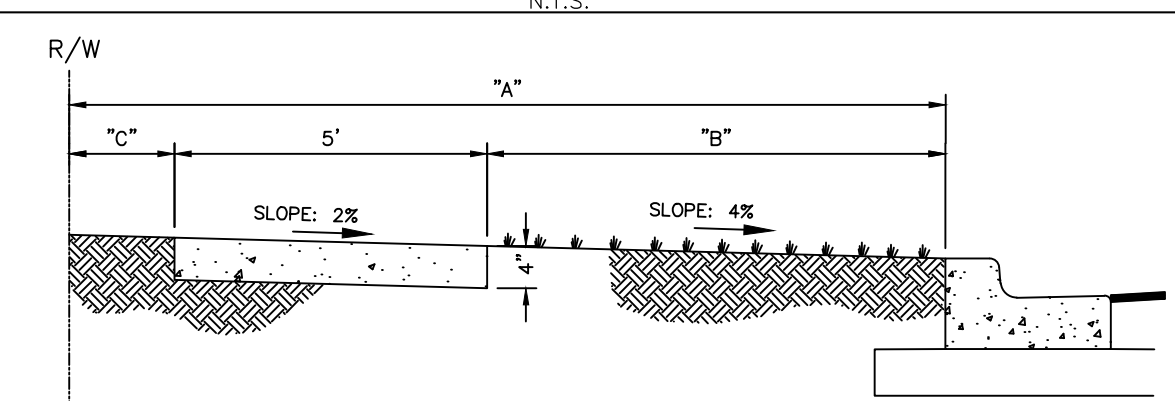
AERATION PIPING DETAIL
N.T.S.



- * FOR DRIVEWAYS THAT CAN DEMONSTRATE THE NEED FOR ADDITIONAL WIDTH, THE WIDTH MAY NOT BE GREATER THAN THE LESSER OF:
- 30' TOTAL AT THE RIGHT-OF-WAY LINE.
 - 30% OF THE FRONT FOOTAGE AS DEFINED ON THE SURVEY (OR FIELD MEASUREMENTS, 36' MAX).
- NOTES:**
- DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED.
 - DRIVEWAY SHALL BE 6" REINFORCED CONCRETE (3,000 PSI AT 28 DAYS) WITH 6"x6" #10 MESH FROM EDGE OF PAVEMENT TO THE RIGHT-OF-WAY-LINE.
 - EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY'S DISCRETION. DEPARTMENT DIRECTOR OR DESIGNER MAY APPROVE THE USE OF A SWALE DRIVE, IF ON-SITE CONDITIONS ARE FAVORABLE.
 - USE 3"x8" FLARED APRON OR 18" RADIUS, BOTH ARE MINIMUMS.
 - EXPANSION JOINT SHALL BE 1/2" PREFORMED JOINT FILLER OR APPROVED ALTERNATE.
 - SAWCUT (1/4" THICKNESS MINIMUM) ON 10' CENTERS. IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.

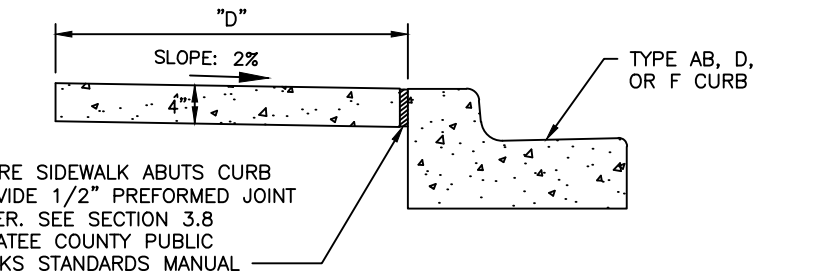
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PUBLIC WORKS DEPARTMENT		PUBLIC WORKS DEPARTMENT	
REV. BY	DATE	REV. BY	DATE
	4/26/22		4/26/22
DATE OF B.O.C.C. APPROVAL		DATE OF B.O.C.C. APPROVAL	

RURAL RESIDENTIAL SWALE DRIVES 101.1



"A"= BACK OF CURB TO RIGHT-OF-WAY (VARIES)
 "B"= UNPAVED AREA (VARIES)
 "C"= VARIES, SEE DETAILS 401.1-401.10

TYPICAL SIDEWALK LOCATION

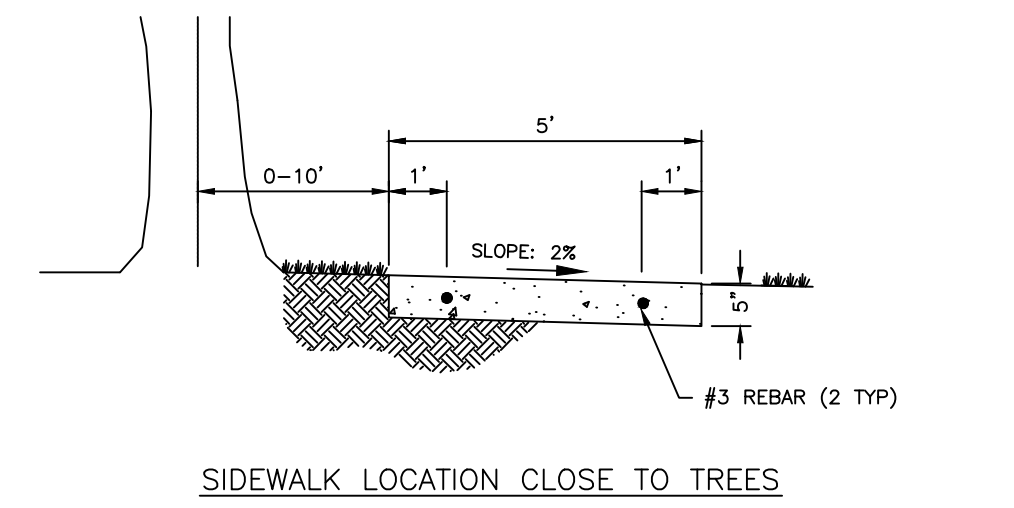


WHERE SIDEWALK ABUTS CURB PROVIDE 1/2" PREFORMED JOINT FILLER. SEE SECTION 3.8 MANATEE COUNTY PUBLIC WORKS STANDARDS MANUAL.

"D"= SIDEWALK WIDTH SHALL BE 6' STANDARD, WHERE SIDEWALK ABUTS TYPE AB, D, OR F CURB.

SEE SECTION 3.8 SIDEWALKS, MANATEE COUNTY PUBLIC WORKS STANDARDS MANUAL, FOR FURTHER INFORMATION.

ALTERNATE SIDEWALK LOCATION



SIDEWALK LOCATION CLOSE TO TREES

MANATEE COUNTY		MANATEE COUNTY	
PUBLIC WORKS DEPARTMENT		PUBLIC WORKS DEPARTMENT	
REV. BY	DATE	REV. BY	DATE
	4/26/22		4/26/22
DATE OF B.O.C.C. APPROVAL		DATE OF B.O.C.C. APPROVAL	

SIDEWALK REQUIREMENTS 301.0

NO.	REVISION DESCRIPTION	BY	DATE



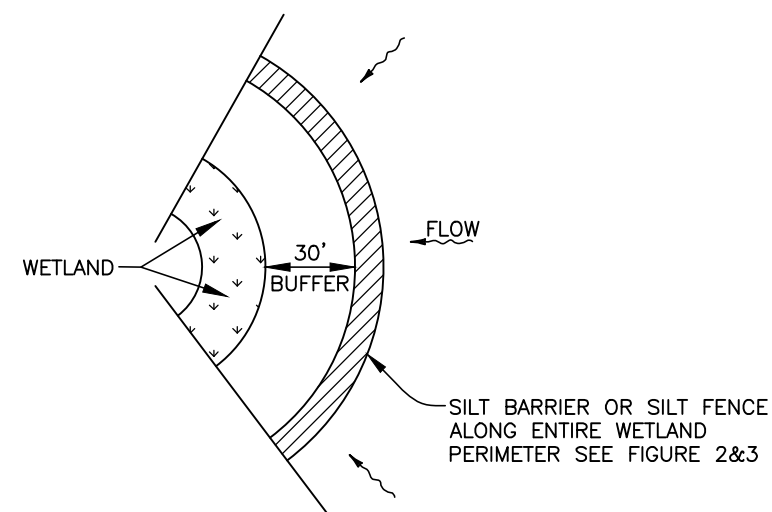
SATELLITE LIFT STATION R&R

2024 GROUP 1

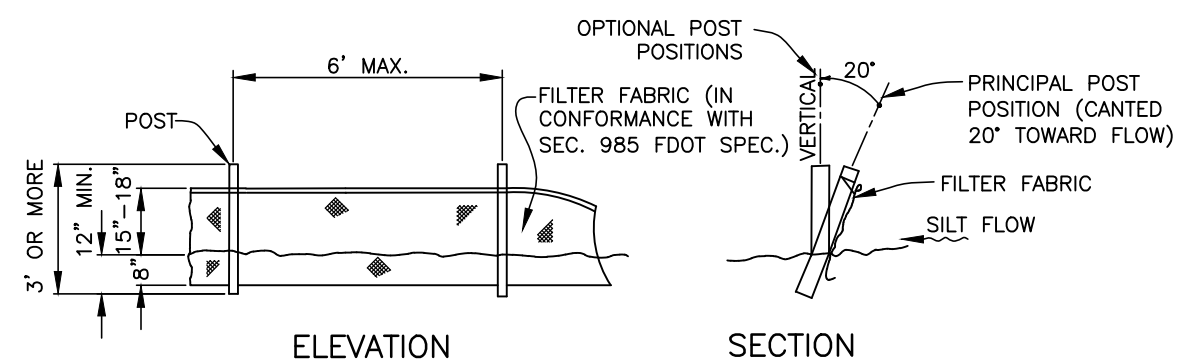
DETAILS3



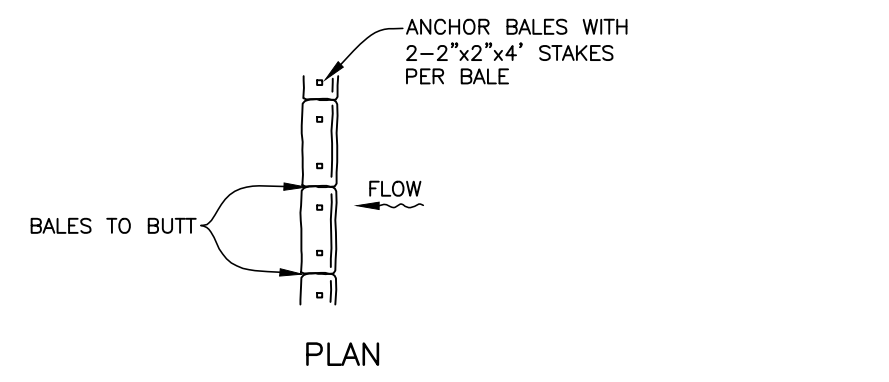
PROJECT #	402-0019707 / 5001301		J. SHEA SHOUN, P.E.
SURVEY #	NA		
SEC./TWN./RGE	VARIES		
SCALE	N.T.S.		
SURVEYED	BY	DATE	
DESIGNED	JSS	5/2023	
DRAWN	JKW	5/2023	
CHECKED	JSS	-	



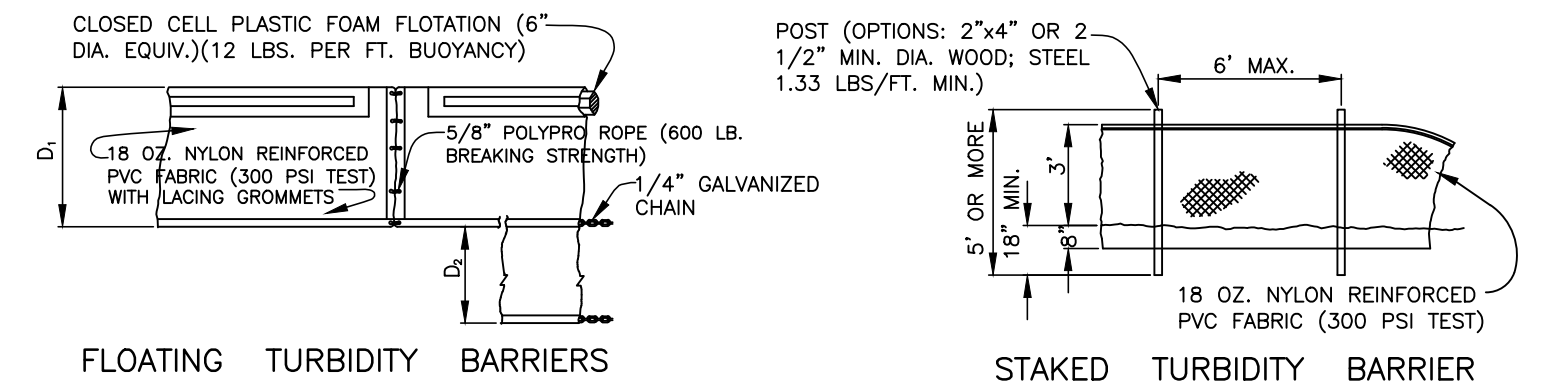
WETLAND BUFFER
FIGURE 1



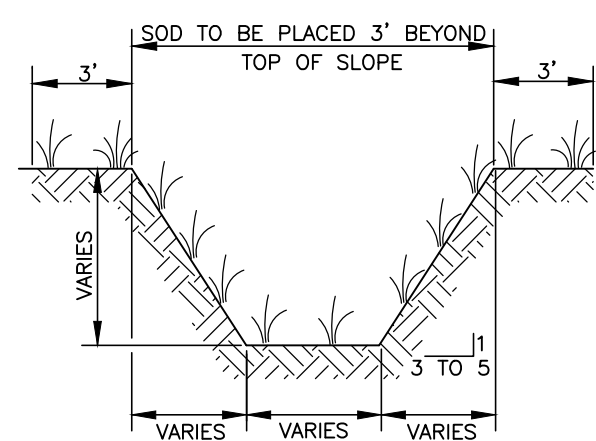
TYPICAL SILT FENCE
FIGURE 2



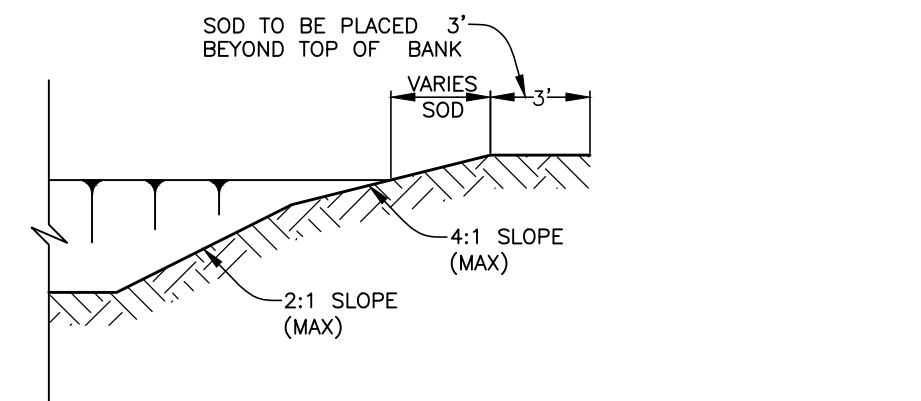
TYPICAL BALE SILT BARRIER
FIGURE 3



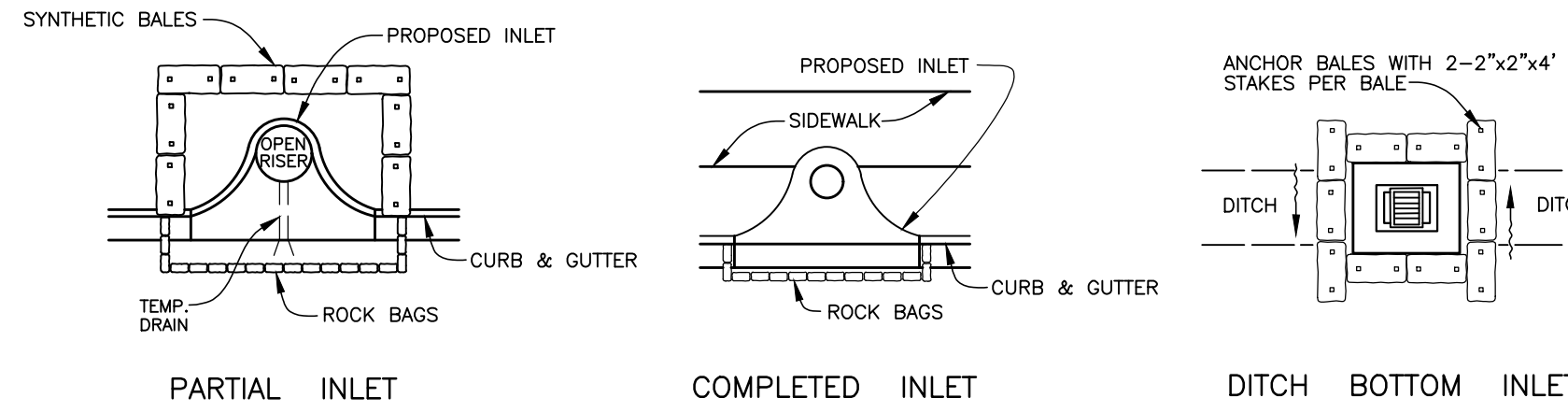
TURBIDITY BARRIERS
FIGURE 4



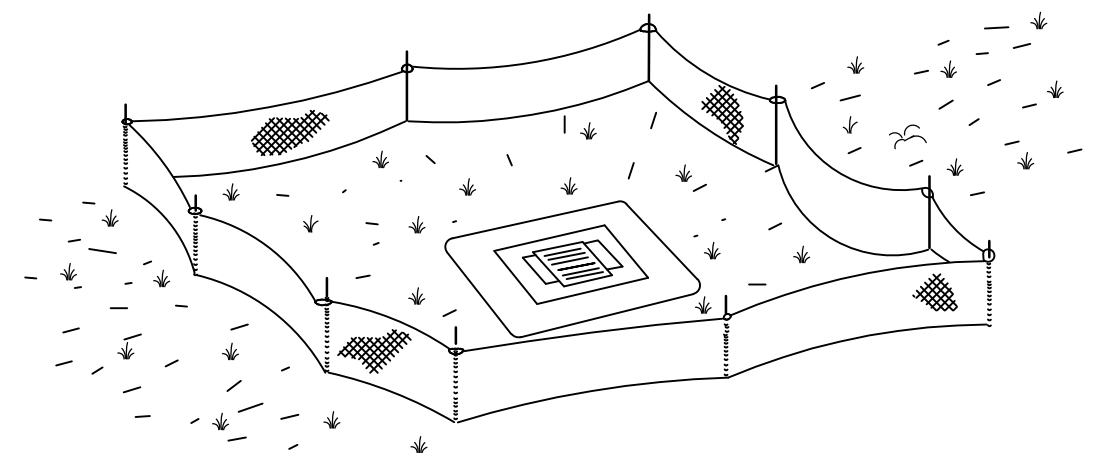
TYPICAL SWALE SECTION
FIGURE 5



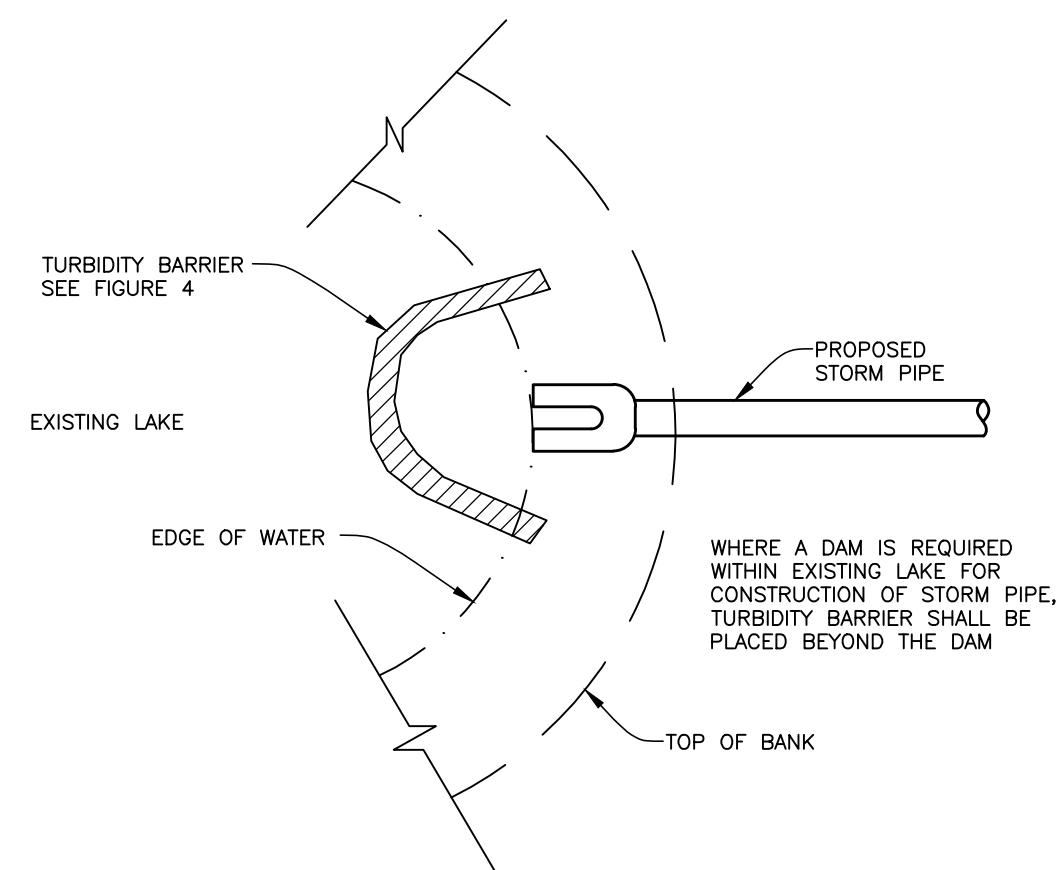
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



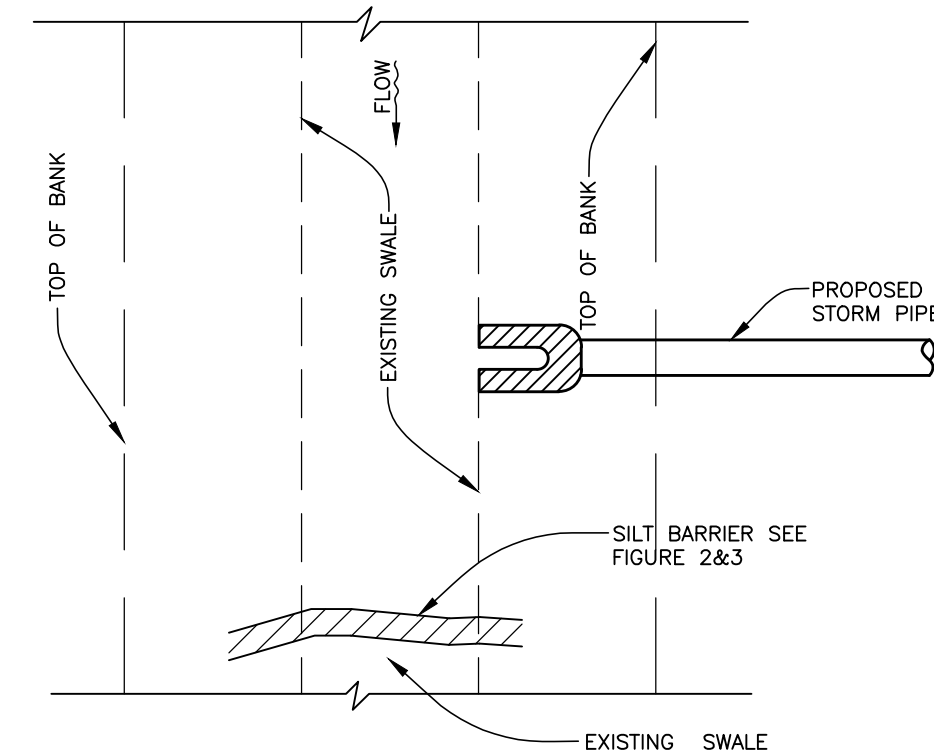
SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7



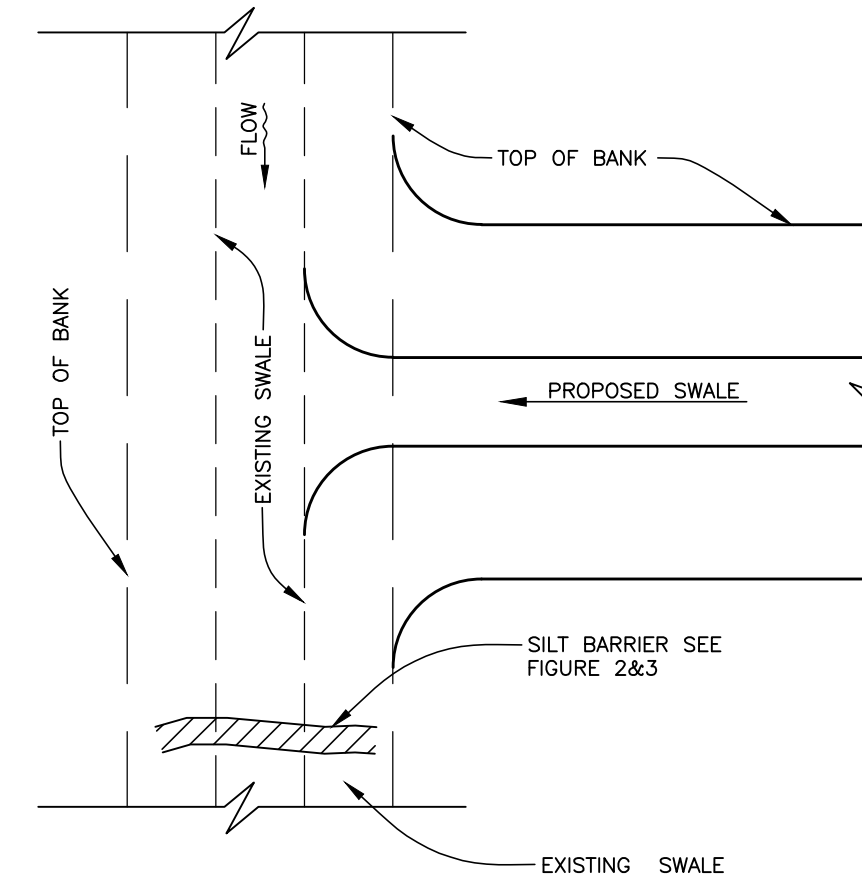
TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



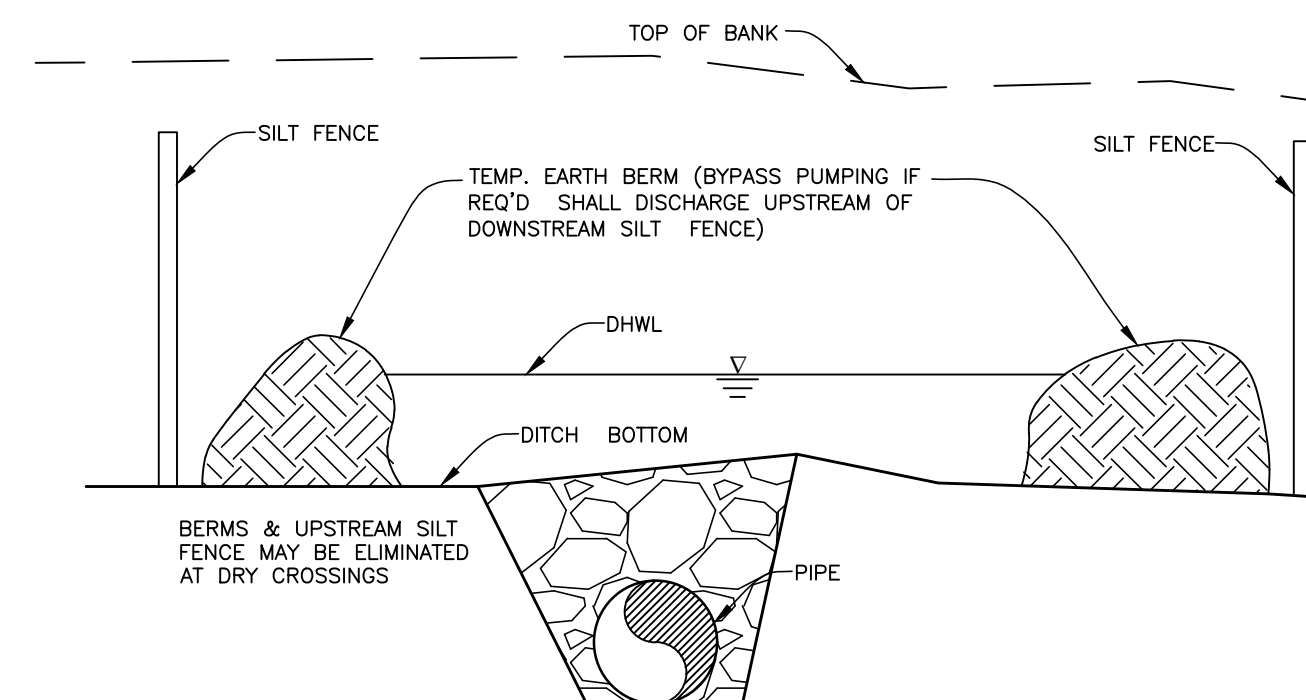
TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9



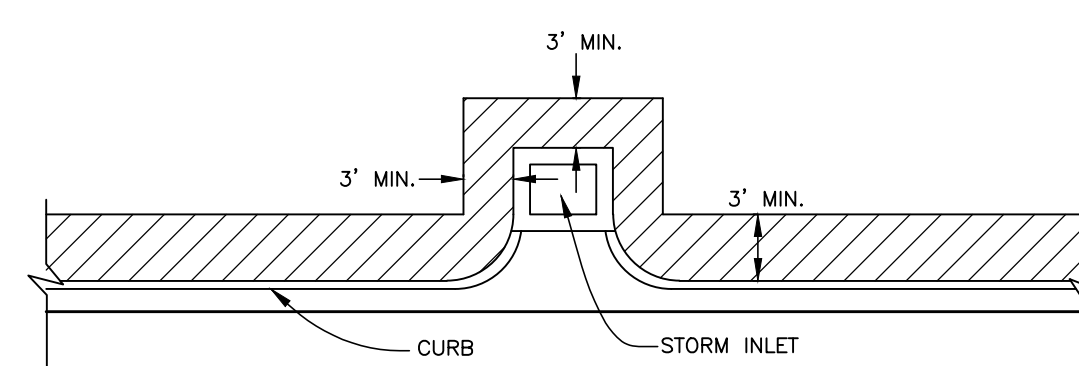
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



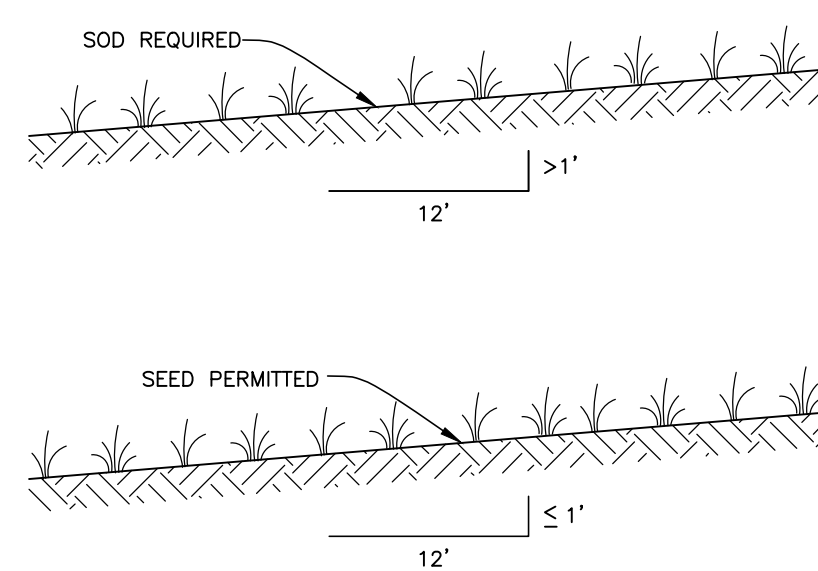
SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11



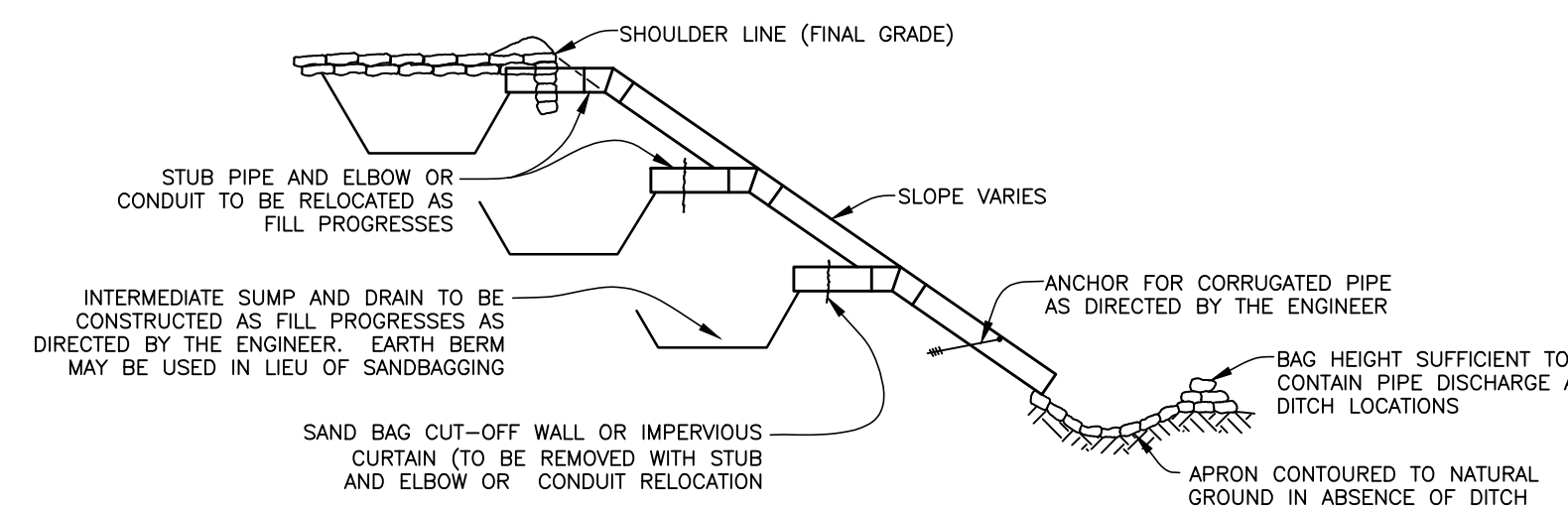
UNDERGROUND PIPE CROSSING
FIGURE 12



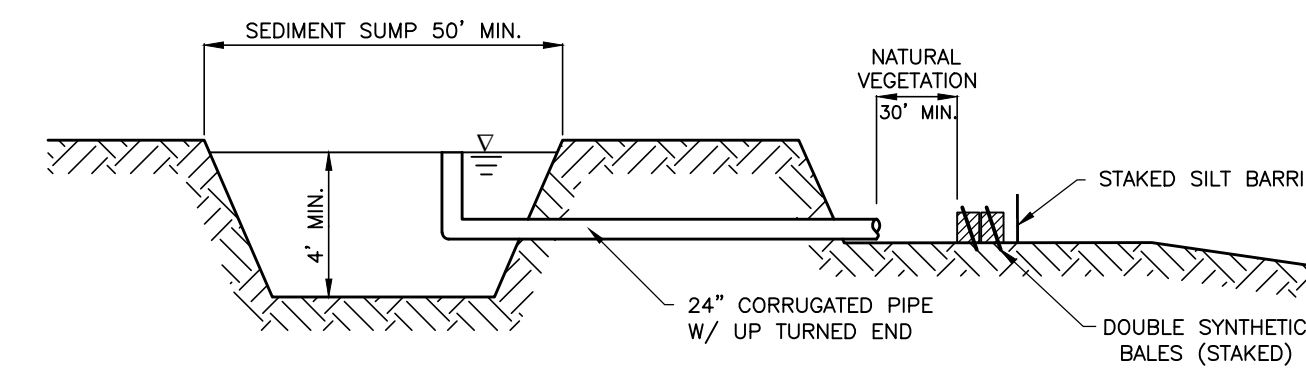
SOD ALONG CURB
AND AROUND INLET
FIGURE 14



GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



SEDIMENT SUMP SECTION
FIGURE 16

NOTE:
REFERENCE THE STATE OF FLORIDA EROSION
AND SEDIMENT CONTROL DESIGNER AND
REVIEWER MANUAL, LATEST EDITION, FOR ALL
TEMPORARY EROSION CONTROL MEASURES

NO.	REVISION DESCRIPTION	BY	DATE



Know what's below
Call before you dig

SATELLITE LIFT STATION R&R
2024 GROUP 1
EROSION CONTROL DETAILS



PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

PROJECT #	402-0019707 / 5001301
SURVEY #	NA
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 5/2023
DRAWN	JKW 5/2023
CHECKED	JSS -

J. SHEA SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
02/21/2024
SHEA SHOUN ENGINEERING, LLC
10101 11th Street, Bradenton, FL 34208

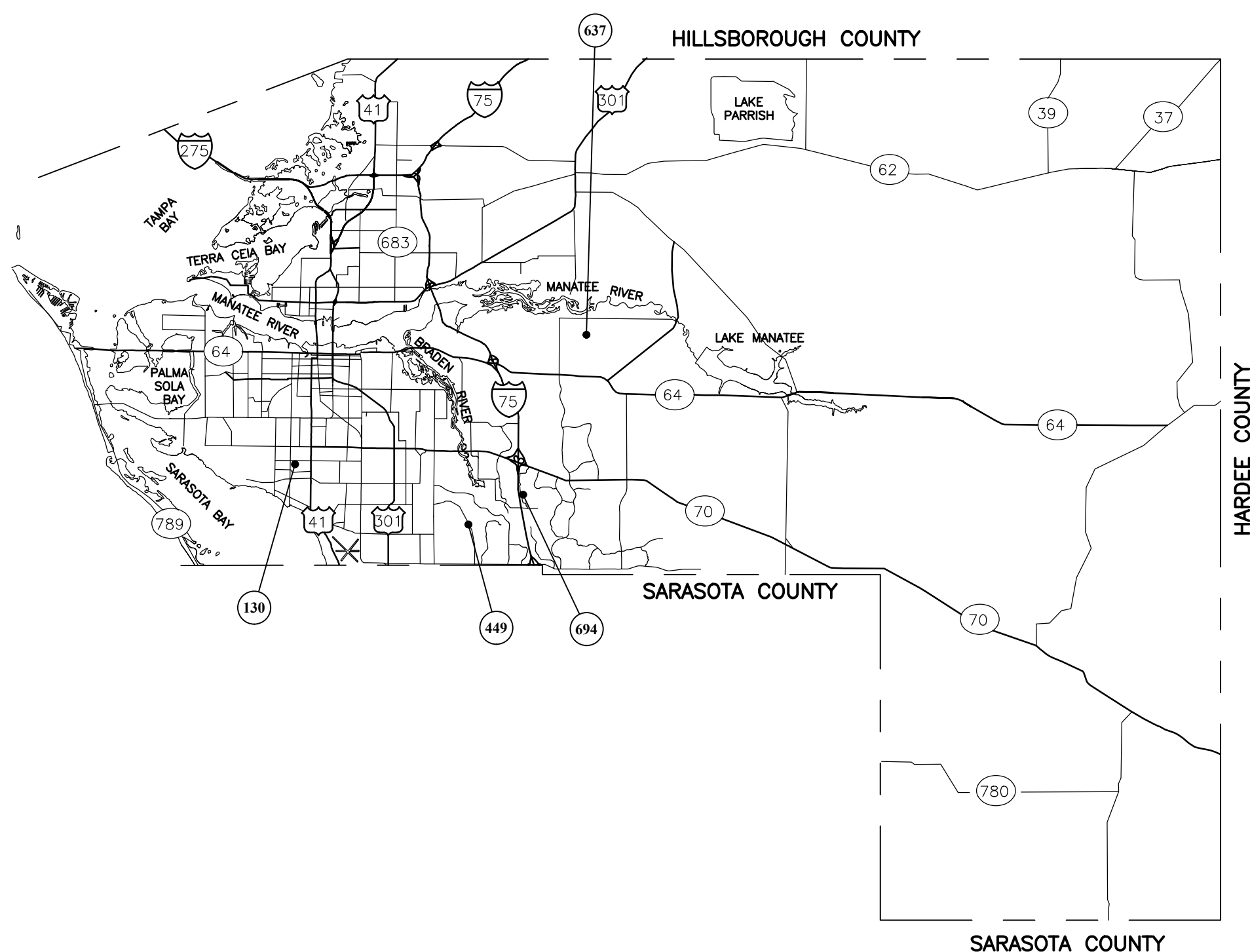


SATELLITE LIFT STATION R&R 2024 GROUP 2 402.0019707 / 5001301

BID PLANS

March 2024

L.S. NAME	RTU	ADDRESS	PROJECT JL NO.	INFLUENT MH
28-A	130	2314 58TH AVE DR. W., BRADENTON	402.5164483	PUBLIC
PALM-AIRE 9	449	8400 WHITFIELD AVE EXT., BRADENTON	402.5164480	PUBLIC
GREYHAWK LANDINGS 3	637	12407 DAISY PLACE, BRADENTON	402.5164481	PUBLIC
RIVER CLUB COM. PARK	694	8006 CIRCLEWOOD AVE., BRADENTON	402.5164482	PUBLIC



NO.	INDEX OF SHEETS
01	COVER
02	GENERAL NOTES AND LEGEND
03	VICINITY MAPS
04	28-A, RTU 130
05	PALM-AIRE 9, RTU 449
06	GREYHAWK LANDINGS 3, RTU 637
07	RIVER CLUB COMMERCIAL PARK, RTU 694
08	DETAILS 1
09	DETAILS 2
10	EROSION CONTROL DETAILS

PROJECT DESCRIPTION

REHABILITATE SEWAGE LIFT STATIONS (AND/OR MANHOLES) TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, UPGRADE OR FULL REPLACEMENT OF THE ELECTRICAL CONTROL EQUIPMENT, WET WELL CLEANING, THE REPLACEMENT OF DISCHARGE PIPING, FITTINGS, VALVES, SWING CHECK VALVES, GUIDE RAILS, PIPE BRACINGS, BASE ELLS, AND/OR MOUNTING PLATES. WET WELL LINER MAY NEED TO BE INSTALLED, REPAIRED OR REPLACED. SEE INDIVIDUAL PLAN SHEETS FOR SPECIFIC REHABILITATION AND INSTALLATIONS REQUIREMENTS FOR EACH LIFT STATION.

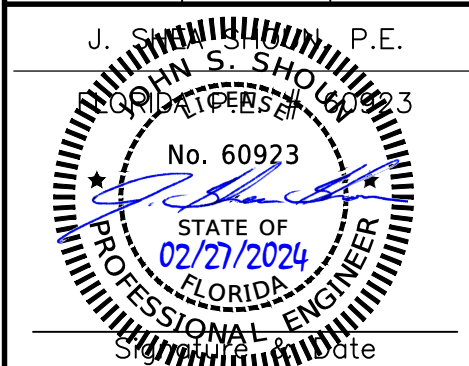


Know what's below
Call before you dig

**SATELLITE LIFT STATION R&R
2024 GROUP 2
COVER**

NO.	REVISION DESCRIPTION	BY	DATE

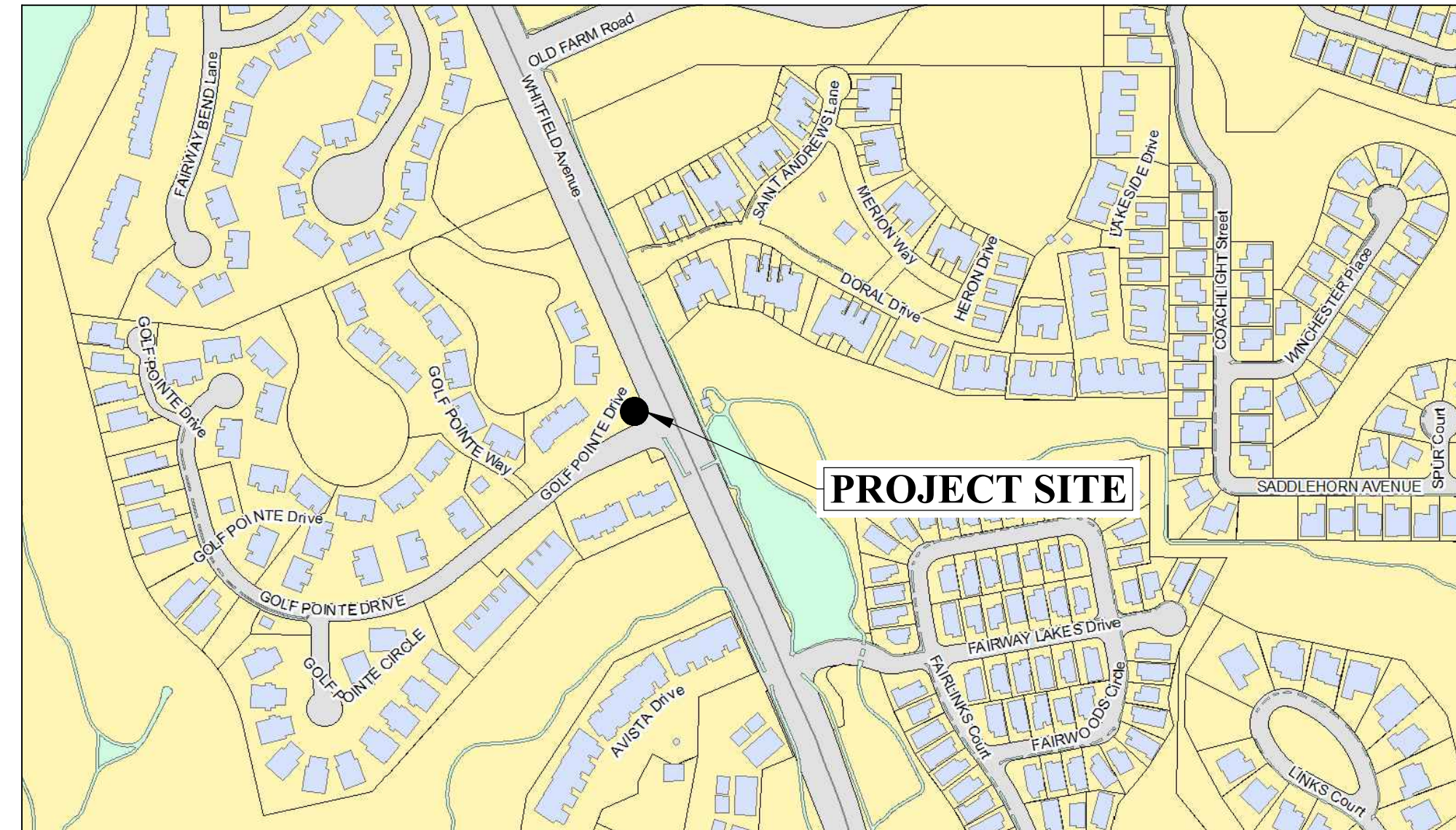
PROJECT #	402.0019707 / 5001301	
SURVEY #	NA	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
	BY	DATE
SURVEYED	NA	NA
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-



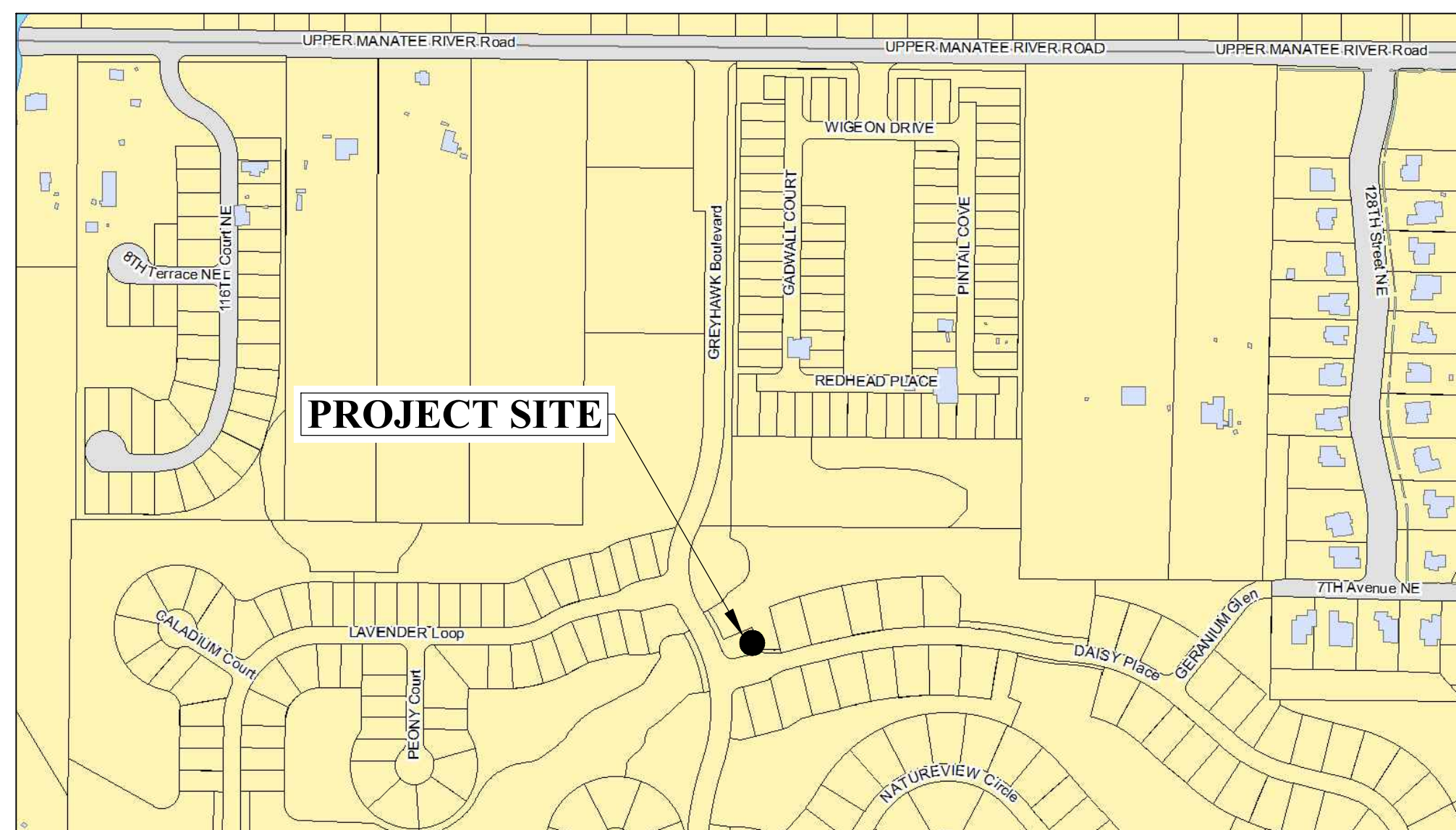
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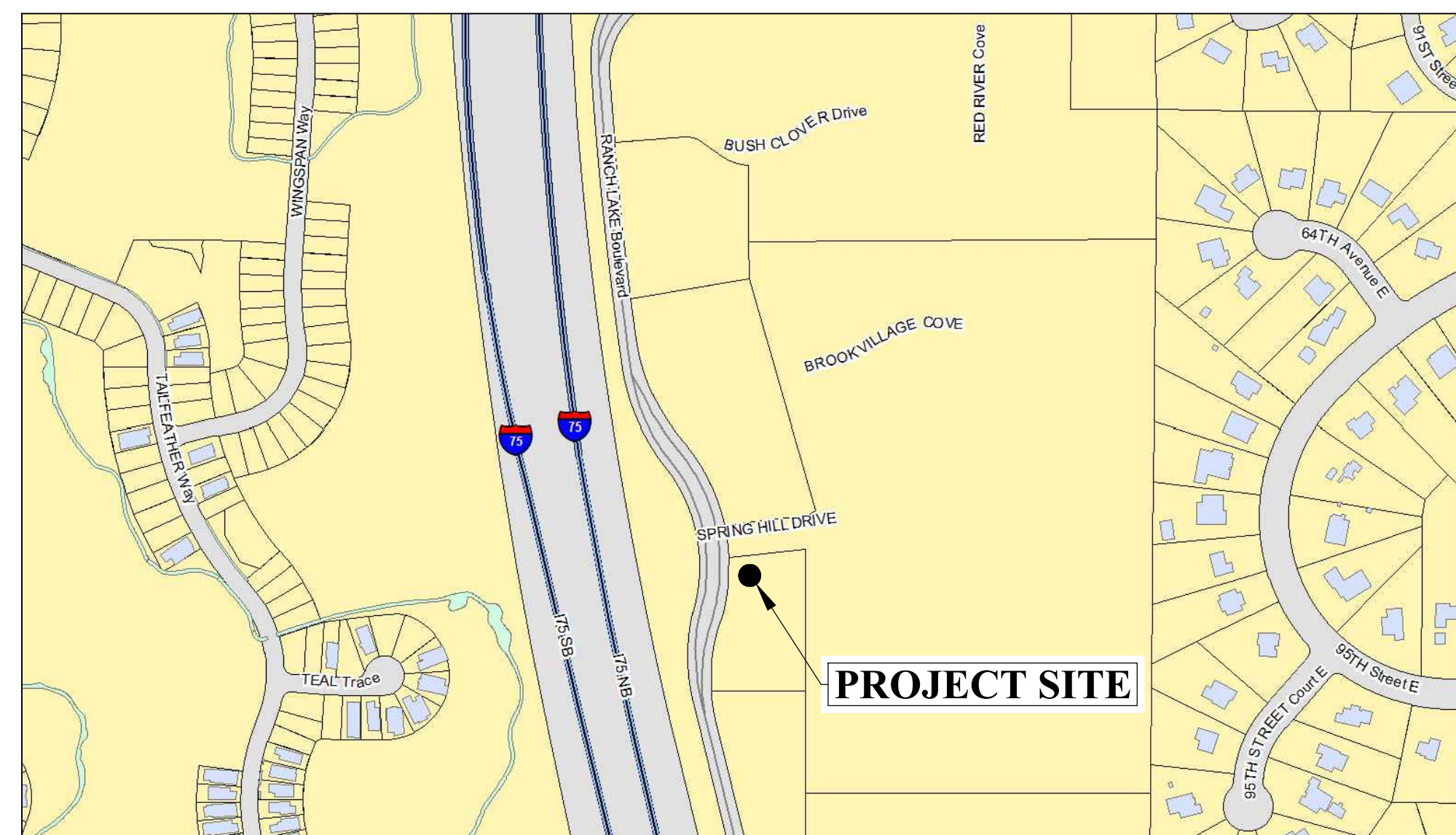
28-A, RTU 130
2314 58TH AVE. W., BRADENTON
LAT N: 27.436778°
LONG W: -82.585186°



PALM AIRE 9, RTU 449,
8400 WHITFIELD AVE. EXT., BRADENTON
LAT N: 27.411695°
LONG W: -82.489606°



GREYHAWK LANDINGS 3, RTU 637,
12407 DAISY PL., BRADENTON
LAT N: 27.509104°
LONG W: -82.419462°



RIVER CLUB COMMERCIAL PARK, RTU 694,
8006 CIRCLEWOOD AVE., BRADENTON
LAT N: 27.425160°
LONG W: -82.457351°

NOTE(S):

1. LIFT STATION SITE VISITS MAY BE COORDINATED WITH ERIK GIBSON, 941-792-8811 x5377.
2. DATA ON THE COUNTY'S UTILITY INFRASTRUCTURE MAY BE RESEARCHED AND VIEWED BY UTILIZING THE PUBLIC ACCESS TO THE COUNTY'S GIS SYSTEM. USE AN INTERNET BROWSER AND ENTER THE FOLLOWING URL, "https://www.mymanatee.org/gisapps/mobile/index.html?type=utilities-public".

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R
2024 GROUP 2
VICINITY MAPS



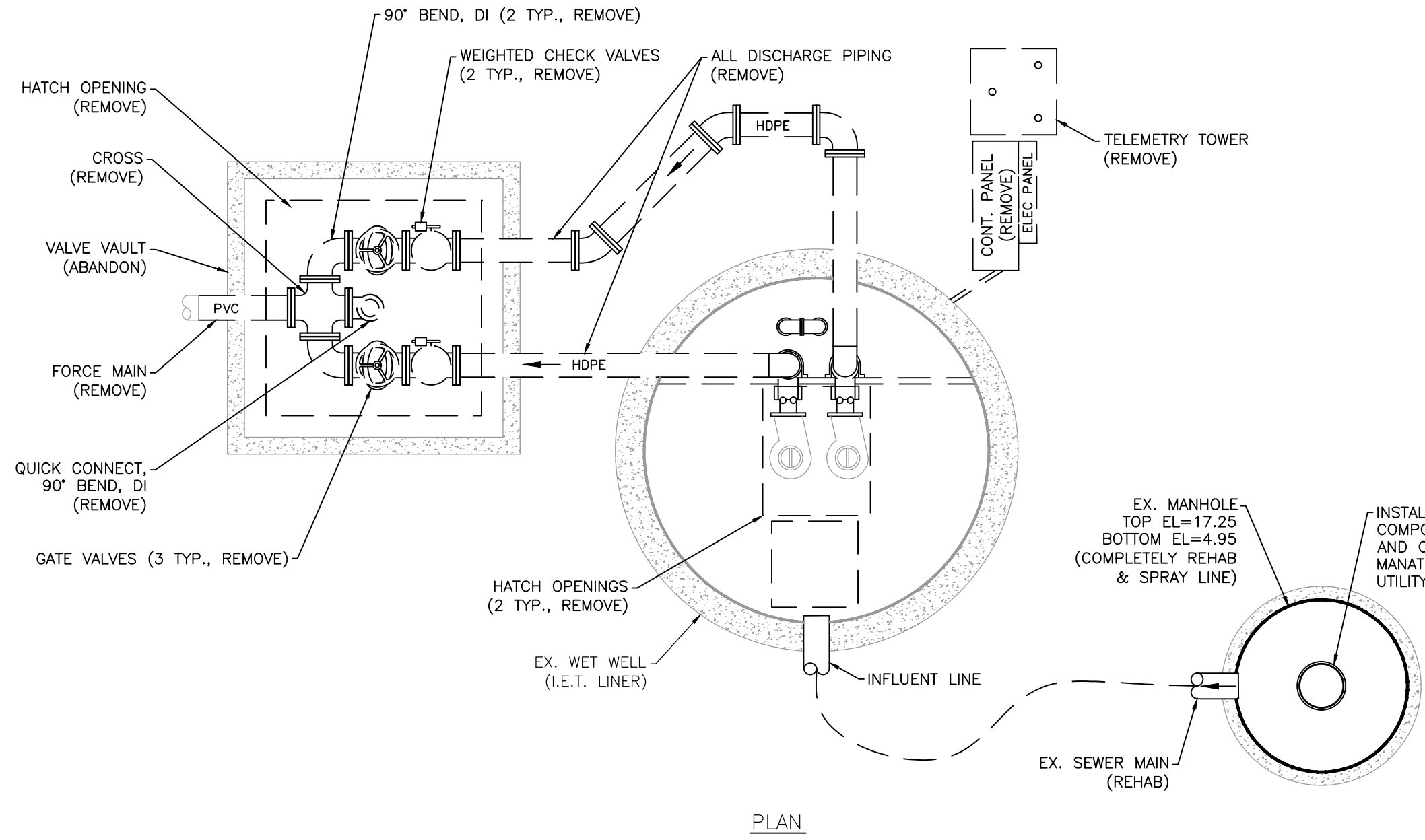
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SURVEY #	NA
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	BY: NA DATE: NA
DESIGNED	JSS 5/2023
DRAWN	JKW 5/2023
CHECKED	JSS -

J. SHEA SHOUN, P.E.
 60923
 STATE OF FLORIDA
 LICENSE No. 60923
 PROFESSIONAL ENGINEER
 02/21/2024
 SHEET 03 OF 10

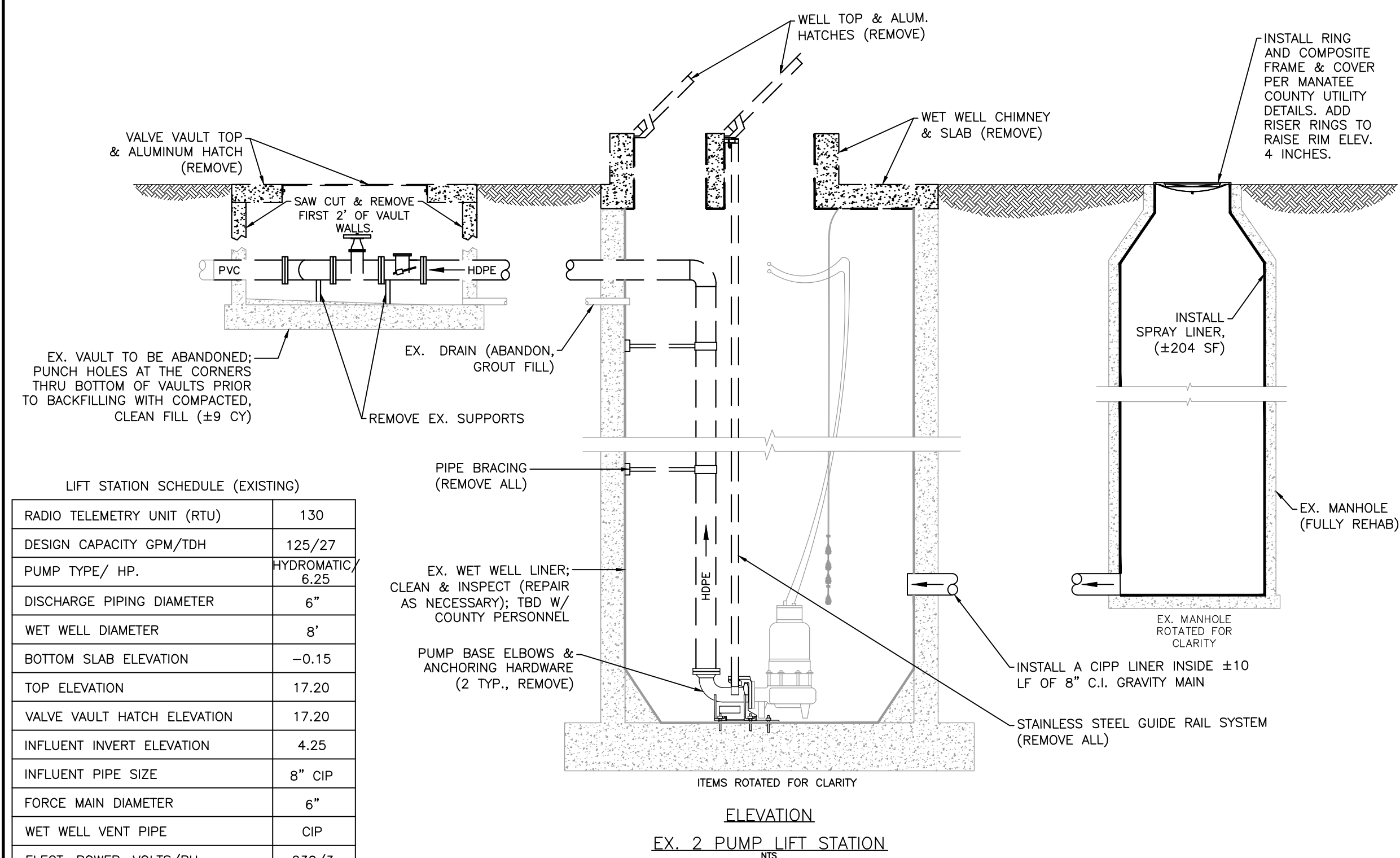
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EXISTING

- NOTES:**
- THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 - CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 - THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
 - REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 - BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 - THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 - THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION

LIFT STATION SCHEDULE (EXISTING)

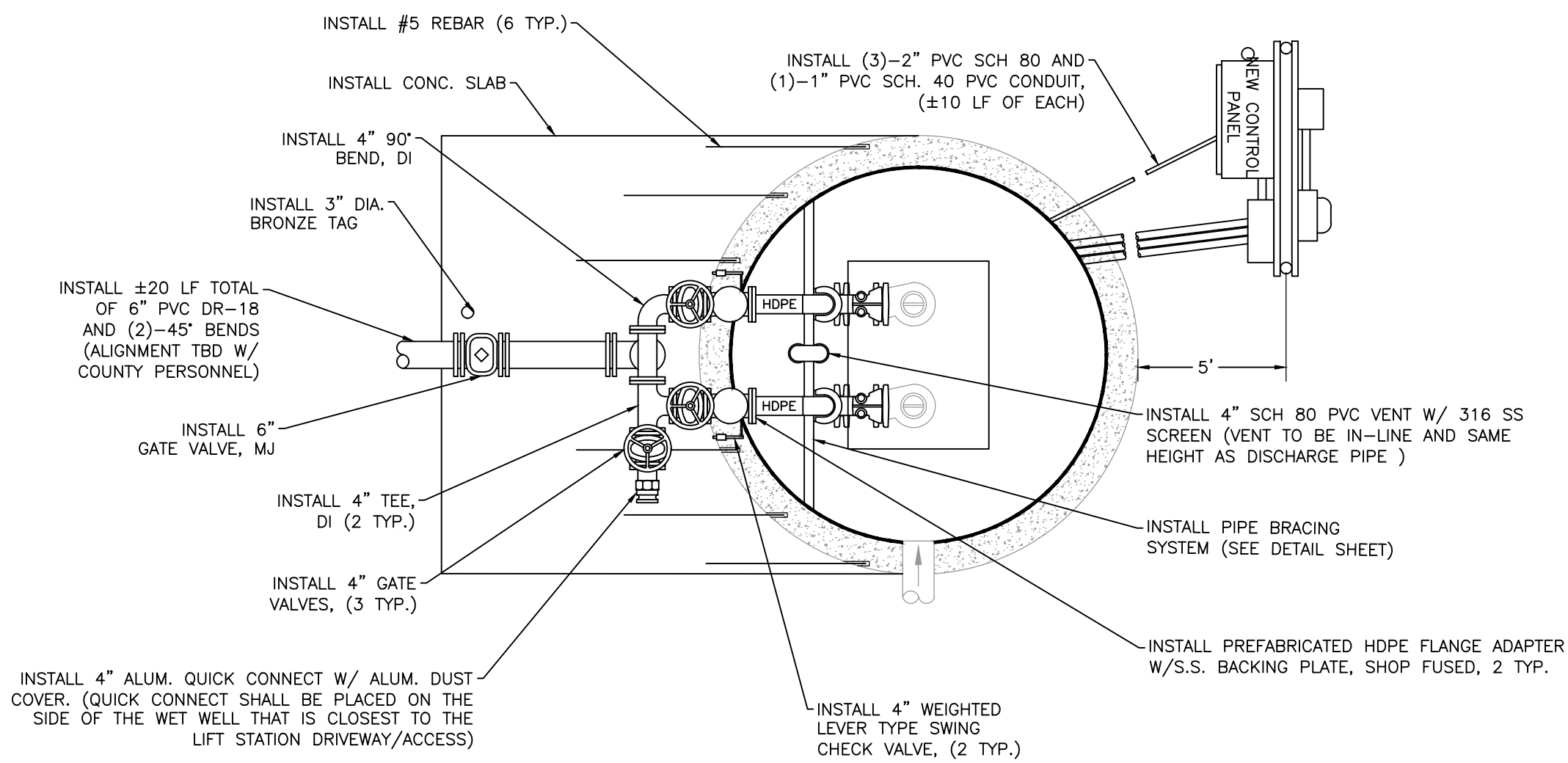
RADIO TELEMETRY UNIT (RTU)	130
DESIGN CAPACITY GPM/TD	125/27
PUMP TYPE/ HP.	HYDROMATIC 6.25
DISCHARGE PIPING DIAMETER	6"
WET WELL DIAMETER	8"
BOTTOM SLAB ELEVATION	-0.15
TOP ELEVATION	17.20
VALVE VAULT HATCH ELEVATION	17.20
INFLUENT INVERT ELEVATION	4.25
INFLUENT PIPE SIZE	8" CIP
FORCE MAIN DIAMETER	6"
WET WELL VENT PIPE	CIP
ELECT. POWER, VOLTS/PH	230/3
ELECT. SERVICE SIZE, AMPS	50
EX. FORCEMAIN TIE-IN	MH

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

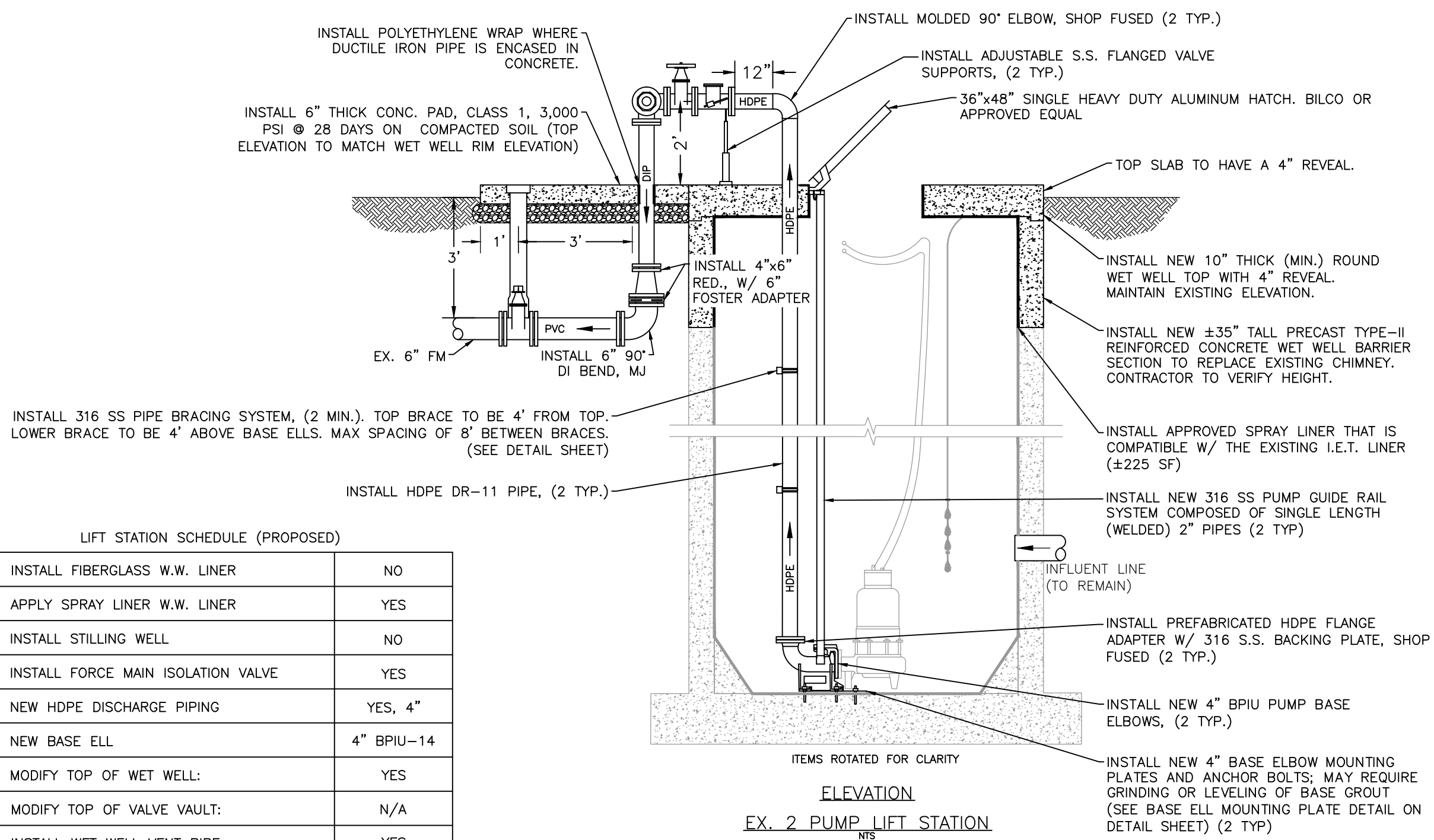
NO.	REVISION DESCRIPTION	BY	DATE

PROPOSED

- GENERAL NOTES:**
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
 - THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAT 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
 - EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
 - THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
 - ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION

LIFT STATION SCHEDULE (PROPOSED)

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 4"
NEW BASE ELL	4" BPIU-14
MODIFY TOP OF WET WELL:	YES
MODIFY TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
- INSTALL ±10 LF NEW ELECTRICAL SERVICE WITH CONDUIT. THE COUNTY WILL SUPPLY ANY REQUIRED HANDHOLES.
 - REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL REMAINING EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF RACK TO HOLD ALL PROPOSED ELECTRICAL ENCLOSURES/COMPONENTS. A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL AND SHALL BE INCLUDED WITH THE CONTROL PANEL.
 - AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584-2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 - SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING RODS. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
 - INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 - REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR. (±305 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
 - DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
 - INSTALL NEW 35-INCH TALL PRECAST TYPE-II REINFORCED CONCRETE WET WELL BARREL SECTION; OR FORM POUR CONCRETE AND REINFORCE WITH REBAR, EPOXY DOWELS INTO EXISTING STRUCTURE. CONTRACTOR TO VERIFY HEIGHT PRIOR TO ORDERING TO ENSURE 4 INCH REVEAL.
 - RELOCATE THE EXISTING METER, BPA, & HOSE BIBB ASSEMBLY. THE METER AND BPA SHALL BE RELOCATED AS CLOSE AS POSSIBLE TO THE FENCE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (±10 LF)
 - INSTALL A NEW 2-INCH WATER SERVICE LINE AND 8"x2" TAPPING SADDLE PER COUNTY STANDARDS VIA DIRECT BURY. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE SAME SIDE AS THE LIFT STATION SITE. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE RIGHT-OF-WAY LINE IN CLOSEST PROXIMITY TO THE WATER DISTRIBUTION MAIN. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. (±100 LF).
 - ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION AT MAIN; INSTALL A BRASS PLUG IN CORPORATION STOP.
 - INSTALL WASHED SHELL & WEED BARRIER (±24 SY); GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.
 - CAREFULLY REMOVE EXISTING FENCE COMPLETELY, INCLUDING ALL POSTS AND CONCRETE FOOTERS, (±40 LF). SAVE FENCE, SET TO SIDE FOR COUNTY TO PICK UP.
 - THE COUNTY SHALL RETAIN OWNERSHIP OF THE EXISTING VALVE ASSEMBLY AND ALL OF THE EXISTING HDPE DISCHARGE PIPE. CONTRACTOR SHALL REMOVE THESE ITEMS INTACT, SET THESE ITEMS ASIDE, AND COORDINATE WITH THE COUNTY FOR PICK-UP.

- NOTES:**
- WATER DISTRIBUTION IS PUBLIC.
 - SEWER COLLECTION IS PUBLIC.
 - LIFT STATION WITHIN COUNTY ROW.

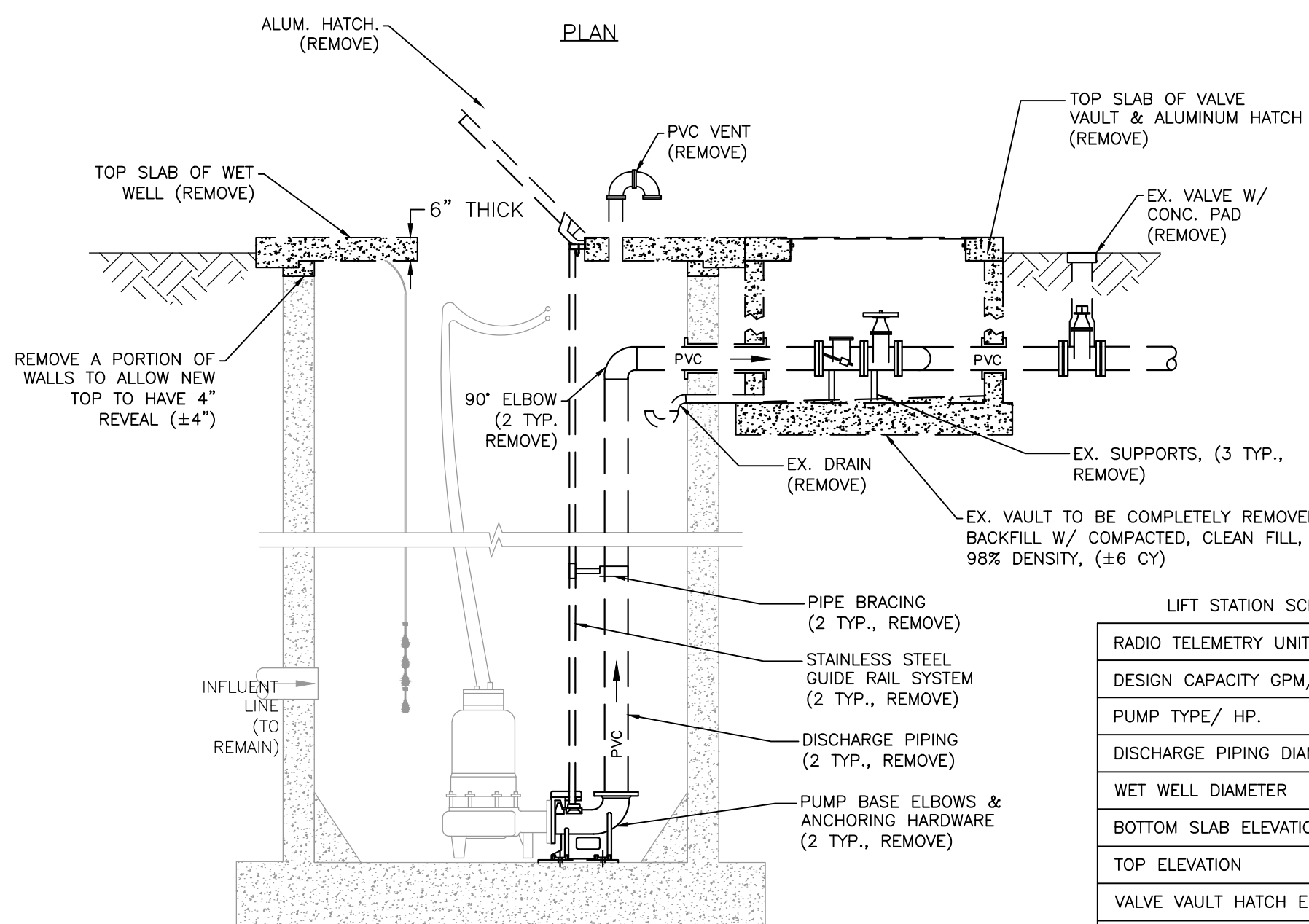
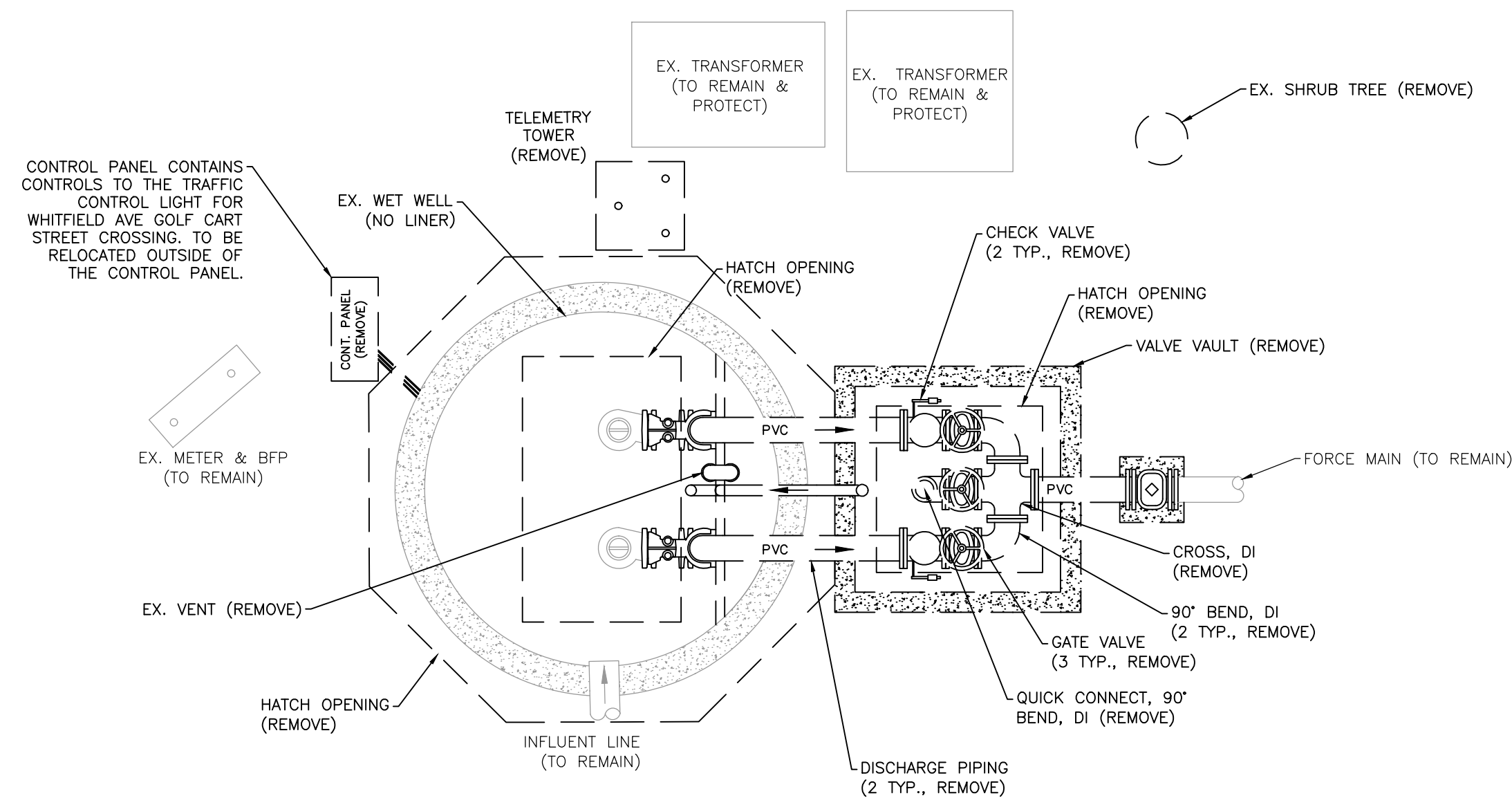
SATELLITE LIFT STATION R&R
2024 GROUP 2
28-A, RTU 130



PROJECT #	402.5164483	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA STATE ENGINEERING LICENSE No. 60923
SEC./TWN./RGE	15/35/17	DATE OF LICENSE 02/21/2024
SCALE	N.T.S.	PROFESSIONAL ENGINEER STATE OF FLORIDA
SURVEYED	NA	DATE
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

EXISTING

- NOTES:**
1. THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
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 4. REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 5. BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

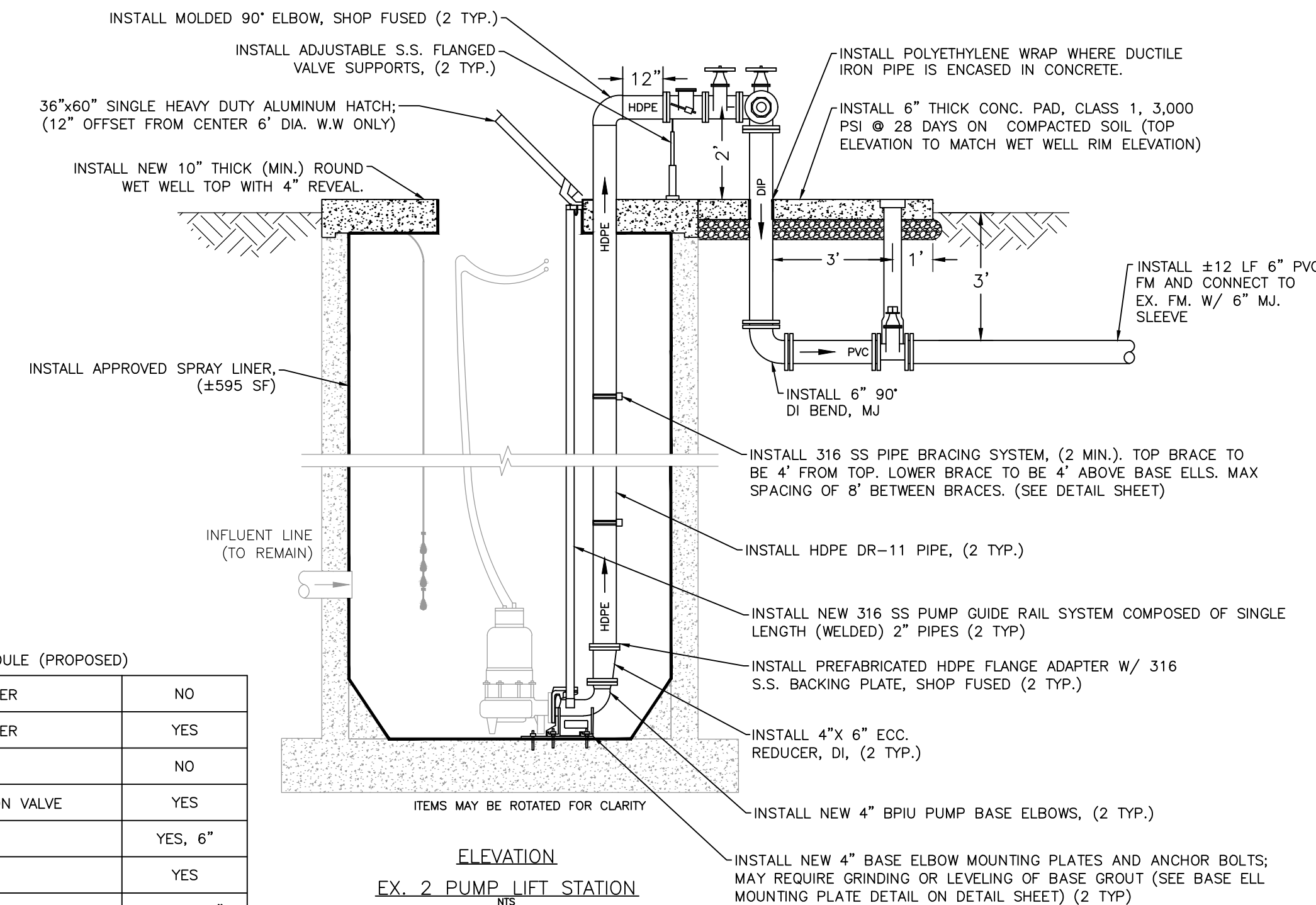
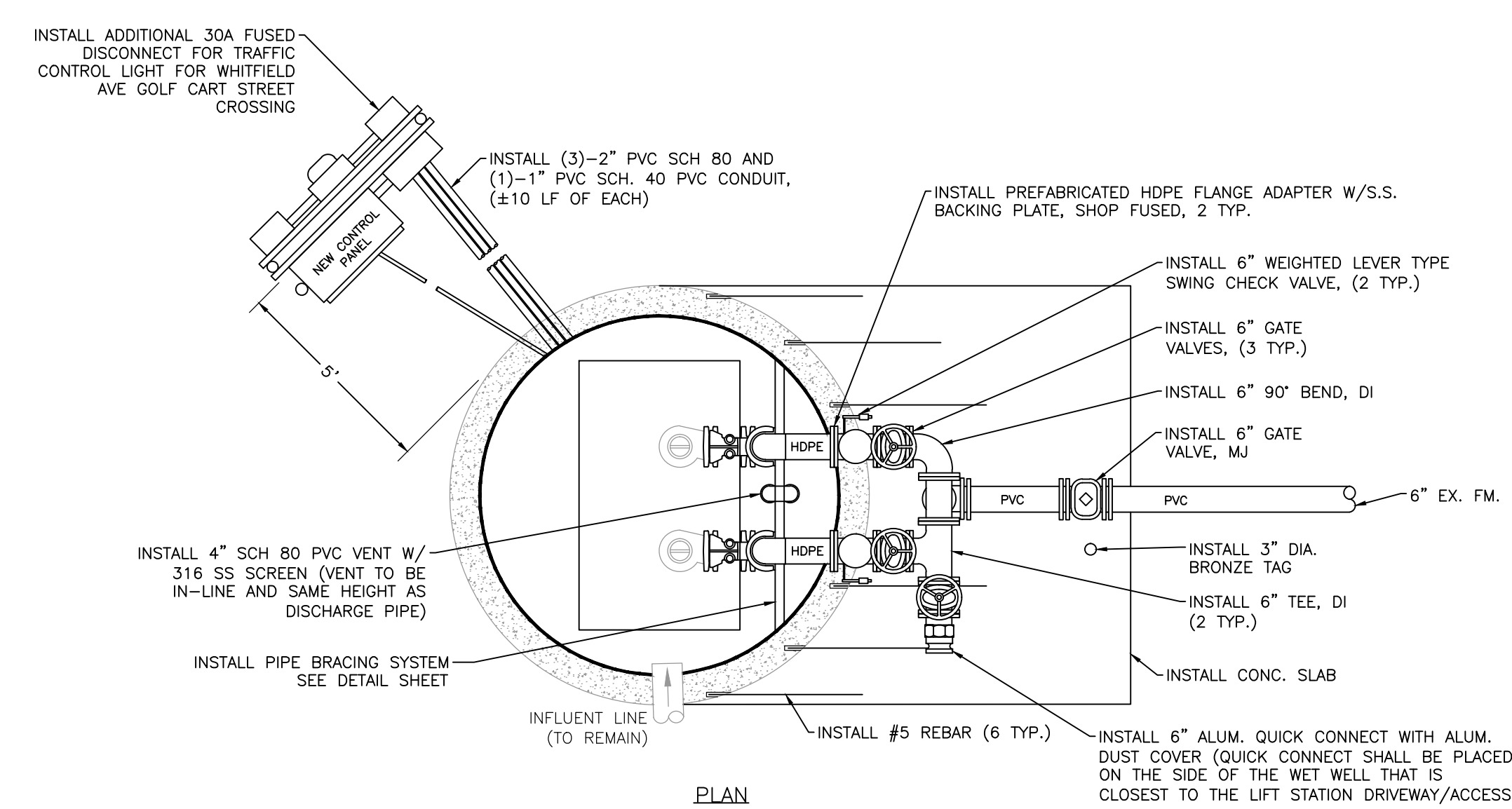


LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	449
DESIGN CAPACITY GPM/TDH	258/24
PUMP TYPE/ HP.	HOMA/3.5
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	UNK.
TOP ELEVATION	UNK.
VALVE VAULT HATCH ELEVATION	UNK.
INFLUENT INVERT ELEVATION	UNK.
INFLUENT PIPE SIZE	10" CIP
FORCE MAIN DIAMETER	6", PVC
WET WELL VENT PIPE	DI
ELECT. POWER, VOLTS/PH	240/3
ELECT. SERVICE SIZE, AMPS	100
EX. FORCEMAIN TIE-IN	FM

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

- GENERAL NOTES:**
1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
 2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
 3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
 4. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
 5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 6"
NEW BASE ELL	YES
MODIFY TOP OF WET WELL:	LOWER, 4"
MODIFY TOP OF VALVE VAULT:	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	NO
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
1. INSTALL ±25 LF NEW ELECTRICAL SERVICE WITH CONDUIT FROM THE TRANSFORMER TO THE NEW CONTROL PANEL. THE COUNTY WILL SUPPLY ANY REQUIRED HANDHOLES.
 2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED TO THE NEW PANEL. NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
 - a. A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
 - b. AN ADDITIONAL 30A FUSED DISCONNECT SHALL BE ADDED TO ACCOMMODATE THE EXISTING TRAFFIC CONTROL LIGHT FOR WHITFIELD AVE GOLF CART STREET CROSSING.
 - c. CONTRACTOR SHALL REMOVE EXISTING TRAFFIC CONTROL POWER AND BREAKER FROM INSIDE THE EXISTING CONTROL PANEL. THE POWER AND NEW 30A FUSED DISCONNECT SHALL BE INSTALLED ON THE BACK SIDE OF THE NEW ELECTRICAL RACK TO THE LEFT OF THE METER CAN. THE METER SHALL FEED BOTH DISCONNECTS. ALL ELECTRICAL CONNECTIONS SHALL BE RE-ESTABLISHED TO HAVE A PROPERLY FUNCTIONING TRAFFIC LIGHT CONTROLLED CROSSWALK. RE-ROUTE EXISTING CONDUCTORS AND CONDUIT TO THE NEW 30A FUSED DISCONNECT. ALL ACTIVITIES SHALL BE COORDINATED WITH LIFT STATION PERSONNEL AND WITH TRAFFIC OPERATION TO ENSURE PROPER FUNCTION OF THE CROSSWALK PRIOR TO, DURING, AND AFTER THE INSTALLATION OF ALL NEW EQUIPMENT. CALL CORY MILES, TRAFFIC CONTROL TECH SUPERVISOR AT 941.708.7450 X7262.
 3. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 4. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
 5. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 6. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±298 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
 7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
 8. REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
 9. REMOVE AND DISPOSE OF EXISTING 5" SHRUB TREE LOCATED NEXT TO THE VALVE VAULT. TRIM/REMOVE ADJACENT TREE LIMBS AND BUSHES. ALL WORK SHALL BE COORDINATED WITH MANATEE COUNTY PERSONNEL PRIOR TO COMMENCEMENT.

- NOTES:**
1. WATER DISTRIBUTION IS PUBLIC. ±45 LF
 2. SEWER COLLECTION IS PUBLIC.

NO.	REVISION DESCRIPTION	BY	DATE

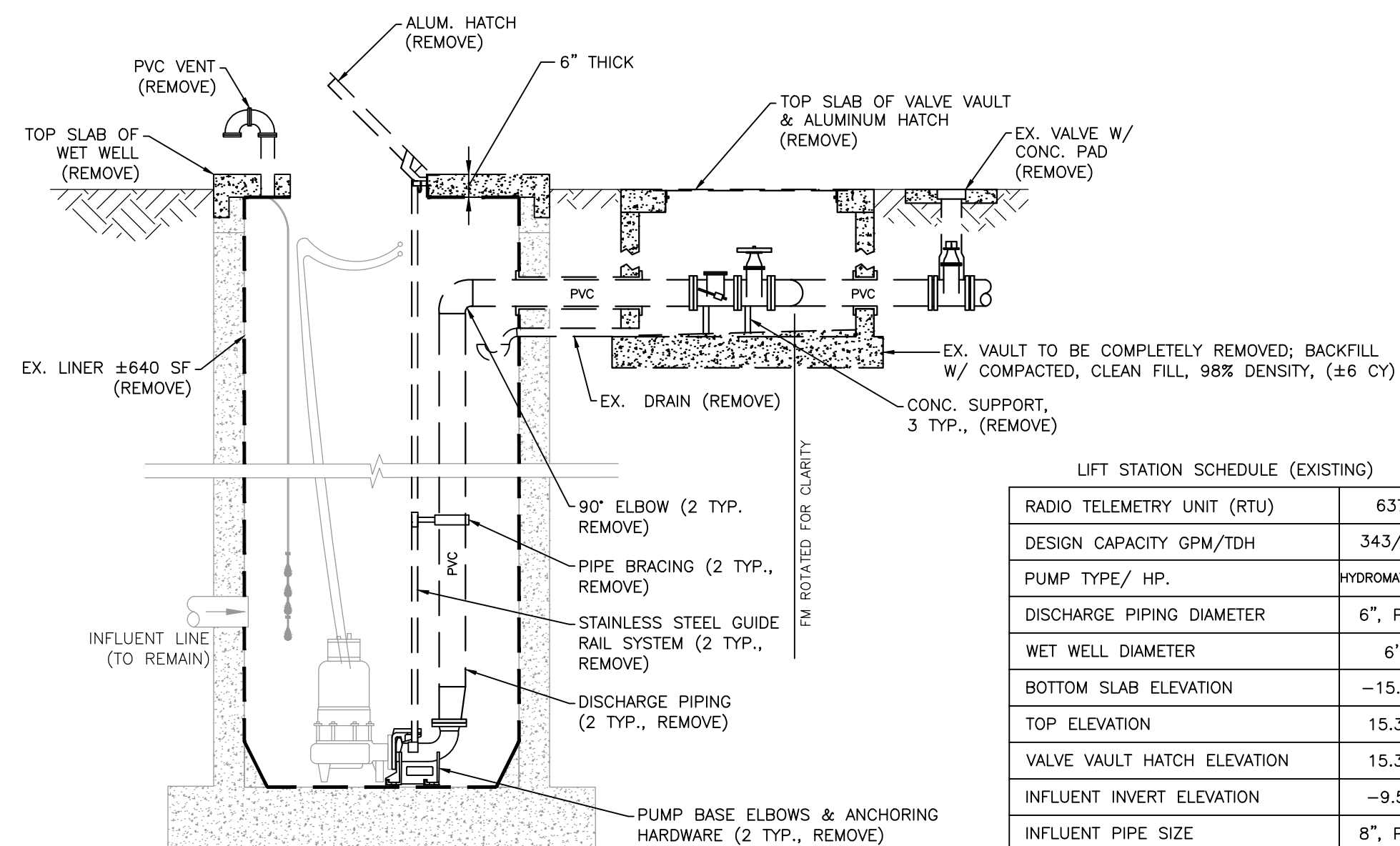
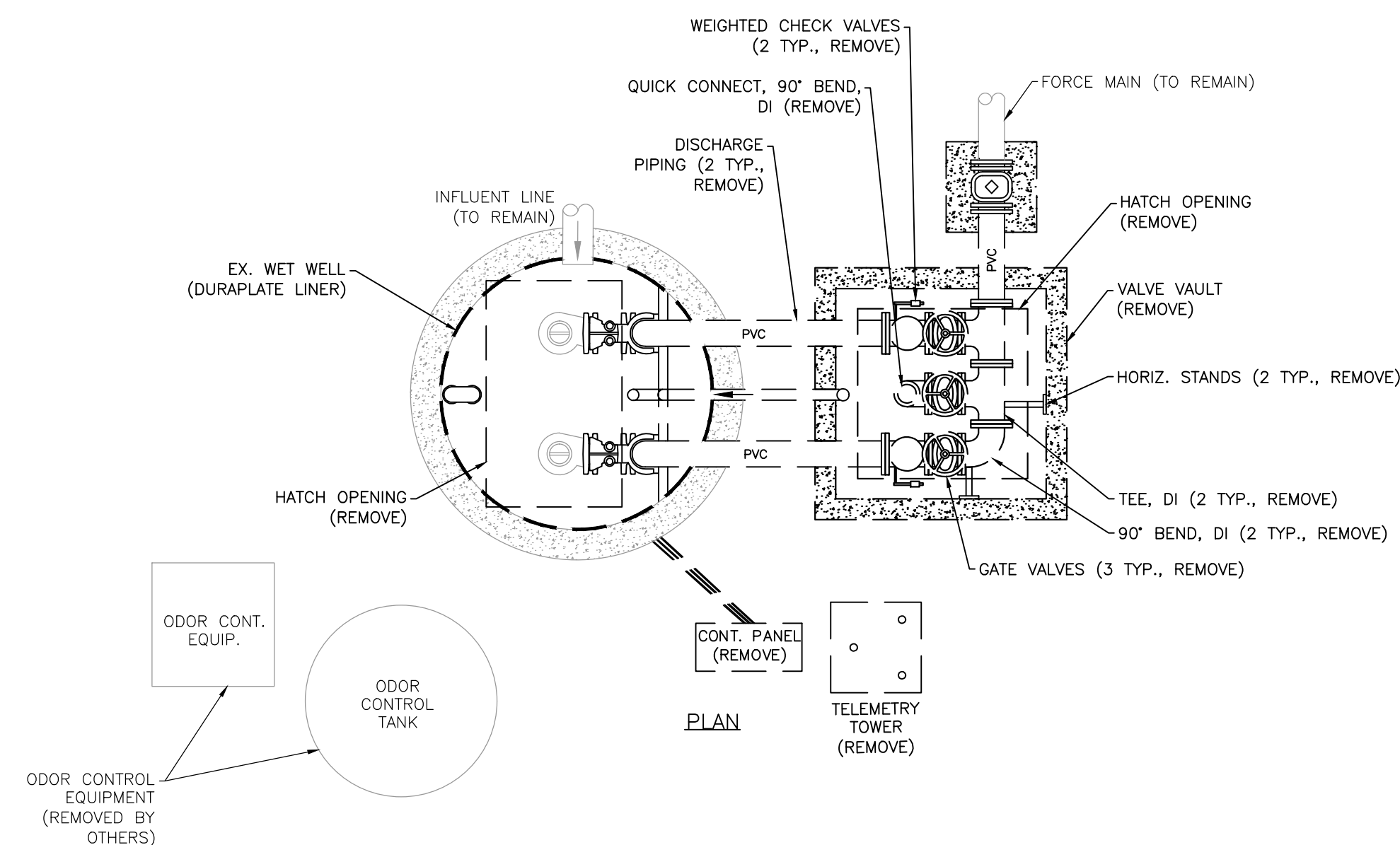
SATELLITE LIFT STATION R&R
2024 GROUP 2
PALM-AIRE 9, RTU 449



PROJECT #	402.5164480	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA STATE ENGINEERING LICENSE No. 60923
SEC./TWN./RGE	27/35/18	DATE OF LICENSE 02/21/2024
SCALE	N.T.S.	PROFESSIONAL ENGINEER
SURVEYED	NA	DATE
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

EXISTING

- NOTES:**
- THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 - CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 - THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
 - REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 - BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 - THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 - THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.

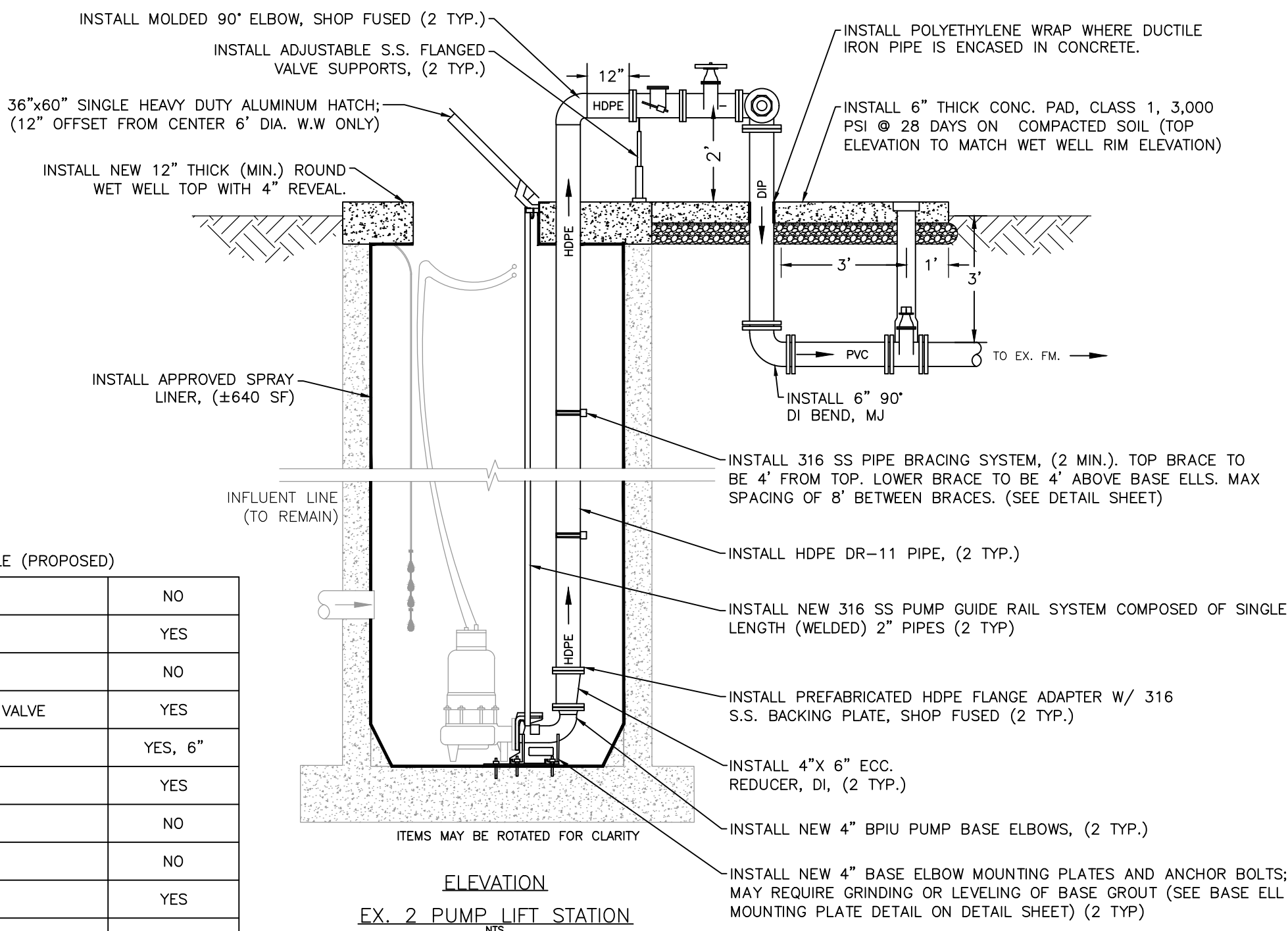
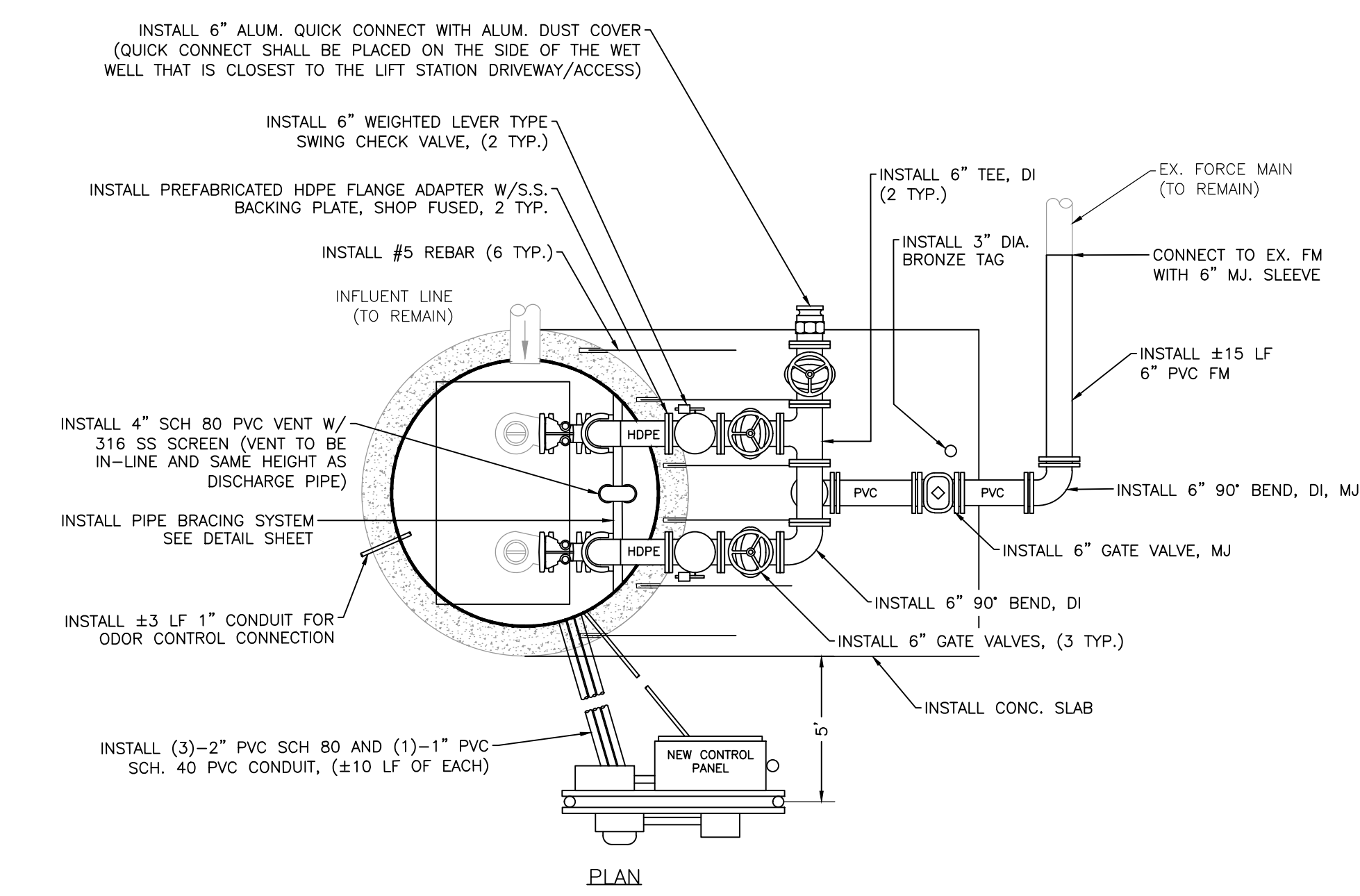


LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	637
DESIGN CAPACITY GPM/TDH	343/98
PUMP TYPE/ HP.	HYDROMATIC/25
DISCHARGE PIPING DIAMETER	6", PVC
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	-15.63
TOP ELEVATION	15.30
VALVE VAULT HATCH ELEVATION	15.30
INFLUENT INVERT ELEVATION	-9.53
INFLUENT PIPE SIZE	8", PVC
FORCE MAIN DIAMETER	6", PVC
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	480/3
ELECT. SERVICE SIZE, AMPS	200
EX. FORCEMAIN TIE-IN	MH

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

- GENERAL NOTES:**
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
 - THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
 - EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
 - THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
 - ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED



LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 6"
NEW BASE ELL	YES
MODIFY TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	NO
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
- INSTALL ±10 LF NEW ELECTRICAL SERVICE WITH CONDUIT. THE COUNTY WILL SUPPLY ANY REQUIRED HANDHOLES.
 - REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
 - AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584 2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 - SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
 - INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 - REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±320 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
 - WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
 - INSTALL A NEW 2-INCH WATER SERVICE LINE AND 6"x2" TAPPING SADDLE PER COUNTY STANDARDS VIA DIRECT BURY. THE EXISTING WATER MAIN IS LOCATED IN THE ROW ON THE SAME SIDE AS THE LIFT STATION SITE, (±15 LF). ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
 - ABANDON EXISTING WATER SERVICE SADDLE AND CORPORATION; INSTALL A BRASS PLUG IN CORPORATION STOP.
 - INSTALL WASHED SHELL & WEED BARRIER (±50 SY); GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.
 - ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH OTHERS.
 - INSTALL ONE CAPPED STUB-OUT; 3 LF OF 1 INCH PVC DIAMETER PIPES BY CORE BORING THROUGH THE WET WELL WALL, USE HYDRAULIC NON-SHRINK GROUT TO REPAIR THE HOLES FOR THE ODOR CONTROL EQUIPMENT CONNECTIONS. FIELD VERIFY LOCATE WITH COUNTY PERSONNEL.

- QUESTIONS:**
- WATER DISTRIBUTION IS PUBLIC.
 - SEWER COLLECTION IS PUBLIC.

NO.	REVISION DESCRIPTION	BY	DATE

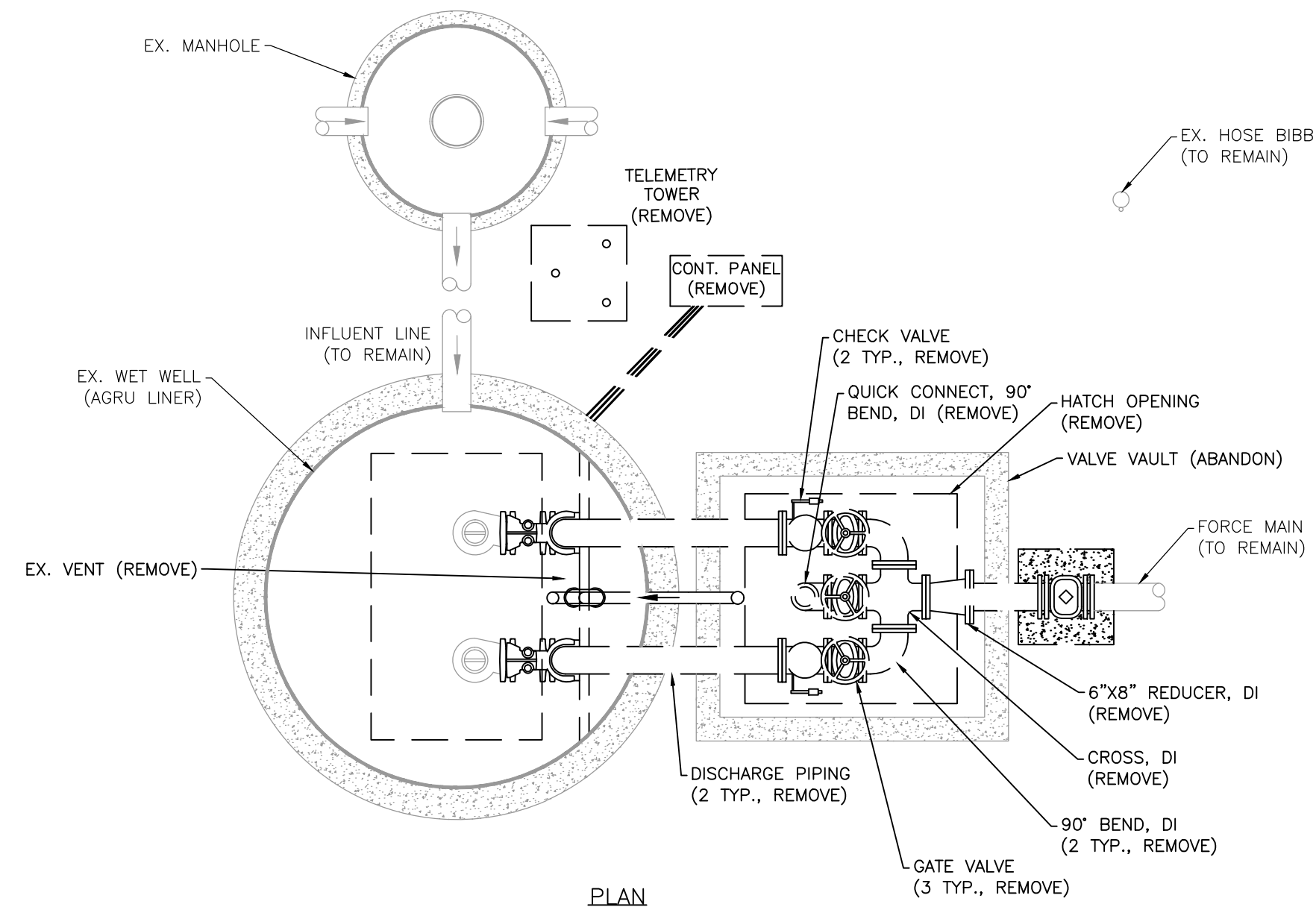
**SATELLITE LIFT STATION R&R
2024 GROUP 2
GREYHAWK LANDINGS 3, RTU 637**



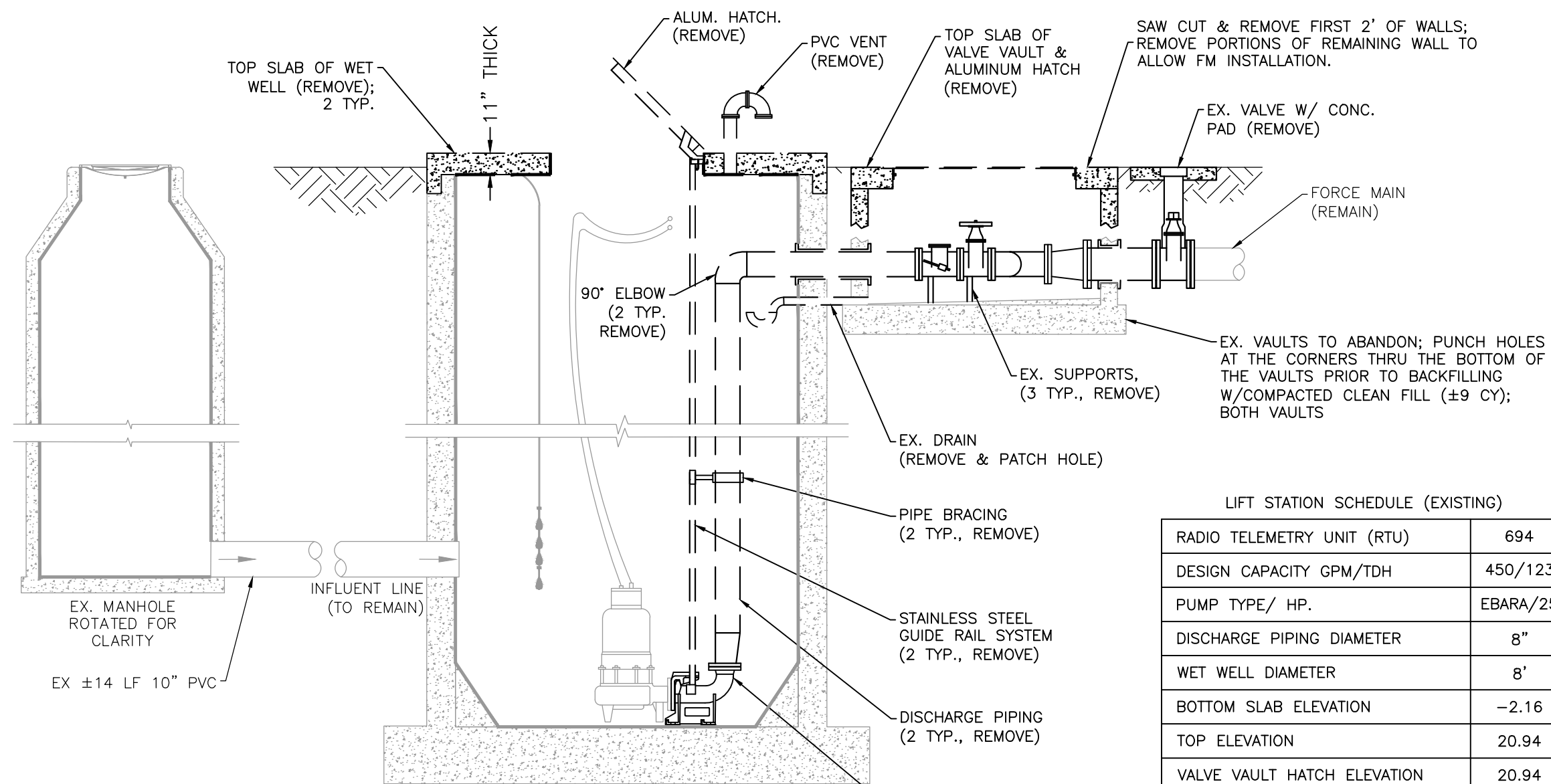
PROJECT #	402.5164481	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	20/34/19	DATE 02/21/2024
SCALE	N.T.S.	STATE OF FLORIDA PROFESSIONAL ENGINEER
SURVEYED	NA	DATE
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

EXISTING

- NOTES:**
1. THE WET WELL AND VALVE VAULT CONFIGURATION SHOWN ON THESE GRAPHICS IS FOR IDENTIFICATION OF COMPONENTS TO BE REMOVED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, CONFIGURATION, ETC. FOR ACCURACY.
 2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 3. THE CONTRACTOR SHALL DETERMINE THE DISCHARGE PIPING ELEVATIONS DURING THE SITE VISITS.
 4. REMOVAL AND REINSTALLATION OF THE PUMPS DURING THE REHABILITATION SHALL BE DONE BY MANATEE COUNTY PERSONNEL IN COORDINATION WITH THE CONTRACTOR
 5. BY-PASS PUMPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
 6. MANATEE COUNTY GOVERNMENT WILL PROVIDE ONE (1) LIFT STATION SHUT-DOWN AT NO COST TO THE CONTRACTOR. ADDITIONAL SHUT-DOWNS WILL COST THE CONTRACTOR \$3,500 EACH, IF NEEDED.
 7. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DAMAGED LANDSCAPING TO EXISTING OR DESIGN CONDITIONS.
 8. THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.



PLAN



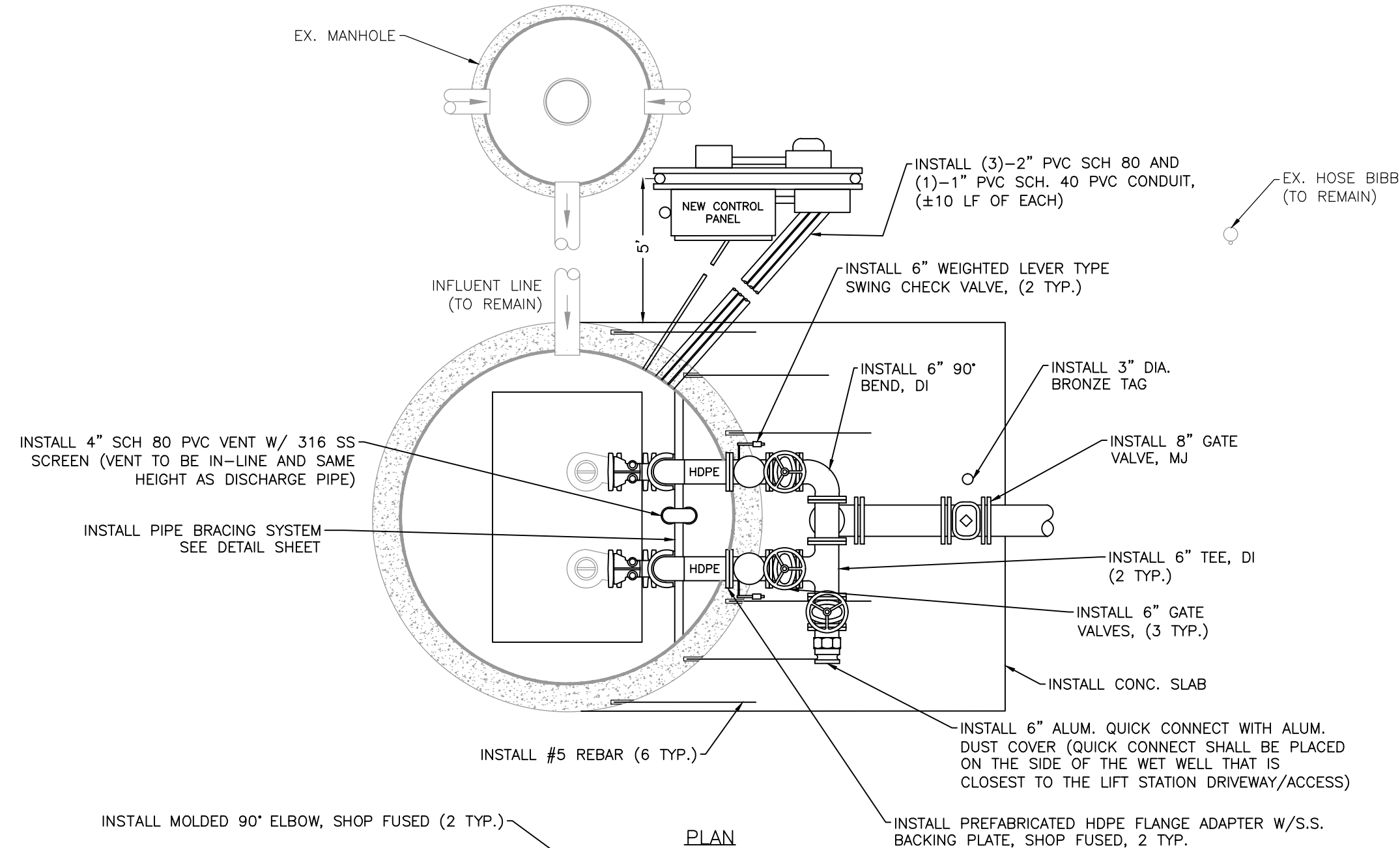
ELEVATION
EX. 2 PUMP LIFT STATION

LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	694
DESIGN CAPACITY GPM/TD	450/123
PUMP TYPE/ HP.	EBARA/25
DISCHARGE PIPING DIAMETER	8"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	-2.16
TOP ELEVATION	20.94
VALVE VAULT HATCH ELEVATION	20.94
INFLUENT INVERT ELEVATION	5.43
INFLUENT PIPE SIZE	10" PVC
FORCE MAIN DIAMETER	8", PVC
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	480/3
ELECT. SERVICE SIZE, AMPS	150
EX. FORCEMAIN TIE-IN	FM

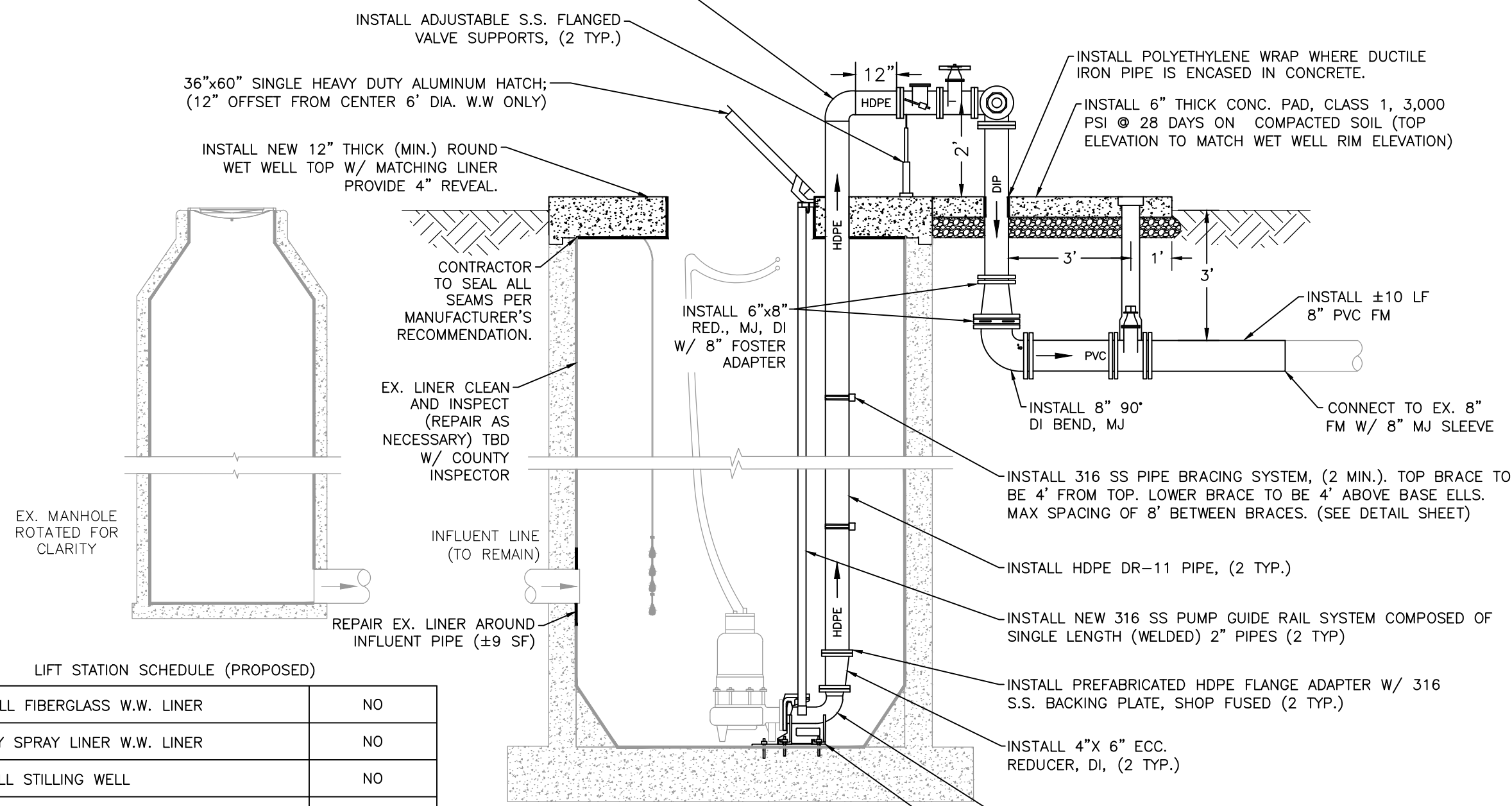
* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

PROPOSED

- GENERAL NOTES:**
1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS. ALL HORIZONTAL AND VERTICAL DISTANCES AND MEASUREMENTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND COMMENCING WORK. ALL MEASUREMENTS AND CALCULATIONS SHALL BE THE RESPONSIBILITY OF THE AWARDED CONTRACTOR.
 2. THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHTEDGE, NOT MORE THAN 1/8" ON A FIVE FOOT (5') TRANSVERSE SECTION. THE EDGE OF THE CONCRETE PAD SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
 3. EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE CONC. PAD AND THE WET WELL SHALL BE 1/2" MATERIAL AND SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213.
 4. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE PAD EXPOSED ABOVE GRADE SHALL BE COATED WITH AT LEAST TWO COATS OF H & C SILICONE ACRYLIC CONCRETE STAIN, PATIO GREEN, MANUFACTURED BY FLR PAINTS. THE ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT OVER-SPRAY OF PAINT ONTO THE CONCRETE SLAB.
 5. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM TO BE PAINTED.



PLAN



ELEVATION
EX. 2 PUMP LIFT STATION

LIFT STATION SCHEDULE (PROPOSED)	
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 6"
NEW BASE ELL	YES
MODIFY TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY	NO
RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
1. INSTALL ±10 LF NEW ELECTRICAL SERVICE WITH CONDUIT. THE COUNTY WILL SUPPLY ANY REQUIRED HANDHOLES.
 2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). ALL EXISTING ELECTRICAL EQUIPMENT CONNECTED TO THE EXISTING CONTROL PANEL SHALL BE RE-ESTABLISHED. THE NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
 3. A TCU BUBBLER UNIT (RPT-001) SYSTEM PROVIDED AND INSTALLED BY DATA FLOW SYSTEMS (DFS) FOR WET WELL LEVEL CONTROL SHALL BE INCLUDED WITH THE CONTROL PANEL.
 4. AN ELECTRICAL SYSTEM STUDY, ELECTRICAL STUDY ANALYSIS, AND PROPER LABELING IN COMPLIANCE WITH NFPA 70E "STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE" AND IEEE 1584-2018 "GUIDE FOR PERFORMING ARC FLASH HAZARDS CALCULATIONS" SHALL BE PROVIDED.
 5. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE AND ALL GROUNDING ROD. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
 6. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 7. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±341 SF). ALL REPAIRS TO BE VERIFIED WITH COUNTY PERSONNEL PRIOR TO WORK.
 8. DAMAGED EXISTING PROTECTIVE LINER(S) AND DETERIORATED WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO REMOVAL AND INSTALLATION OF CONCRETE REPAIR AND/OR INSTALLATION OF NEW PROTECTIVE LINER(S) AND/OR LINER REPAIR.
 9. INSTALL WASHED SHELL & WEED BARRIER (±50 SY). GRADE THE AREA AROUND WET WELL TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM LIFT STATION AND TO HAVE A 4" REVEAL ON THE WET WELL/VALVE ASSEMBLY PAD. COORDINATE WITH MANATEE COUNTY PERSONNEL.

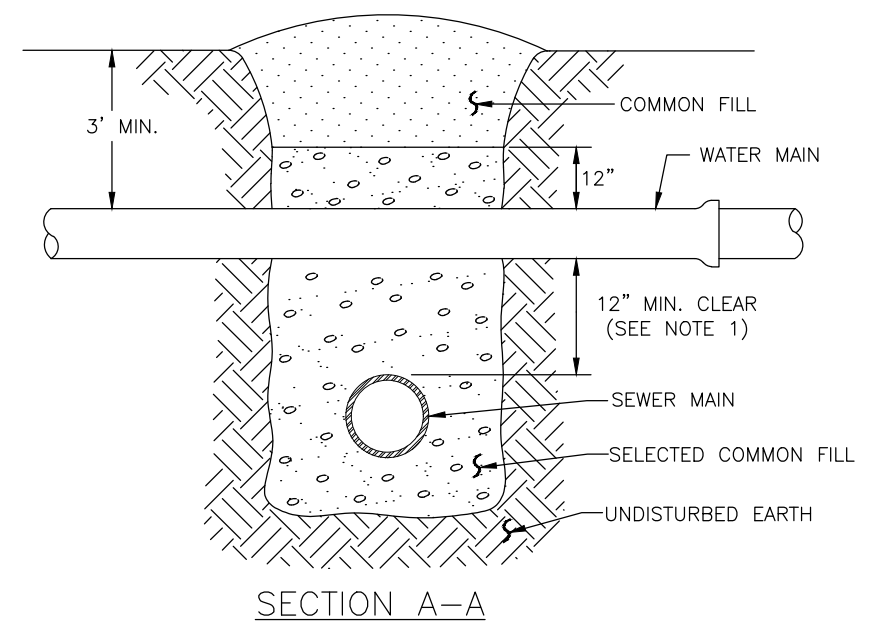
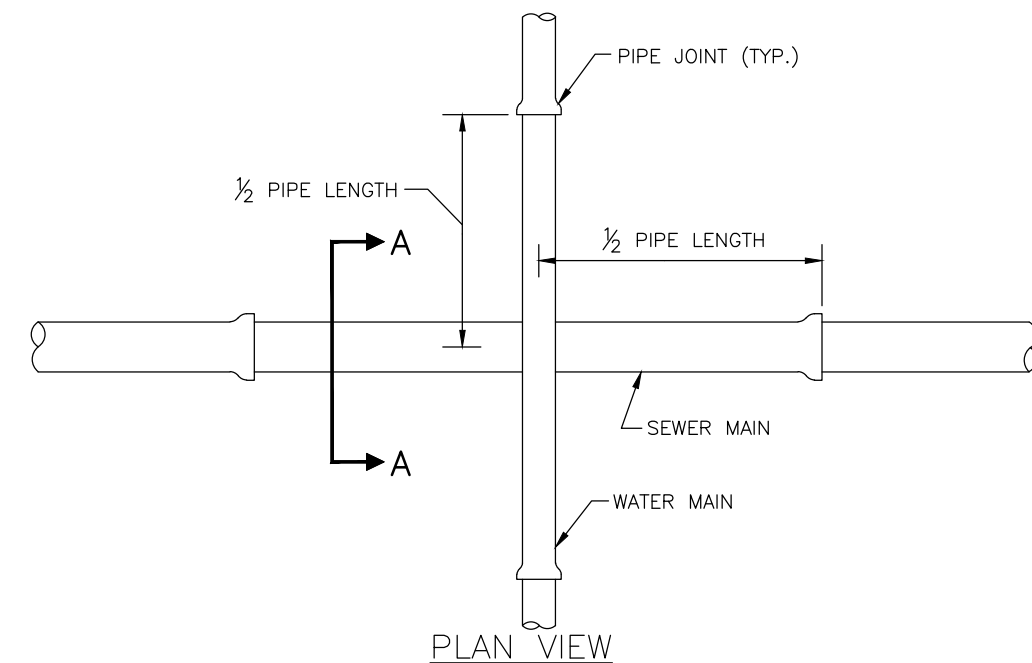
- QUESTIONS:**
1. WATER DISTRIBUTION IS PUBLIC.
 2. SEWER COLLECTION IS PUBLIC.

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R
2024 GROUP 2
RIVER CLUB COMMERCIAL PARK, RTU 694

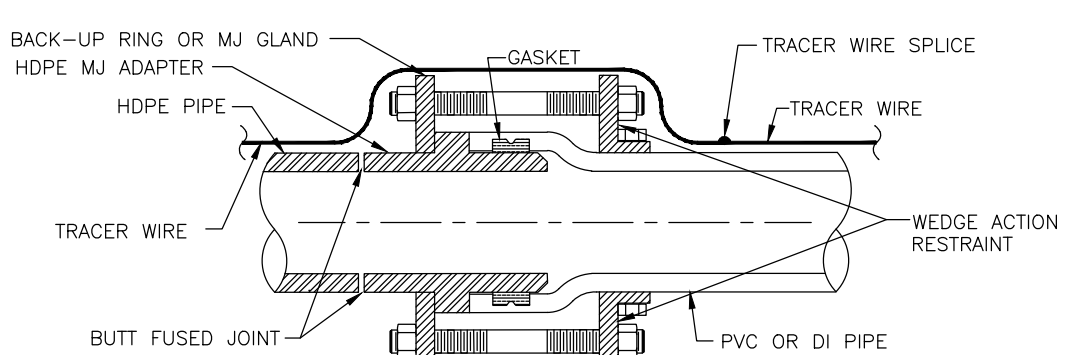


PROJECT #	402.5164482	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	24/35/18	DATE OF 02/21/2024
SCALE	N.T.S.	FLORIDA PROFESSIONAL ENGINEER
SURVEYED	NA	DATE
DESIGNED	JSS	5/2023
DRAWN	JKW	5/2023
CHECKED	JSS	-

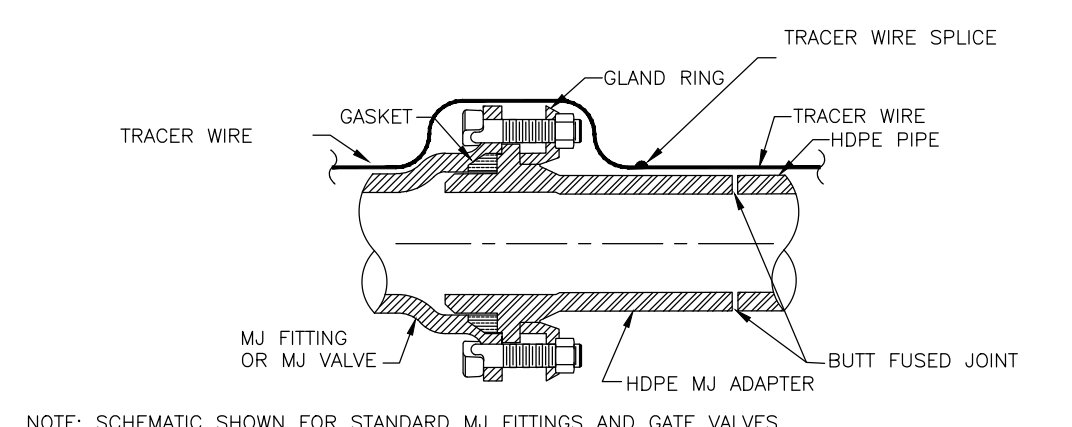


NOTES:

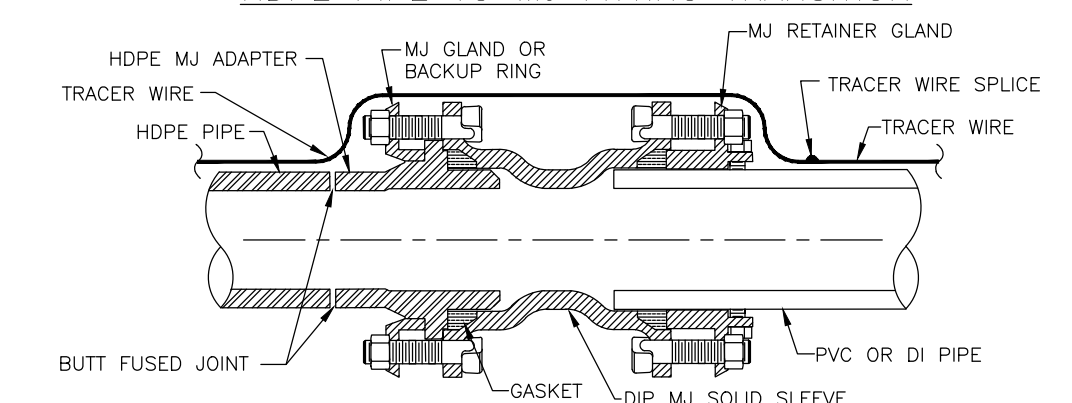
- 1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON.
- 2. PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY, SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.



HDPE PIPE TO PVC PIPE / SPIGOT TO BELL CONNECTION



HDPE PIPE TO MJ FITTING TRANSITION



HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

NOTES:

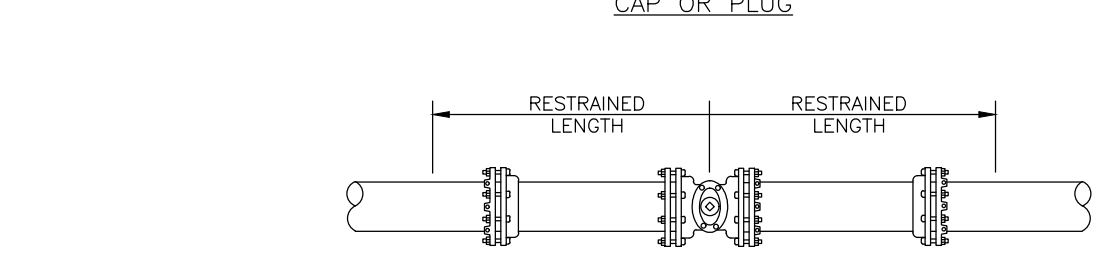
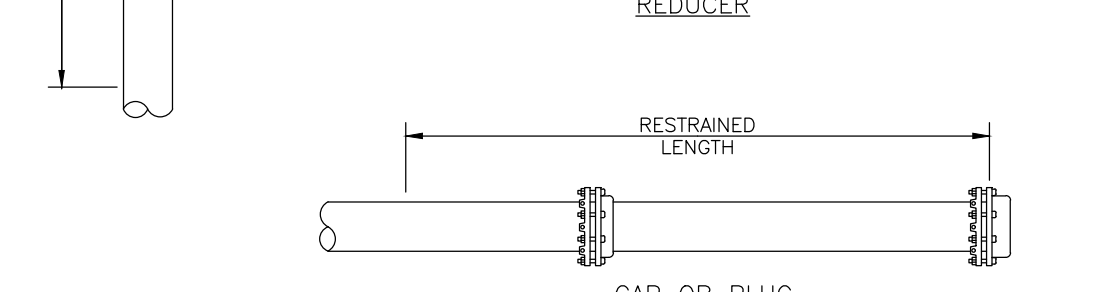
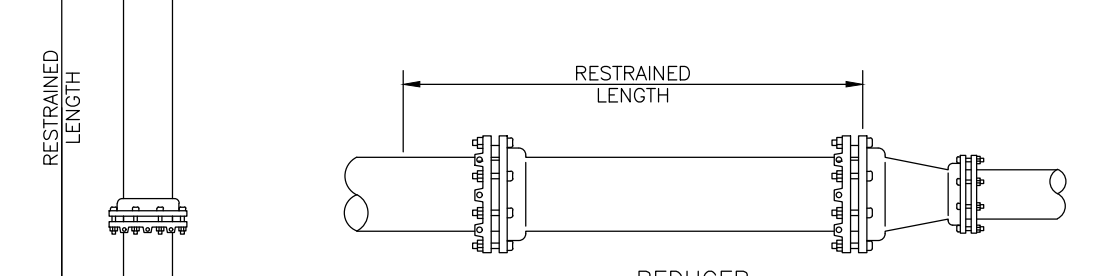
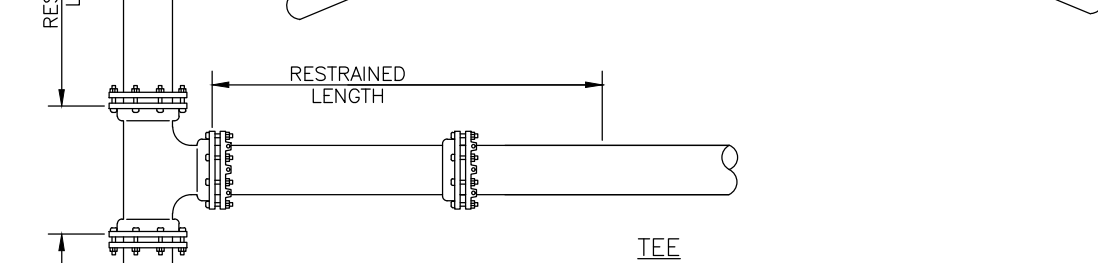
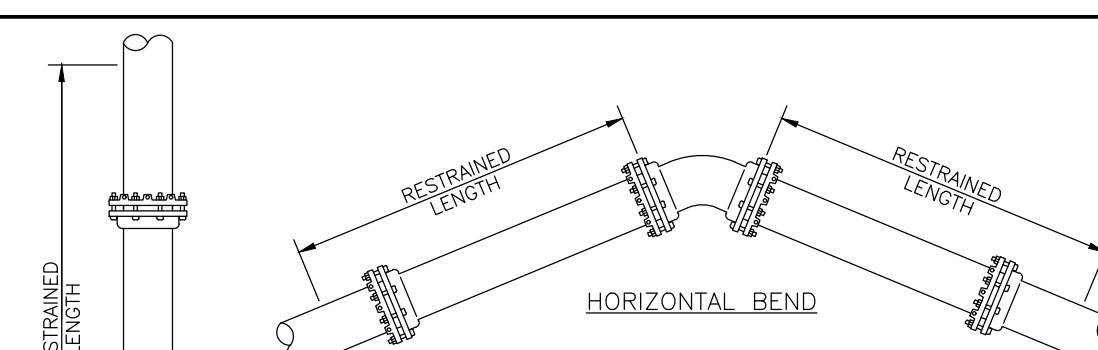
- 1. ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.
- 2. CONTRACTOR SHALL NOT USE MECHANICAL MEANS TO ALIGN PIPE AND FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING" LOADED.

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	HORIZ. BENDS			TEES		REDUCERS		PLUGS & VALVES
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	
24	90	38	18	X24	X20	X16	X12	214
20	78	32	16	X20	X16	X12	X8	184
16	66	27	13	X16	X12	X8	X6	151
12	52	22	10	X12	X8	X6	X4	118
10	44	18	9	X10	X8	X6	X4	100
8	37	15	7	X8	X6	X4	X3	83
6	29	12	6	X6	X4	X3	X2	63
4	21	8	4	X4	X3	X2	X1	45

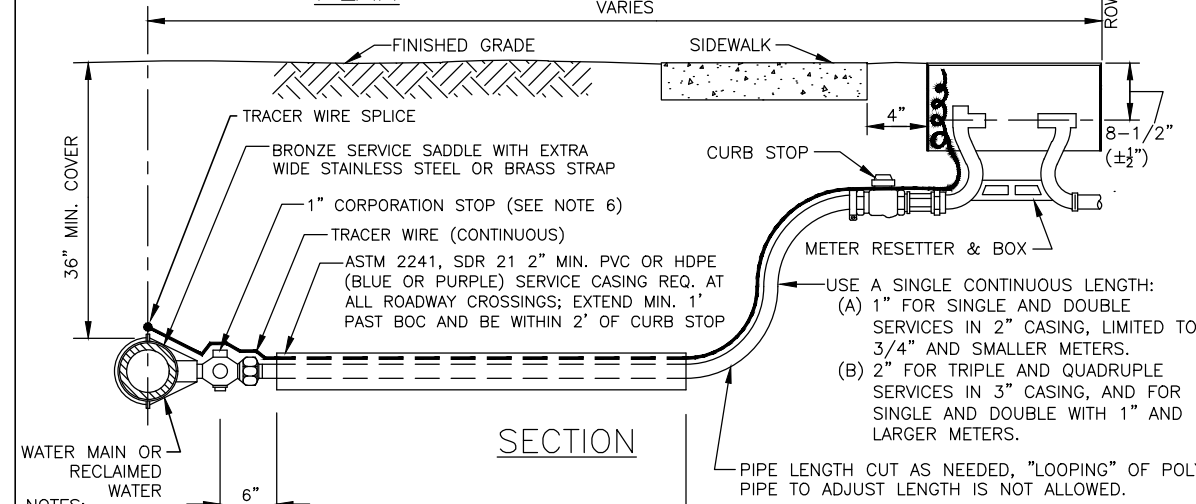
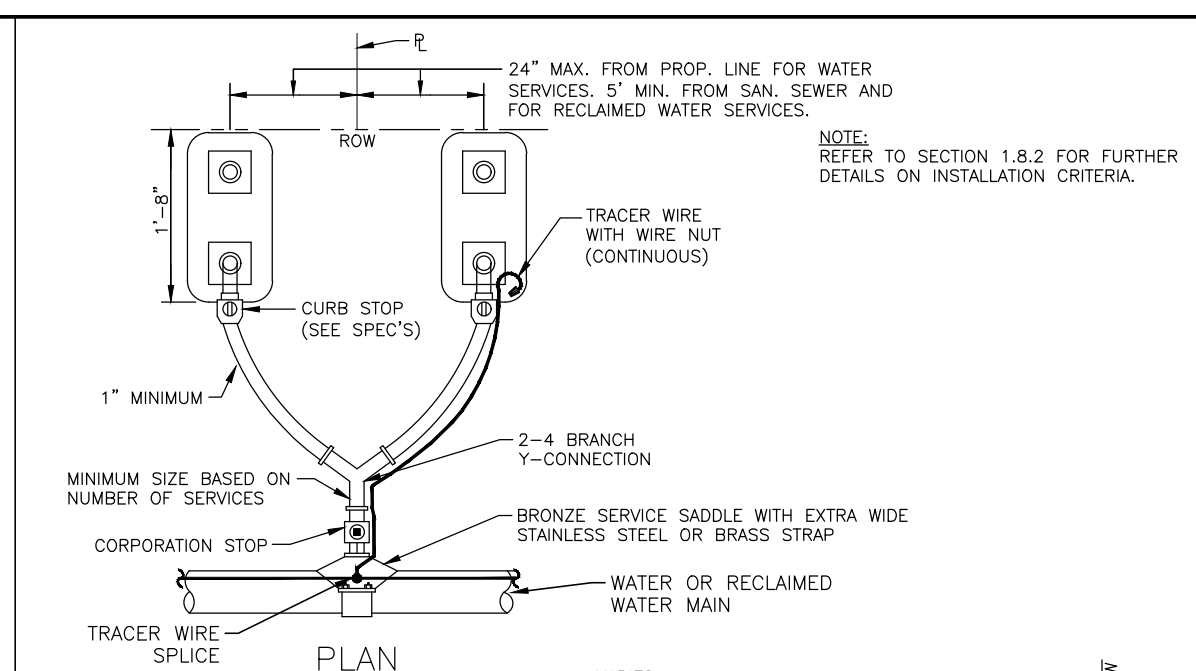
NOTES:

- 1. RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5° BENDS.
- 2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
- 3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
- 4. PIPE SIZES ARE GIVEN IN INCHES.
- 5. RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
- 6. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
- 7. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWMA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
- 8. RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
- 9. ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
- 10. ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.



NOTE:

- 1. SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.



- NOTES:**
- ALL SERVICE TAPS TO BE LOCATED IN THE FIELD. TAPS SHALL BE NO CLOSER THAN 2'-0" STAGGERED INTERVALS OR WITHIN 2'-0" FROM BELL OR SPIGOT ENDS.
 - METER BOXES & RESETTERS ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS. WITH PRIOR APPROVAL BY COUNTY, METER BOXES WITH LOCKABLE LIDS MAY BE LOCATED IN SIDEWALKS.
 - "W" OR "R" SHALL BE IMPRESSED INTO THE NEWLY POURED CONCRETE CURB (OR ROUTED INTO EXISTING CONCRETE CURB USING AN APPROVED TEMPLATE) AND INSTALL AN ALUMINUM BLUE DISC WITH "W" OR ALUMINUM PURPLE DISC WITH "R" AND THE FOOTAGE FROM THE DISC TO THE METER USING A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT. TRENCH SHALL COMPLY WITH TEMPLATE DETAIL UG-21.
 - COLOR CODED TRACER WIRE SHALL BE INSTALLED WITH WATER AND RECLAIMED MAIN AND ALL SERVICES. SERVICE WIRE SHALL BE CONNECTED TO THE TRACER WIRE ALONG THE MAIN ON DOUBLE SERVICES. WHEN SECOND METER IS OVER 8 FT APART, TWO TRACER WIRES SHALL BE INSTALLED; ONE FOR EACH METER.
 - WATER AND RECLAIMED WATER SERVICE LINES TO BE 5' MINIMUM FROM SEWER SERVICE PIPES.
 - FOR 2" SERVICES, REPLACE CORPORATION STOP WITH A 2" RESILIENT WEDGE FIP GATE VALVE W/BOX, LID & TAG.
 - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE ROW IS ONE FOOT (CUL-DE-SAC W/MEDIAN) A 10'-FOOT-WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
 - TEMPORARY RESIDENTIAL USE CAN BE PROVIDED BY CONTACTING THE UTILITY CUSTOMER SERVICE. SEE DETAIL UW-21.
 - SERVICE TUBING SHALL NOT BE CRIMPED OR KINKED TO RE-ADJUST CURB STOP LOCATION.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: TYPICAL NEW WATER & SEWER LINE CROSSING UG-2

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: HDPE TO PVC OR DI PIPE ADAPTER UG-6

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: RESTRAINED LENGTHS FOR PVC PIPE UG-8

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

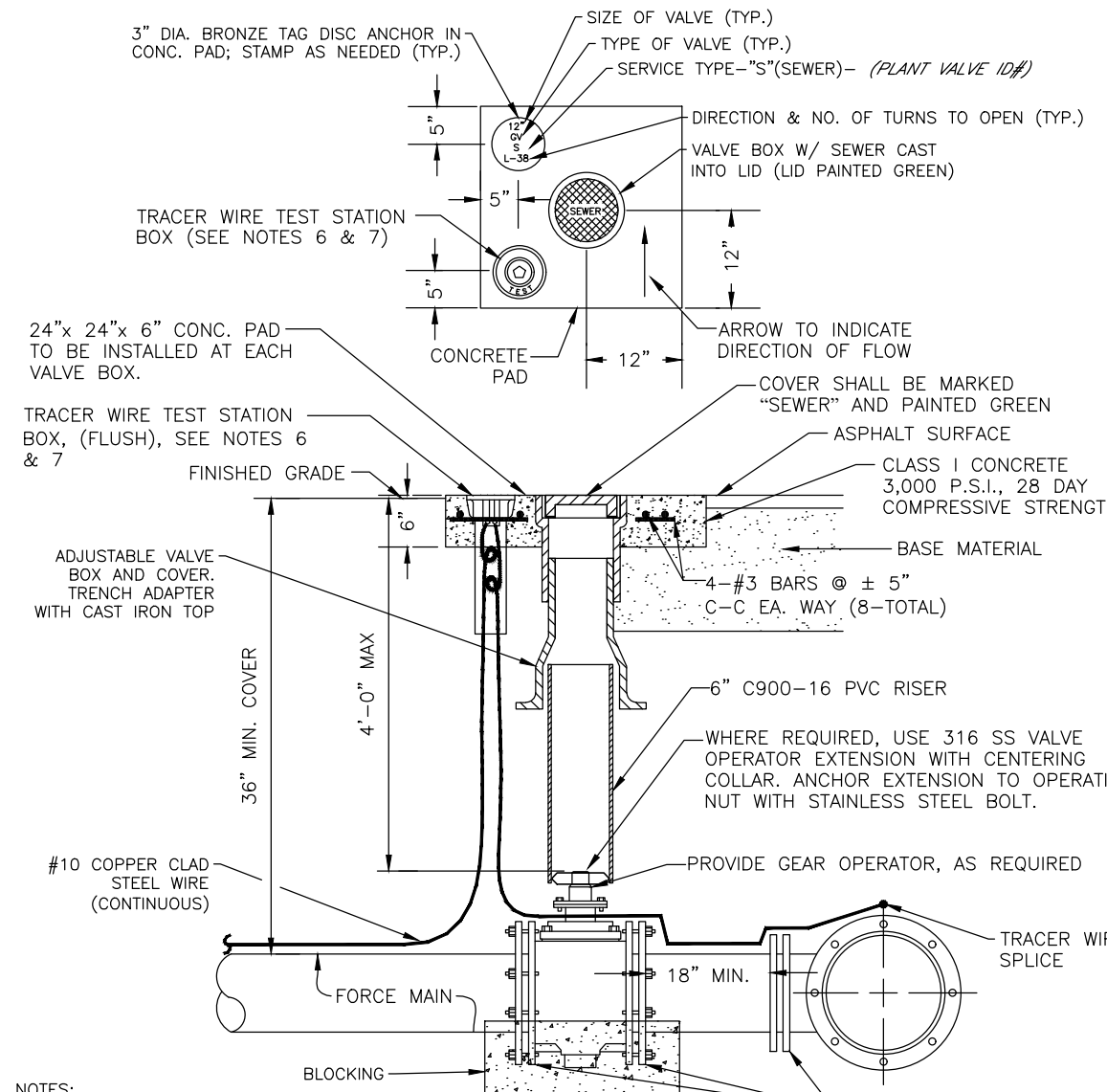
REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: RESTRAINED LENGTHS FOR PIPE UG-10

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: TYPICAL SERVICE CONNECTION UW-23



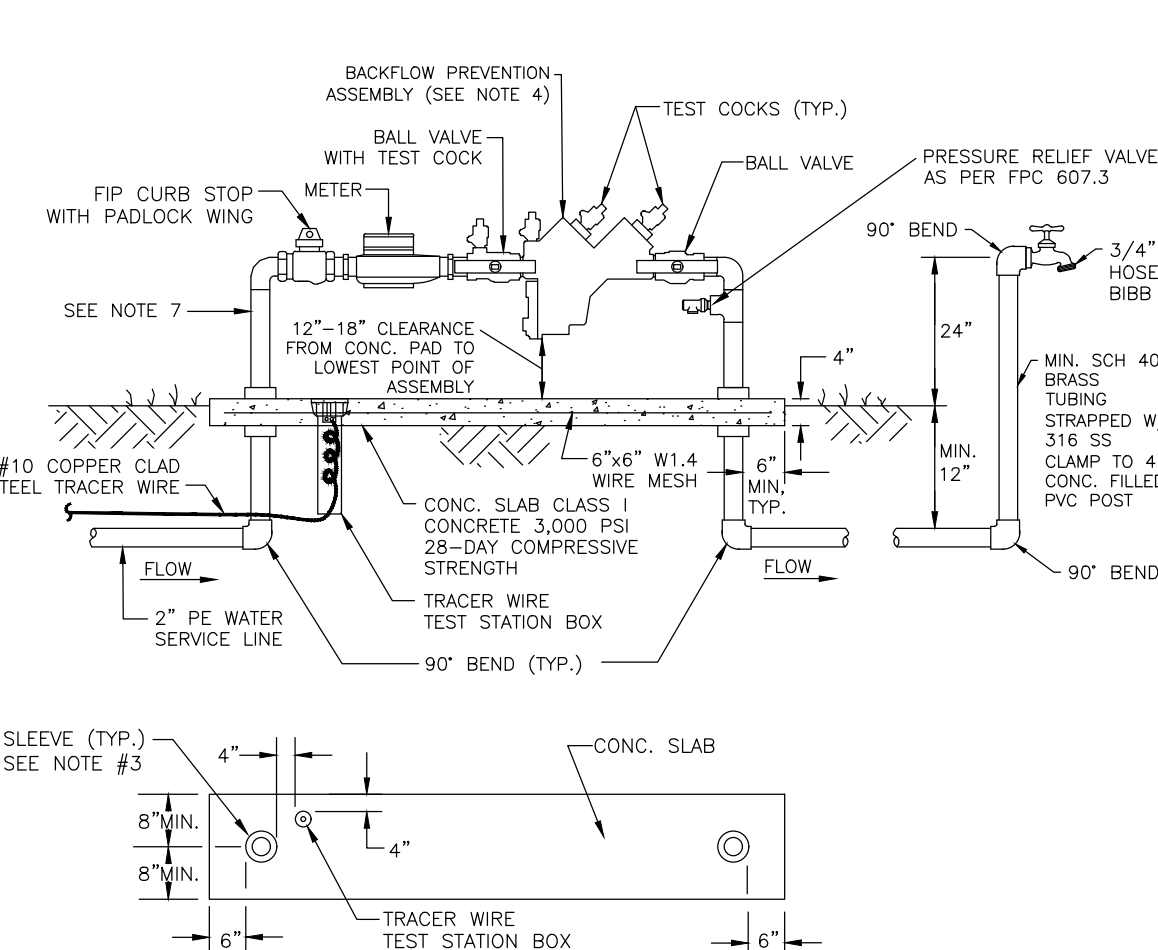
NOTES:

- 1. "S" SHALL BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB (OR ROUTED INTO EXISTING CONCRETE CURB USING AN APPROVED TEMPLATE) AND INSTALL AN ALUMINUM GREEN DISC WITH "S" AND THE FOOTAGE FROM THE DISC TO THE VALVE USING A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT. LETTERS SHALL COMPLY WITH TEMPLATE DETAIL UG-21.
- 2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
- 3. VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS OR GUTTERS.
- 4. PRECAST CONCRETE PADS AND THRUST BLOCKS SHALL NOT BE USED.
- 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
- 6. USE NON-TRAFFIC RATED BOXES WHERE VALVES WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC. USE TRAFFIC RATED BOXES WHERE POSSIBLE. LOCATE TRACER WIRE TESTING STATION OUTSIDE OF TRAVEL LANE OR IN MEDIAN, CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.
- 7. TRACER WIRE BOX SHALL BE LOCATED OUTSIDE THE ROADWAY ON THOROUGHFARES (COLLECTORS & ARTERIAL) AND STATE ROADWAYS.
- 8. SHOULD THE TRACER WIRE TESTING STATION CONCRETE PAD OVERLAP A SIDEWALK, THE TRACER WIRE TESTING BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.
- 9. THE BRASS TAG SHALL HAVE A "PLANT VALVE ID#" WHEN VALVES ARE INSTALLED WITHIN THE COUNTY TREATMENT PLANT LIMITS. THE "PLANT VALVE ID#" SHALL BE SHOWN ON THE CONSTRUCTION PLANS AND RECORD DRAWINGS.
- 10. REFER TO SECTION 1.1.1 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: VALVE, BOX, COVER AND TAG US-14



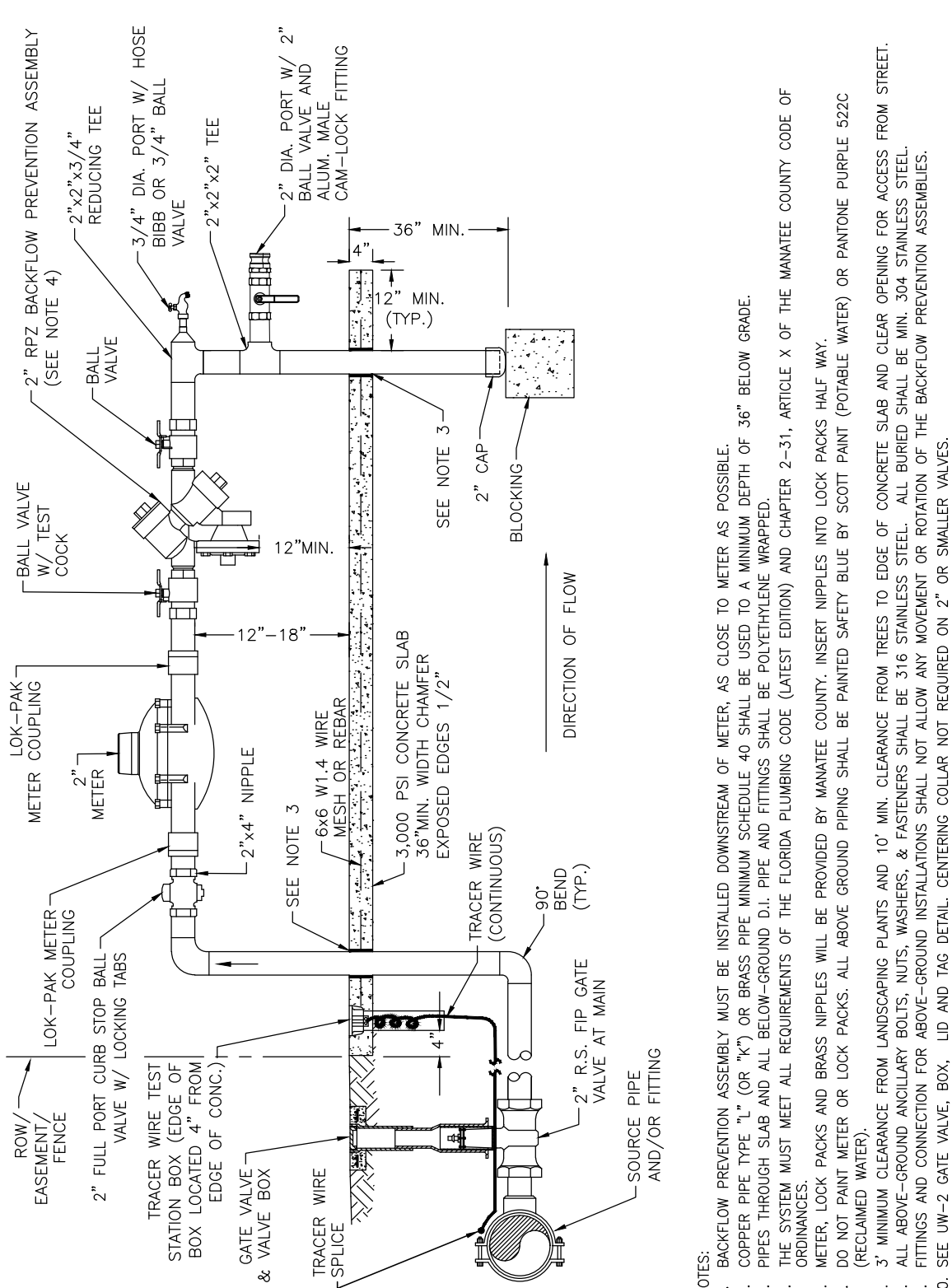
NOTES:

- 1. BACKFLOW PREVENTION ASSEMBLY DEVICE MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
- 2. COPPER PIPE TYPE "K" (OR "L") OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 12" BELOW GRADE.
- 3. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
- 4. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND CHAPTER 2-31, ARTICLE 4 OF THE MANATEE COUNTY CODE OF ORDINANCES.
- 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
- 6. BACKFLOW PREVENTER SHALL BE TESTED AT THE TIME OF INSTALLATION.
- 7. PRESSURE REDUCING VALVE REQUIRED UPSTREAM OF BACKFLOW PREVENTION ASSEMBLY, IF SYSTEM PRESSURE EXCEEDS 80 PSI.
- 8. 3" MIN. CLEARANCE FROM LANDSCAPING PLANTS; AND 10' MIN. CLEARANCE FROM TREES TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
- 9. THE WATER METER AND BACKFLOW PREVENTION ASSEMBLY SHALL BE LOCATED AT THE ROW LINE. THE BACKFLOW PREVENTION ASSEMBLY FOR PRIVATE LIFT STATIONS SHALL BE LOCATED ADJACENT TO THE ROW LINE OR WITHIN AN EASEMENT OUTSIDE OF THE FENCING.
- 10. SATELLITE LIFT STATIONS SHALL HAVE A 2" WATER SERVICE LINE, A 5/8-INCH WATER METER, AND A 3/4-INCH REDUCED PRESSURE (RP2) BACKFLOW PREVENTION ASSEMBLY AND A SEPARATE POST MOUNTED HOSE BIBB. STATIONS WITH WET WELL DIAMETERS 10 FEET AND LARGER SHALL HAVE A 2-INCH METER AND RP2 BACKFLOW PREVENTION ASSEMBLY, AND AN ADDITIONAL 2" ALUMINUM QUICK CONNECT HOSE CONNECTION, SEE DETAILS US-22. ALL ITEMS SHALL BE FIELD LOCATED WITH COUNTY PERSONNEL.
- 11. BACKFLOW PREVENTION ASSEMBLIES USED FOR POTABLE APPLICATIONS SHALL BE LEAD FREE AS DEFINED IN THE REDUCTION OF LEAD IN DRINKING WATER ACT, SECTION 1417 OF THE SAFE DRINKING WATER ACT, 42 U.S.C. 300g-6. AS MAY BE AMENDED, AND IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: 5/8" WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS US-21



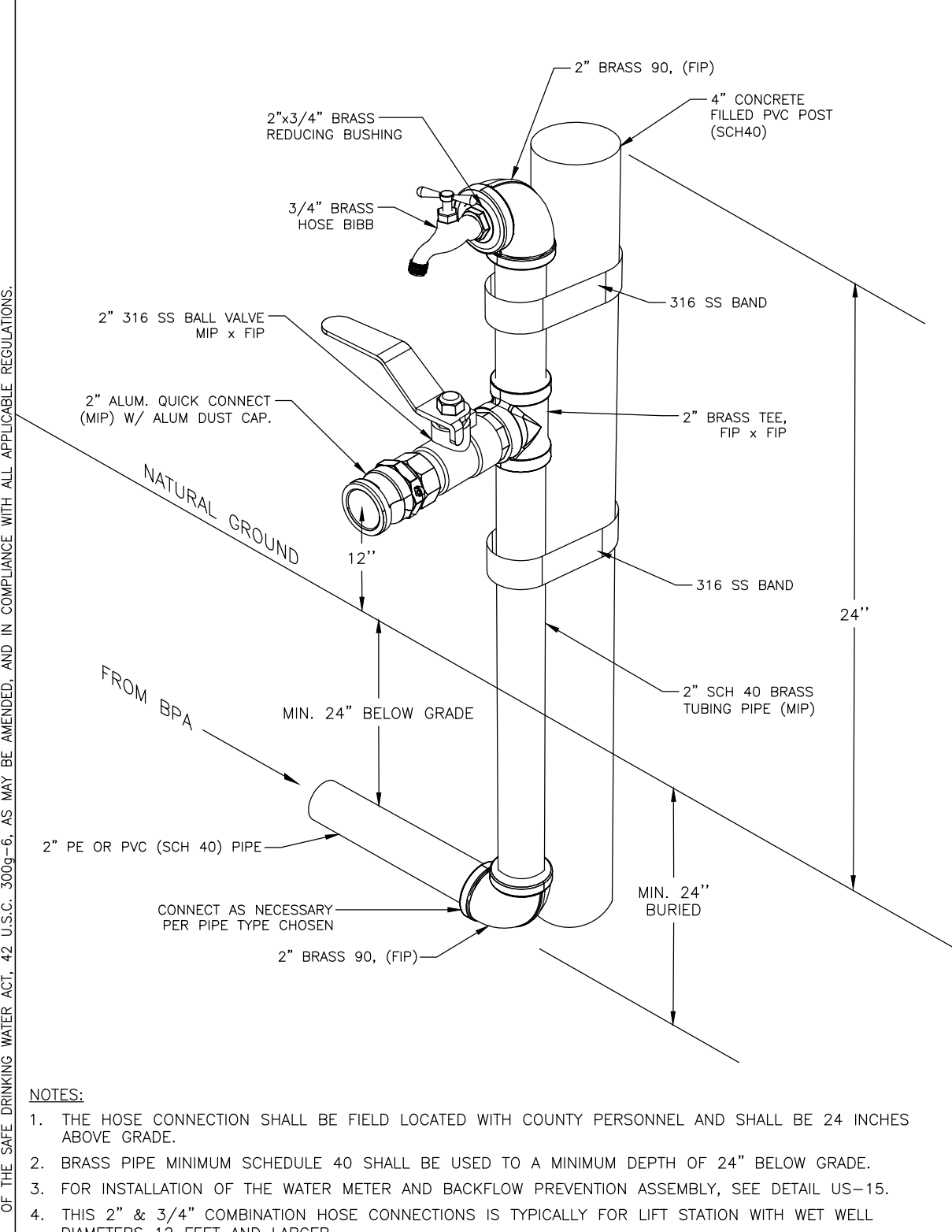
NOTES:

- 1. BACKFLOW PREVENTION ASSEMBLY MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
- 2. COPPER PIPE TYPE "K" (OR "L") OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 36" BELOW GRADE.
- 3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
- 4. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE FLORIDA PLUMBING CODE (LATEST EDITION) AND CHAPTER 2-31, ARTICLE 4 OF THE MANATEE COUNTY CODE OF ORDINANCES.
- 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
- 6. DO NOT PAINT METER OR LOCK PAKS. ALL ABOVE GROUND PIPING SHALL BE PAINTED SAFETY BLUE BY SCOTT PAINT (POTABLE WATER) OR PANTONE PURPLE 522C (RECLAIMED WATER).
- 7. 3" MINIMUM CLEARANCE FROM LANDSCAPING PLANTS AND 10' MINIMUM CLEARANCE FROM TREES TO EDGE OF CONCRETE SLAB AND CLEAR OPENING FOR ACCESS FROM STREET.
- 8. FITTINGS AND CONNECTION FOR ABOVE-GROUND INSTALLATIONS SHALL NOT ALLOW ANY MOVEMENT OR ROTATION OF THE BACKFLOW PREVENTION ASSEMBLIES.
- 9. TO SEE UG-2 GATE VALVE, BOX, LID AND TAG DETAIL, CENTERING COLLAR NOT REQUIRED ON 2" OR SMALLER VALVES.
- 10. REFER TO SECTION 1.1.1 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS.
- 11. OF THE SAFE DRINKING WATER ACT, 42 U.S.C. 300g-6. AS MAY BE AMENDED, AND IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: 2" WATER METER AND BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS US-22



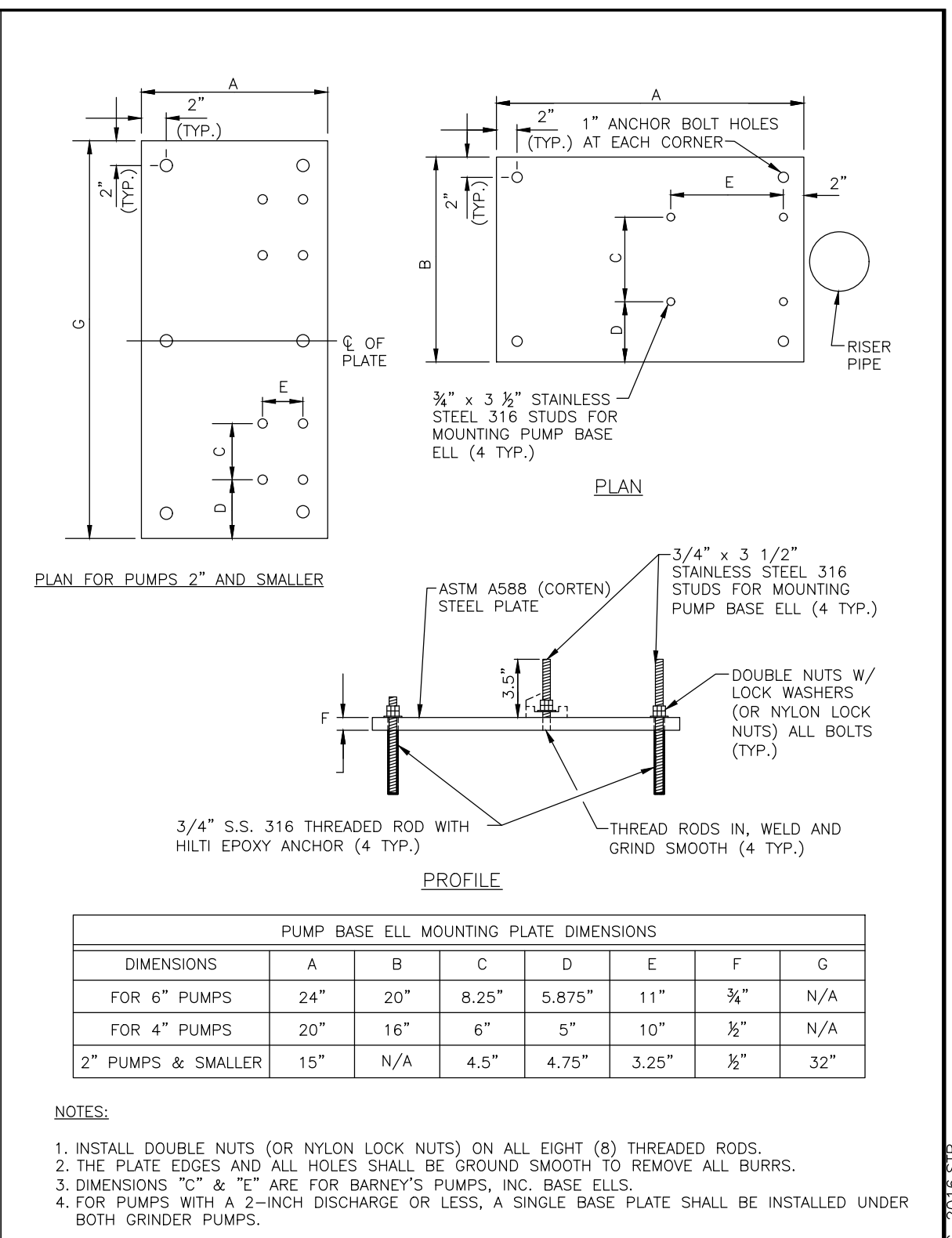
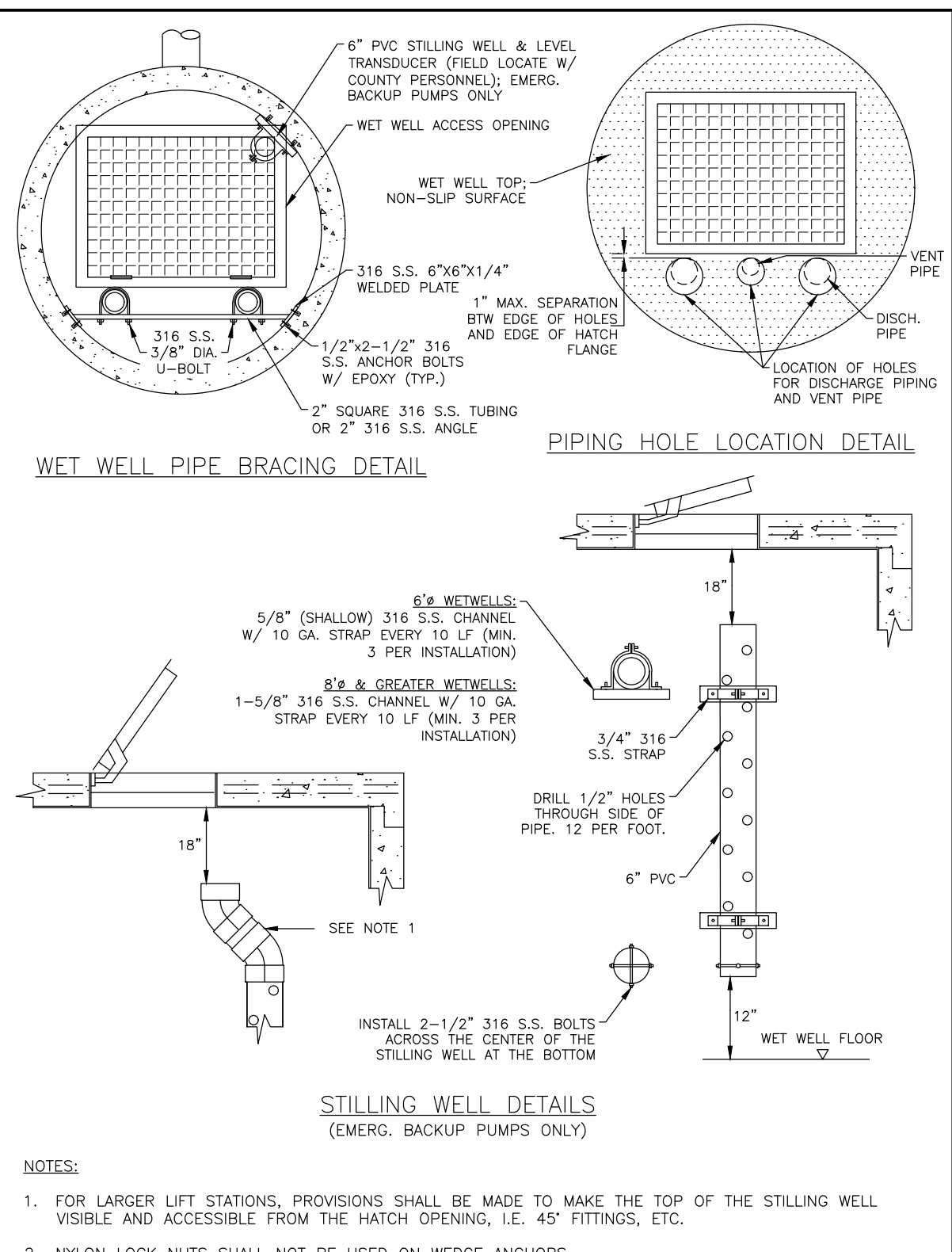
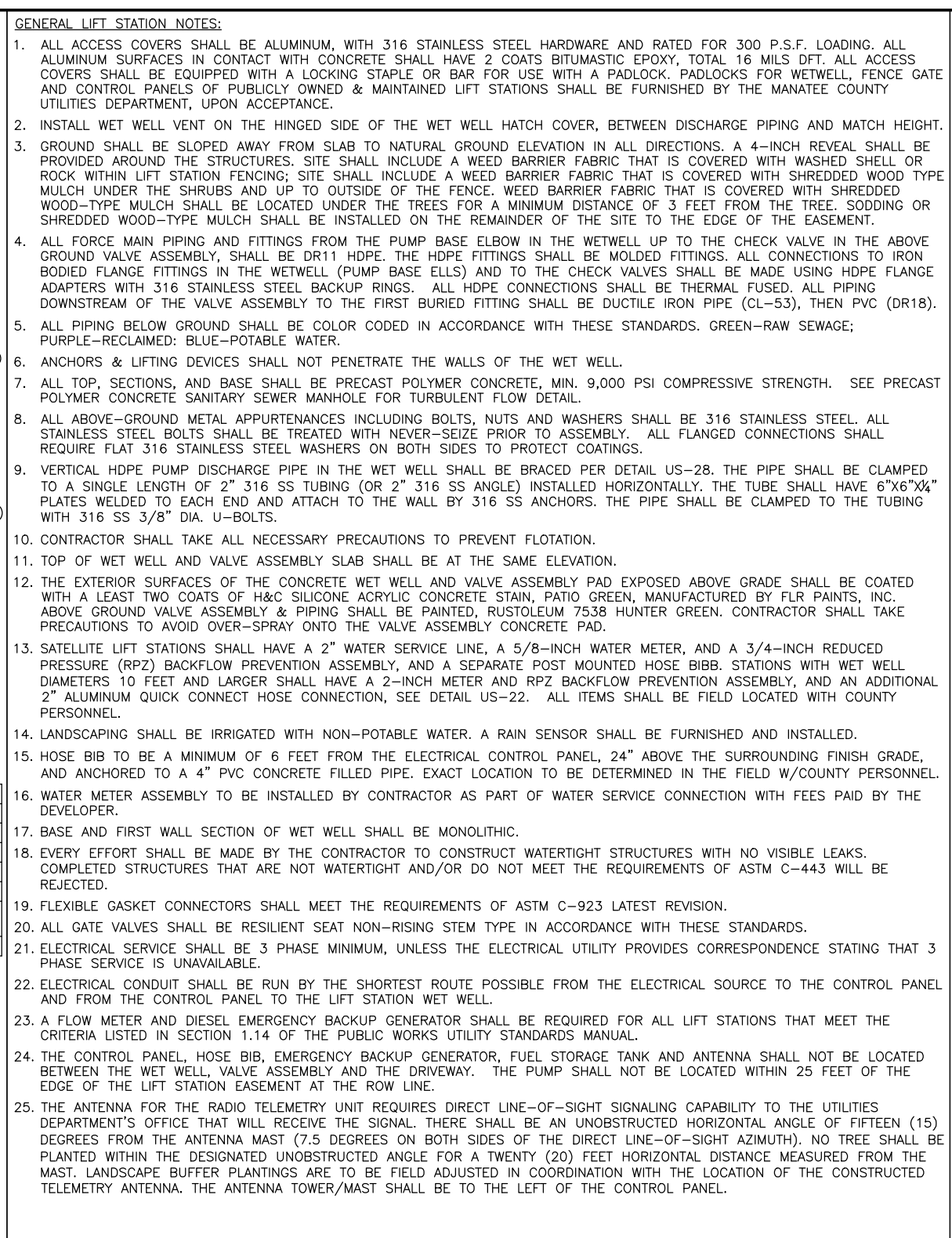
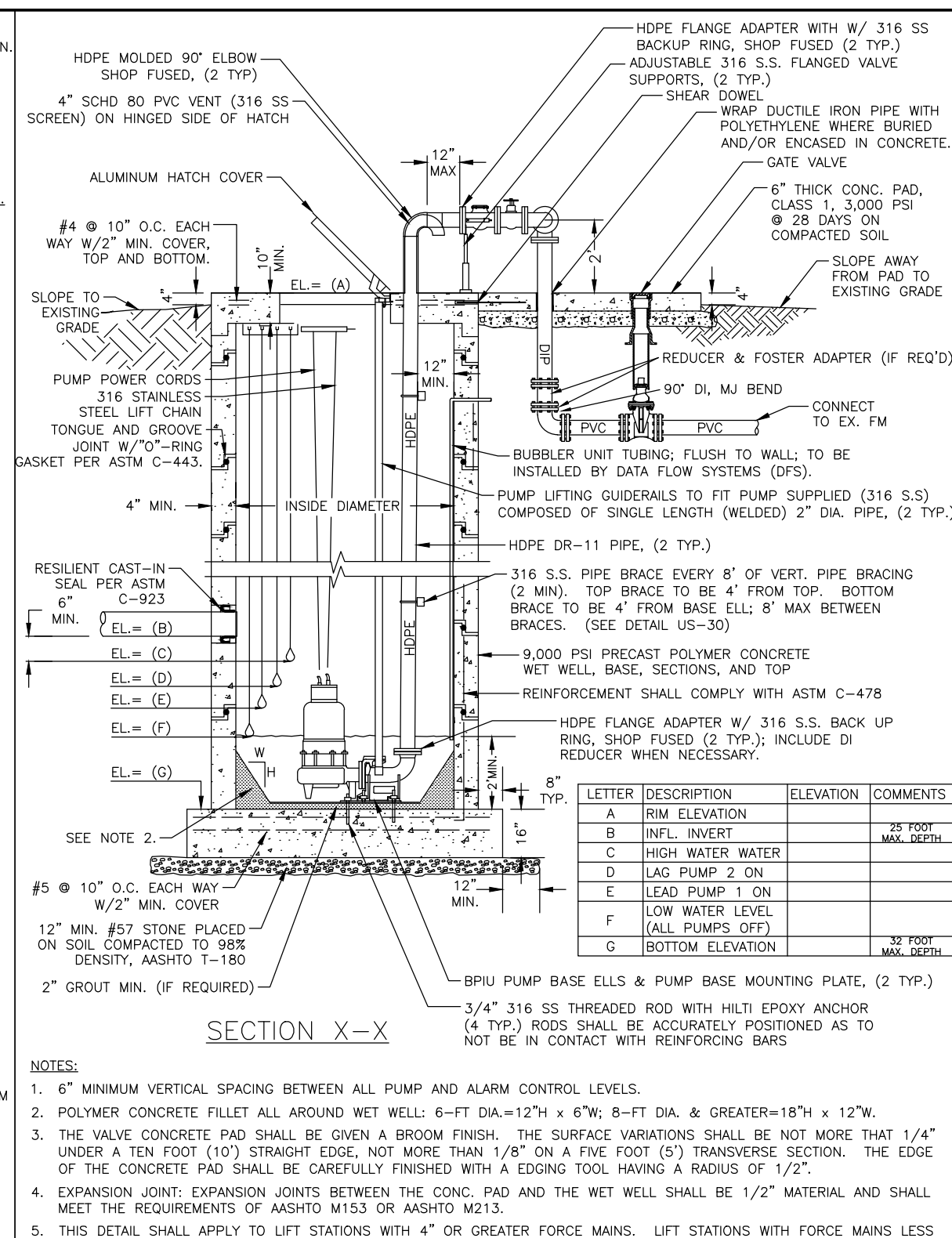
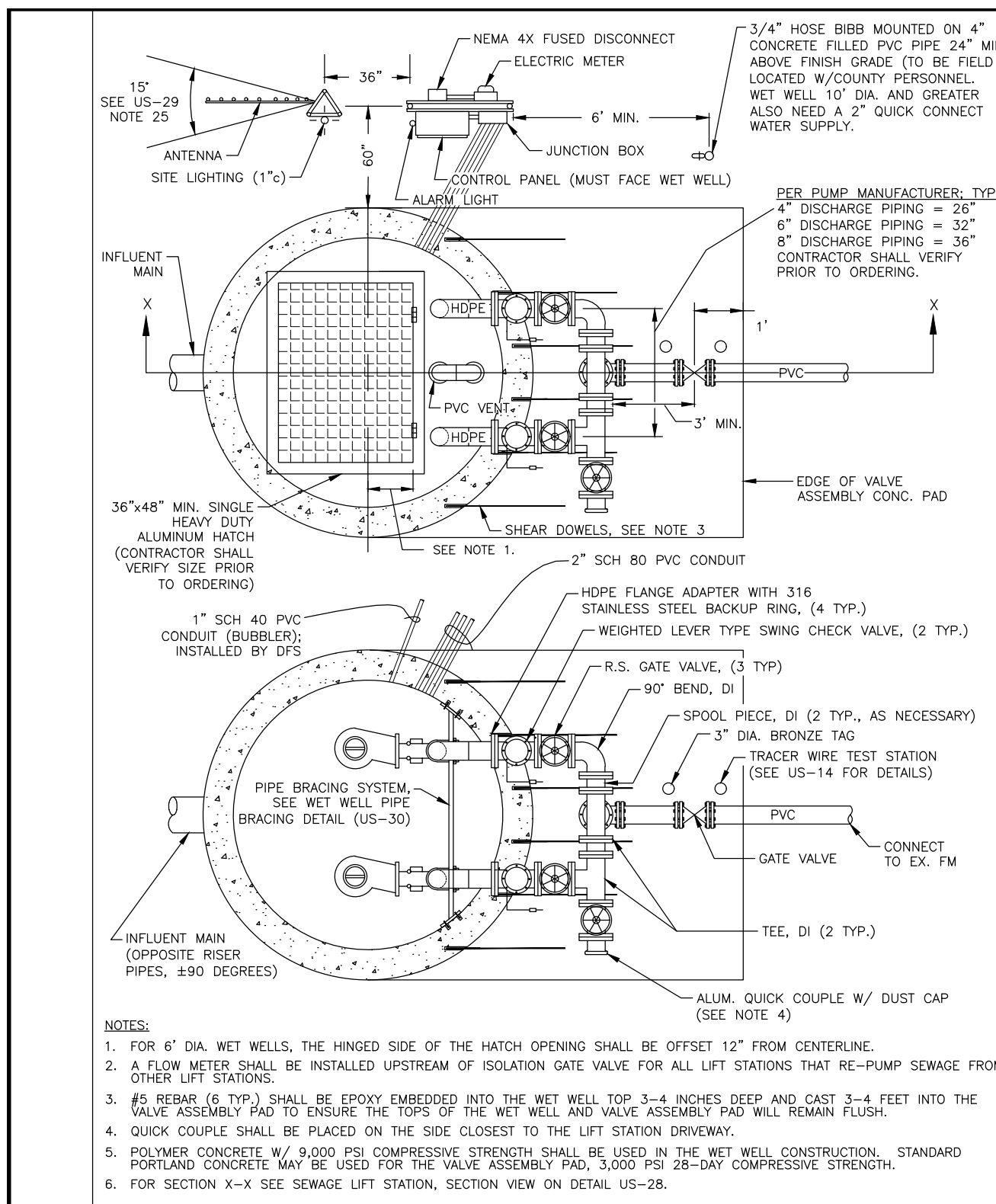
NOTES:

- 1. THE HOSE CONNECTION SHALL BE FIELD LOCATED WITH COUNTY PERSONNEL AND SHALL BE 24 INCHES ABOVE GRADE.
- 2. BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 24" BELOW GRADE.
- 3. FOR INSTALLATION OF THE WATER METER AND BACKFLOW PREVENTION ASSEMBLY, SEE DETAIL US-15.
- 4. THIS 2" & 3/4" COMBINATION HOSE CONNECTIONS IS TYPICALLY FOR LIFT STATION WITH WET WELL DIAMETERS 12 FEET AND LARGER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT

REV. BY: DATE: SEPT 12, 2023

DATE OF APPROVAL: 2" & 3/4" COMBINATION REMOTE HOSE CONNECTION FOR LIFT STATIONS US-RHC



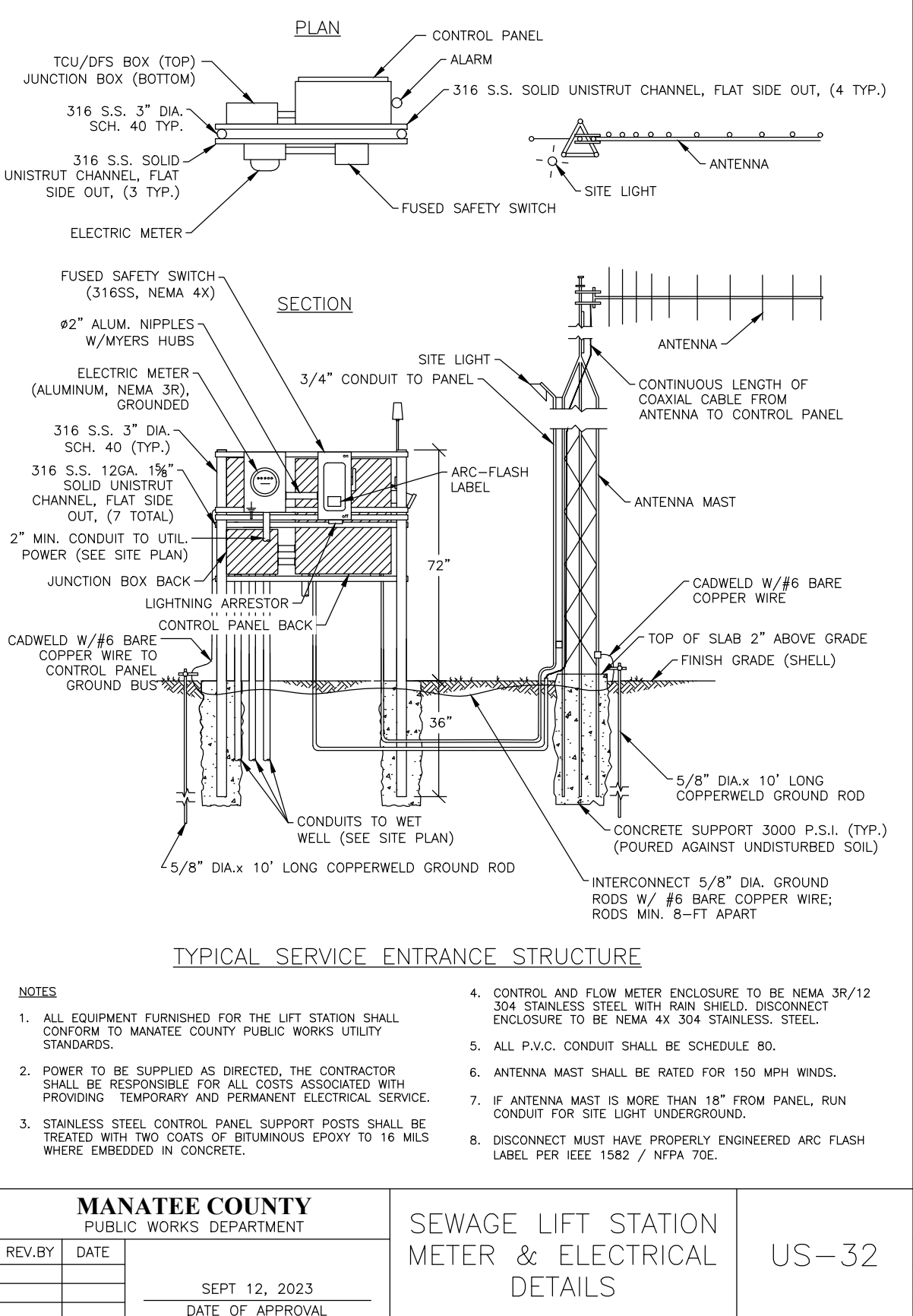
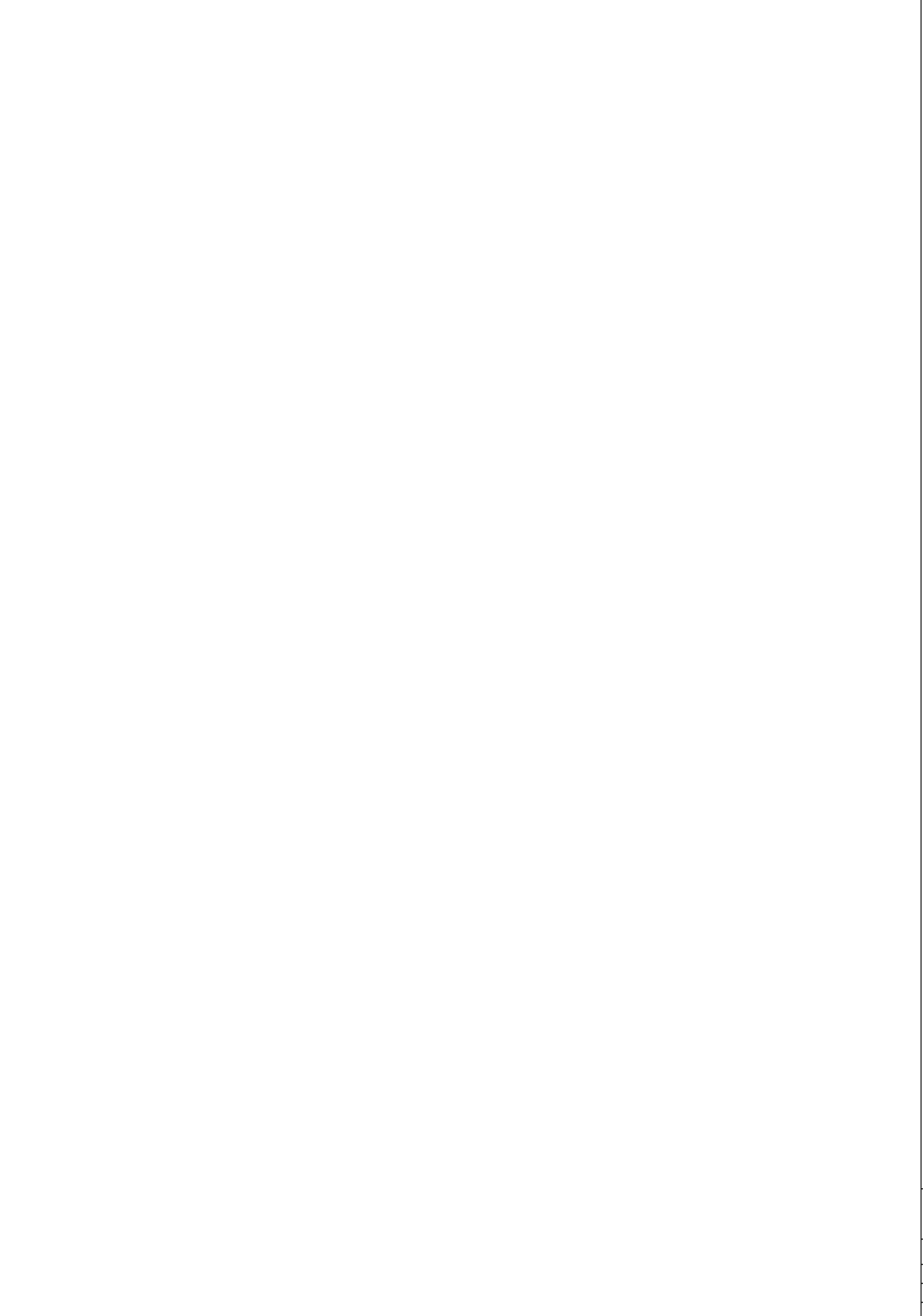
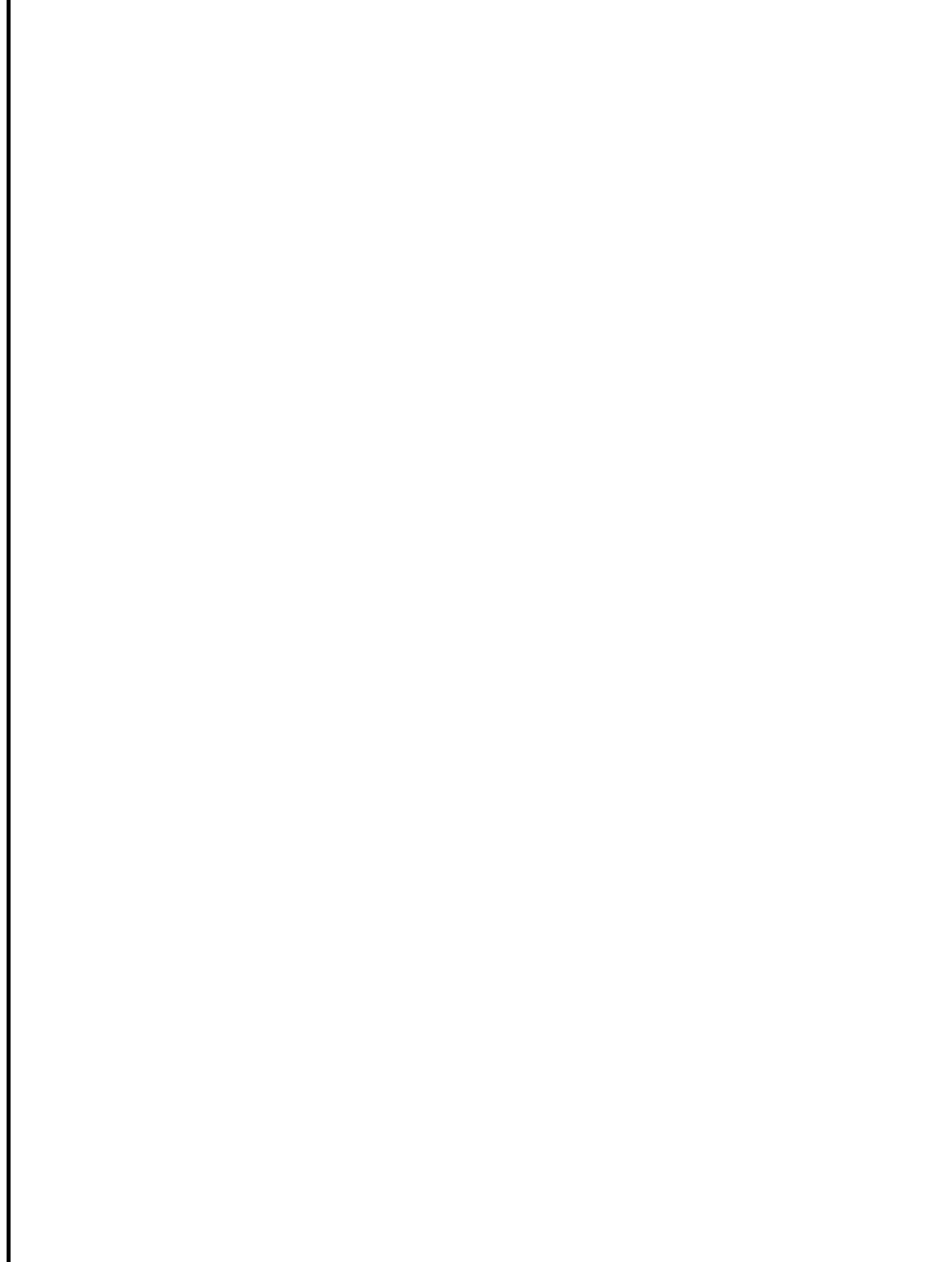
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION PLAN VIEW	US-26
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION SECTION VIEW	US-28
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		LIFT STATION NOTES	US-29
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		LIFT STATION PIPE BRACING, & STILLING WELL DETAILS	US-30
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		PUMP BASE ELL MOUNTING PLATE	US-31
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		



NO.	REVISION DESCRIPTION	BY	DATE

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION METER & ELECTRICAL DETAILS	US-32
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		SEWAGE LIFT STATION CONTROL PANEL	US-33
REV. BY	DATE		
	SEPT 12, 2023		
	DATE OF APPROVAL		

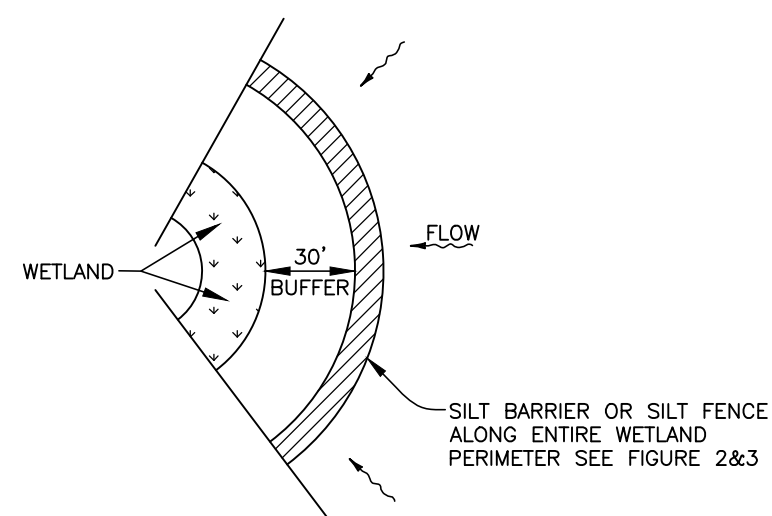
SATELLITE LIFT STATION R&R

2024 GROUP 2

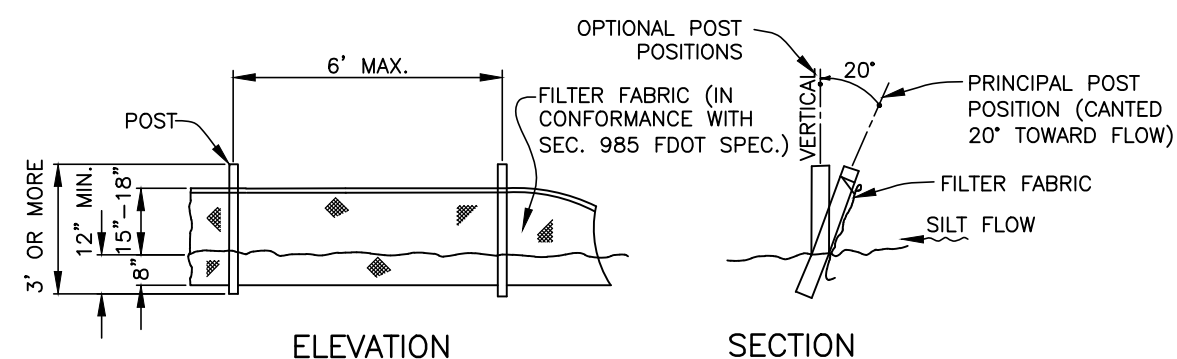
DETAILS 2



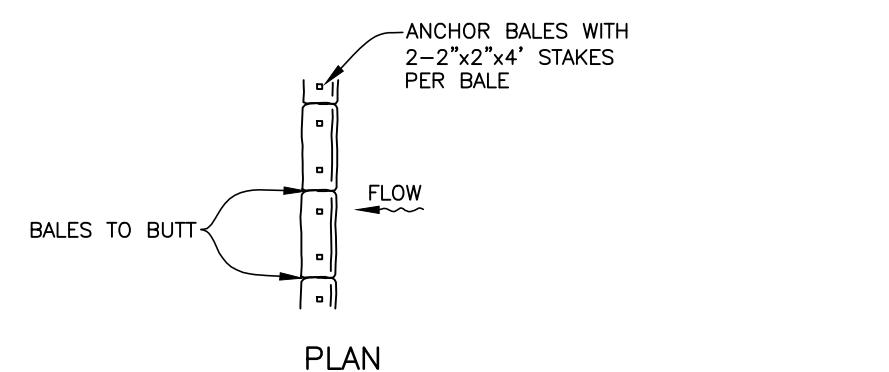
PROJECT #	402.00197 / 5001301	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	VARIES	STATE OF FLORIDA PROFESSIONAL ENGINEER
SCALE	N.T.S.	DATE: 02/21/2024
SURVEYED	NA	DESIGNED
DESIGNED	JSS 5/2023	DRAWN
DRAWN	JKW 5/2023	CHECKED
CHECKED	JSS	



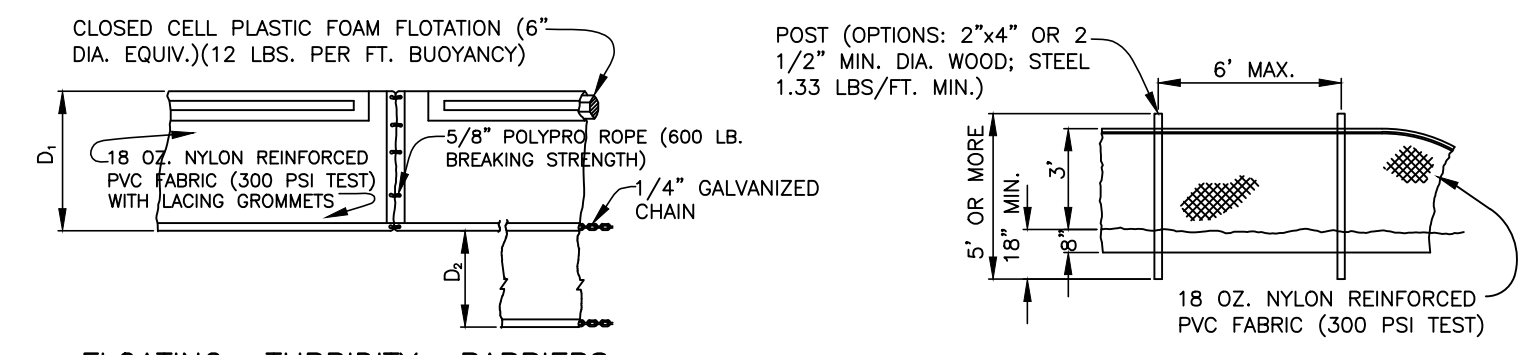
WETLAND BUFFER
FIGURE 1



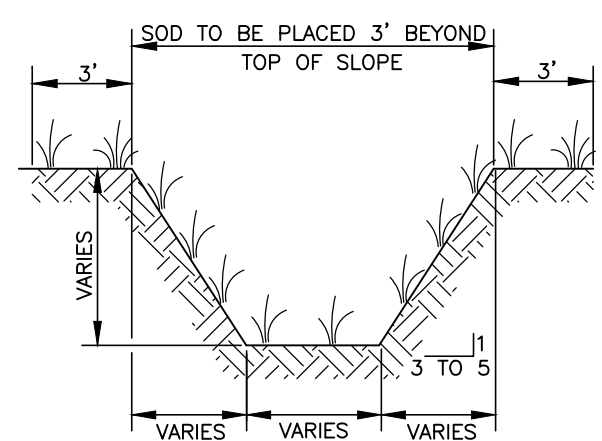
TYPICAL SILT FENCE
FIGURE 2



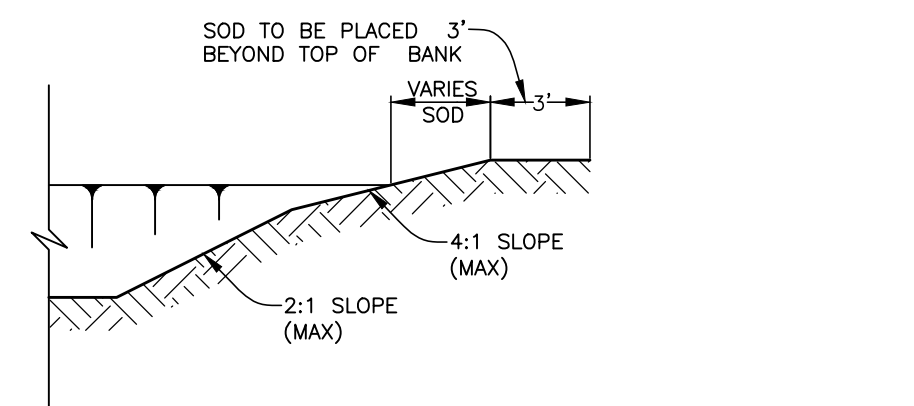
TYPICAL BALE SILT BARRIER
FIGURE 3



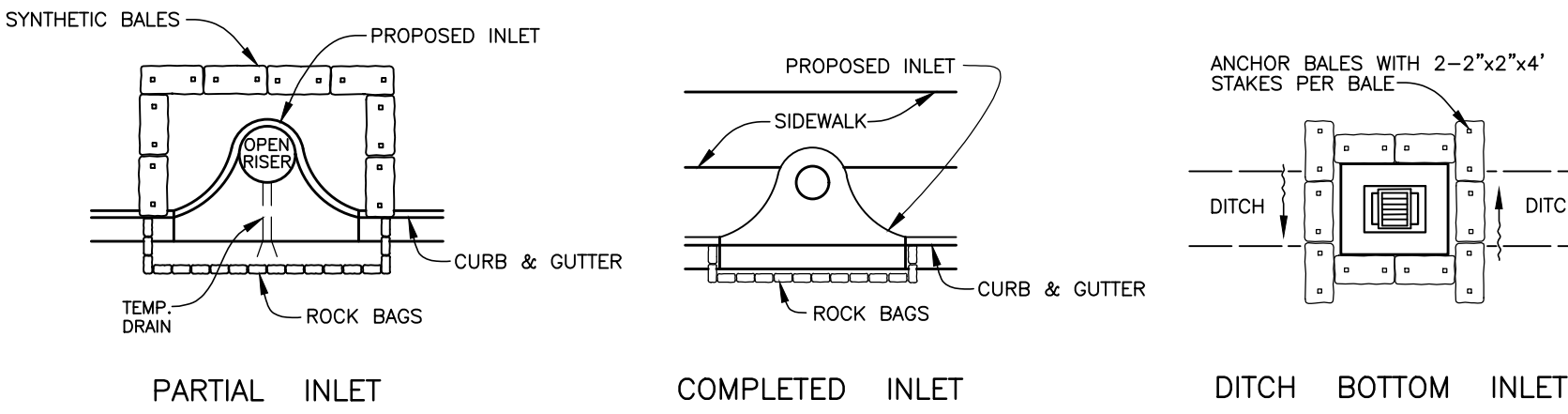
TURBIDITY BARRIERS
FIGURE 4



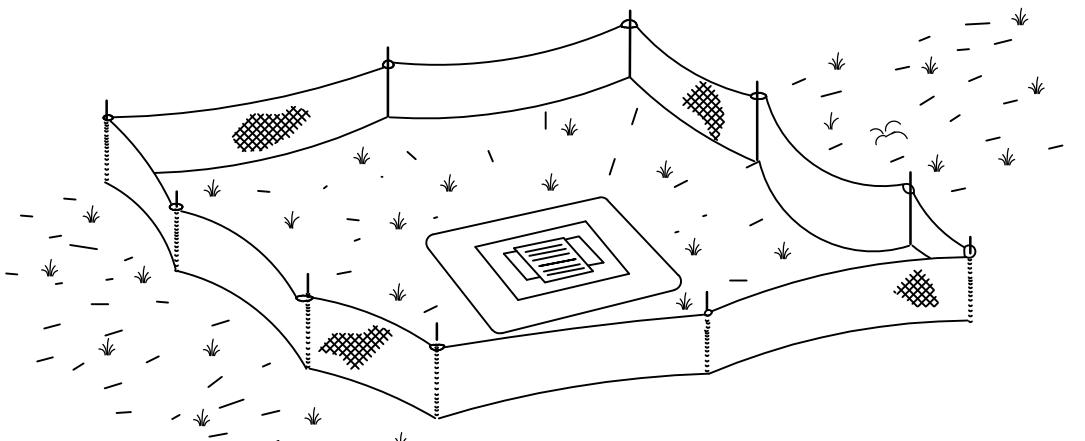
TYPICAL SWALE SECTION
FIGURE 5



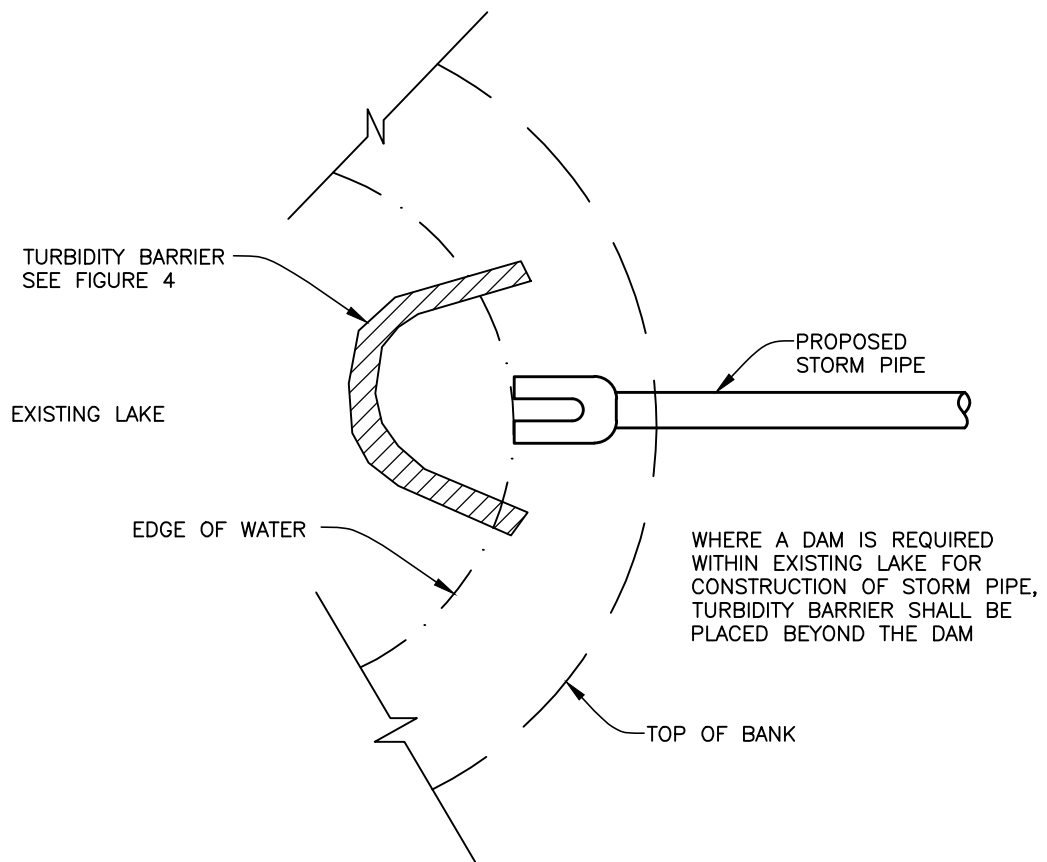
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



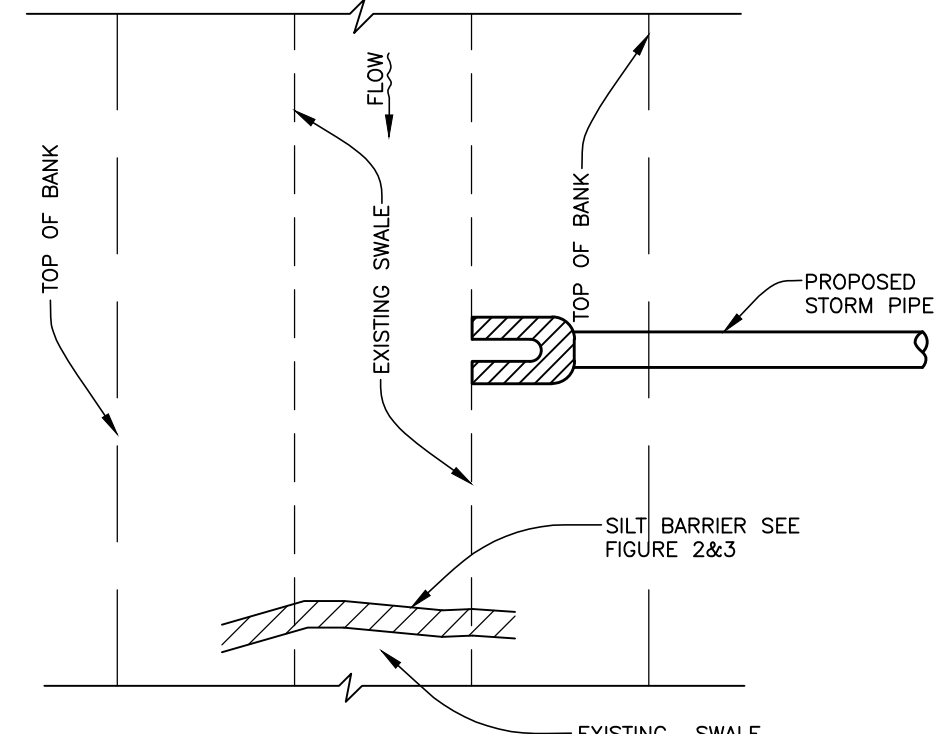
SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
FIGURE 7



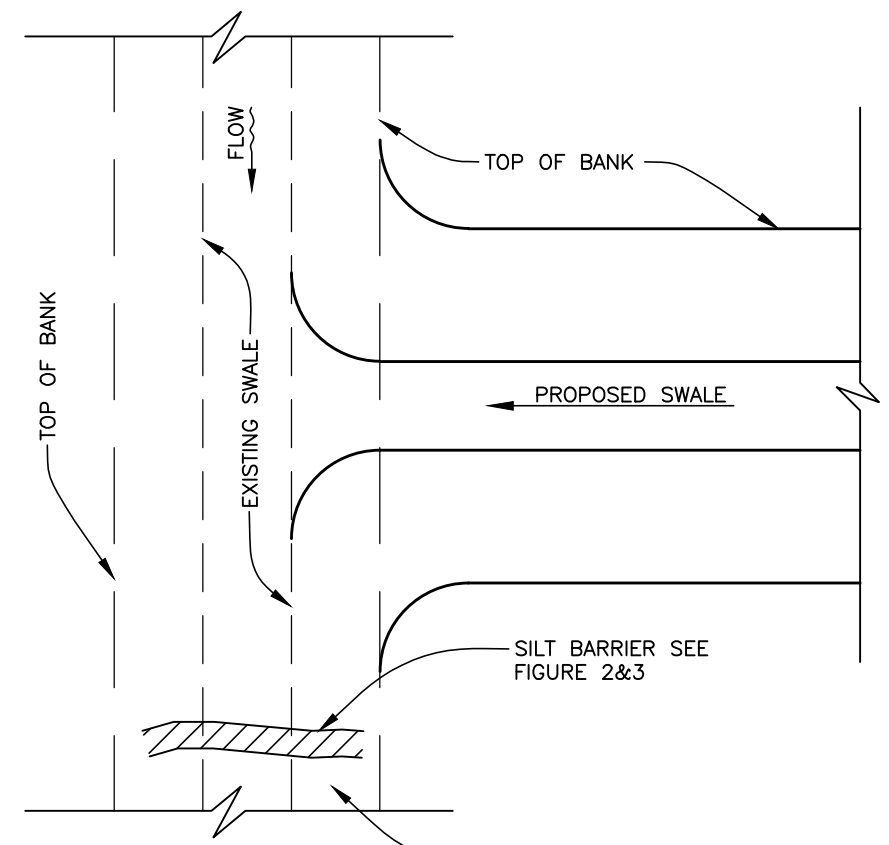
TYPE III SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



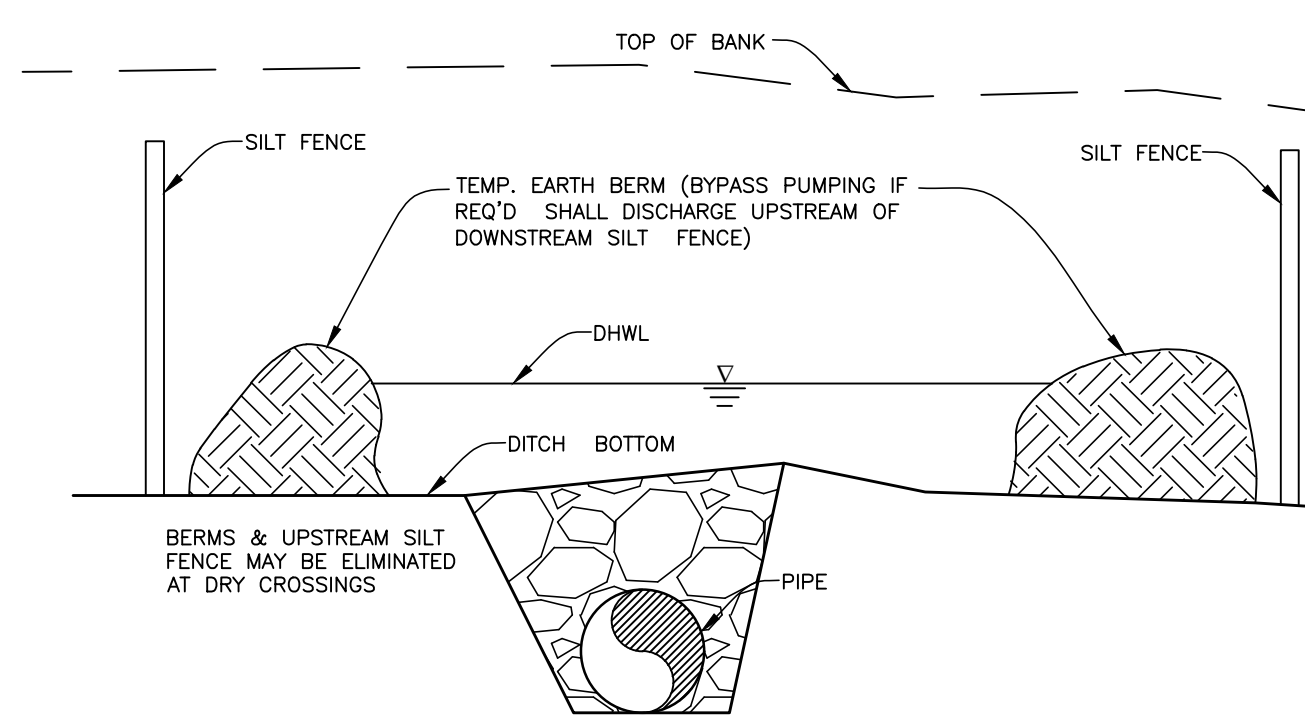
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE
FIGURE 9



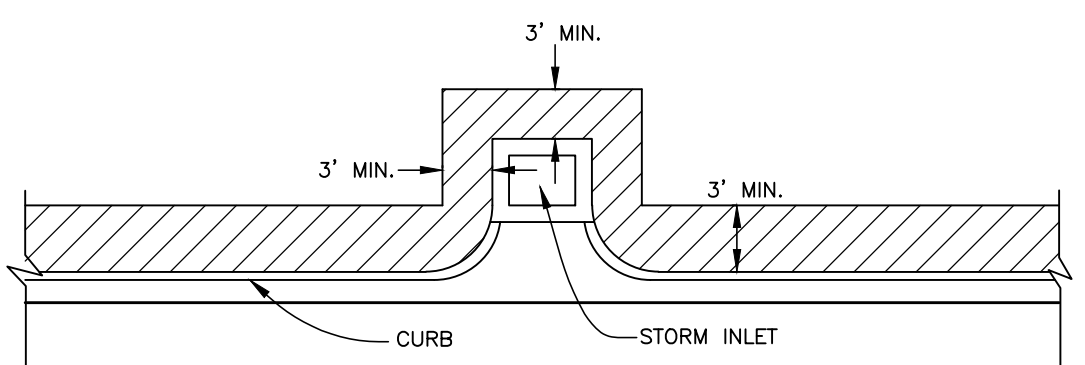
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
FIGURE 10



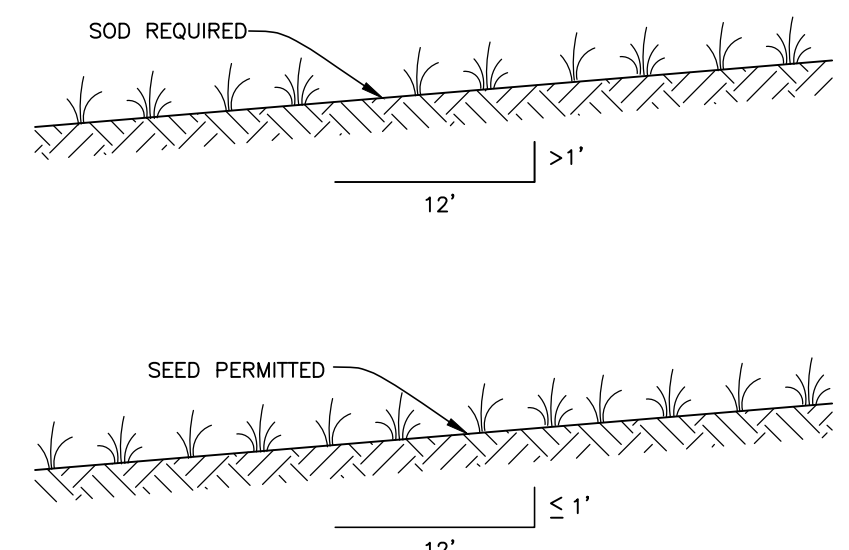
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
FIGURE 11



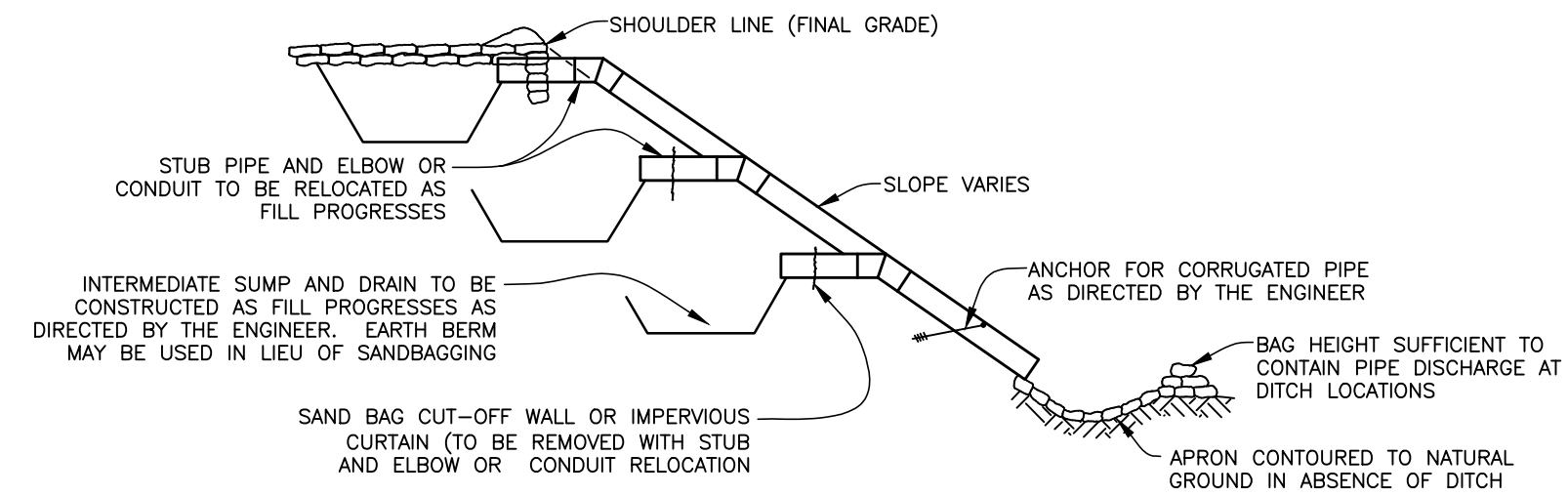
UNDERGROUND PIPE CROSSING
FIGURE 12



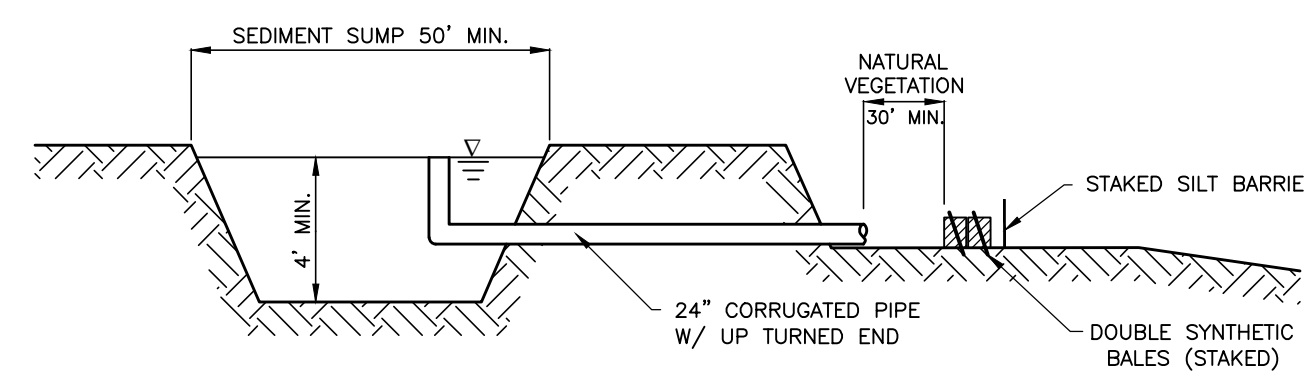
SOD ALONG CURB AND AROUND INLET
FIGURE 14



GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



SEDIMENT SUMP SECTION
FIGURE 16

NOTE:
REFERENCE THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION, FOR ALL TEMPORARY EROSION CONTROL MEASURES

NO.	REVISION DESCRIPTION	BY	DATE



SATELLITE LIFT STATION R&R
2024 GROUP 2
EROSION CONTROL DETAILS



PROJECT #	402.0019707 / 5001301
SURVEY #	NA
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	JSS 5/2023
DRAWN	JKW 5/2023
CHECKED	JSS -

J. SHEA SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
02/21/2024
SHEET 10 OF 10

10/20/21 Eng Design/PROJ/CSAN SWP Proj/Rev. SW - CS Upgrades VLS R&R 2024 Group 2/NOV/23/11:57 AM Site/Station, P11, ANS1 (Full Size) D (4x600 x 22x00) Inches, 100-2018.016