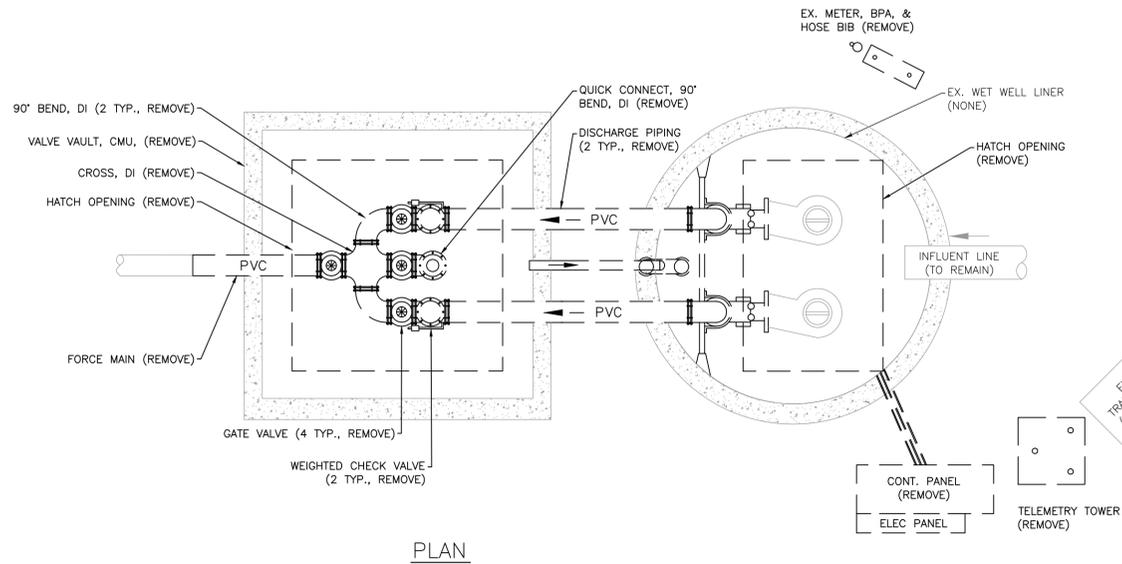
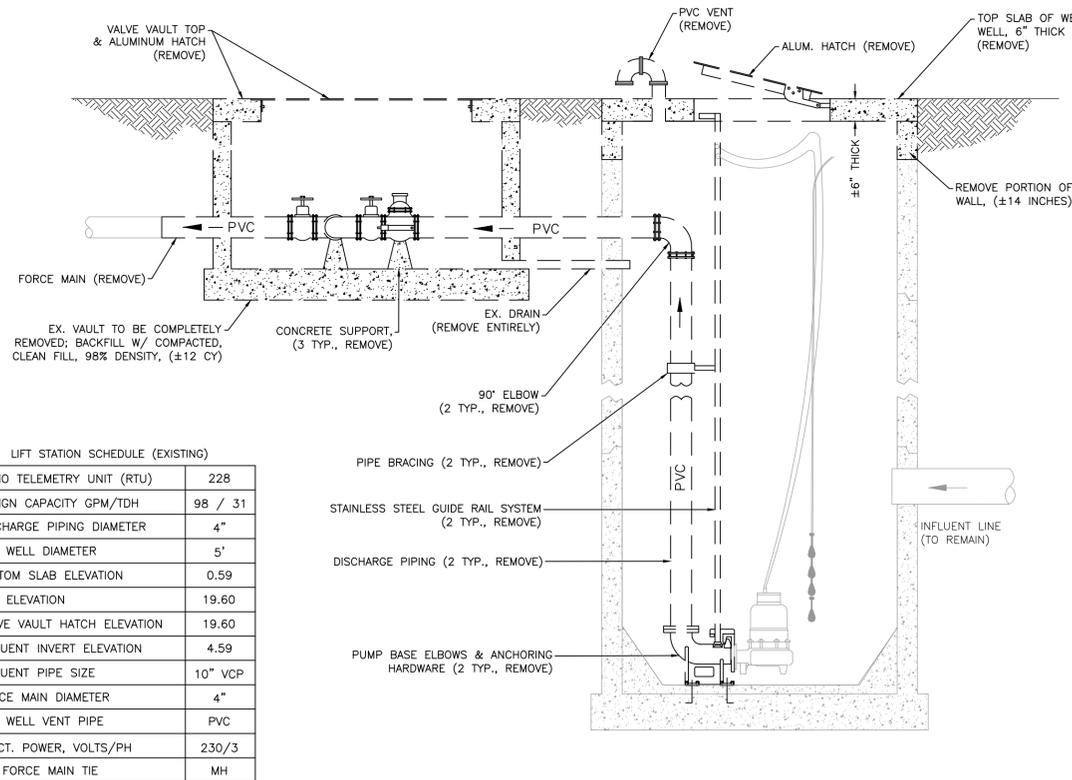


EXISTING

- 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. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
 3. THE CONTRACTOR/BIDDER 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)

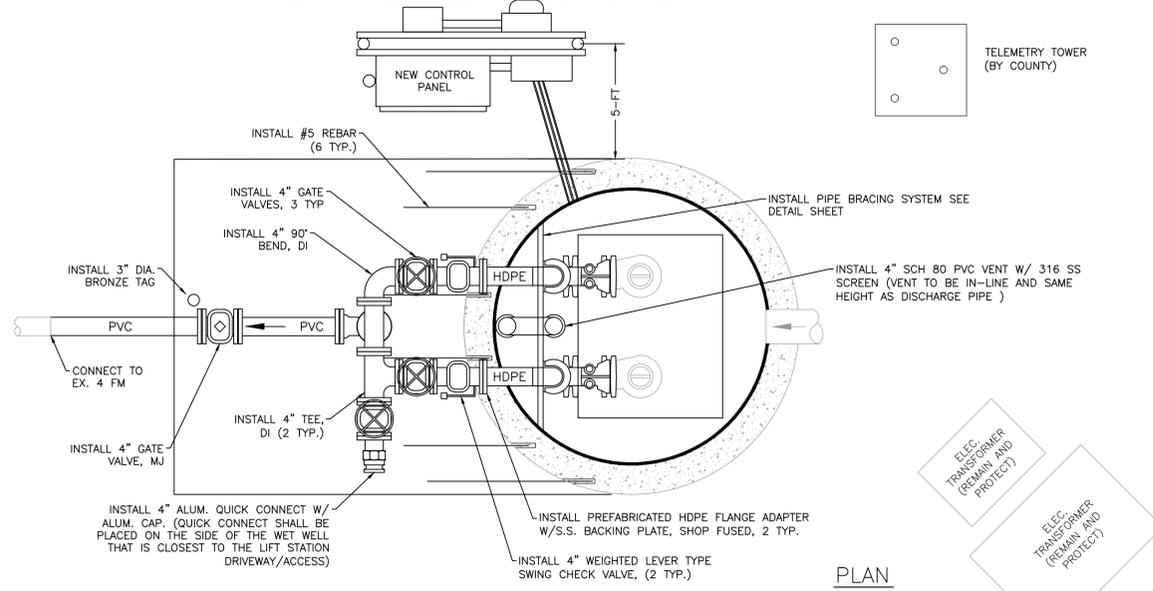
RADIO TELEMETRY UNIT (RTU)	228
DESIGN CAPACITY GPM/TD	98 / 31
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	5'
BOTTOM SLAB ELEVATION	0.59
TOP ELEVATION	19.60
VALVE VAULT HATCH ELEVATION	19.60
INFLUENT INVERT ELEVATION	4.59
INFLUENT PIPE SIZE	10" VCP
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	230/3
EX. FORCE MAIN TIE	MH

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

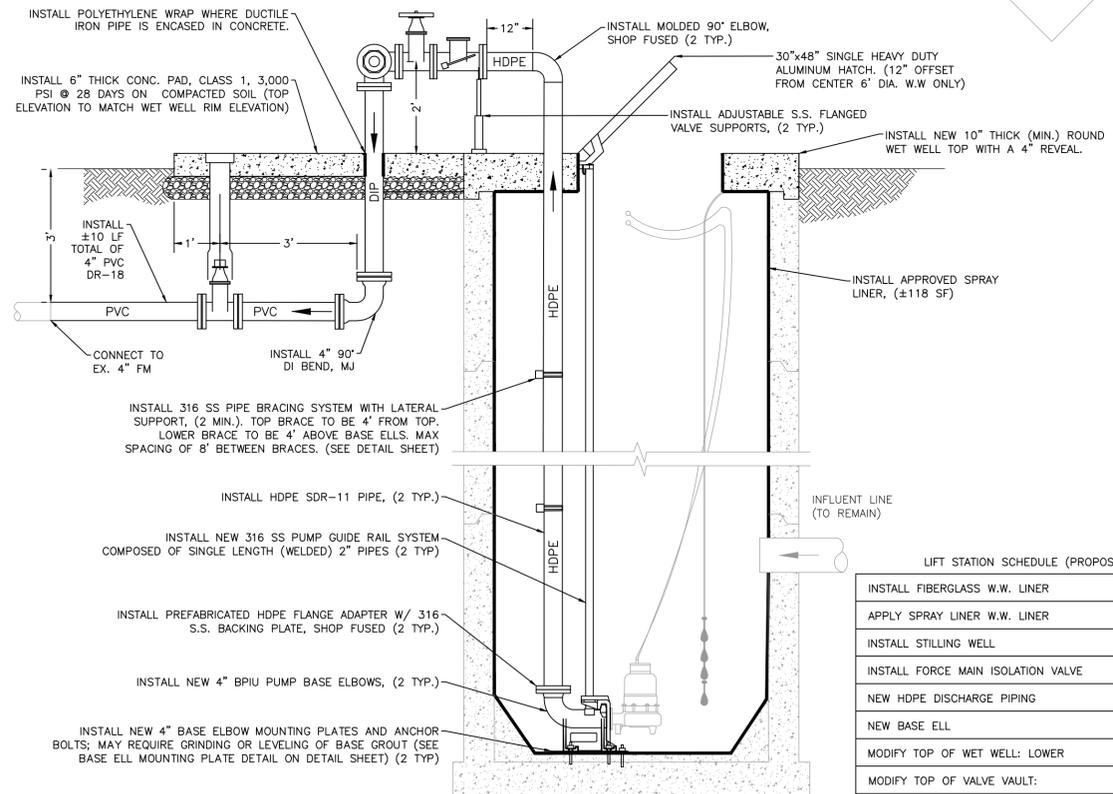
NO.	REVISION DESCRIPTION	BY	DATE

PROPOSED

- GENERAL NOTES:**
1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
 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 ASHTO M153 OR ASHTO 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
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 TOP OF WET WELL: LOWER	YES, 14"
MODIFY TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	YES
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	NO

- CONSTRUCTION NOTES:**
1. INSTALL ±20 LF NEW ELECTRICAL SERVICE W/ CONDUIT FROM EXISTING TRANSFORMER.
 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). 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.
 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. 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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 6. REPAIR CONCRETE WALLS, AS NEEDED, IN WET WELL, 2-INCH MIN. THICK OVER EXISTING REBAR, (±59 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. INSTALL A NEW WATER SERVICE; INSTALL A NEW 2" SERVICE TEE ON THE EAST SIDE OF THE CUL-DE-SAC AND A ±190 LF 2-INCH WATER SERVICE (IN A 3" CASING UNDER PAVEMENT VIA HDD) TO THE WEST SIDE OF THE CUL-DE-SAC; A NEW STANDARD METER/BPA ASSEMBLY AT THE WEST ROW LINE; AND INSTALL A NEW 3/4-INCH HOSE BIBB ASSEMBLY, ALL PER COUNTY STANDARDS. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE ROW; HOSE BIBB SHALL BE LOCATED NEAR THE WET WELL.
 9. ABANDON THE EXISTING 6"x1" WATER SERVICE SADDLE AND CORPORATION; INSTALL A BRASS PLUG IN THE EXISTING CORPORATION ON 5TH AVE DR NW. DETERIORATED SADDLES SHALL BE REPLACED PRIOR TO PLUGGING. COUNTY INSPECTOR SHALL DETERMINE IF REPLACEMENT IS REQUIRED.
 10. REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
 11. REMOVE AND PROPERLY DISPOSE OF EXCESS CONCRETE PAVEMENT AROUND THE LIFT STATION STRUCTURES, (±42 SF). COORDINATE LIMITS OF REMOVAL WITH COUNTY PERSONNEL. SAW CUT CONCRETE PRIOR TO REMOVAL TO CREATE A SMOOTH, STRAIGHT, UNIFORM EDGE; FINAL EDGES TO HAVE A 1/2" CHAMFER.

**SATELLITE LIFT STATION R&R
2022 GROUP 1
HARBOR WOODS, RTU 228**



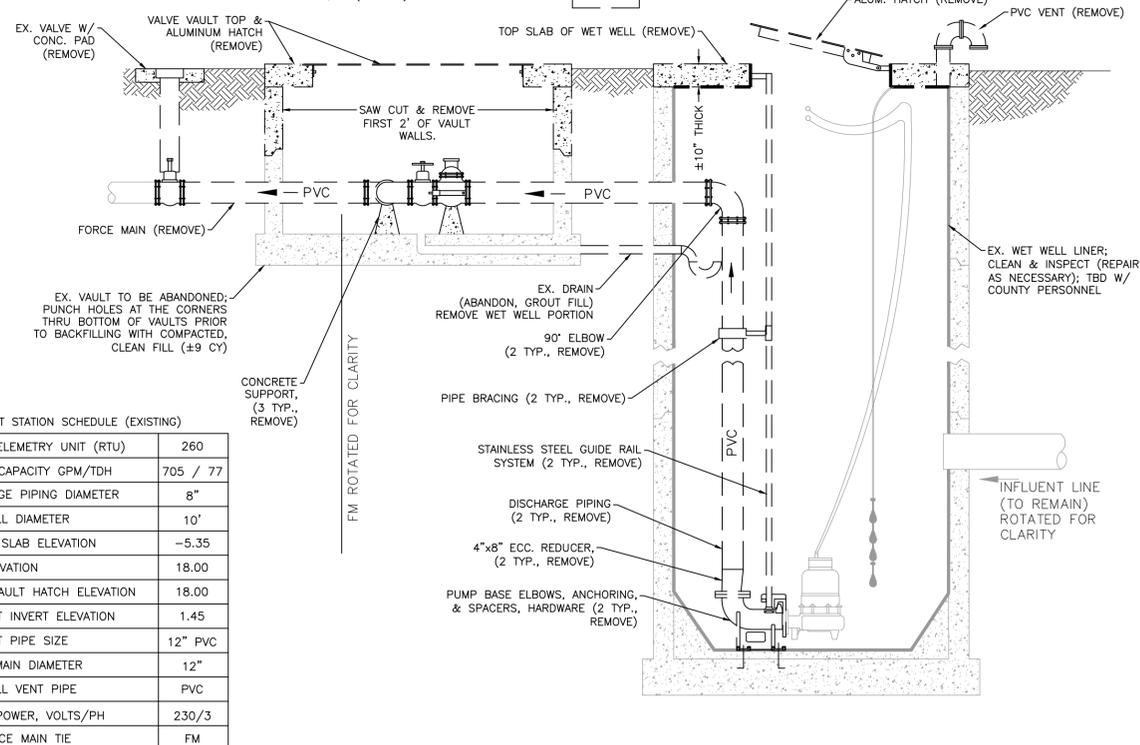
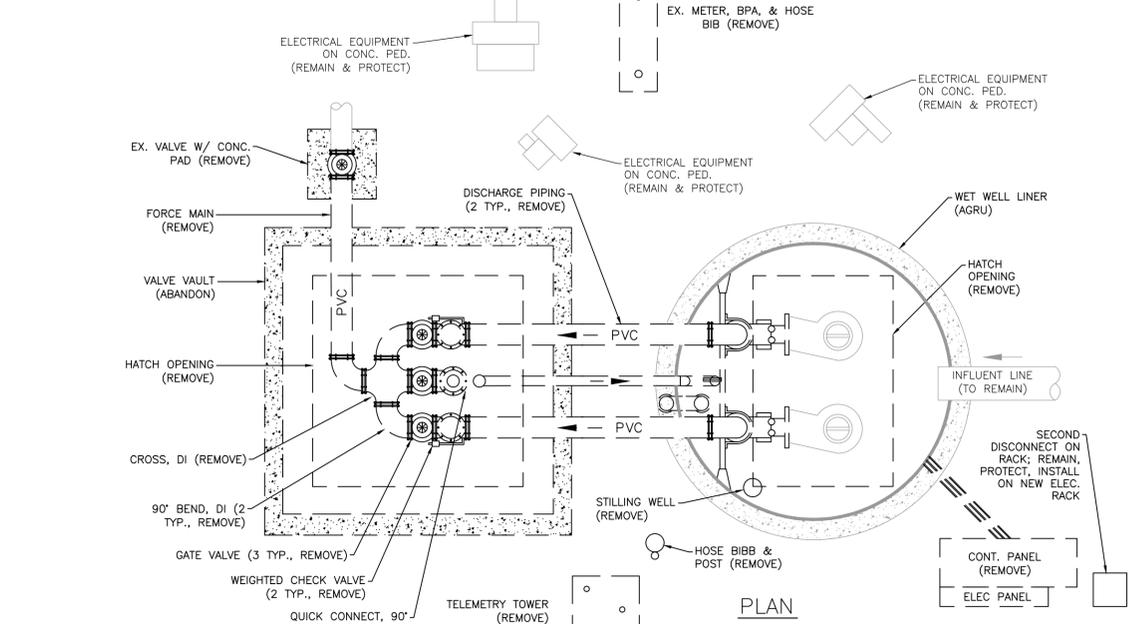
PROJECT #	402-5162480	J. SHEA SHOUN, P.E.
SURVEY #	NA	60923
SEC./TWN./RGE	29/34/17	No. 60923
SCALE	N.T.S.	STATE OF FLORIDA
SURVEYED	NA	DATE
DESIGNED	JSS	6/2021
DRAWN	JSS	6/2021
CHECKED	JSS	-

SHEET 04 OF 12

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. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
3. THE CONTRACTOR/BIDDER 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.



LIFT STATION SCHEDULE (EXISTING)

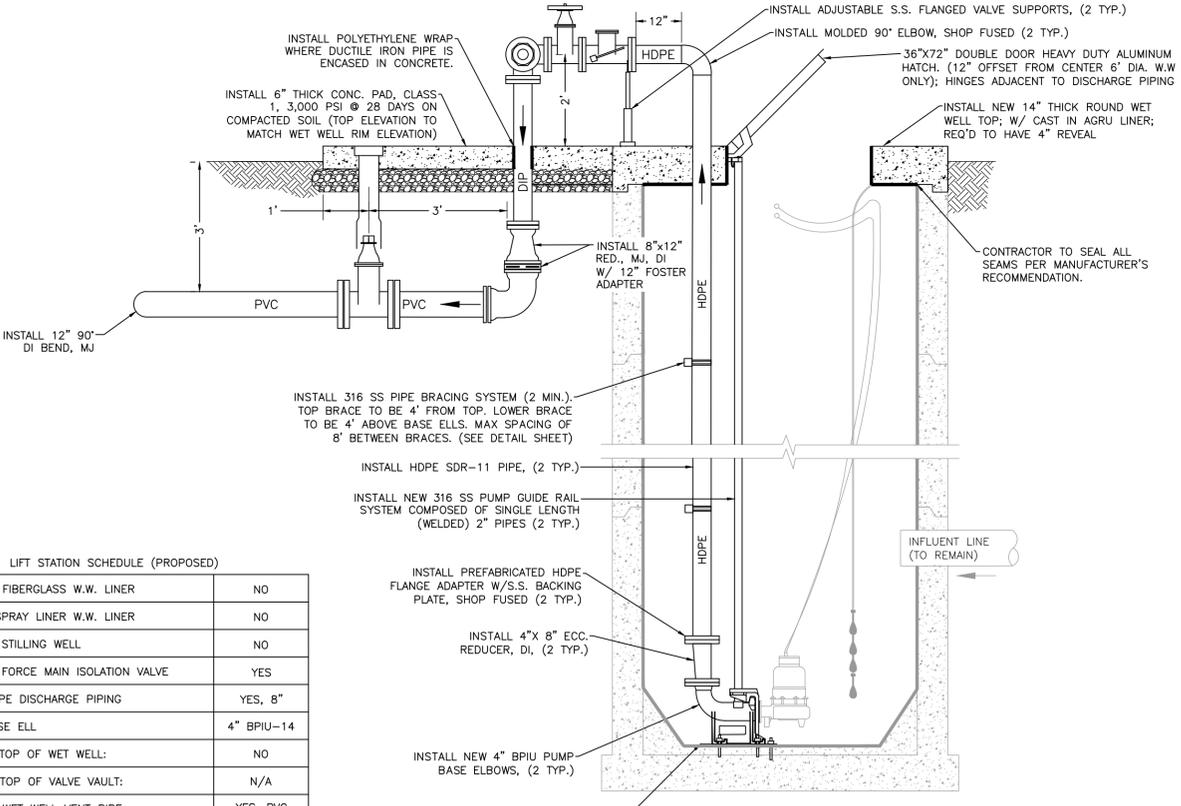
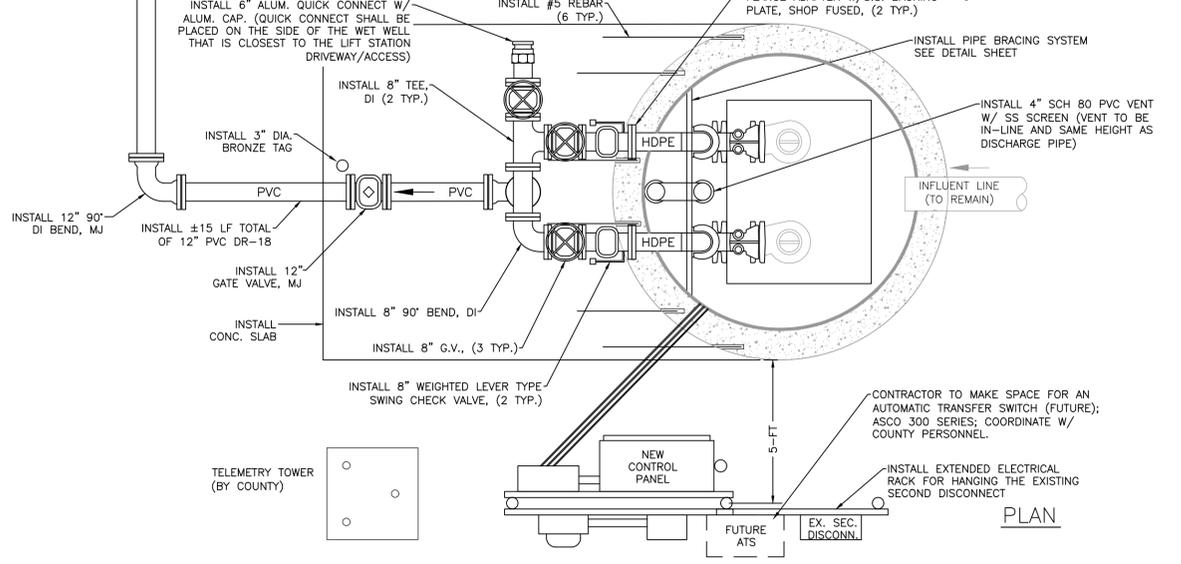
RADIO TELEMETRY UNIT (RTU)	260
DESIGN CAPACITY GPM/TD	705 / 77
DISCHARGE PIPING DIAMETER	8"
WET WELL DIAMETER	10'
BOTTOM SLAB ELEVATION	-5.35
TOP ELEVATION	18.00
VALVE VAULT HATCH ELEVATION	18.00
INFLUENT INVERT ELEVATION	1.45
INFLUENT PIPE SIZE	12" PVC
FORCE MAIN DIAMETER	12"
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	230/3
EX. FORCE MAIN TIE	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.
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	NO
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 8"
NEW BASE ELL	4" BPIU-14
MODIFY TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES, PVC
INSTALL NEW WATER SERVICE ASSEMBLY, UW-14	YES, 2" DIA.
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	NO

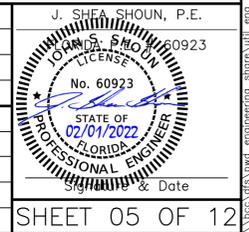
CONSTRUCTION NOTES:

1. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). 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.
2. 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.
3. SEPARATE THE TELEMETRY TOWER FROM CONCRETE BASE AND SET TO SIDE OF LIFT STATION SITE. CONTRACTOR SHALL REMOVE AND DISPOSE OF CONCRETE BASE. COUNTY SHALL INSTALL NEW TELEMETRY ANTENNA.
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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
5. 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.
6. INSTALL A NEW 12"x2" TAPPING SADDLE AND 2-INCH WATER SERVICE VIA DIRECT BURY; A 2-INCH METER/BPA ASSEMBLY; AND A 2-INCH QUICK CONNECT ALONG WITH A 3/4-INCH HOSE BIBB PER COUNTY STANDARDS. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE/ROW; HOSE BIBB SHALL BE LOCATED NEAR THE WET WELL, (±20 LF).
7. ABANDON THE EXISTING 12"x11" WATER SERVICE SADDLE AND CORPORATION; INSTALL A BRASS PLUG IN THE EXISTING CORPORATION. DETERIORATED SADDLES SHALL BE REPLACED PRIOR TO PLUGGING. COUNTY INSPECTOR SHALL DETERMINE IF REPLACEMENT IS REQUIRED.
8. REPLACE WASHED SHELL AND WEED BARRIER (MATCH EXISTING) AS NECESSARY, (±15 SY)

SATELLITE LIFT STATION R&R
2022 GROUP 1
BOLLETIERI PARK, RTU 260



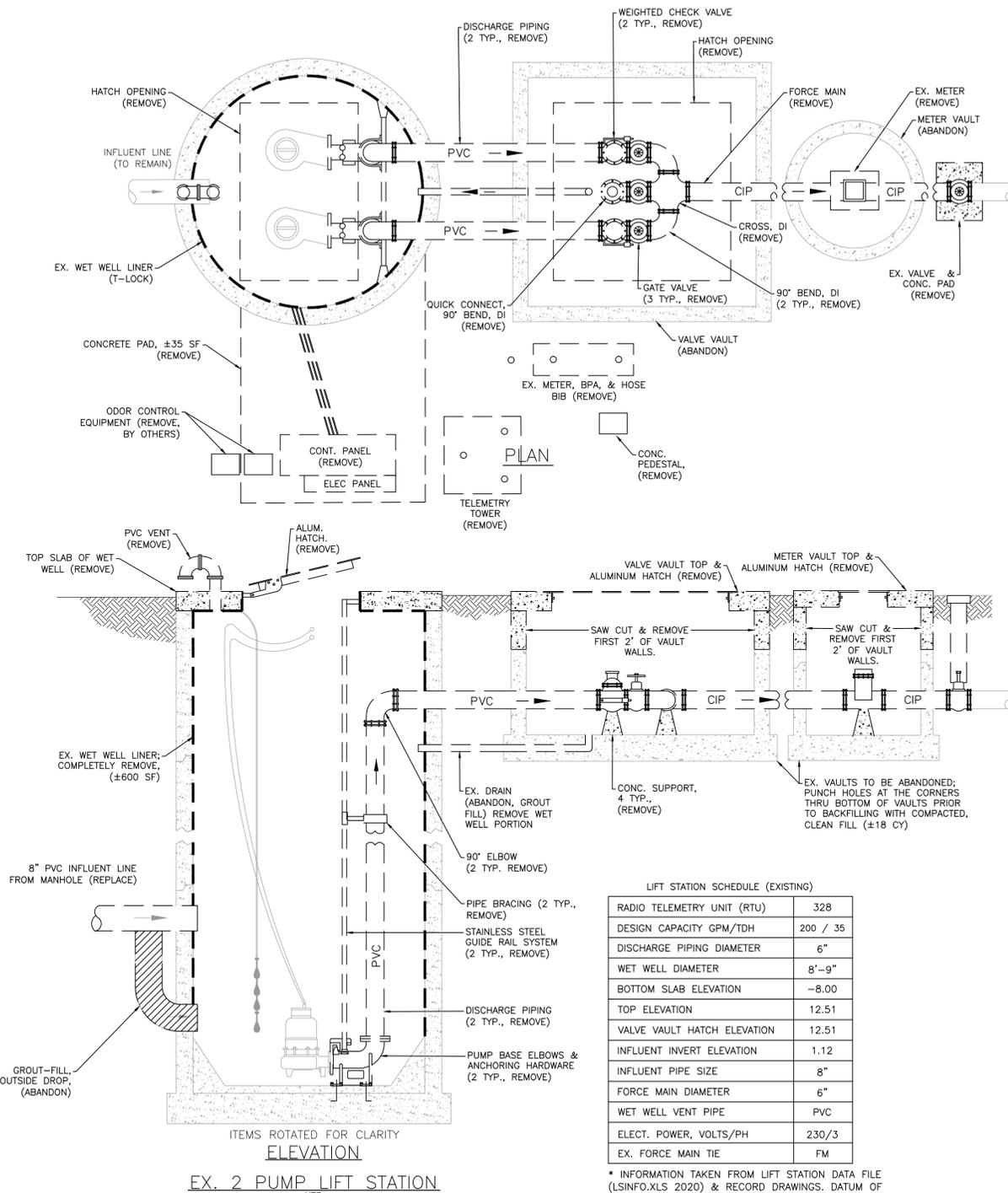
PROJECT #	402-5162481	J. SHEA SHOUN, P.E.
SURVEY #	NA	60923
SEC./TWN./RGE	16/35/17	No. 60923
SCALE	N.T.S.	STATE OF FLORIDA
SURVEYED	NA	DATE
DESIGNED	JSS	6/2021
DRAWN	JSS	6/2021
CHECKED	JSS	-



NO.	REVISION DESCRIPTION	BY	DATE

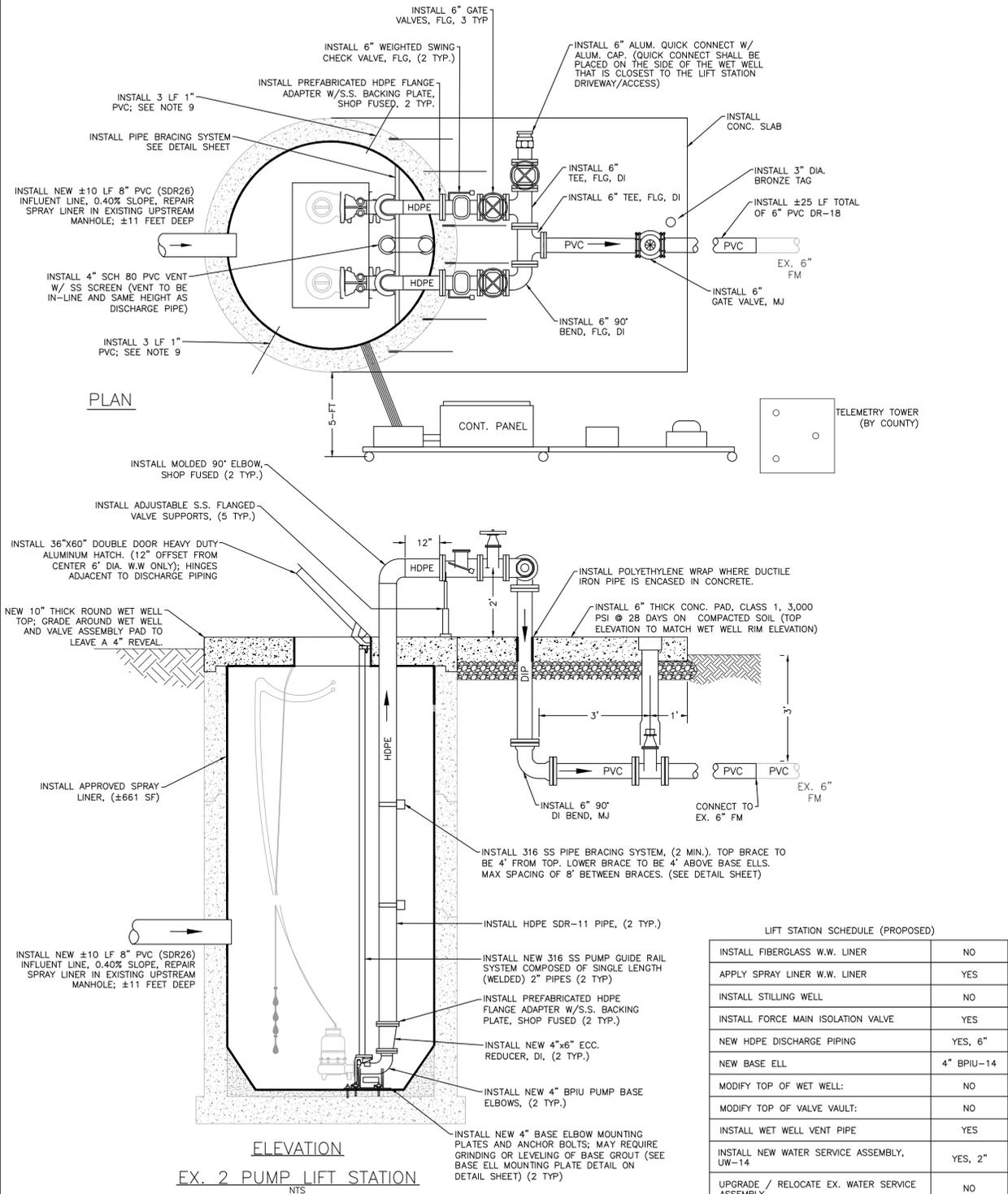
EXISTING

- 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.
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 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.



PROPOSED

- GENERAL NOTES:**
1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
 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, MISCELLANEOUS WORK.



- CONSTRUCTION NOTES:**
1. INSTALL ±10 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
 2. REMOVE AND INSTALL ALL NEW ONE-SIDE ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. [GENERATOR RECEPTACLE SHALL BE ON THE LEFT OR DESCRIBE AS NEEDED FOR PROJECT]
 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. 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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
 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. INSTALL A NEW 8"x2" TAPPING SADDLE AND 2-INCH WATER SERVICE VIA DIRECT BURY; A 2-INCH METER/BPA ASSEMBLY; AND A 2-INCH QUICK CONNECT ALONG WITH A 3/4-INCH HOSE BIB PER COUNTY STANDARDS. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE/ROW; HOSE BIB SHALL BE LOCATED NEAR THE WET WELL, (±30 LF).
 8. ABANDON THE EXISTING 8"x1" WATER SERVICE SADDLE AND CORPORATION; INSTALL A BRASS PLUG IN THE EXISTING CORPORATION. DETERIORATED SADDLES SHALL BE REPLACED PRIOR TO PLUGGING. COUNTY INSPECTOR SHALL DETERMINE IF REPLACEMENT IS REQUIRED.
 9. INSTALL TWO SEPARATE 1" PVC SLEEVES THRU THE WET WELL WALLS W/ HYDRAULIC NON-SHRINK GROUT FOR USE WITH THE ODOR CONTROL EQUIPMENT. COORDINATE WITH COUNTY PERSONNEL ON LOCATION.
 10. ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. COUNTY INSPECTOR TO COORDINATE WITH ODOR CONTROL SUPPLIER.
 11. COUNTY SHALL RETAIN OWNERSHIP OF THE EXISTING GATE AND CHECK VALVES WITHIN THE VALVE VAULT, ALONG WITH THE METER VAULT TOP SLAB W/ HATCH. CONTRACTOR SHALL SET THESE ASIDE AND THE COUNTY SHALL REMOVE THESE ITEMS FROM THE SITE.

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R

2022 GROUP 1

KAY RD, RTU 328



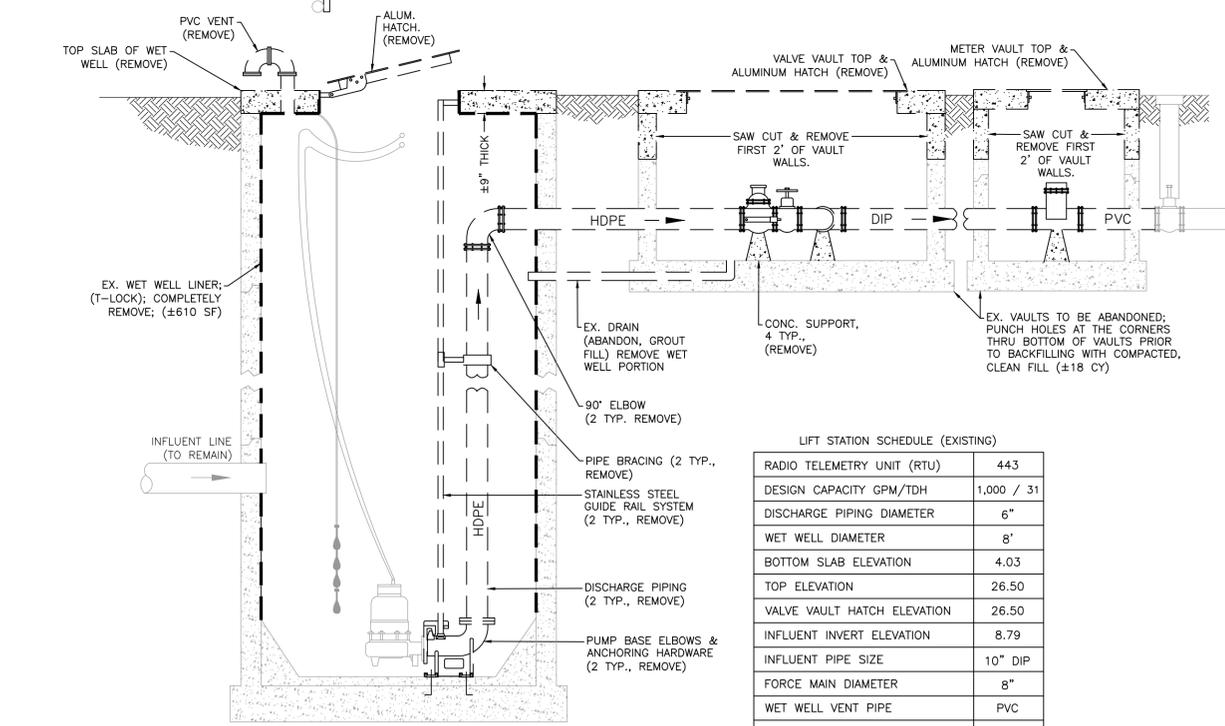
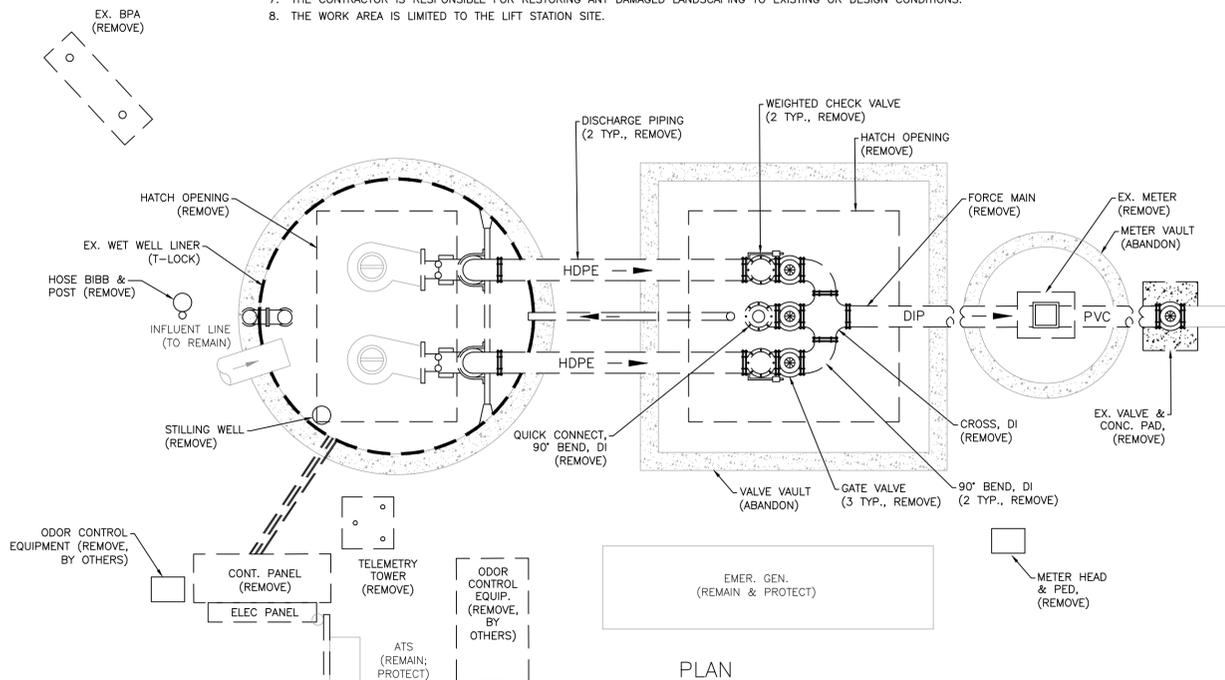
PROJECT #	402-5162482	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA LICENSE NO. 60923
SEC./TWN./RGE	27/34/18	DATE: 02/01/2022
SCALE	N.T.S.	PROFESSIONAL ENGINEER
SURVEYED	NA	DATE
DESIGNED	JSS	6/2021
DRAWN	JSS	6/2021
CHECKED	JSS	-

SHEET 06 OF 12

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. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
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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)	443
DESIGN CAPACITY GPM/TDH	1,000 / 31
DISCHARGE PIPING DIAMETER	6"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	4.03
TOP ELEVATION	26.50
VALVE VAULT HATCH ELEVATION	26.50
INFLUENT INVERT ELEVATION	8.79
INFLUENT PIPE SIZE	10" DIP
FORCE MAIN DIAMETER	8"
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	230/3
EX. FORCE MAIN TIE	FM

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

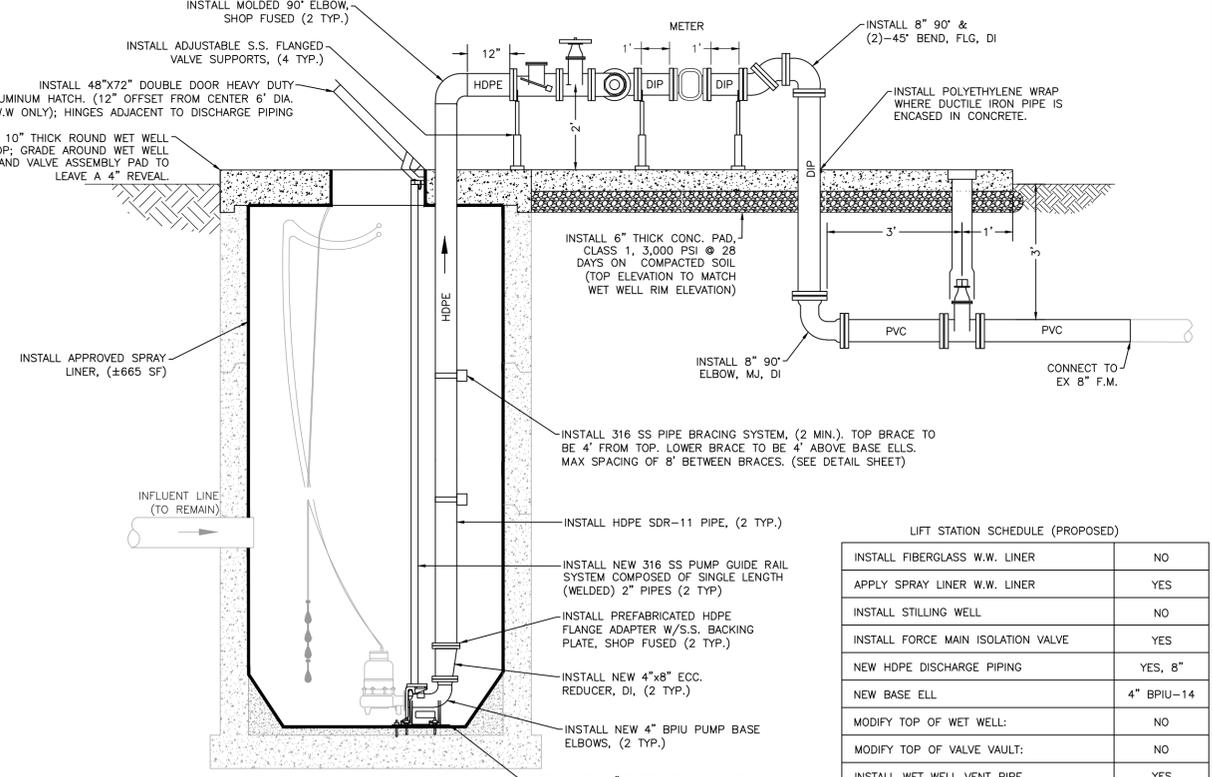
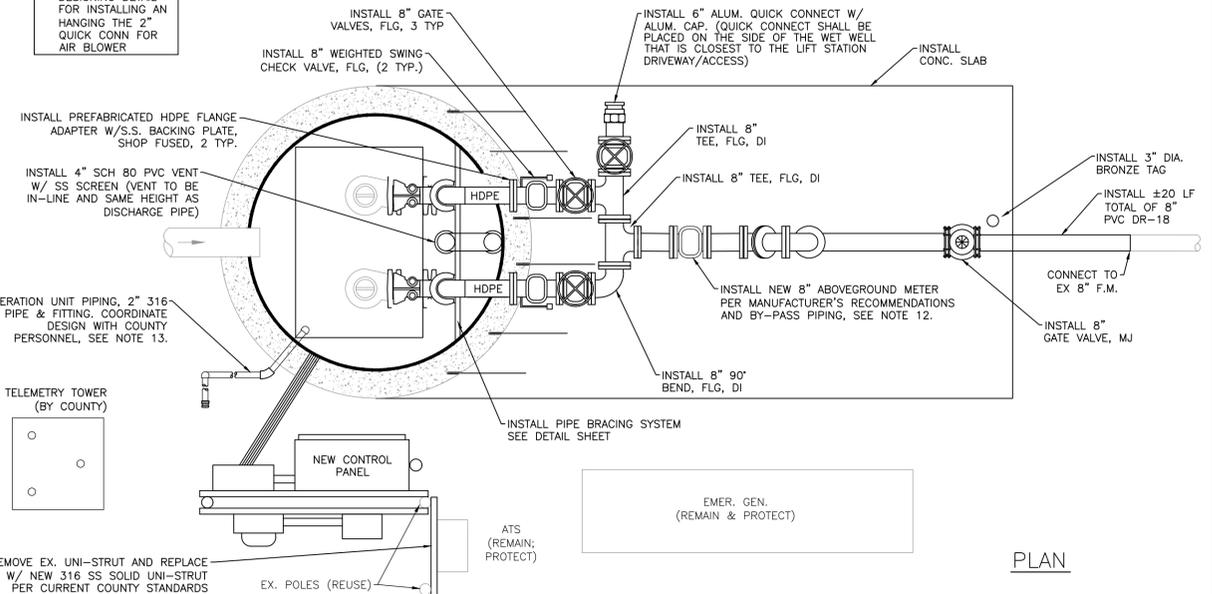
PROPOSED

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
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, MISCELLANEOUS WORK.

NOTES:

1. NEED ASSIST IN DESIGNING DETAIL FOR INSTALLING AN HANGING THE 2" QUICK CONN FOR AIR BLOWER



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, 8"
NEW BASE ELL	4" BPIU-14
MODIFY TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	NO
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, UW-14	YES, 2"
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	NO

CONSTRUCTION NOTES:

1. INSTALL ±15 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
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). 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. ALL EXISTING ELECTRICAL CONNECTIONS TO AND FROM THE CONTROL PANEL SHALL BE RE-INSTALLED AND ALL EXISTING ELECTRICAL COMPONENTS SHALL BE FUNCTIONING PROPERLY AS INSPECTED AND APPROVED BY THE COUNTY.
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. 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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
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. EXTEND THE EXISTING 2-INCH WATER SERVICE LINE FROM THE EXISTING METER BOX INTO THE LIFT STATION FENCED AREA. (±20 LF). INSTALL A NEW 2-INCH METER/BPA ASSEMBLY; AND A 2-INCH QUICK CONNECT ALONG WITH A 3/4-INCH HOSE BIBB PER COUNTY STANDARDS. ALL ITEMS SHALL BE FIELD LOCATE WITH MANATEE COUNTY PERSONNEL. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE/ROW. REPLACE END CAP OF DOWNSTREAM LEG WITH A 90° 2-INCH BEND TO PROVIDE A WATER SERVICE CONNECTION FOR THE EMERGENCY SHOWER. A 1-INCH WATER SERVICE LINE (SCH 80 PVC) SHALL BE INSTALLED FROM THE 90° BEND TO THE EMERGENCY SHOWER. (±50 LF) AND PAID UNDER BID ITEM WATER SERVICE CONNECTION AND LINE.
8. FLOW METER SHALL BE INSTALLED AND GROUNDED PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL ADHERE TO THE UPSTREAM AND DOWNSTREAM SEPARATION DISTANCES FROM FITTINGS TO ENSURE ACCURACY OF METER.
9. ALL ODOR CONTROL EQUIPMENT SHALL BE REMOVED AND REINSTALLED BY OTHERS. COUNTY INSPECTOR TO COORDINATE WITH ODOR CONTROL SUPPLIER.
10. ALL EXTERIOR CONCRETE SLAB AROUND THE LIFT STATION STRUCTURES SHALL BE REMOVED, (±100 SF). COORDINATE LIMITS OF REMOVAL WITH COUNTY PERSONNEL. SAW CUT CONCRETE PRIOR TO REMOVAL TO CREATE A SMOOTH STRAIGHT, UNIFORM EDGE; FINAL EDGES TO HAVE A 1/2" CHAMFER.
11. COUNTY SHALL RETAIN OWNERSHIP OF THE EXISTING GATE VALVES AND CHECK VALVES WITHIN THE VALVE VAULT. CONTRACTOR SHALL SET THESE ASIDE AND THE COUNTY SHALL REMOVE THE VALVES FROM THE SITE.
12. THIS STATION SHALL HAVE A NEW ABOVE GROUND METER INSTALLED AND THEREFORE SHALL HAVE A METER BYPASS PIPING INSTALLED (NOT ILLUSTRATED). REFER TO DETAIL US-18B ON SHEET 10.
13. INSTALL 2-INCH AERATION PIPING (ALL 316 STAINLESS STEEL) FOR THIS STATION ONLY. THE AERATION PIPING SHALL RUN FROM THE AERATION UNIT TO THE INSIDE OF THE WET WELL. SEE SHEET 11 FOR A CONCEPTUAL LAYOUT AND DESIGN. ALL SHALL BE FIELD LOCATED AND COORDINATED WITH COUNTY PERSONNEL.

SATELLITE LIFT STATION R&R
2022 GROUP 1
PALM-AIRE 3, 443



PROJECT #	402-5162483
SURVEY #	NA
SEC./TWN./RGE	34/35/18
SCALE	N.T.S.
SURVEYED	NA
DESIGNED	JSS 6/2021
DRAWN	JSS 6/2021
CHECKED	JSS -

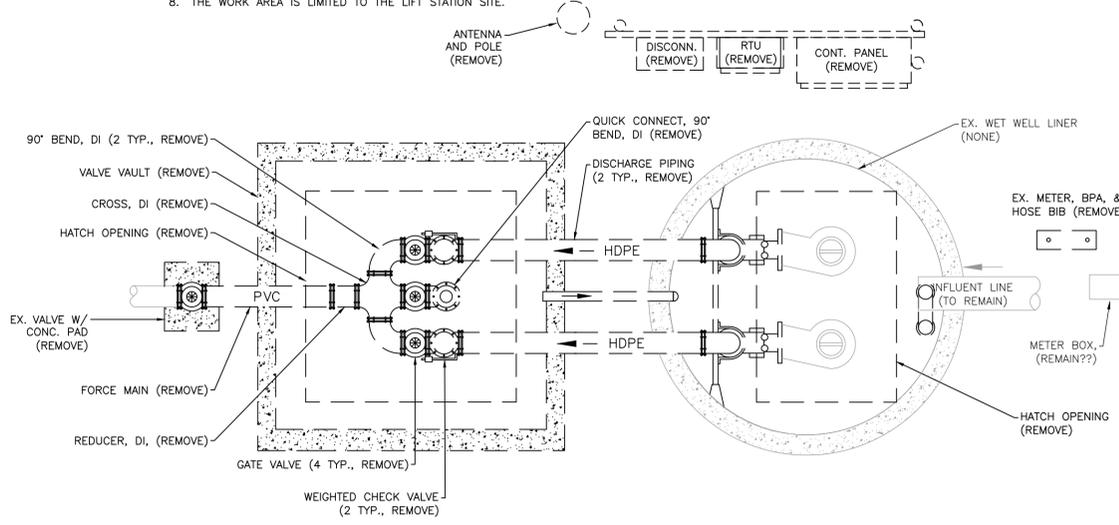
J. SIGMUND, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature & Date

NO.	REVISION DESCRIPTION	BY	DATE

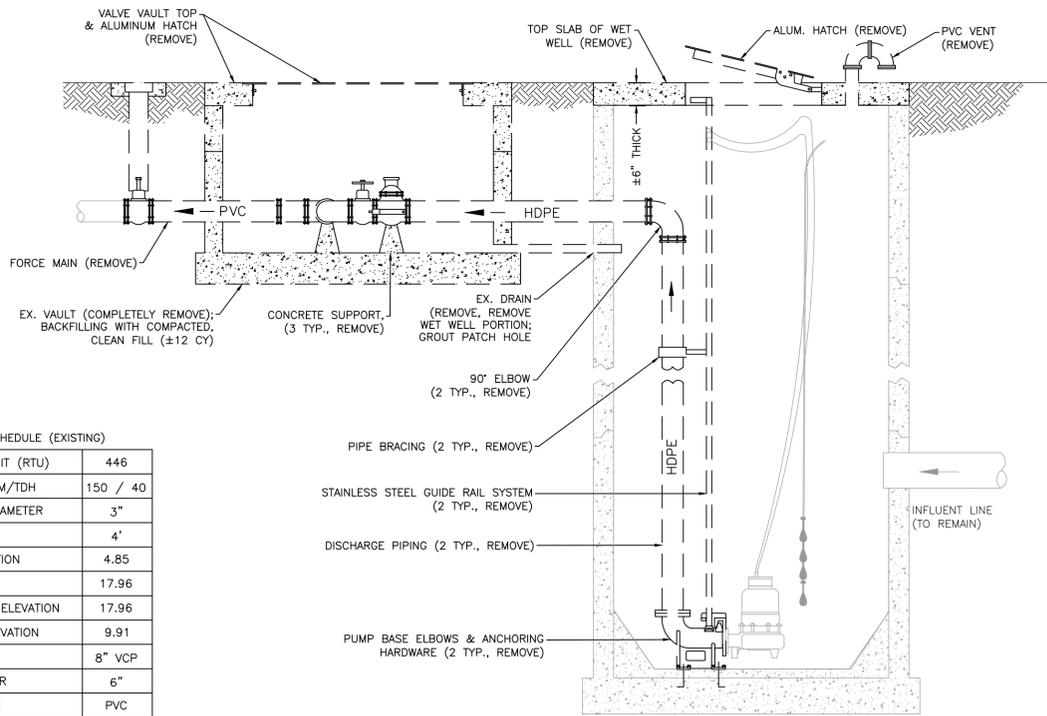
EXISTING

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. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
3. THE CONTRACTOR/BIDDER 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)	446
DESIGN CAPACITY GPM/TDH	150 / 40
DISCHARGE PIPING DIAMETER	3"
WET WELL DIAMETER	4'
BOTTOM SLAB ELEVATION	4.85
TOP ELEVATION	17.96
VALVE VAULT HATCH ELEVATION	17.96
INFLUENT INVERT ELEVATION	9.91
INFLUENT PIPE SIZE	8" VCP
FORCE MAIN DIAMETER	6"
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	230/3
EX. FORCE MAIN TIE	MH

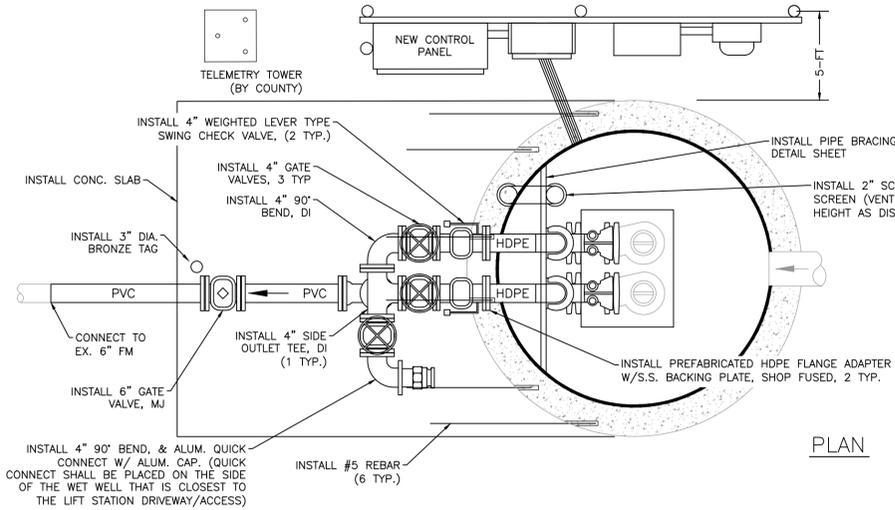
* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2020) & RECORD DRAWINGS. DATUM OF ELEVATIONS IS UNKNOWN.

NO.	REVISION DESCRIPTION	BY	DATE

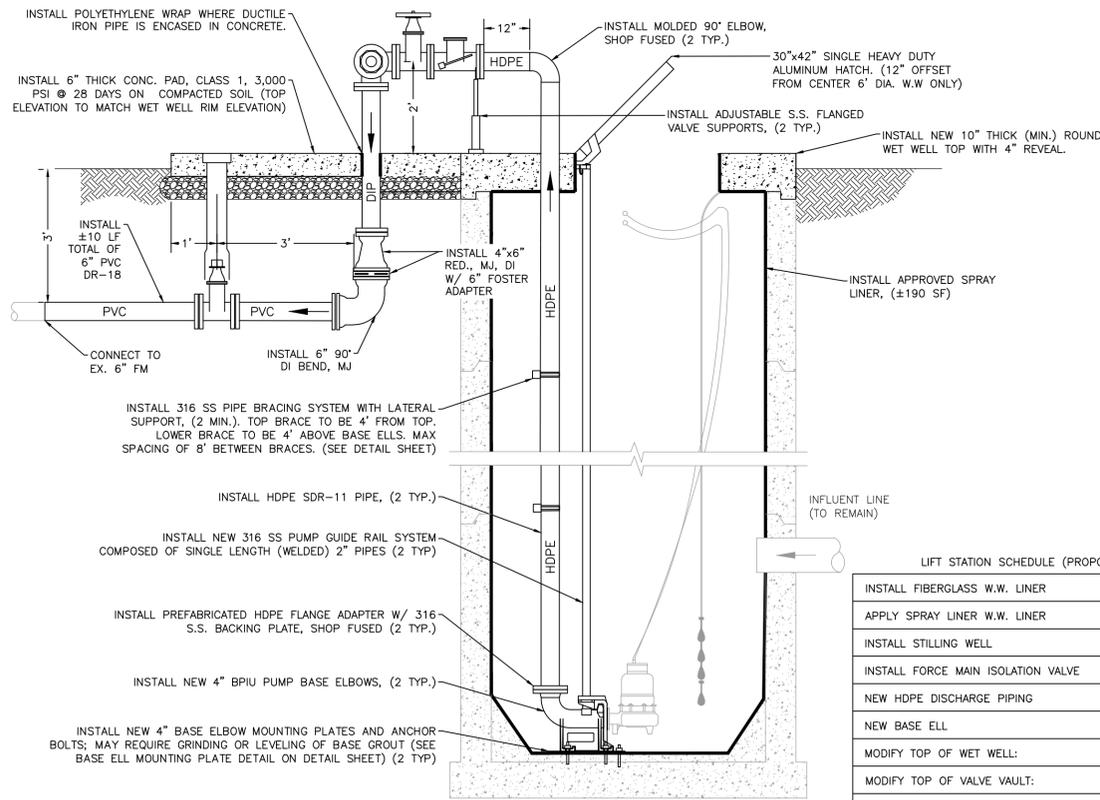
PROPOSED

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
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, MISCELLANEOUS WORK.



PLAN



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 TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	YES
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	NO

CONSTRUCTION NOTES:

1. INSTALL ±10 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
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). 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.
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. 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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
6. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
7. INSTALL A NEW 8"x2" TAPPING SADDLE AND 2-INCH WATER SERVICE VIA HDD; NEW STANDARD METER/BPA ASSEMBLY; AND INSTALL A NEW 3/4-INCH HOSE BIBB ASSEMBLY PER COUNTY STANDARDS. ALL ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL. THE METER/BPA SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE FENCE/ROW. HOSE BIBB SHALL BE LOCATED NEAR THE WET WELL, (±45 LF).
8. ABANDON THE EXISTING 8"x1" WATER SERVICE SADDLE AND CORPORATION; INSTALL A BRASS PLUG IN THE EXISTING CORPORATION. DETERIORATED SADDLES SHALL BE REPLACED PRIOR TO PLUGGING. COUNTY INSPECTOR SHALL DETERMINE IF REPLACEMENT IS REQUIRED.
9. INSTALL LANDSCAPING ROCK (MATCH EXISTING) TO REPLENISH EXISTING LANDSCAPE ROCK REMOVED, (±10 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.
10. PROTECT THE EXISTING LANDSCAPING HEDGE AROUND THE LIFT STATION. REPLACE IN KIND, IF DAMAGED OR REMOVED, AT CONTRACTOR EXPENSE.

SATELLITE LIFT STATION R&R
2022 GROUP 1
PALM-AIRE 6, 446



PROJECT #	402-5162484
SURVEY #	NA
SEC./TWN./RGE	27/35/18
SCALE	N.T.S.
SURVEYED	NA
DESIGNED	JSS 6/2021
DRAWN	JSS 6/2021
CHECKED	JSS -

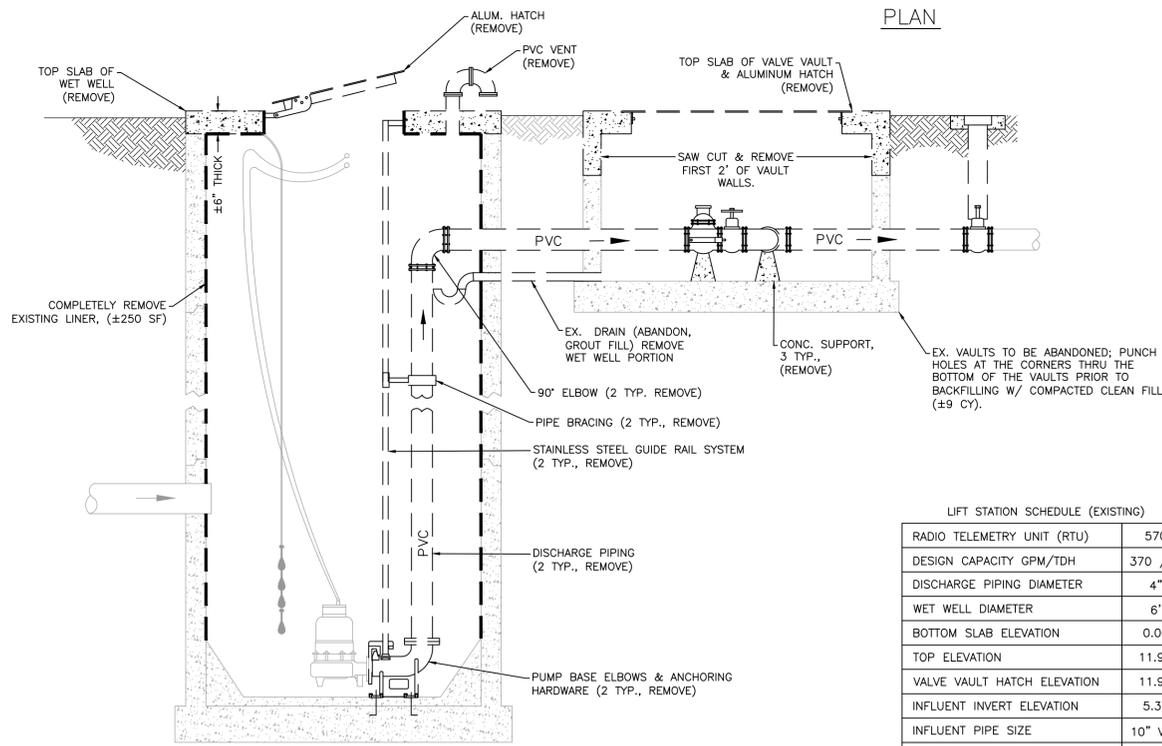
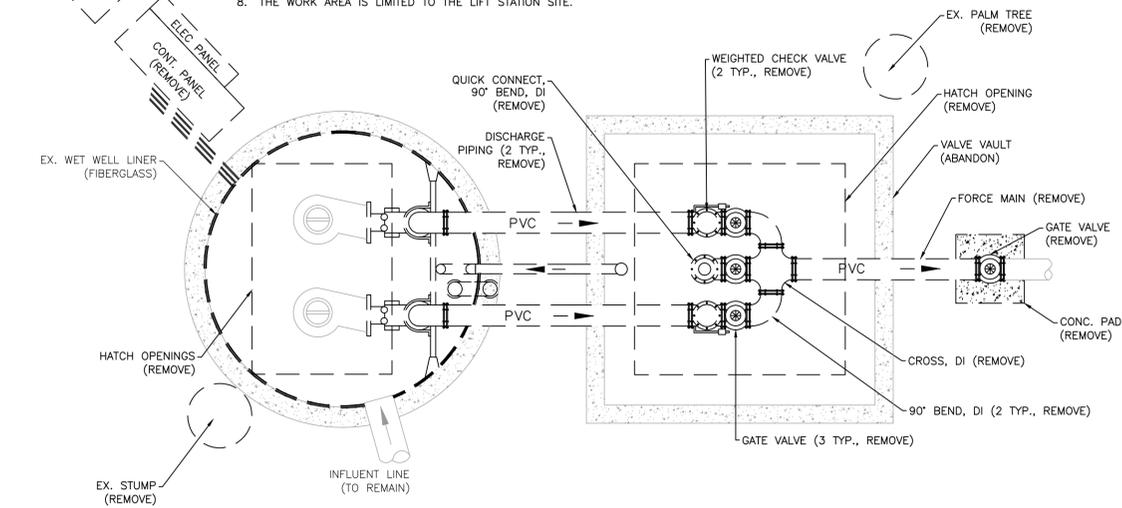
J. SHEA SHOUN, P.E.

 SHEET 08 OF 12

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. THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
3. THE CONTRACTOR/BIDDER 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.



ELEVATION
EX. 2 PUMP LIFT STATION
NTS

ELEVATION
EX. 2 PUMP LIFT STATION
NTS

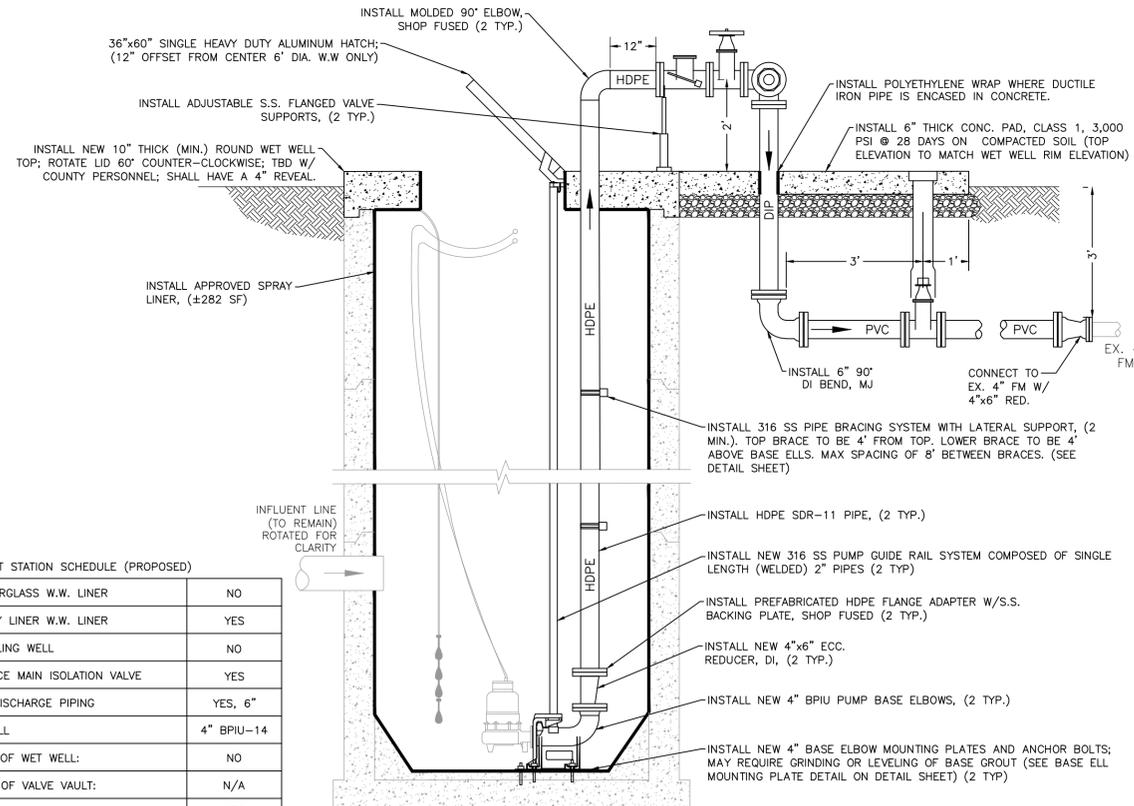
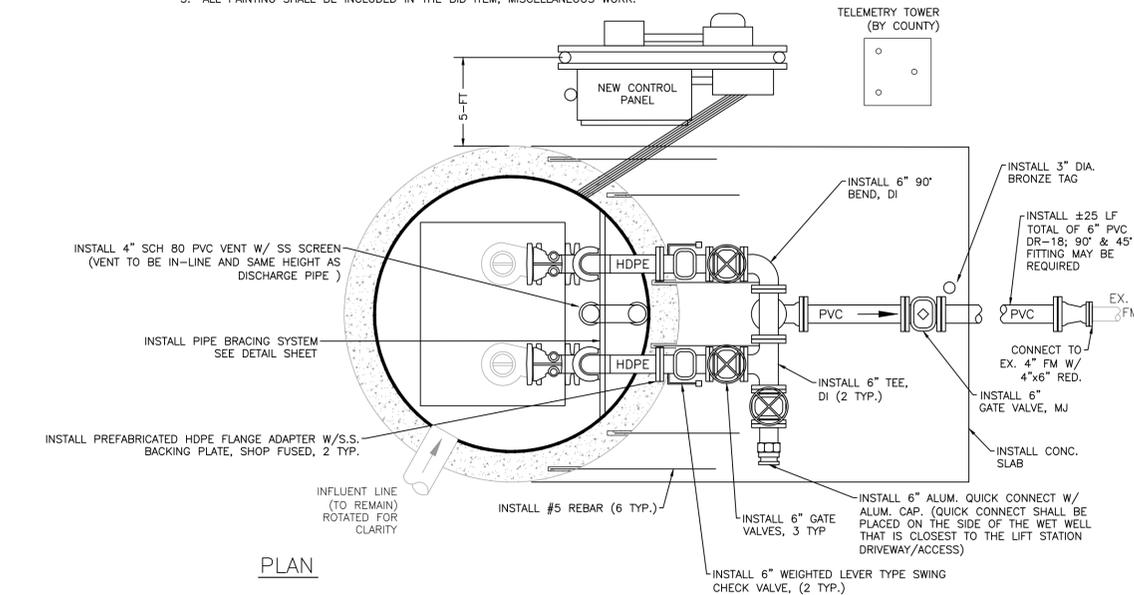
LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	570
DESIGN CAPACITY GPM/TDH	370 / ?
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	0.00
TOP ELEVATION	11.94
VALVE VAULT HATCH ELEVATION	11.94
INFLUENT INVERT ELEVATION	5.36
INFLUENT PIPE SIZE	10" VCP
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC
ELECT. POWER, VOLTS/PH	230/3
EX. FORCE MAIN TIE	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.
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 ASHTO M153 OR ASHTO 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, MISCELLANEOUS WORK.



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, 6"
NEW BASE ELL	4" BPIU-14
MODIFY TOP OF WET WELL:	NO
MODIFY TOP OF VALVE VAULT:	N/A
INSTALL WET WELL VENT PIPE	YES
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	NO
UPGRADE / RELOCATE EX. WATER SERVICE ASSEMBLY	NO

CONSTRUCTION NOTES:

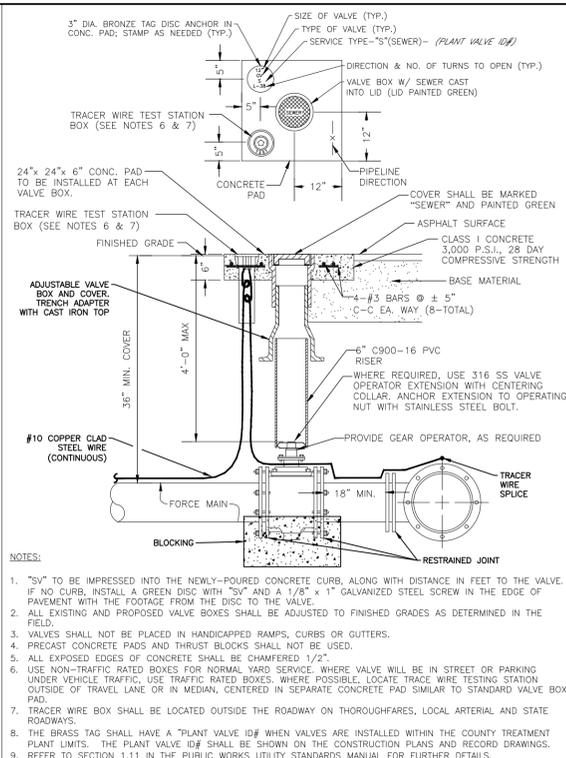
1. INSTALL ±20 LF NEW ELECTRICAL SERVICE W/ CONDUIT.
2. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A CONTROL PANEL, TCU ENCLOSURE, JUNCTION BOX ENCLOSURE, A METER CAN, AND A SAFETY SWITCH (DISCONNECT). NEW ELECTRICAL STRUCTURE SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
3. A TCU 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. 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 VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
7. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
8. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
9. INSTALL A 12-FT WIDE 6-INCH THICK REINFORCE CONCRETE DRIVEWAY. EXACT LOCATION AND LAYOUT SHALL BE DETERMINED IN THE FIELD WITH COUNTY PERSONNEL, (±36 SY). THE DRIVEWAY CANNOT EXCEED A 2% CROSS SLOPE WHERE IT SHALL BE USED AS A SIDEWALK. THE EXISTING SIDEWALK MAY NEED TO BE REWORKED TO AVOID THE NEED FOR HANDICAP RAMPS, THE LONGITUDINAL SLOPE OF THE SIDEWALK MAY NOT EXCEED 5%.
10. REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES.
11. REMOVE AND DISPOSE OF EXISTING PALM TREE, STUMP, AND ROCK LOCATED AROUND THE LIFT STATION STRUCTURES. ALL WORK SHALL BE COORDINATED WITH MANATEE COUNTY PERSONNEL PRIOR TO COMMENCEMENT.

**SATELLITE LIFT STATION R&R
2022 GROUP 1
RIDGWOOD 1, RTU 570**

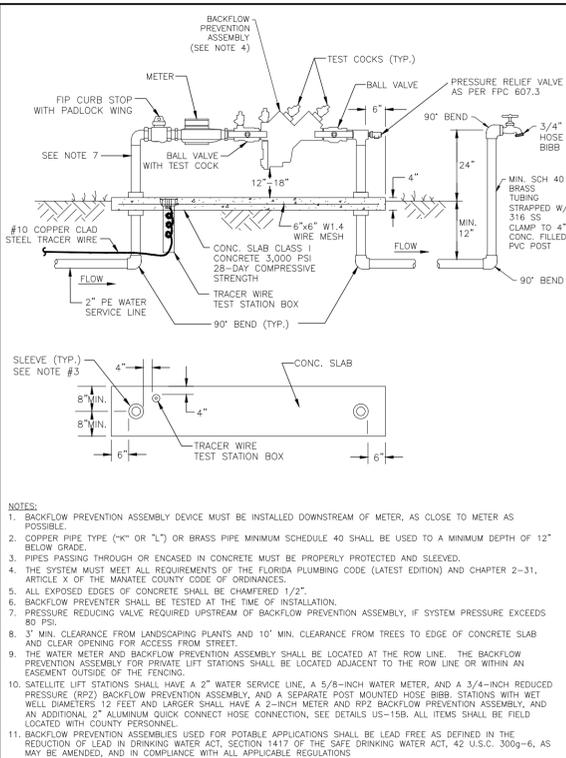


PROJECT #	402-5162485	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA PROFESSIONAL ENGINEERING LICENSE No. 60923
SEC./TWN./RGE	10/34/18	DATE 02/01/2022
SCALE	N.T.S.	SIGNATURE
SURVEYED	NA	DATE
DESIGNED	JSS	6/2021
DRAWN	JSS	6/2021
CHECKED	JSS	-

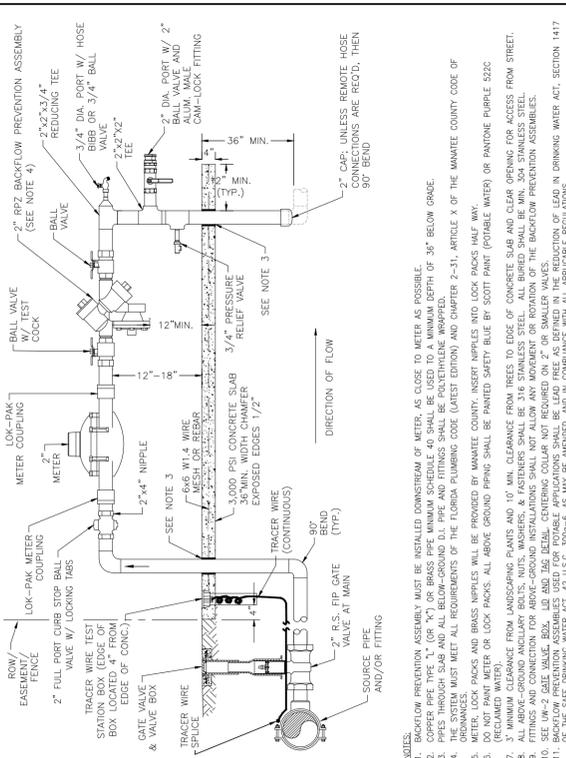
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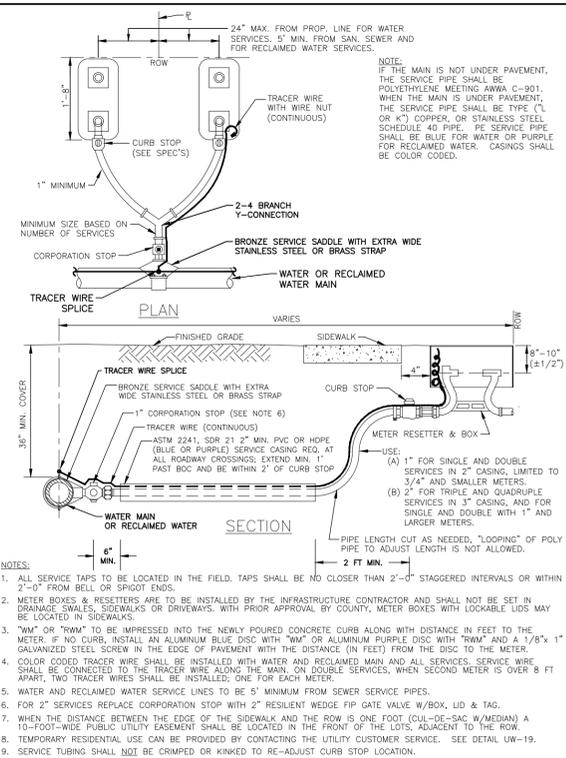
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	VALVE, BOX, COVER AND TAG	US-11
REV. BY DATE		
DATE OF APPROVAL		



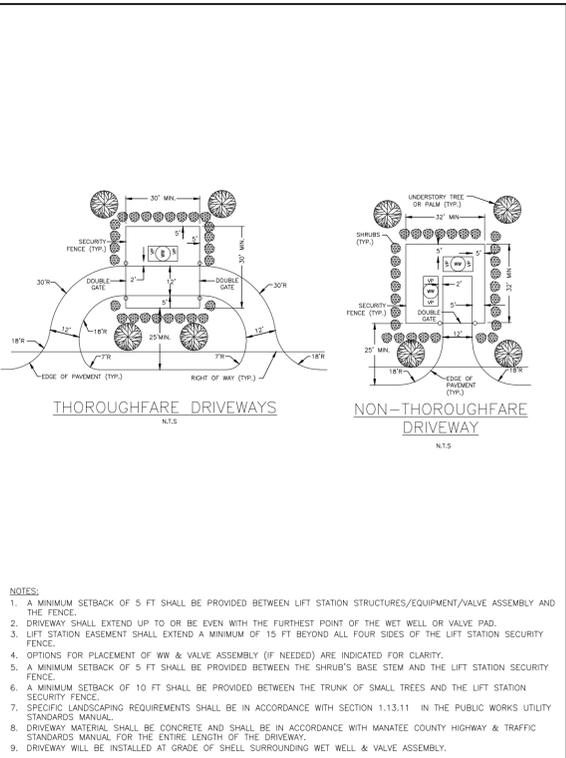
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	5/8" WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-15A
REV. BY DATE		
DATE OF APPROVAL		



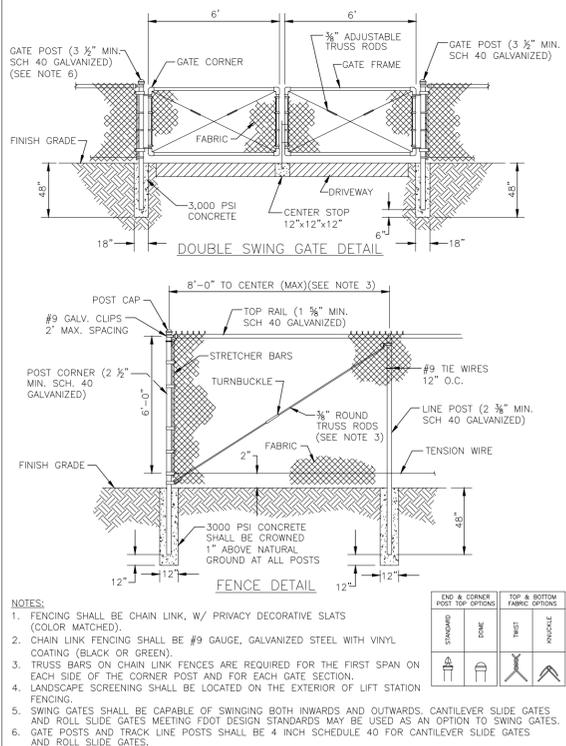
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	2" WATER METER AND BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-15B (NEW)
REV. BY DATE		
DATE OF APPROVAL		



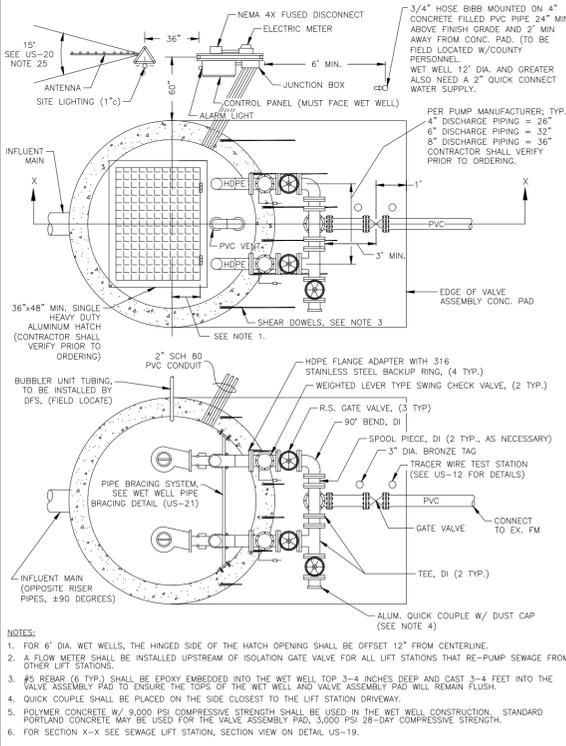
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TYPICAL SERVICE CONNECTION	UW-21
REV. BY DATE		
DATE OF APPROVAL		



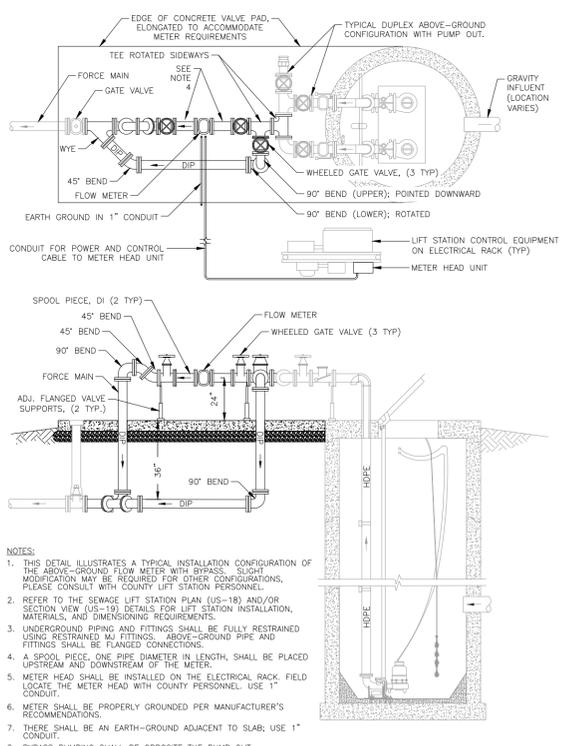
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	MINIMUM ACCESS/EGRESS AND LANDSCAPING REQUIREMENTS FOR LIFT STATIONS	US-16
REV. BY DATE		
DATE OF APPROVAL		



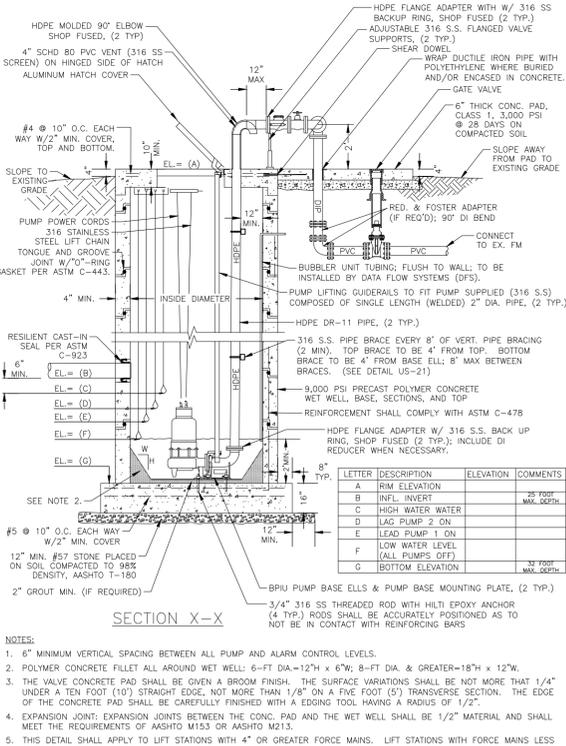
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SECURITY FENCING	US-17
REV. BY DATE		
DATE OF APPROVAL		



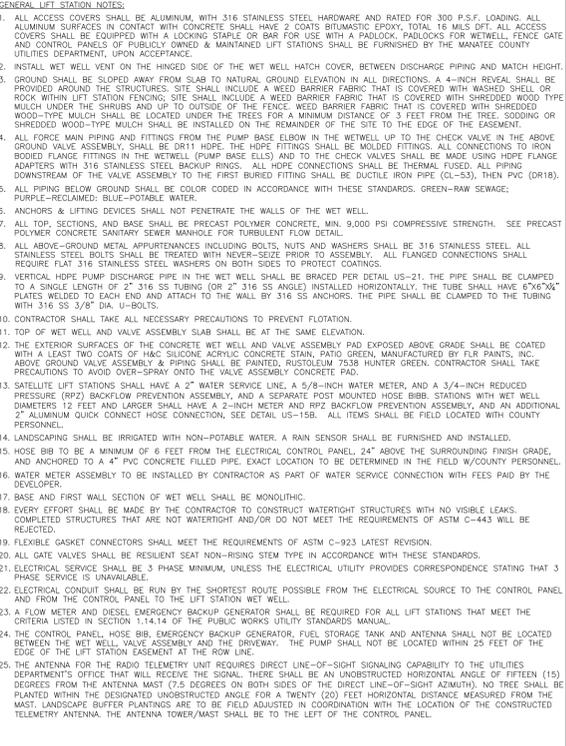
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION PLAN VIEW	US-18A
REV. BY DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	ABOVE GROUND FLOW METER DETAIL WITH METER BYPASS	US-18B (NEW)
REV. BY DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SEWAGE LIFT STATION SECTION VIEW	US-19
REV. BY DATE		
DATE OF APPROVAL		



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	LIFT STATION NOTES	US-20
REV. BY DATE		
DATE OF APPROVAL		

NO.	REVISION DESCRIPTION	BY	DATE

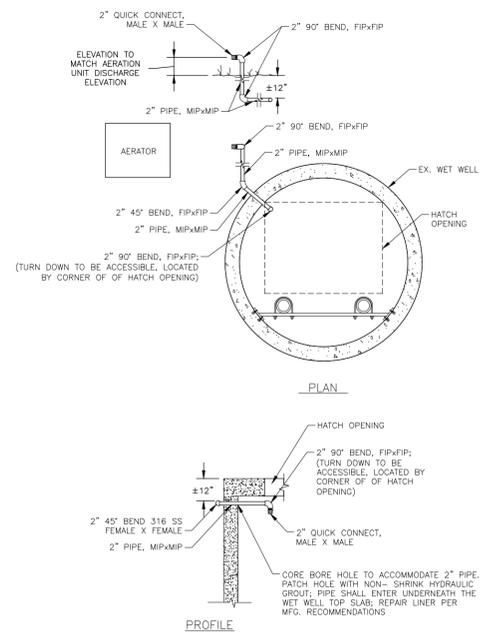
SATELLITE LIFT STATION R&R

2022 GROUP 1

DETAILS 1

PROJECT #	402-0019707 / 5001301	J. SHEA SHOUN, P.E.
SURVEY #	NA	FLORIDA PROFESSIONAL ENGINEER No. 60923 02/01/2022
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	NA	
DESIGNED	JSS	6/2021
DRAWN	JSS	6/2021
CHECKED	JSS	-

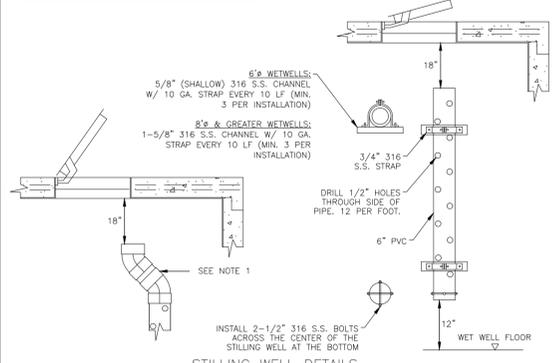
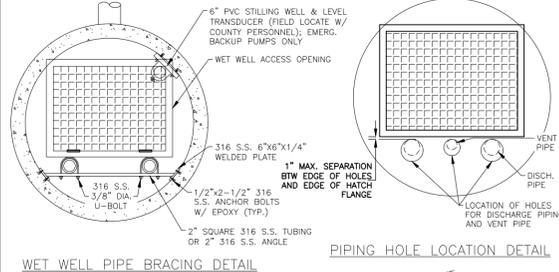
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208



- 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

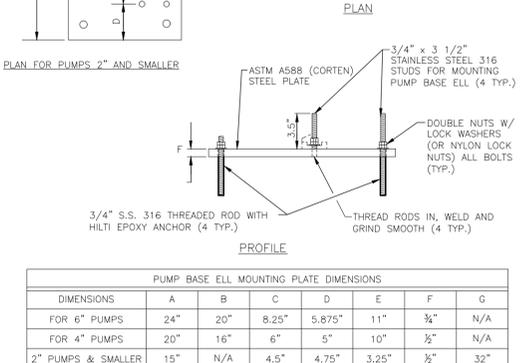
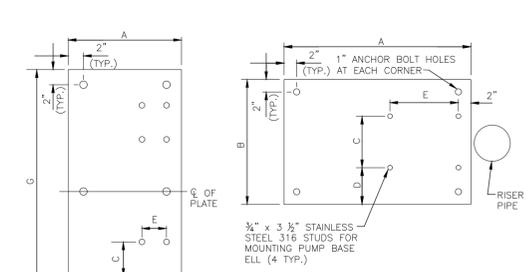
NOTES:

- 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.



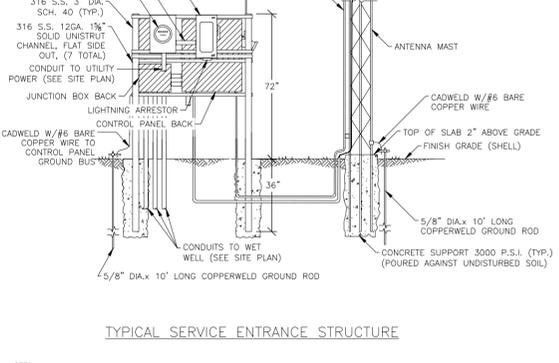
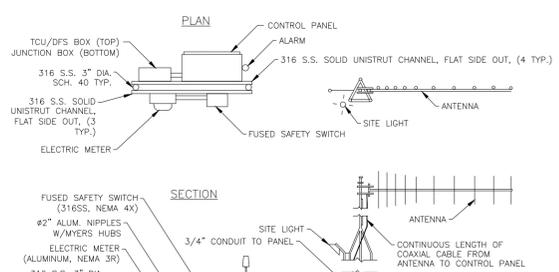
- NOTES:**
- FOR LARGER LIFT STATIONS, PROVISIONS SHALL BE MADE TO MAKE THE TOP OF THE STILLING WELL VISIBLE AND ACCESSIBLE FROM THE HATCH OPENING, I.E. 45° FITTINGS, ETC.
 - REFER TO STANDARD DETAILS US-18, US-19 & US-20 FOR LIFT STATION DETAILS.
 - NYLON LOCK NUTS SHALL NOT BE USED ON WEDGE ANCHORS.

DIMENSIONS	A	B	C	D	E	F	G
FOR 6" PUMPS	24"	20"	8.25"	5.875"	11"	3/4"	N/A
FOR 4" PUMPS	20"	16"	6"	5"	10"	3/4"	N/A
2" PUMPS & SMALLER	15"	N/A	4.5"	4.75"	3.25"	3/4"	32"

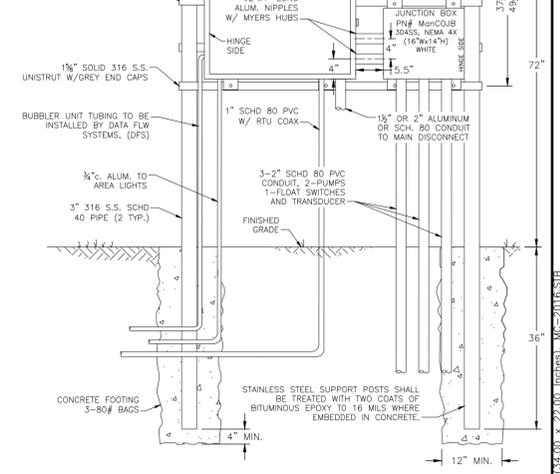
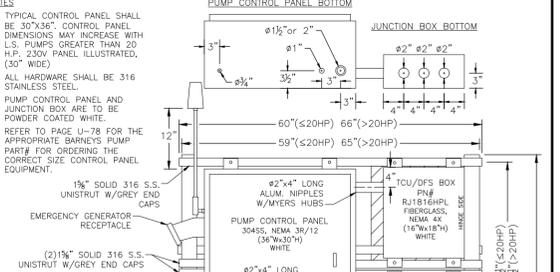


- NOTES:**
- INSTALL DOUBLE NUTS (OR NYLON LOCK NUTS) ON ALL EIGHT (8) THREADED RODS.
 - THE PLATE EDGES AND ALL HOLES SHALL BE GROUND SMOOTH TO REMOVE ALL BURRS.
 - DIMENSIONS "C" & "D" ARE FOR BARNEY'S PUMPS, INC. BASE ELLS.
 - FOR PUMPS WITH A 2-INCH DISCHARGE OR LESS, A SINGLE BASE PLATE SHALL BE INSTALLED UNDER BOTH GRINDER PUMPS.

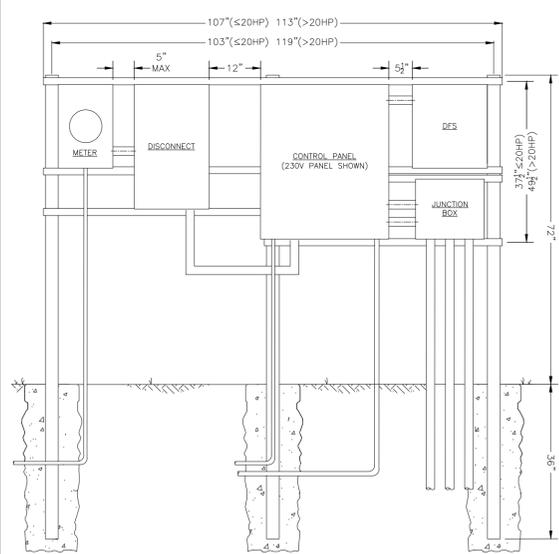
DIMENSIONS	A	B	C	D	E	F	G
FOR 6" PUMPS	24"	20"	8.25"	5.875"	11"	3/4"	N/A
FOR 4" PUMPS	20"	16"	6"	5"	10"	3/4"	N/A
2" PUMPS & SMALLER	15"	N/A	4.5"	4.75"	3.25"	3/4"	32"



- NOTES:**
- ALL EQUIPMENT FURNISHED FOR THE LIFT STATION SHALL CONFORM TO MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
 - POWER TO BE SUPPLIED AS DIRECTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY AND PERMANENT ELECTRICAL SERVICE.
 - STAINLESS STEEL CONTROL PANEL SUPPORT POSTS SHALL BE TREATED WITH TWO COATS OF BUTYRUMINOUS EPOXY TO 16 MILS WHERE EMBEDDED IN CONCRETE.
 - CONTROL AND FLOW METER ENCLOSURE TO BE NEMA 3R/12 304 STAINLESS STEEL WITH RAIN SHIELD, DISCONNECT ENCLOSURE TO BE NEMA 4X 304 STAINLESS STEEL.
 - ALL P.V.C. CONDUIT SHALL BE SCHEDULE 80.
 - ANTENNA MAST SHALL BE RATED FOR 150 MPH WINDS.
 - IF ANTENNA MAST IS MORE THAN 18' FROM PANEL, RUN CONDUIT FOR SITE LIGHT UNDERGROUND.

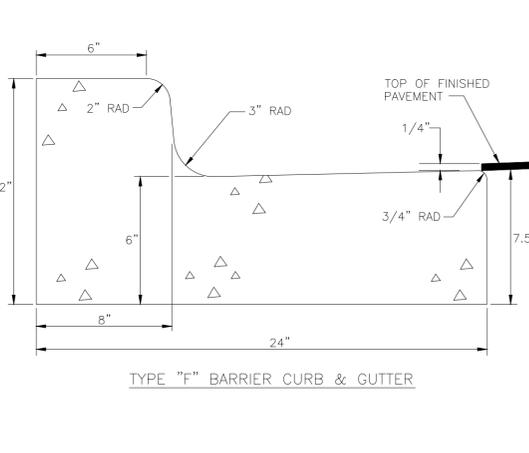


DIMENSIONS	A	B	C	D	E	F	G
FOR 6" PUMPS	24"	20"	8.25"	5.875"	11"	3/4"	N/A
FOR 4" PUMPS	20"	16"	6"	5"	10"	3/4"	N/A
2" PUMPS & SMALLER	15"	N/A	4.5"	4.75"	3.25"	3/4"	32"



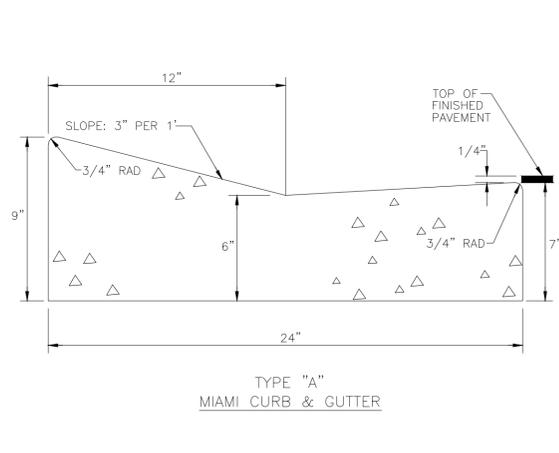
- NOTES:**
- THIS DETAIL IS ONLY TO SHOW THE GENERAL LAYOUT OF THE CONTROL EQUIPMENT. REFER TO DETAILS US-23 & US-24 FOR FURTHER DETAIL INFORMATION.
 - A REMOTE EMERGENCY GENERATOR RECEPTACLE SHALL BE REQUIRED WHEN USING A ONE-SIDED LAYOUT. THE RECEPTACLE SHALL BE MOUNTED ±4 LF HIGH AND ATTACHED WITH 316 S.S. HARDWARE TO A CONCRETE BANJO PEDESTAL, WHICH SHALL BE FIELD LOCATED WITH COUNTY PERSONNEL.

NO.	REVISION DESCRIPTION	BY	DATE



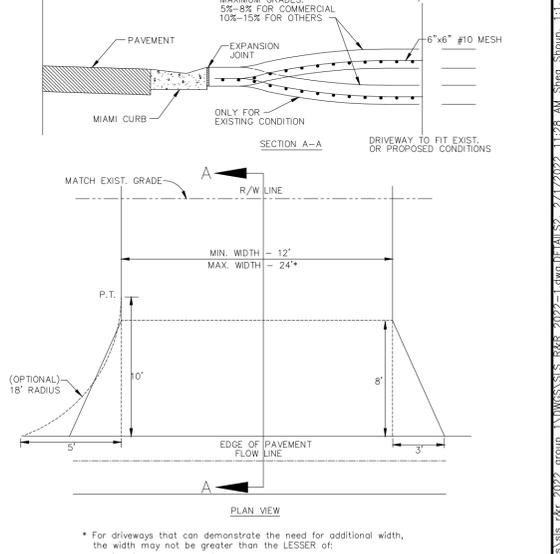
- NOTES:**
- CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.
 - CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

NO.	REVISION DESCRIPTION	BY	DATE



- NOTES:**
- CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.
 - CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

NO.	REVISION DESCRIPTION	BY	DATE



- NOTES:**
- CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB - TO R/W LINE.
 - DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)
 - MAINTAIN EXISTING DRAINAGE FLOWLINE. FOR PIPING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200 - DRAINAGE (STD. 200.0, 202.5)
 - 3"x8" FLARE OR 18" RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "F" CURB TO MIAMI CURB) SEE STD. 102.2. NO CHANGE WITH 3" VALLEY CROSSINGS - SEE STDS. 201.0, 201.1, 201.2, 201.4, 201.5, 201.6.
 - EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12' (BEYOND FLARE) PLACE JOINT ON 10' CENTER.
 - LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

NO.	REVISION DESCRIPTION	BY	DATE

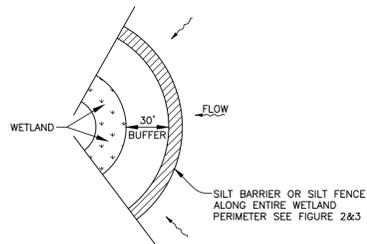
SATELLITE LIFT STATION R&R

2022 GROUP 1

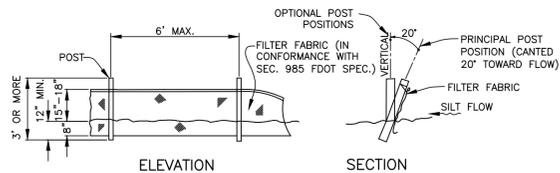
DETAILS 2



PROJECT #	402-0019707 / 5001301	J. SHEA SHOUN, P.E. Professional Engineer No. 60923 STATE OF FLORIDA 02/01/2022
SURVEY #	NA	
SEC./TWN./RGE	VARIES	SHEET 11 OF 12
SCALE	N.T.S.	
SURVEYED	BY: NA DATE: NA	DATE: 6/2021
DESIGNED	JSS 6/2021	
DRAWN	JSS 6/2021	
CHECKED	JSS -	

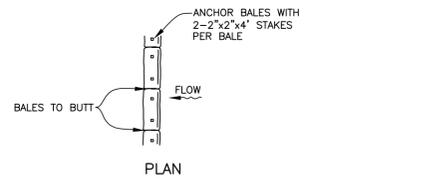


WETLAND BUFFER
FIGURE 1

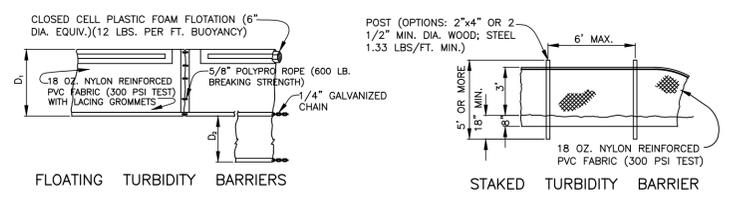


TYPICAL SILT FENCE
FIGURE 2

NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

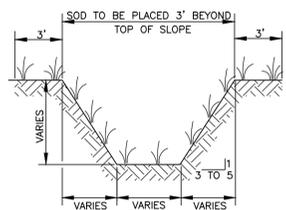


TYPICAL BALE SILT BARRIER
FIGURE 3

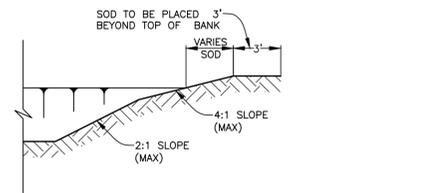


TURBIDITY BARRIERS
FIGURE 4

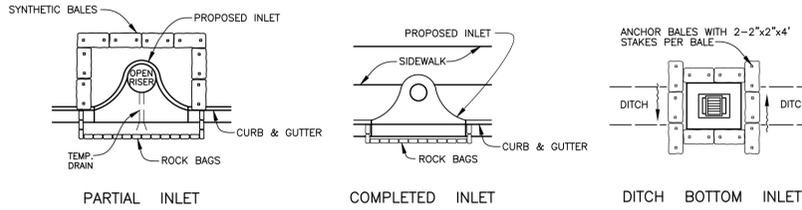
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



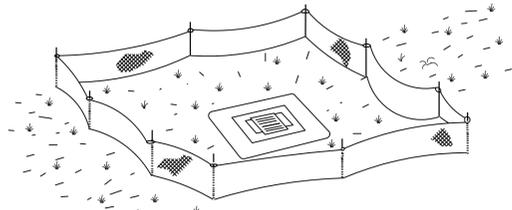
TYPICAL SWALE SECTION
FIGURE 5



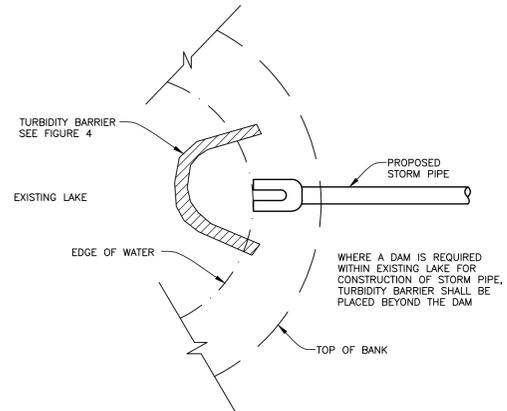
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7

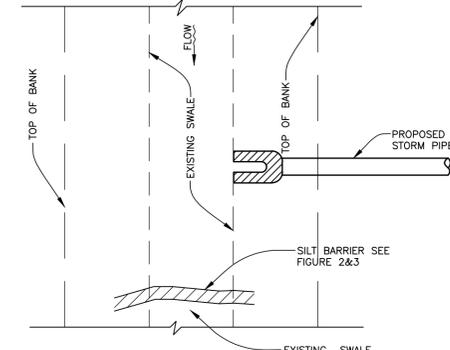


TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8

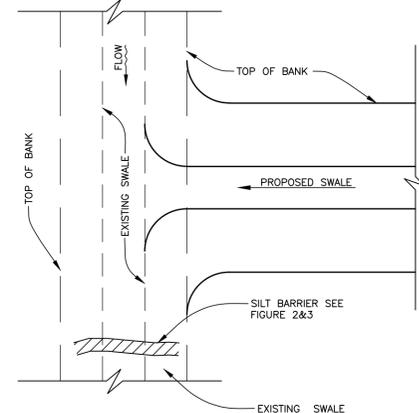


TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9

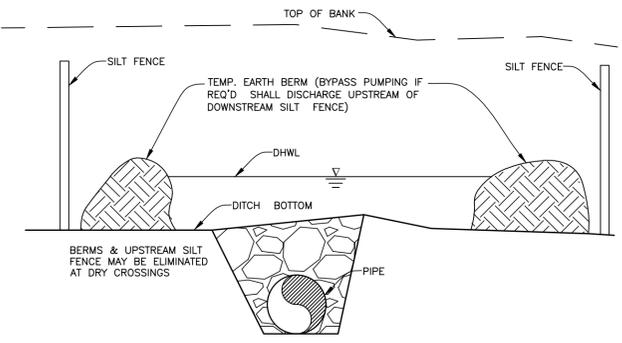
WHERE A DAM IS REQUIRED WITHIN EXISTING LAKE FOR CONSTRUCTION OF STORM PIPE, TURBIDITY BARRIER SHALL BE PLACED BEYOND THE DAM



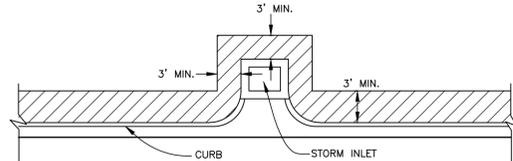
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



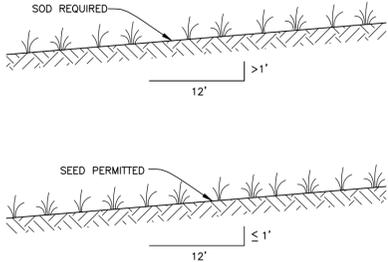
SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11



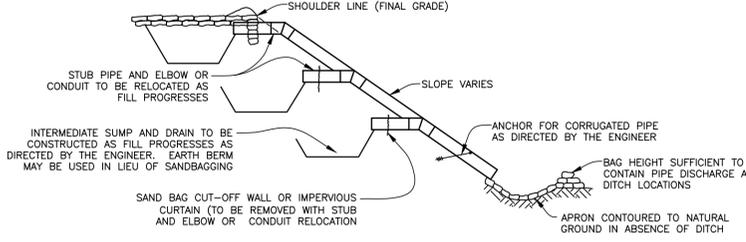
UNDERGROUND PIPE CROSSING
FIGURE 12



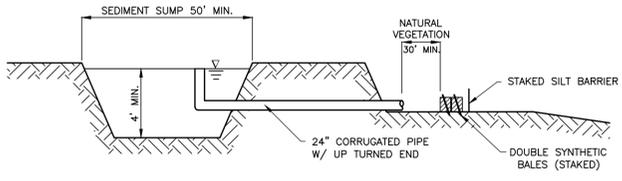
SOD ALONG CURB
AND AROUND INLET
FIGURE 14



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

SATELLITE LIFT STATION R&R
2022 GROUP 1
EROSION CONTROL DETAILS



PROJECT #	402-0019707 / 5001301
SURVEY #	NA
SEC./TWN./RGE	VARIES
SCALE	N.T.S.
SURVEYED	BY: NA DATE: NA
DESIGNED	JSS 6/2021
DRAWN	JSS 6/2021
CHECKED	JSS -

J. SHEA SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
02/01/2022
SHEETS

NO.	REVISION DESCRIPTION	BY	DATE

18 upgrades/16 16 2022 group 1\WORKS\SIS R&R 2022-1.dwg, 2/17/2022 11:28 AM Shea Shoun, P.E., ANS (full bleed) (4x400 x 22,000 inches), 10-2016(15)B