



# MANATEE COUNTY, FLORIDA SATELLITE LIFT STATION R&R 2014 GROUP 1 402-0019707 / 5001301

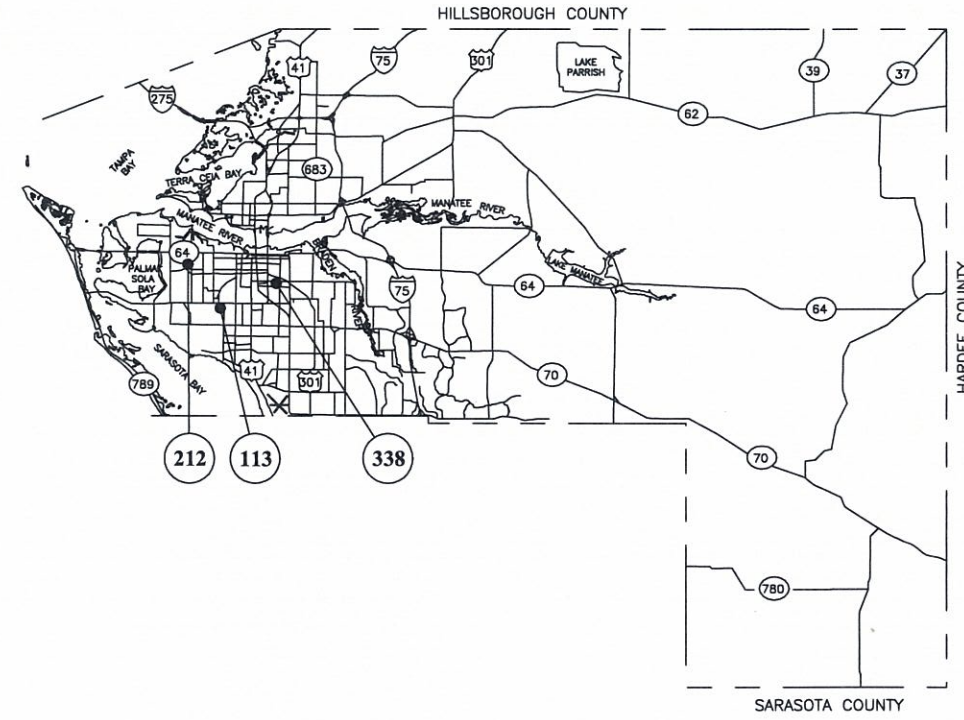
MARCH 2014

THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

**SATELLITE LIFT STATION R&R  
2014 GROUP 1  
COVER SHEET**


**100% PLANS**

L.S.NAME/NO.	RTU #	ADDRESS	PROJECT JL NO.
COLLEGE PLAZA	113	4408 34TH ST. W.	5005102
THE OAKS	212	1300 WATER OAK WAY	5005103
S-2	338	2312 8TH ST. W.	5005106

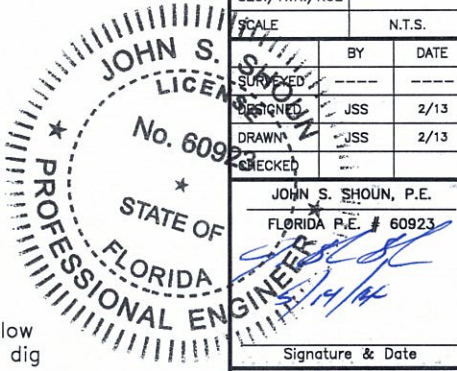


NO.	INDEX OF SHEETS
1.	COVER SHEET
2.	GENERAL NOTES & LEGEND
3.	VICINITY MAPS
4.	COLLEGE PLAZA (RTU 113)
5.	THE OAKS (RTU 212)
6.	S-2 (RTU 338)
7.-8.	SEWER DETAILS
9.	EROSION CONTROL

**PROJECT DESCRIPTION**  
REHABILITATE SEWAGE LIFT STATIONS TO REDUCE RISK TO PUBLIC HEALTH AND ENVIRONMENTAL POLLUTION. THE WORK SHALL CONSIST OF, BUT NOT LIMITED TO, 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



JOHN S. SHOUN, P.E.  
FLORIDA P.E. # 60923

NO.	DATE	BY	REVISION DESCRIPTION
1	5/14/14	JSS	removed Fiddler's Green

PROJECT #	402-0019707 / 5001301
SURVEY #	-
SEC./TWN./RGE	-
SCALE	N.T.S.

NO.	BY	DATE
SURVEYED	-	-
DESIGNED	JSS	2/13
DRAWN	JSS	2/13
CHECKED	-	-

Signature & Date

GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: SHERRI ROBINSON AND CAN BE REACHED AT: (941) 708-7450 EXT. 7334

SAFETY

- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.

ENVIRONMENTAL

- 13. WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE WHEN A SPILL IS APPARENT.

UTILITIES

- 31. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS.

RESTORATION

- 36. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.

CONSTRUCTION

- 43. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT Baffles POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.

65. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.

EMERGENCY CONTACTS

MANATEE COUNTY PUBLIC WORKS DEPT. UTILITY ENGINEERING WAYNE TROXLER, P.E. 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7450 EXT. 7650 FAX: (941) 708-7431

TECO/PEOPLES GAS CO. DAN SHANAHAN 8261 VICO COURT SARASOTA, FL 34240 (941) 342-4030 FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911 dshanahan@tecoenergy.com

SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770

VERIZON FLORIDA INC. WAYNE SUMNER 1701 RINGLING BLVD. SARASOTA, FL 34236 (941) 330-9203 WAYNE.SUMNER@verizon.com

FLORIDA POWER & LIGHT GREG COKER 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 723-4430 FAX: (941) 723-4444 EMERGENCY: 1-800-4-OUTAGE Greg.Coker@fpl.com

FLORIDA GAS TRANSMISSION SAFETY HARBOR TEAM 7804 ANDERSON RD. TAMPA, FL 33634 CHRIS LEE (813) 466-3327 CELL : (727) 639-7512 christopher.lee@sug.com

BRIGHT HOUSE NETWORKS TOM WRIGHT 5413 E. STATE ROAD 64 BRADENTON, FL 34208-5535 (941) 748-3816 EXT. 21348 tom.wright@mybrighthouse.com

DEPARTMENT OF ENVIRONMENTAL PROTECTION STEPHANIE BARIOS 13051 N. TELECOM PKWY TEMPLE TERRACE, FL 33637 PHONE: (813) 632-7600, EXT. 408 FAX: (813) 632-7662

PEACE RIVER ELECTRIC COOPERATIVE, INC. P.O. BOX 1310 WACHULA, FL 33873 KENDELL COKER (863) 767-4660 kendell.coker@preco.coop



THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

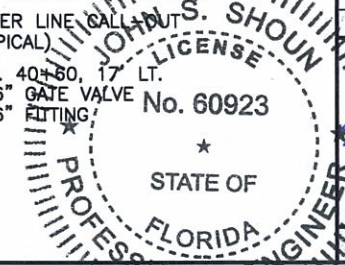
SATELLITE LIFT STATION R&R 2014 GROUP 1 GENERAL NOTES & LEGEND

LEGEND

Table with columns for EXISTING, PROPOSED, and ABBREVIATIONS. Includes symbols for bench marks, concrete monuments, pipes, conduits, manholes, valves, and various utility lines.

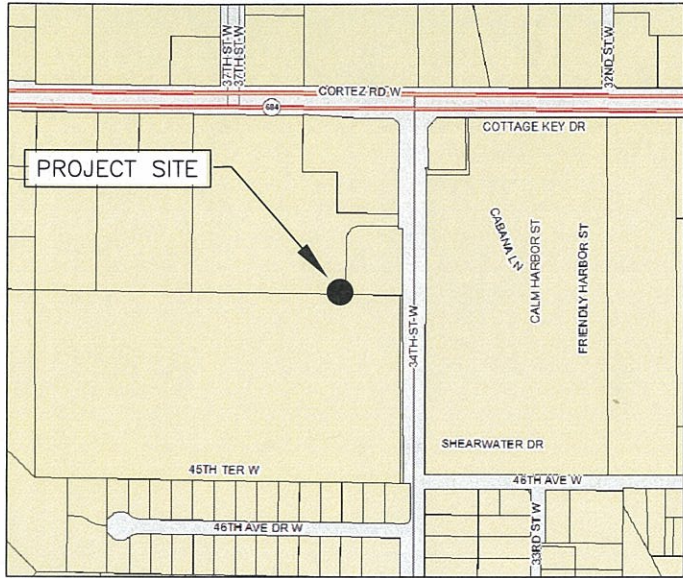
PROPOSED PROJECT NOTES JOB SPECIFIC (EXAMPLE):

WATER LINE CALIBRATION, SHOUN (TYPICAL) STA. 40+80, 17' LT. 1-6" GATE VALVE No. 60923 1-6" FITTING



Revision table with columns for NO., REVISION DESCRIPTION, BY, and DATE. Includes project information like PROJECT # 402-0019707 / 5001301 and SURVEY #.

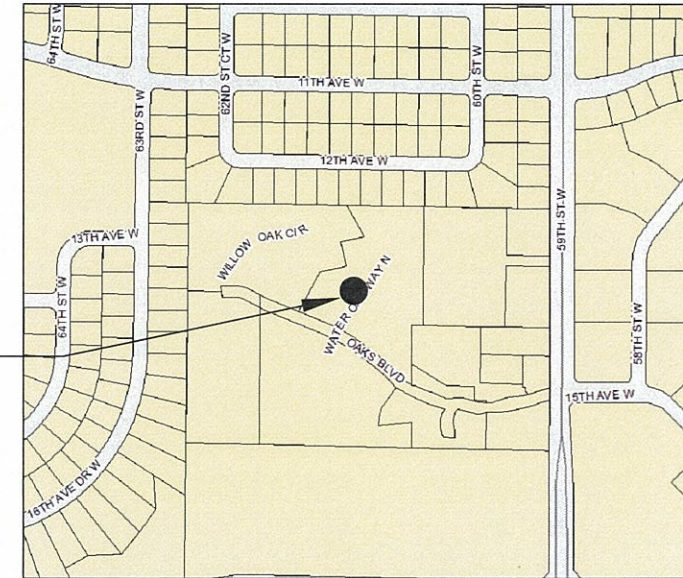
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT | S:\PMD\_Engineering\_Share\Util\_Eng\_Design\PROJ\SAN\_SWR\_Proj\San\_Swr - LS Upgrades\SLR\_R&R 2014 Group 1\DWG5\active-SLR\_R&R 2014 Grp 1.dwg, 3 VC MAPS, 5/14/2014 10:06 AM Shea Shoun, 1:1, Tabloid (11 x 17)



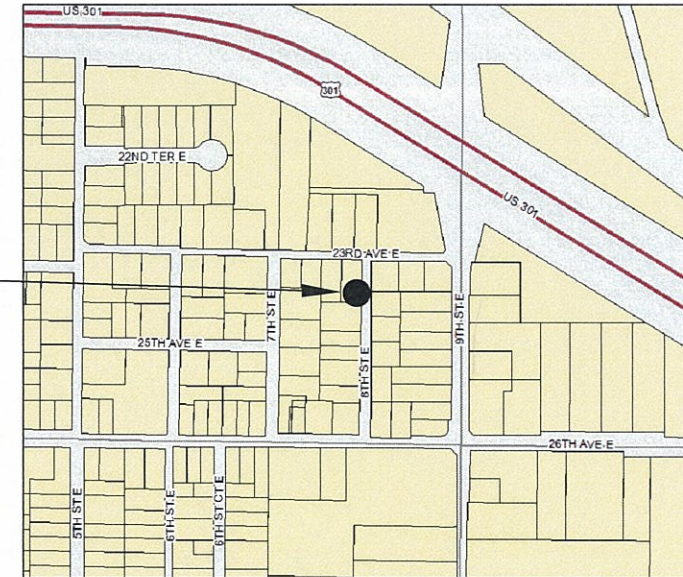
COLLEGE PLAZA, RTU 113, 4408 34TH ST. W.

NOTE(S):

1. LIFT STATION SITE VISITS MAY BE COORDINATED WITH NICK WAGNER, 941-792-8811 x5377.



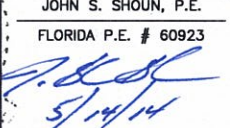
THE OAKS, RTU 212, 1300 WATER OAK WAY

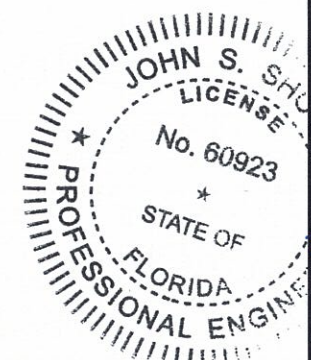


S-2, RTU 338, 2312 8TH ST. E.

THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

**SATELLITE LIFT STATION R&R**  
**2014 GROUP 1**  
**VICINITY MAPS**

NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #	402-0019707 / 5001301		
SURVEY #	-		
SEC./TWN./RGE	-		
SCALE	N.T.S.		
		BY	DATE
SURVEYED	----		
DESIGNED	JSS		2/13
DRAWN	JSS		2/13
CHECKED			
JOHN S. SHOUN, P.E. FLORIDA P.E. # 60923			
 Signature & Date 5/14/14			



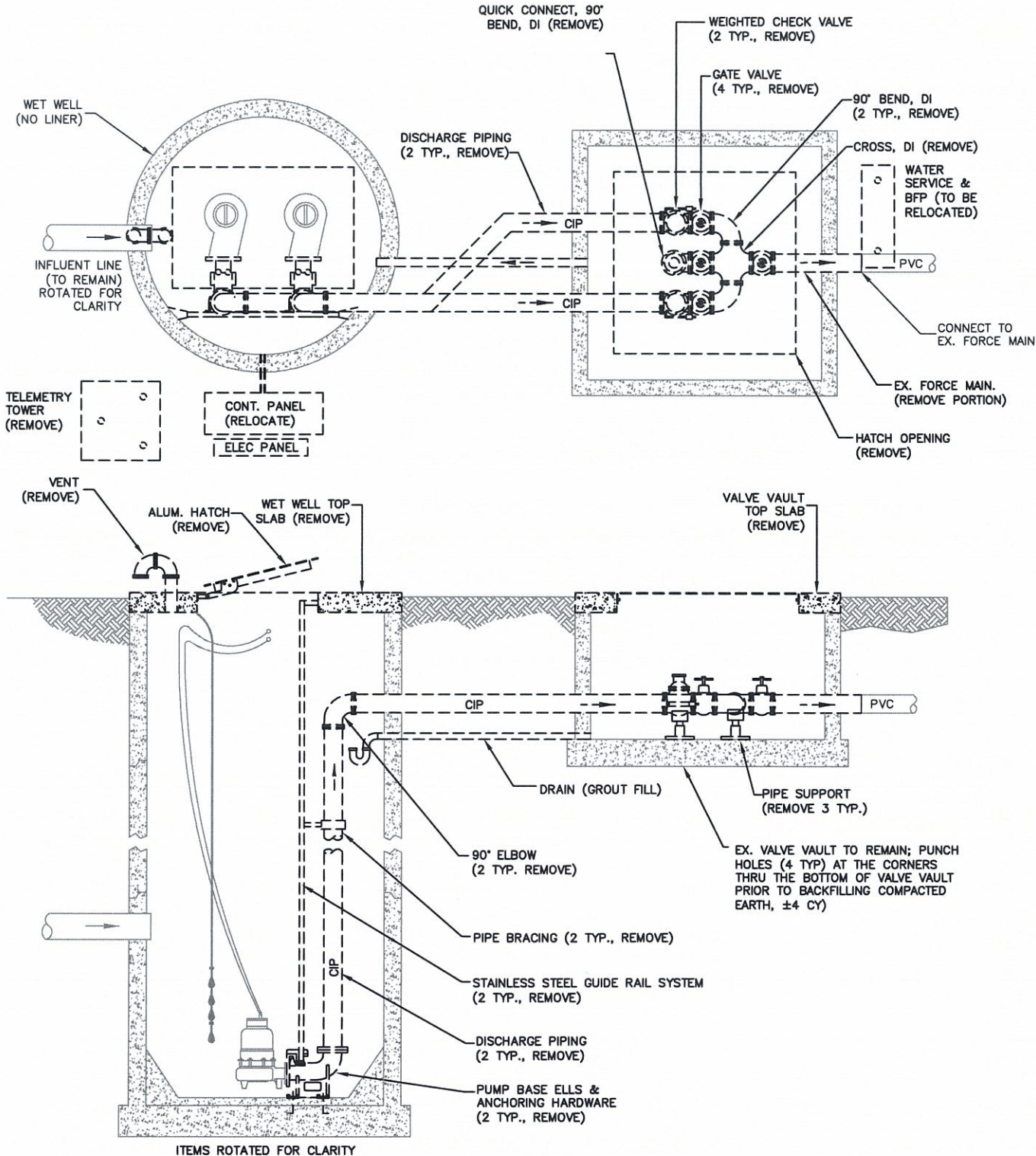
# EXISTING

**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.
- THE CONTRACTOR/BIDDER SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
- THE CONTRACTOR/BIDDER 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 CONDITIONS.
- THE WORK AREA IS LIMITED TO THE LIFT STATION SITE.
- CONTRACTOR SHALL TRIM SURROUNDING BRUSH AWAY FROM LIFT STATION SITE EQUIPMENT.

RADIO TELEMETRY UNIT (RTU)	113
L.S. DESIGN CAPACITY GPM/TDH	100 / 15
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	7'
BOTTOM SLAB ELEVATION	8.39
TOP ELEVATION	19.06
VALVE VAULT HATCH ELEVATION	19.06
INFLUENT INVERT ELEVATION	12.06
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	DIP

INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2013) & RECORD DRAWINGS



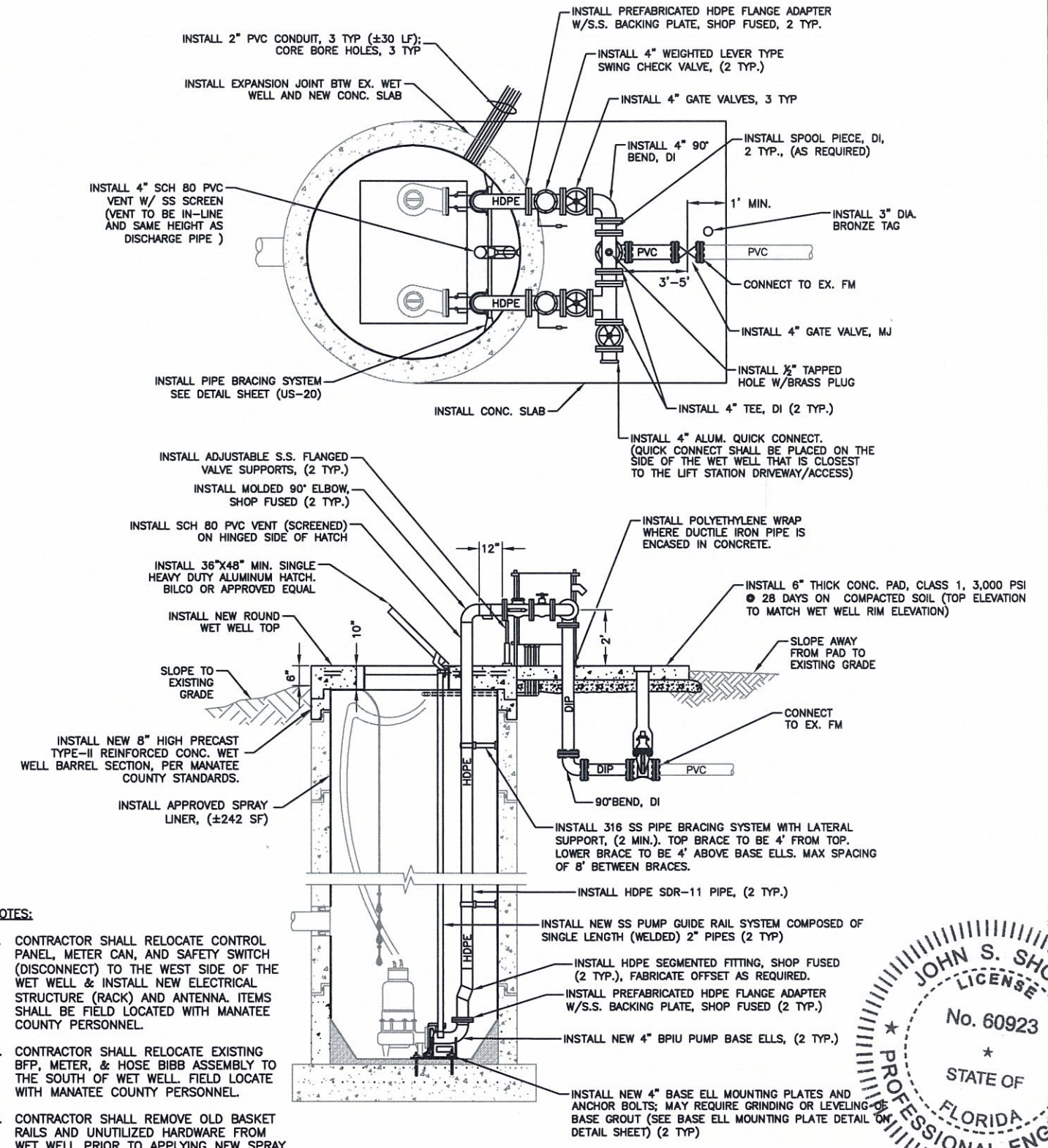
ITEMS ROTATED FOR CLARITY

# PROPOSED

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN G.V.	YES
NEW HDPE PIPING IN W.W.	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	YES, 8"
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	YES

**GENERAL NOTES:**

- CONTRACTOR SHALL NOT BACKFILL OVER ELECTROFUSED COUPLINGS UNTIL INSPECTOR HAS VISUALLY CHECKED IT FOR LEAKS DURING PUMP STARTUP OR PRESSURE TEST AS DIRECTED BY THE ENGINEER.
- ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
- 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 A 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, INC. ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID OVER-SPRAY ONTO THE VALVE ASSEMBLY CONCRETE PAD.
- ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM, MISCELLANEOUS WORK.



**NOTES:**

- CONTRACTOR SHALL RELOCATE CONTROL PANEL, METER CAN, AND SAFETY SWITCH (DISCONNECT) TO THE WEST SIDE OF THE WET WELL & INSTALL NEW ELECTRICAL STRUCTURE (RACK) AND ANTENNA. ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.
- CONTRACTOR SHALL RELOCATE EXISTING BFP, METER, & HOSE BIBB ASSEMBLY TO THE SOUTH OF WET WELL FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
- CONTRACTOR SHALL REMOVE OLD BASKET RAILS AND UNUTILIZED HARDWARE FROM WET WELL PRIOR TO APPLYING NEW SPRAY LINER.

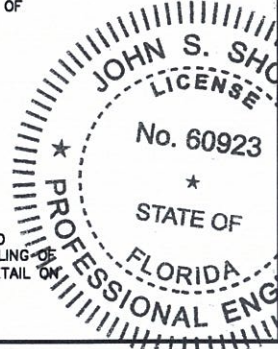


1022 26th Avenue East  
Bradenton, FL 34208

THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

SATELLITE LIFT STATION R&R  
2014 GROUP 1  
COLLEGE PLAZA, RTU 113

DATE	5/14/14
BY	JSS
REVISION DESCRIPTION	revised existing wet well diameter
NO.	1
PROJECT #	402-0019707 / 5005102
SURVEY #	-
SEC./TWN./RGE	09/35/17
SCALE	N.T.S.
	BY DATE
SURVEYED	-----
DESIGNED	JSS 2/13
DRAWN	JSS 2/13
CHECKED	
JOHN S. SHOUN, P.E.	
FLORIDA P.E. # 60923	
Signature & Date	
SHEET 4 OF 9	



COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT | S:\PMD\_Engineering\_Shoun\014\_Satellite\_Lift\_Station\_R&R\_2014\_Group\_1\DWG\ASIS\ASIS\_R&R\_2014\_Group\_1.dwg, 4/23/2014 9:47 AM Shoun, J.S. | 11x17.dwg (11 x 17)

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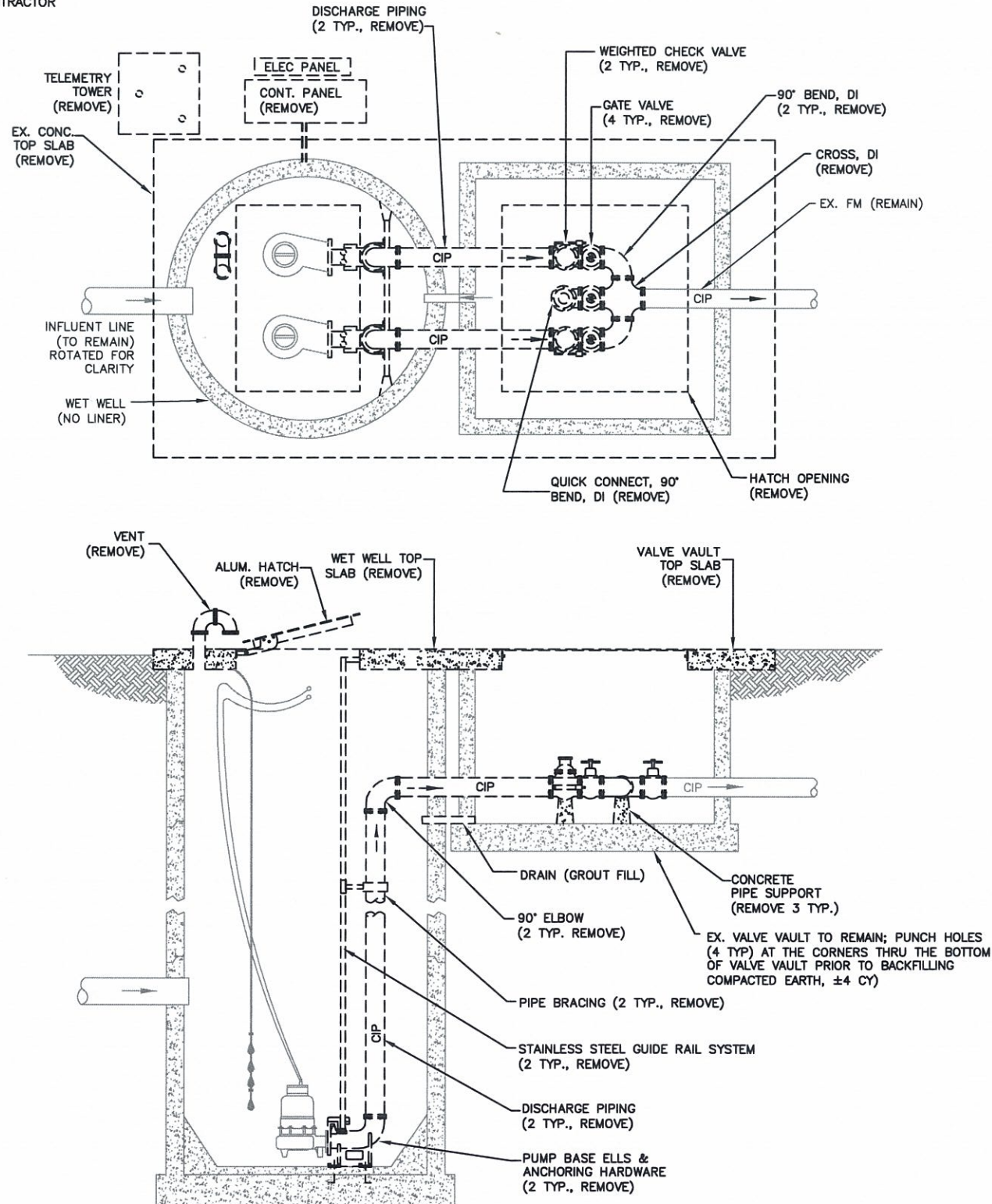
## NOTES:

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.

RADIO TELEMETRY UNIT (RTU)	212
L.S. DESIGN CAPACITY GPM/TDH	100 / 28
DISCHARGE PIPING DIAMETER	4"
WET WELL DIAMETER	6'
BOTTOM SLAB ELEVATION	8.31
TOP ELEVATION	23.50
VALVE VAULT HATCH ELEVATION	23.50
INFLUENT INVERT ELEVATION	12.31
INFLUENT PIPE SIZE	8"
FORCE MAIN DIAMETER	4"
WET WELL VENT PIPE	PVC

INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2013) & RECORD DRAWINGS

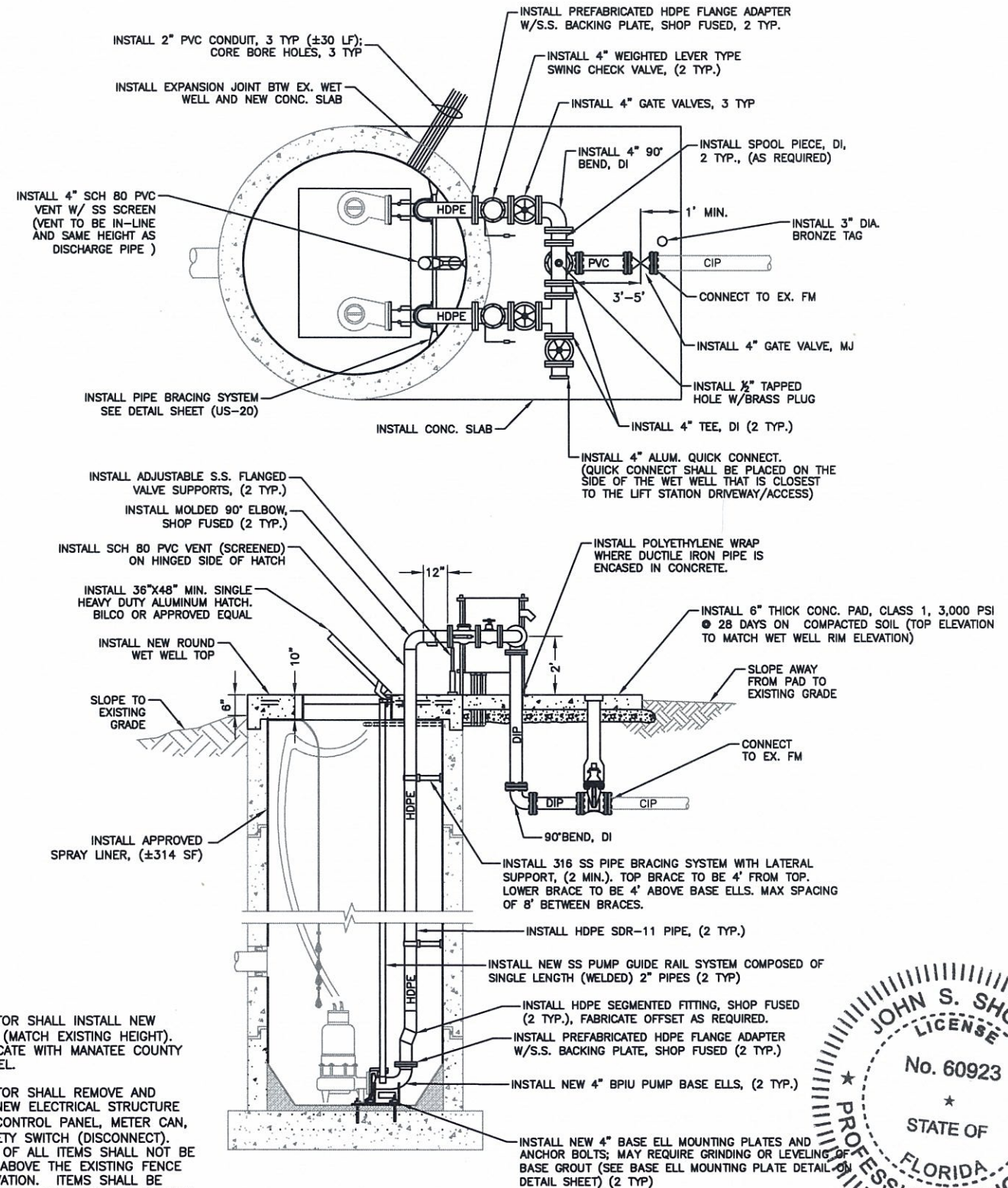


# PROPOSED

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	NO
INSTALL FORCE MAIN G.V.	YES
NEW HDPE PIPING IN W.W.	YES, 4"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, US-15	NO
RELOCATE WATER SERVICE ASSEMBLY	NO

## GENERAL NOTES:

1. CONTRACTOR SHALL NOT BACKFILL OVER ELECTROFUSED COUPLINGS UNTIL INSPECTOR HAS VISUALLY CHECKED IT FOR LEAKS DURING PUMP STARTUP OR PRESSURE TEST AS DIRECTED BY THE ENGINEER.
2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.
3. 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 A EDGING TOOL HAVING A RADIUS OF 1/2".
4. 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.
5. 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, INC. ABOVE GROUND VALVE ASSEMBLY & PIPING SHALL BE PAINTED, RUSTOLEUM 7538 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID OVER-SPRAY ONTO THE VALVE ASSEMBLY CONCRETE PAD.
6. ALL PAINTING SHALL BE INCLUDED IN THE BID ITEM, MISCELLANEOUS WORK.



## NOTES:

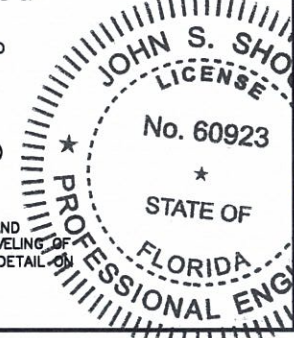
1. CONTRACTOR SHALL INSTALL NEW ANTENNA (MATCH EXISTING HEIGHT). FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
2. CONTRACTOR SHALL REMOVE AND INSTALL NEW ELECTRICAL STRUCTURE (RACK), CONTROL PANEL, METER CAN, AND SAFETY SWITCH (DISCONNECT). THE TOP OF ALL ITEMS SHALL NOT BE LOCATED ABOVE THE EXISTING FENCE TOP ELEVATION. ITEMS SHALL BE FIELD LOCATED WITH MANATEE COUNTY PERSONNEL.



# SATELLITE LIFT STATION R&R 2014 GROUP 1 THE OAKS, RTU 212

THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

DATE	
BY	
REVISION DESCRIPTION	
NO.	
PROJECT #	402-0019707 / 5005103
SURVEY #	-
SEC./TWN./RGE	32/34/17
SCALE	N.T.S.
	BY DATE
SURVEYED	---
DESIGNED	JSS 2/13
DRAWN	JSS 2/13
CHECKED	
JOHN S. SHOUN, P.E. FLORIDA P.E. # 60923	
Signature & Date	

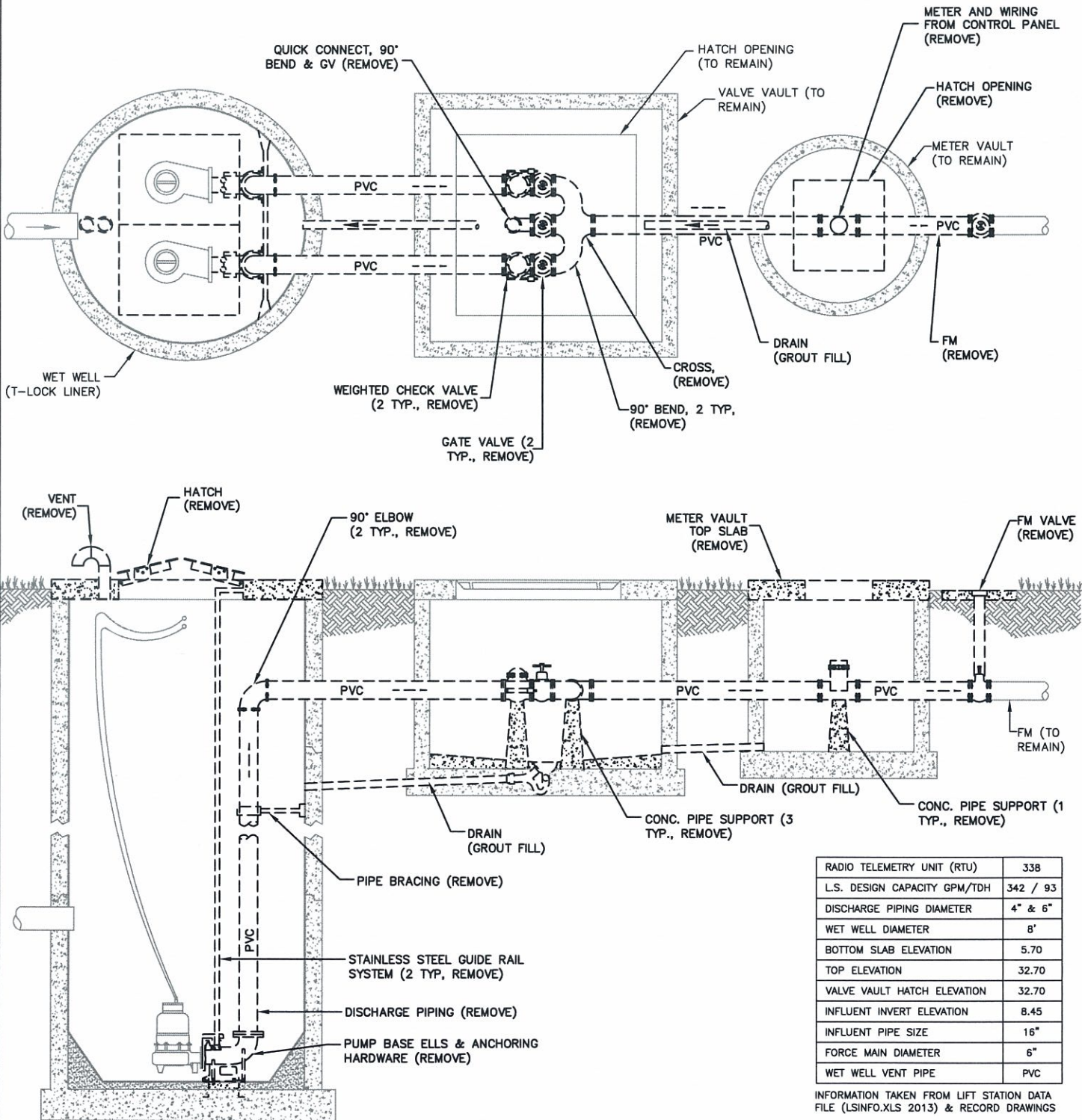


# EXISTING

## 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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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.



RADIO TELEMETRY UNIT (RTU)	338
L.S. DESIGN CAPACITY GPM/TDH	342 / 93
DISCHARGE PIPING DIAMETER	4" & 6"
WET WELL DIAMETER	8'
BOTTOM SLAB ELEVATION	5.70
TOP ELEVATION	32.70
VALVE VAULT HATCH ELEVATION	32.70
INFLUENT INVERT ELEVATION	8.45
INFLUENT PIPE SIZE	16"
FORCE MAIN DIAMETER	6"
WET WELL VENT PIPE	PVC

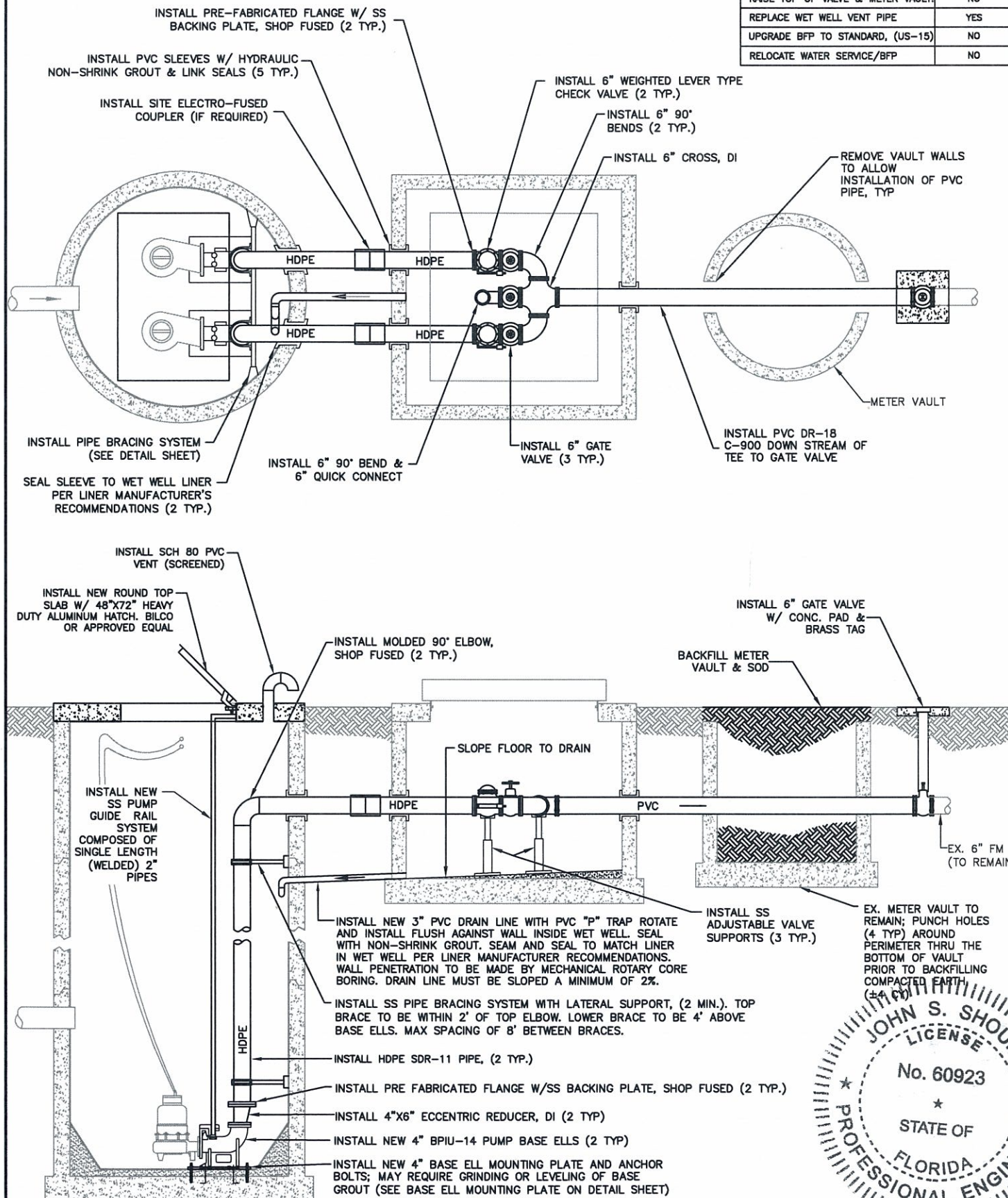
INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2013) & RECORD DRAWINGS

# PROPOSED

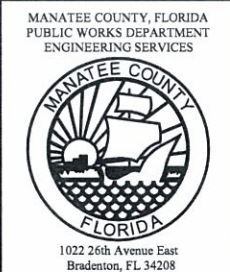
INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	NO
INSTALL STILLING WELL	NO
INSTALL G.V. OUTSIDE OF METER BOX	YES
NEW HDPE PIPING IN W.W.	YES, 6"
NEW BASE ELL	4" BPIU-14
RAISE TOP OF WET WELL:	NO
RAISE TOP OF VALVE & METER VAULT:	NO
REPLACE WET WELL VENT PIPE	YES
UPGRADE BFP TO STANDARD, (US-15)	NO
RELOCATE WATER SERVICE/BFP	NO

## NOTES:

1. CONTRACTOR SHALL NOT BACKFILL OVER ELECTROFUSED COUPLINGS UNTIL INSPECTOR HAS VISUALLY CHECKED IT FOR LEAKS DURING PUMP STARTUP OR PRESSURE TEST AS DIRECTED BY THE ENGINEER.
2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS.



JOHN S. SHOUN  
 LICENSE  
 No. 60923  
 STATE OF  
 FLORIDA  
 PROFESSIONAL ENGINEER



THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

## SATELLITE LIFT STATION R&R

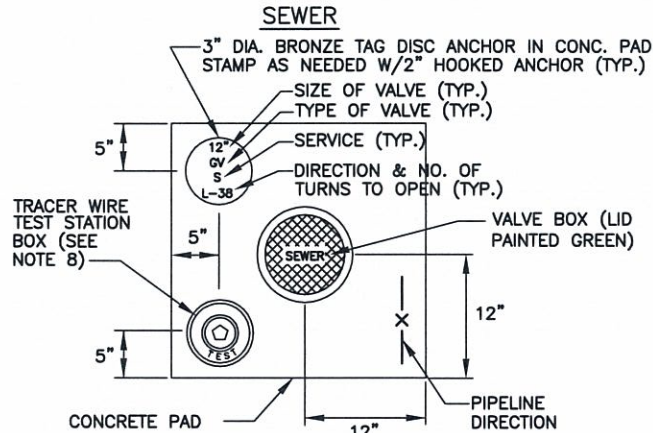
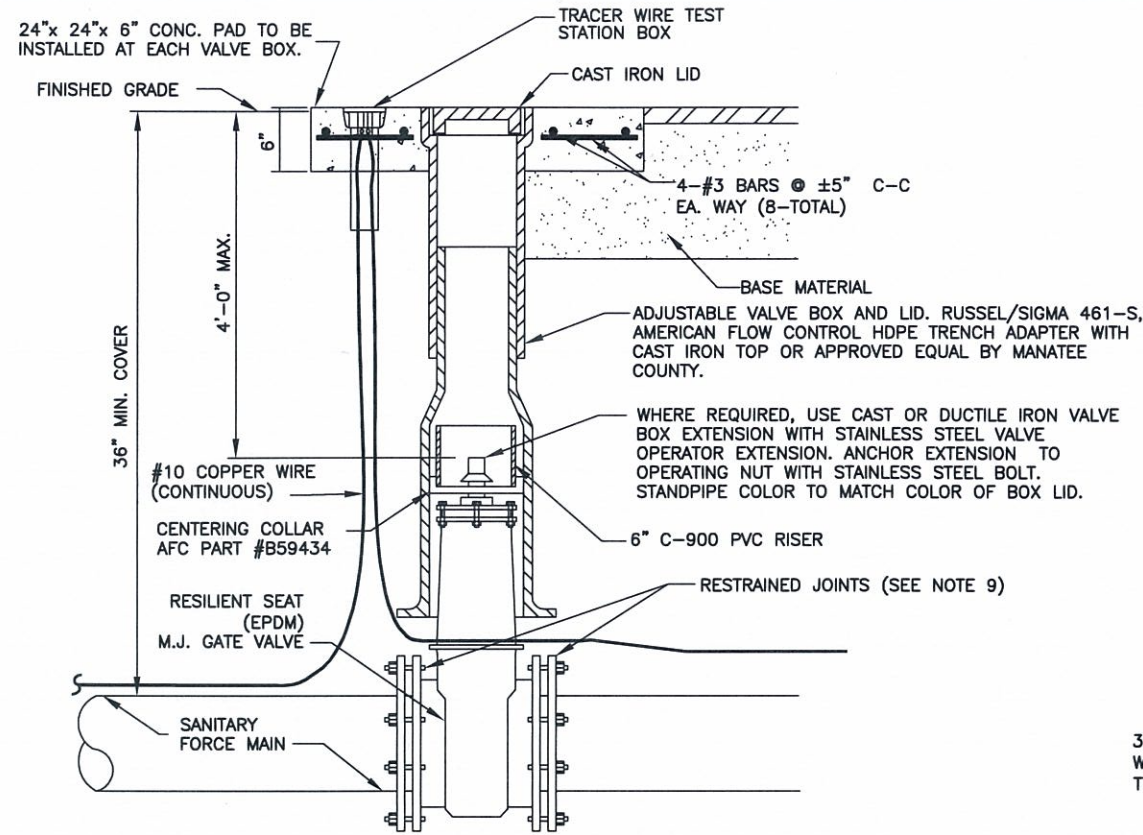
### 2014 GROUP 1

#### S-2, RTU 338

DATE	5/14/14
BY	JSS
REVISION DESCRIPTION	Install new top slab
NO.	1
PROJECT #	402-0019707 / 5005106
SURVEY #	-
SEC./TWN./RGE	36/34/17
SCALE	N.T.S.
BY	DATE
SURVEYED	---
DESIGNED	JSS 2/13
DRAWN	JSS 2/13
CHECKED	---
JOHN S. SHOUN, P.E.	
FLORIDA P.E. # 60923	
Signature & Date	5/14/14

NOTES:

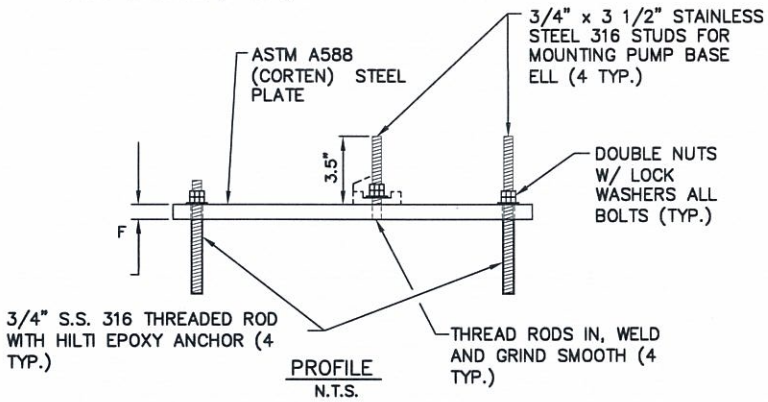
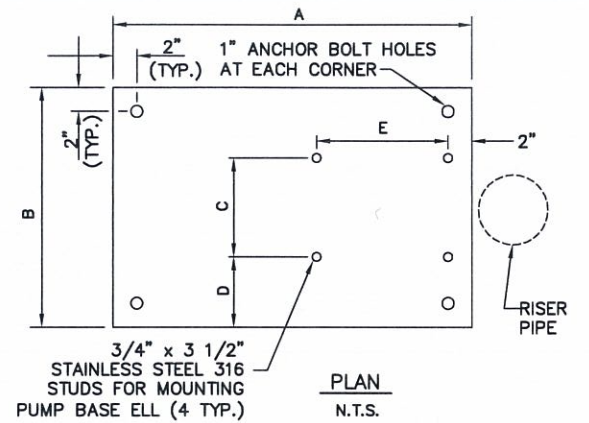
1. ALL ACCESS COVERS SHALL BE ALUMINUM, WITH STAINLESS STEEL HARDWARE AND RATED FOR 300 P.S.F. LOADING. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL HAVE 2 COATS BITUMASTIC EPOXY, TOTAL 16 MILS DFT. ALL ACCESS COVERS SHALL BE EQUIPPED WITH A LOCKING STAPLE OR BAR FOR USE WITH A PADLOCK. PADLOCKS FOR WETWELL, VALVE VAULT, FENCE GATE AND CONTROL PANELS OF PUBLICLY OWNED & MAINTAINED LIFT STATIONS SHALL BE FURNISHED BY THE MANATEE COUNTY UTILITIES DEPARTMENT.
2. INSTALL WET WELL VENT ON THE HINGED SIDE OF THE WET WELL HATCH COVER.
3. GROUND SHALL BE SLOPED AWAY FROM SLAB TO NATURAL GROUND ELEVATION IN ALL DIRECTIONS. SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH WASHED SHELL OR ROCK WITHIN LIFT STATION FENCING. SITE SHALL INCLUDE A WEED BARRIER FABRIC THAT IS COVERED WITH SHREDDED WOOD TYPE MULCH UNDER THE SHRUBS AND UP TO OUTSIDE OF THE FENCE. WEED BARRIER FABRIC THAT IS COVERED WITH SHREDDED WOOD-TYPE MULCH SHALL BE LOCATED UNDER THE TREES FOR A MINIMUM DISTANCE OF 3 FEET FROM THE TREE. SODDING OR SHREDDED WOOD-TYPE MULCH SHALL BE INSTALLED ON THE REMAINDER OF THE SITE TO THE EDGE OF THE EASEMENT.
4. DUCTILE IRON OR CAST IRON VALVES AND FITTINGS SHALL HAVE A FACTORY APPLIED FUSION BONDED EPOXY EXTERIOR AND INTERIOR COATING.
5. ALL FORCE MAIN PIPING AND FITTINGS WITHIN THE WETWELL AND THE VALVE VAULT, FROM THE PUMP BASE ELBOW TO THE CHECK VALVE, SHALL BE DR11 HDPE. ALL CONNECTIONS TO IRON BODIED FLANGE FITTINGS IN THE WETWELL (PUMP BASE ELLS) AND TO THE VALVE VAULT CHECK VALVES SHALL BE MADE USING HDPE FLANGE ADAPTERS WITH 316 STAINLESS STEEL BACKUP RINGS. ALL HDPE CONNECTIONS SHALL BE THERMAL FUSED OR ELECTRO-FUSED. ALL PIPING DOWNSTREAM OF THE CROSS IN THE VALVE VAULT TO THE PLUG VALVE SHALL BE PVC DR 14 C-900.
6. ALL PIPING SHALL BE COLOR CODED IN ACCORDANCE WITH THESE STANDARDS. GREEN-RAW SEWAGE; PANTONE 522C PURPLE-RECLAIMED; BLUE-POTABLE WATER.
7. ANCHORS & LIFTING DEVICES SHALL NOT PENETRATE THE WALLS OF THE WET WELL.
8. ALL METAL APPURTENANCES INCLUDING BOLTS, NUTS AND WASHERS INSIDE THE WET WELL AND VALVE VAULT SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED (TYPE 316). ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SEIZE PRIOR TO ASSEMBLY.
9. VERTICAL HDPE PUMP DISCHARGE PIPE IN THE WET WELL SHALL HAVE A TOP BRACE TO BE WITHIN 2' OF TOP ELBOW, A BOTTOM BRACE TO BE 4' ABOVE BASE ELLS, AND BE BRACED EVERY EIGHT (8) LINEAR FEET TO PREVENT EXCESSIVE BOWING, MAX SPACING OF 8' BTW BRACES. THE PIPE SHALL BE CLAMPED TO A SINGLE LENGTH OF 1-5/8" STAINLESS STEEL CHANNEL INSTALLED HORIZONTALLY AND ANCHORED TO THE WET WELL WALL AT EACH END WITH A CENTER BRACE OF 1-5/8" CHANNEL ATTACHED TO THE BACK OF THE WET WELL. THE PIPE CLAMPS SHALL BE A MINIMUM OF 1-1/2" WIDE, 12 GA. STAINLESS STEEL. WET WELLS LARGER THAN 8 FEET OR PIPING LARGER THAN 6 INCHES SHALL HAVE BRACING CONSTRUCTED FROM 1/4 INCH X 4 INCH STAINLESS STEEL ANGLE.
10. VALVE & METER VAULTS SHALL BE PRECAST TYPE II REINFORCED CONCRETE.
11. FOR 5/8" WATER METER, PROVIDE POTABLE WATER SERVICE CONNECTION WITH 3/4" BRASS LOCKSHIELD AND LOOSE KEY HOSE BIB. PROVIDE WATTS 909 BACKFLOW PREVENTER (OR APPROVED EQUAL). ALL WATER SERVICE PIPING FROM WATER METER TO BE TYPE "K" COPPER OR BRASS, 3/4" MIN. DIAMETER FOR 5/8" METER AND 2" MIN. DIAMETER PIPING FOR 2" METER, SEE DETAIL US-15.
12. HOSE BIB TO BE A MAXIMUM OF 2 FEET FROM THE VALVE VAULT, A MINIMUM OF 6 FEET FROM THE ELECTRICAL CONTROL PANEL, 24" ABOVE THE SURROUNDING FINISH GRADE, AND ANCHORED TO A 4" PVC CONCRETE FILLED PIPE.
13. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO CONSTRUCT WATERTIGHT STRUCTURES WITH NO VISIBLE LEAKS. COMPLETED STRUCTURES THAT ARE NOT WATERTIGHT AND/OR DO NOT MEET THE REQUIREMENTS OF ASTM C-443 WILL BE REJECTED.
14. FLEXIBLE GASKET CONNECTORS SHALL MEET THE REQUIREMENTS OF ASTM C-923 LATEST REVISION AND ARE REQUIRED IN ALL MANHOLES.
15. ALL GATE VALVES SHALL BE RESILIENT SEAT IN ACCORDANCE WITH THESE STANDARDS.
16. ELECTRICAL CONDUIT SHALL BE RUN BY THE SHORTEST ROUTE POSSIBLE FROM THE ELECTRICAL SOURCE TO THE CONTROL PANEL AND FROM THE CONTROL PANEL TO THE LIFT STATION WET WELL. NO ELECTRICAL SHALL BE INSTALLED BETWEEN THE WET WELL AND VALVE VAULT STRUCTURES.
17. THE VALVE VAULT SHALL HAVE A MINIMUM CLEARANCE OF 12" FROM FLANGES TO THE VALVE VAULT WALL, 18" FROM FLANGES TO THE VALVE VAULT FLOOR AND 12" FROM THE CROSS TO THE VALVE VAULT WALL AT THE FORCE MAIN EXIT POINT.
18. PVC RESTRAINTS SHALL BE EBAA IRON MEGA FLANGE. MEGA LUG OR APPROVED EQUAL.
19. ALL BURIED FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT, DUCTILE IRON.
20. MANATEE COUNTY UTILITY OPERATIONS DEPT. SHALL HAVE THE OPTION TO PICK-UP AT THE SITE ANY REMOVED ITEM SUCH AS VALVES FOR POSSIBLE REUSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL REMOVED ITEMS NOT PICKED UP BY THE UTILITY OPERATIONS DEPT.



NOTES:

1. "S" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "S" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
3. SANITARY VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
4. PRECAST CONCRETE PADS & THRUST BLOCKS SHALL NOT BE USED.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
6. PIPELINE DIRECTION TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
7. BINGHAM & TAYLOR P200NFG FOR NORMAL YARD SERVICE. WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC, USE P525RD CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.

GATE VALVE, BOX COVER AND TAG  
NTS



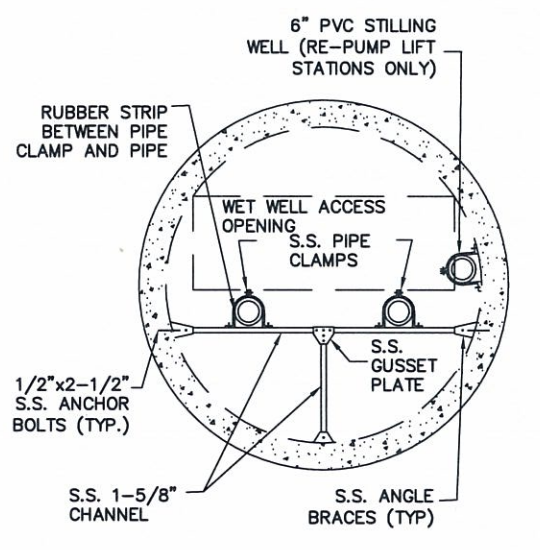
PUMP BASE ELL MOUNTING PLATE DIMENSIONS

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"	1/2"	N/A

NOTES:

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

PUMP BASE ELL MOUNTING PLATE  
NTS



WET WELL PIPE BRACING DETAIL  
NTS



THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

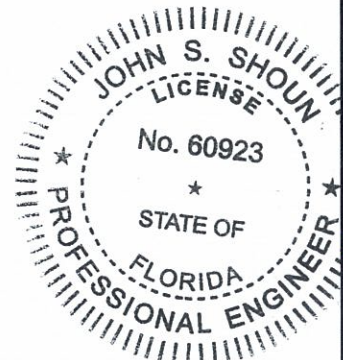
**SATELLITE LIFT STATION R&R**

**2014 GROUP 1**

**DETAILS**

NO.	DATE	BY	REVISION DESCRIPTION

PROJECT #	402-0019707 / 5001301
SURVEY #	-
SEC./TWN./RGE	-
SCALE	N.T.S.



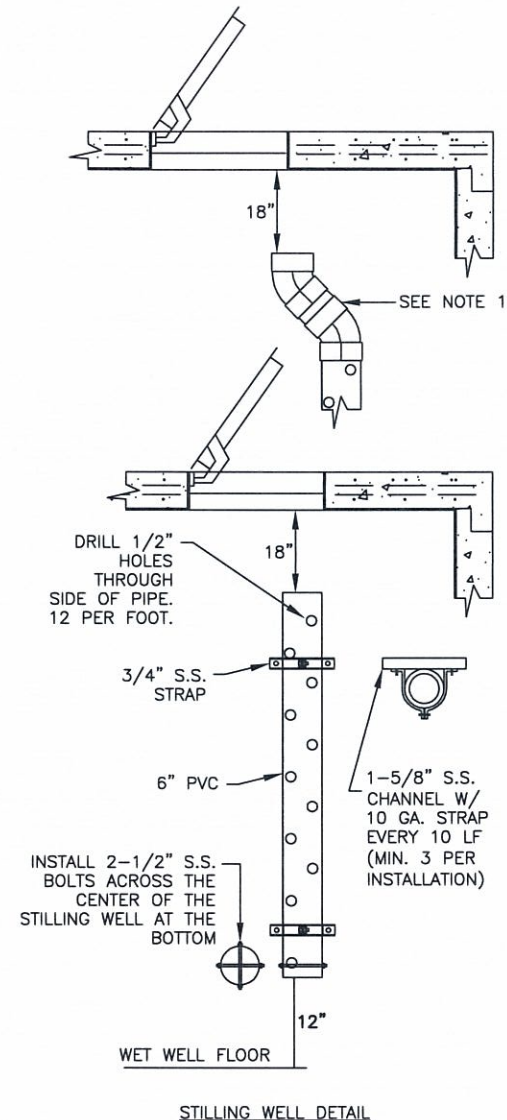
JOHN S. SHOUN, P.E.  
FLORIDA P.E. # 60923  
*[Signature]*  
5/24/14  
Signature & Date

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THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

# SATELLITE LIFT STATION R&R 2014 GROUP 1 DETAILS



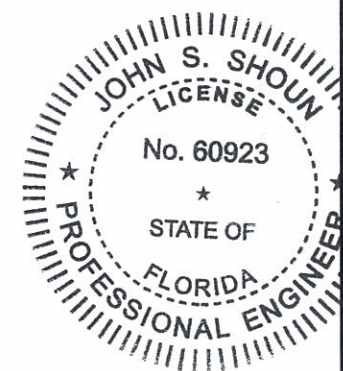
STILLING WELL DETAIL

**NOTES:**

1. STILLING WELL FOR LEVEL TRANSDUCER REQUIRED FOR RE-PUMP STATIONS ONLY. 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.
2. REFER TO STANDARD DETAILS US-17, US-18 & US-19 FOR PUMP STATION DETAILS.
3. NYLON LOCK NUTS SHALL BE USED AT ALL TIMES IN THE WET WELL, EXCEPT BASE ELLS & PIPE BRACING ANCHOR BOLTS CAN ALSO BE DOUBLE NUT.

PUMP STATION  
STILLING WELL DETAILS

NTS



NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #	402-0019707 / 5001301		
SURVEY #	-		
SEC./TWN./RGE	-		
SCALE	N.T.S.		
	BY	DATE	
SURVEYED	----	----	
DESIGNED	JSS	2/13	
DRAWN	JSS	2/13	
CHECKED			
JOHN S. SHOUN, P.E.			
FLORIDA P.E. # 60923			
 Signature & Date			

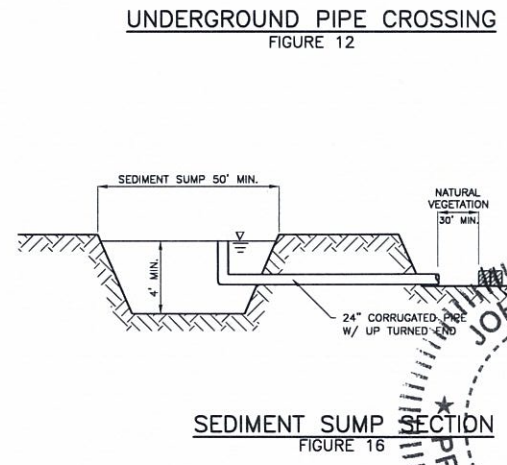
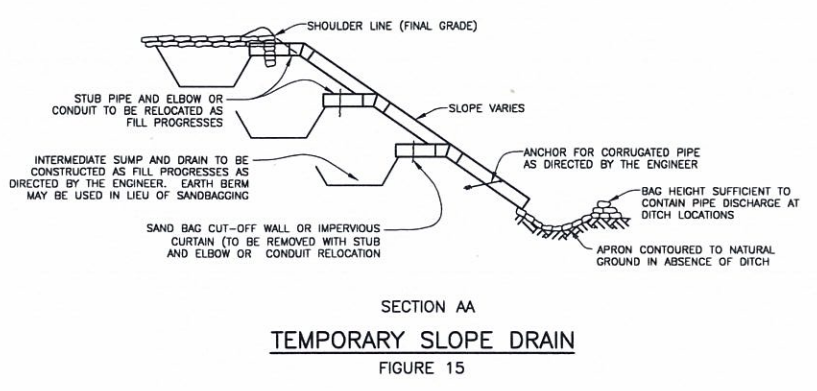
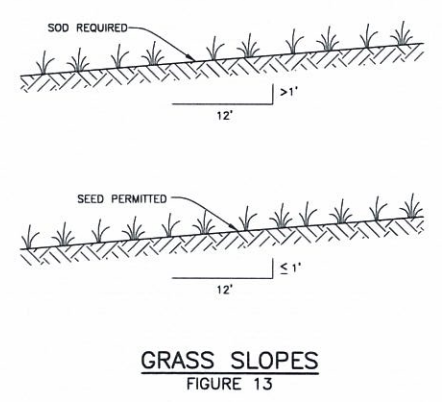
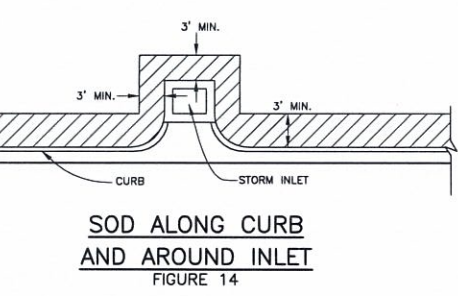
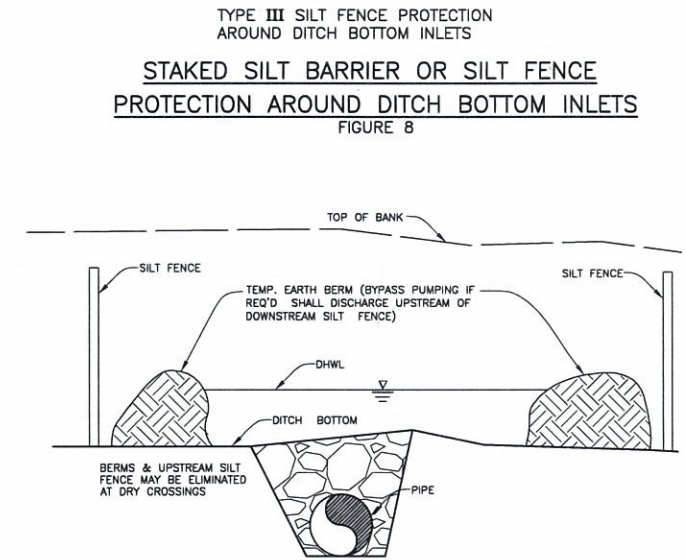
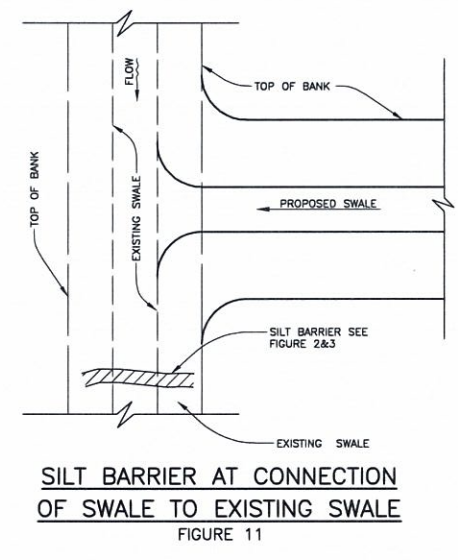
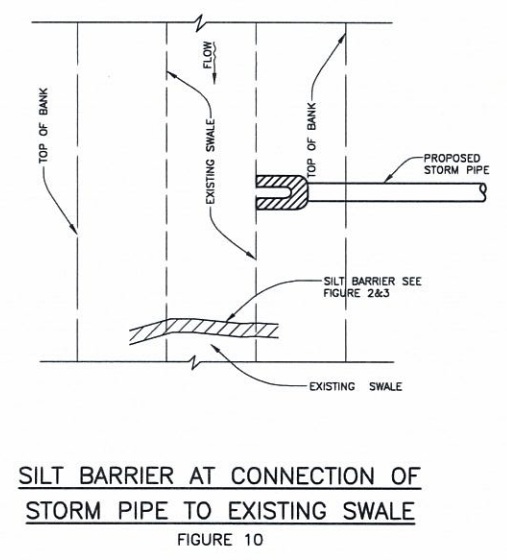
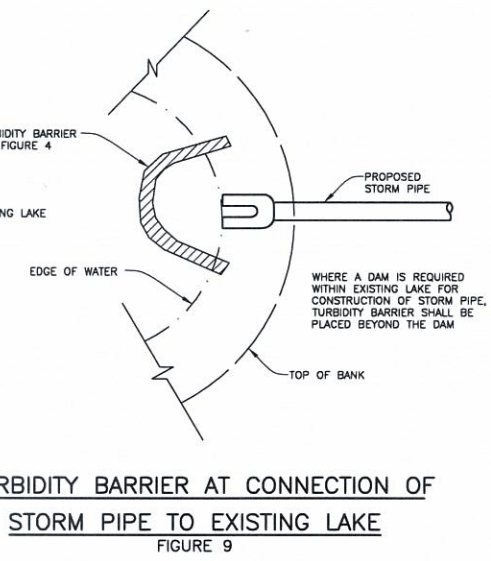
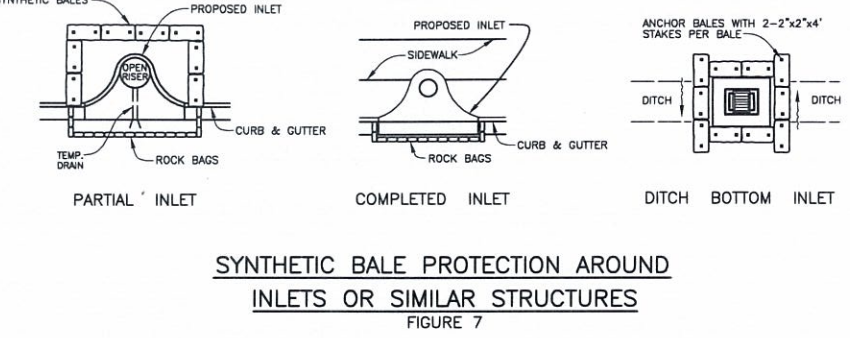
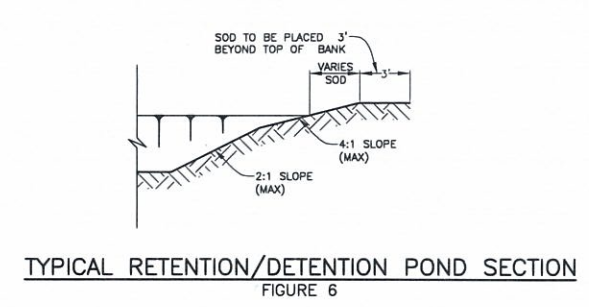
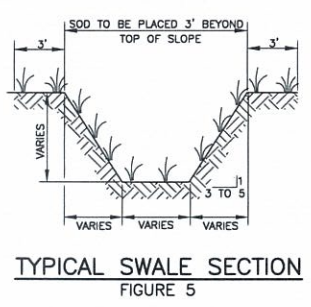
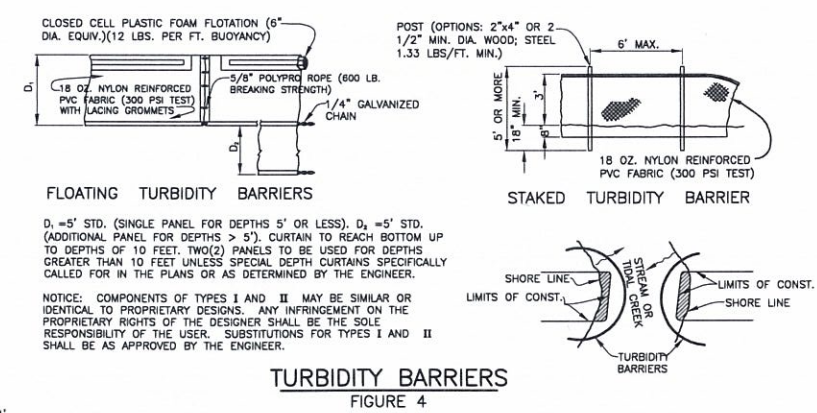
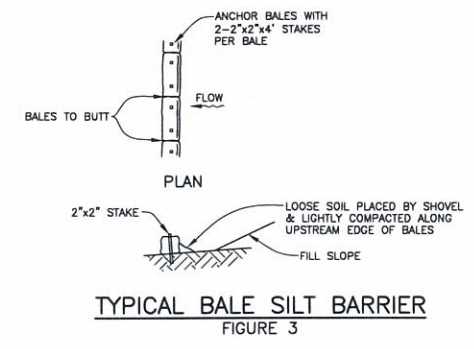
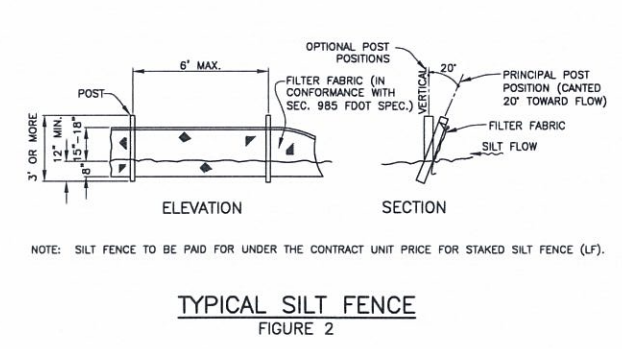
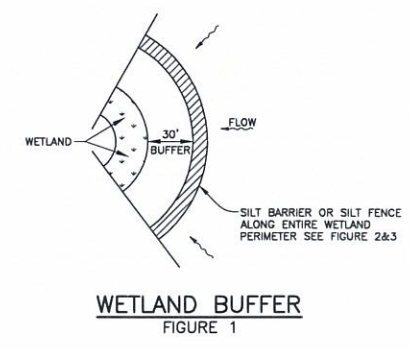
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THESE PLANS HAVE BEEN DESIGNED ON 11x17 SHEETS

**SATELLITE LIFT STATION R&R  
2014 GROUP 1  
EROSION CONTROL**



**SECTION  
SEDIMENT SUMP SECTION  
FIGURE 16**

NOTE:  
REFERENCE THE FDOT DESIGN STANDARDS  
LATEST EDITION FOR ALL TEMPORARY  
EROSION CONTROL MEASURES.

NO.	DATE	BY	REVISION DESCRIPTION
PROJECT #	402-0019707 / 5001301		
SURVEY #	-		
SEC./TWN./RGE	-		
SCALE	N.T.S.		
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JOHN S. SHOUN, P.E. FLORIDA P.E. # 60923			
Signature & Date 5/14/14			

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