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SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD

May 2021

BID PLANS

**SATELLITE LIFT STATION R&R
COLONY COVE 6 & MEMPHIS RD
COVER**

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, 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.

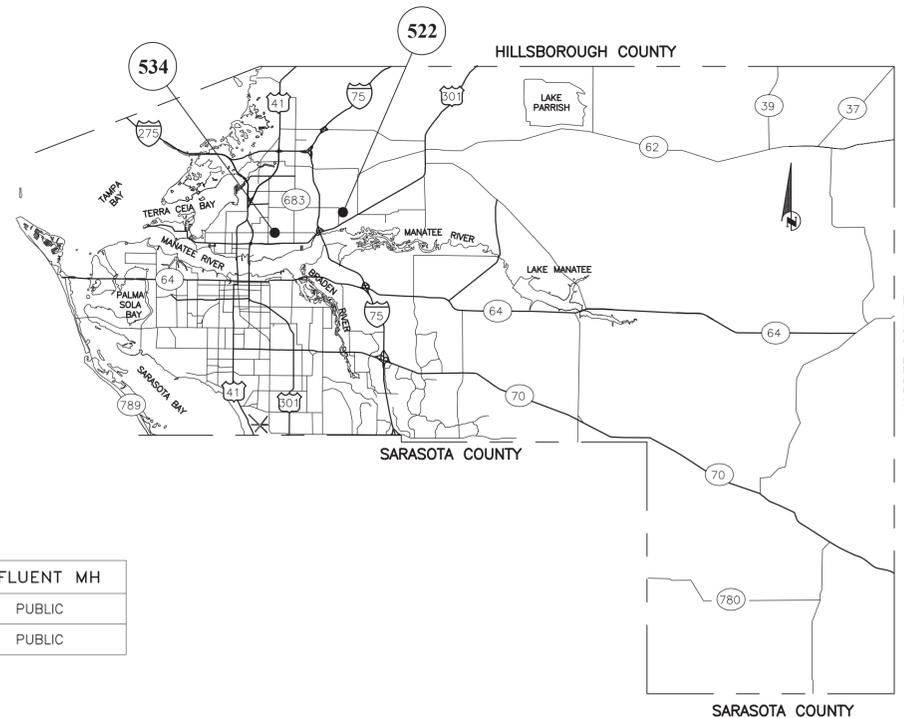
REINFORCED CONCRETE PADS SHALL BE CONSTRUCTED TO SUPPORT THE ODOR CONTROL EQUIPMENT. THE EQUIPMENT SHALL BE INSTALLED BY OTHERS.

COLONY COVE 6 SHALL HAVE THE EXISTING EMERGENCY GENERATOR & AUTOMATIC TRANSFER SWITCH (ATS) REMOVED AND REPLACED WITH AN EMERGENCY BACKUP PUMP.

ALL SATELLITE LIFT STATION SHALL REQUIRE AN ELECTRICAL SYSTEM STUDY & ELECTRICAL STUDY ANALYSIS - "ARC FLASH" - (NFPA 70E) TO BE PERFORMED BY THE FOLLOWING COMPANY:

ROZEL, LLC
JOE WEISSENBURGER
jw@70eConsultants.com
(515) 344-3457

THE CONTRACTOR SHALL COORDINATE AND PROVIDE SUFFICIENT ON-SITE DATA AND ACCESS FOR THE STUDY/ANALYSIS TO BE COMPLETED TO THE SATISFACTION OF ROZEL, LLC AND THE COUNTY.



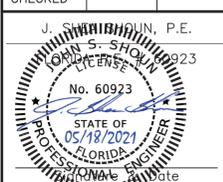
L.S. NAME	RTU	ADDRESS	PROJECT NUMBER	INFLUENT MH
COLONY COVE 6	522	162 COLONY COVE DRIVE N., ELLENTON FL	404-6005686	PUBLIC
MEMPHIS ROAD	534	1721 17TH STREET EAST, PALMETTO FL	404-6061082	PUBLIC

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NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	VARIES
SURVEY #	00-44787
SEC./TWN./RGE	VARIES
SCALE	N.T.S.

	BY	DATE
SURVEYED	ZNS	4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		



GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: ANTHONY BENITEZ, P.E. AND CAN BE REACHED AT 941-708-7450, x7333.
2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS.
3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
5. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
7. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
8. NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

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.
10. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
11. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
12. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

- 13. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
14. STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
15. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOG, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
16. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.
17. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
18. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
19. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
20. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
21. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- 22. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
23. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
24. THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALLS SHALL BE REPLACED IN ACCORDANCE WITH F.D.O.T. STANDARDS.
26. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.
27. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02575.
28. A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

- 29. 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. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY EFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.
30. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
31. ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING UTILITY SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS AT ANY TIME OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
32. FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS. THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.
33. ALL WATER SERVICES TO BE INSTALLED OR MODIFIED ON PRIVATE PROPERTY SHALL REQUIRE A PLUMBING PERMIT;

- A. THE CONTRACTOR'S PLUMBER SHALL INSTALL A REDUCED PRESSURE (RP) TYPE BACKFLOW PREVENTION ASSEMBLIES (BPA'S) EQUIPPED WITH A PRESSURE RELIEF VALVE AT THE POTABLE WATER METER WHENEVER ANY OF THE FOLLOWING CONDITIONS EXIST AT A PROPERTY:
• IN-GROUND IRRIGATION SYSTEM,
• SECONDARY SOURCE OF WATER (I.E. RECLAIMED WATER OR WELL),
• SWIMMING POOL,
• FIRE SPRINKLER SYSTEM,
• FLOOD ZONE DESIGNATION, (IF ONLY FLOOD ZONE; INSTALL DOUBLE CHECK BPA)
• PROPERTY THAT ABUTS OR INCLUDES A BODY OF WATER (INCLUDING RIVER, BAY, LAKE OR POND),
• SOLAR WATER HEATING SYSTEM,
• MULTISTORY OR MULTIFAMILY RESIDENTIAL FACILITY.
B. A LICENSED PLUMBER SHALL INSTALL THE BPA'S IN ACCORDANCE WITH THE CURRENT FLORIDA PLUMBING CODE AND MANATEE COUNTY CODE OF ORDINANCES, AND SHALL SELECT A PRESSURE RELIEF VALVE WITH AN APPROPRIATE PRESSURE SET POINT TO PROTECT THE CUSTOMERS' PLUMBING AND NOT ALLOW EXCESSIVE LEAKAGE DUE TO SYSTEM SUPPLY PRESSURE. A PRESSURE REDUCING VALVE MAY BE NECESSARY UPSTREAM OF THE PRESSURE RELIEF VALVE, WHERE NORMAL SUPPLY PRESSURE EXCEEDS 80 PSI. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION CONTROL STAFF AS REQUIRED.
C. IF IN-GROUND IRRIGATION SYSTEM IS CONNECTED TO THE POTABLE WATER LINE, AN ADDITIONAL RP BPA SHALL BE INSTALLED AT THE POINT OF CONNECTION.
D. VACUUM BREAKERS SHALL BE INSTALLED ON ALL HOSE BIBBS.
E. CONTRACTOR SHALL COORDINATE WITH COUNTY CROSS CONNECTION STAFF & PRIVATE PROPERTY OWNER AS REQUIRED. CROSS CONNECTION STAFF SHALL DETERMINE WHICH PROPERTIES REQUIRE A BPA & TYPE TO BE INSTALLED.

RESTORATION

- 34. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
35. ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
36. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
37. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
38. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS.
39. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
40. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

CONSTRUCTION

- 41. 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.
42. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEP DAILY AS PART OF DAILY CLEAN UP.
43. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
44. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
45. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
46. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
47. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES. MODIFICATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.
48. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
49. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
50. ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.
51. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION.
52. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
53. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
54. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
55. ALL PENETRATIONS OF EXISTING STRUCTURES SHALL BE BY MECHANICAL ROTARY CORE DRILLING METHOD. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
56. THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED, THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WRBD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
57. ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE TESTING.
58. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.
59. WATER MAINS CROSSING OVER OR UNDER SANITARY SEWERS, FORCE MAINS, AND RECLAIMED WATER LINES SHALL BE LAID PER CURRENT EDITION OF "10 STATE STANDARDS" AND MANATEE COUNTY UTILITY STANDARDS UNLESS NOTED OTHERWISE ON THE PLANS.
60. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
61. 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.
62. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS OF THE WORK AS CONSTRUCTED. AS-BUILT DRAWINGS SHALL INCLUDE THE LOCATION OF ABANDONED FORCE MAIN CUT AND PLUG POINTS. AS-BUILT DRAWINGS SHALL BE ANNOTATED EACH DAY AS THE WORK PROCEEDS AND SHALL BE AVAILABLE TO THE COUNTY PROJECT MANAGER AND/OR FIELD INSPECTOR FOR REVIEW ON AN ONGOING BASIS. AS-BUILT DRAWINGS SHALL PROVIDE THE HORIZONTAL AND VERTICAL INSTALLED LOCATION OF ALL NEW PIPELINE, FITTINGS, VALVES AND FORCE MAIN APPURTENANCES REFERENCED TO FIXED SURFACE FEATURES THAT ARE SHOWN ON THE CONSTRUCTION DRAWINGS AND/OR RIGHT-OF-WAY LINES, PROPERTY CORNERS OR OTHER SURVEYED POINTS. THE CONTRACTOR SHALL BE ABLE TO PRESENT THE RECORD DRAWINGS TO THE COUNTY PROJECT MANAGER AND/OR INSPECTOR ON DEMAND AS THE WORK PROGRESSES.

EXISTING UTILITY LOCATIONS

- 63. THE FOLLOWING IDENTIFIES THE QUALITY LEVEL OF EXISTING UTILITY LINEWORK ON PLANS.
LEVEL "A" - VISUALLY LOCATED OR SOFT DIGS (HORIZONTAL AND VERTICAL)
LEVEL "B" - DESIGNATED BY GPR OR FLAGGING (HORIZONTAL)
LEVEL "C" - SURFACE VISIBLE FEATURES SURVEY
MANATEE COUNTY PUBLIC WORKS DEPT.
1701 RINGLING BLVD.
SARASOTA, FL 34236
JOHN PLOTT
(941) 906-6707
FAX: (941) 906-6706
John.Plott@ftr.com
TECO/PEOPLES GAS CO.
8261 VICO COURT
SARASOTA, FL 34240
(941) 342-4030
DAN SHANAHAN
FAX: (941) 342-4011
EMERGENCY: 1-877-832-6911
ATMS
2101 47TH TERRACE EAST
BRADENTON, FL 34203
VISHAL KAKKAD, P.E.
(941) 749-3500 EXT. 7812
FAX: (941) 749-3571
vishal.kakkad@mymnatee.org.
FRONTIER
1253 12TH AVENUE EAST
PALMETTO, FL 34221
GREG COKER
(941) 723-4430
FAX: (941) 723-4444
EMERGENCY: 1-800-4-OUTAGE
Greg.Coker@fpl.com
MANATEE COUNTY HEALTH DEPT.
410 6TH AVENUE EAST
BRADENTON, FL 34208
(941) 748-0747 EXT. 1355
FAX: (941) 750-9364
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
SARASOTA
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
ED WATSON
PHONE: (813) 470-5875
FAX: (813) 470-5993
FLORIDA GAS TRANSMISSION
7804 ANDERSON RD.
TAMPA FL 33634
CHAD HARRELL
PHONE: (813) 466-3327
E-mail: chad.harrell@usug.com
PEACE RIVER ELECTRIC COOPERATIVE, INC.
P.O. BOX 1310
WACHULA, FL 33873
KENDELL COKER
(863) 767-4660
kendell.coker@peco.coop

LEVEL "D" - EXISTING RECORDS OR GIS REFERENCE 2010 EDITION OF FDOT UTILITY ACCOMODATION MANUAL (UAM)

MAINTENANCE OF TRAFFIC

- 64. THE CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROL PLAN (TCP) IMPLEMENTED. THE TCP SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TCP IN THE STATE OF FLORIDA THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION (SERIES 600). ANY DEVIATIONS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SUBMITTED TO COUNTY (AND FDOT) FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY (AND FDOT) APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.
65. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN (TCP). THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TCP SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
66. THE CONTRACTOR SHALL USE, BUT ARE NOT LIMITED TO, FDOT INDICES 415, 600, 615, 616, AND 621. THE RECOMMENDED FDOT DESIGN STANDARD INDICES ARE CONCEPTUAL.
67. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY DRAINAGE. THERE WILL BE NO DIRECT PAY FOR THIS WORK. COSTS SHALL BE INCLUDED IN THE COST OF PIPE.
68. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.
69. THE CONTRACTOR WILL NOTIFY ALL EMERGENCY AND RESCUE AGENCIES LOCATED IN THE PROJECT VICINITY 24 HOURS IN ADVANCE OF ANY PROPOSED LANE CLOSURES OR DETOURS.
70. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
71. USE FDOT INDEX NO. 619 FOR TRAFFIC CONTROL MEASURES WHEN CONSTRUCTION EQUIPMENT IS DRIVEN ON OPEN TRAVEL LANES. THE REGULATORY SPEED IN WORK ZONES SHOULD BE AS CLOSE TO NORMAL CONDITIONS AS POSSIBLE, UNLESS NOTED ON THE TRAFFIC CONTROL PLANS.
72. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
73. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
74. ANY MOT ITEM NOT SPECIFICALLY LISTED UNDER A PARTICULAR PAY ITEM SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
75. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
76. ALL DETOURS, IF APPROVED BY THE COUNTY, SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D. LATEST EDITION) AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION (600 SERIES). ANY DETOUR RECOMMENDED BY THE CONTRACTOR MUST BE SUBMITTED TO THE COUNTY (AND FDOT) FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY (AND FDOT) APPROVAL PRIOR TO IMPLEMENTATION AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.

LEGEND
EXISTING
BENCH MARK
CONCRETE MONUMENT
IRON PIPE
IRON ROD
HUB
NAIL & DISK
ELEVATION
PARCEL ID NO.
LOT NO.
GUY WIRE
POWER POLE
LIGHT POLE
MAIL BOX
SIGN
REFLECTOR
SPRINKLER
GAS MARKER
BACKFLOW PREVENTER
BLOW OFF VALVE
FIRE HYDRANT
WATER VALVE
AIR RELEASE VALVE
WATER METER
SANITARY SEWER MANHOLE
SANITARY SEWER CLEAN OUT
SOIL BORING LOCATION
TELEPHONE SERVICE BOX
UTILITY BOX
UTILITY RISER
FLOW DIRECTION
GRATE INLET
MITERED END SECTION
STORM SEWER MANHOLE
BUSH
TREE
OAK TREE
PALM TREE
PINE TREE
EDGE OF VEGETATION
CHAIN LINK FENCE
WOOD FENCE
BARBED WIRE FENCE
FORCE MAIN
POTABLE WATER
RECLAIMED WATER
SANITARY SEWER
STORM DRAIN
GAS LINE
OVERHEAD CHARTER
UNDERGROUND CHARTER
OVERHEAD ELECTRIC
UNDERGROUND ELECTRIC
OVERHEAD FRONTIER
UNDERGROUND FRONTIER
UNDERGROUND PRECO
UNDERGROUND FFL
OVERHEAD UTILITY
RAIL ROAD TRACKS
EDGE OF CONCRETE
EDGE OF ROAD
TOE OF SLOPE
TOP OF BANK
PROPERTY LINE
RIGHT OF WAY
ABBREVIATIONS
R/W RIGHT OF WAY
CONC CONCRETE
ASPH ASPHALT
DRWY DRIVEWAY
SWK SIDEWALK
EDGE OF PAVEMENT
BOC BACK OF CURB

Table with 4 columns: NO., REVISION DESCRIPTION, BY, DATE. Contains multiple empty rows for revisions.

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD GENERAL NOTES & LEGEND



Table with 2 columns: PROJECT #, SURVEY #, SEC./TWN./RGE, SCALE, SURVEYED, DESIGNED, DRAWN, CHECKED. Values include Varies, 00-44787, 00-44787, N.T.S., ZNS, JSS, JSS, ZNS, 4/12/19, 09/2019, 08/2019.

Professional Engineer seal for J. Shear Shoun, P.E., No. 60923, State of Florida, License expires 05/18/2021.

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COLONY COVE 6, RTU 522,
162 COLONY DR. N., ELLENTON
(BEHIND FIRE STATION)



MEMPHIS RD, RTU 534,
1721 17TH ST E, PALMETTO

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD PROJECT SITE LOCATION MAPS



PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	BY	DATE
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		

J. SHEA SHOUN, P.E.

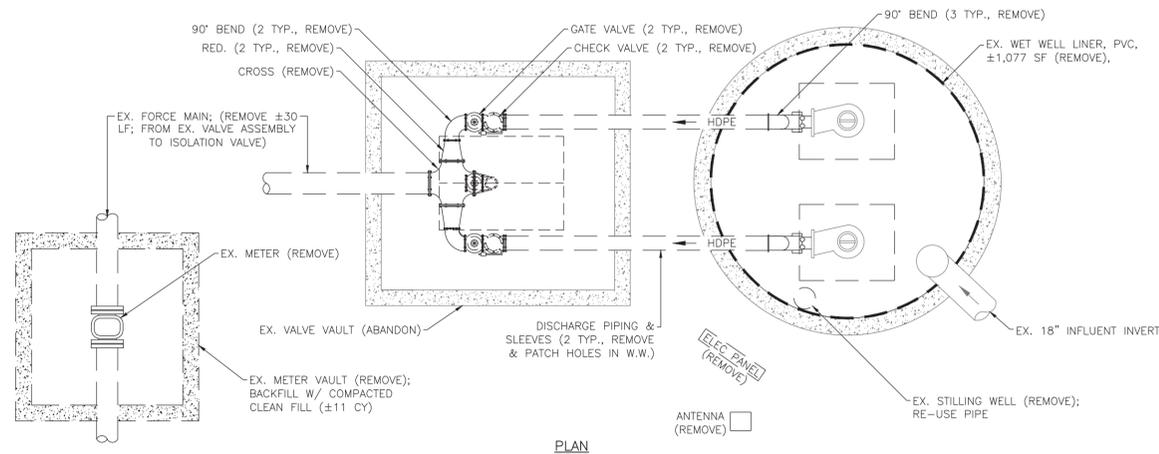
SHEET 03 OF 14

I:\Users\jshoun\OneDrive\Documents\Projects\2018\2018 Group\1\DWG\2018 R&R\2018 Group\1.dwg\cslp, 5/18/2021 7:01 AM Shea Shoun, P.E., ANSI T11 sheet D (34.00 x 22.00 inches), MC-2018-516

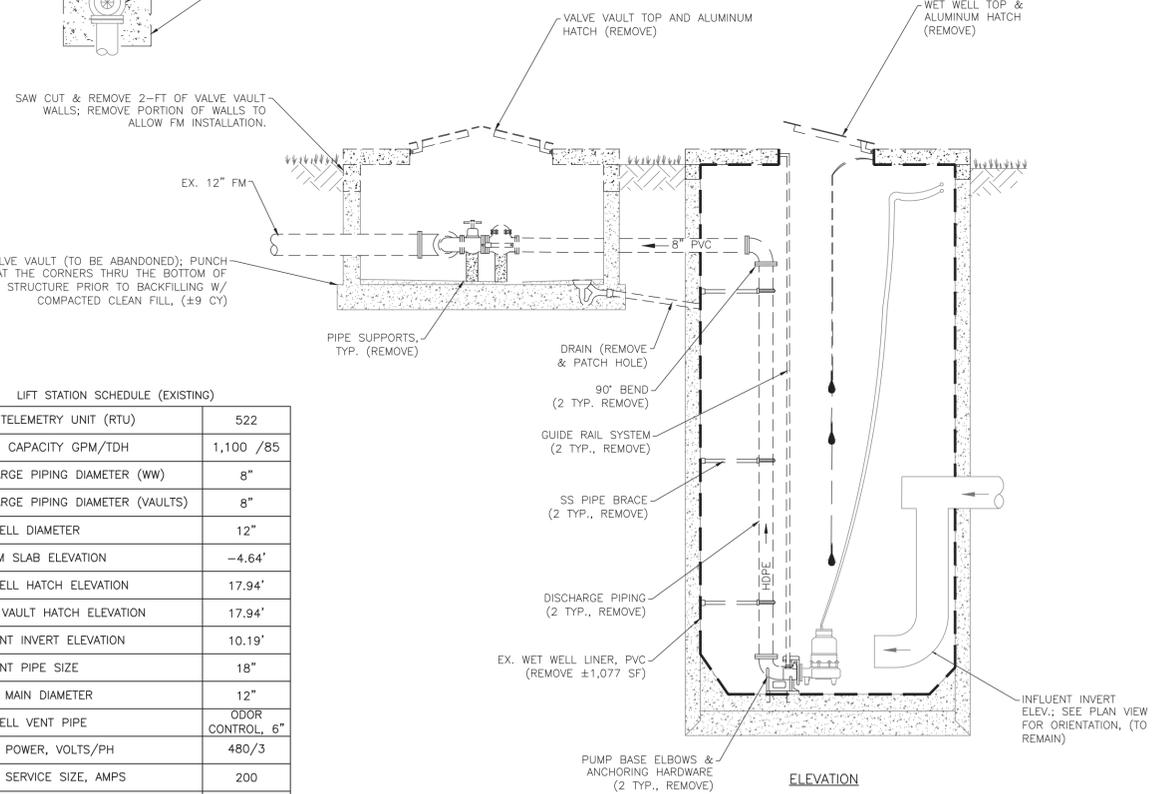
EXISTING

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

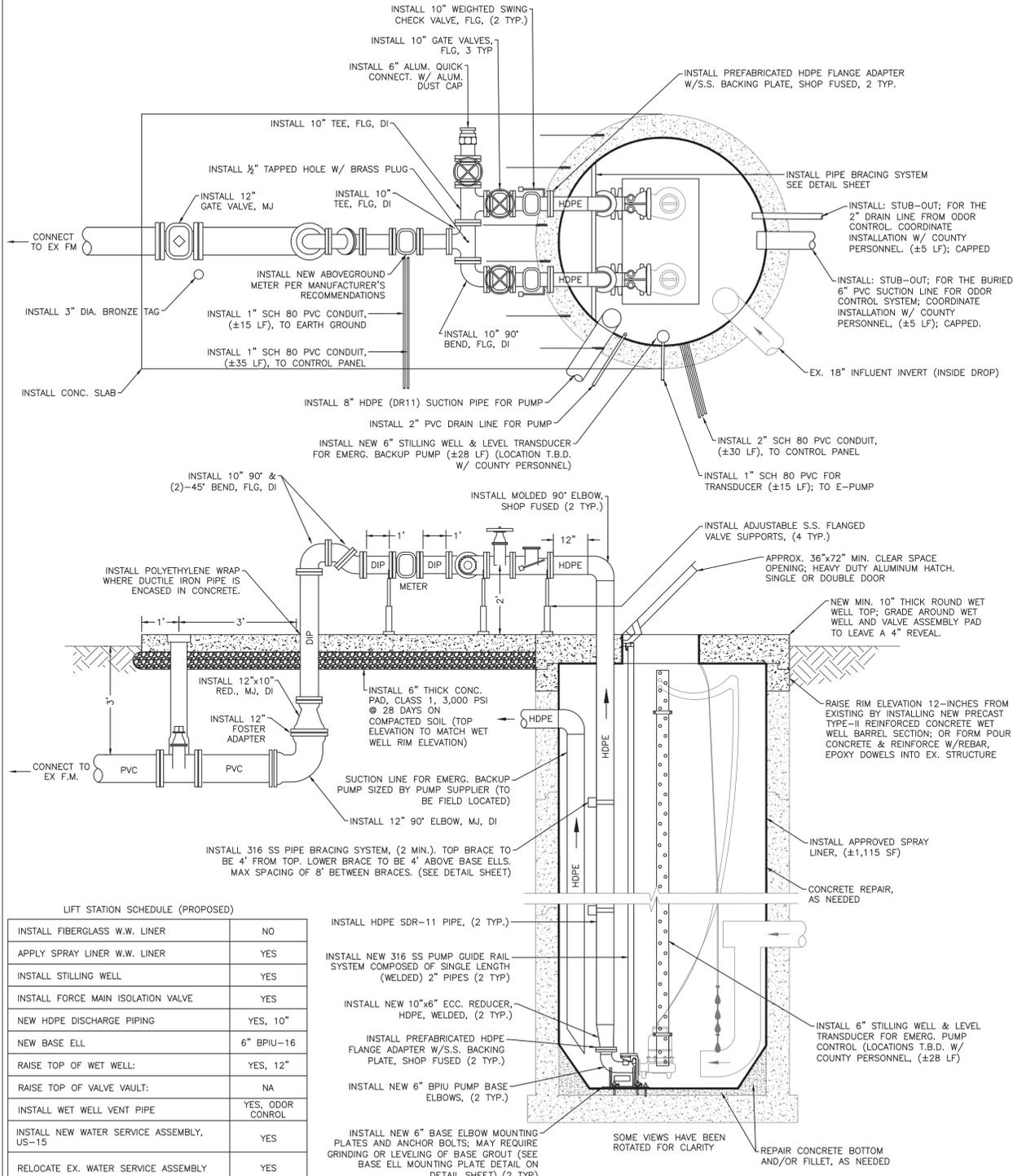
LIFT STATION SCHEDULE (EXISTING)	
RADIO TELEMETRY UNIT (RTU)	522
DESIGN CAPACITY GPM/TDH	1,100 /85
DISCHARGE PIPING DIAMETER (WW)	8"
DISCHARGE PIPING DIAMETER (VAULTS)	8"
WET WELL DIAMETER	12"
BOTTOM SLAB ELEVATION	-4.64'
WET WELL HATCH ELEVATION	17.94'
VALVE VAULT HATCH ELEVATION	17.94'
INFLUENT INVERT ELEVATION	10.19'
INFLUENT PIPE SIZE	18"
FORCE MAIN DIAMETER	12"
WET WELL VENT PIPE	ODOR CONTROL, 6"
ELECT. POWER, VOLTS/PH	480/3
ELECT. SERVICE SIZE, AMPS	200
EX. FM TIE-IN	FM

* INFORMATION TAKEN FROM LIFT STATION DATA FILE (LSINFO.XLS 2018) & 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, REINFORCED CONCRETE SLAB.



LIFT STATION SCHEDULE (PROPOSED)

INSTALL FIBERGLASS W.W. LINER	NO
APPLY SPRAY LINER W.W. LINER	YES
INSTALL STILLING WELL	YES
INSTALL FORCE MAIN ISOLATION VALVE	YES
NEW HDPE DISCHARGE PIPING	YES, 10"
NEW BASE ELL	6" BPIU-16
RAISE TOP OF WET WELL	YES, 12"
RAISE TOP OF VALVE VAULT	NA
INSTALL WET WELL VENT PIPE	YES, ODOR CONTROL
INSTALL NEW WATER SERVICE ASSEMBLY, US-15	YES
RELOCATE EX. WATER SERVICE ASSEMBLY	YES

- INSTALL HDPE SDR-11 PIPE, (2 TYP.)
- INSTALL NEW 316 SS PUMP GUIDE RAIL SYSTEM COMPOSED OF SINGLE LENGTH (WELDED) 2" PIPES (2 TYP)
- INSTALL NEW 10"x6" ECC. REDUCER, HDPE, WELDED, (2 TYP.)
- INSTALL PREFABRICATED HDPE FLANGE ADAPTER W/S.S. BACKING PLATE, SHOP FUSED (2 TYP.)
- INSTALL NEW 6" BPIU PUMP BASE ELBOWS, (2 TYP.)
- INSTALL NEW 6" BASE ELBOW MOUNTING PLATES AND ANCHOR BOLTS; MAY REQUIRE GRINDING OR LEVELING OF BASE GROUT (SEE BASE ELL MOUNTING PLATE DETAIL ON DETAIL SHEET) (2 TYP)

REHAB. CONSTRUCTION NOTES:

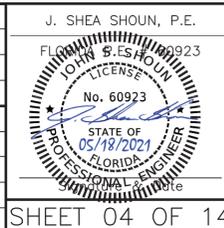
1. INSTALL ±10 LF NEW ELECTRICAL SERVICE.
2. INSTALL #5 REBAR (6 TYP.) EPOXY EMBEDDED INTO THE WET WELL TOP 3-4 INCHES DEEP AND CAST 3-4 FEET INTO THE VALVE VAULT ASSEMBLY CONCRETE PAD TO ENSURE THE TOPS OF THE WET WELL AND VALVE ASSEMBLY PAD WILL REMAIN FLUSH.
3. REMOVE AND INSTALL ALL NEW ELECTRICAL STRUCTURE (RACK), A VENTILATED 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.
4. 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.
5. 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 PERFORMED AND PROVIDED BY ROZEL, LLC. THE CONTRACTOR SHALL COORDINATE, PROVIDE SUFFICIENT ON-SITE DATA, AND ACCESS FOR THE STUDY/ANALYSIS TO BE COMPLETED TO THE SATISFACTION OF ROZEL, LLC AND THE COUNTY.
6. INSTALL NEW ±12" THICK PRECAST TYPE-II REINFORCED CONCRETE WET WELL BARREL SECTION; OR FORM POUR CONCRETE AND REINFORCE WITH REBAR, EPOXY DOWELS INTO EXISTING STRUCTURE. ENSURE THERE IS A 4" REVEAL OF THE TOP SLAB.
7. 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.
8. REPAIR CONCRETE, AS NEEDED, IN WET WELL, 2" MIN. THICK OVER EXISTING REBAR, (±558 SF). ALL REPAIRS TO BE VERIFIED W/ COUNTY PERSONNEL PRIOR TO WORK.
9. WET WELL CONCRETE WALLS SHALL BE INSPECTED BY COUNTY PERSONNEL PRIOR TO INSTALLATION OF NEW SPRAY LINER AND/OR LINER REPAIR.
10. CONTRACTOR TO REGRADE SITE TO ALLOW FOR A POSITIVE DRAINAGE SLOPE AWAY FROM THE LIFT STATION AREA TOWARDS THE SURROUNDING DITCHES. MAXIMUM OF 1% SLOPE.
11. METER SHALL BE INSTALLED/GROUNDED PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL ADHERE TO THE UPSTREAM AND DOWNSTREAM SEPARATION DISTANCES FROM FITTINGS TO ENSURE ACCURACY OF METER. THE METER HEAD SHALL BE MOUNTED ON THE NEW ELECTRICAL RACK. LOCATION T.B.D. WITH COUNTY PERSONNEL.
12. THE FOLLOWING EXISTING ITEMS AT THE STATION SHALL BE COLLECTED BY THE COUNTY:
 - a. AUTOMATIC TRANSFER SWITCH (A.T.S.) AND GROUP 5 ASCO CONTROLLER
 - b. KAL-36200 BREAKER (BREAKER)
 - c. BOTH PUMP BREAKERS
 - d. BOTH STARTERS
 - e. TELEMETRY CONTROL UNIT (T.C.U.)
 - f. RIO 032
 - g. TOP 3 SECTIONS OF TOWER.

SATELLITE LIFT STATION R&R

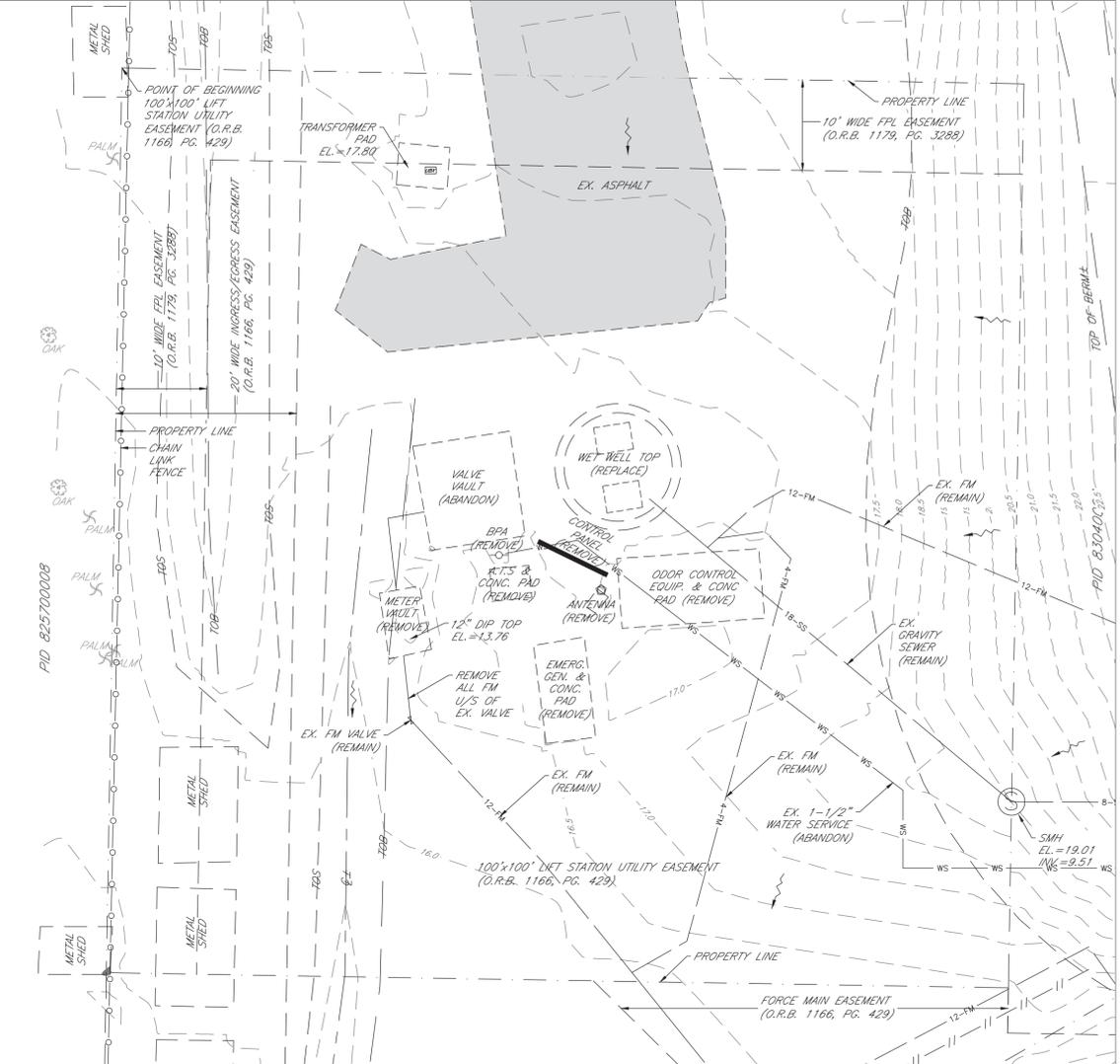
SLS COLONY COVE 6, RTU 522 (REHAB)



PROJECT #	404.6005686
SURVEY #	00-44787
SEC./TWN./RGE	10/34/18
SCALE	N.T.S.
SURVEYED	ZNS 4/12/19
DESIGNED	JSS 09/2019
DRAWN	JSS 08/2019
CHECKED	



EXISTING



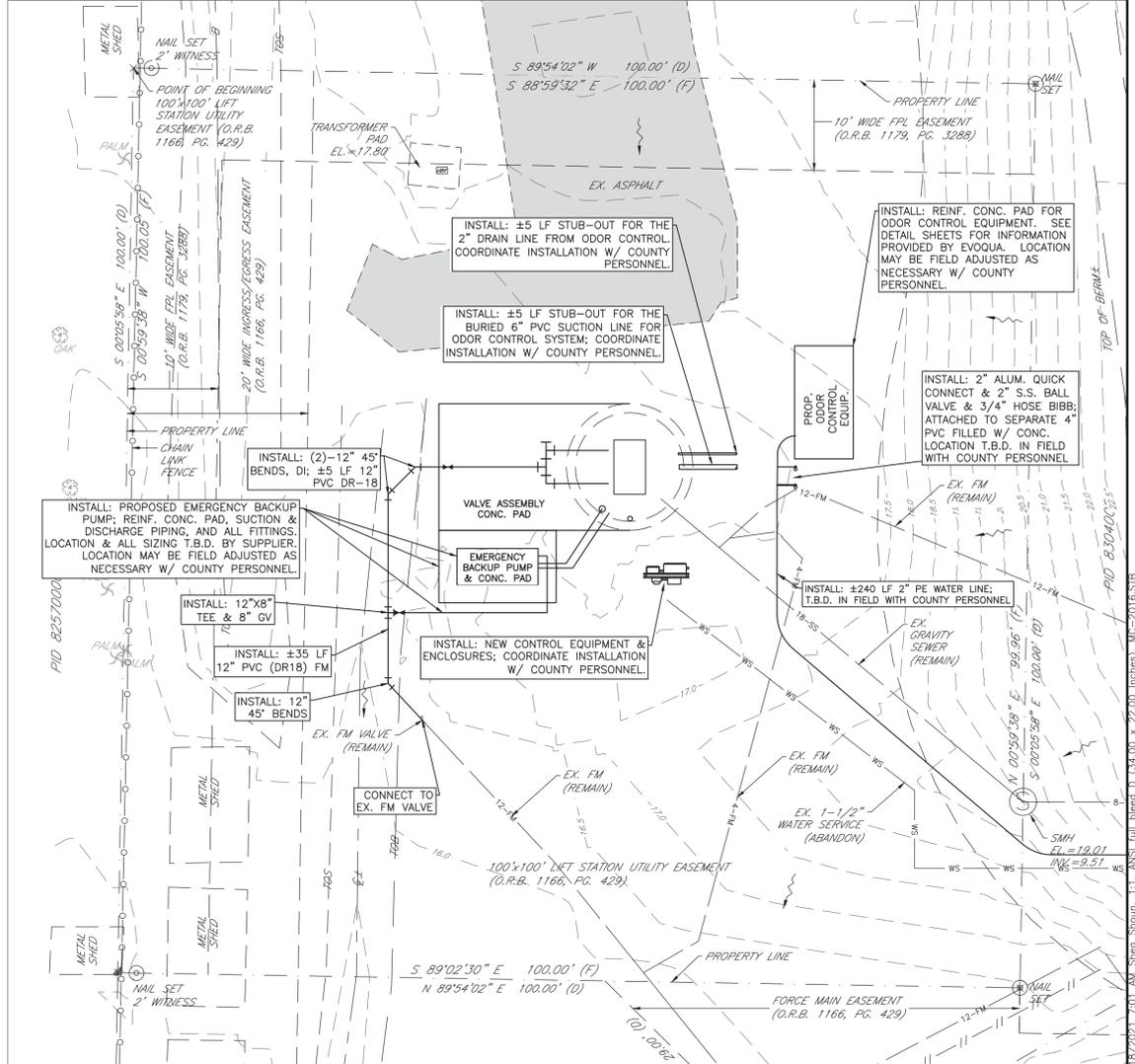
SITE PLAN CONSTRUCTION NOTES:

- GENERAL:**
- ALL EQUIPMENT, PIPING, ETC. SHALL BE WITHIN THE 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.
 - CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL PRIOR TO ALL INSTALLATIONS.
 - ALL NEW STRUCTURES, PIPING AND CONDUIT INSTALLED SHALL BE PROPERLY SHOWN ON THE REQUIRED RECORD DRAWINGS.
 - INSTALL ALL NEW 2" METER, BPA, & HOSE BIBB ASSEMBLY WITH NEW WATER SERVICE LINE AND CONNECTION. INSTALL NEW 2" QUICK CONNECT AND 3/4" HOSE BIBB PER COUNTY STANDARDS. CONFIGURATION AND FIELD LOCATION TBD WITH MANATEE COUNTY PERSONNEL.
 - ODOR CONTROL UNIT REMOVAL AND INSTALLATION BY OTHERS.

BACKUP PUMP CONSTRUCTION NOTES:

- CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SIZING, FURNISHING, AND INSTALLING A FULLY OPERATING AND PROPERLY FUNCTIONING EMERGENCY BACKUP PUMP WITH REINFORCED CONCRETE PAD. THIS SHALL INCLUDE ALL PIPING AND FITTINGS OF THE SUCTION AND DISCHARGE SIDE OF THE PUMP FROM THE WET WELL AND TO THE ISOLATION GATE VALVE (CONNECTION POINT) TO ENSURE THE MOST EFFICIENT DESIGN. THE COUNTY SHALL SUPPLY ALL AVAILABLE DATA TO ASSIST IN THE CONTRACTOR ENDEAVORS.
- CONTRACTOR IS RESPONSIBLE FOR ALL FITTINGS REQUIRED TO CONNECT THE PUMP TO THE SUCTION/DISCHARGE PIPING. FITTING SHALL BE INCLUDED IN PUMP COST.
- CONTRACTOR RESPONSIBLE TO PULL AND TERMINATE REMOTE SENSOR WIRING AT CONTROL PANEL. MANATEE COUNTY PERSONNEL TO MOUNT AND CONNECT TO PANEL. CONTRACTOR TO COORDINATE WITH MANATEE COUNTY PERSONNEL PRIOR TO AND DURING INSTALLATION OF REMOTE SENSOR.
- CONTRACTOR SHALL COORDINATE WITH PUMP VENDOR TO TEST AND CONFIGURE THE PUMP OPERATION AS SUBMITTED IN THE SHOP DRAWING.
- THE SUCTION AND DISCHARGE PIPING SHOWN IS ONE POSSIBILITY FOR INSTALLATION. CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL PRIOR TO INSTALLATION. ALL PIPING AND CONDUIT INSTALLED SHALL BE SHOWN ON THE RECORD DRAWINGS.
- THE CAPACITY OF THE DIESEL FUEL TANK SHALL BE SIZED TO THE MINIMAL FOOTPRINT & HEIGHT TO RUN THE BACKUP PUMP CONTINUOUSLY AT MAXIMUM RATED CAPACITY FOR A MINIMUM 48 HOURS, BUT NOT TO EXCEED A MAXIMUM OF 540 GALLONS.
- CONTRACTOR SHALL SUPPORT ALL SUSPENDED PIPING WITH 316 STAINLESS STEEL ADJUSTABLE STANDS FASTENED TO A CONCRETE PAD.
- THE OVERALL FUEL SYSTEM IS TO COMPLY WITH ALL APPLICABLE NFPA REGULATIONS AS WELL AS THOSE REQUIRED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION. THIS INCLUDES NFPA COMPLIANT LABELS FOR THE FUEL SHUT-OFF LOCATION AND APPLICATIONS OF DIESEL HAZMAT SYMBOL STICKERS.

PROPOSED



LEGEND

●	IRON MARKER FOUND/SET (AS NOTED)	SS	SANITARY SEWER
○	NAIL & DISC FOUND/SET (AS NOTED)	FM	FORCE MAIN
○	IRON PIPE FOUND (AS NOTED)	INV.	INVERT
I.R.S.	IRON ROD SET	PVC	POLYVINYL CHLORIDE (PIPE)
I.R.F.	IRON ROD FOUND	DIP	DUCTILE IRON PIPE
I.P.F.	IRON PIPE FOUND	AB	ALARM BOX
NDF	NAIL & DISC FOUND	MANCO	MANATEE COUNTY
I.P.F.	IRON PIPE FOUND	SQ	SQUARE
R/W	RIGHT OF WAY	BFV	BACK FLOW PREVENTER
ID	IDENTIFICATION	ANT	ANTENNA
LB	LICENSED BUSINESS	SE	SANITARY SEWER MANHOLE
(P)	PLAT DATA	EE	EXISTING ELEVATION
(F)	FIELD DATA	BM	BENCHMARK
(D)	DEED DATA	PP	POWER POLE
(C)	CALCULATED DATA	EH	ELECTRIC HANDHOLE
O.R.B.	OFFICIAL RECORD BOOK	UB	UTILITY BOX (AS NOTED)
PG.	PAGE	WM	WATER METER
No.	NUMBER	MES	MITERED END SECTION
NGVD	NATIONAL GEODETIC VERTICAL DATUM	LP	LIGHT POLE (CONCRETE)
NAVD	NORTH AMERICAN VERTICAL DATUM	SWV	FORCE MAIN WATER VALVE
BFP	BACK FLOW PREVENTER	ANT	ANTENNA
I.D.	IDENTIFICATION	OHU	OVERHEAD UTILITY
PID	PARCEL IDENTIFICATION (NUMBER)	EL.	ELEVATION
CONC.	CONCRETE	INV.	INVERT
ANT	ANTENNA	BM	BENCHMARK
OHU	OVERHEAD UTILITY		
EL.	ELEVATION		
INV.	INVERT		
BM	BENCHMARK		

NOTES:

- BEARINGS ARE BASED ON THE SOUTHERLY LINE OF LIFT STATION EASEMENT (O.R.B. 1166, PG. 429), HAVING A FIELD BEARING OF S 89°02'30" E, AND ARE RELATED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, (WEST ZONE) NAD 83/2011 DERIVED FROM CONTROL MONUMENT "MANATEE G. STROOP COR'S" (DL7628) AND VERIFIED BY CONTROL MONUMENT "HOLMES" (DM6806).
 - THE PROPERTY LIES WITHIN FLOOD ZONE "X" AS SHOWN ON MANATEE COUNTY FLOOD INSURANCE RATE MAP PANEL No. 12081C 0190 E, DATED MARCH 17, 2014.
 - ELEVATIONS ARE BASED ON NAVD 1988 DATUM, MANATEE COUNTY BENCH MARKS "142-88-02", PUBLISHED ELEVATION OF 15.28', NAVD 1988 AND 142-88-03, PUBLISHED ELEVATION OF 12.88', NAVD 1988.
 - TITLE INFORMATION WAS DERIVED FROM REPORT No. 29266-1, PREPARED BY AMERICAN GOVERNMENT SERVICES CORPORATION, WITH AN EFFECTIVE DATE OF MAY 28, 2019.
 - VAULT & WET WELL LIDS WERE LOCKED AT THE TIME OF DATA COLLECTION.
- BENCH MARKS:**
- BM MANCO BENCHMARK "142-88-02"
EL.= 15.28' NAVD 1988 (EL. = 16.25' NGVD 1929)
- BM MANCO BENCHMARK "142-88-03"
EL.= 12.88' NAVD 1988 (EL. = 13.85' NGVD 1929)
- BM NAIL & DISK SET (LB 6982) IN PARKING PAVEMENT EDGE
EL.= 17.75' NAVD 1988 (EL. = 18.72' NGVD 1929)
- BM IRON ROD SET (LB 6982) ON TOP OF BERM
EL.= 23.00' NAVD 1988 (EL. = 23.97' NGVD 1929)
- (NAVD 1988 TO NGVD 1929 CONVERSION EQUATION = +0.971')

0 10' 20'

**NAD 83/2011
NAVD 88**

SPECIFIC PURPOSE SURVEY

TO LOCATE EXISTING INFRASTRUCTURE
SATELLITE LIFT STATION (RTU522)
COLONY COVE MOBILE HOME PARK

LOCATED IN
SECTION 10 TOWNSHIP 34 SOUTH, RANGE 16 EAST
MANATEE COUNTY, FLORIDA

FOR: MANATEE COUNTY GOVERNMENT

EXTRACTS FROM THE SURVEYORS NOTES. COPIES OF THE
SEALED SURVEY ARE AVAILABLE UPON REQUEST

NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R

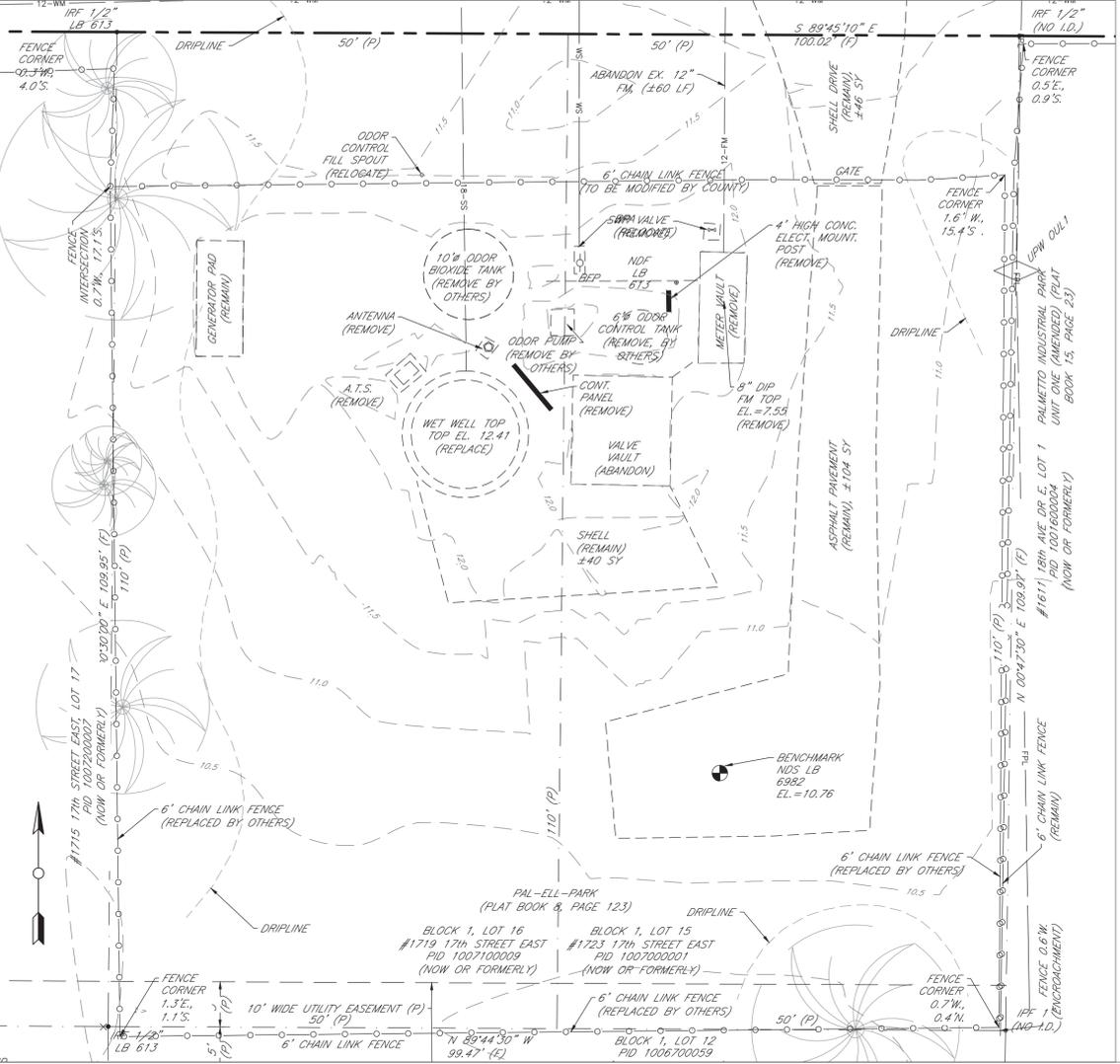
SLS COLONY COVE 6, RTU 522 (SITE PLAN)



PROJECT #	404.6005686
SURVEY #	00-44787
SEC./TWN./RGE	10/34/18
SCALE	1" = 10'
SURVEYED	ZNS 4/12/19
DESIGNED	JSS 09/2019
DRAWN	JSS 08/2019
CHECKED	

J. SHEPHERD, P.E.
Professional Engineer
No. 60923
FLORIDA
05/18/2021
DATE

EXISTING



LEGEND

●	IRON MARKER FOUND/SET (AS NOTED)	SS	SANITARY SEWER
○	NAIL & DISC FOUND/SET (AS NOTED)	FM	FORCE MAIN
○	IRON PIPE FOUND (AS NOTED)	INV	INVERT
I.R.S.	IRON ROD SET	PVC	POLYVINYL CHLORIDE (PIPE)
I.R.F.	IRON ROD FOUND	DIP	DUCTILE IRON PIPE
I.P.F.	IRON PIPE FOUND	AB	ALARM BOX
NDF	NAIL & DISC FOUND	MANCO	MANATEE COUNTY SQUARE
I.P.F.	IRON PIPE FOUND	SQ	SQUARE
R/W	RIGHT OF WAY	○	BACK FLOW PREVENTER
ID	IDENTIFICATION	○	ANTENNA
LB	LICENSED BUSINESS	○	SANITARY SEWER MANHOLE
(P)	PLAT DATA	○	EXISTING ELEVATION
(F)	FIELD DATA	○	BENCHMARK
(D)	DEED DATA	○	POWER POLE
(C)	CALCULATED DATA	○	ELECTRIC HANDHOLE
O.R.B.	OFFICIAL RECORD BOOK	○	UTILITY BOX (AS NOTED)
PG.	PAGE	○	WATER METER
No.	NUMBER	○	MITERED END SECTION
NGVD	NATIONAL GEODETIC VERTICAL DATUM	○	LIGHT POLE (CONCRETE)
NAVD	NORTH AMERICAN VERTICAL DATUM	○	FORCE MAIN WATER VALVE
BFP	BACK FLOW PREVENTER	○	CHAIN LINK FENCE
ID	IDENTIFICATION	○	CONCRETE
PID	PARCEL IDENTIFICATION (NUMBER)	○	ANTENNA
CONC.	CONCRETE	○	OVERHEAD UTILITY
ANT	ANTENNA	○	ELEVATION
OHU	OVERHEAD UTILITY	○	INV.
EL	ELEVATION	○	BM
INV.	INVERT	○	BENCH MARK
BM	BENCHMARK	○	OAK TREE (SIZE)
○	OAK TREE (SIZE)	○	PALM TREE
○	PALM TREE	○	ORNAMENTAL TREE (SIZE)
○	ORNAMENTAL TREE (SIZE)		

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NOTES:

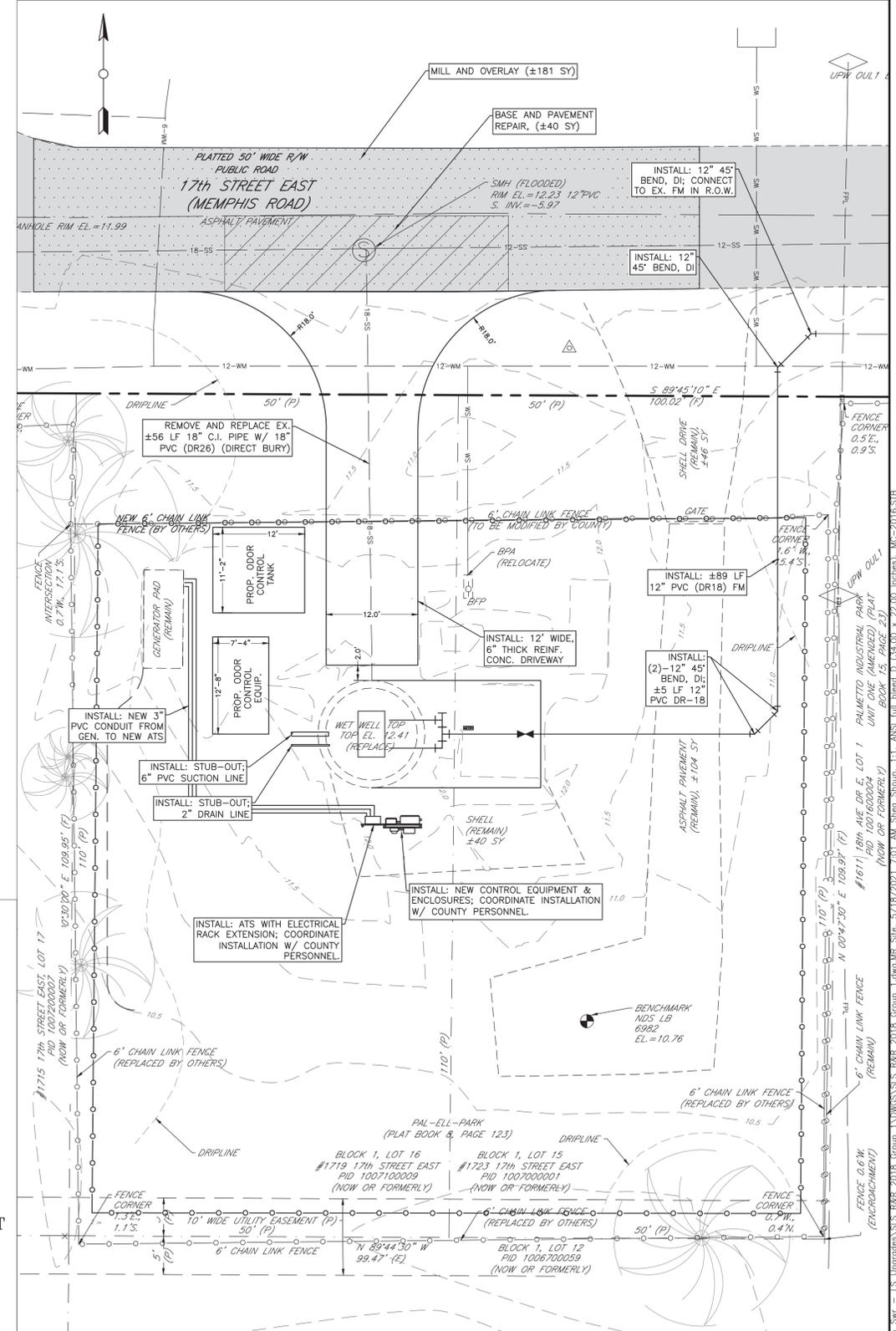
- BEARINGS ARE BASED ON THE SOUTHERLY RIGHT-OF-WAY LINE OF 17th STREET EAST (MEMPHIS ROAD), HAVING A BEARING OF S 89°45'10" E, AND ARE RELATED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, (WEST ZONE) NAD 83/2011 DERIVED FROM CONTROL MONUMENT "MANATEE G. STROOP CORRS-ARP" (DL7628) AND VERIFIED BY "SANTA ROSA" (D04869).
- THE PROPERTY LIES WITHIN FLOOD ZONE "X" AS SHOWN ON MANATEE COUNTY FLOOD INSURANCE RATE MAP PANEL No. 12081C 0168 E, DATED MARCH 17, 2014.
- ELEVATIONS ARE BASED ON NAVD 1988 DATUM, MANATEE COUNTY BENCH MARKS "120-88-02", PUBLISHED ELEVATION OF 9.73', NAVD 1988 AND "SANTA ROSA" (D04869), PUBLISHED ELEVATION OF 15.52', NAVD 1988.
- TITLE INFORMATION WAS DERIVED FROM REPORT No. 29226-2, PREPARED BY AMERICAN GOVERNMENT SERVICES CORPORATION, WITH AN EFFECTIVE DATE OF MAY 14, 2019.
- VAULT & WETWELL LIDS WERE LOCKED AT THE TIME OF DATA COLLECTION.

BENCH MARKS:
 BM MANCO BENCHMARK "SANTA ROSA" (PID D04869)
 EL. = 15.52' NAVD 1988 (EL. = 16.50' NGVD 1929)
 BM MANCO BENCHMARK "120-88-02"
 EL. = 9.73' NAVD 1988 (EL. = 10.71' NGVD 1929)
 BM NAIL & DISK SET (LB 6982) IN ASPHALT PAVEMENT DRIVE
 EL. = 10.76' NAVD 1988 (EL. = 11.74' NGVD 1929)
 BM NAIL & DISK FOUND (LB 6982) IN ASPHALT PAVEMENT,
 INTERSECTION OF 17th ST. E. & 17th AVE. DRIVE E.
 EL. = 12.11' NAVD 1988 (EL. = 13.09' NGVD 1929)

(NAVD 1988 TO NGVD 1929 CONVERSION EQUATION = +0.978')

- SITE PLAN CONSTRUCTION NOTES:**
- GENERAL:
- ALL EQUIPMENT, PIPING, ETC. SHALL BE WITHIN THE 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.
 - CONTRACTOR SHALL COORDINATE WITH COUNTY PERSONNEL PRIOR TO ALL INSTALLATIONS.
 - ALL NEW STRUCTURES, PIPING AND CONDUIT INSTALLED SHALL BE PROPERLY SHOWN ON THE REQUIRED RECORD DRAWINGS.
 - RELOCATE EX. 2" METER, BPA, 3/4" HOSE BIBB, AND 2" QUICK CONNECT ASSEMBLY, (±5 LF). FIELD LOCATE WITH MANATEE COUNTY PERSONNEL.
 - ODOR CONTROL UNIT TO BE HANDLED BY OTHERS.
 - INSTALL A 12' WIDE 6" THICK REINFORCED CONCRETE DRIVEWAY. PROPOSED DRIVEWAY SHALL BE FIELD ADJUSTED WITH COUNTY PERSONNEL TO PREVENT BLOCKAGE OF STORM WATER RUNOFF. (±80 SY). DRIVEWAY SHALL BE FLUSH TO EXISTING GRADE WITHIN THE RIGHT-OF-WAY.
 - CONTRACTOR TO UTILIZE EXISTING FENCE/GATE OR INSTALL AND MAINTAIN 6-FEET HIGH TEMPORARY SECURITY FENCE AND GATE(S) ALONG MEMPHIS RD FRONTAGE AT THE CONTRACTOR EXPENSE. PERMANENT FENCE AND GATE SHALL BE INSTALLED BY COUNTY. THE LIFT STATION SITE SHALL BE SECURED EACH DAY.
- GENERATOR REHAB NOTES:**
- INSTALL ALL NEW 3-INCH CONDUIT FROM THE EXISTING GENERATOR TO THE NEW AUTOMATIC TRANSFER SWITCH, (±165 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.

PROPOSED



NAD 83/2011
NAVD 88

SPECIFIC PURPOSE SURVEY
 TO LOCATE EXISTING INFRASTRUCTURE
SATELLITE LIFT STATION (RTU534)
LOTS 15 & 16, PAL-ELL-PARK
 (PLAT BOOK 8, PAGE 123)
 LOCATED IN
SECTION 18 TOWNSHIP 34 SOUTH, RANGE 18 EAST
MANATEE COUNTY, FLORIDA
 FOR: **MANATEE COUNTY GOVERNMENT**
 EXTRACTS FROM THE SURVEYORS NOTES. COPIES OF THE SEALED SURVEY ARE AVAILABLE UPON REQUEST

NO.	REVISION DESCRIPTION	BY	DATE

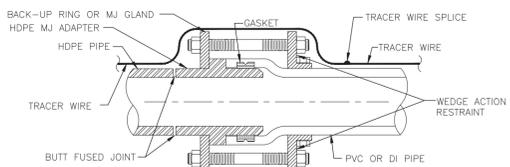
SATELLITE LIFT STATION R&R

SLS MEMPHIS RD, RTU 534 (SITE PLAN)

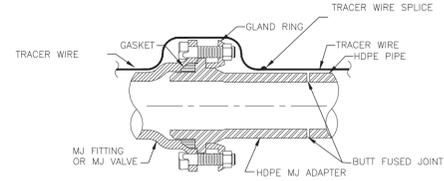


PROJECT #	404.6061082
SURVEY #	00-44787
SEC./TWN./RGE	18/34/18
SCALE	1" = 10'
SURVEYED	ZNS 4/12/19
DESIGNED	JSS 09/2019
DRAWN	JSS 08/2019
CHECKED	

J. SHEPHERD, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 Signature: _____ Date: _____

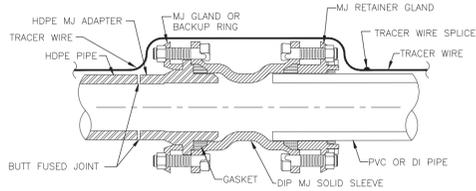


HDPE PIPE TO PVC PIPE / SPIGOT TO BELL CONNECTION



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

HDPE PIPE TO MJ FITTING TRANSITION

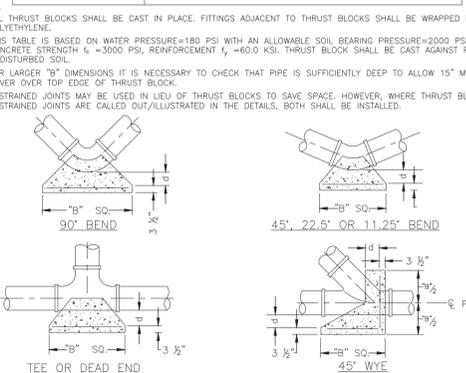


HDPE PIPE TO PVC PIPE SPIGOT TO SPIGOT CONNECTION

1. ONE TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS.

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

PIPE SIZE (N.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
	B	d	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	0.6	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	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 1/2	1.1	3 1/2	2.4	5 1/2	2.0	4 1/2
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3 1/2	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3 3/4	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	1.8	4 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 3/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	2.3	5 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/4	5.8	14	4.9	11 3/4
24	8.2	19 3/4	6.0	14 1/2	4.3	10 3/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4



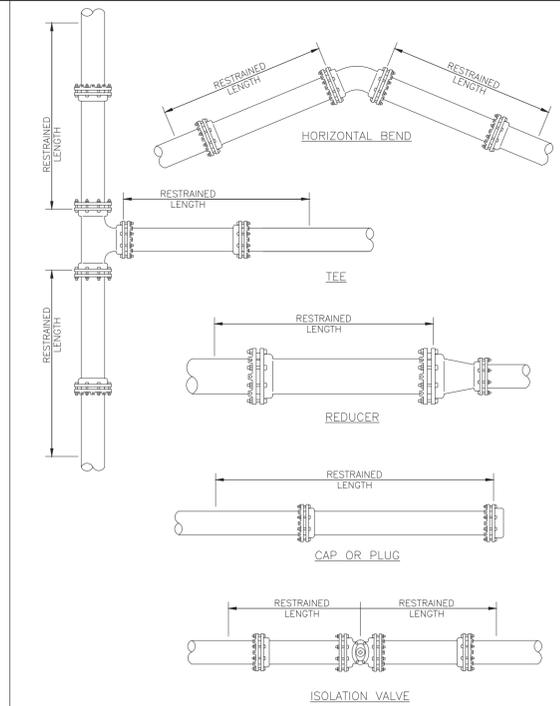
NOTES:
1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH f_c =3000 PSI, REINFORCEMENT f_y =60,000 KSI. THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
3. 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.
4. 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

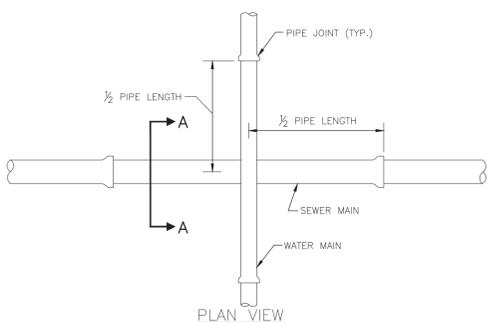
NOTES:
1. RESTRAIN 11.25° BENDS 50% OF LENGTH FOR 22.5° BENDS.
2. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
3. ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
4. PIPE SIZES ARE GIVEN IN INCHES.
5. 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 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.
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		
DATE OF APPROVAL			

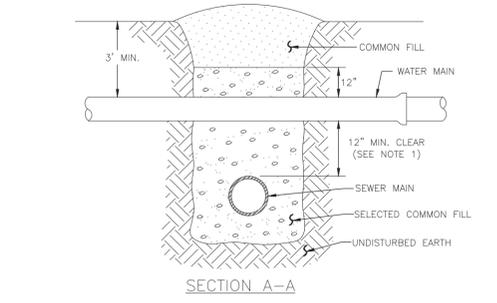


NOTE:
1. SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

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



PLAN VIEW

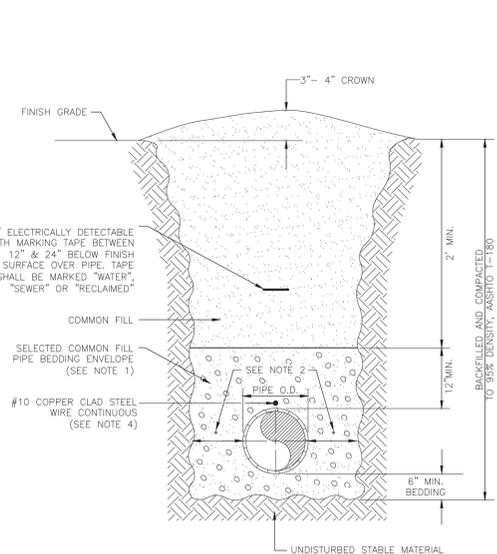


SECTION A-A

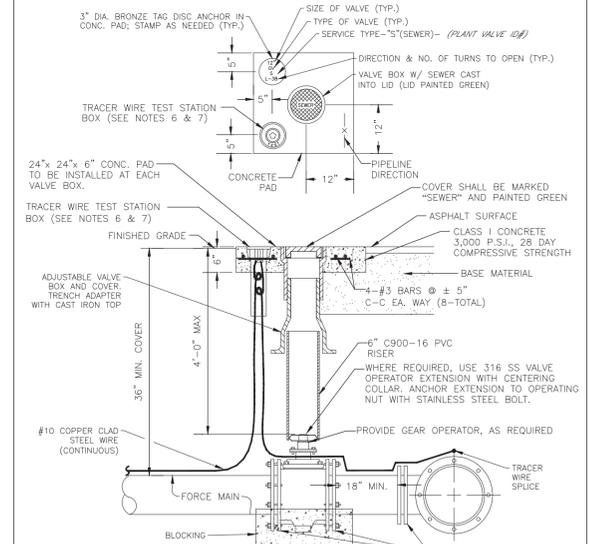
NOTES:
1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON.
2. PIPE SECTIONS SHALL BE FULL-LENGTH AND SHALL BE ADJUSTED HORIZONTALLY, SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.

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

NOTES:
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

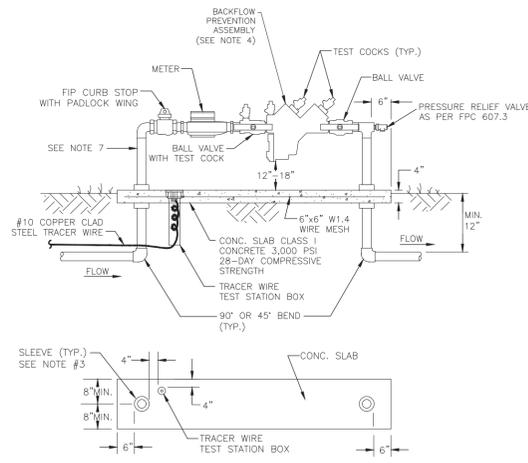


MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY	DATE		
DATE OF APPROVAL			



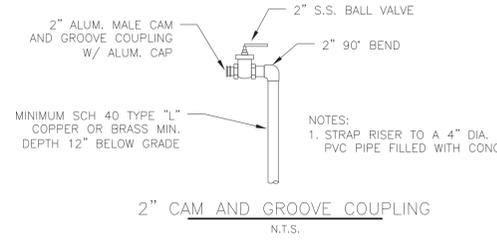
NOTES:
1. "SV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED 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 FOR NORMAL YARD SERVICE, 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 THROUGHFARES, LOCAL ARTERIAL AND STATE ROADWAYS.
8. 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.
9. REFER TO SECTION 1.11 IN THE PUBLIC WORKS UTILITIES STANDARDS MANUAL FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		VALVE, BOX, COVER AND TAG	US-11
REV. BY	DATE		
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 SLEAVED.
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 5/8-INCH WATER METER, WITH A 3/4-INCH REDUCED PRESSURE (RPZ) BACKFLOW PREVENTION ASSEMBLY. STATIONS WITH WELLHEAD DIAMETERS 12 FEET AND LARGER TO HAVE A 2-INCH METER AND RPZ BACKFLOW PREVENTION ASSEMBLY.
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		WATER METER & BACKFLOW PREVENTION ASSEMBLY FOR LIFT STATIONS	US-15
REV. BY	DATE		
DATE OF APPROVAL			



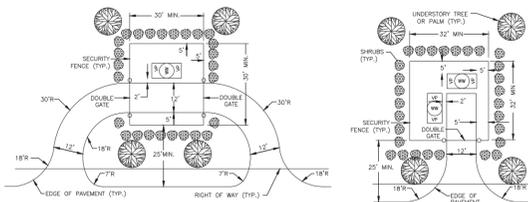
NOTES:
1. STRAP RISER TO A 4" DIA. PVC PIPE FILLED WITH CONC.

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD DETAILS



PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	ZNS	4/12/19
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		

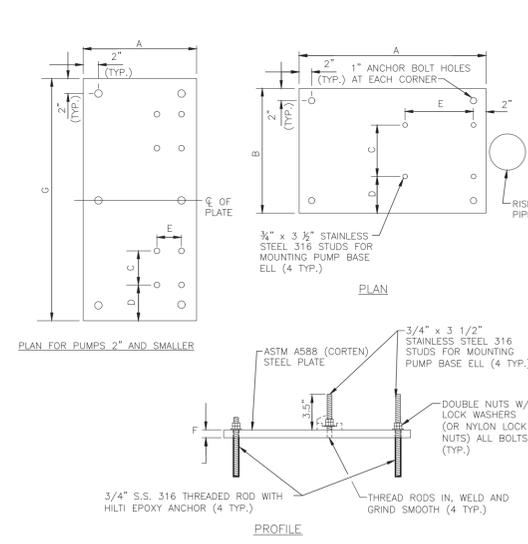
J. SHEA SHOUN, P.E.
 FLO. REG. NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 No. 60923
 05/18/2021



THOROUGHFARE DRIVEWAYS
NON-THOROUGHFARE DRIVEWAY

- NOTES:
1. A MINIMUM SETBACK OF 5 FT SHALL BE PROVIDED BETWEEN LIFT STATION STRUCTURES/EQUIPMENT/VALVE ASSEMBLY AND THE FENCE.
 2. DRIVEWAY SHALL EXTEND UP TO OR BE EVEN WITH THE FURTHEST POINT OF THE WET WELL OR VALVE PAD.
 3. LIFT STATION EASEMENT SHALL EXTEND A MINIMUM OF 15 FT BEYOND ALL FOUR SIDES OF THE LIFT STATION SECURITY FENCE.
 4. OPTIONS FOR PLACEMENT OF WW & VALVE ASSEMBLY (IF NEEDED) ARE INDICATED FOR CLARITY.
 5. A MINIMUM SETBACK OF 5 FT SHALL BE PROVIDED BETWEEN THE SHRUB'S BASE STEM AND THE LIFT STATION SECURITY FENCE.
 6. A MINIMUM SETBACK OF 10 FT SHALL BE PROVIDED BETWEEN THE TRUNK OF SMALL TREES AND THE LIFT STATION SECURITY FENCE.
 7. SPECIFIC LANDSCAPING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 1.13.11 IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL.
 8. DRIVEWAY MATERIAL SHALL BE CONCRETE AND SHALL BE IN ACCORDANCE WITH MANATEE COUNTY HIGHWAY & TRAFFIC STANDARDS MANUAL FOR THE DRIVEWAY.
 9. DRIVEWAY WILL BE INSTALLED AT GRADE OF SLL SURROUNDING WET WELL & VALVE ASSEMBLY.

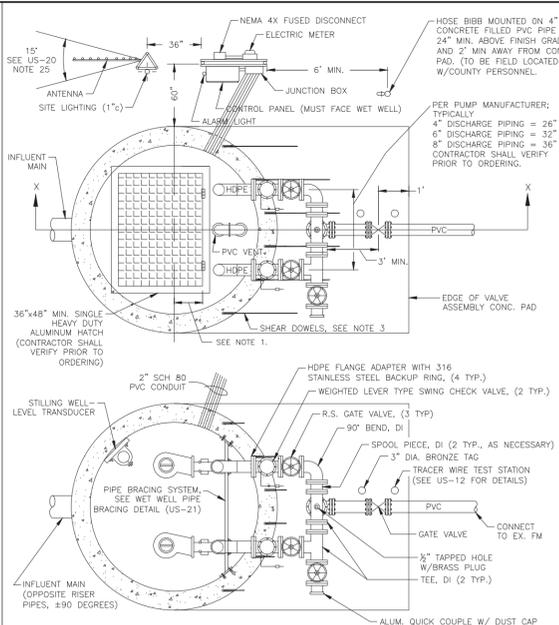
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		MINIMUM ACCESS/EGRESS AND LANDSCAPING REQUIREMENTS FOR LIFT STATIONS	US-16
REV. BY	DATE	DATE OF APPROVAL	



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
2" PUMPS & SMALLER	15"	N/A	4.5"	4.75"	3.25"	1/2"	32"

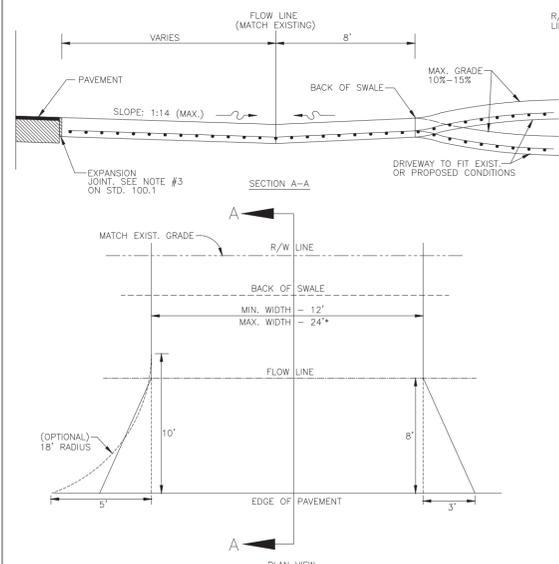
- NOTES:
1. INSTALL DOUBLE NUTS (OR NYLON LOCK NUTS) ON ALL EIGHT (8) THREADED RODS.
 2. THE PLATE EDGES AND ALL HOLES SHALL BE GRIND SMOOTH TO REMOVE ALL BURRS.
 3. DIMENSIONS "C" & "E" ARE FOR BARNER'S PUMPS, INC. BASE ELLS.
 4. FOR PUMPS WITH A 2-INCH DISCHARGE OR LESS, A SINGLE BASE PLATE SHALL BE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

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		PUMP BASE ELL MOUNTING PLATE	US-22
REV. BY	DATE	DATE OF APPROVAL	



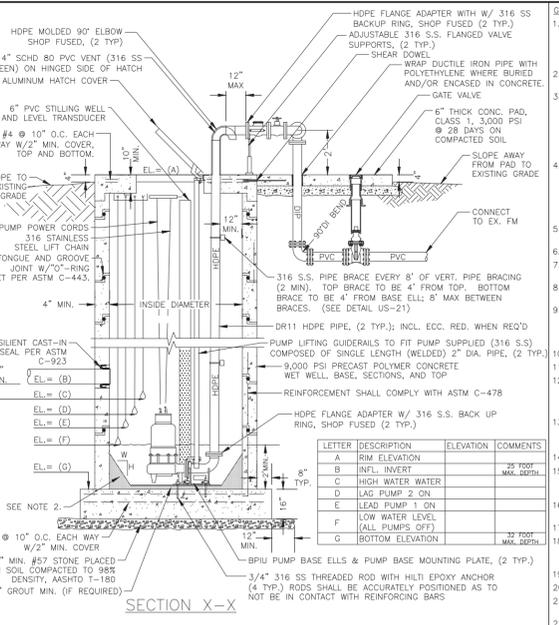
- NOTES:
1. FOR 6" DIA. WET WELLS, THE HINGED SIDE OF THE HATCH OPENING SHALL BE OFFSET 12" FROM CENTERLINE.
 2. A FLOW METER SHALL BE INSTALLED UPSTREAM OF ISOLATION GATE VALVE FOR ALL LIFT STATIONS THAT RE-PUMP SEWAGE FROM OTHER LIFT STATIONS.
 3. #5 REBAR (6 TYP.) SHALL BE EPOXY EMBEDDED INTO THE 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.
 4. QUICK COUPLE SHALL BE PLACED ON THE SIDE CLOSEST TO THE LIFT STATION DRIVEWAY.
 5. POLYMER CONCRETE W/ 9,000 PSI COMPRESSIVE STRENGTH SHALL BE USED IN THE WET WELL CONSTRUCTION. STANDARD PORTLAND CONCRETE MAY BE USED FOR THE VALVE ASSEMBLY PAD, 3,000 PSI 28-DAY COMPRESSIVE STRENGTH.
 6. FOR SECTION X-X SEE SEWAGE LIFT STATION, SECTION VIEW ON DETAIL US-19.

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



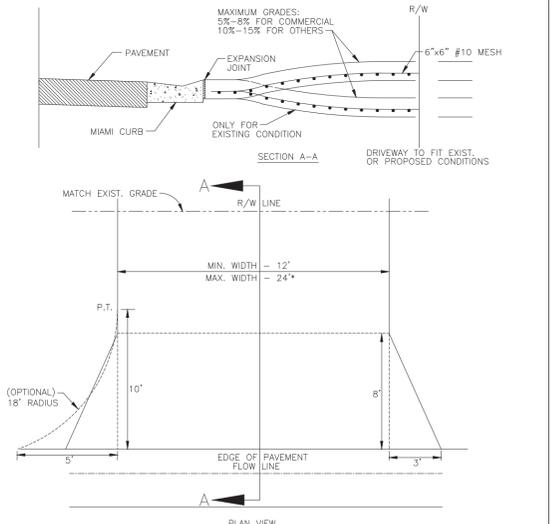
- * For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:
- a.) 30' total at the R/W line
 - b.) 30% of the front footage as defined on the survey (or field measurements, 36' max.)
- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE (3,000 PSI @ 28 DAYS) WITH 6"x6" #10 MESH FROM EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE.
 - (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ABOVE.
 - (C) EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY'S DISCRETION.
 - (D) 3"x8" FLARED APRON IS MINIMAL, OR 18" RADIUS.
 - (E) ENGINEERING DIVISION MANAGER MAY APPROVE THE USE OF A SWALE DRIVE, IF ON-SITE CONDITIONS ARE FAVORABLE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		RURAL RESIDENTIAL (SWALE DRIVE)	101.0
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	



1. 6" MINIMUM VERTICAL SPACING BETWEEN ALL PUMP AND ALARM CONTROL LEVELS.
2. POLYMER CONCRETE FILLET ALL AROUND WET WELL: 6-FT DIA. x 12"H x 6"W; 8-FT DIA. & GREATER x 18"H x 12"W.
3. THE VALVE CONCRETE PAD SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL BE NOT MORE THAN 1/4" UNDER A TEN FOOT (10') STRAIGHT EDGE, 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 ASHTO M153 OR ASHTO M213.
5. THIS DETAIL SHALL APPLY TO LIFT STATIONS WITH 4" OR GREATER FORCE MAINS. LIFT STATIONS WITH FORCE MAINS LESS THAN 4" REFER TO DETAIL US-27A.

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

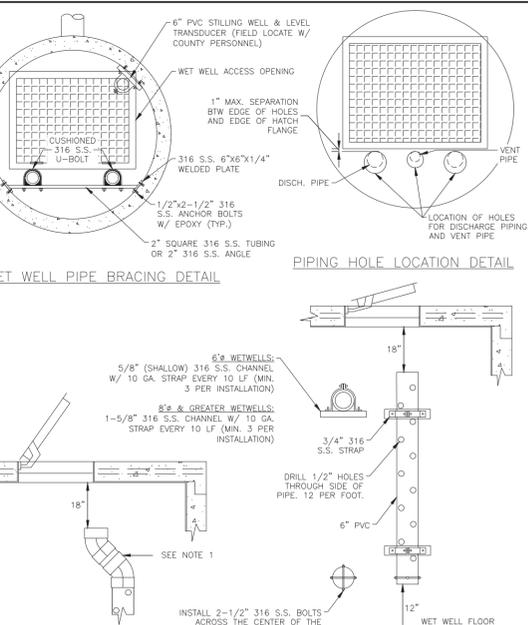


- * For driveways that can demonstrate the need for additional width, the width may not be greater than the LESSER of:
- a.) 30' total at the R/W line
 - b.) 30% of the front footage as defined on the survey (or field measurement, 36' max.)
- (A) CONSTRUCT WITH 6" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB- TO R/W LINE.
 - (B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STD. 101.0)
 - (C) 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).
 - (D) 3"x8" FLARE OR 18" RADIUS WITH CURB TRANSITION (TRANSITION FROM TYPE "A" 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.
 - (E) EXPANSION JOINT 0.50" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, DRIVES WIDER THAN 12" (BEYOND FLARE) PLACE JOINT ON 10' CENTER.
 - (F) LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		URBAN DRIVES	101.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	

- GENERAL LIFT STATION NOTES:
1. ALL ACCESS COVERS SHALL BE ALUMINUM, WITH 316 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 18 MILS DFT. ALL ACCESS COVERS SHALL BE EQUIPPED WITH A LOCKING STAPLE OR BAR FOR USE WITH A PADLOCK. PADLOCKS FOR WETWELL, FENCE GATE AND CONTROL PANELS OF PUBLICLY OWNED & MAINTAINED LIFT STATIONS SHALL BE FURNISHED BY THE MANATEE COUNTY UTILITIES DEPARTMENT, UPON ACCEPTANCE.
 2. INSTALL WET WELL VENT ON THE HINGED SIDE OF THE WET WELL HATCH COVER, BETWEEN DISCHARGE PIPING AND HATCH HOIST.
 3. GROUND SHALL BE SLOPED AWAY FROM SLAB TO NATURAL GROUND ELEVATION IN ALL DIRECTIONS. A 4-INCH REVEAL SHALL BE PROVIDED AROUND THE STRUCTURES. 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 SHREDED WOOD TYPE MULCH UNDER THE SHRUBS AND UP TO OUTSIDE OF THE FENCE. WEED BARRIER FABRIC THAT IS COVERED WITH SHREDED WOOD-TYPE MULCH SHALL BE LOCATED UNDER THE TREES FOR A MINIMUM DISTANCE OF 3 FEET FROM THE TREE. SODDING OR SHREDED WOOD-TYPE MULCH SHALL BE INSTALLED ON THE REMAINDER OF THE SITE TO THE EDGE OF THE EASEMENT.
 4. ALL FORCE MAIN PIPING AND FITTINGS FROM THE PUMP BASE ELBOW IN THE WETWELL UP TO THE CHECK VALVE IN THE ABOVE GROUND VALVE ASSEMBLY SHALL BE DR11 HOPE. THE HOPE FITTINGS SHALL BE MOLDED FITTINGS. ALL CONNECTIONS TO IRON BODIED FLOW FITTINGS IN THE WETWELL (PUMP BASE ELLS) AND TO THE CHECK VALVES SHALL BE MADE USING HOPE FLANGE ADAPTERS WITH 316 STAINLESS STEEL BACKUP RINGS. ALL HOPE CONNECTIONS SHALL BE THERMAL FUSED. ALL PIPING DOWNSTREAM OF THE VALVE ASSEMBLY TO THE FIRST BURIED FITTING SHALL BE DUCTILE IRON PIPE (CL-53), THEN PVC (DR18).
 5. ALL PIPING BELOW GROUND SHALL BE COLOR CODED IN ACCORDANCE WITH THESE STANDARDS. GREEN-RAW SEWAGE; PURPLE-RECLAIMED; BLUE-POTABLE WATER.
 6. ANCHORS & LIFTING DEVICES SHALL NOT PENETRATE THE WALLS OF THE WET WELL.
 7. ALL TOP, SECTIONS, AND BASE SHALL BE PRECAST POLYMER CONCRETE, MIN. 9,000 PSI COMPRESSIVE STRENGTH. SEE PRECAST POLYMER CONCRETE SANITARY SEWER MANHOLE FOR TURBULENT FLOW DETAIL.
 8. ALL ABOVE-GROUND METAL APPURTENANCES INCLUDING BOLTS, NUTS AND WASHERS SHALL BE 316 STAINLESS STEEL. ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SEIZE PRIOR TO ASSEMBLY.
 9. VERTICAL HOPE PUMP DISCHARGE PIPE IN THE WET WELL SHALL BE BRACED PER DETAIL US-21. THE PIPE SHALL BE CLAMPED TO A SINGLE LENGTH OF 2" 316 SS TUBING (OR 2" 316 SS ANGLE) INSTALLED HORIZONTALLY. THE TUBING SHALL HAVE 6"x6"x1/4" PLATES WELDED TO EACH END AND ATTACH TO THE WALL BY 316 SS ANCHORS. THE PIPE SHALL BE CLAMPED TO THE TUBING WITH CUSHIONED 316 SS U-BOLTS.
 10. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FLOTTATION.
 11. TOP OF WET WELL AND VALVE ASSEMBLY SLAB SHALL BE AT THE SAME ELEVATION.
 12. THE EXTERIOR SURFACES OF THE CONCRETE WET WELL AND VALVE ASSEMBLY 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 7638 HUNTER GREEN. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID OVER-SPRAY ONTO THE VALVE ASSEMBLY CONCRETE PAD.
 13. FOR 5/8" WATER METER, PROVIDE POTABLE WATER SERVICE CONNECTION WITH 3/4" BRASS HOSE BIB. PROVIDE AN APPROVED BACKFLOW PREVENTION ASSEMBLY INSTALLED AT THE ROW. 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.
 14. LANDSCAPING SHALL BE IRRIGATED WITH NON-POTABLE WATER. A RAIN SENSOR SHALL BE FURNISHED AND INSTALLED.
 15. HOSE BIB TO BE 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, EXACT LOCATION TO BE DETERMINED IN THE FIELD W/COUNTY PERSONNEL.
 16. WATER METER ASSEMBLY TO BE INSTALLED BY CONTRACTOR AS PART OF WATER SERVICE CONNECTION WITH FEES PAID BY THE DEVELOPER.
 17. BASE AND FIRST WALL SECTION OF WET WELL SHALL BE MONOLITHIC.
 18. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO CONSTRUCT WATER TIGHT STRUCTURES WITH NO VISIBLE LEAKS. COMPLETED STRUCTURES THAT ARE NOT WATER TIGHT AND/OR DO NOT MEET THE REQUIREMENTS OF ASTM C-443 WILL BE REJECTED.
 19. FLEXIBLE GASKET CONNECTORS SHALL MEET THE REQUIREMENTS OF ASTM C-923 LATEST REVISION.
 20. ALL GATE VALVES SHALL BE RESILIENT SEAT NON-RISING STEM TYPE IN ACCORDANCE WITH THESE STANDARDS.
 21. ELECTRICAL SERVICE SHALL BE 3 PHASE MINIMUM, UNLESS THE ELECTRICAL UTILITY PROVIDES CORRESPONDENCE STATING THAT 3 PHASE SERVICE IS UNAVAILABLE.
 22. 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.
 23. A FLOW METER AND EMERGENCY BACKUP PUMP SHALL BE REQUIRED FOR ALL LIFT STATIONS THAT MEET THE CRITERIA LISTED IN SECTION 1.14.14 OF THE PUBLIC WORKS UTILITY STANDARDS MANUAL.
 24. THE CONTROL PANEL, HOSE BIB, EMERGENCY BACKUP PUMP, FUEL STORAGE TANK AND ANTENNA SHALL NOT BE LOCATED BETWEEN THE WET WELL VALVE ASSEMBLY AND THE DRIVEWAY. THE PUMP SHALL NOT BE LOCATED WITHIN 25 FEET OF THE EDGE OF THE LIFT STATION BASEMENT AT THE ROW LINE.
 25. THE ANTENNA FOR THE RADIO TELEMETRY UNIT REQUIRES DIRECT LINE-OF-SIGHT SIGNALING CAPABILITY TO THE UTILITIES DEPARTMENT'S OFFICE THAT WILL RECEIVE THE SIGNAL. THERE SHALL BE AN UNOBSTRUCTED HORIZONTAL ANGLE OF FIFTEEN (15) DEGREES FROM THE ANTENNA MAST (7.5 DEGREES ON BOTH SIDES OF THE DIRECT LINE-OF-SIGHT ANGLE). NO TREE SHALL BE PLANTED WITHIN THE DESIGNATED UNOBSTRUCTED ANGLE FOR A TWENTY (20) FEET HORIZONTAL DISTANCE MEASURED FROM THE MAST. LANDSCAPE BUFFER PLANTINGS ARE TO BE FIELD ADJUSTED IN COORDINATION WITH THE LOCATION OF THE CONSTRUCTED TELEMETRY ANTENNA. THE ANTENNA TOWER/MAST SHALL BE TO THE LEFT OF THE CONTROL PANEL.

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



- NOTES:
1. 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-18, US-19 & US-20 FOR LIFT STATION DETAILS.
 3. NYLON LOCK NUTS SHALL NOT BE USED ON WEDGE ANCHORS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		LIFT STATION PIPE BRACING, & STILLING WELL DETAILS	US-21
REV. BY	DATE	DATE OF APPROVAL	

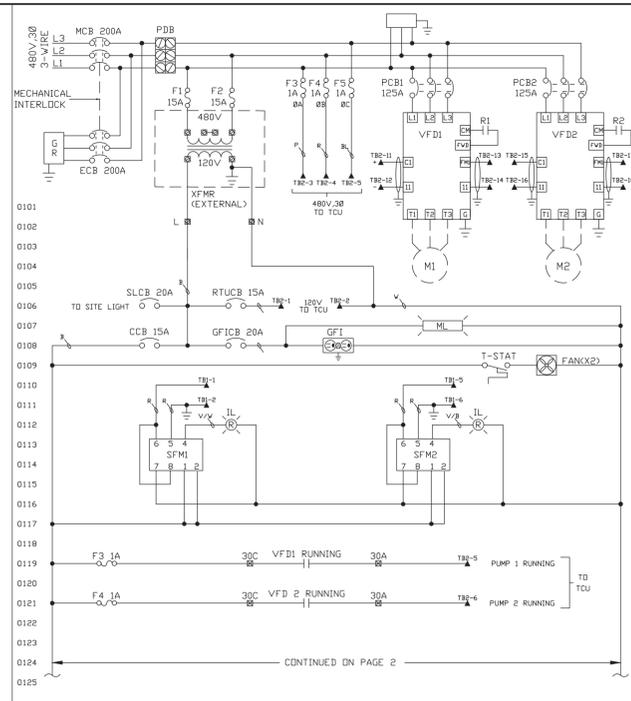
NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD DETAILS

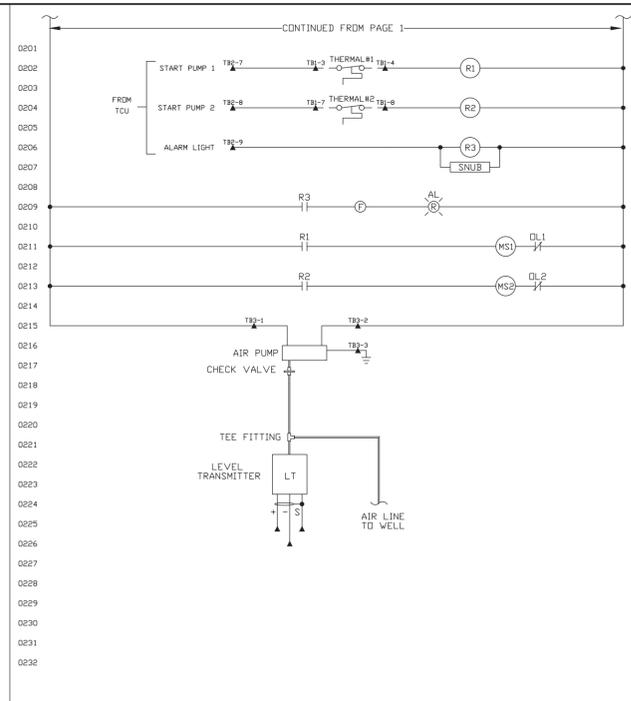


PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	BY	DATE
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		

J. SHEA SHOHN, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
Professional Engineer
Signature: _____ Date: _____



UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			1 OF 6

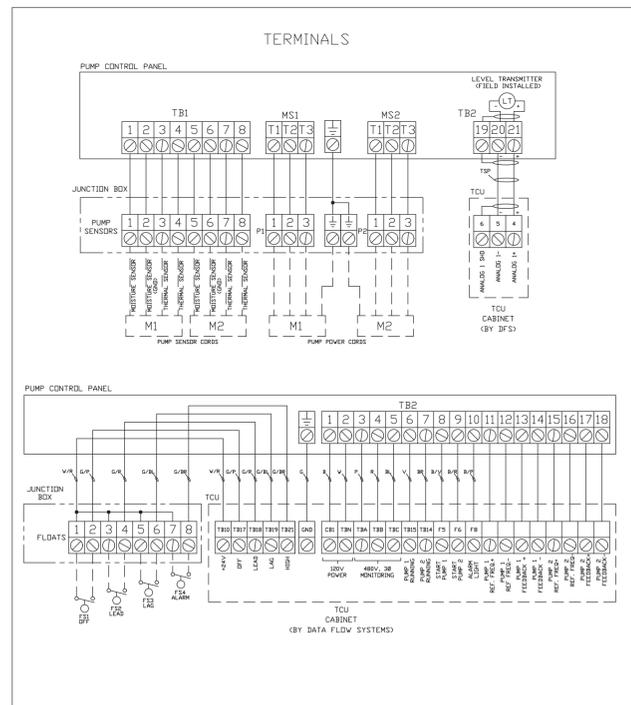


UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			2 OF 6

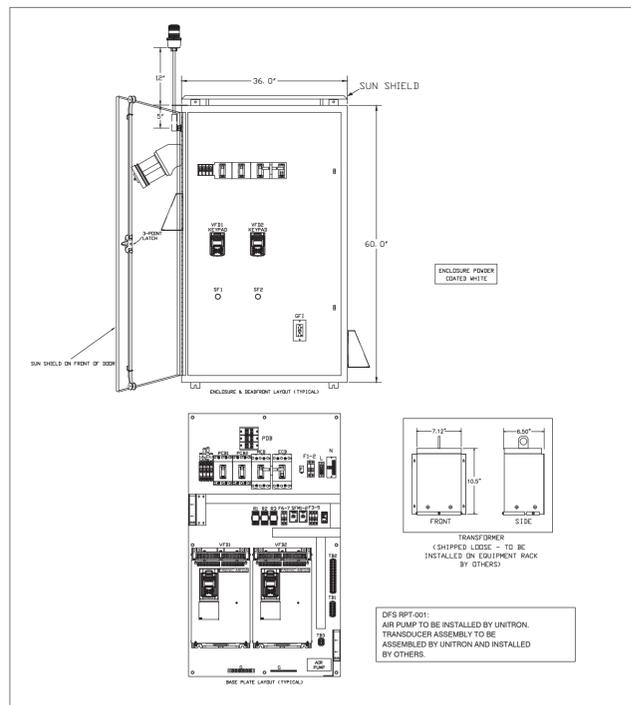
PUMP CONTROL PANEL BILL OF MATERIALS			
QTY.	ABBR.	DESCRIPTION	MANUFACTURER, PART#
1	ENC	ENCLOSURE, 3Ø4SS N3R/12 (WHITE)	SCHAEFER'S, SPN123RSS-6Ø3612-587
1	MCB	MAIN CIRCUIT BREAKER	SØ.D, JGL36200
1	ECB	EMERGENCY CIRCUIT BREAKER	SØ.D, JGL36200
2	PCB1,2	PUMP CIRCUIT BREAKER	SØ.D, HGL36125
1	CCB	CONTROL CIRCUIT BREAKER	SØ.D, ØDU115
1	RTUCB	RTU CIRCUIT BREAKER	SØ.D, ØDU115
1	GFICB	GF CIRCUIT BREAKER	SØ.D, ØDU120
1	SLCB	SITE LIGHT CIRCUIT BREAKER	SØ.D, ØDU120
2	VFD1,2	VARIABLE FREQUENCY DRIVE	FUJ, FRNØ6ØG1S-4U
2	VFD	REMOTE KEYPAD	FUJ, TP-G1W-J1
1	GR	GENERATOR RECEPTACLE	RUSSELL STOLL, JRSB2Ø34HR
2	SPD	SURGE PROTECTOR	DITEK, DTK-48Ø3CMX+ (1 SHIPPED LOOSE)
2	F1-2	FUSE, 15A	FERRAZ, ATØR-15
1	XFMR	TRANSFORMER, 48ØV/12ØVAC 3KVA	SØ.D, 74ØØ-3S1F (SHIPPED LOOSE)
5	F3-7	FUSE, 1A	FERRAZ, ATMR-1
1	GF1	12ØV RECEPTACLE	PASS & SEYMOUR, 1597-1
1	ML	MAINTENANCE LIGHT, LED	HØFFMAN, LED1S35
2	SFM1,2	SEAL FAIL MODULE	SYRELEC, PNRU-11ØA
2	IL	INDICATING LIGHT, RED LED	SØ.D, XB5EVG4
3	R1-3	CONTROL RELAY	SØ.D, 85Ø1-KP12P14-V2Ø
1	F	FLASHER	INGRAM, FL-12ØV
1	AL	ALARM LIGHT, 12ØV LED	FEDERAL, LP3PL-12ØR
1	RED	RED LED, SNUBØØØØ	
1	SNUB	BUBBLER	DATAFLOW, RPT-ØØ1 (PROVIDED BY OTHERS)

WIRE COLOR CODE	
SYMBOL	COLOR
B	BLACK
W	WHITE
G	GREEN
BL	BLUE
R	RED
P	PINK
V	VIOLET
BR	BROWN
B/R	BLACK/RED
B/V	BLACK/VIOLET
B/P	BLACK/PINK
G/P	GREEN/PINK
G/R	GREEN/RED
G/BL	GREEN/BLUE
G/BR	GREEN/BROWN
W/R	WHITE/RED
W/B/V	WHY/BLK/VIOLET
W/B/R	WHY/BLK/RED

UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			3 OF 6

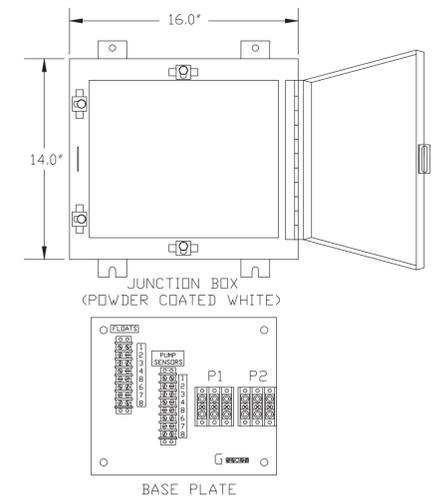


UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			4 OF 6



UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			5 OF 6

JUNCTION BOX BILL OF MATERIALS			
QTY.	ABBR.	DESCRIPTION	MANUFACTURER, PART#
1	ENC	ENCLOSURE, 3Ø4SS N4X (WHITE)	SCHAEFER'S, SPN4SS-14168-587
2		8-POINT TERMINAL BLOCK	IDEAL, 89-2Ø8
2		PUMP TERMINAL BLOCK	MARATHON, 1323572
1	G	GROUND BAR	EATON, GBK5



UNITRON CONTROLS* A DIVISION OF BARNEY'S PUMPS, INC. PO BOX 3029, LAKELAND, FL 33802 PHONE: (883) 666-8500 FAX: (883) 666-3858		DATE: 4/14/2021	PROJECT: COLONY COVE 6
STATUS: SUBMITAL		CUSTOMER: MANATEE COUNTY	
DRAWN BY: JFJ/SMB		PUMP: S6L5000M4-4	ELECTRICAL: 480V, 3Ø/50HP/70.5A
REV	REVISION DESCRIPTION	DATE	SCALE
1			6 OF 6

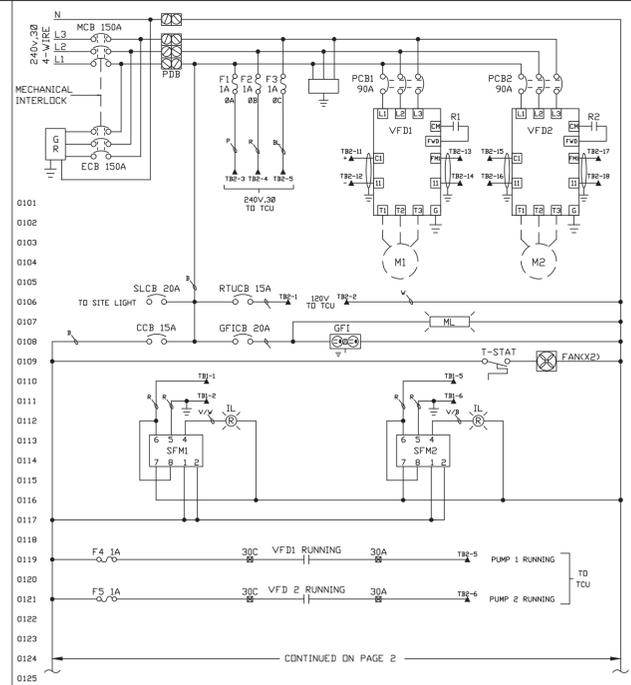
NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD COLONY COVE 6 LIFT STATION DETAILS



PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	BY	DATE
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		

J. SHEA SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
05/18/2021
DATE

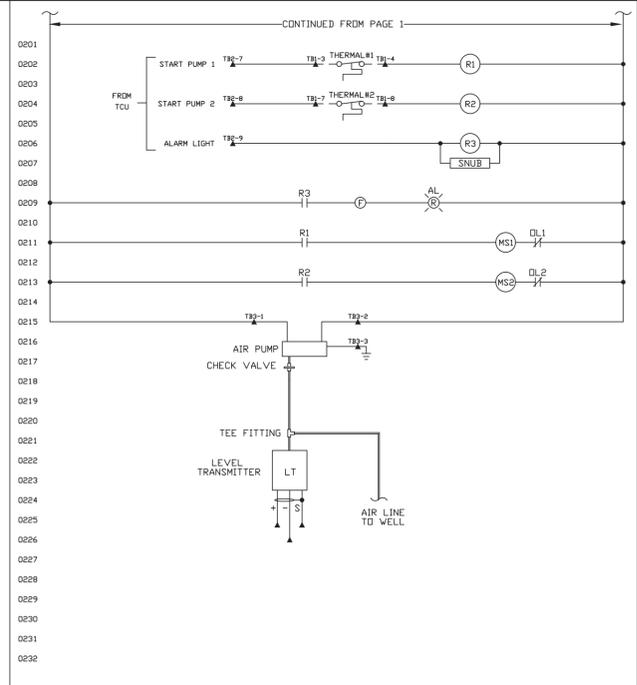


REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	1 OF 6	0

UNITRON CONTROLS*
A DIVISION OF BARNEY'S PUMPS, INC.
PO BOX 3529, LAKELAND, FL 33802
PHONE: (883) 695-8500 FAX: (883) 695-3858

PROJECT: MEMPHIS RD
CUSTOMER: MANATEE COUNTY
PUMP: 8VL150M8-23 ELECTRICAL: 240V,3Ø/15HP/46.4 FLA
DRAWN BY: JF7/SMB
DATE: 5/17/2021
STATUS: SUBMITTAL

LAMINATE PLOT SCALE 1:1.25



REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	2 OF 6	0

UNITRON CONTROLS*
A DIVISION OF BARNEY'S PUMPS, INC.
PO BOX 3529, LAKELAND, FL 33802
PHONE: (883) 695-8500 FAX: (883) 695-3858

PROJECT: MEMPHIS RD
CUSTOMER: MANATEE COUNTY
PUMP: 8VL150M8-23 ELECTRICAL: 240V,3Ø/15HP/46.4 FLA
DRAWN BY: JF7/SMB
DATE: 5/17/2021
STATUS: SUBMITTAL

LAMINATE PLOT SCALE 1:1.25

PUMP CONTROL PANEL BILL OF MATERIALS			
QTY.	ABBR.	DESCRIPTION	MANUFACTURER, PART#
1	ENC	ENCLOSURE, 304SS N3R/12 (WHITE)	SCHAEFER'S, SPN123RSS-603612-571
1	MCB	MAIN CIRCUIT BREAKER	SQ.D, HGL36150
1	ECB	EMERGENCY CIRCUIT BREAKER	SQ.D, HGL36150
2	PCB1,2	PUMP CIRCUIT BREAKER	SQ.D, HGL36090
1	CCB	CONTROL CIRCUIT BREAKER	SQ.D, QDU115
1	RTUCB	RTU CIRCUIT BREAKER	SQ.D, QDU115
1	GFICB	GFI CIRCUIT BREAKER	SQ.D, QDU120
1	SLCB	SITE LIGHT CIRCUIT BREAKER	SQ.D, QDU120
2	VFD1,2	VARIABLE FREQUENCY DRIVE	FUJII, FRN020G1S-2U
2	VFD	REMOTE KEYPAD	FUJII, TP-G1W-J1
1	GR	GENERATOR RECEPTACLE	RUSSELL STOLL, JRSB2044FR
2	SPD	SURGE PROTECTOR	DITEK, DTK-2403CMX+ (1 SHIPPED LOOSE)
5	F1-5	FUSE, 1A	FERRAZ, ATM-1
1	GF1	120V RECEPTACLE	PASS & SEYMOUR, 1597-1
1	ML	MAINTENANCE LIGHT, LED	HEFFMAN, LEDA1535
2	SFM1,2	SEAL FAIL MODULE	SYRELEC, PNRU-110A
2	IL	INDICATING LIGHT, RED LED	SQ.D, XB5EVG4
3	R1-3	CONTROL RELAY	SQ.D, 8501-KP12P14-V20
1	F	FLASHER	INGRAM, FL-120V
1	AL	ALARM LIGHT, 120V LED	FEDERAL, LP3PL-120R
1	SNUB	RC SNUBBER	RED LION, SNUB0000
1		BUBBLER	DATAFLOW, RPT-001 (PROVIDED BY OTHERS)

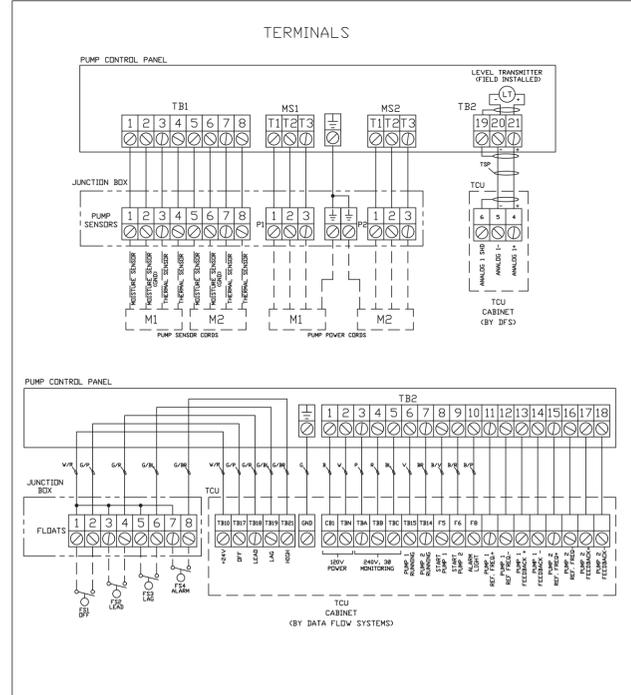
WIRE COLOR CODE	
SYMBOL	COLOR
B	BLACK
W	WHITE
G	GREEN
BL	BLUE
R	RED
P	PINK
V	VIOLET
BR	BROWN
B/R	BLACK/RED
B/V	BLACK/VIOLET
B/P	BLACK/PINK
G/P	GREEN/PINK
G/R	GREEN/RED
G/BL	GREEN/BLUE
G/BR	GREEN/BROWN
W/R	WHITE/RED
W/B/V	WHY/BLK/VIOLET
W/B/R	WHY/BLK/RED

REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	3 OF 6	0

UNITRON CONTROLS*
A DIVISION OF BARNEY'S PUMPS, INC.
PO BOX 3529, LAKELAND, FL 33802
PHONE: (883) 695-8500 FAX: (883) 695-3858

PROJECT: MEMPHIS RD
CUSTOMER: MANATEE COUNTY
PUMP: 8VL150M8-23 ELECTRICAL: 240V,3Ø/15HP/46.4 FLA
DRAWN BY: JF7/SMB
DATE: 5/17/2021
STATUS: SUBMITTAL

LAMINATE PLOT SCALE 1:1.25

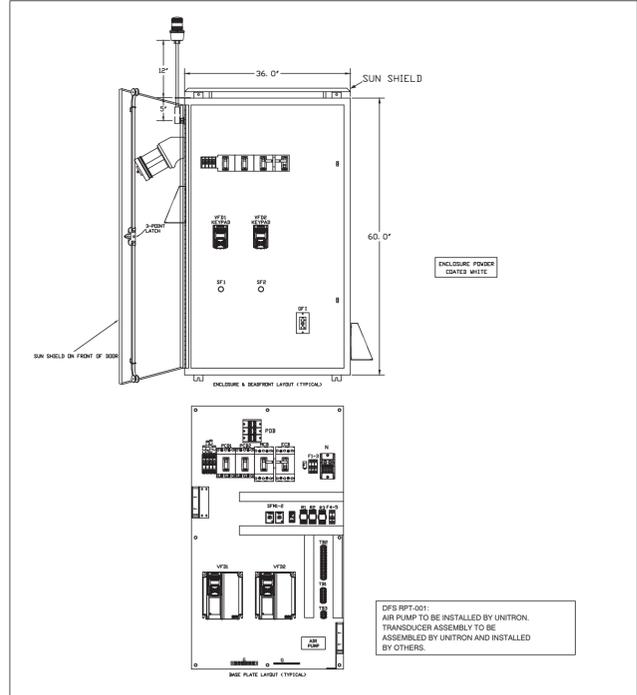


REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	4 OF 6	0

UNITRON CONTROLS*
A DIVISION OF BARNEY'S PUMPS, INC.
PO BOX 3529, LAKELAND, FL 33802
PHONE: (883) 695-8500 FAX: (883) 695-3858

PROJECT: MEMPHIS RD
CUSTOMER: MANATEE COUNTY
PUMP: 8VL150M8-23 ELECTRICAL: 240V,3Ø/15HP/46.4 FLA
DRAWN BY: JF7/SMB
DATE: 5/17/2021
STATUS: SUBMITTAL

LAMINATE PLOT SCALE 1:1.25

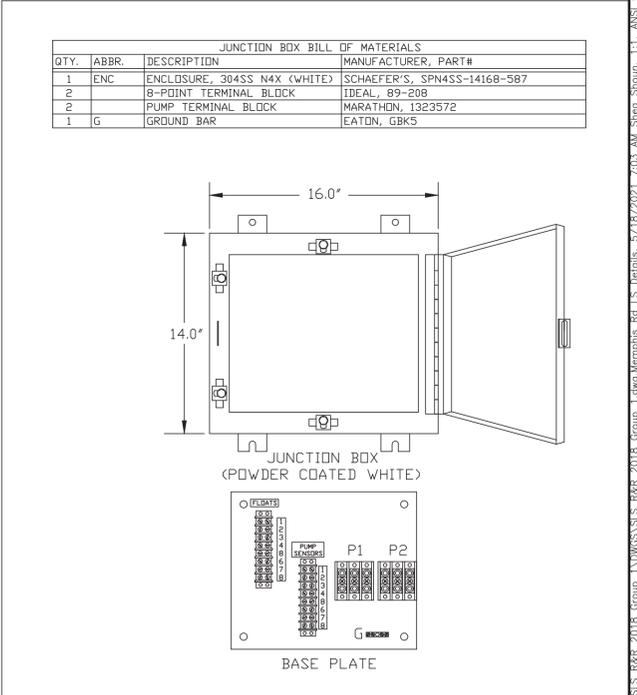


REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	5 OF 6	0

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REV	REVISION DESCRIPTION	DATE	SCALE	JOB #	DWG. #	PAGE	REV
-	-	-	-	-	MANC0CP240-3-15-VFD	6 OF 6	0

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LAMINATE PLOT SCALE 1:1.25

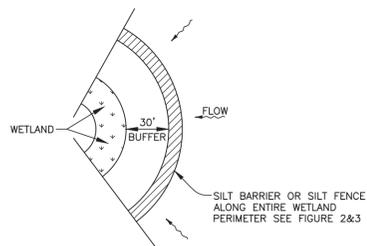
NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD MEMPHIS RD LIFT STATION DETAILS

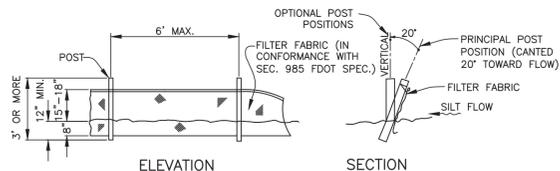


PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	BY	DATE
DESIGNED	JSS	09/2019
DRAWN	JSS	08/2019
CHECKED		

J. SHEA SHOWN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
05/18/2021
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature: _____ Date: _____

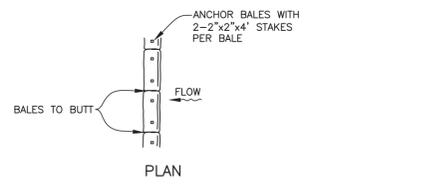


WETLAND BUFFER
FIGURE 1

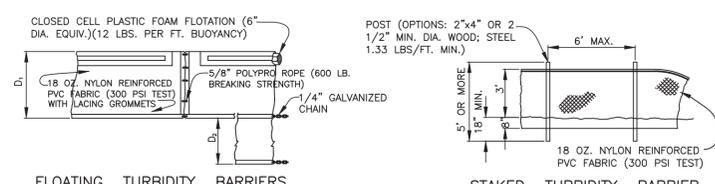


TYPICAL SILT FENCE
FIGURE 2

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



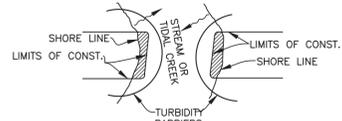
TYPICAL BALE SILT BARRIER
FIGURE 3



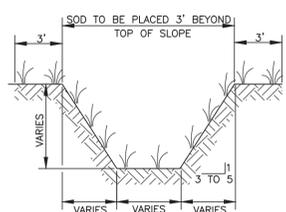
FLOATING TURBIDITY BARRIERS
STAKED TURBIDITY BARRIER

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.

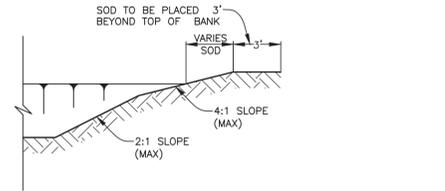
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



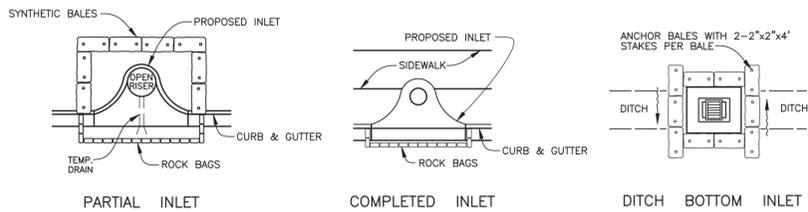
TURBIDITY BARRIERS
FIGURE 4



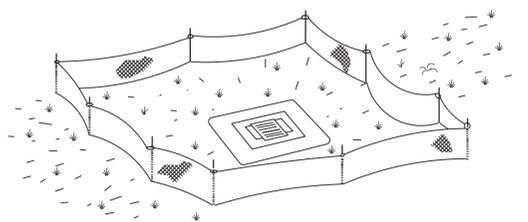
TYPICAL SWALE SECTION
FIGURE 5



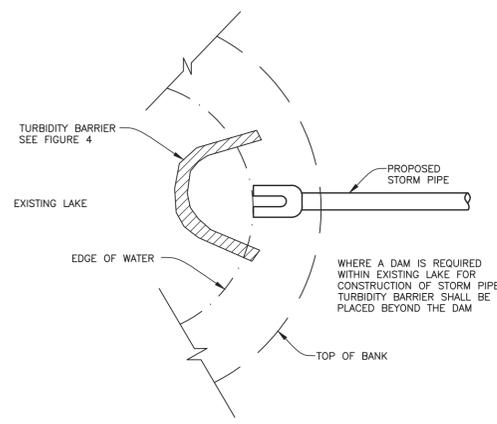
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7

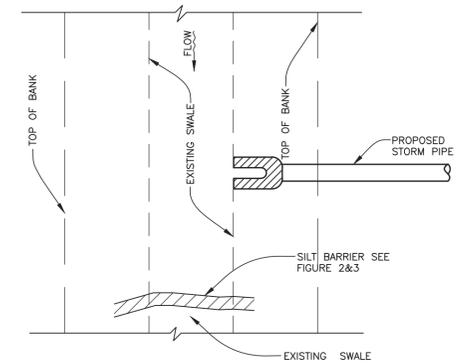


TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8

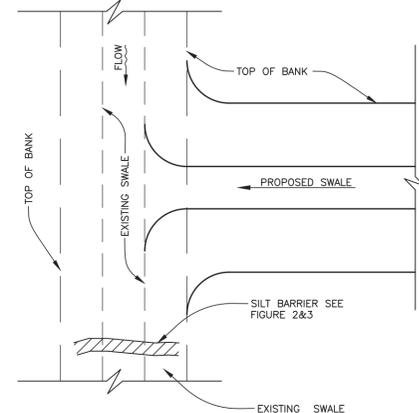


TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9

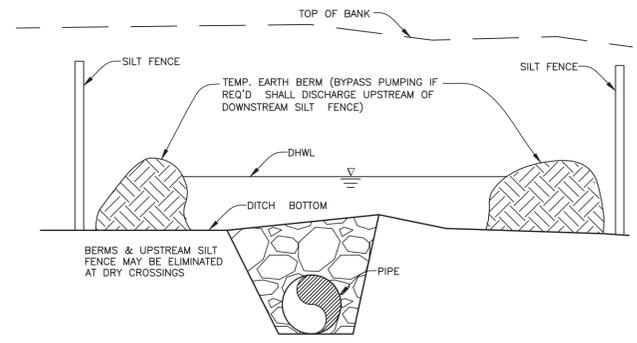
WHERE A DAM IS REQUIRED WITHIN EXISTING LAKE FOR CONSTRUCTION OF STORM PIPE, TURBIDITY BARRIER SHALL BE PLACED BEYOND THE DAM



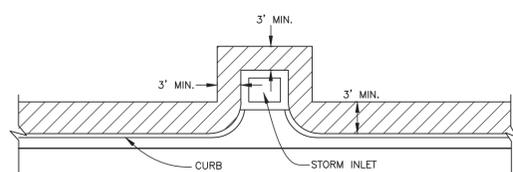
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



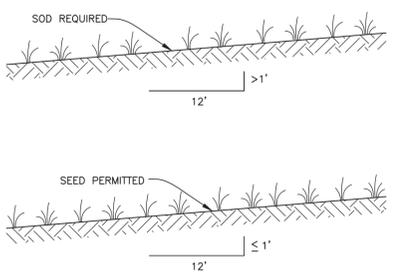
SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11



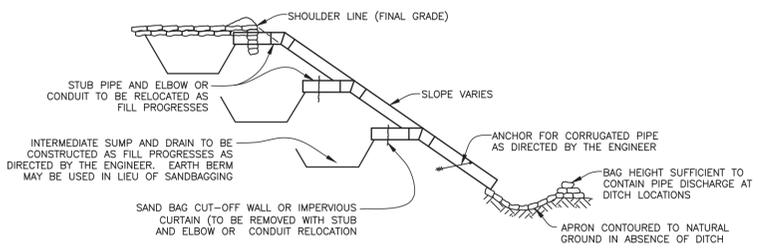
UNDERGROUND PIPE CROSSING
FIGURE 12



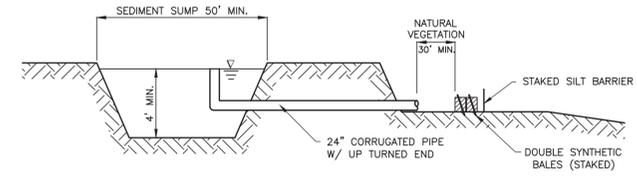
SOD ALONG CURB
AND AROUND INLET
FIGURE 14



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

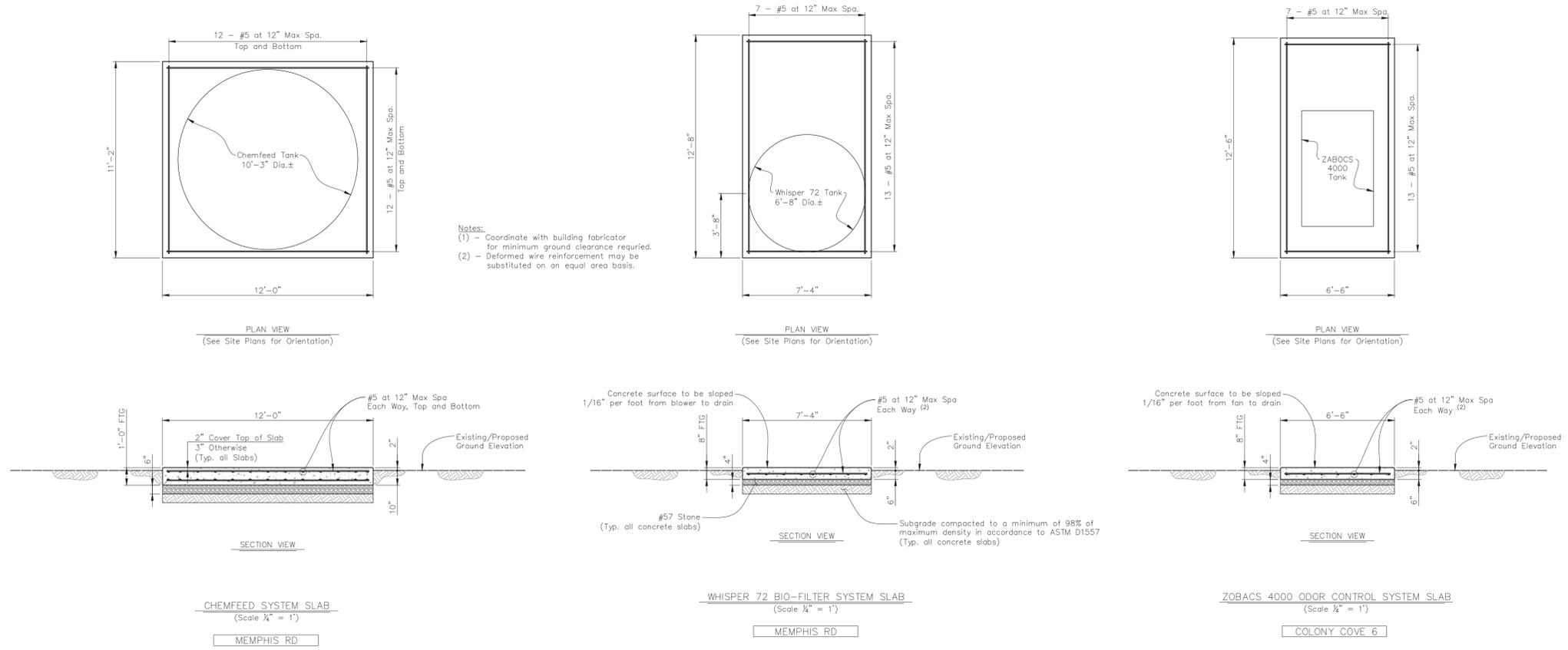
NO.	REVISION DESCRIPTION	BY	DATE

SATELLITE LIFT STATION R&R COLONY COVE 6 & MEMPHIS RD EROSION CONTROL MEASURES



PROJECT #	VARIES	
SURVEY #	00-44787	
SEC./TWN./RGE	VARIES	
SCALE	N.T.S.	
SURVEYED	BY	DATE
DESIGNED	JSS	4/12/19
DRAWN	JSS	09/2019
CHECKED		

J. SHEA SHOUN, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSE
 05/18/2021



Notes:
 (1) - Coordinate with building fabricator for minimum ground clearance required.
 (2) - Deformed wire reinforcement may be substituted on an equal area basis.

GENERAL NOTES

- GENERAL SPECIFICATIONS:**
- MANATEE COUNTY PUBLIC WORKS STANDARDS; PART 1 - UTILITIES STANDARDS MANUAL, 2020
- DESIGN SPECIFICATIONS:**
- FLORIDA BUILDING CODE, 2020
 - ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-14.
 - MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, ASCE 7-16
- VERTICAL DATUM:**
- NAVD 1988.
- ENVIRONMENT:**
- MODERATELY AGGRESSIVE.
- DESIGN METHOD:**
- LOAD AND RESISTANCE FACTOR DESIGN (LRFD) FOR CONCRETE.
 - ALLOWABLE STRESS DESIGN (ASD) FOR SOIL ANALYSIS.
- DESIGN LOADINGS:**
- CHEMFEED SYSTEM TANK (4400 GALLON DOUBLE WALL TANK):
 - WEIGHT OF FULL TANK = 54,000 LBS
 - WEIGHT OF EMPTY TANK = 2,250 LBS
 - WHISPER 72 BIO-FILTER SYSTEM TANK:
 - WEIGHT OF FULL TANK = 11,800 LBS
 - WEIGHT OF EMPTY TANK = 3,951 LBS
 - ZABOCS 4000 ODOR CONTROL SYSTEM TANK:
 - WEIGHT OF FULL TANK = 6,000 LBS
 - WEIGHT OF EMPTY TANK = 4,800 LBS
 - WIND LOAD:
 - RISK CATEGORY = III
 - BASIC ULTIMATE WIND VELOCITY = 156 MPH
 - BASIC ALLOWABLE WIND VELOCITY = 121 MPH
 - WIND EXPOSURE = B
 - GEOTECHNICAL INFORMATION (PRESUMPTIVE VALUES):
 - VERTICAL FOUNDATION PRESSURE = 2000 PSF (SANDY MATERIAL)
 - LATERAL BEARING PRESSURE = 150 PSF/FT BELOW GRADE
 - LATERAL SLIDING RESISTANCE = 0.25 x DL
 - FLOOD DESIGN DATA:
 - BOTH SITES NOT IN FLOOD ZONE PER FIRMS
- CONCRETE MATERIALS:**
- REINFORCING STEEL:
 - STEEL BARS FOR CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60 CARBON STEEL PER SECTION 03200.
 - PLAIN AND DEFORMED CARBON STEEL WIRE REINFORCEMENT SHALL CONFORM TO ASTM A1064 GRADE 75 PER SECTION 03200.
 - CONCRETE SHALL BE IN ACCORDANCE TO ACI 318 AND SPECIFICATION 03300:
 - f'c Min. 28-Day Compressive Strength = 4000 psi
 - CONCRETE COVER:
 - 3" FOR CONCRETE CAST AGAINST EARTH AND PERMANENTLY IN CONTACT WITH THE GROUND.
 - 2" FOR CONCRETE EXPOSED TO THE WEATHER.
 - ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO CENTERLINE OF BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.
 - PROVIDE 3/4" CHAMFERS ON ALL EXPOSED EDGES AND CORNERS EXCEPT AS NOTED FOR BUILDING SLABS. PROVIDE 1/2" CHAMFERS AS REQUIRED BY BUILDING FABRICATOR.
- SUBGRADE:**
- SUBGRADE TO BE COMPACTED TO A MINIMUM OF 98 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557, METHOD A OR C IN ACCORDANCE TO SECTION 02220.
 - PASSING TEST RESULTS SHALL BE PROVIDED AND ACCEPTED BY THE COUNTY PRIOR TO POURING CONCRETE.
- EQUIPMENT ANCHORAGE:**
- TANKS AND EQUIPMENT ARE TO BE ANCHORED TO THE SLABS USING AN ADHESIVE ANCHOR SYSTEM OR OTHER APPROVED METHOD LOCATED AT THE TIE-DOWN TABS AS PROVIDED BY THE FABRICATOR. ADHESIVE ANCHOR SYSTEM TO BE THE HILTI HIT-RE 800 V3 EPOXY ADHESIVE ANCHOR SYSTEM OR AN APPROVED EQUAL.
 - USE 3/8" DIA. STAINLESS STEEL THREADED HAS RODS FOR THE CHEMFEED TANK WITH A 5 3/8" EMBEDMENT DEPTH.
 - USE 1/2" DIA. STAINLESS STEEL THREADED HAS RODS FOR THE WHISPER 72 BIO-FILTER TANK AND ZABOCS 4000 ODOR CONTROL TANK WITH A 4 1/2" EMBEDMENT DEPTH.

NO.	REVISION DESCRIPTION	BY	DATE

**SATELLITE LIFT STATION R&R
 COLONY COVE 6 & MEMPHIS RD
 REINFORCED CONCRETE SLAB DETAILS**



PROJECT #	404-6061082
SURVEY #	00-44787
SEC./TWN./RGE	19/34/18 18/34/18
SCALE	1/4" = 1'
SURVEYED	ZNS 04/12/19
DESIGNED	SML 01/2021
DRAWN	SML 02/2021
CHECKED	09/2019 -

STEVEN M. LANEY, P.E.
 FLORIDA LICENSE # 46449
 No. 46449
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSED IN THE STATE OF FLORIDA
 May 19, 2021



I:\Projects\2018 Group 1\DWG\Area\022-SIS R&R Colony Cove 6\slab\slab details.rvt - 11. ANS full based D (3,00 x 22,00 inches), 10/20/2018