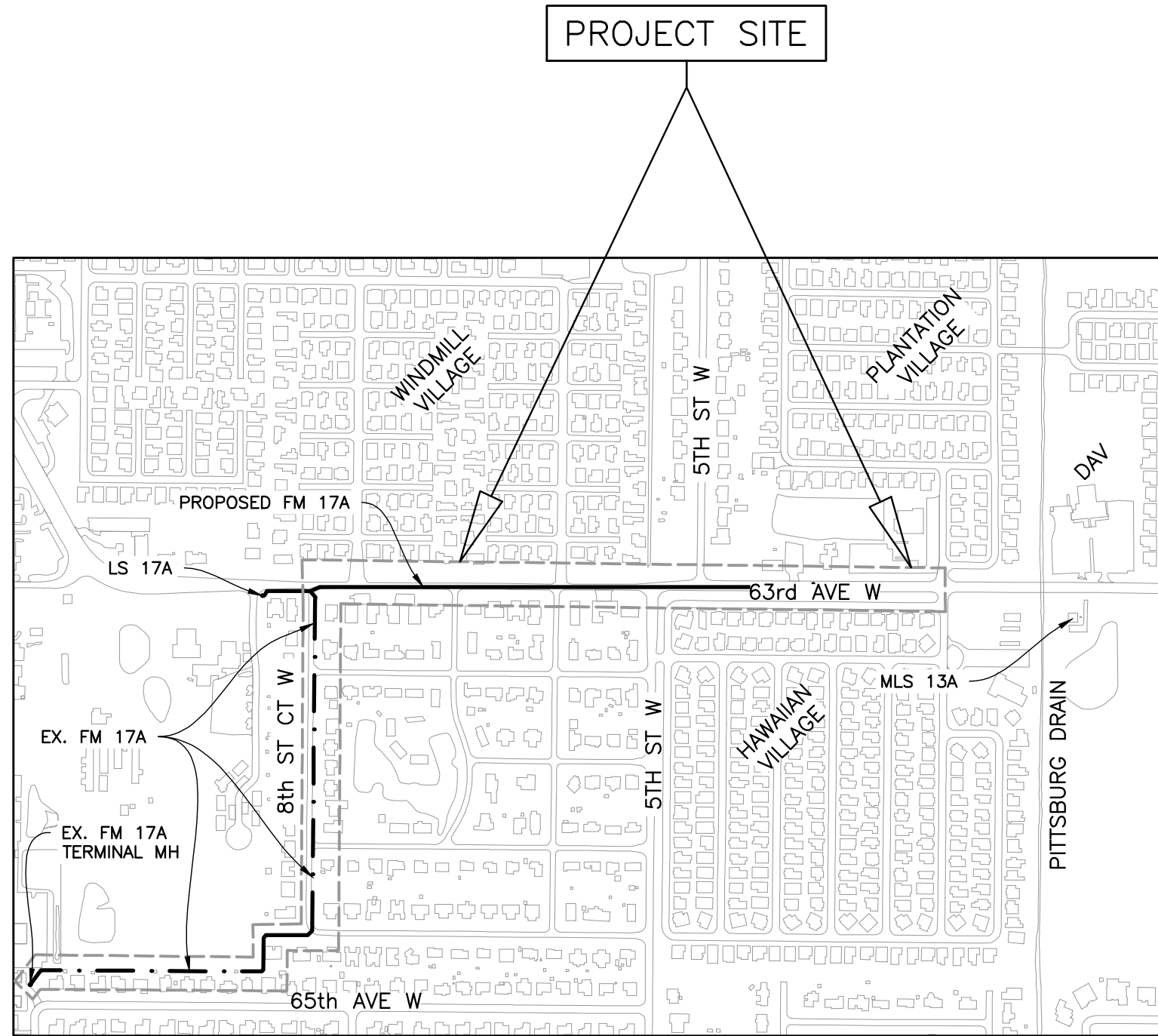




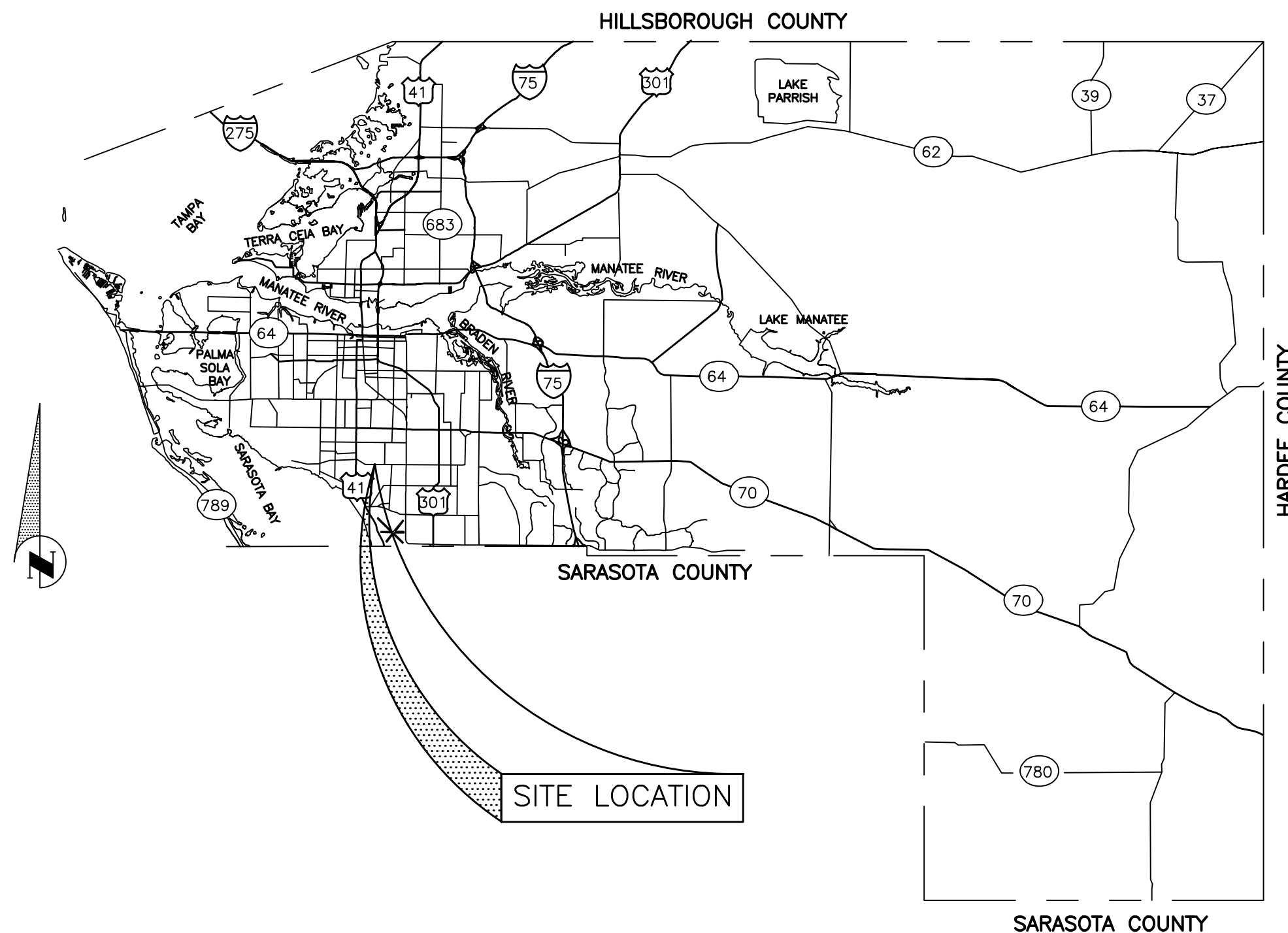
FORCE MAIN 17A REPLACEMENT 63rd AVENUE WEST 404-6028385

NOVEMBER 2015

100% PLANS



VICINITY MAP
N.T.S.



SITE LOCATION

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04	PLAN & PROFILE STA. 15+10 TO 20+40
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09	DETAILS
10	EXISTING FORCE MAIN GROUT PLAN
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**VERTICAL DATUM
NAVD 88**

PROJECT DESCRIPTION

REPLACE ±2,300 LF OF DILAPIDATED 6" CAST IRON FORCE MAIN WITH ±1,530 LF OF NEW 6" HDPE FM. RE-DIRECTING FM DISCHARGE POINT TO A GRAVITY MANHOLE ON 63RD AVE WEST THAT FEEDS INTO MASTER LIFT STATION 13A.

CAP EXISTING 6" FM, GROUT FILL & ABANDON IN PLACE (±2,300 LF), TERMINAL MANHOLE LOCATED ROUGHLY 100 LF NORTH OF THE CORNER OF 65TH AVE W AND 12TH ST W.

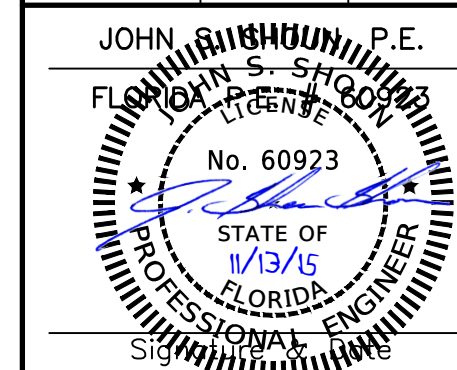


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

**FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
COVER**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
SCALE	VARIES
VERTICAL DATUM	NAVD 1988
SURVEYED	FDC 02/04/15
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015



Know what's below
Call before you dig

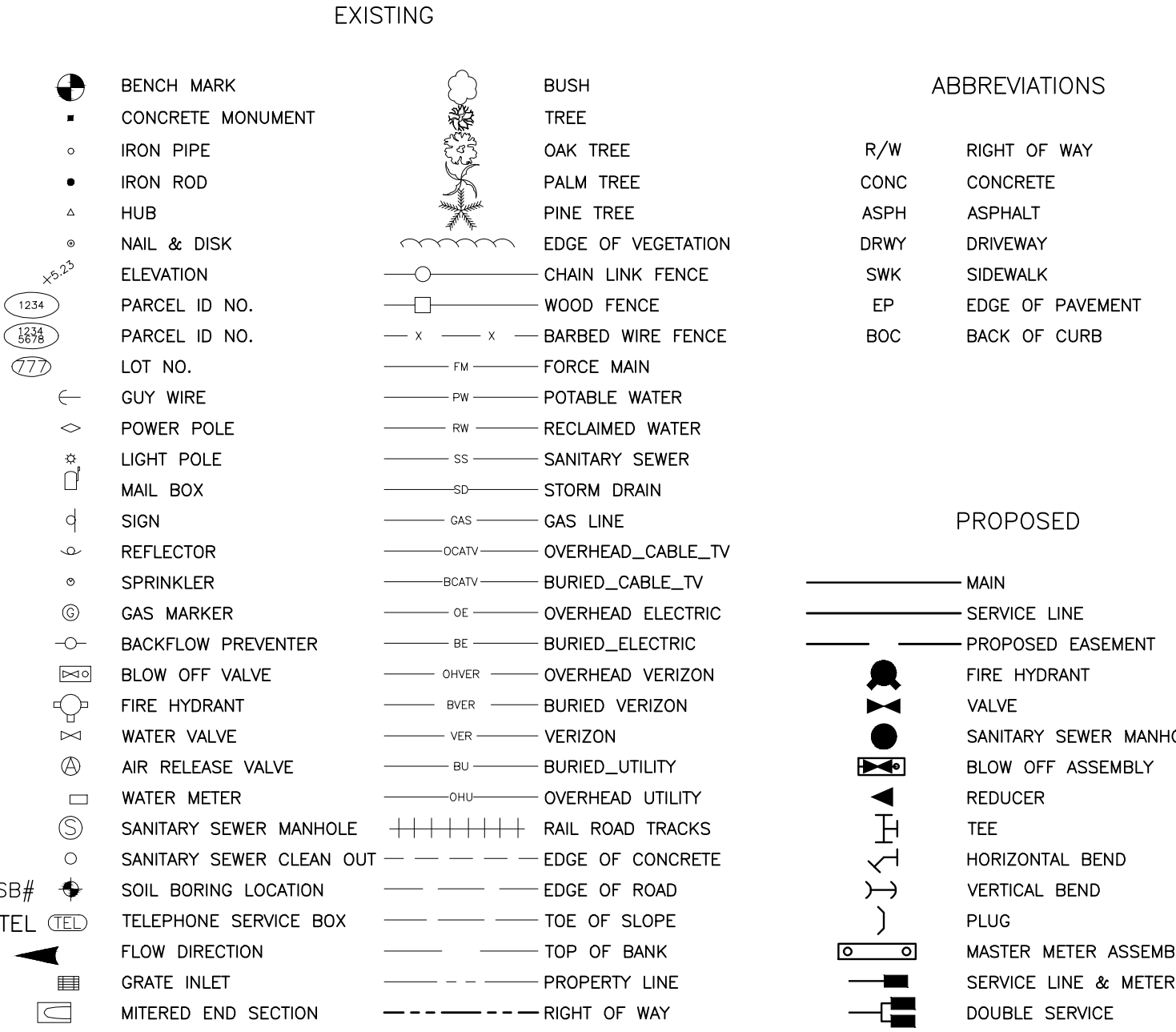
COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT s:\pww\engineering\share\util_eng_design\PROJ\con_swr_proj\FM-17A-DWG\N-FM-17A-Cover_Notes_Details.dwg, 01_11/13/2015 3:26 PM Sheet Shoun, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

- GENERAL**
1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: BRIAN P. BATES, P.E. AND CAN BE REACHED AT (941) 708-7450; EXT. 7329
 2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER.
 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 FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "BRADFORD 2010" NAVD 1988 ELEVATION 18.79' A VALUE OF (+0.99') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.
 5. 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.
 6. 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.
 7. 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.
 8. 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.
 9. 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**
10. 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.
 11. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
 12. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
 13. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.
- ENVIRONMENTAL**
14. WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE WHEN A SPILL IS APPARENT.
 15. ONCE LOCATED, THE BENTONITE SPILL MUST BE ISOLATED AND SEEPAGE INTO ANY NEARBY WATER BODIES WILL BE BLOCKED DEPENDING ON THE DEGREE OF THE SPILL, THE ISOLATED BENTONITE MUST BE REMOVED MANUALLY OR MECHANICALLY AND DISPOSED OF BY APPROPRIATE MEANS OR REUSED.
 16. 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.
 17. 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.
 18. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, 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.
 19. 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.
 20. 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.
 21. 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 STACKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
 22. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
 23. 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.
 24. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.
- RIGHT-OF-WAY**
25. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
 26. 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.
 27. 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.
 28. 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.
 29. 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.
 30. 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.
 31. 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**
32. 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 AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, GROSSED 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.
33. 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.
 34. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
 35. 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.
 36. 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.
- RESTORATION**
37. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
 38. ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
 39. 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.
 40. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
 41. 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.
 42. 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.
 43. 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**
44. 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.
 45. 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.
 46. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
 47. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
 48. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
 49. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
 50. 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.
 51. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
 52. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
 53. 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.
 54. 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.
 55. 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.
 56. 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.
 57. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
 58. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
 59. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
 60. 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, WBRD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
 61. 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.
 62. 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.
 63. ALL EXISTING MAINS THAT ARE BEING REPLACED SHALL BE ABANDONED IN PLACE UPON ACCEPTANCE AND ACTIVATION OF THE NEW MAINS. ABANDONED MAINS SHALL BE CUT, FILLED WITH GROUT, AND CAPPED. REFER TO SECTION 02064 OF THE SPECIFICATIONS FOR GROUTING OF ABANDONED PIPE.
 64. 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.
 65. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
 66. 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.
 67. 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 PROCEEDS.

- MAINTENANCE OF TRAFFIC**
68. THE CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROL PLAN IMPLEMENTED. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TRAFFIC CONTROL PLAN 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 THE FDOT AND THE COUNTY FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FDOT AND COUNTY APPROVAL (PRIOR TO IMPLEMENTATION) AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.
 69. THE CONTRACTOR PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHT-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.
 70. 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.
 71. 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.
 72. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.
 73. 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.
 74. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
 75. 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.
 76. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
 77. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
 78. 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.
 79. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
 80. 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 SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SUBMITTED TO THE FDOT AND THE COUNTY FOR APPROVAL AT LEAST FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COUNTY APPROVAL (PRIOR TO IMPLEMENTATION) AND FAILURE TO OBTAIN APPROVAL SHALL NOT BE GROUNDS FOR ANY DELAY CLAIM FOR TIME OR ADDITIONAL COMPENSATION.
 81. THE CONTRACTOR IS RESPONSIBLE TO RETIME THE TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS (INCLUDING LIMITS OF WORK ZONE TRAFFIC CONTROL) THAT ARE POTENTIALLY AFFECTED DURING VARIOUS PHASES OF CONSTRUCTION. COORDINATE ALL SIGNAL RETIMING EFFORTS WITH VISHAL KAKKAD, P.E., PTOE, COUNTY TRAFFIC ENGINEER, AT (941) 749-3500 EXT. 7812.
 82. MANATEE COUNTY REQUIRES THAT VEHICLE DETECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF LOOP DETECTORS AT THE TRAFFIC SIGNAL AT 63RD AVENUE WEST / 5TH STREET WEST. COORDINATE ALL LOOP DETECTION ISSUES WITH PAUL VILLALUZ OF MANATEE COUNTY AT (941) 749-3500 EXT. 7859.

LEGEND



EMERGENCY CONTACTS

- | | | | |
|---|---|---|--|
| <p>MANATEE COUNTY PUBLIC WORKS DEPT.
 SCOTT MAY, P.E.
 1022 26TH AVENUE EAST
 BRADENTON, FL 34208
 (941) 708-7450 EXT. 7650
 FAX: (941) 708-7415</p> | <p>FLORIDA POWER & LIGHT GREG COKER
 1263 12TH AVENUE EAST
 PALMETTO, FL 34221
 (941) 723-4430
 FAX: (941) 723-4444
 EMERGENCY: 1-800-4-OUTAGE
 Greg.Coker@fpl.com</p> | <p>FLORIDA GAS TRANSMISSION CHAD HARRELL
 7804 ANDERSON RD.
 TAMPA FL 33634
 PHONE: (813) 466-3327
 E-mail: chad.harrell@sug.com</p> | <p>PEACE RIVER ELECTRIC COOPERATIVE, INC.
 P.O. BOX 1310
 WACHULA, FL 33873
 KENDELL COKER
 (863) 767-4660
 kendell.coker@preco.coop</p> |
| <p>TECO/PEOPLES GAS CO. DAN SHANAHAN
 8261 VICO COURT
 SARASOTA, FL 34240
 (941) 342-4030
 FAX: (941) 342-4011
 EMERGENCY: 1-877-832-6911</p> | <p>MANATEE COUNTY HEALTH DEPT. HANS ROSE
 410 6th AVENUE EAST
 BRADENTON, FL 34208
 (941) 748-0747 EXT. 1355
 FAX: (941) 750-9364</p> | <p>FDEP, SOUTHWEST DISTRICT ED WATSON
 13081 N. TELCOM PKWY
 TEMPLE TERRACE, FL 33637
 P.O. BOX 1310
 WACHULA, FL 33873
 (813) 470-5875
 FAX: (813) 470-5993</p> | <p>MANATEE COUNTY PUBLIC WORKS DEPT./TRAFFIC ENGINEERING/ ATMS
 2101 47TH TERRACE EAST
 BRADENTON, FL 34203
 VISHAL KAKKAD, P.E.
 (941) 749-3500 EXT. 7812
 FAX: (941) 749-3571
 vishal.kakkad@mymanatee.org.</p> |
| <p>VERIZON FLORIDA INC. JOHN PLOTT
 1701 RINGLING BLVD.
 SARASOTA, FL 34236
 (941) 906-6707
 FAX: (941) 906-6706
 John.Plott@verizon.com</p> | <p>SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SARASOTA SERVICE OFFICE STEVE LOPES, P.E.
 6750 FRUITVILLE ROAD
 SARASOTA, FL 34240
 (941) 377-3722
 FAX: (941) 373-7660</p> | <p>BRIGHT HOUSE NETWORKS TOM WRIGHT
 5413 E. STATE ROAD 64
 BRADENTON, FL 34208-5535
 (941) 748-3816 EXT. 21348
 Steve.Lopes@mybighthouse.com
 Tom.Wright@mybighthouse.com</p> | <p>SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770</p> |

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

FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
NOTES

NO.	REVISION DESCRIPTION	DATE	BY

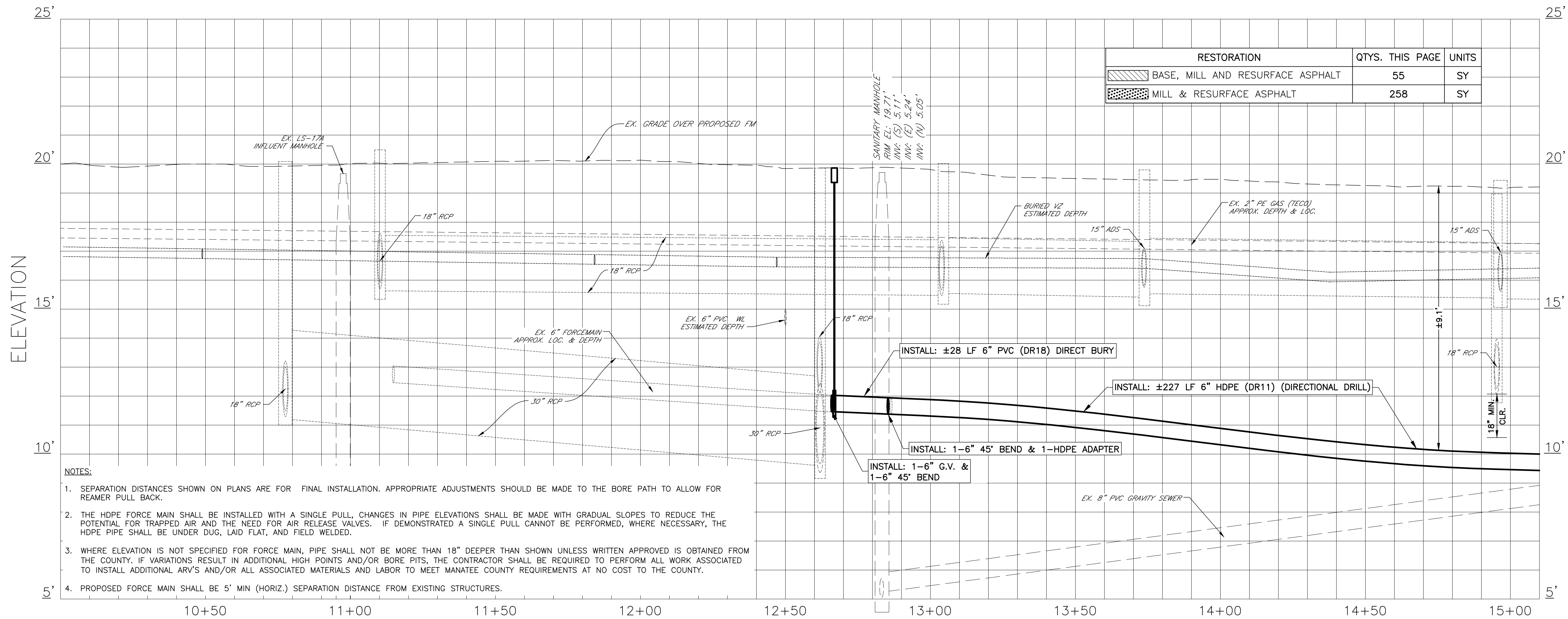
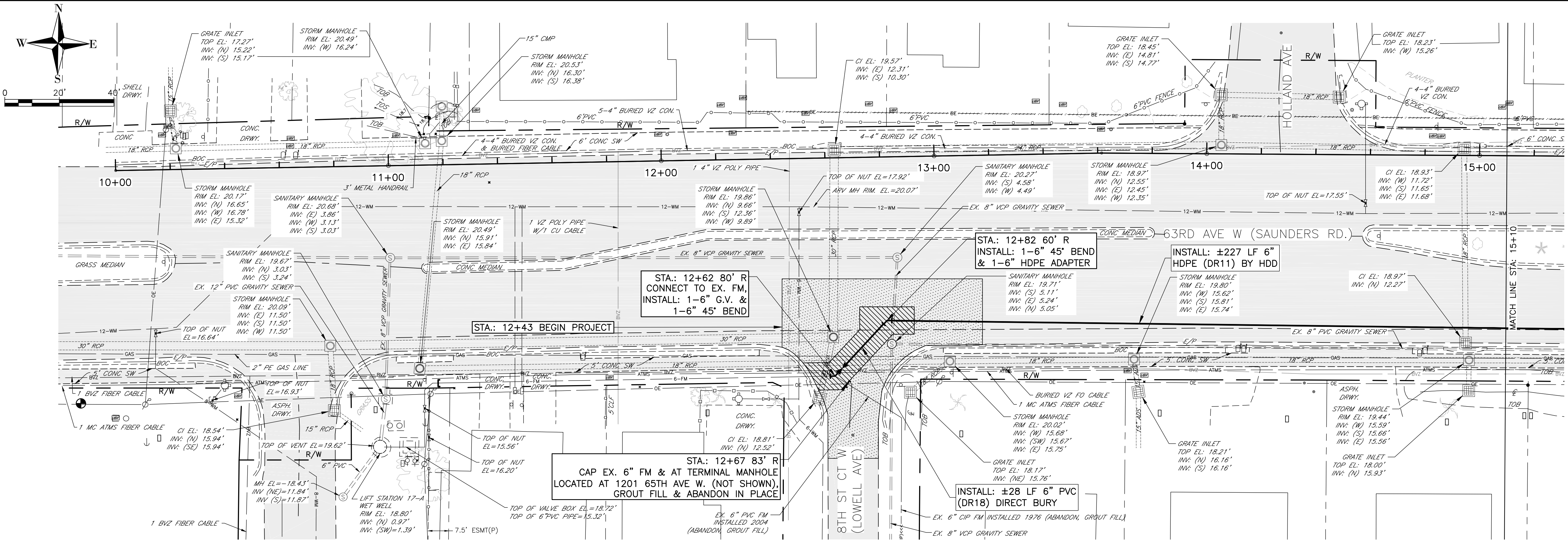
PROJECT # 404-6028385
 SURVEY # 577-0017
 SEC./TWN./RGE 23 &24/35/17
 SCALE VARIES
 VERTICAL DATUM NAVD 1988

	BY	DATE
SURVEYED	FDC	02/04/15
DESIGNED	JSS	05/2015
DRAWN	BLR	05/2015

JOHN S. SHOUN, P.E.
 FLORIDA PROFESSIONAL ENGINEER
 LICENSE NO. 60923
 STATE OF FLORIDA
 SIGNATURE

SHEET 02 OF 14

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- NOTES:**
- SEPARATION DISTANCES SHOWN ON PLANS ARE FOR FINAL INSTALLATION. APPROPRIATE ADJUSTMENTS SHOULD BE MADE TO THE BORE PATH TO ALLOW FOR REAMER PULL BACK.
 - THE HDPE FORCE MAIN SHALL BE INSTALLED WITH A SINGLE PULL, CHANGES IN PIPE ELEVATIONS SHALL BE MADE WITH GRADUAL SLOPES TO REDUCE THE POTENTIAL FOR TRAPPED AIR AND THE NEED FOR AIR RELEASE VALVES. IF DEMONSTRATED A SINGLE PULL CANNOT BE PERFORMED, WHERE NECESSARY, THE HDPE PIPE SHALL BE UNDER DUG, LAID FLAT, AND FIELD WELDED.
 - WHERE ELEVATION IS NOT SPECIFIED FOR FORCE MAIN, PIPE SHALL NOT BE MORE THAN 18" DEEPER THAN SHOWN UNLESS WRITTEN APPROVED IS OBTAINED FROM THE COUNTY. IF VARIATIONS RESULT IN ADDITIONAL HIGH POINTS AND/OR BORE PITS, THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL WORK ASSOCIATED TO INSTALL ADDITIONAL ARV'S AND/OR ALL ASSOCIATED MATERIALS AND LABOR TO MEET MANATEE COUNTY REQUIREMENTS AT NO COST TO THE COUNTY.
 - PROPOSED FORCE MAIN SHALL BE 5' MIN (HORIZ.) SEPARATION DISTANCE FROM EXISTING STRUCTURES.

FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
PLAN & PROFILE STA. 10+00 TO 15+10

NO.	REVISION DESCRIPTION	BY	DATE

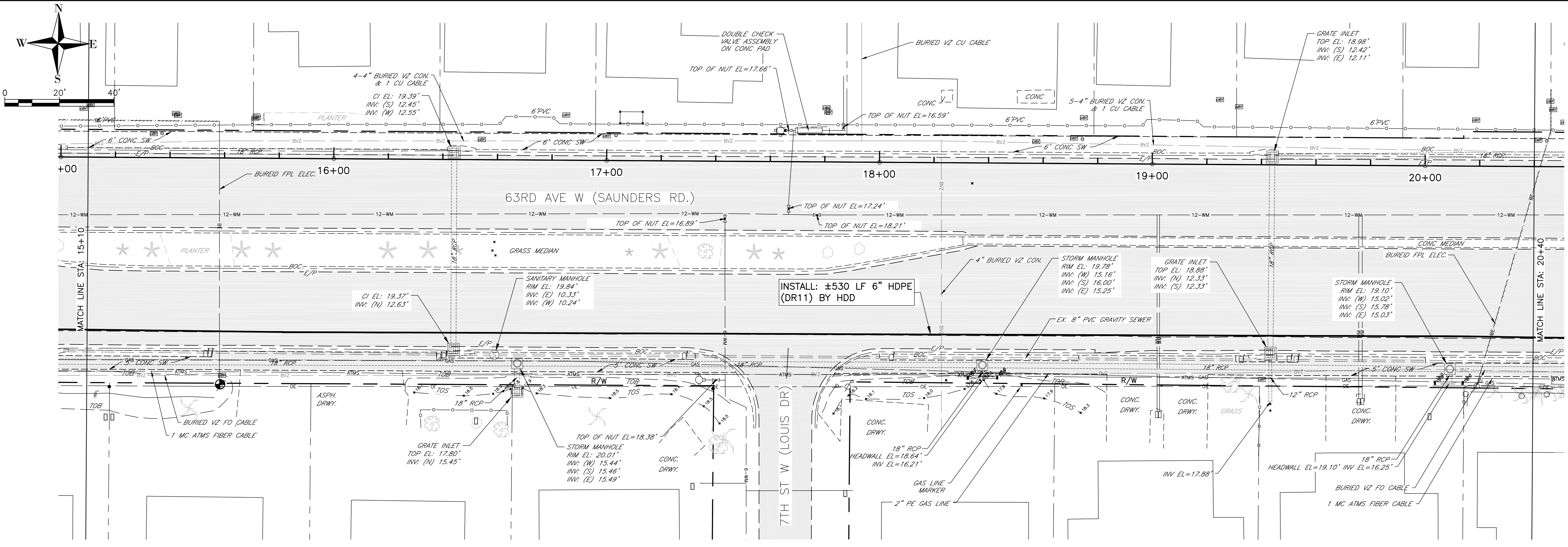
PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY FDC 577-0017
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

811 Know what's below Call before you dig

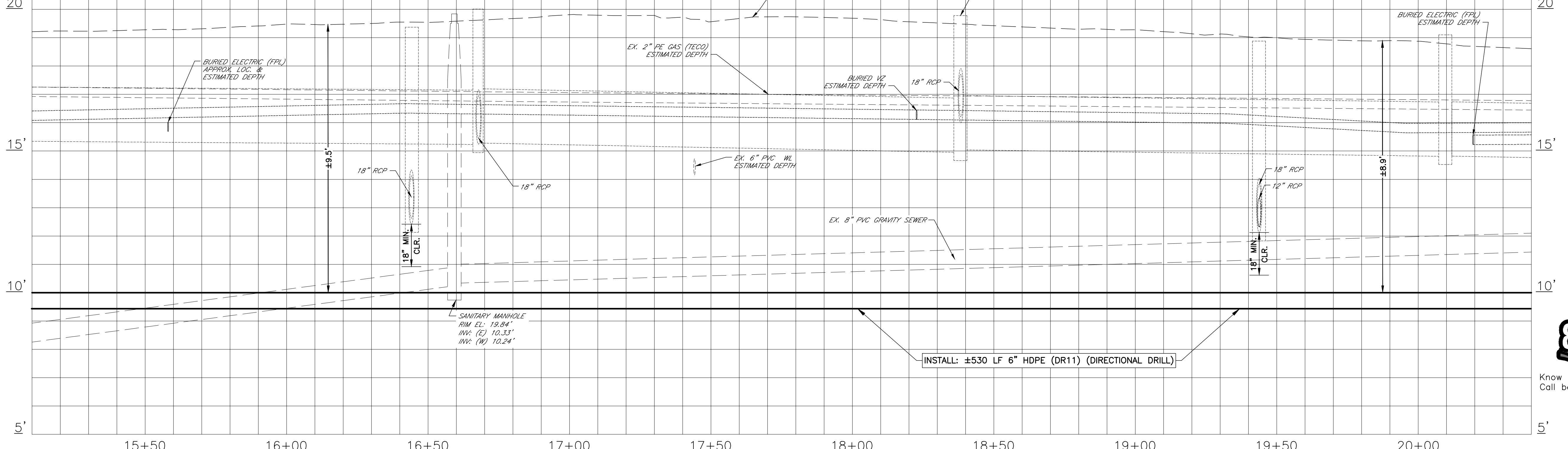
JOHN S. SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
LICENSE NO. 60923
STATE OF FLORIDA
EXPIRES 1/31/16

SHEET 05 OF 14

COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT s:\jw\engineering\share\util_eng\design\PROJ\con swr\proj\17A\DWG\SM-17A_P_Design.dwg,05_11/17/2015 3:27 PM Shea Shoun, 1:1, ANSI full bleed D (34.00 x 22.00 inches)



- NOTES:**
- SEPARATION DISTANCES SHOWN ON PLANS ARE FOR FINAL INSTALLATION. APPROPRIATE ADJUSTMENTS SHOULD BE MADE TO THE BORE PATH TO ALLOW FOR REAMER PULL BACK.
 - THE HDPE FORCE MAIN SHALL BE INSTALLED WITH A SINGLE PULL, CHANGES IN PIPE ELEVATIONS SHALL BE MADE WITH GRADUAL SLOPES TO REDUCE THE POTENTIAL FOR TRAPPED AIR AND THE NEED FOR AIR RELEASE VALVES. IF DEMONSTRATED A SINGLE PULL CANNOT BE PERFORMED, WHERE NECESSARY, THE HDPE PIPE SHALL BE UNDER DUG, LAID FLAT, AND FIELD WELDED.
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 - PROPOSED FORCE MAIN SHALL BE 5' MIN (HORIZ.) SEPARATION DISTANCE FROM EXISTING STRUCTURES.



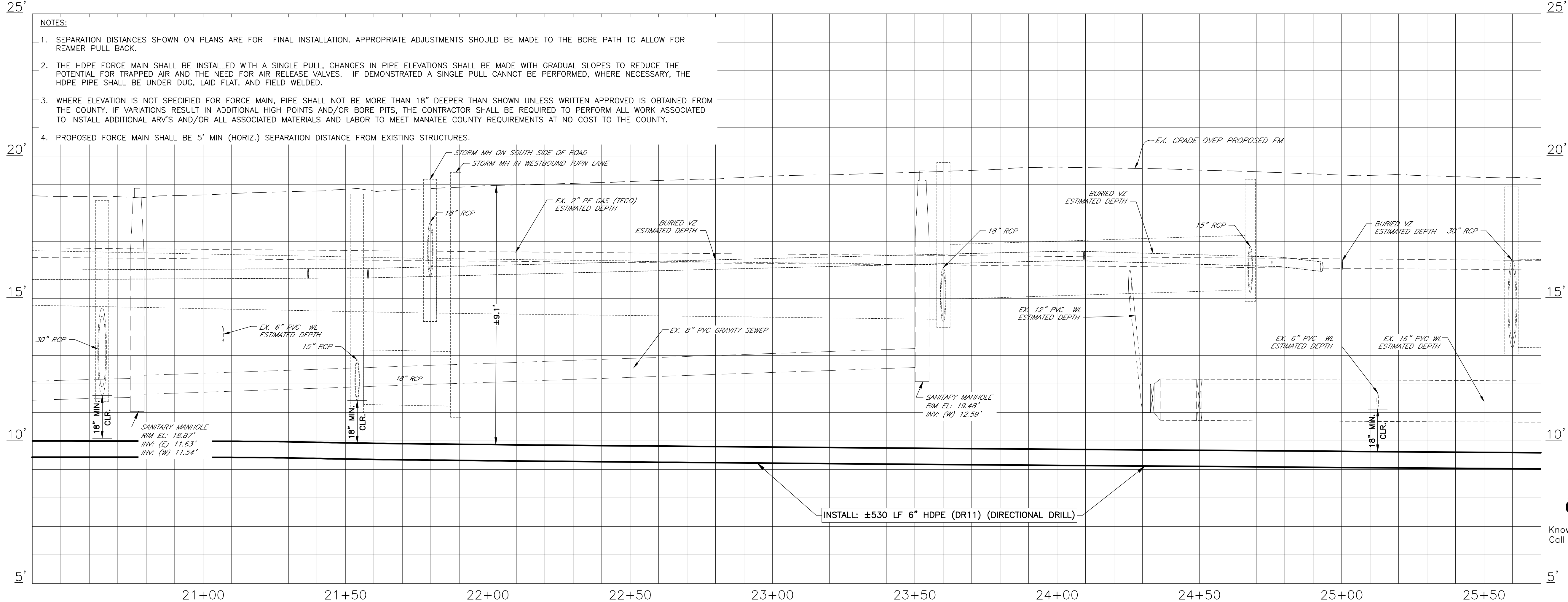
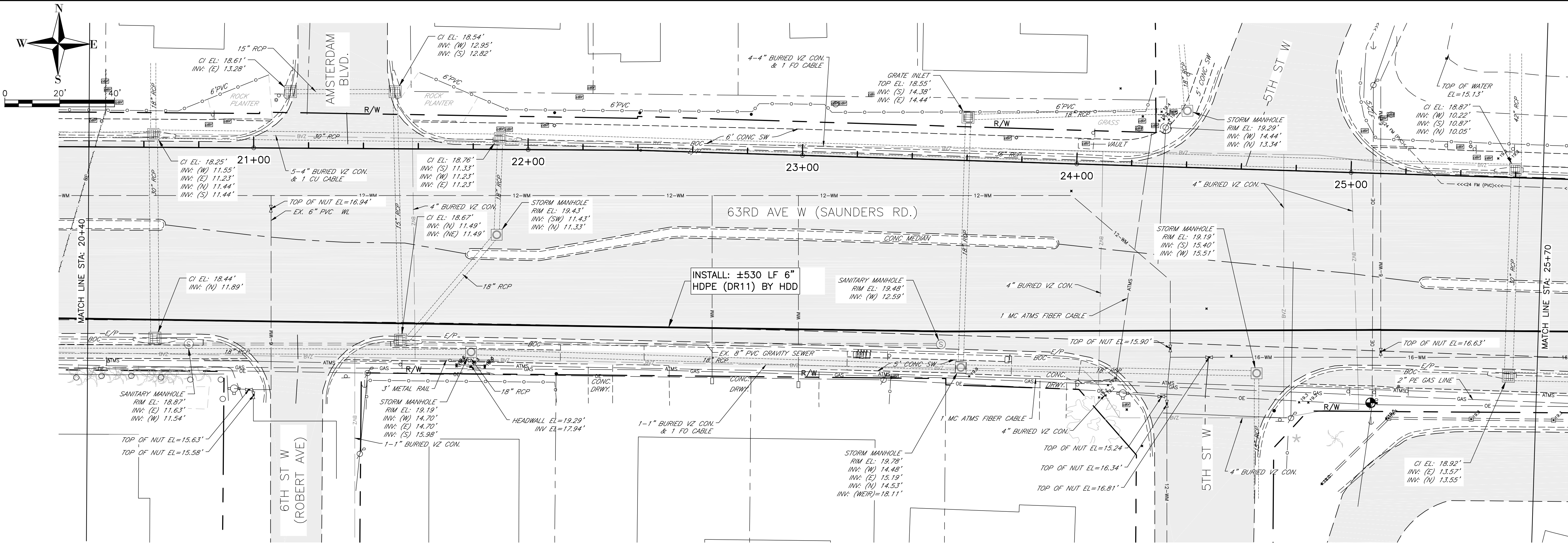
**FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
PLAN & PROFILE STA. 15+10 TO 20+40**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	FDC 577-0017
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

JOHN BRIBBUNOR, E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
1/13/15
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature

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- NOTES:**
- SEPARATION DISTANCES SHOWN ON PLANS ARE FOR FINAL INSTALLATION. APPROPRIATE ADJUSTMENTS SHOULD BE MADE TO THE BORE PATH TO ALLOW FOR REAMER PULL BACK.
 - THE HDPE FORCE MAIN SHALL BE INSTALLED WITH A SINGLE PULL. CHANGES IN PIPE ELEVATIONS SHALL BE MADE WITH GRADUAL SLOPES TO REDUCE THE POTENTIAL FOR TRAPPED AIR AND THE NEED FOR AIR RELEASE VALVES. IF DEMONSTRATED A SINGLE PULL CANNOT BE PERFORMED, WHERE NECESSARY, THE HDPE PIPE SHALL BE UNDER DUG, LAID FLAT, AND FIELD WELDED.
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 - PROPOSED FORCE MAIN SHALL BE 5' MIN (HORIZ.) SEPARATION DISTANCE FROM EXISTING STRUCTURES.



FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
PLAN & PROFILE STA. 20+40 TO 25+70

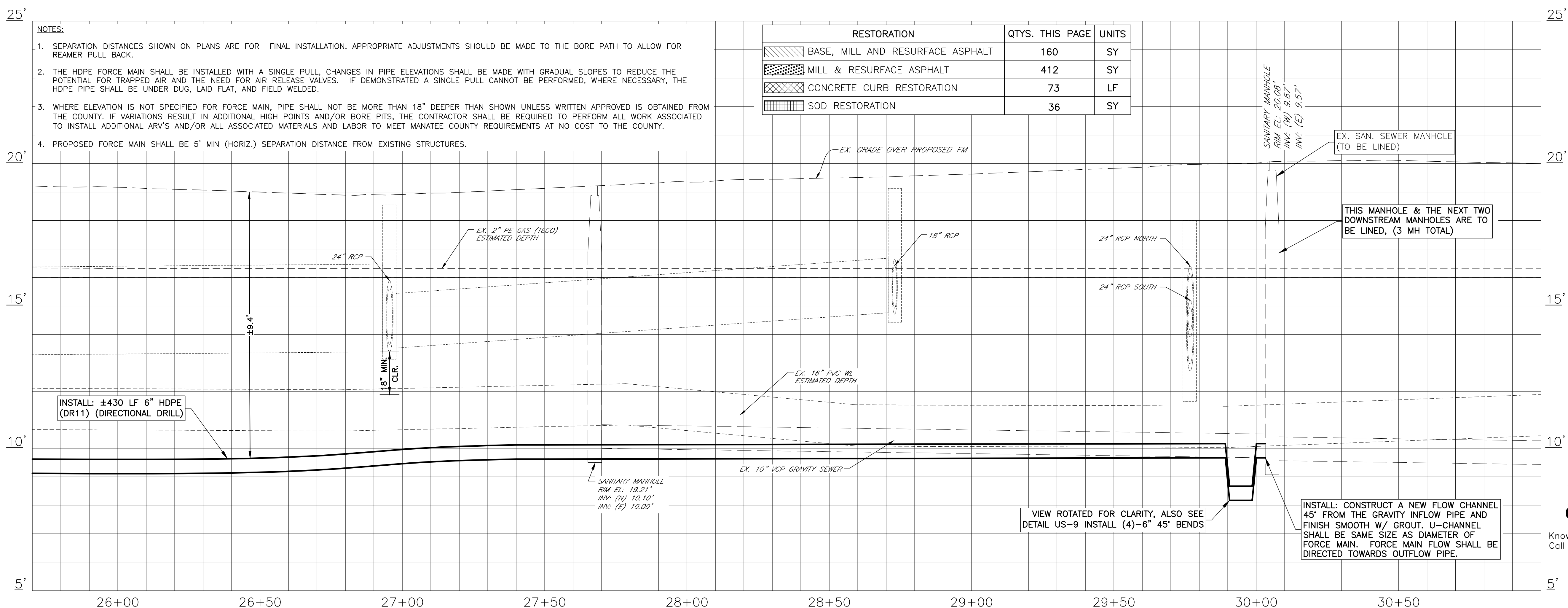
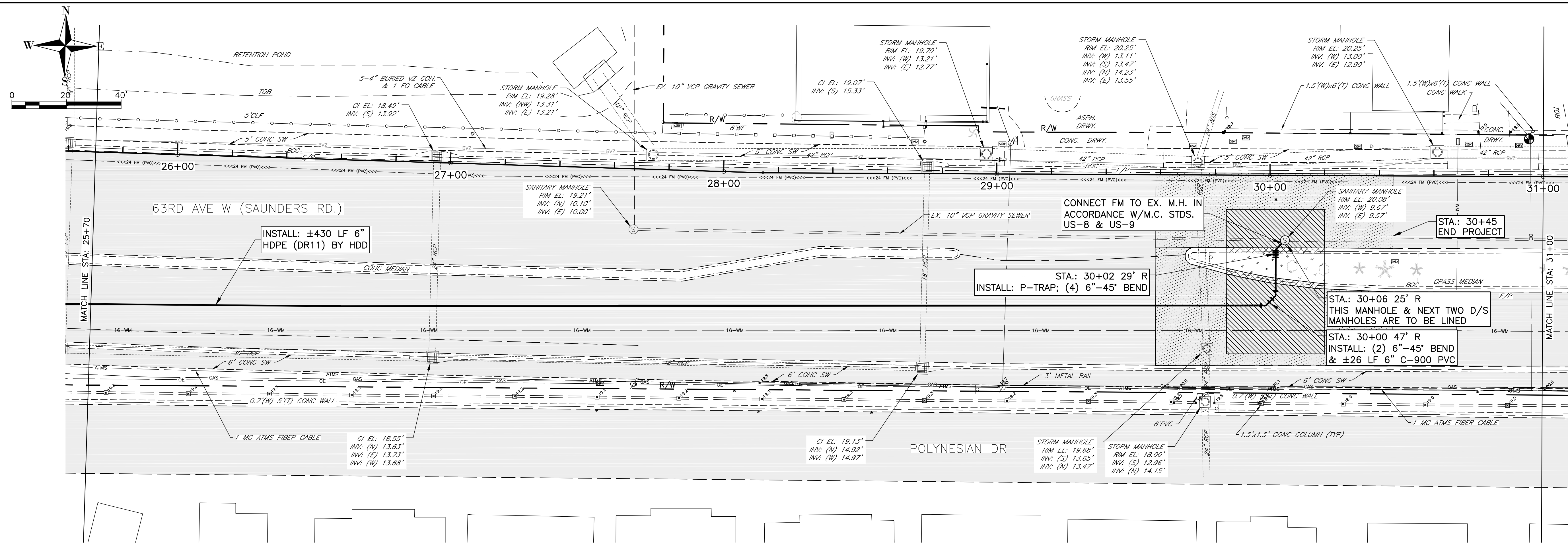
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY FDC 05/17/2015
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

JOHN GREEN, P.E.
FLORIDA REGISTERED PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
1/13/15
Professional Engineer
Signature

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**FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
PLAN & PROFILE STA. 25+70 TO 31+00**



- NOTES:**
- SEPARATION DISTANCES SHOWN ON PLANS ARE FOR FINAL INSTALLATION. APPROPRIATE ADJUSTMENTS SHOULD BE MADE TO THE BORE PATH TO ALLOW FOR REAMER PULL BACK.
 - THE HDPE FORCE MAIN SHALL BE INSTALLED WITH A SINGLE PULL, CHANGES IN PIPE ELEVATIONS SHALL BE MADE WITH GRADUAL SLOPES TO REDUCE THE POTENTIAL FOR TRAPPED AIR AND THE NEED FOR AIR RELEASE VALVES. IF DEMONSTRATED A SINGLE PULL CANNOT BE PERFORMED, WHERE NECESSARY, THE HDPE PIPE SHALL BE UNDER DUG, LAID FLAT, AND FIELD WELDED.
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 - PROPOSED FORCE MAIN SHALL BE 5' MIN (HORIZ.) SEPARATION DISTANCE FROM EXISTING STRUCTURES.

RESTORATION	QTY. THIS PAGE	UNITS
BASE, MILL AND RESURFACE ASPHALT	160	SY
MILL & RESURFACE ASPHALT	412	SY
CONCRETE CURB RESTORATION	73	LF
SOD RESTORATION	36	SY

EX. SAN. SEWER MANHOLE (TO BE LINED)
THIS MANHOLE & THE NEXT TWO DOWNSTREAM MANHOLES ARE TO BE LINED, (3 MH TOTAL)

INSTALL: CONSTRUCT A NEW FLOW CHANNEL 45' FROM THE GRAVITY INFLOW PIPE AND FINISH SMOOTH W/ GROUT. U-CHANNEL SHALL BE SAME SIZE AS DIAMETER OF FORCE MAIN. FORCE MAIN FLOW SHALL BE DIRECTED TOWARDS OUTFLOW PIPE.

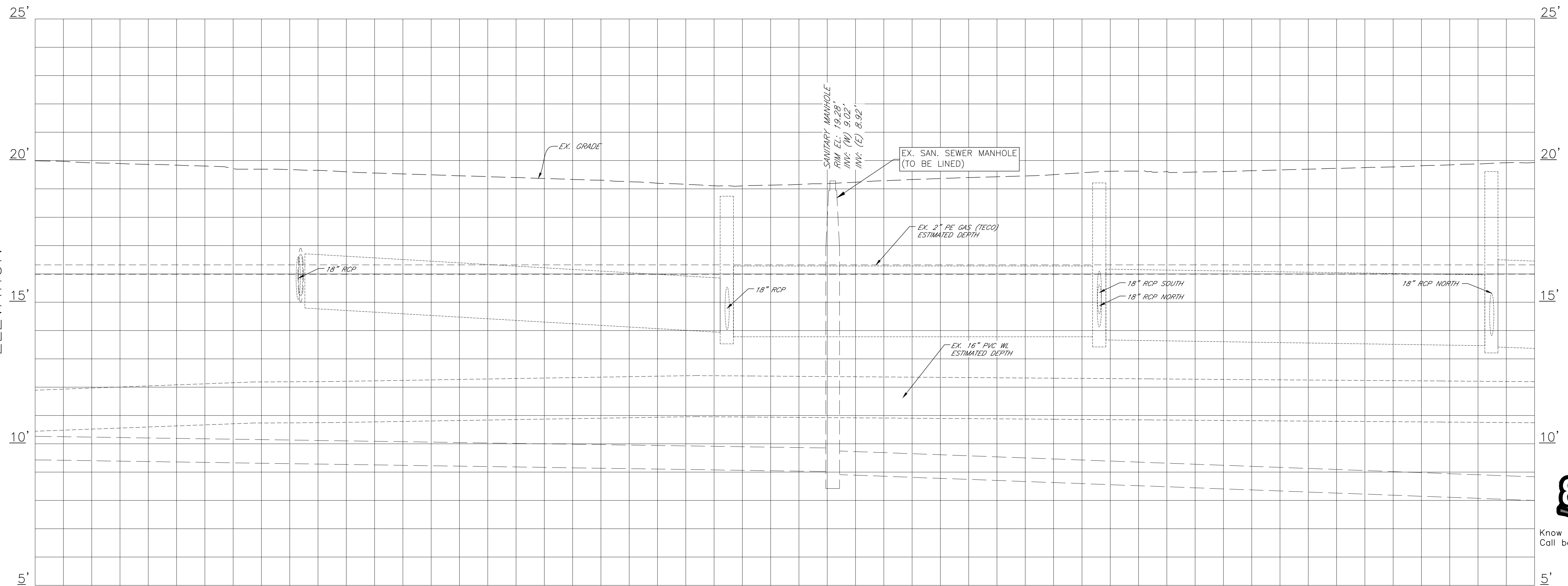
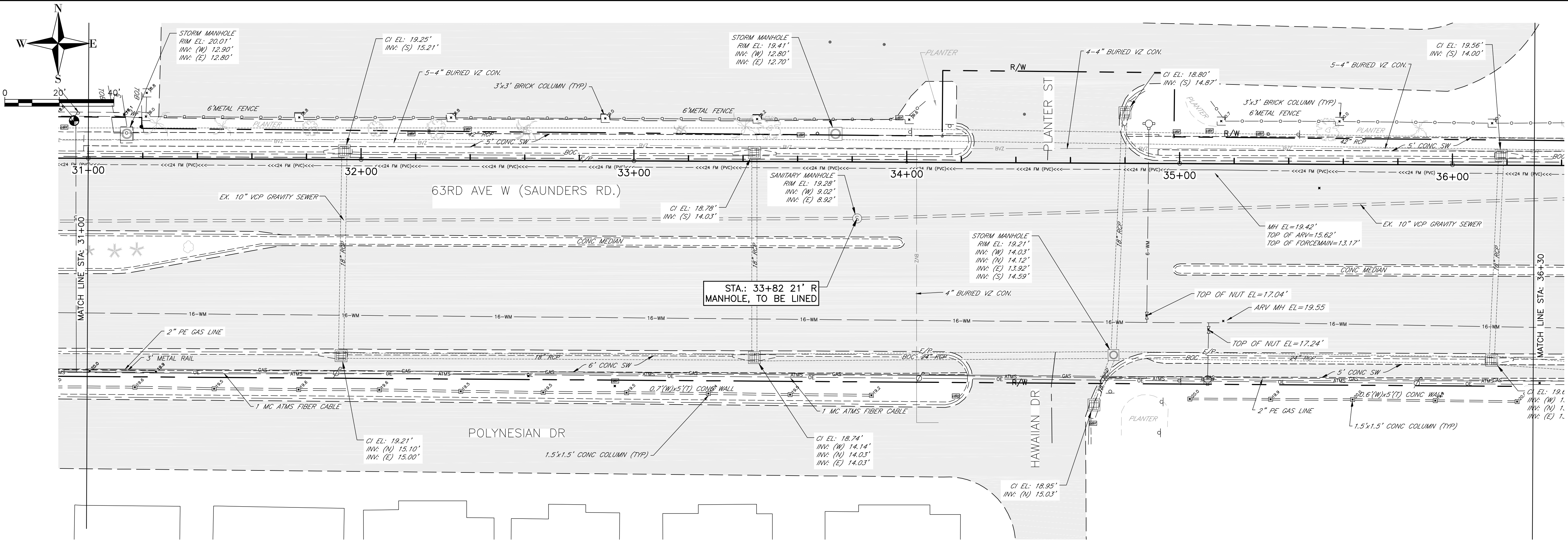


NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY DATE
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

JOHN S. SHAW
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
1/13/15
Signature

FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
PLAN & PROFILE STA. 30+00 TO 38+30

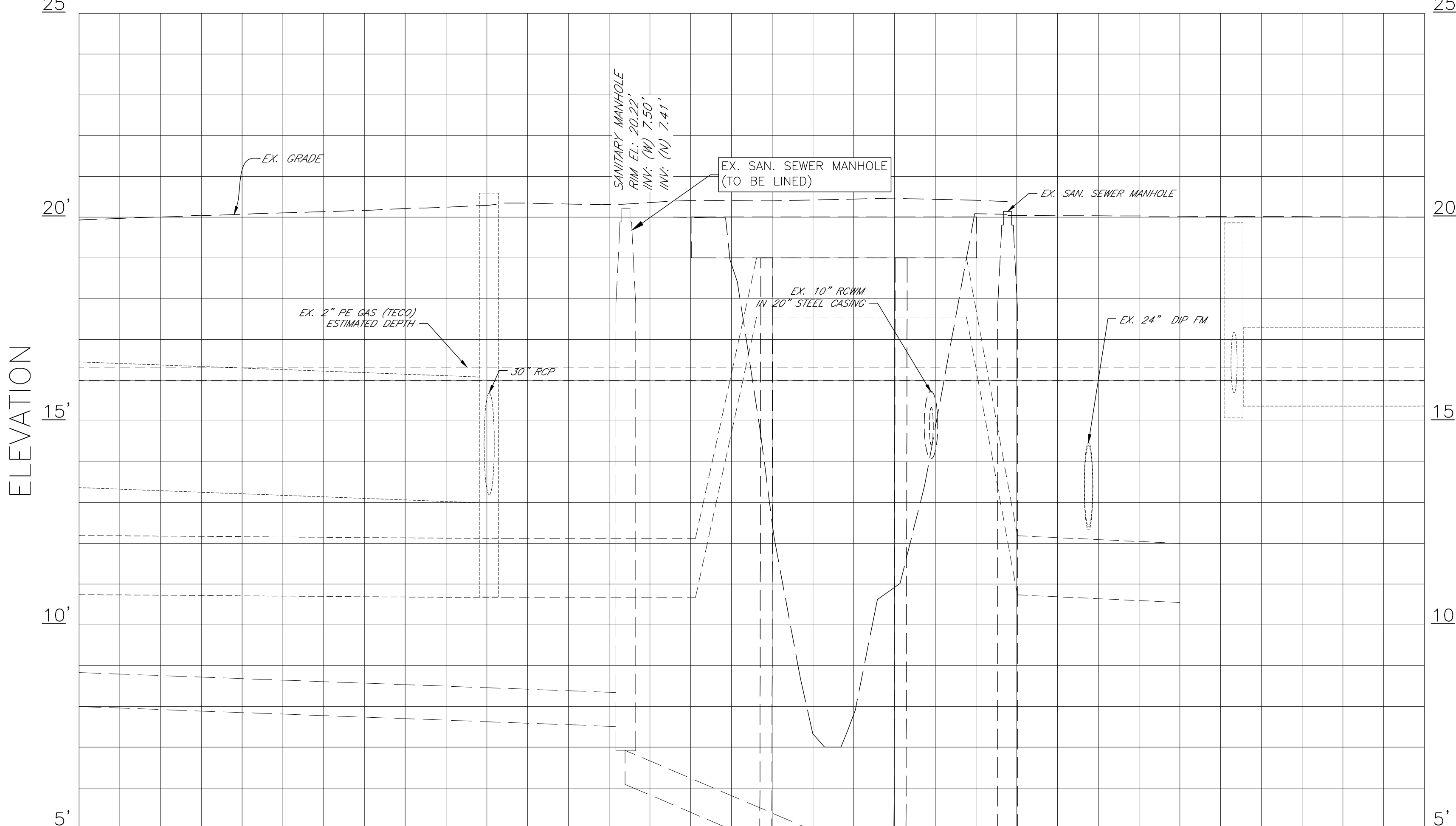
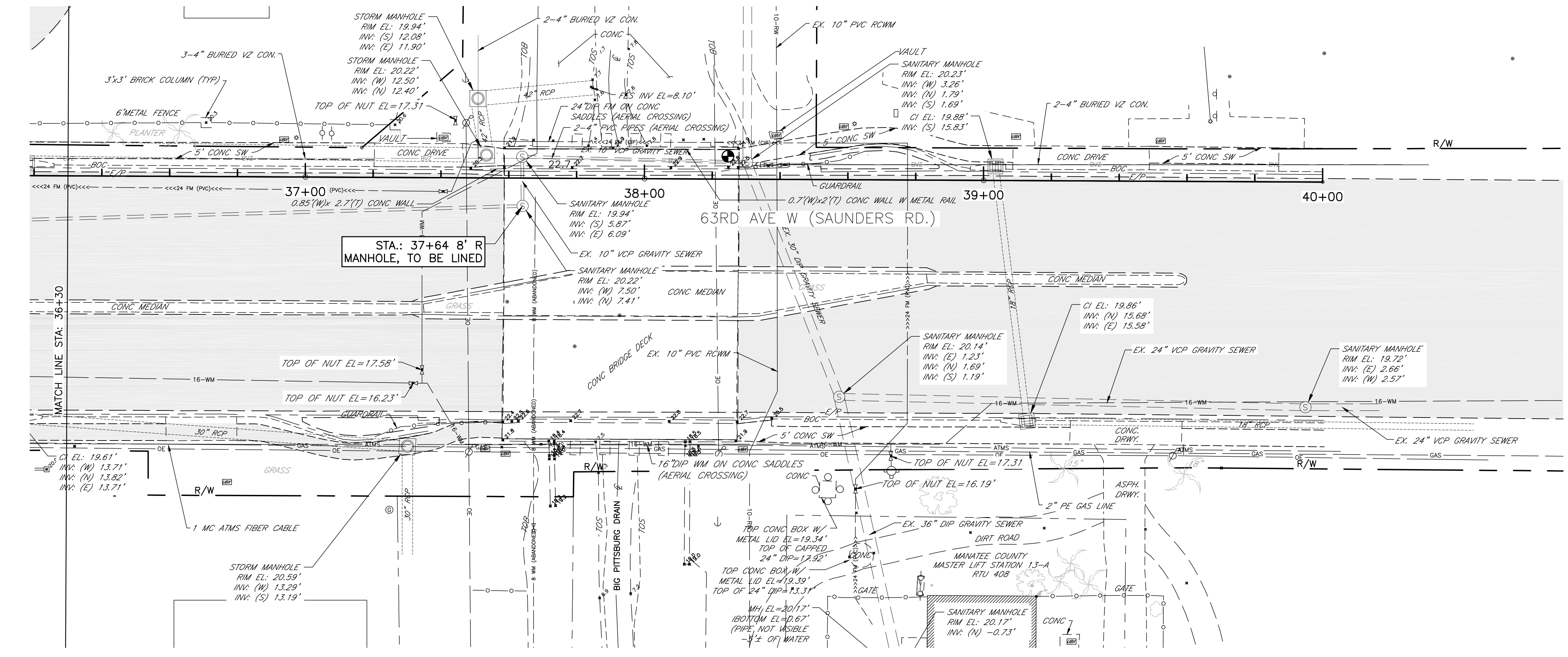
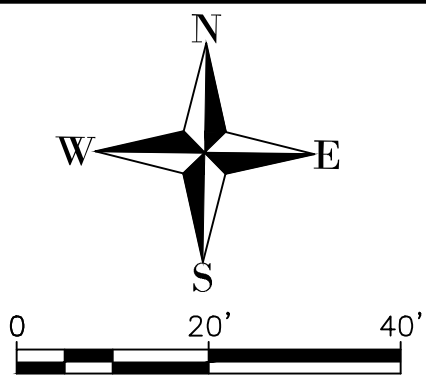


NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	FDC 577-0017
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

JOHN S. SHUN, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
1/13/15

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FORCE MAIN 17A REPLACEMENT 63rd AVENUE WEST PLAN & PROFILE STA. 38+00 TO END

NO.	REVISION DESCRIPTION	BY	DATE

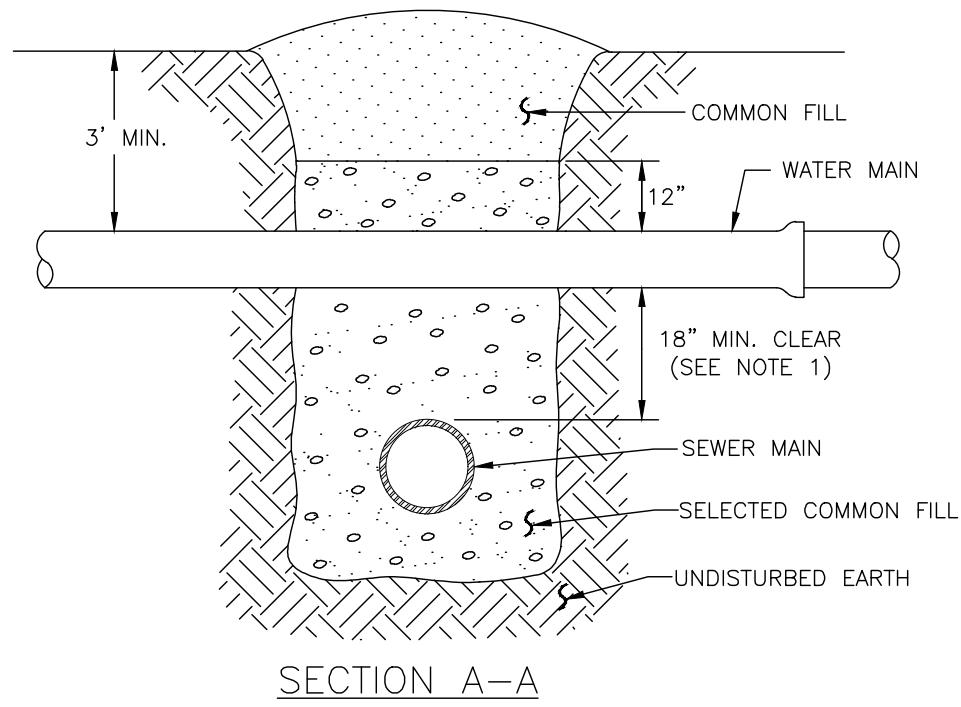
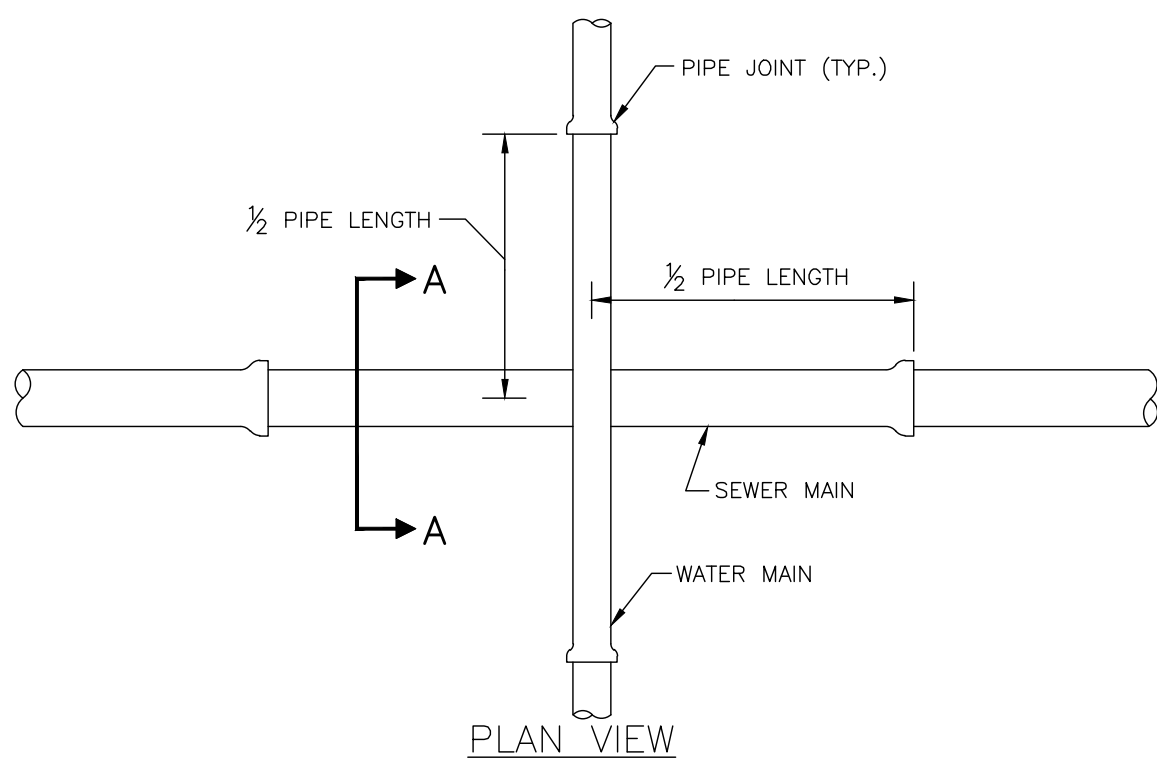
PROJECT # 404-6028385
 SURVEY # 577-0017
 SEC./TWN./RGE 23 & 24/35/17
 VERT. SCALE 1"=2'
 HORZ. SCALE 1"=20'
 VERTICAL DATUM NAVD 1988

NO.	BY	DATE
SURVEYED	FDC	577-0017
DESIGNED	JSS	05/2015
DRAWN	BLR	05/2015

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER



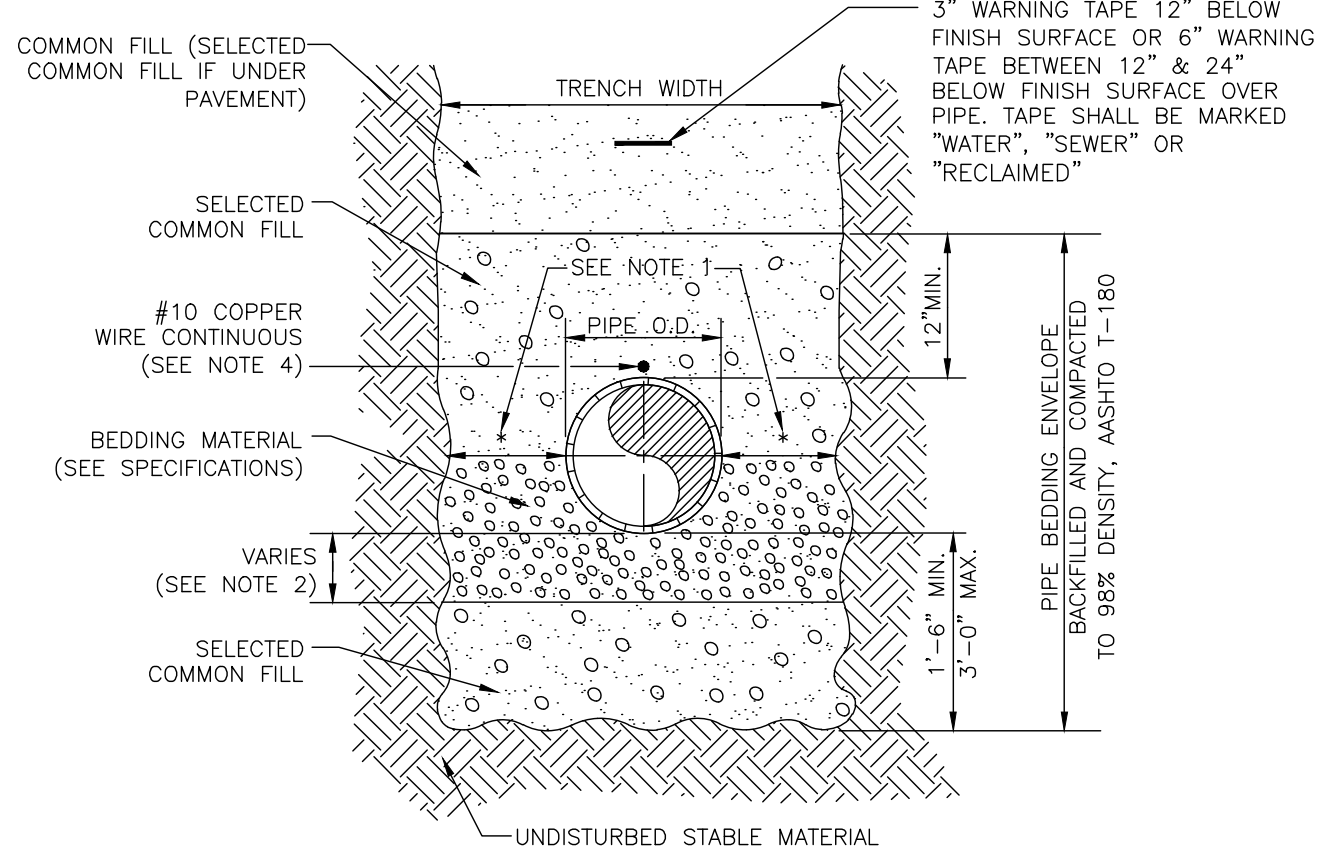
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT s:\pww\engineering_shou2\littl_eng_design\PROJ\con swr proj\FL-17A\DWG\FL-17A_P_Design.dwg, 11/13/2015 5:28 PM Shea Shoun, 1:1, ANSI full bleed D (34.00 x 22.00 inches)



- NOTES:
- CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON OR 3" FOR FORCE MAIN WHERE FORCE MAIN IS ENCASED A MINIMUM OF 10" EACH SIDE OF CROSSING.
 - WHERE NO ENCASEMENT IS REQUIRED, 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.
 - REFER TO THE JACK & BORE CROSSING DETAIL FOR CASING AND SPACER REQUIREMENTS.

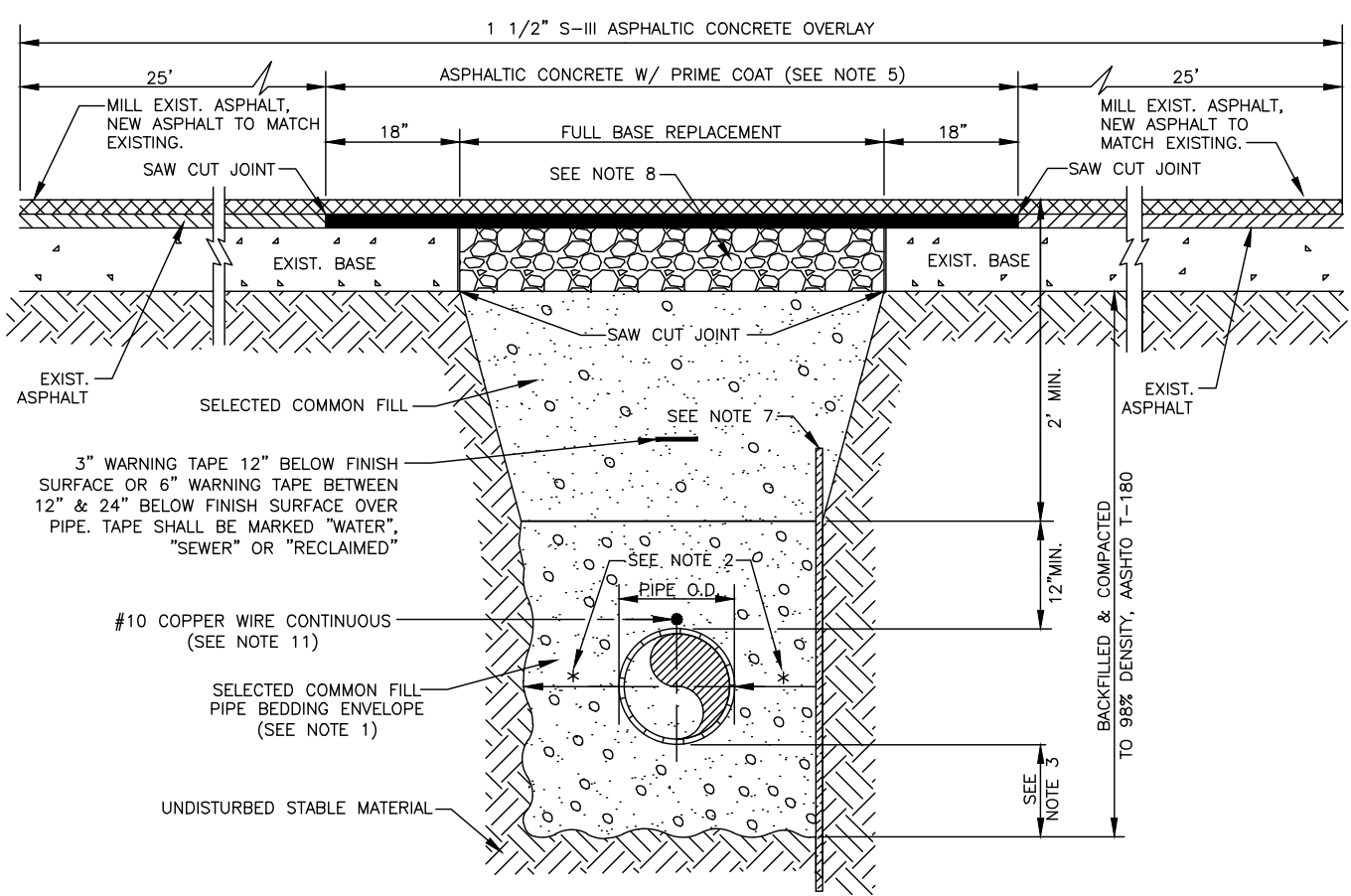
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY CLB/BR	DATE 11/10		
JANUARY 7, 2014 DATE OF APPROVAL			

- NOTES:
- 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.
 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

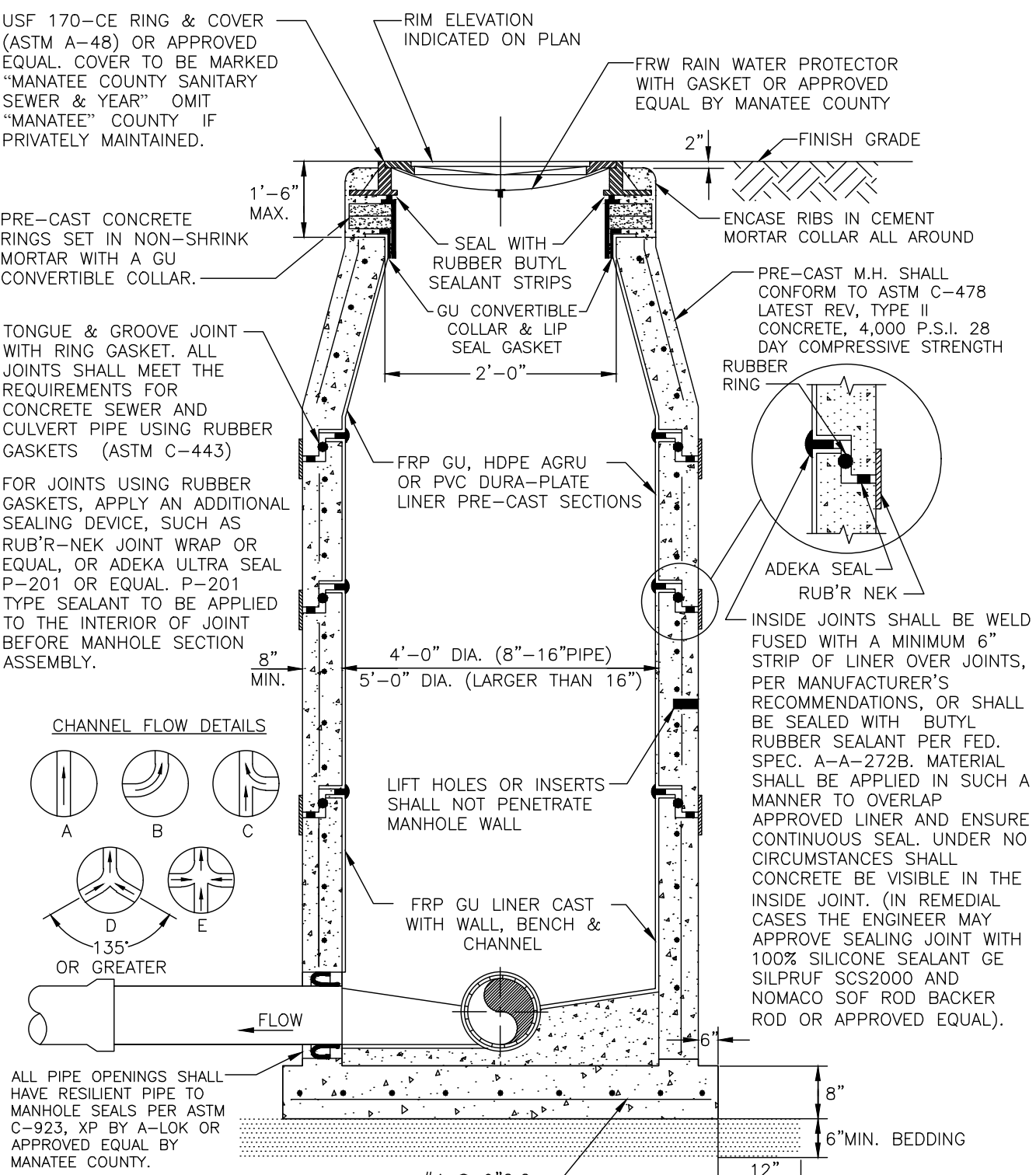


MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH TYPE A-3 PIPE BEDDING	UG-16
REV. BY CLB/BR	DATE 11/10		
JANUARY 7, 2014 DATE OF APPROVAL			

- NOTES:
- USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 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.
 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
 - MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO MILLING OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCREPANCY "BUMP" AT JOINT. EDGE LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
 - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 - BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 - TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 - RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 - NOTES 5, THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



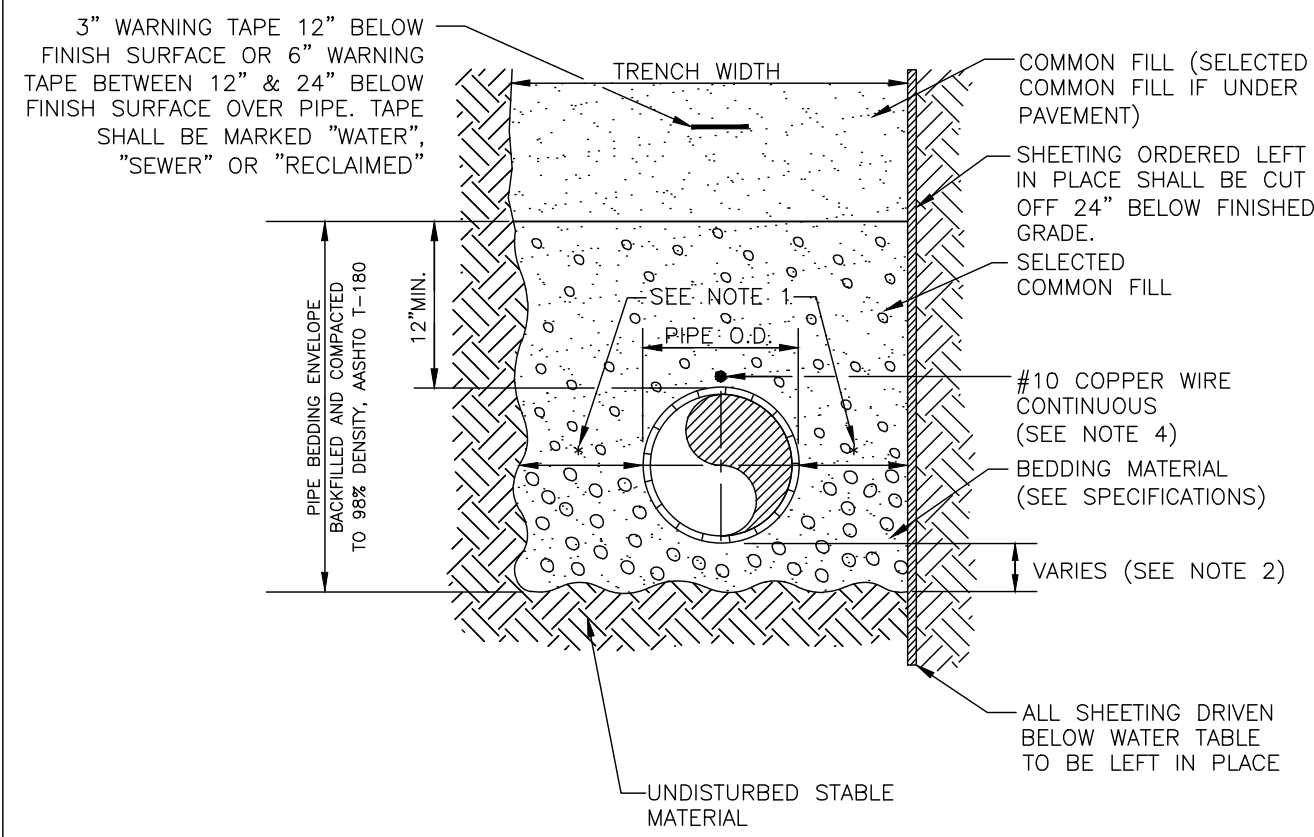
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12
REV. BY WRT/KE	DATE 03/11		
JANUARY 7, 2014 DATE OF APPROVAL			



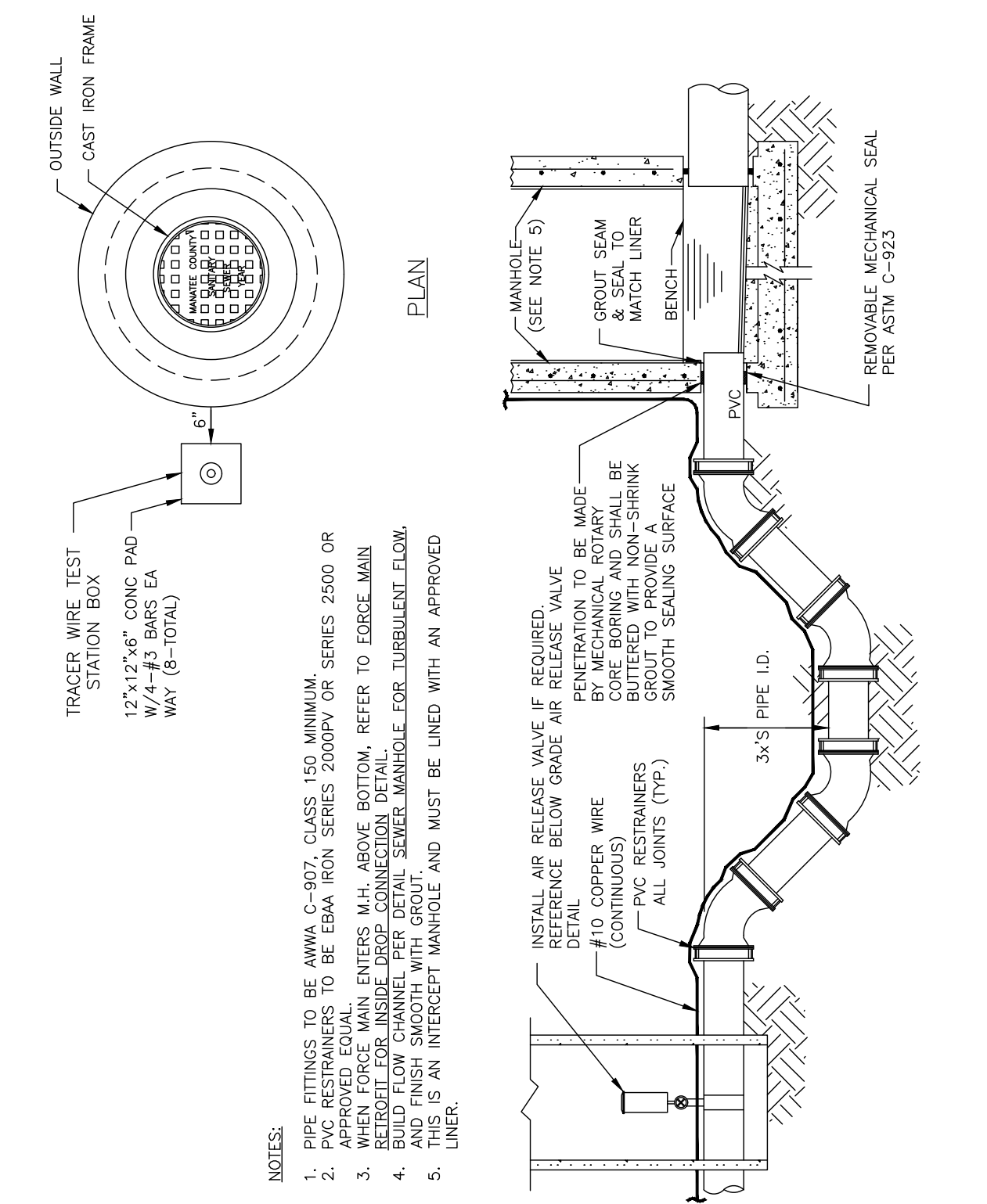
- NOTE:
- DROP MANHOLES, MANHOLES WITH OPPOSING FLOW (DETAILS D & E), MANHOLES IMMEDIATELY UPSTREAM OF A LIFT STATION WET WELL, MANHOLES WITH GRAVITY SEWERS GREATER THAN 12 INCHES IN DIAMETER, MANHOLES RECEIVING A FORCE MAIN AND THE FIRST TWO GRAVITY MANHOLES DOWNSTREAM OF MANHOLES RECEIVING A FORCE MAIN SHALL HAVE AN APPROVED LINER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR TURBULENT FLOW	US-3
REV. BY CLB/CB	DATE 11/10		
JANUARY 7, 2014 DATE OF APPROVAL			

- NOTES:
- 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.
 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TRENCH WITH TYPE A-2 PIPE BEDDING	UG-15
REV. BY CLB/BR	DATE 11/10		
JANUARY 7, 2014 DATE OF APPROVAL			



MANATEE COUNTY PUBLIC WORKS DEPARTMENT		FORCE MAIN CONNECTION TO MANHOLE	US-9
REV. BY CLB/KE	DATE 11/10		
JANUARY 7, 2014 DATE OF APPROVAL			



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

**FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
DETAILS**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
SCALE	
VERTICAL DATUM	NAVD 1988
SURVEYED	BY FDC DATE 02/04/15
DESIGNED	JSS DATE 05/2015
DRAWN	BLR DATE 05/2015

JOHN S. SHOUN, P.E.	
Professional Engineer License No. 60923	
State of Florida	

SHEET 09 OF 14

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FORCE MAIN 17A REPLACEMENT
63rd AVENUE WEST
EXISTING FORCE MAIN GROUT PLAN



NOTES:

1. CONTRACTOR MUST REMOVE ALL ABOVE GROUND COMPONENTS OF ANY FORCE MAIN VALVES, INCLUDING VALVES, ARV'S, VALVE BOXES, PADS AND MARKERS ON THE ABANDONED PORTION OF EX. FORCE MAIN 17-A.

CAP EXISTING FORCE MAIN TO THE SOUTH OF THIS POINT, GROUT FILL AND ABANDON IN PLACE ±2,300 LF 6" CI PIPE, TO THE TERMINAL MANHOLE ON 65TH AVE W.

EX. FORCE MAIN 17-A, (TO BE GROUT FILLED AND ABANDONED IN PLACE)

CAP EXISTING FORCEMAIN, GROUT FILL, ABANDON IN PLACE. FROM THIS POINT TO 63RD AVE W

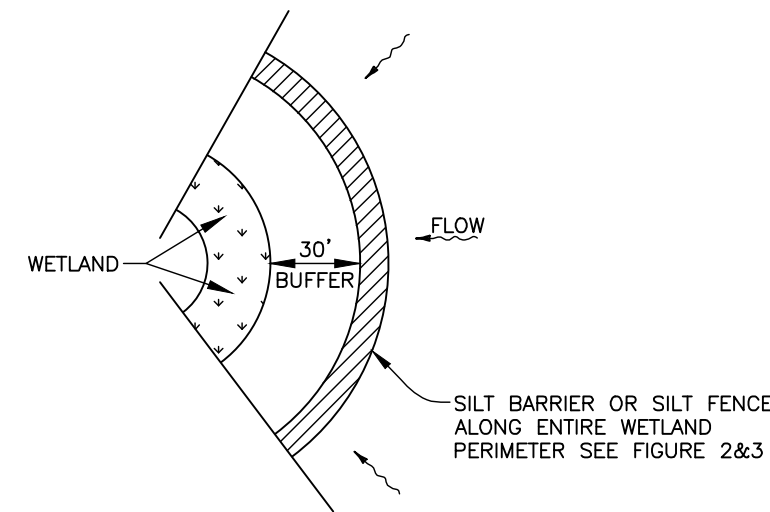
EX. FORCE MAIN TERMINAL MANHOLE; DISCONNECT FORCE MAIN, PATCH HOLE AND REPAIR LINER.

NO.	REVISION DESCRIPTION	BY	DATE

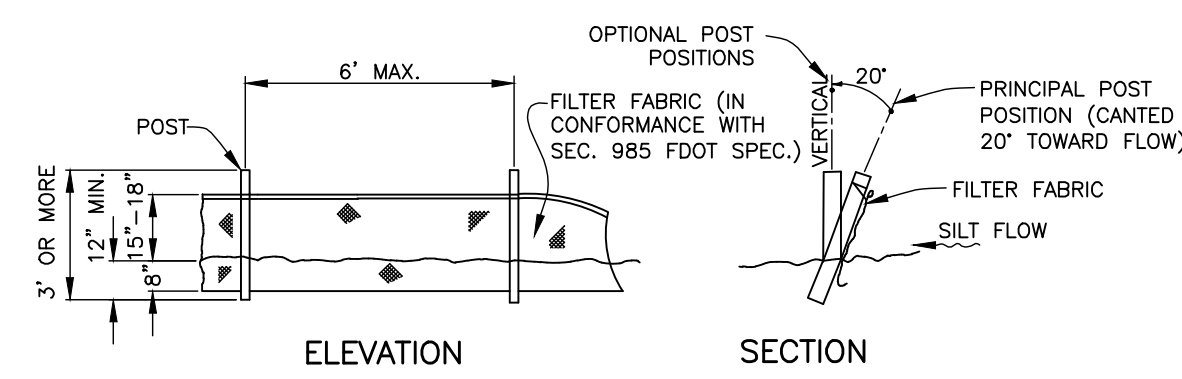
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SURVEY #	577-0017
SEC./TWN./RGE	23 & 24/35/17
SCALE	1"=100'
VERTICAL DATUM	NAVD 1988
SURVEYED	FDC 02/04/15
DESIGNED	JSS 05/2015
DRAWN	BLR 05/2015

Signature & Date

Professional Engineer
No. 60923
STATE OF FLORIDA
1/13/15

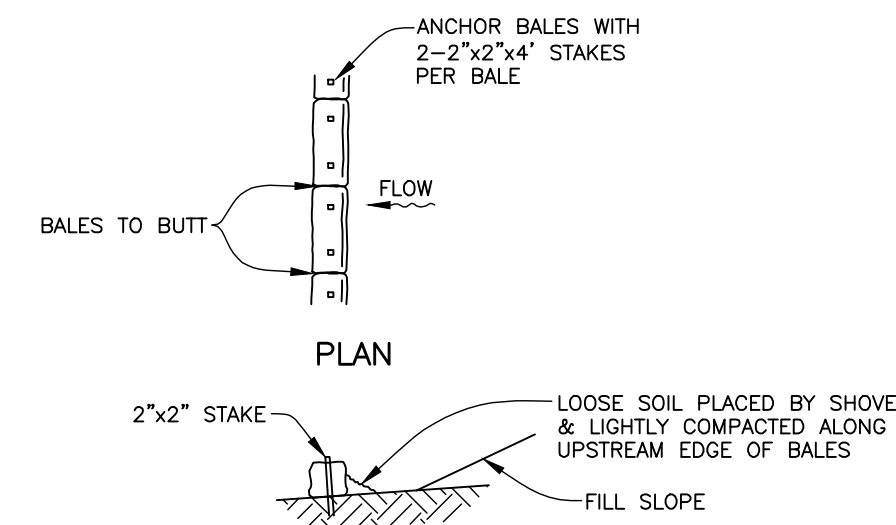


WETLAND BUFFER
FIGURE 1

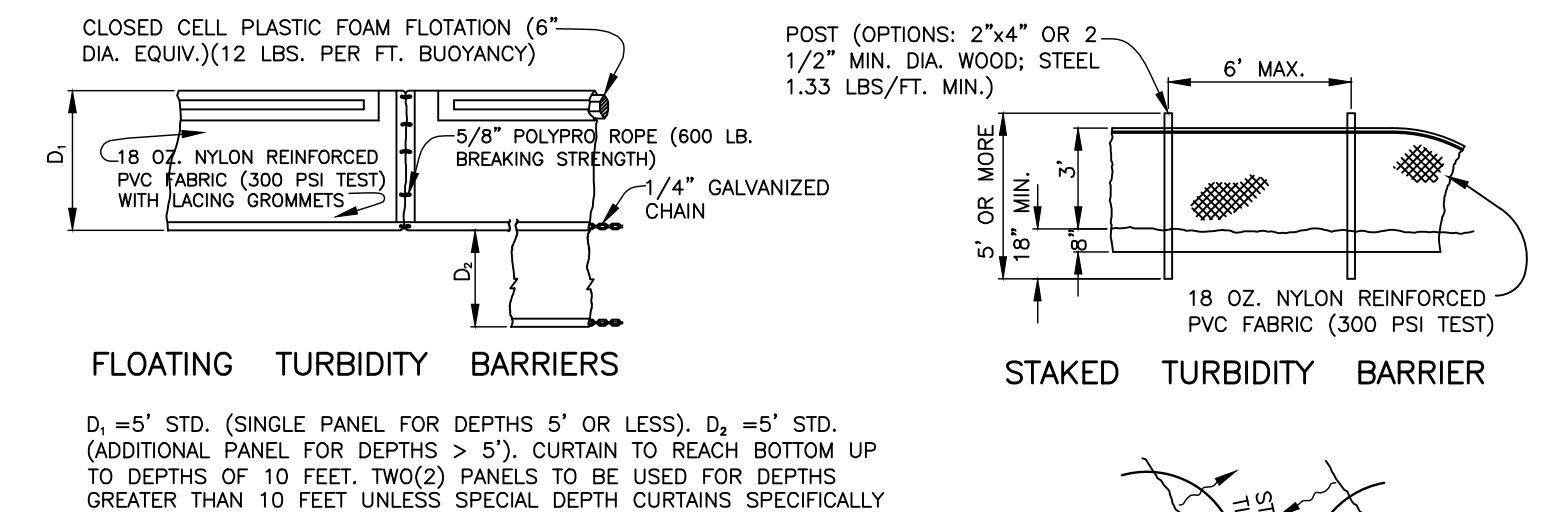


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

TYPICAL SILT FENCE
FIGURE 2



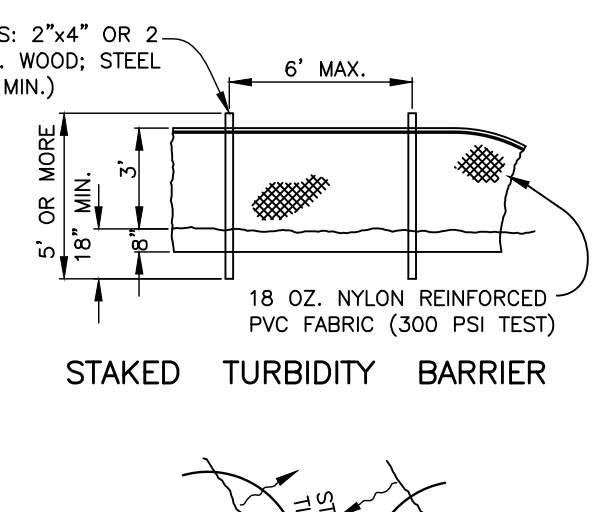
TYPICAL BALE SILT BARRIER
FIGURE 3



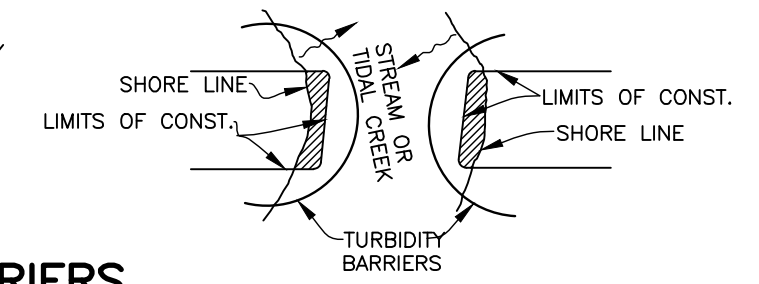
FLOATING TURBIDITY BARRIERS

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.

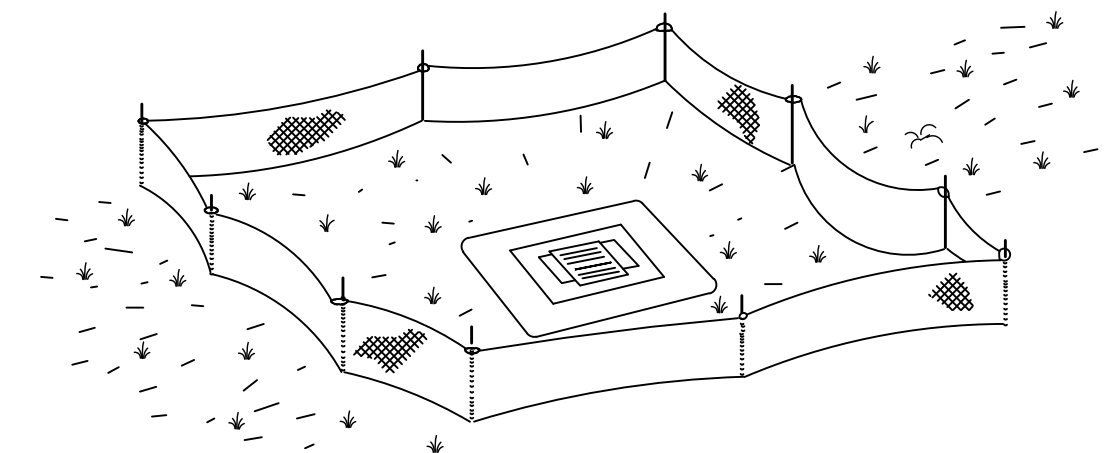
NOTE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



STAKED TURBIDITY BARRIER

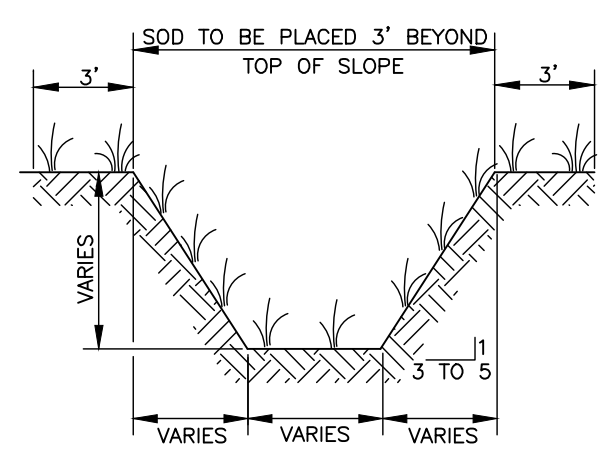


TURBIDITY BARRIERS
FIGURE 4

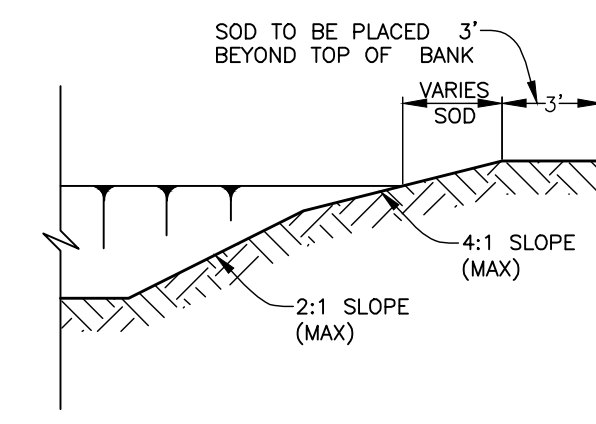


**TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS**

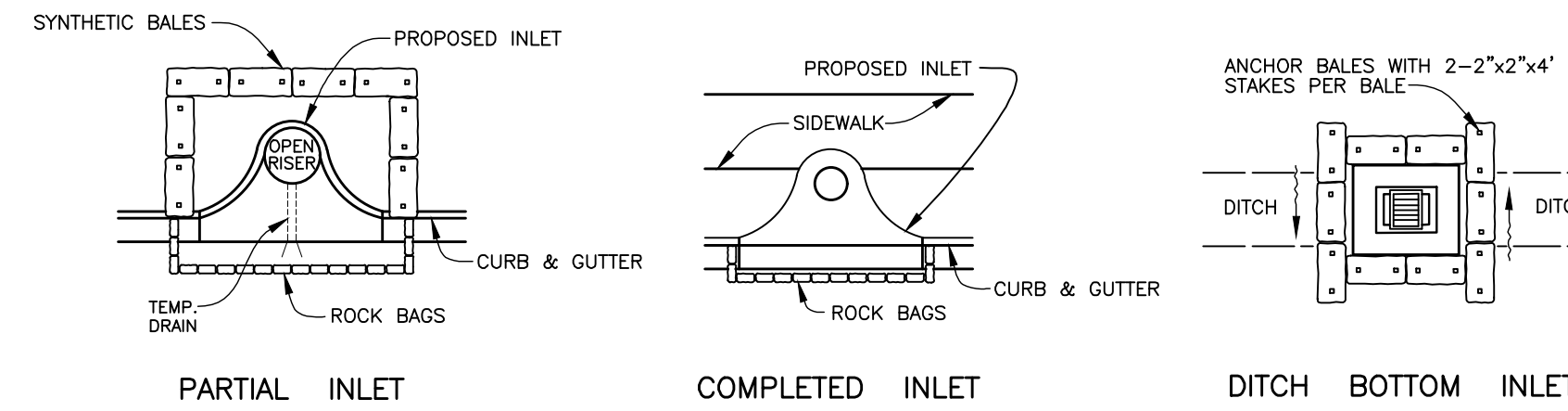
**STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS**
FIGURE 8



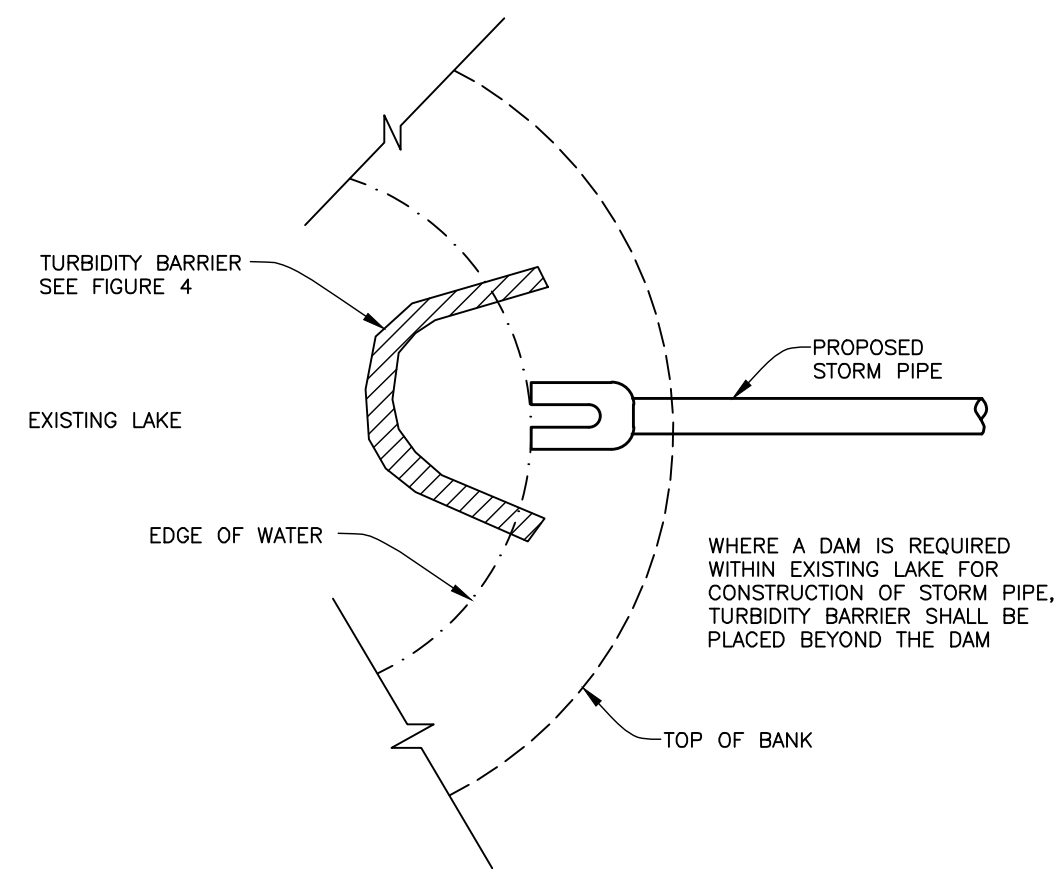
TYPICAL SWALE SECTION
FIGURE 5



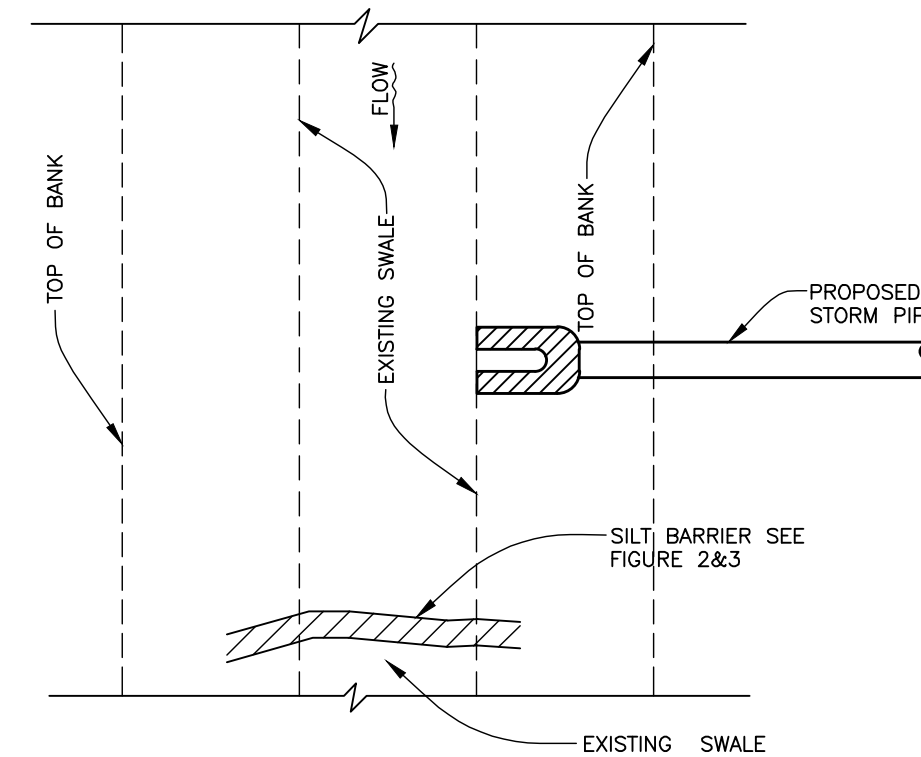
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



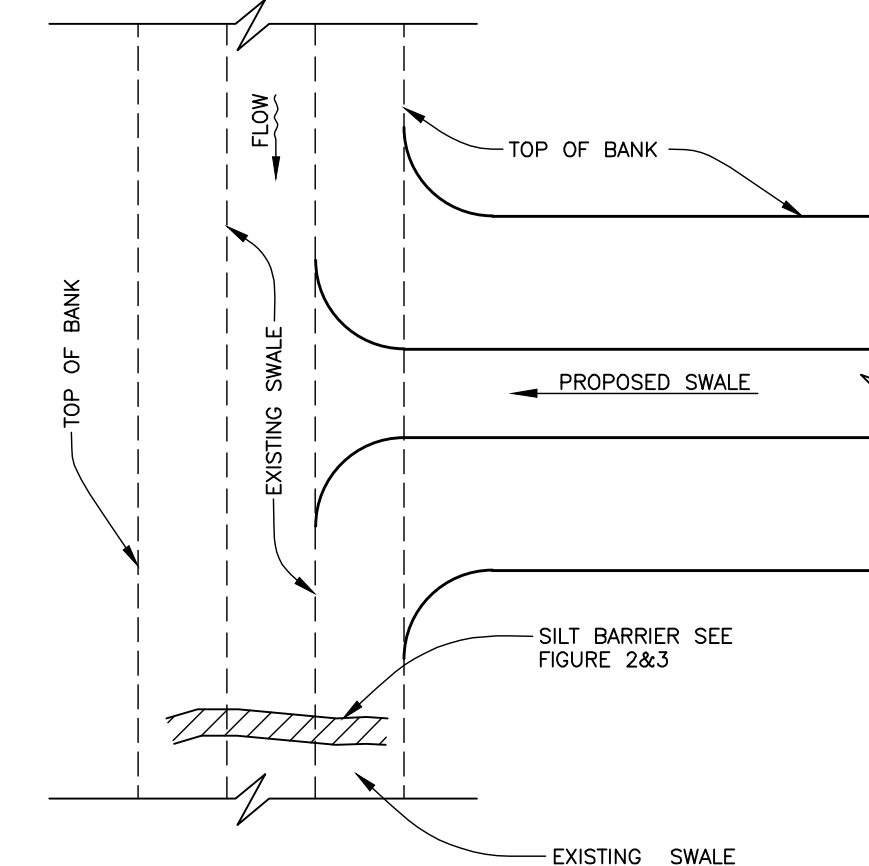
**SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES**
FIGURE 7



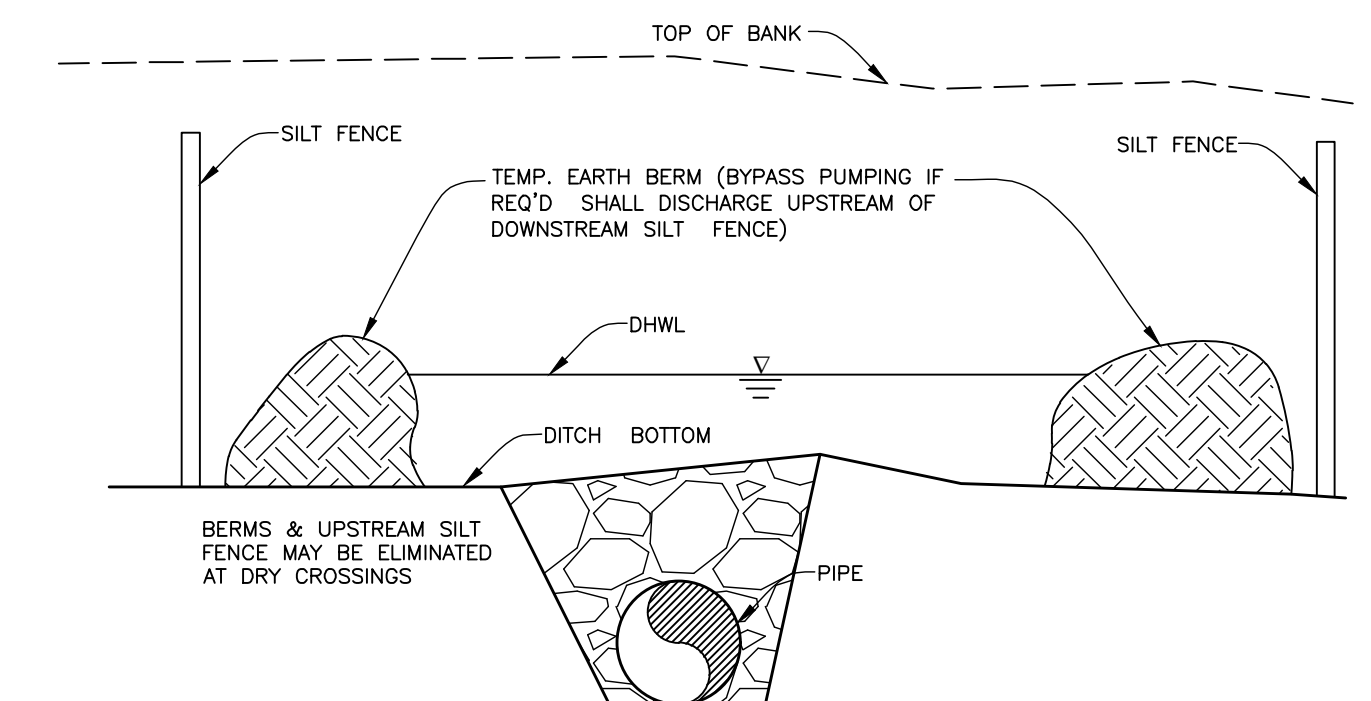
**TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE**
FIGURE 9



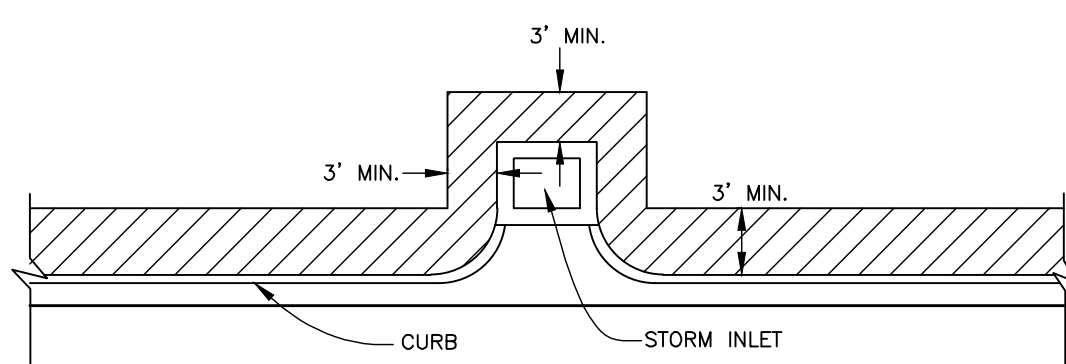
**SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE**
FIGURE 10



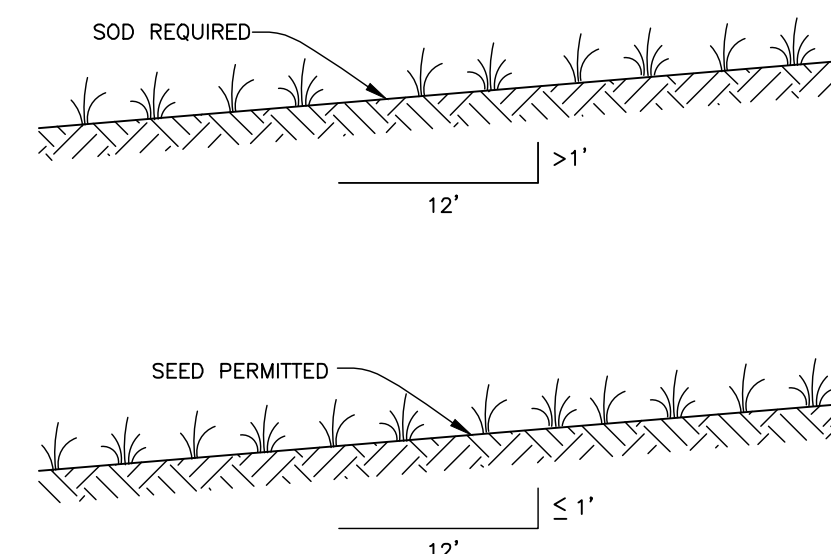
**SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE**
FIGURE 11



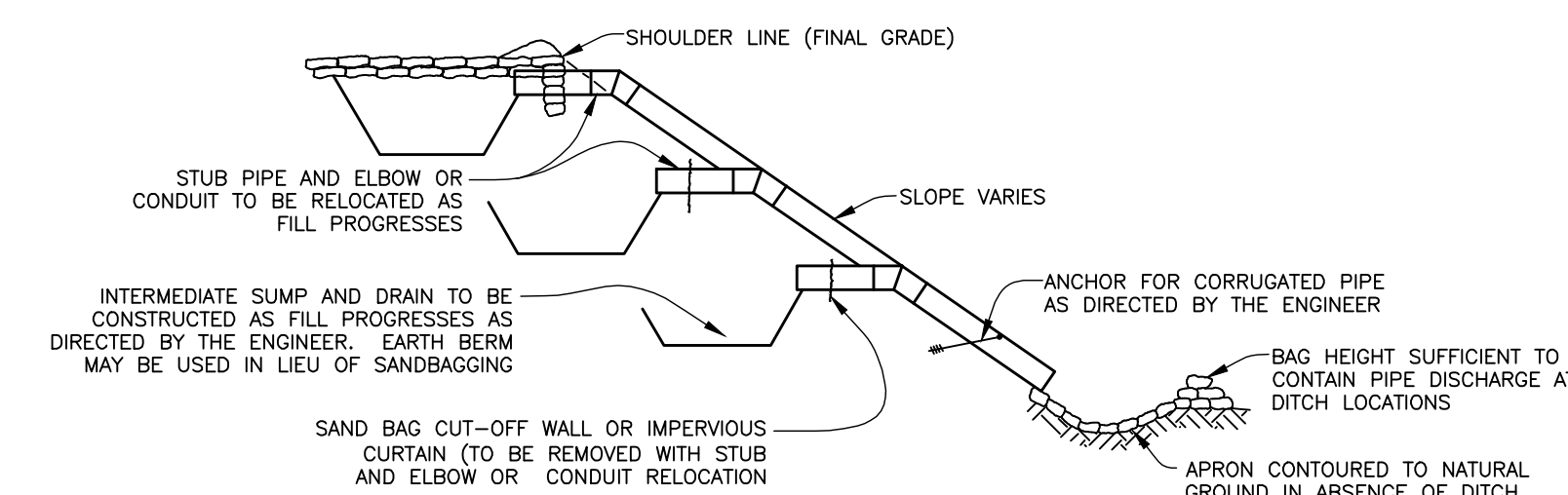
UNDERGROUND PIPE CROSSING
FIGURE 12



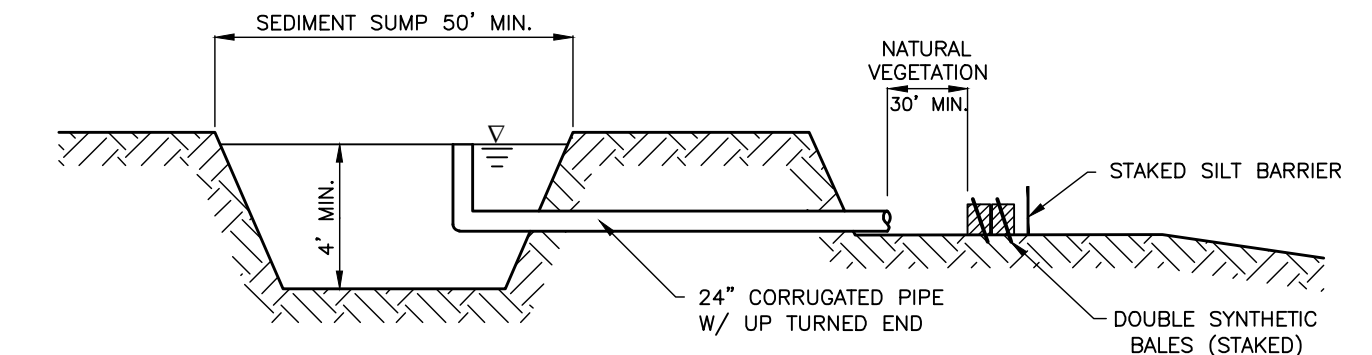
**SOD ALONG CURB
AND AROUND INLET**
FIGURE 14



GRASS SLOPES
FIGURE 13



**SECTION AA
TEMPORARY SLOPE DRAIN**
FIGURE 15

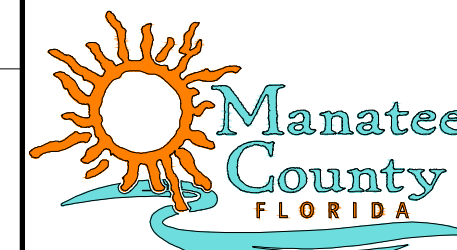


SEDIMENT SUMP SECTION
FIGURE 16

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

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SURVEYED	FDC	02/04/15	
DESIGNED	JSS	05/2015	
DRAWN	BLR	05/2015	

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1/13/15
PROFESSIONAL ENGINEER

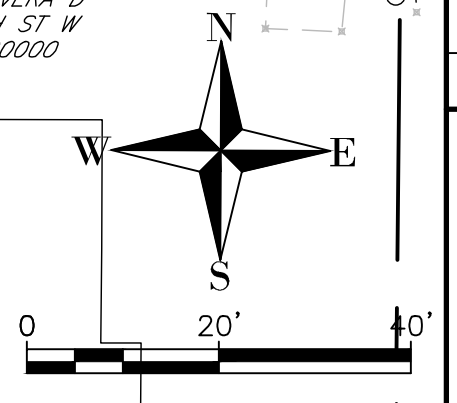
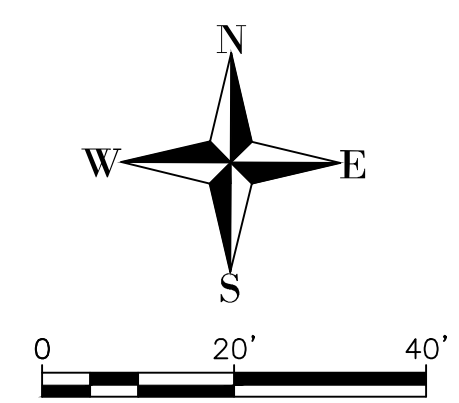
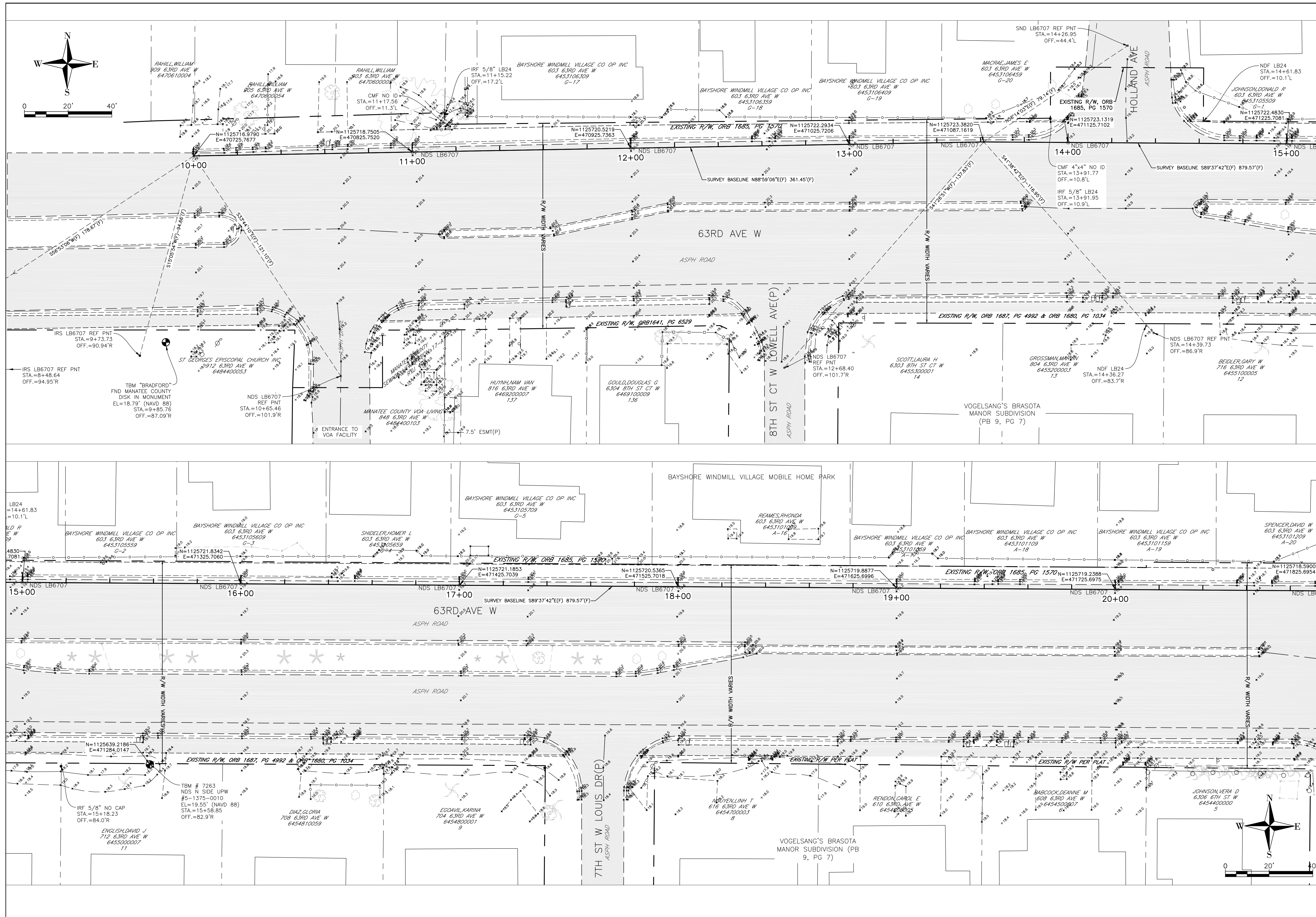


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
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FORCE MAIN 17A REPLACEMENT

63rd AVENUE WEST

SURVEY CONTROL & EX. TOPO



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6028385
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DRAWN	BLR 05/2015

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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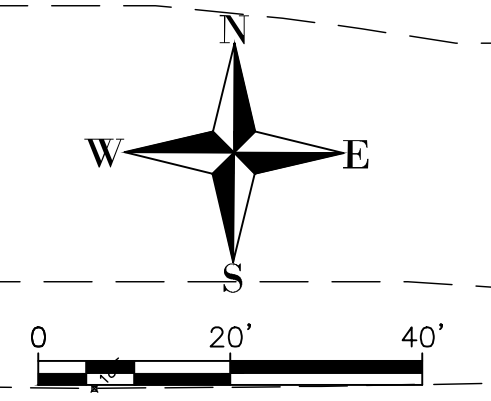
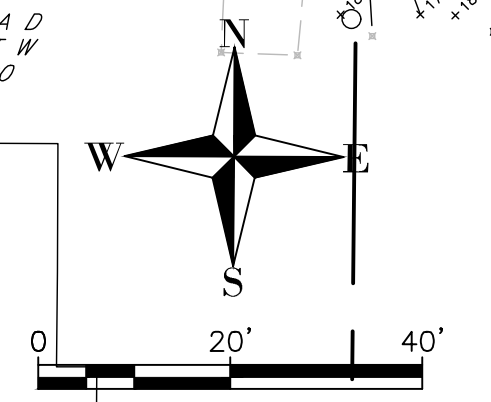
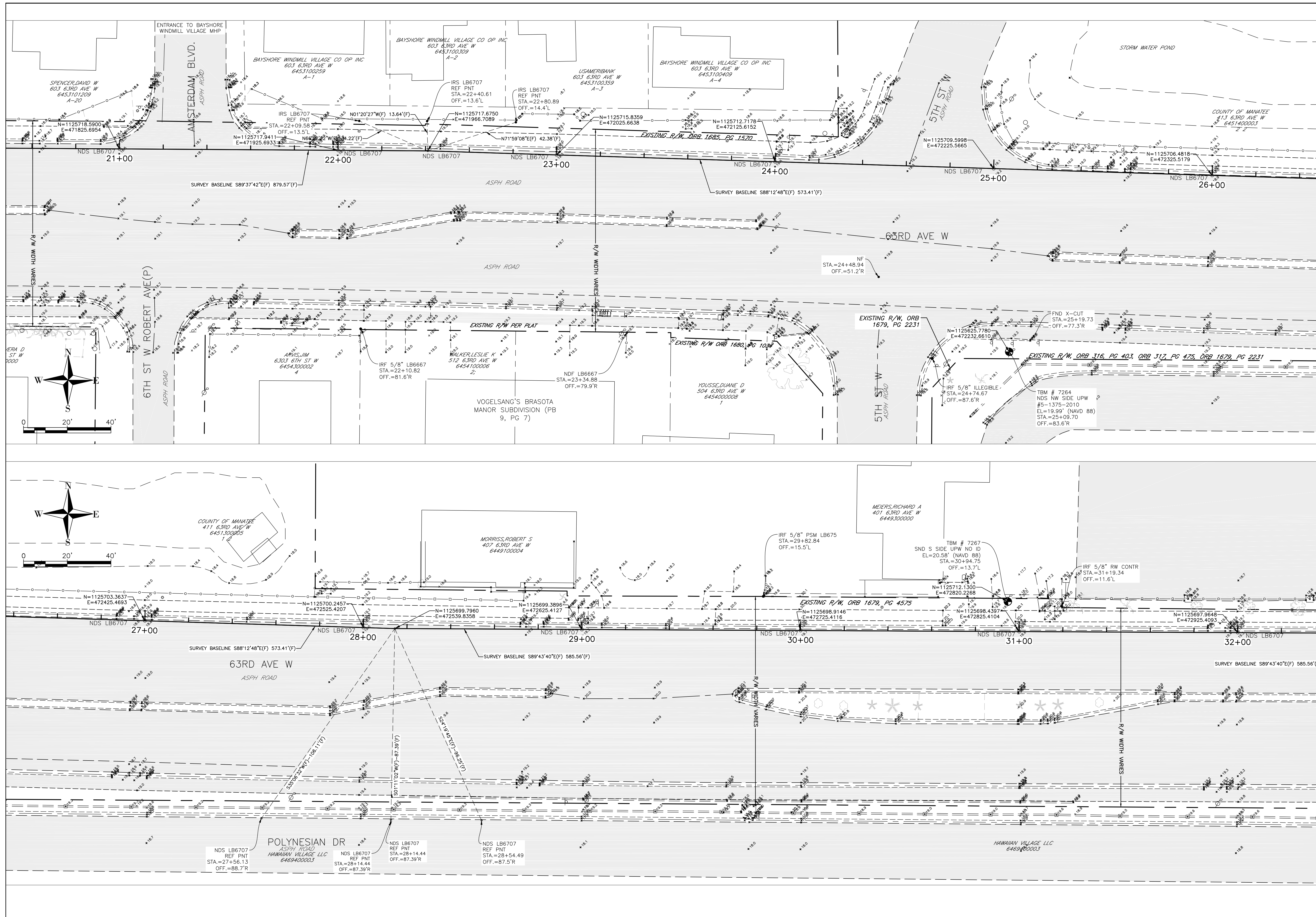


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

FORCE MAIN 17A REPLACEMENT

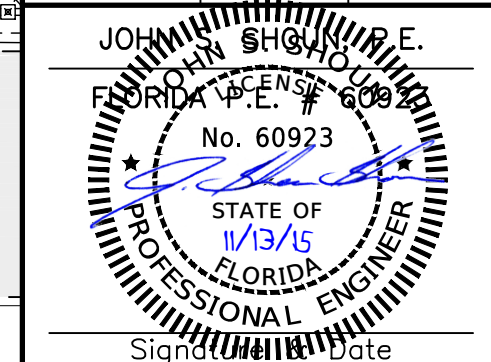
63rd AVENUE WEST

SURVEY CONTROL & EX. TOPO



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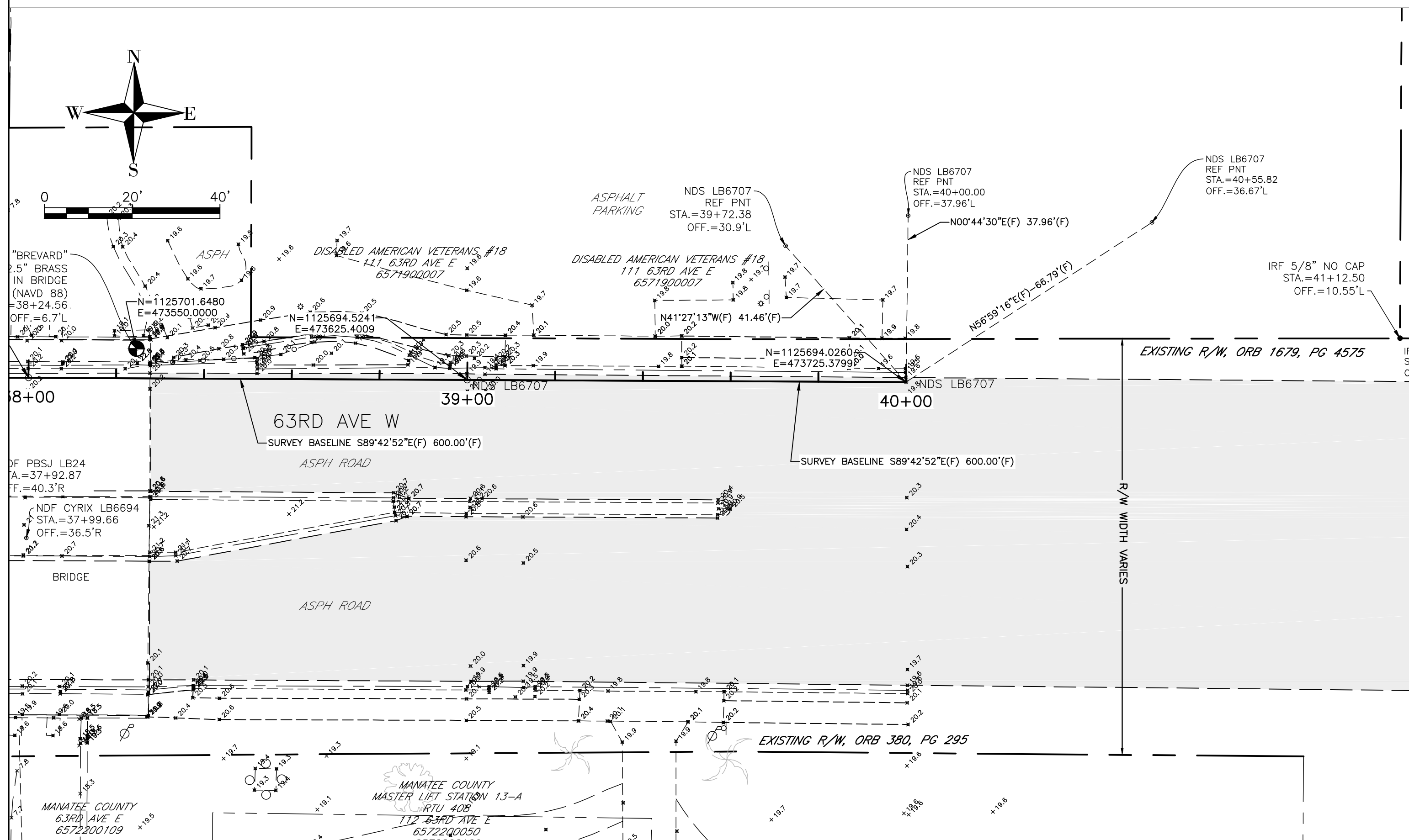
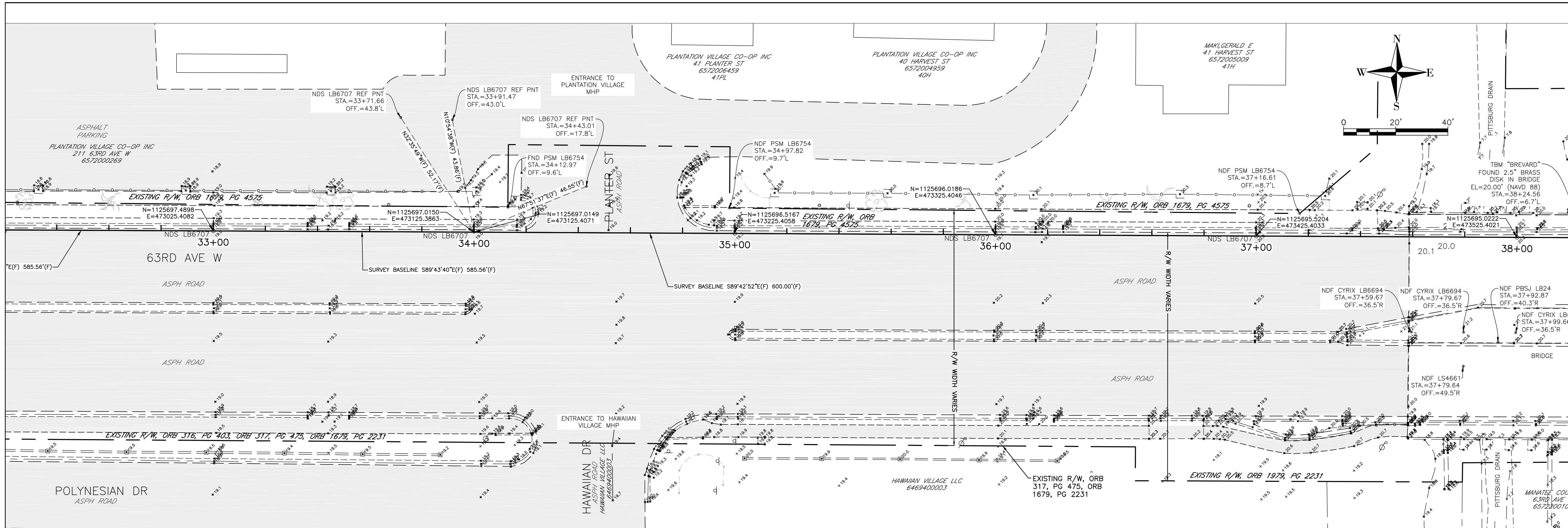


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FORCE MAIN 17A REPLACEMENT

63rd AVENUE WEST

SURVEY CONTROL & EX. TOPO



EXTRACTS FROM SURVEYORS REPORT, SEE SEALED REPORT FOR FURTHER DETAILS:

BEARINGS AND COORDINATES (IN U.S. SURVEY FEET) ARE BASED ON THE NATIONAL GEODETIC SURVEY (NGS), STATE PLANE COORDINATES, FLORIDA WEST ZONE, NORTH AMERICAN DATUM 1983/1999 ADJUSTMENT.

CONTROL STATIONS UTILIZED:

- (1) A FOUND MANATEE COUNTY DISK ST AMPED "GIS 090", DESIGNATED BY NGS AS "GIS 090", PID =AG9185 (NORTHING = 1,126,710.76, EASTING = 478,876.34);
- (2) A FOUND MANATEE COUNTY DISK ST AMPED "GIS 081", DESIGNATED BY NGS AS "GIS 081",PID =AG9186 (NORTHING = 1,143,115.24, EASTING = 478,968.28);

BOTH AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY WEB SITE. (<http://www.ngs.noaa.gov>)

VERTICAL:

ELEVATIONS ARE BASED ON NGS, NORTH AMERICAN VERTICAL DATUM, 1988 ADJUST MENT (NAVD 88).

CONTROL BENCHMARK UTILIZED:

- (1) A FOUND MANATEE COUNTY DISK IN CONCRETE STAMPED "BRADFORD 2010", DESIGNATED "BRADFORD" BY THE NATIONAL GEODETIC SURVEY, PID = D05093, ELEVATION=18.79 FEET , ADJUST ED (NAVD 88);
- (2) A FOUND MANATEE COUNTY DISK IN CONCRETE SAMPED "BREVARD 2010", DESIGNATED "BREVARD" BY THE NATIONAL GEODETIC SURVEY, PID = D05094, ELEVATION=20.00 FEET , ADJUST ED (NAVD 88);

BOTH AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY WEB SITE.(<http://www.ngs.noaa.gov>)

CONVERSION FACTOR:

ADD 0.99 FEET TO CONVERT TO NATIONAL GEODETIC VERTICAL DATUM, 1929 ADJUST MENT (NGVD 29).
CONVERTION CALCULATED UTILIZING VERT CON (VERSION 2.0).

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PROFESSIONAL ENGINEER
SINCE 11/3/15

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