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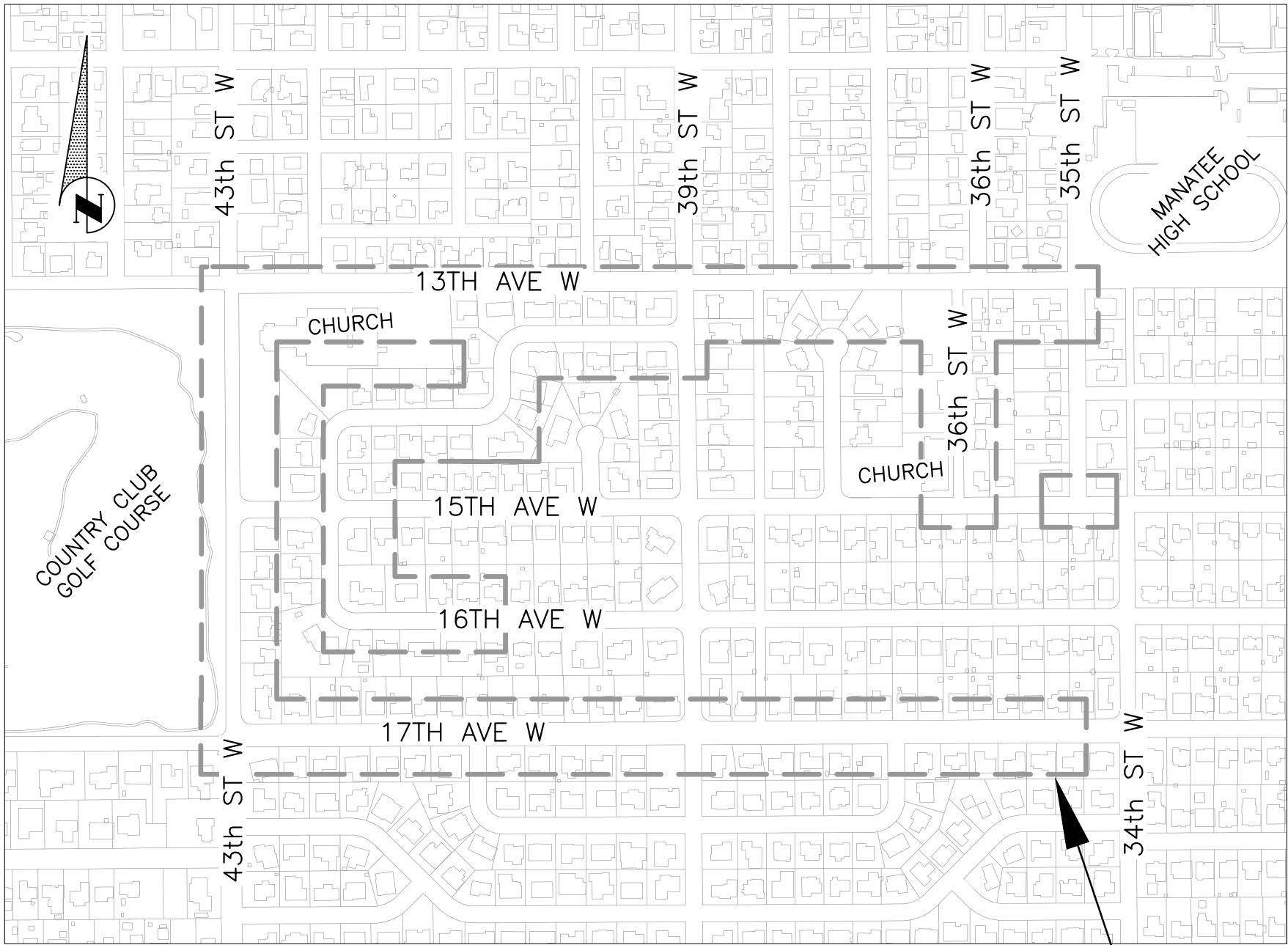


BID PLANS

COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
404-6088770

FEBRUARY 2018

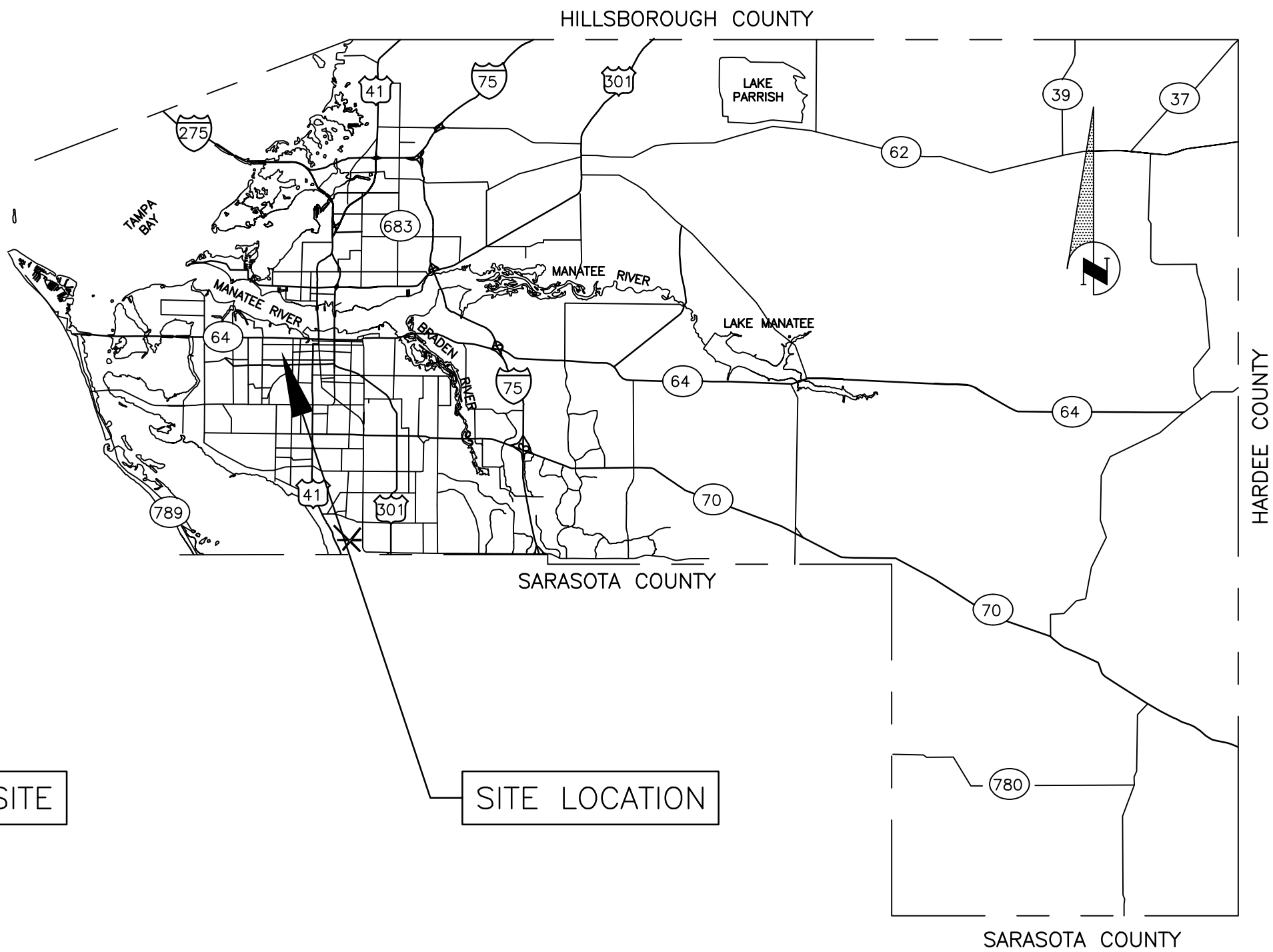
VICINITY MAP
N.T.S.



PROJECT DESCRIPTION

INSTALL APPROXIMATELY ± 6,100 LF OF 6" & 8" WATER MAIN TO REPLACE EXISTING OLD AND UNDERSIZED WATER MAINS. IN ORDER TO PROVIDE IMPROVED FIRE PROTECTION, WATER QUALITY AND SYSTEM RELIABILITY.

PROJECT SITE



SITE LOCATION

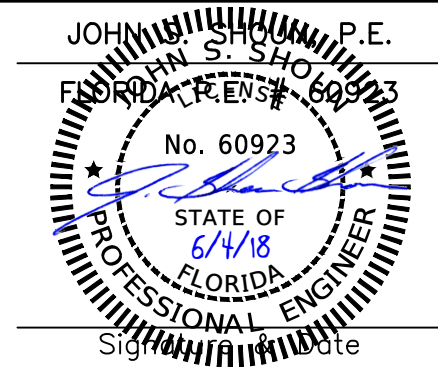
NO.	SHEET
01	COVER
02	NOTES
03	OVERALL UTILITY PLAN & KEY SHEET
04	RESURFACE AREAS
05	INTENTIONALLY LEFT BLANK
06	P&P 13TH AVE W STA 40+00 to 45+20
07	P&P 13TH AVE W STA 45+20 to 50+60
08	P&P 13TH AVE W STA 50+60 to 56+00
09	P&P 13TH AVE W STA 56+00 to 61+40
10	P&P 13TH AVE W STA 61+40 to 66+00
11	P&P 36TH ST W STA 70+00 to 73+50
12	P&P 36TH ST W STA 73+50 to 77+00
13	P&P 15TH AVE W STA 136+00 to 141+00
14	P&P 43RD ST W STA 30+00 to 35+00
15	P&P 43RD ST W STA 35+00 to 38+00
16	P&P 15TH AVE W STA 115+00 to 119+00
17	P&P 17TH ST W STA 0+00 to 5+50
18	P&P 17TH ST W STA 5+50 to 11+00
19	P&P 17TH ST W STA 11+00 to 16+50
20	P&P 17TH ST W STA 16+50 to 22+00
21	P&P 17TH ST W STA 22+00 to 27+50
22	P&P 14TH-16TH AVE W STA 80+00 to 85+40
23	P&P 14TH-16TH AVE W STA 85+40 to 88+60
24	P&P 14TH-16TH AVE W STA 88+60 to 92+80
25	P&P 14TH-16TH AVE W STA 92+80 to 97+60
26	P&P 14TH-16TH AVE W STA 97+60 to 99+80
27	P&P 14TH-16TH AVE W STA 99+80 to 105+30
28	P&P 39TH ST W STA 150+00 to 153+00
29	DETAILS
30	DETAILS
30A	DETAILS
31	SURVEY CONTRTOL
32	EROSION CONTROL



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

COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
COVER

NO.	REVISION	DESCRIPTION	DATE	BY
1	1	UPDATE SHEET INDEX	5/17/18	JSS
2	2			
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4	4			
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GENERAL

1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: ERIC SHROYER P.E. AND CAN BE REACHED AT (941) 708-7450; EXT. 7344

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. VERTICAL CONTROL FOR THIS PROJECT WAS ESTABLISHED BY A MINIMUM OF TWO REFERENCE BENCHMARKS BASED ON NGS, NORTH AMERICAN VERTICAL DATUM, 1988 ADJUSTMENT (NAVD 88).

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 1926.850, 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 STAKED 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, 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.

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.

UTILITY LOCATES

37. THE FOLLOWING IDENTIFIES THE QUALITY LEVEL OF EXISTING UNDERGROUND 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
LEVEL "D" -EXISTING RECORDS OR GIS
REFERENCE 2010 EDITION OF FDOT UTILITY ACCOMMODATION MANUAL (UAM)

38. ALL WATER SERVICES TO BE INSTALLED OR MODIFIED ON PRIVATE PROPERTY THAT REQUIRE A PLUMBING PERMIT.
A. A 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,
- 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.

RESTORATION

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

40. 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.

41. 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.

42. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.

43. 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.

44. 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 UNCOMPACTED 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.

45. 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

46. 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.

47. 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.

48. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.

49. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.

50. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.

51. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.

52. 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.

53. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.

54. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.

55. 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.

56. 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.

57. 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.

58. 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.

59. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.

60. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.

61. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.

62. 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 HOMEOWNERS' ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WBRO RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.

63. 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.

64. 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.

65. 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.

66. 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.

67. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.

68. 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.

MAINTENANCE OF TRAFFIC

69. 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.

70. 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.

71. 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.

72. 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.

73. MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.

74. 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.

75. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.

76. 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.

77. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.

78. CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.

79. 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.

80. THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.

81. 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.

EXISTING

BM

CONCRETE MONUMENT

CP

IRON PIPE

IR

IRON ROD

HUB

NAIL & DISK

N&D

ELEVATION

PARCEL ID NO.

LOT NO.

GW

GUY WIRE

PP

POWER POLE

LP

LIGHT POLE

MB

MAIL BOX

SN

SIGN

REF

REFLECTOR

SPRK

SPRINKLER

GM

GAS MARKER

BFP

BACKFLOW PREVENTER

BO

BLOW OFF VALVE

FDH

FIRE HYDRANT

WV

WATER VALVE

ARV

AIR RELEASE VALVE

WM

WATER METER

SMH

SANITARY SEWER MANHOLE

SC

SANITARY SEWER CLEAN OUT

SB#1

SOIL BORING LOCATION

TEL

TELEPHONE SERVICE BOX

UTB

UTILITY BOX

UR

UTILITY RISER

GI

GRATE INLET

MI

MITERED END SECTION

SSM

STORM SEWER MANHOLE

CONCRETE MONUMENT

IRON PIPE

IRON ROD

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

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

GAS LINE

OVERHEAD TV

UNDERGROUND TV

OVERHEAD ELECTRIC

UNDERGROUND ELECTRIC

OVERHEAD VERIZON

UNDERGROUND VERIZON

VERIZON

UNDERGROUND UTILITY

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

EP

EDGE OF PAVEMENT

BOC

BACK OF CURB

MAIN

SERVICE LINE

PROPOSED EASEMENT

FIRE HYDRANT

VALVE

SANITARY SEWER MANHOLE

BLOW OFF ASSEMBLY

REDUCER

TEE

HORIZONTAL BEND

VERTICAL BEND

PLUG

MASTER METER ASSEMBLY

SERVICE LINE & METER

DOUBLE SERVICE

PROPOSED

MAIN

SERVICE LINE

PROPOSED EASEMENT

FIRE HYDRANT

VALVE

SANITARY SEWER MANHOLE

BLOW OFF ASSEMBLY

REDUCER

TEE

HORIZONTAL BEND

VERTICAL BEND

PLUG

MASTER METER ASSEMBLY

SERVICE LINE & METER

DOUBLE SERVICE

EMERGENCY CONTACTS

MANATEE COUNTY PUBLIC WORKS DEPT. UTILITY ENGINEERING
SCOTT MAY, P.E.
1022 26TH AVENUE EAST
BRADENTON, FL 34208
(941) 708-7450 EXT. 7650
FAX: (941) 708-7415

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

FRONTIER
JOHN PLOTT
1701 RINGLING BLVD.
SARASOTA, FL 34236
(941) 906-6707
FAX: (941) 906-6706
JOHN.PLOTT@FR.COM

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

MANATEE COUNTY HEALTH DEPT.
HANS ROESE
410 6TH AVENUE EAST
BRADENTON, FL 34208
(941) 748-0747 EXT. 1355
FAX: (941) 750-9364

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

FDEP, SOUTHWEST DISTRICT
ED WATSON
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
(813) 470-5875
FAX: (813) 470-5993

CHARTER COMMUNICATIONS
TOM WRIGHT
5413 E. STATE ROAD 64
BRADENTON, FL 34208-5535
(941) 748-3816 EXT. 21348
TOM.WRIGHT@CHARTER.COM

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

FLORIDA GAS TRANSMISSION
JOHN LUDLOW
7804 ANDERSON RD.
TAMPA FL 33634
PHONE: (813) 466-3327
E-MAIL: CHAD.HARRELL@SUG.COM

PEACE RIVER ELECTRIC COOPERATIVE, INC.
P.O. BOX 1310
WACHULA, FL 33873
KENDELL COKER
(863) 767-4660
KENDELL.COKER@PRECO.COOP

PROJECT #

404-6088770

SURVEY #

14Y13314LS

SEC./TWN./RGE

33/34S/17E

SCALE

VARIES

VERTICAL DATUM

NAVD 88

SURVEYED

GFY

11/2016

DESIGNED

BLR

03/2017

DRAWN

BLR

03/2017

JOHN S. SHROYER, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature Date

SHEET 02 OF 33

COUNTRY CLUB HEIGHTS

WATERLINE REPLACEMENT

NOTES

BY

DATE

JSS

5/17/18

REVISION DESCRIPTION

UPDATE

NOTE #38

NO.

1

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State of Florida

Manatee County

Shore Utility Engineering

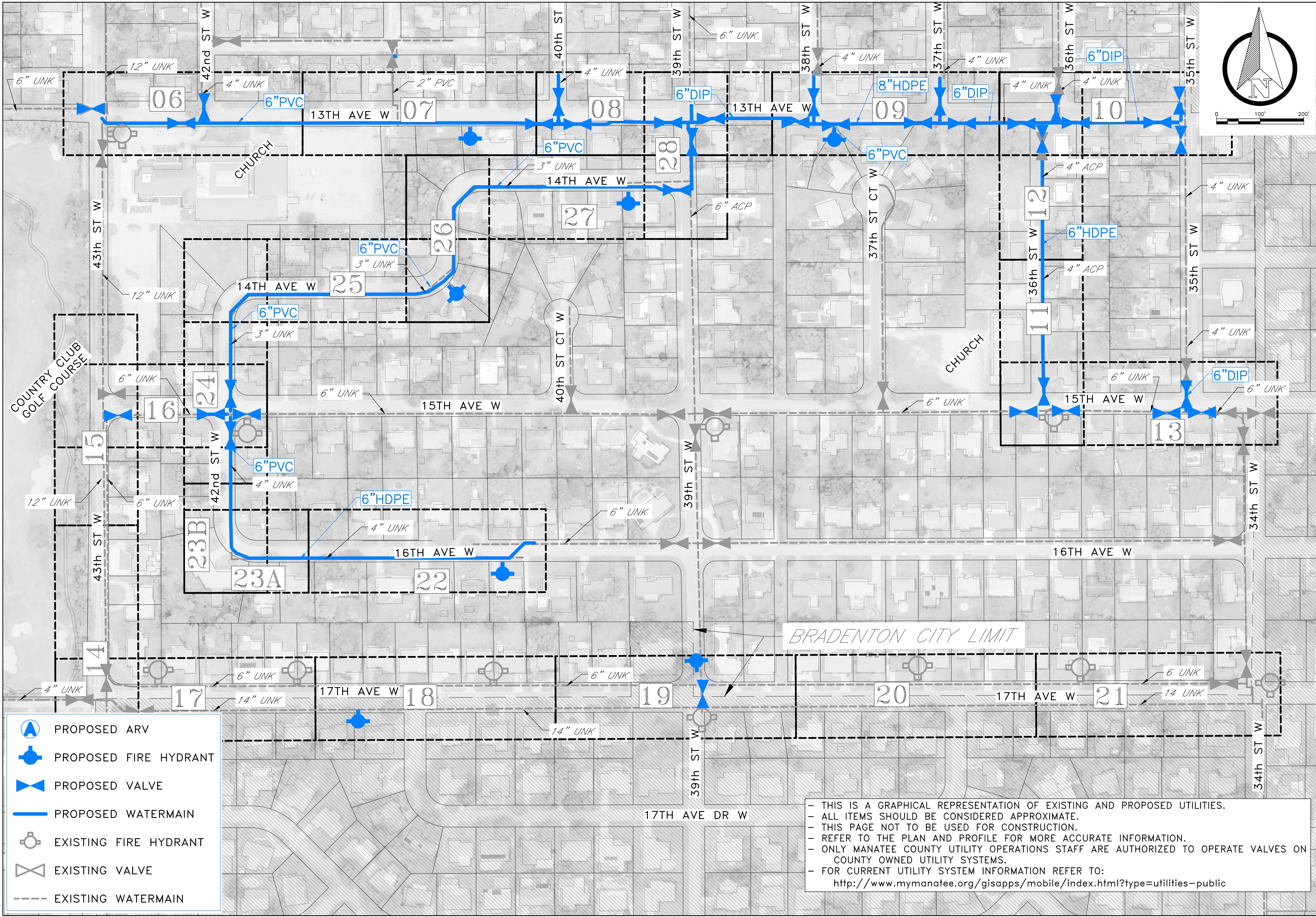
Country Club Heights

Notes

Details

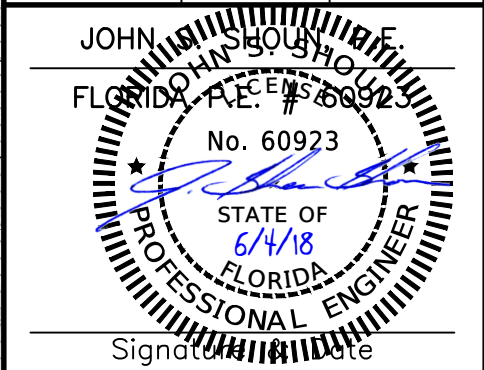
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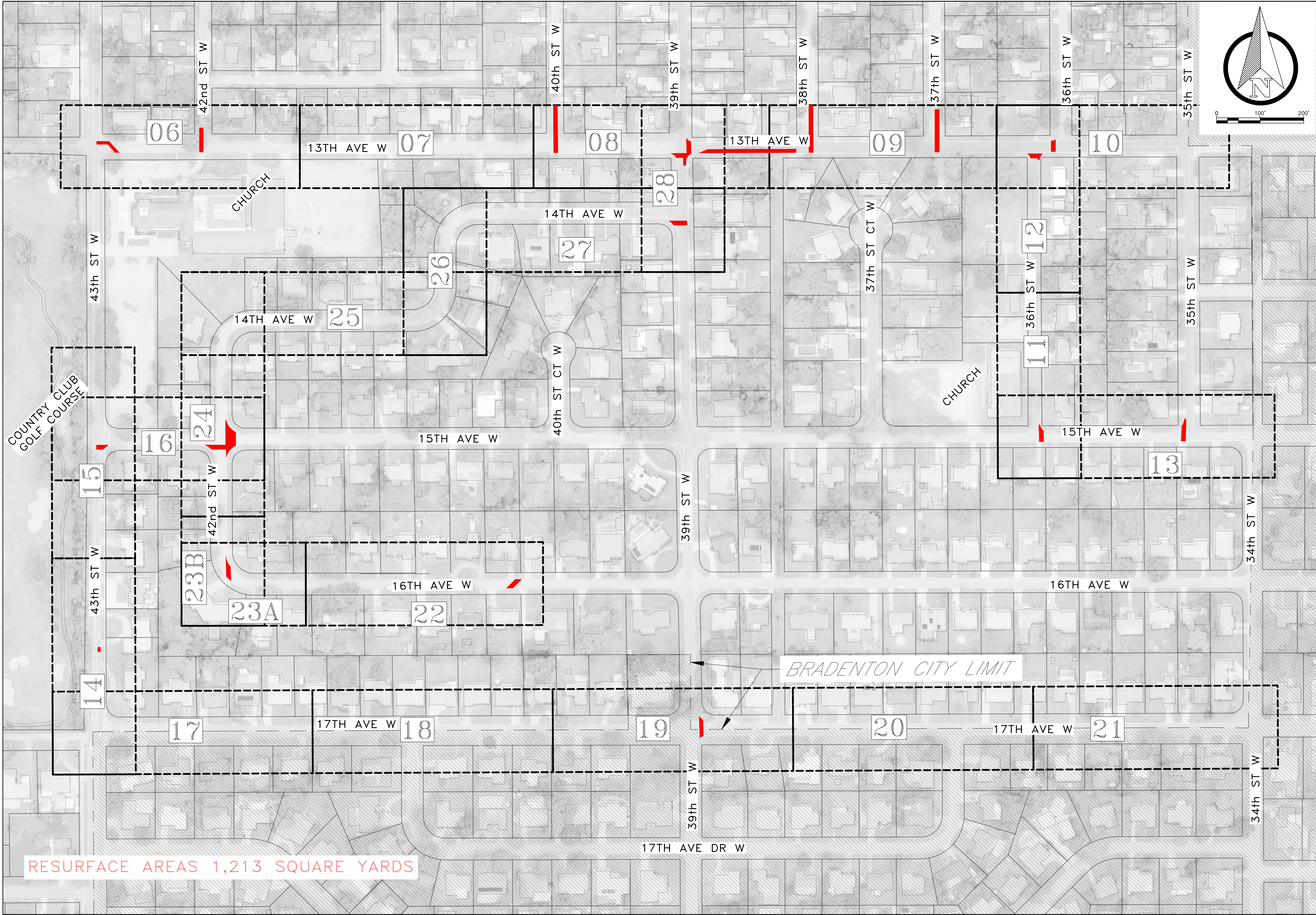


COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
OVERALL UTILITY PLAN & KEY SHEET

NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
SCALE	1"=100'		
VERTICAL DATUM	NAVD 88		
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	



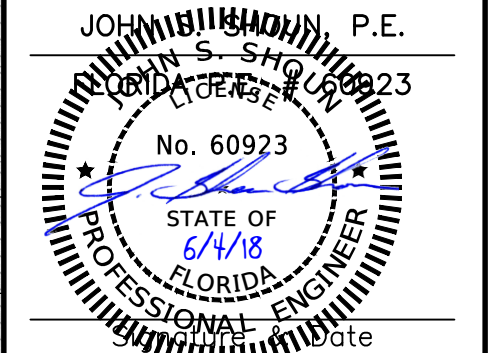
- THIS IS A GRAPHICAL REPRESENTATION OF EXISTING AND PROPOSED UTILITIES.
- ALL ITEMS SHOULD BE CONSIDERED APPROXIMATE.
- THIS PAGE NOT TO BE USED FOR CONSTRUCTION.
- REFER TO THE PLAN AND PROFILE FOR MORE ACCURATE INFORMATION.
- ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED UTILITY SYSTEMS.
- FOR CURRENT UTILITY SYSTEM INFORMATION REFER TO:
<http://www.mymanatee.org/gisapps/mobile/index.html?type=utilities-public>



RESURFACE AREAS 1,213 SQUARE YARDS

**COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
RESURFACE AREAS**

NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
SCALE	1"=100'		
VERTICAL DATUM	NAVD 88		
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	


JOHN S. SHUMAN, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Date

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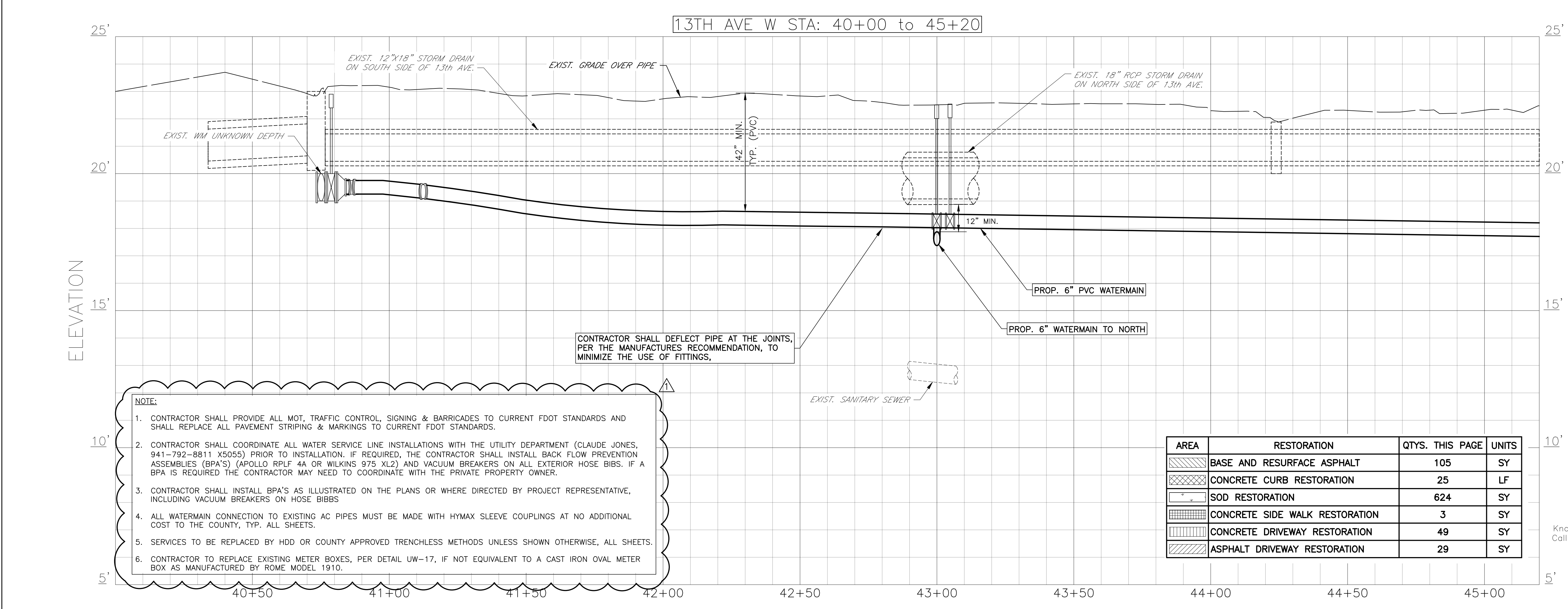
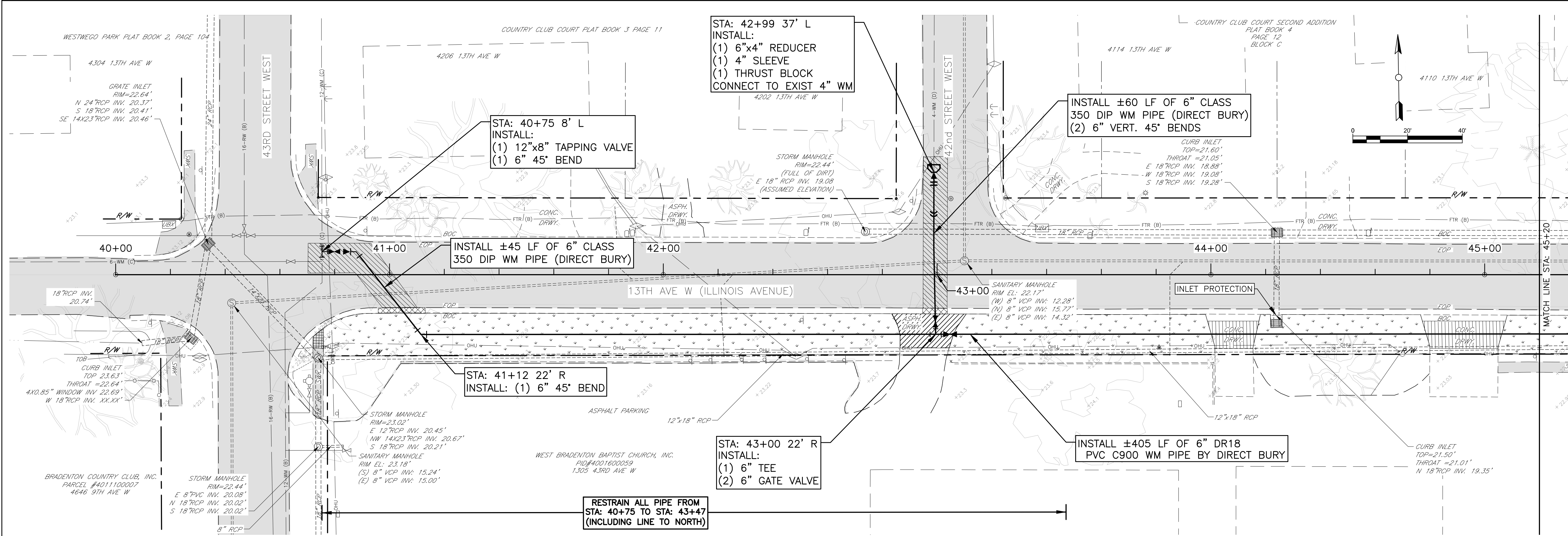


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT

NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #		404-6088770	
SURVEY #		14Y13314LS	
SEC./TWN./RGE		33/34S/17E	
SCALE		1"=125'	
VERTICAL DATUM		NAVD 88	
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	

JOHN S. SHANNON, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
6/4/18
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature

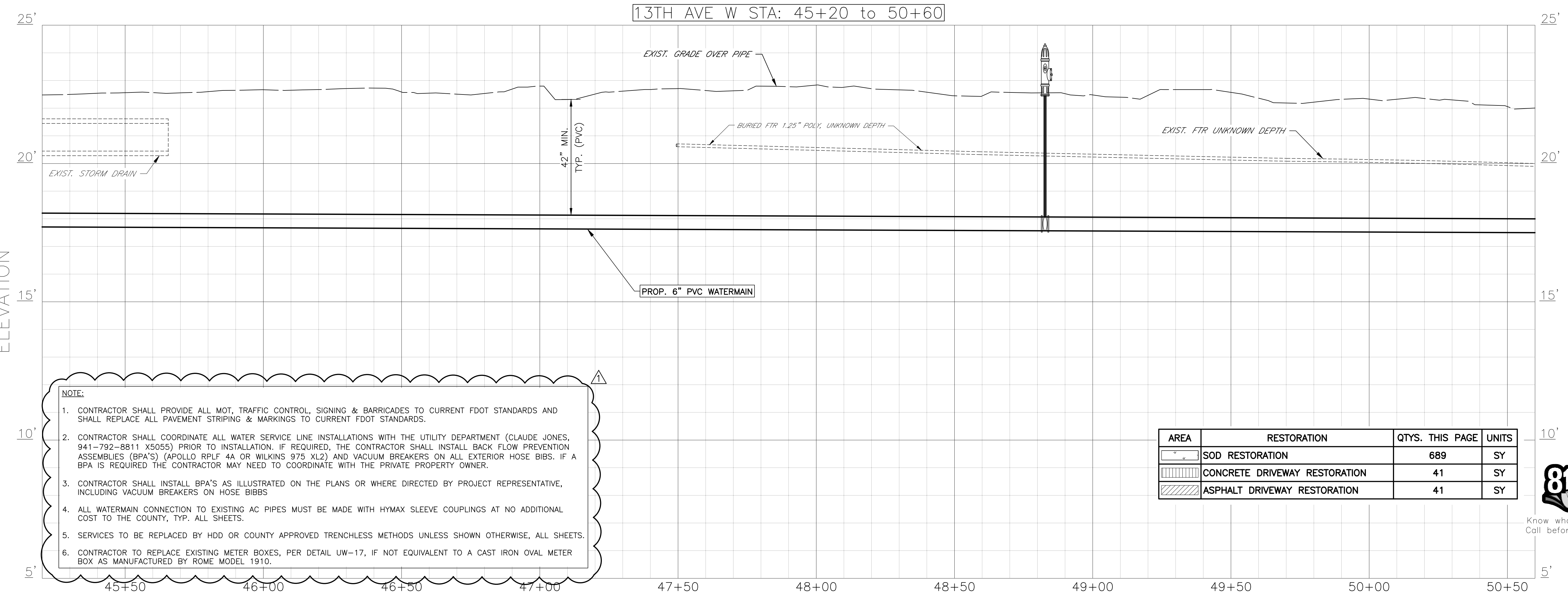
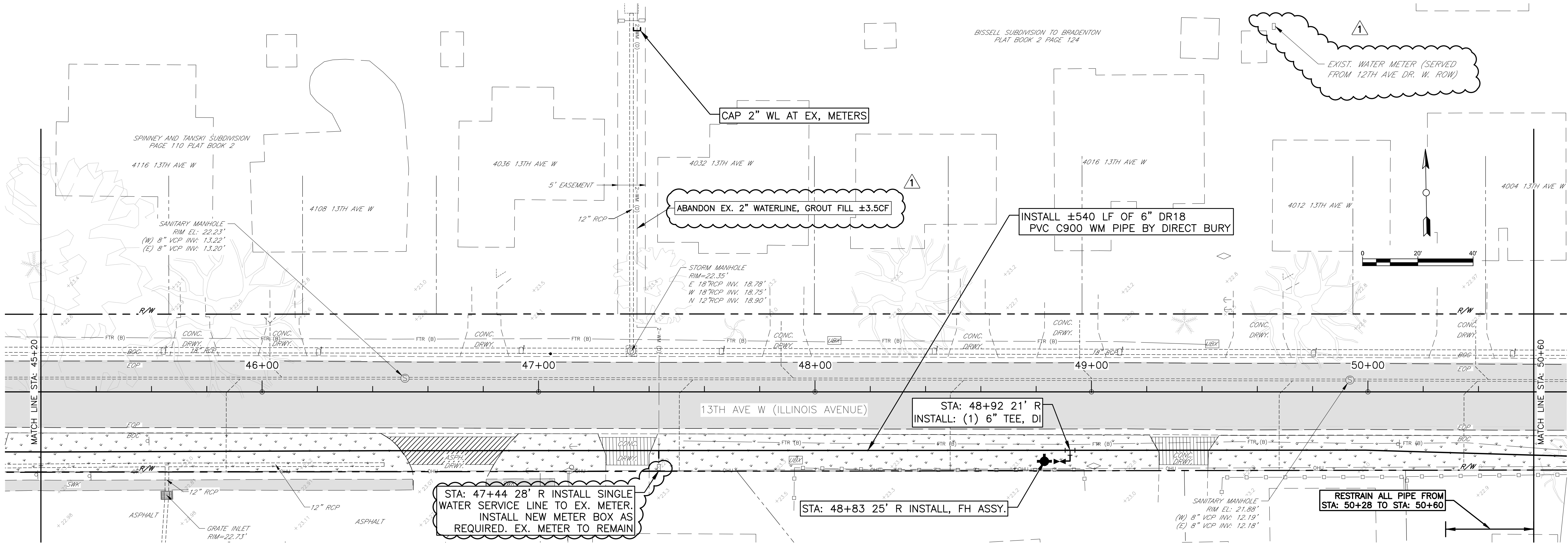


COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 13TH AVE W STA 40+00 TO 45+20

REVISION	DESCRIPTION	BY	DATE
PLAN	REVISIONS	JSS	5/25/18
NO.			
PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
VERT. SCALE	1"=2'		
HORZ. SCALE	1"=20'		
VERTICAL DATUM	NAVD 88		
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	

JOHN S. SHO... P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Date

SHEET 06 OF 33



- NOTE:**
1. CONTRACTOR SHALL PROVIDE ALL MOT, TRAFFIC CONTROL, SIGNING & BARRICADES TO CURRENT FDOT STANDARDS AND SHALL REPLACE ALL PAVEMENT STRIPING & MARKINGS TO CURRENT FDOT STANDARDS.
 2. CONTRACTOR SHALL COORDINATE ALL WATER SERVICE LINE INSTALLATIONS WITH THE UTILITY DEPARTMENT (CLAUDE JONES, 941-792-8811 X5055) PRIOR TO INSTALLATION. IF REQUIRED, THE CONTRACTOR SHALL INSTALL BACK FLOW PREVENTION ASSEMBLIES (BPA'S) (APOLLO RPLF 4A OR WILKINS 975 XL2) AND VACUUM BREAKERS ON ALL EXTERIOR HOSE BIBS. IF A BPA IS REQUIRED THE CONTRACTOR MAY NEED TO COORDINATE WITH THE PRIVATE PROPERTY OWNER.
 3. CONTRACTOR SHALL INSTALL BPA'S AS ILLUSTRATED ON THE PLANS OR WHERE DIRECTED BY PROJECT REPRESENTATIVE, INCLUDING VACUUM BREAKERS ON HOSE BIBBS
 4. ALL WATERMAIN CONNECTION TO EXISTING AC PIPES MUST BE MADE WITH HYMAX SLEEVE COUPLINGS AT NO ADDITIONAL COST TO THE COUNTY, TYP. ALL SHEETS.
 5. SERVICES TO BE REPLACED BY HDD OR COUNTY APPROVED TRENCHLESS METHODS UNLESS SHOWN OTHERWISE, ALL SHEETS.
 6. CONTRACTOR TO REPLACE EXISTING METER BOXES, PER DETAIL UW-17, IF NOT EQUIVALENT TO A CAST IRON OVAL METER BOX AS MANUFACTURED BY ROME MODEL 1910.

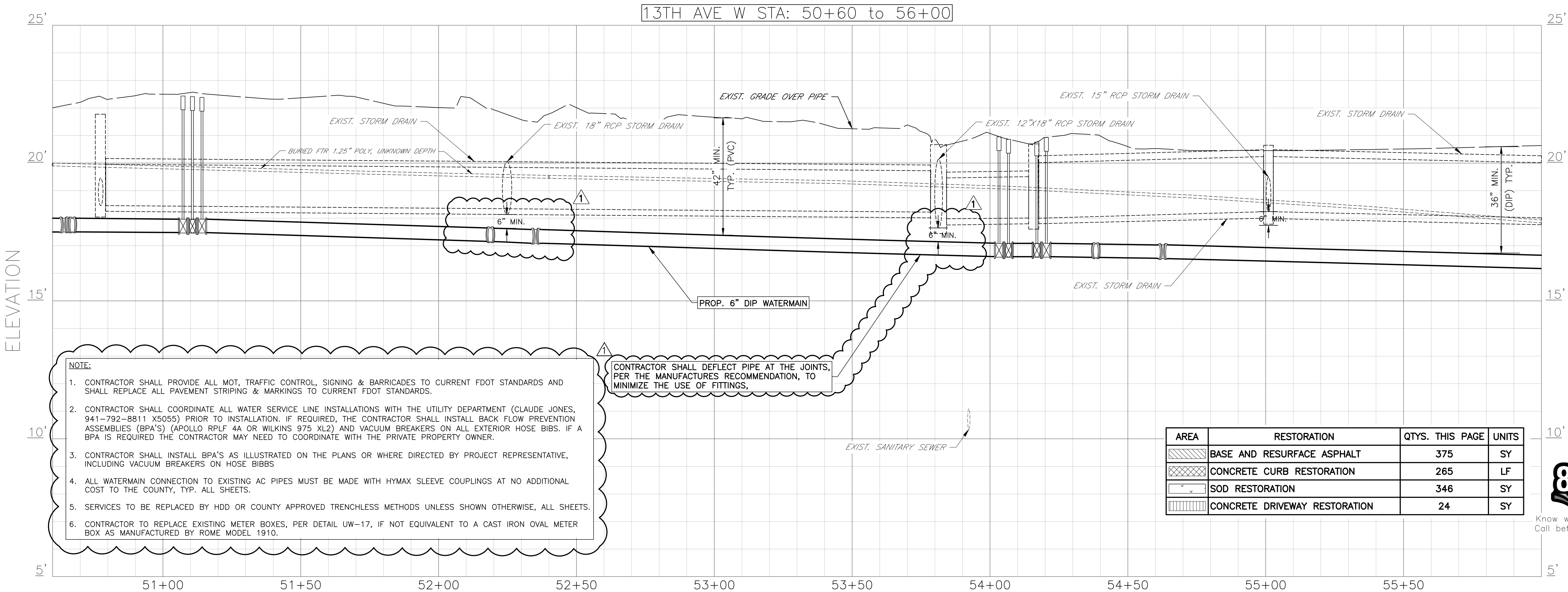
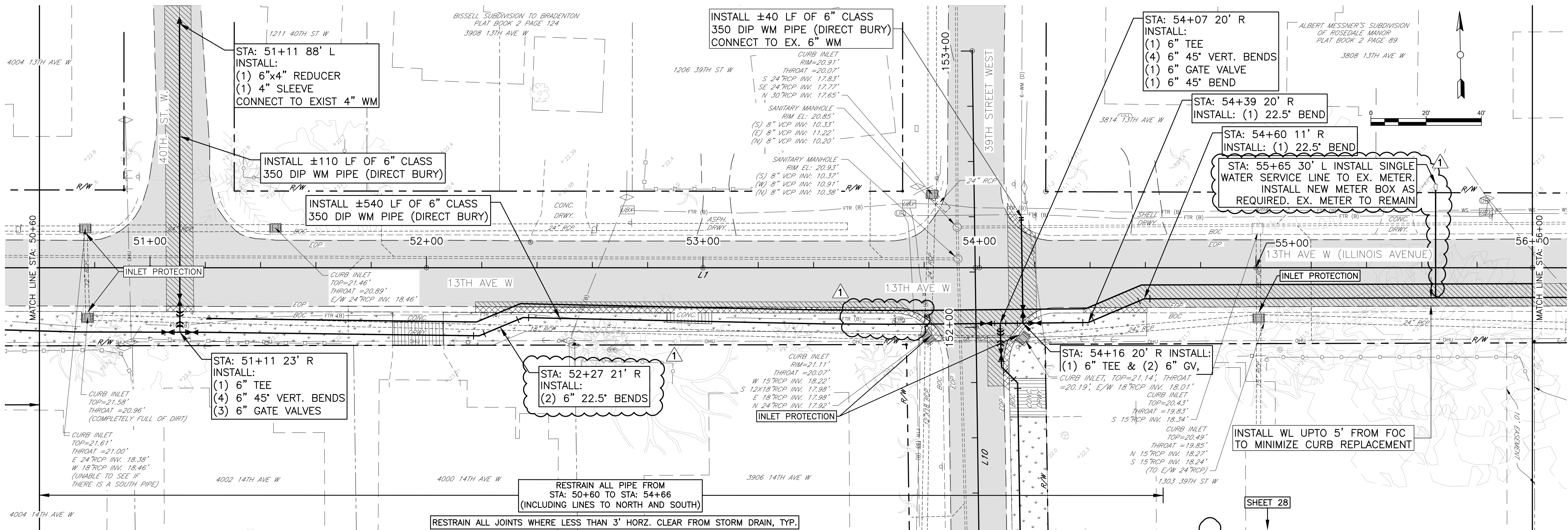
AREA	RESTORATION	QTY. THIS PAGE	UNITS
	SOD RESTORATION	689	SY
	CONCRETE DRIVEWAY RESTORATION	41	SY
	ASPHALT DRIVEWAY RESTORATION	41	SY



COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 13TH AVE W STA 45+20 TO 50+60

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JOHN E. HOGAN, E.
FLORIDA P.E. No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature: _____ Date: _____



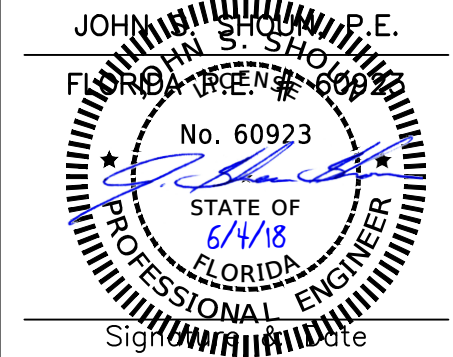
- NOTE:
- CONTRACTOR SHALL PROVIDE ALL MOT, TRAFFIC CONTROL, SIGNING & BARRICADES TO CURRENT FDOT STANDARDS AND SHALL REPLACE ALL PAVEMENT STRIPING & MARKINGS TO CURRENT FDOT STANDARDS.
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 - CONTRACTOR TO REPLACE EXISTING METER BOXES, PER DETAIL UW-17, IF NOT EQUIVALENT TO A CAST IRON OVAL METER BOX AS MANUFACTURED BY ROME MODEL 1910.

AREA	RESTORATION	QTYs. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	375	SY
	CONCRETE CURB RESTORATION	265	LF
	SOD RESTORATION	346	SY
	CONCRETE DRIVEWAY RESTORATION	24	SY



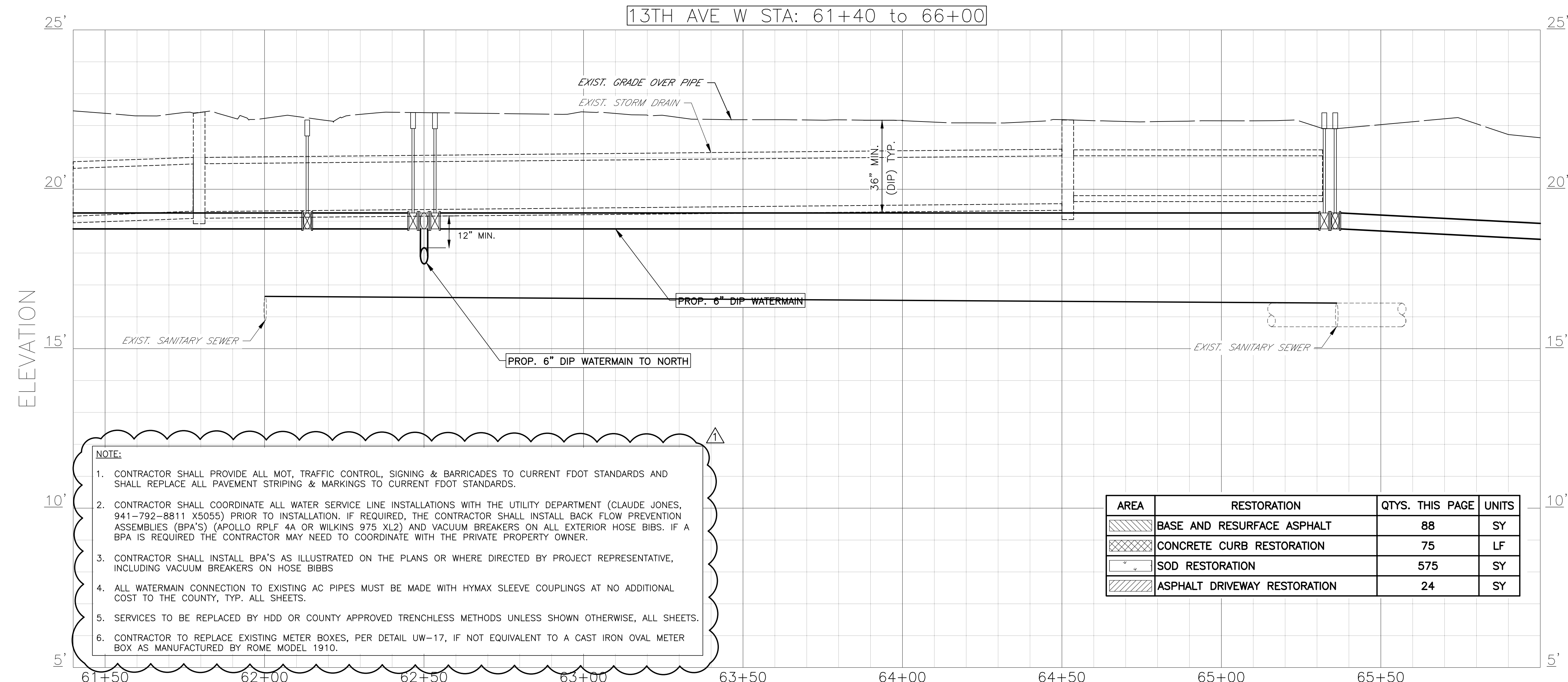
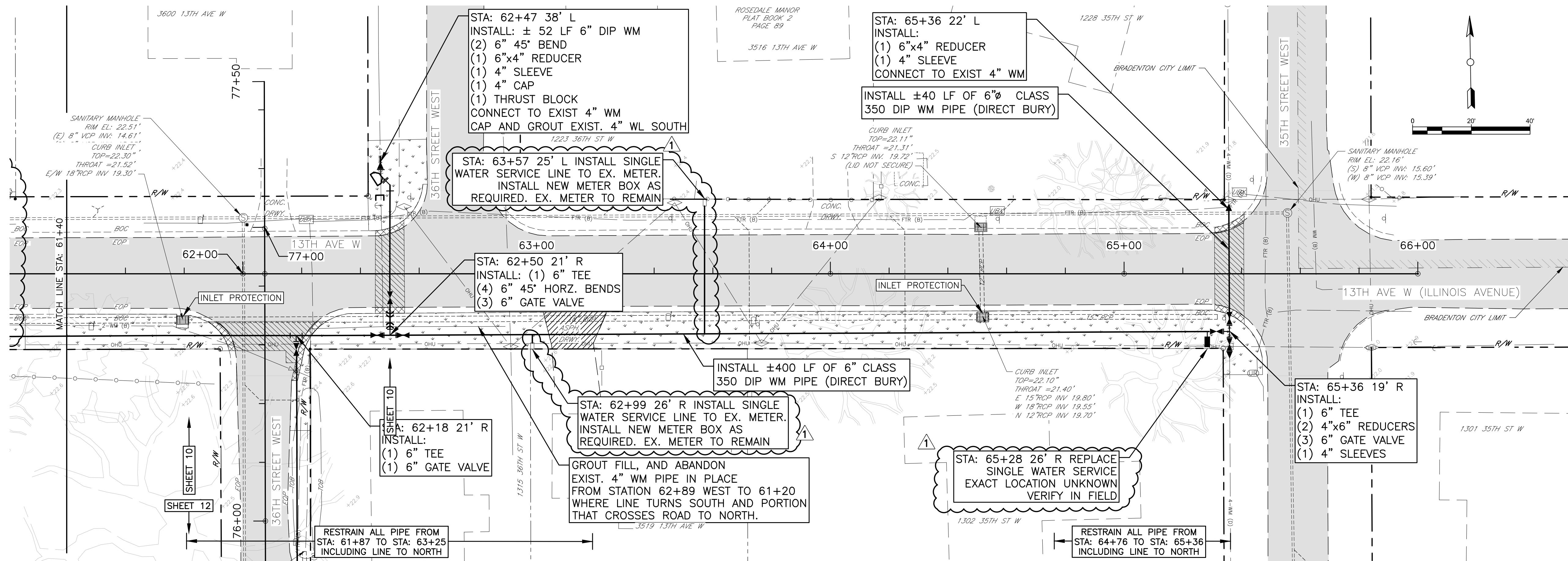
COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 13TH AVE W STA 50+60 TO 56+00

NO.	REVISION DESCRIPTION	BY	DATE
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COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 13TH AVE W STA 61+40 TO 66+00

COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util_Eng_Design\Proj\Water Line-Country Club Heights\DWG\Country Club Heights P&P.dwg, 10, 6/7/2018 12:06 PM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)



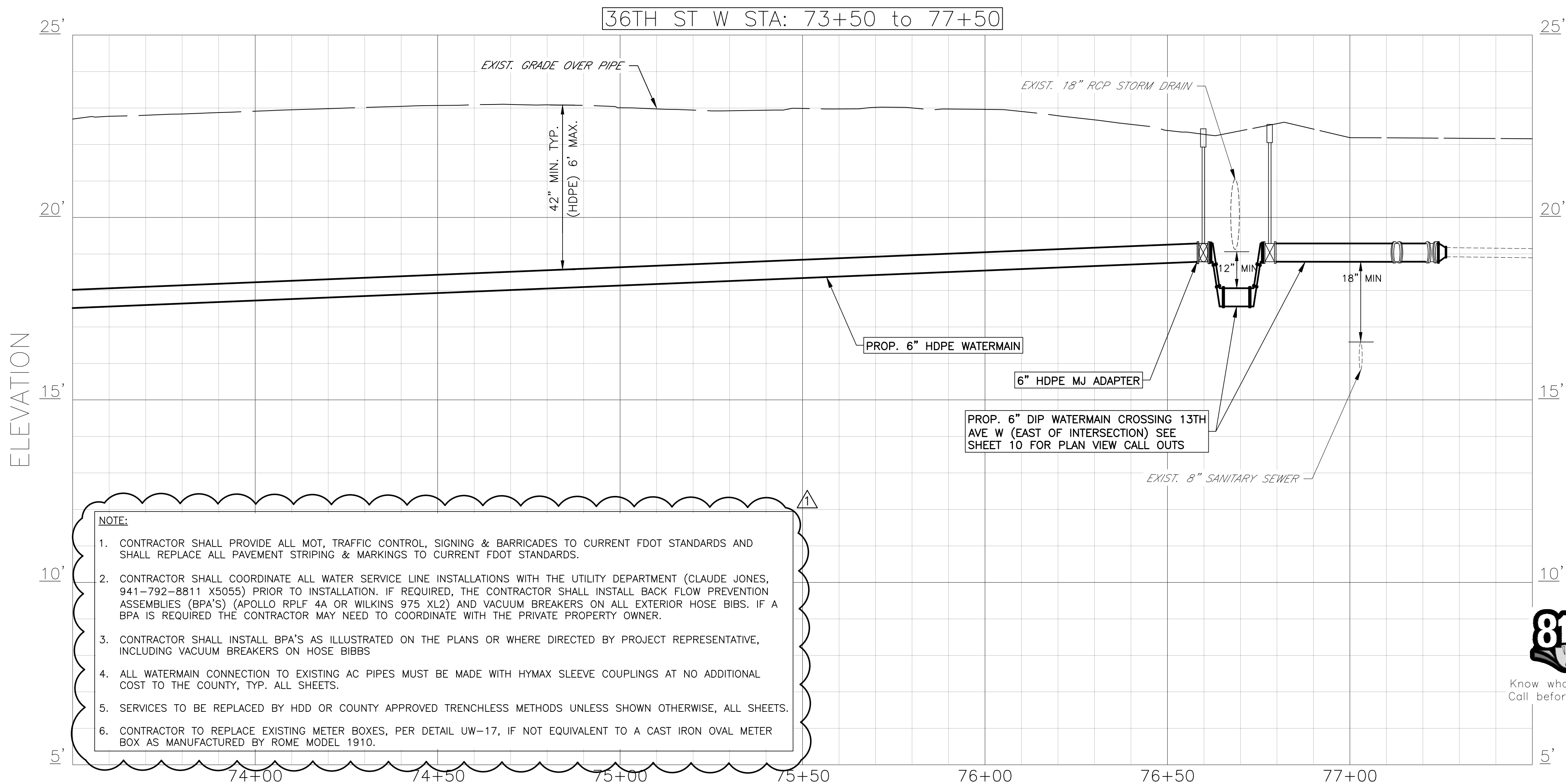
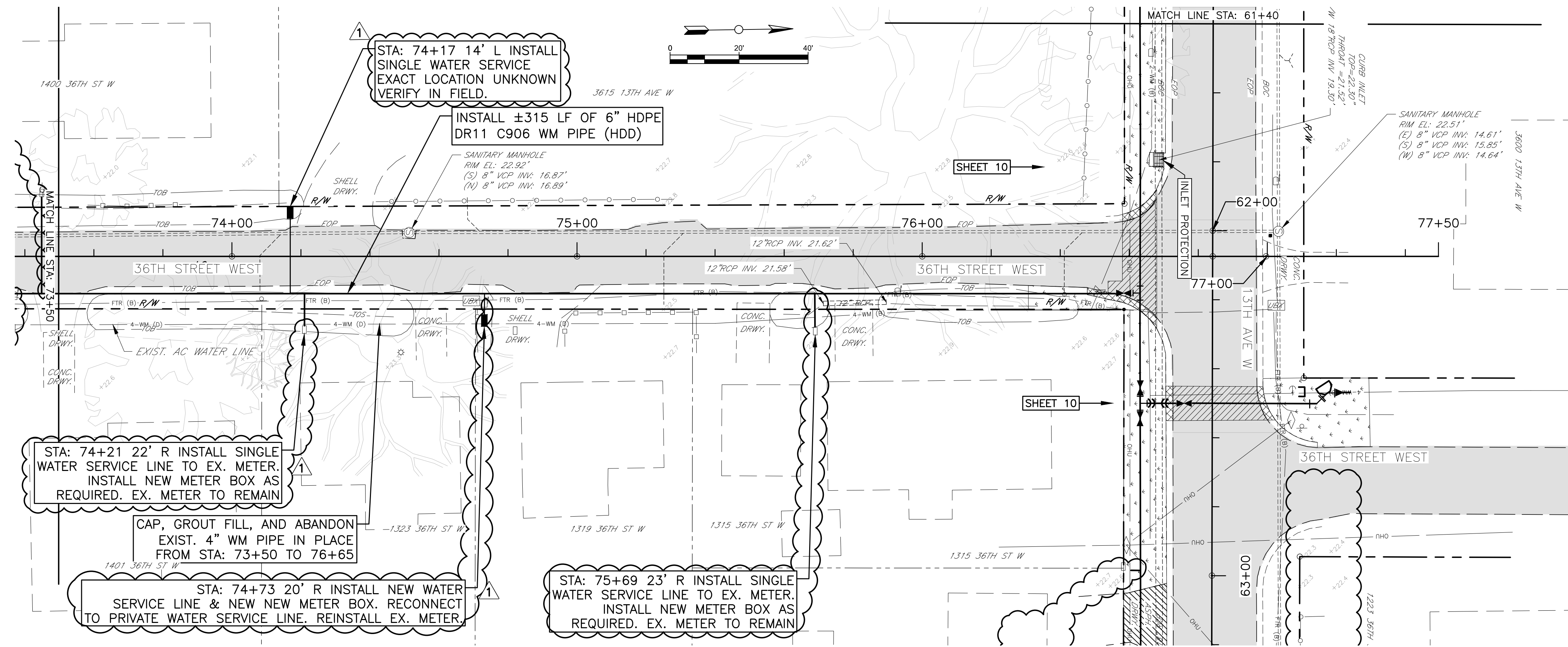
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AREA	RESTORATION	QTYS. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	88	SY
	CONCRETE CURB RESTORATION	75	LF
	SOD RESTORATION	575	SY
	ASPHALT DRIVEWAY RESTORATION	24	SY



JOHN S. SHORR, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
6/4/18
Signature: [Signature]
Date: [Date]

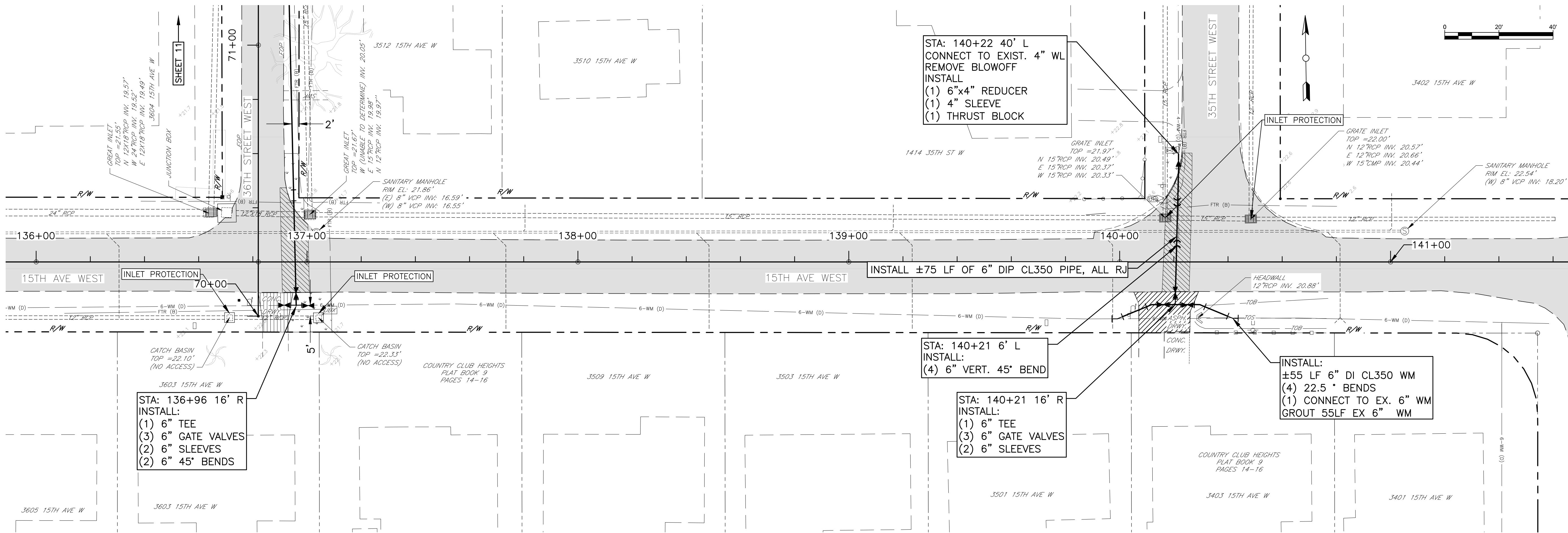




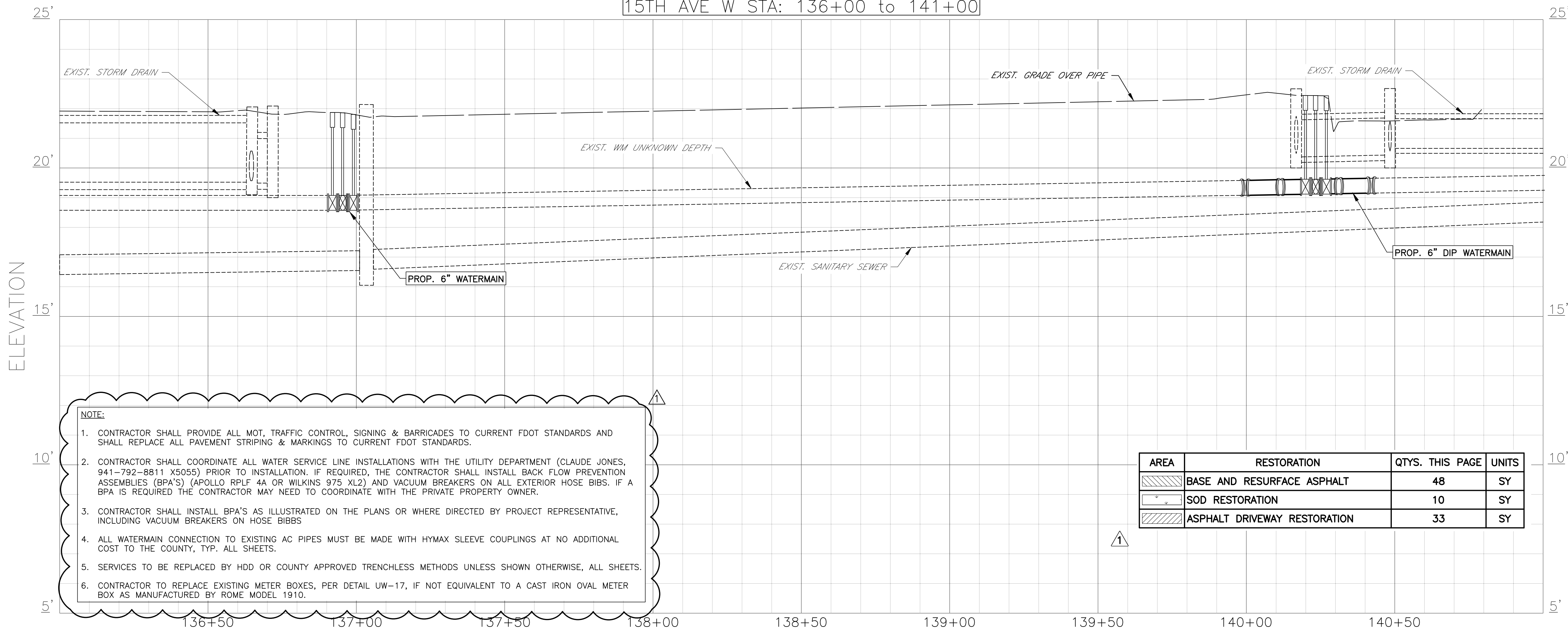
COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 36TH ST W STA 73+50 TO 77+00

NO.	REVISION DESCRIPTION	BY	DATE
△	PLAN REVISIONS	JSS	5/25/18

PROJECT #	404-6088770	
SURVEY #	14Y13314LS	
SEC./TWN./RGE	33/34S/17E	
VERT. SCALE	1"=2'	
HORZ. SCALE	1"=20'	
VERTICAL DATUM	NAVD 88	
	BY	DATE
SURVEYED	GFY	11/2016
DESIGNED	BLR	03/2017
DRAWN	BLR	03/2017



15TH AVE W STA: 136+00 to 141+00



- NOTE:**
- CONTRACTOR SHALL PROVIDE ALL MOT, TRAFFIC CONTROL, SIGNING & BARRICADES TO CURRENT FDOT STANDARDS AND SHALL REPLACE ALL PAVEMENT STRIPING & MARKINGS TO CURRENT FDOT STANDARDS.
 - CONTRACTOR SHALL COORDINATE ALL WATER SERVICE LINE INSTALLATIONS WITH THE UTILITY DEPARTMENT (CLAUDE JONES, 941-792-8811 X5055) PRIOR TO INSTALLATION. IF REQUIRED, THE CONTRACTOR SHALL INSTALL BACK FLOW PREVENTION ASSEMBLIES (BPA'S) (APOLLO RPLF 4A OR WILKINS 975 XL2) AND VACUUM BREAKERS ON ALL EXTERIOR HOSE BIBS. IF A BPA IS REQUIRED THE CONTRACTOR MAY NEED TO COORDINATE WITH THE PRIVATE PROPERTY OWNER.
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 - CONTRACTOR TO REPLACE EXISTING METER BOXES, PER DETAIL UW-17, IF NOT EQUIVALENT TO A CAST IRON OVAL METER BOX AS MANUFACTURED BY ROME MODEL 1910.

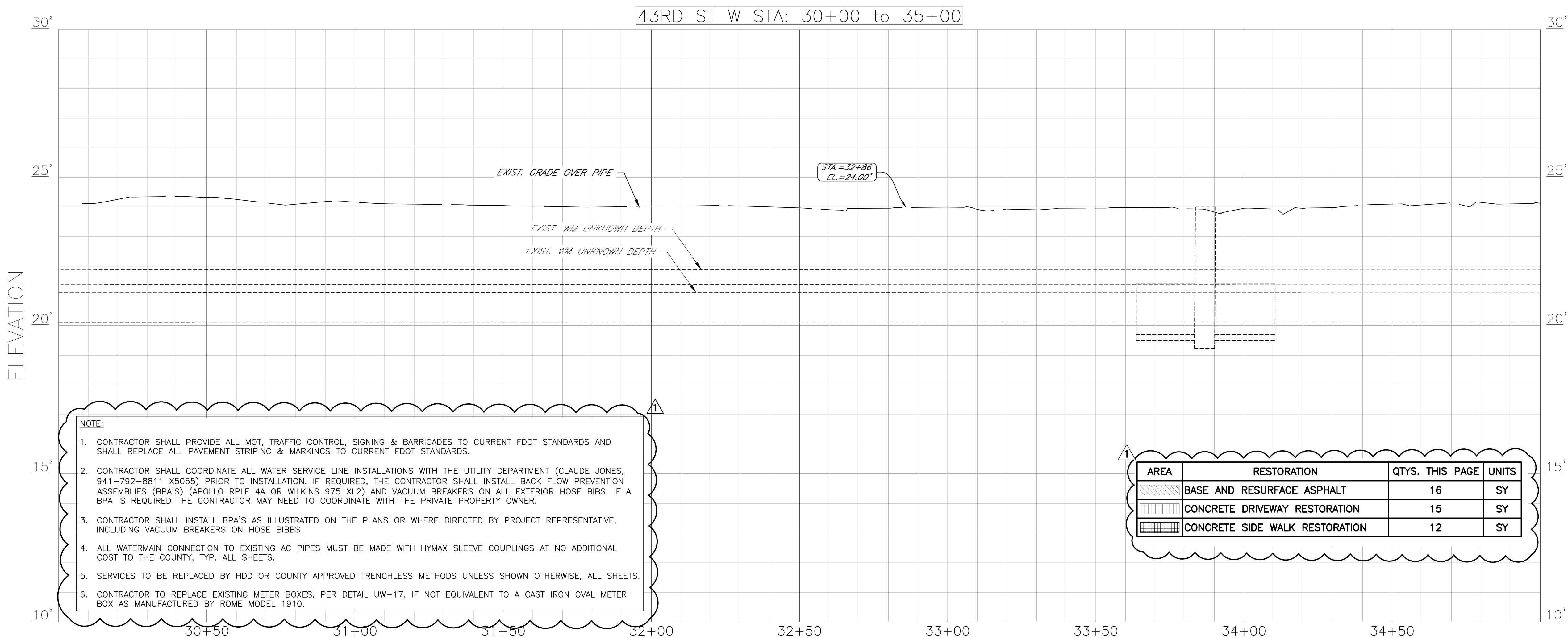
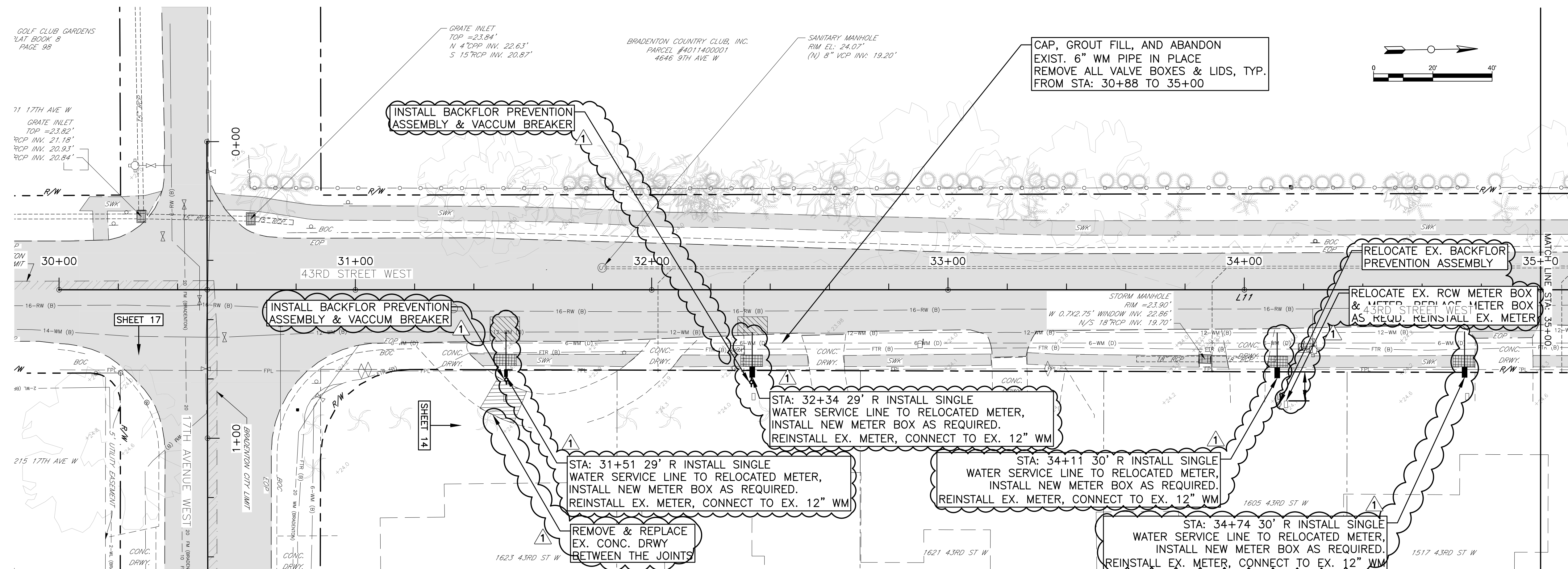
COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 15TH AVE W STA 136+00 TO 141+00

NO.	REVISION	DESCRIPTION	BY	DATE
1	PLAN	REVISIONS	JSS	5/25/18
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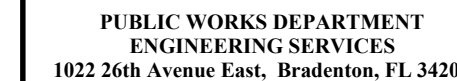
COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 43RD ST W STA 30+00 TO 35+00

[illegible]

JOHN S. SECUN, P.E.
LORDA PSE # 60923
No. 60923
STATE OF
6/4/18
FLORIDA
PROFESSIONAL ENGINEER
Signature: _____ Date: _____



Know what's below
Call before you dig

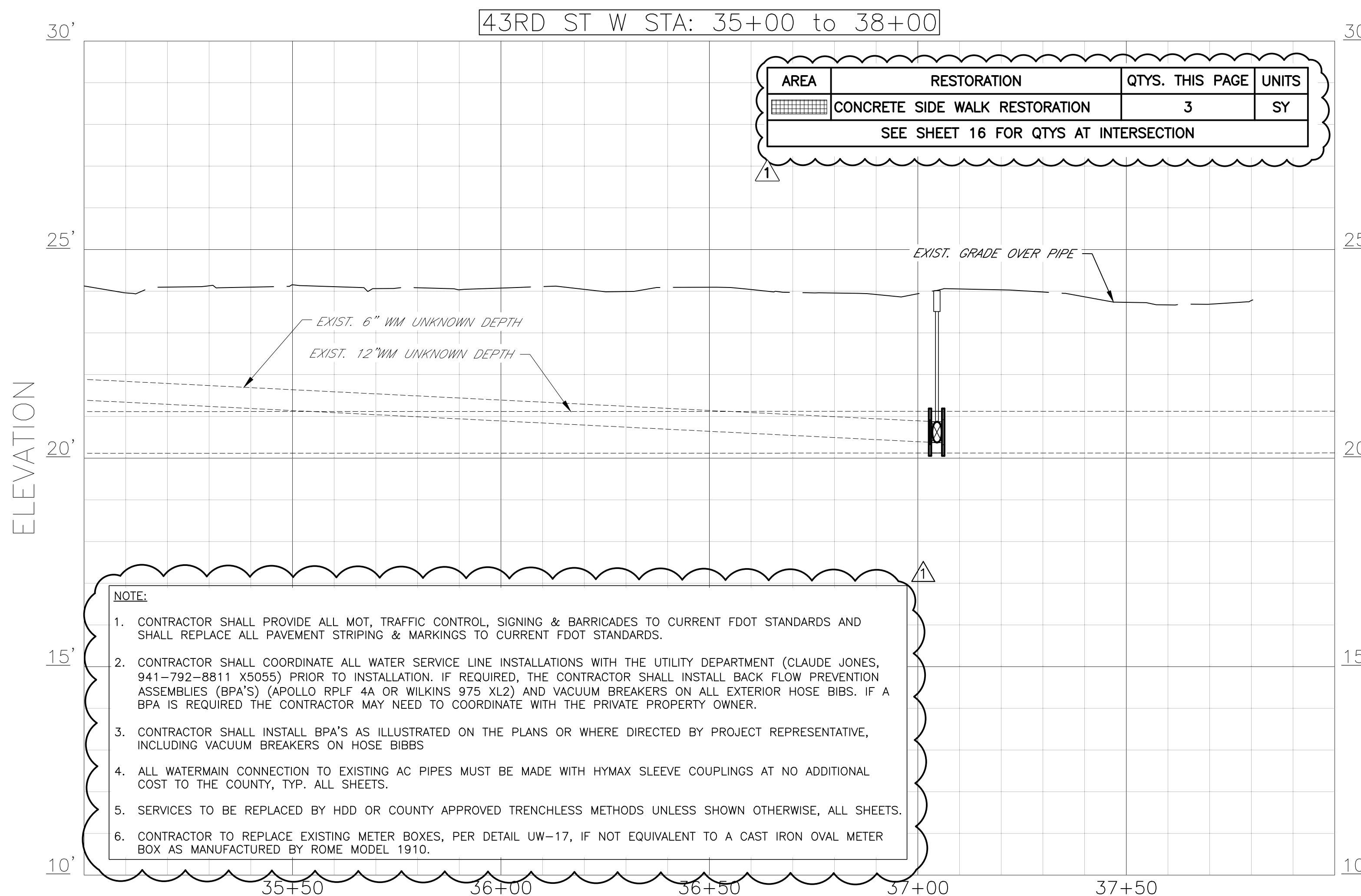
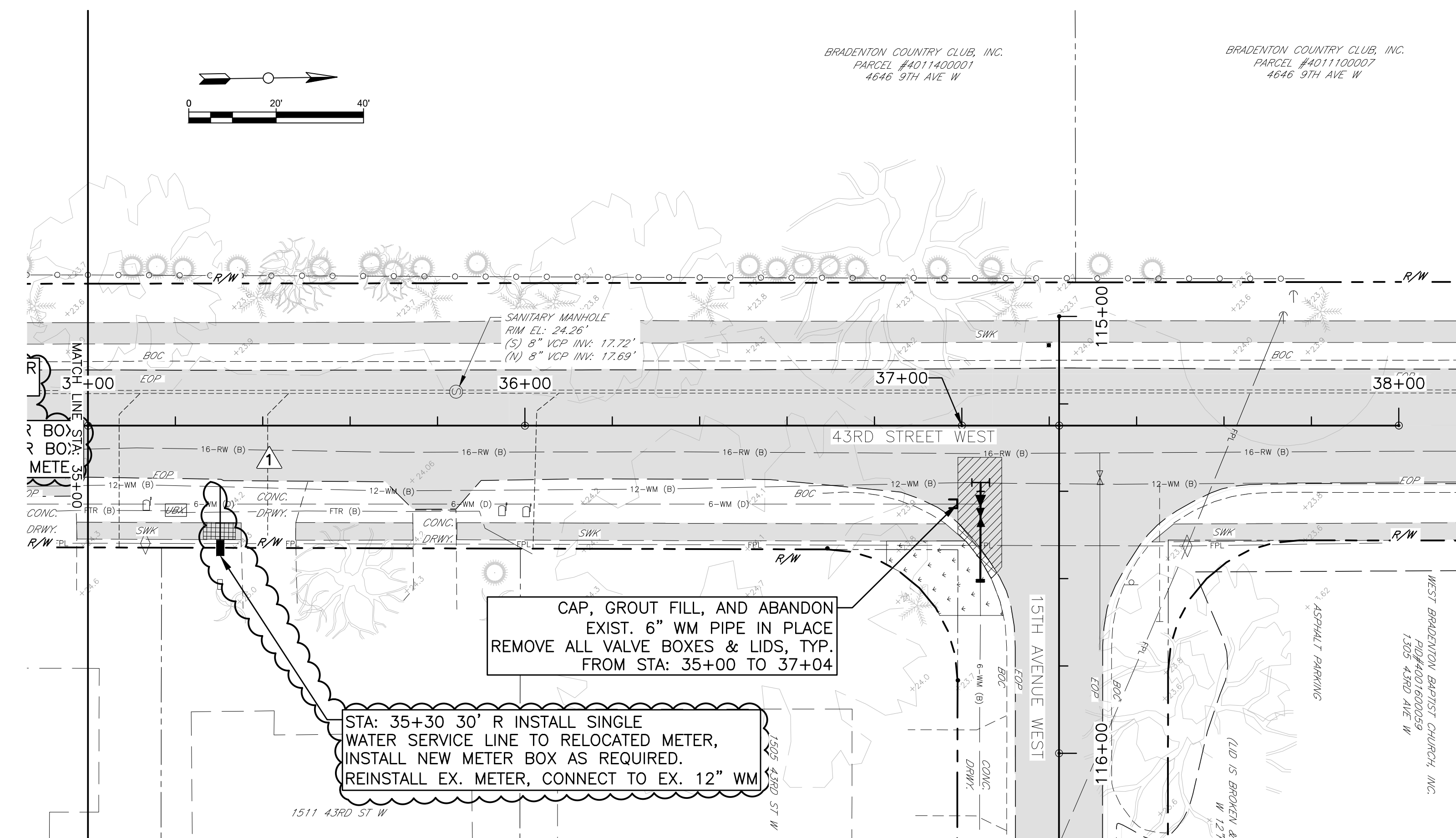


COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 43RD ST W STA 35+00 TO 38+00

[illegible]

JOHN SHOLIN, P.E.
FLORIDA P.E. # 60923
No. 60923
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
SIGNED: [Signature] DATE: 6/4/18

SHEET 15 OF 3

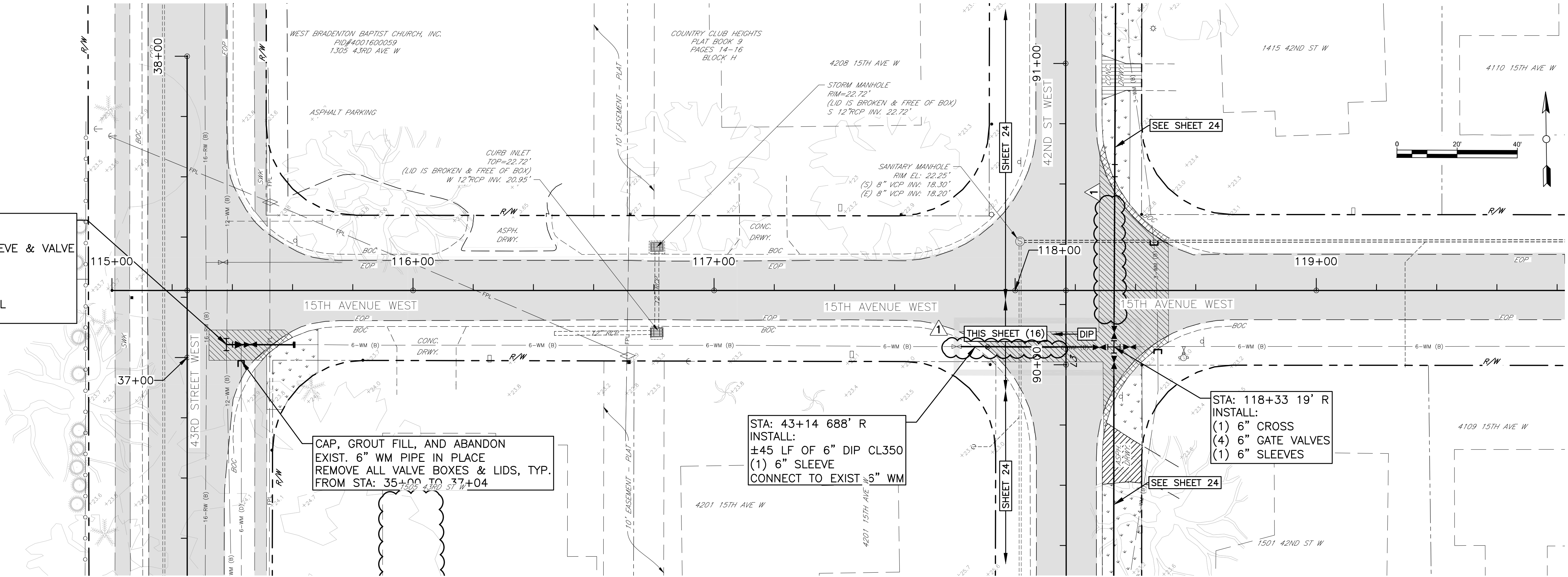


Know what's below
Call before you dig

STA: 115+38 18' R
INSTALL:
(1) 12"x8" TAPPING SLEEVE & VALVE
(1) 8"x6" REDUCER
(1) 6" SLEEVE
20± LF OF 6" DIP
CONNECT TO EXIST 6" WL
ALL RJ

BRADENTON COUNTRY CLUB, INC.
PARCELS 14-17
4046 9TH AVE W

SHEET 15

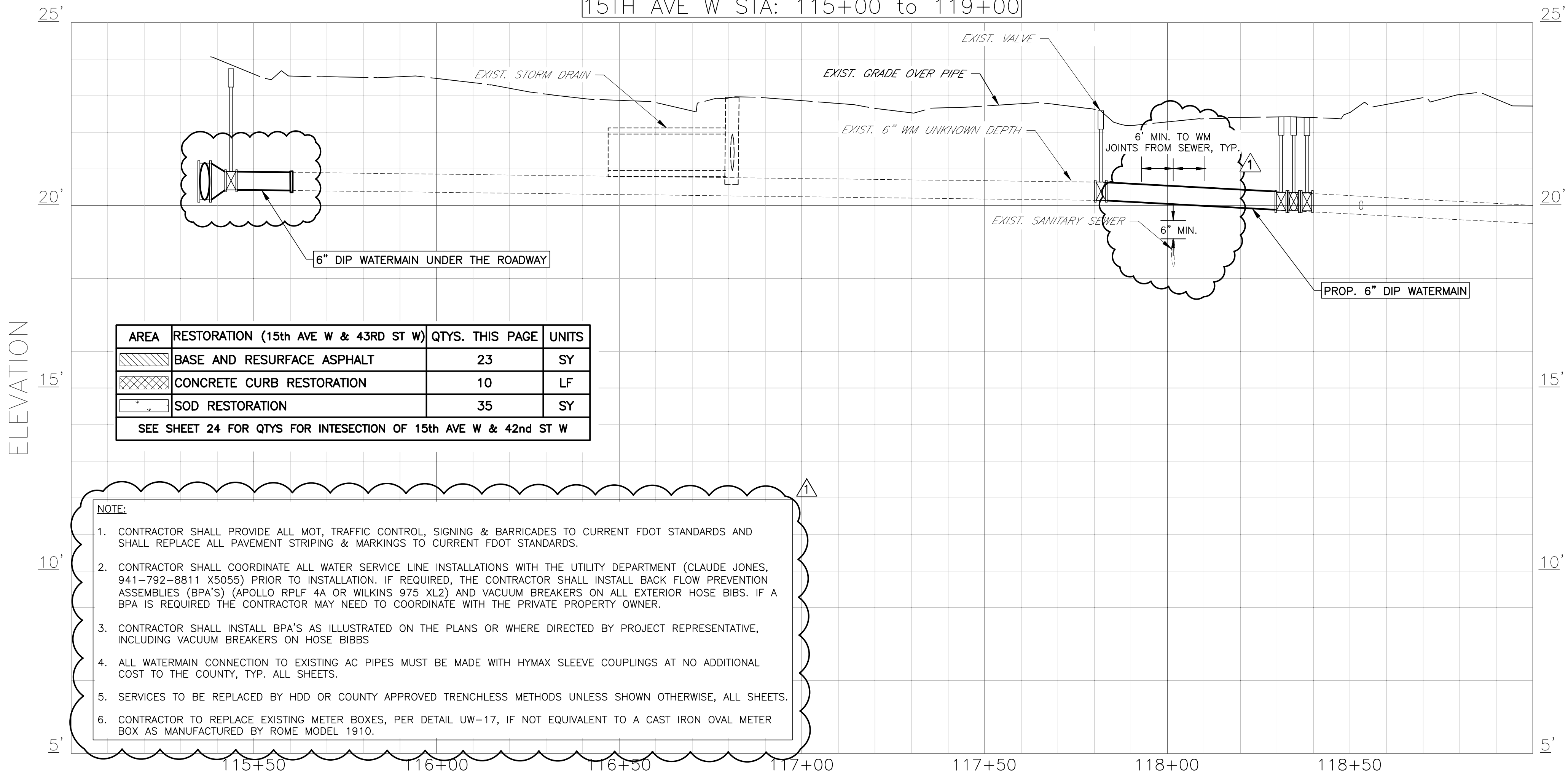


CAP, GROUT FILL, AND ABANDON
EXIST. 6" WM PIPE IN PLACE
REMOVE ALL VALVE BOXES & LIDS, TYP.
FROM STA: 35+00 TO 37+04

STA: 43+14 688' R
INSTALL:
±45 LF OF 6" DIP CL350
(1) 6" SLEEVE
CONNECT TO EXIST 3" WM

STA: 118+33 19' R
INSTALL:
(1) 6" CROSS
(4) 6" GATE VALVES
(1) 6" SLEEVES

15TH AVE W STA: 115+00 TO 119+00



AREA	RESTORATION (15th AVE W & 43RD ST W)	QTYS. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	23	SY
	CONCRETE CURB RESTORATION	10	LF
	SOD RESTORATION	35	SY

SEE SHEET 24 FOR QTYS FOR INSESECTION OF 15th AVE W & 42nd ST W

NOTE:

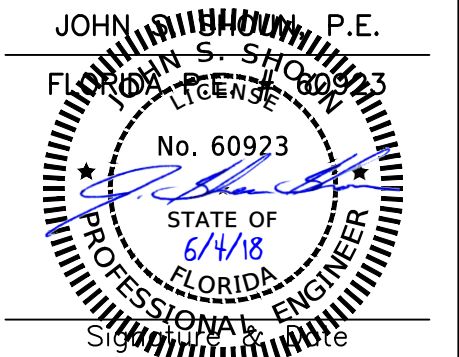
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COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 15TH AVE W STA 115+00 TO 119+00

REVISION	DESCRIPTION	BY	DATE
1	PLAN REVISIONS	JSS	5/25/18

PROJECT #	404-6088770
SURVEY #	14Y13314LS
SEC./TWN./RGE	33/34S/17E
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 88
	BY DATE
SURVEYED	GFY 11/2016
DESIGNED	BLR 03/2017
DRAWN	BLR 03/2017

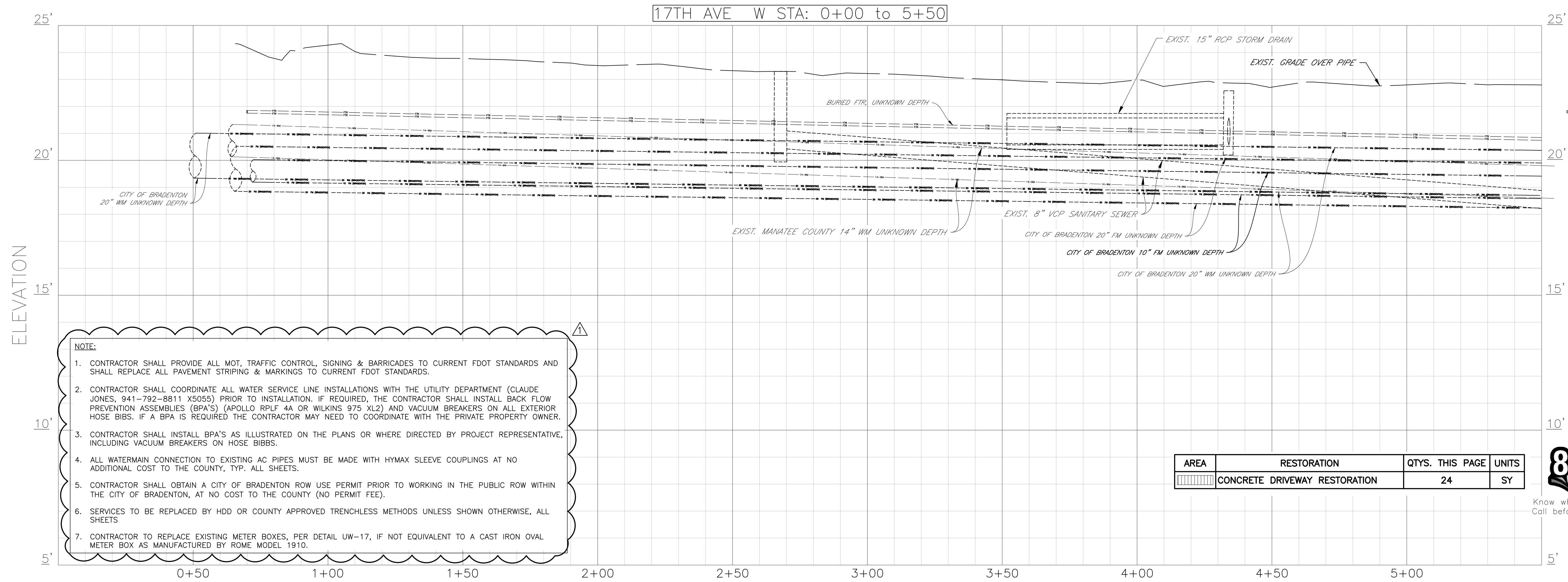




COUNTRY CLUB HEIGHTS

WATERLINE REPLACEMENT

P&P 17TH ST W STA 0+00 TO 5+50



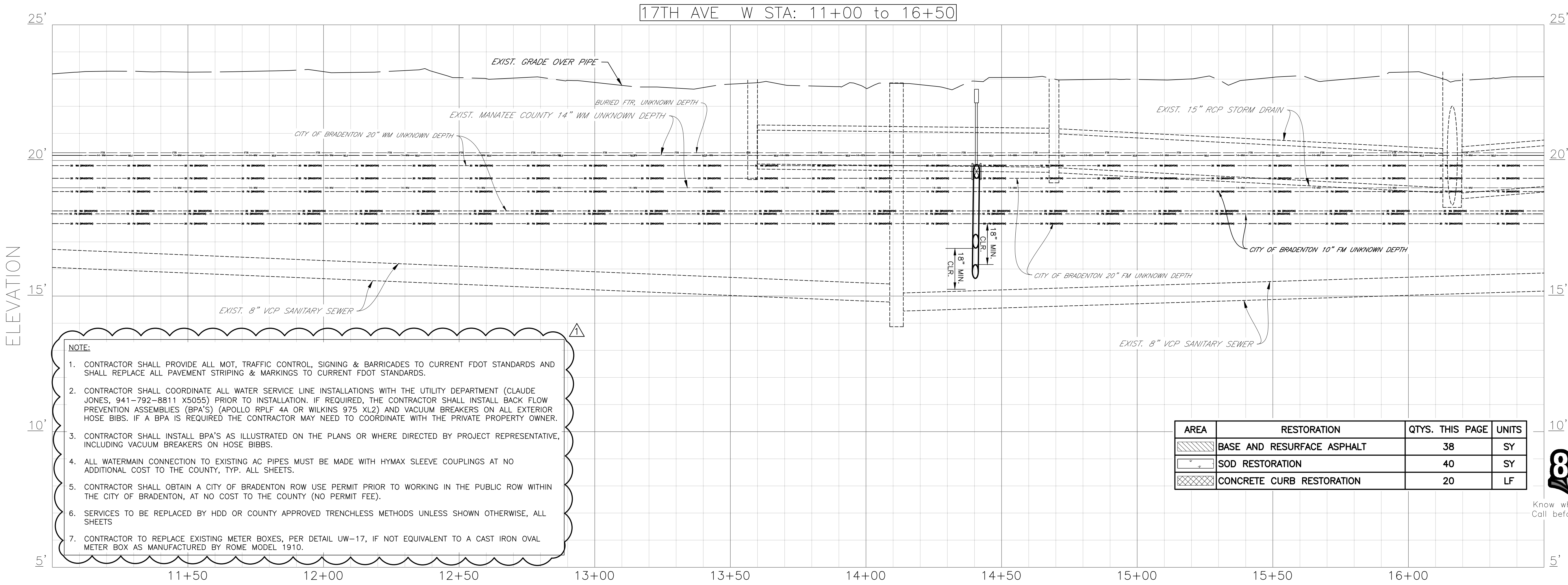
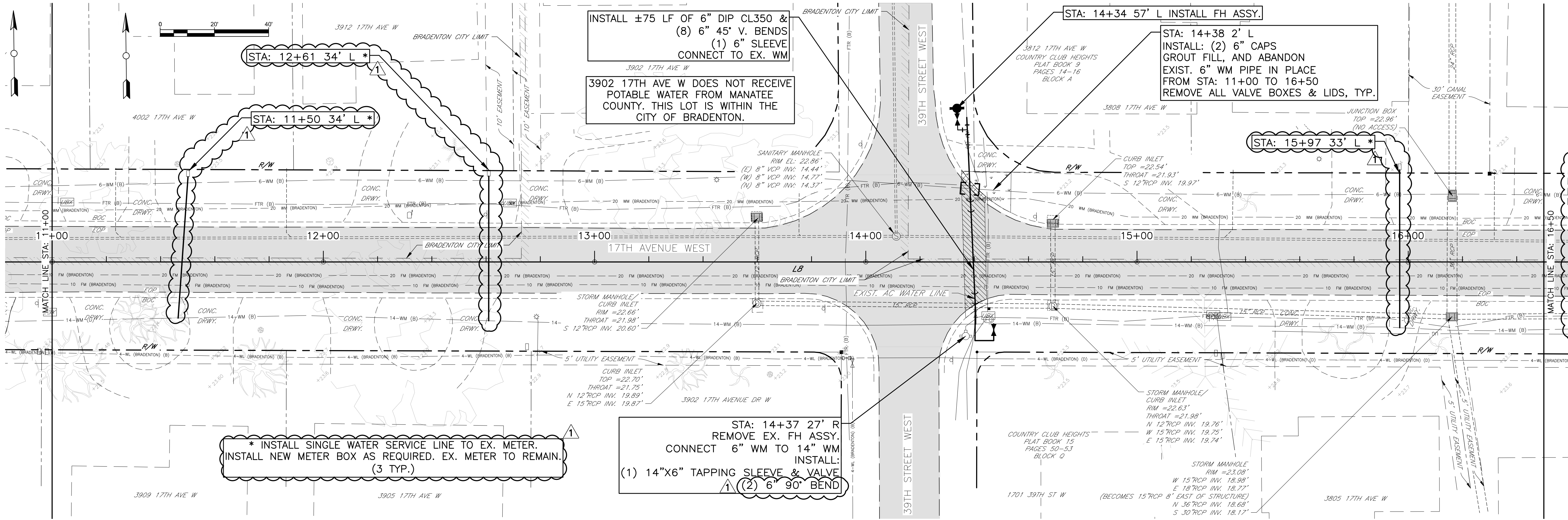
REVISION DESCRIPTION		BY	DATE
PLAN REVISIONS		JSS	5/25/18
NO.			
PROJECT #		404-6088770	
SURVEY #		14Y13314LS	
SEC./TWN./RGE		33/34S/17E	
VERT. SCALE		1"=2'	
HORZ. SCALE		1"=20'	
VERTICAL DATUM		NAVD 88	
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	


P.E.
60923

STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER
 Date _____

SHEET 17 OF 30

Copyright 2015 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering\Share\Util Eng Design\PROJ\WTR LINE Proj\Water Line-Country Club Heights P_Design.dwg,17, 6/1/2018 12:14 PM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)



- NOTE:**
- CONTRACTOR SHALL PROVIDE ALL MOT, TRAFFIC CONTROL, SIGNING & BARRICADES TO CURRENT FDOT STANDARDS AND SHALL REPLACE ALL PAVEMENT STRIPING & MARKINGS TO CURRENT FDOT STANDARDS.
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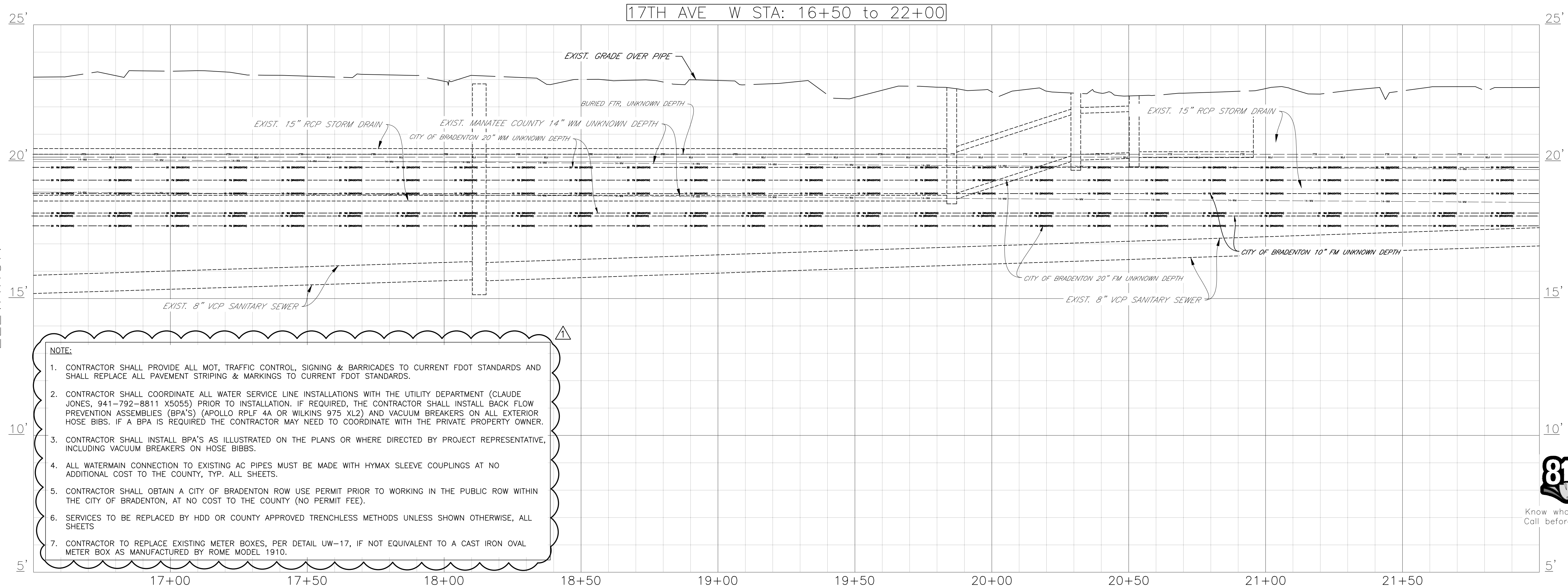
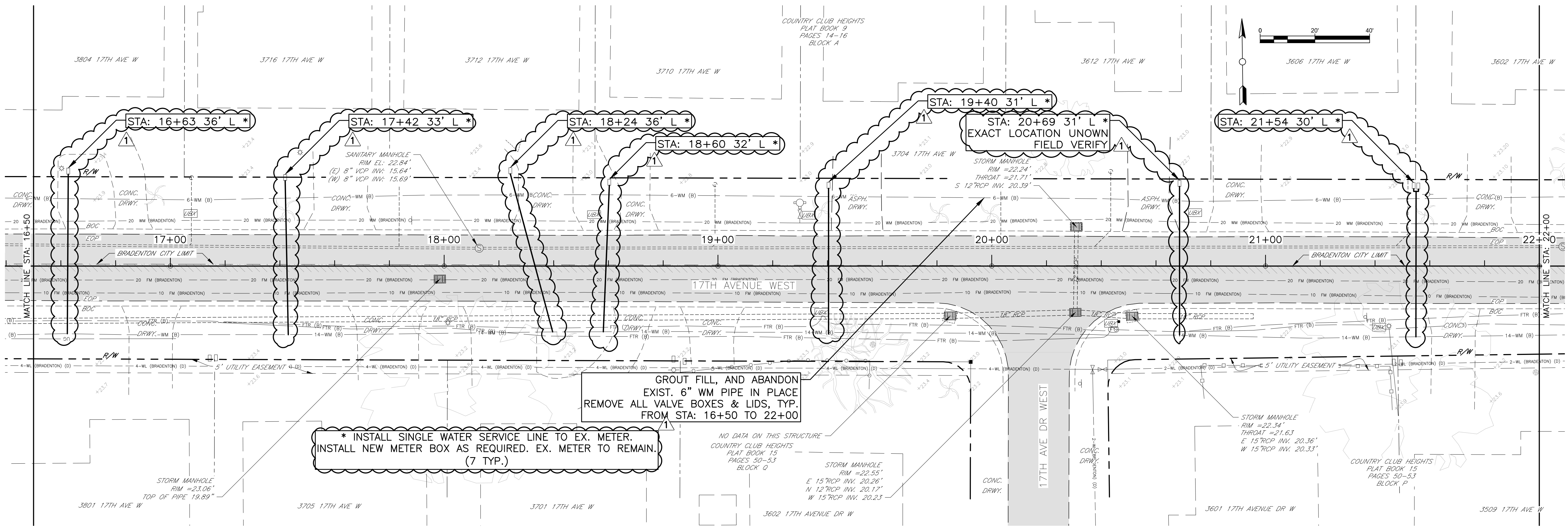
AREA	RESTORATION	QTYS. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	38	SY
	SOD RESTORATION	40	SY
	CONCRETE CURB RESTORATION	20	LF



COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 17TH ST W STA 11+00 TO 16+50

REVISION	DESCRIPTION	BY	DATE
PLAN	REVISIONS	JSS	5/25/18
NO.			
PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
VERT. SCALE	1"=2'		
HORZ. SCALE	1"=20'		
VERTICAL DATUM	NAVD 88		
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	

JOHN BISHOP, P.E.
Professional Engineer
No. 60923
6/4/18
STATE OF FLORIDA
Professional Engineer
Date



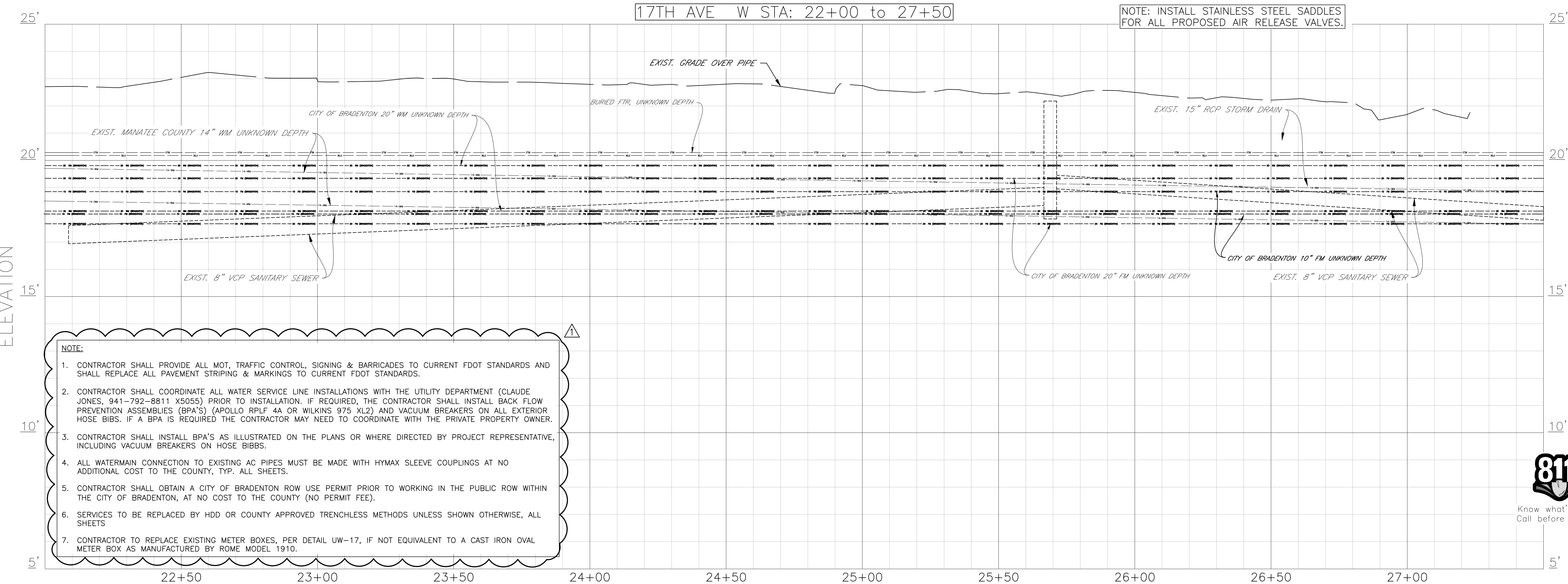
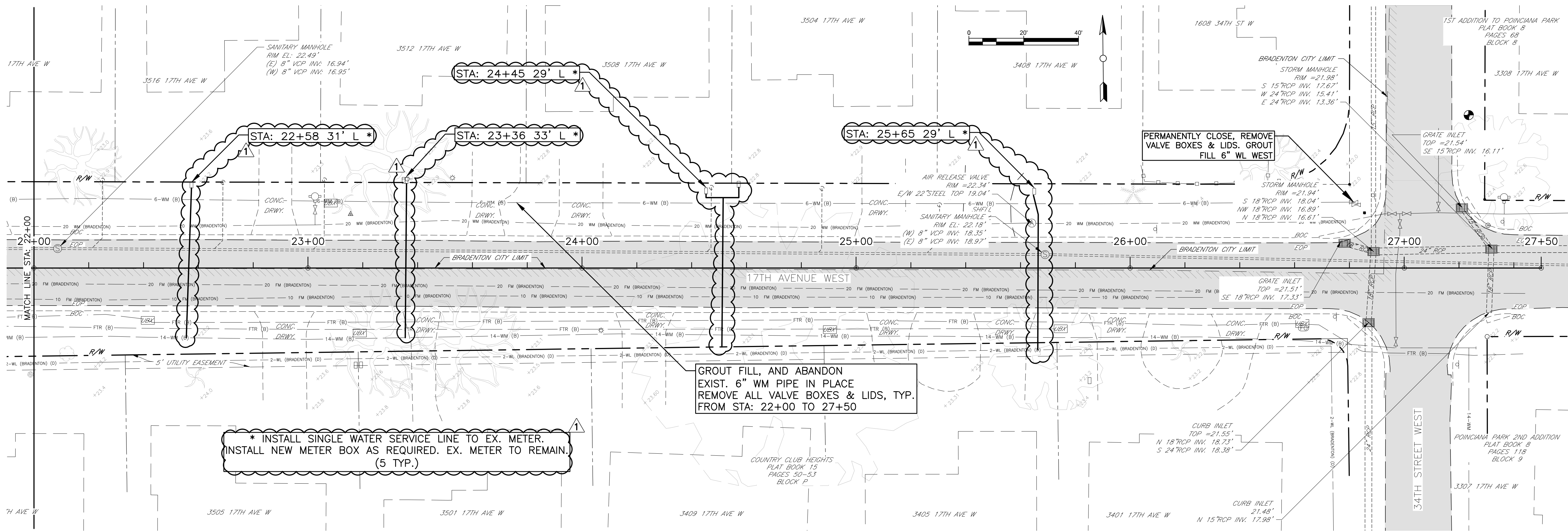
NOTE:

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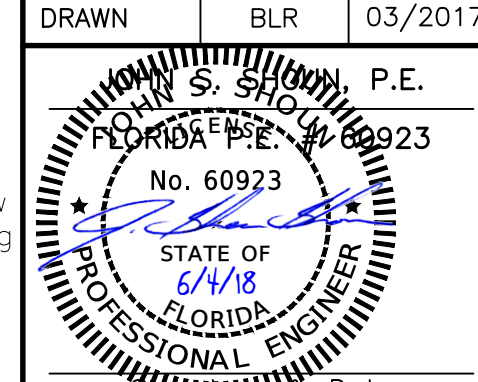
COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 17TH ST W STA 16+50 TO 22+00

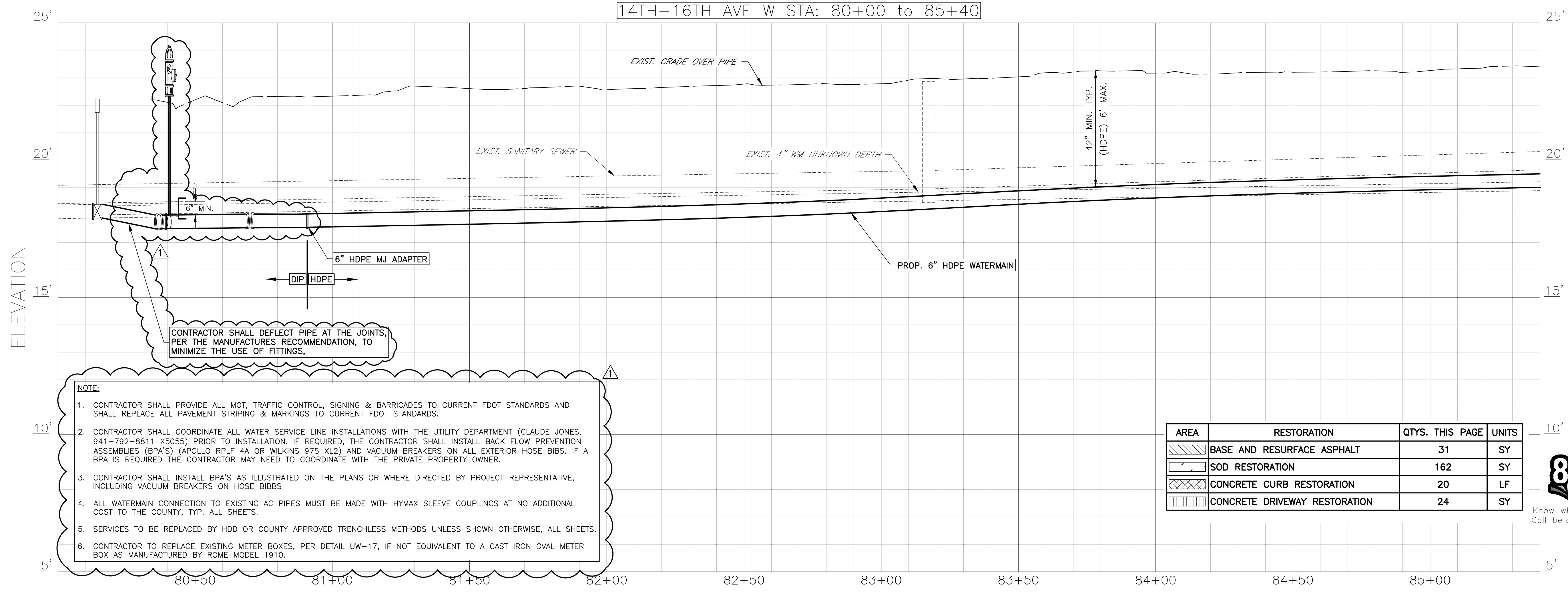
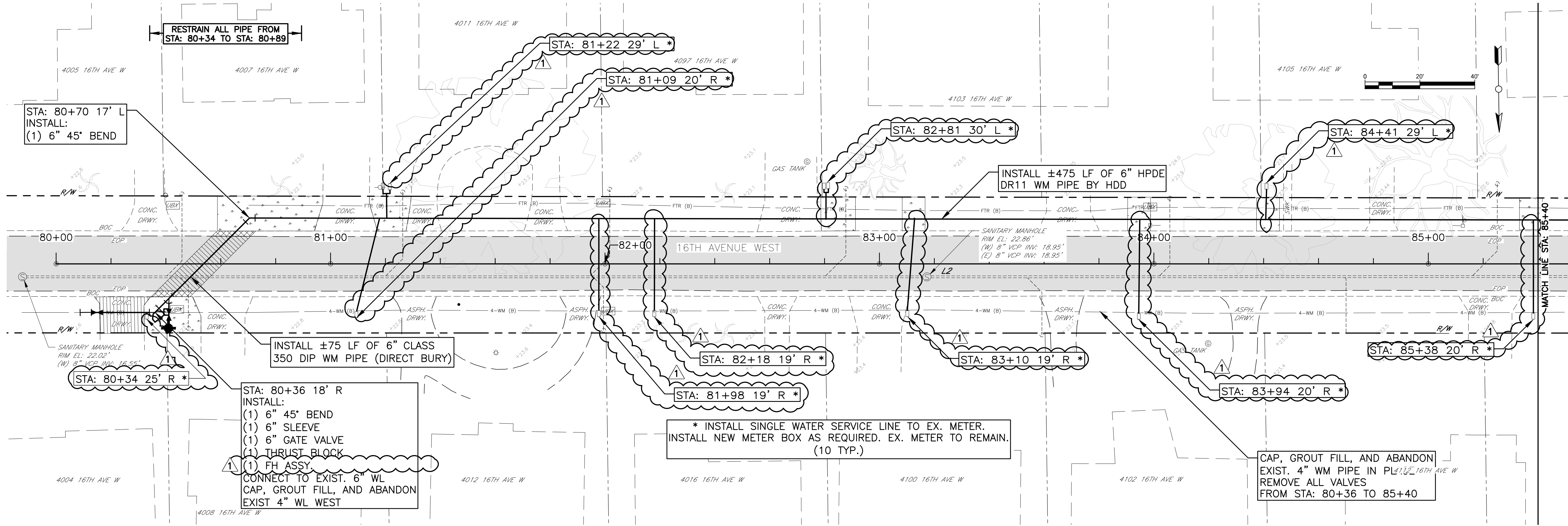
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JOHN S. SHORR, E.
FLORIDA LICENSE # 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature



COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 17TH ST W STA 22+00 TO 27+50

REVISION	DESCRIPTION	BY	DATE
PLAN	REVISIONS	JSS	5/25/18
NO.			
PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
VERT. SCALE	1"=2'		
HORZ. SCALE	1"=20'		
VERTICAL DATUM	NAVD 88		
	BY	DATE	
SURVEYED	GFY	11/2016	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	
			
SHEET 21 OF 33			



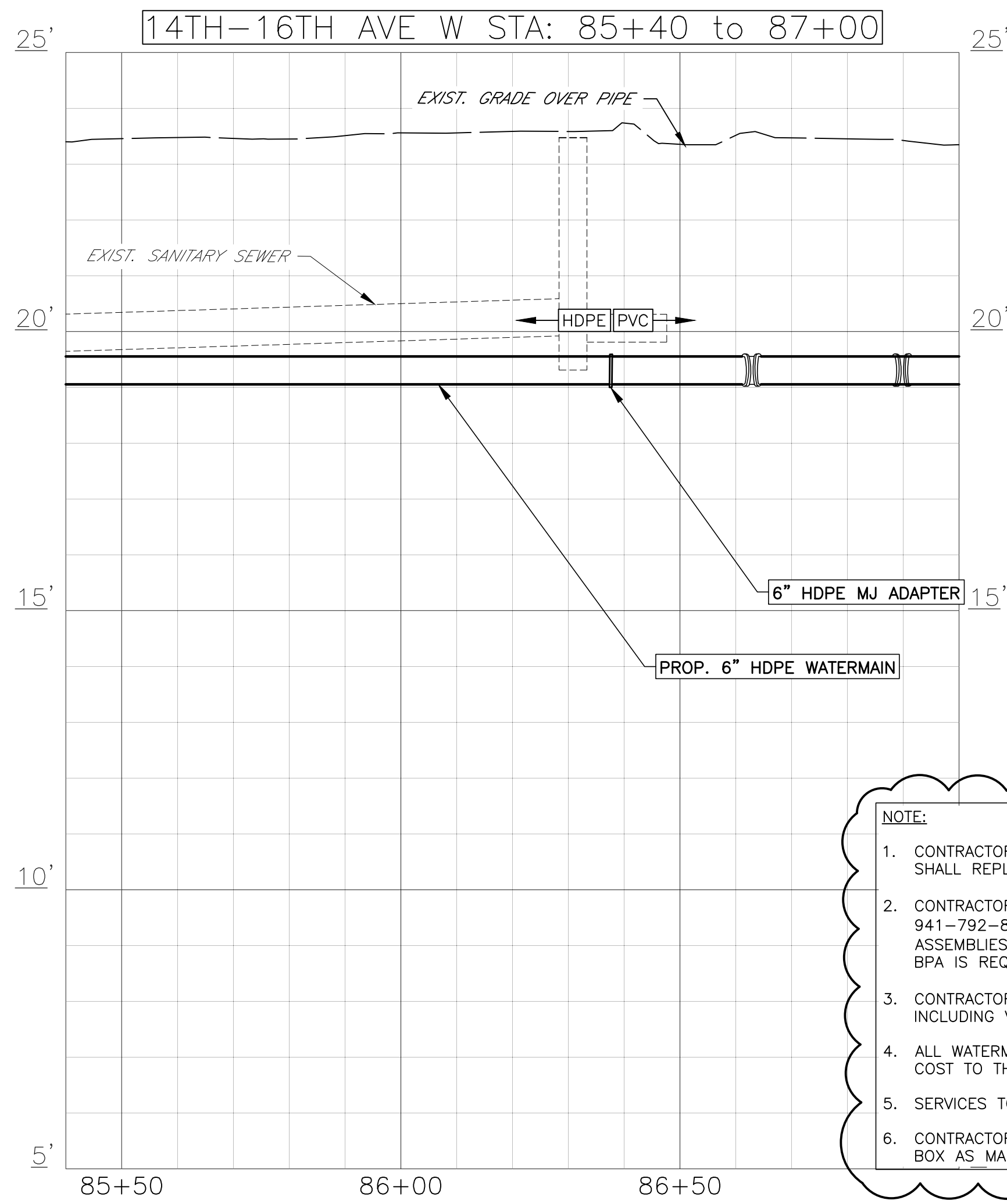
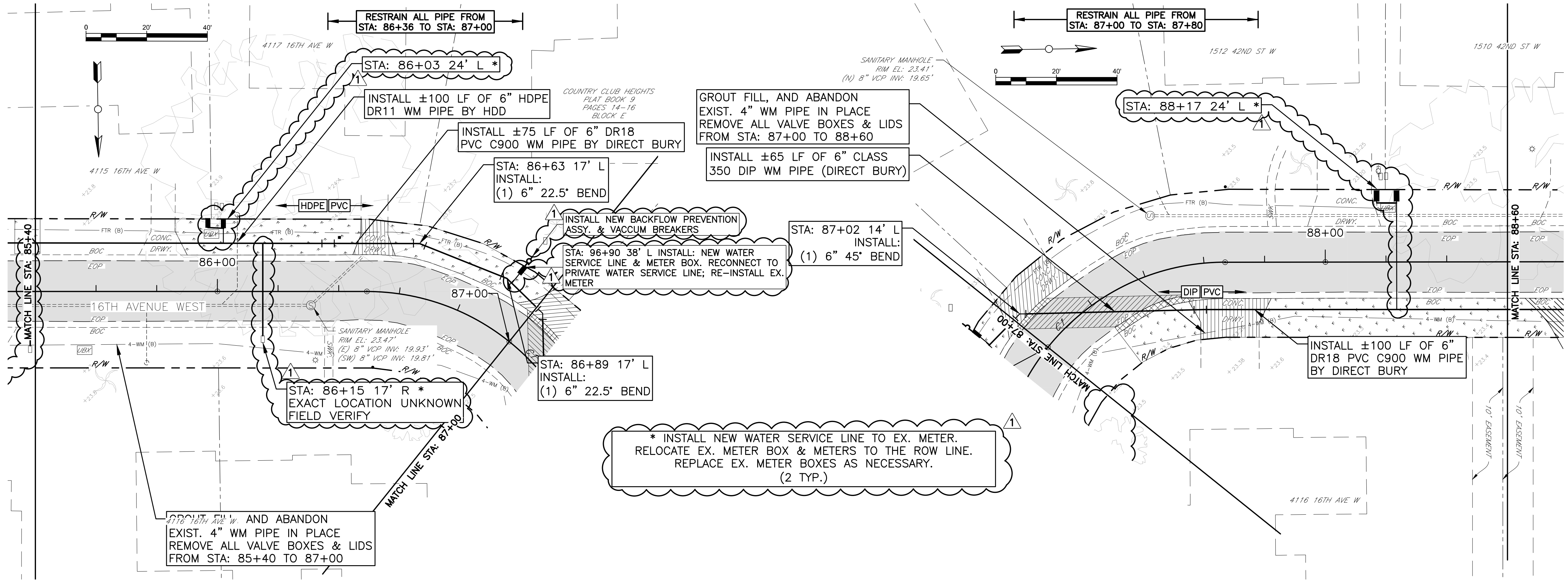
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AREA	RESTORATION	QTY. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	31	SY
	SOD RESTORATION	162	SY
	CONCRETE CURB RESTORATION	20	LF
	CONCRETE DRIVEWAY RESTORATION	24	SY

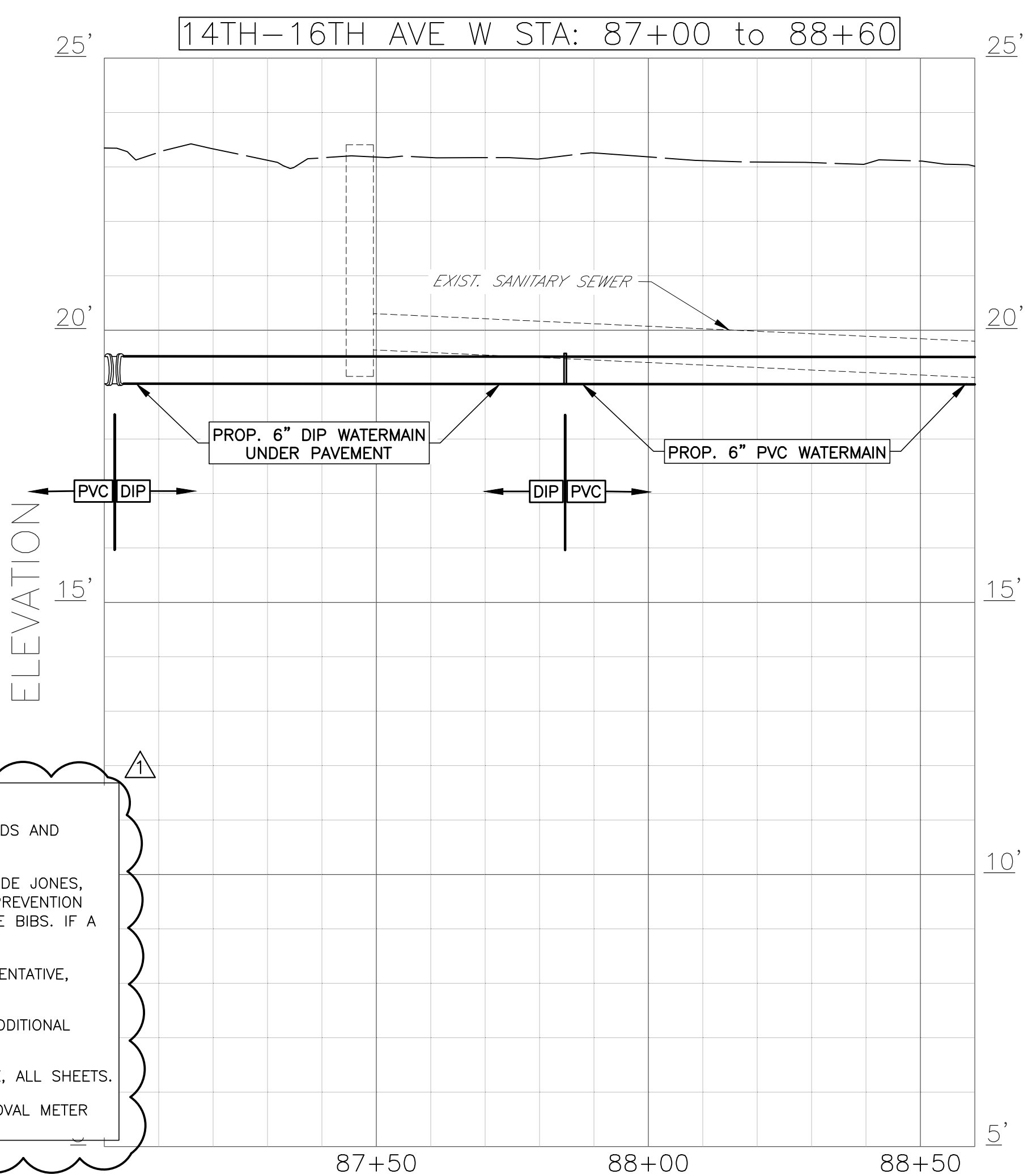


COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 14TH-16TH AVE W STA 80+00 TO 85+40

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AREA	RESTORATION	QTY. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	39	SY
	CONCRETE CURB RESTORATION	15	LF
	SOD RESTORATION	296	SY
	CONCRETE DRIVEWAY RESTORATION	75	SY



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

COUNTRY CLUB HEIGHTS

WATERLINE REPLACEMENT

P&P 14TH-16TH AVE W STA 85+40 TO 88+60

NO.	DATE	BY	REVISION DESCRIPTION
1	5/25/18	JSS	PLAN REVISIONS

PROJECT #	404-6088770		
SURVEY #	14Y13314LS		
SEC./TWN./RGE	33/34S/17E		
VERT. SCALE	1"=2'		
HORZ. SCALE	1"=20'		
VERTICAL DATUM	NAVD 88		
SURVEYED	GFY	DATE	11/2016
DESIGNED	BLR	DATE	03/2017
DRAWN	BLR	DATE	03/2017

JOHN S. SHARP, P.E.
FLORIDA LICENSE # 60923
No. 60923
6/4/18
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature

811
Know what's below
Call before you dig

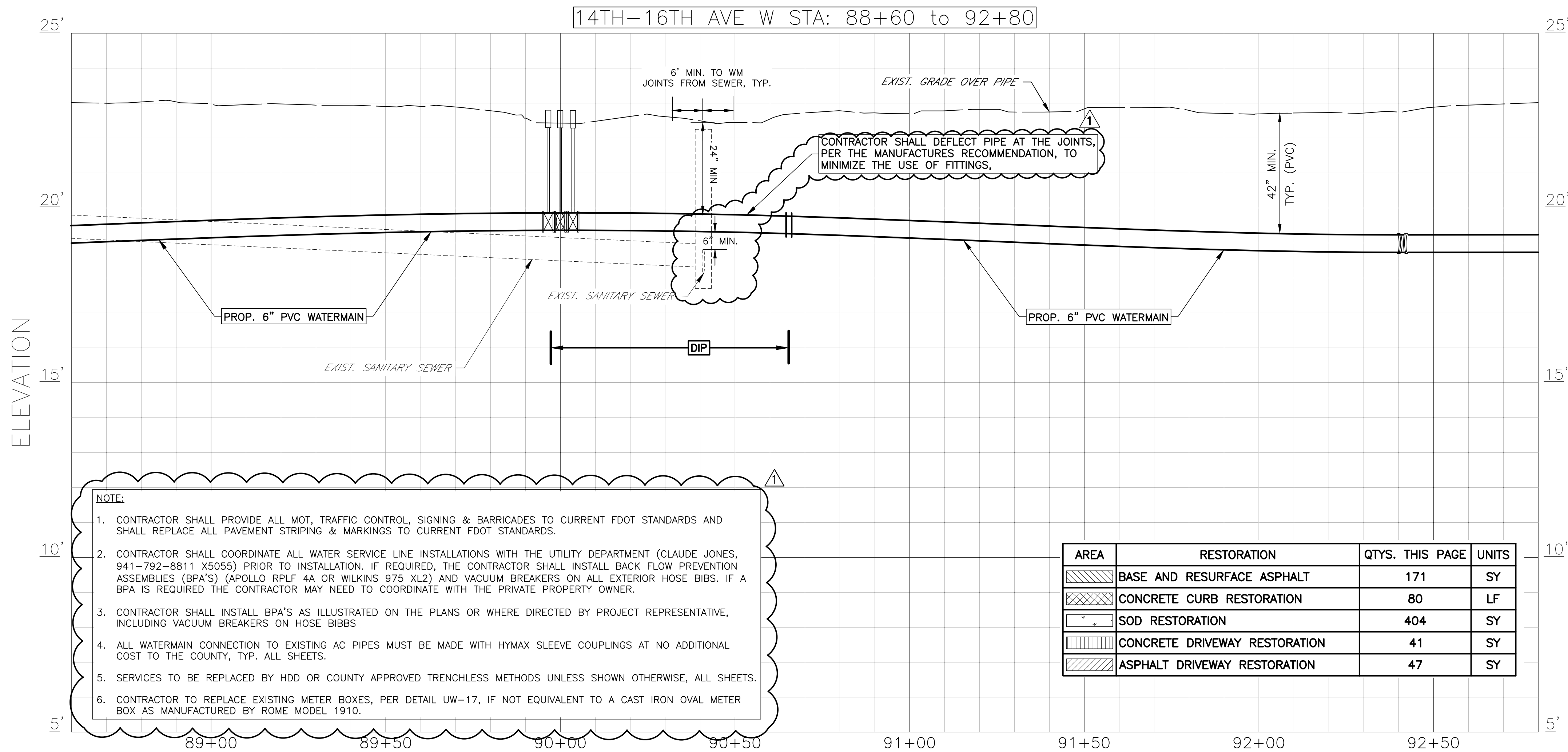
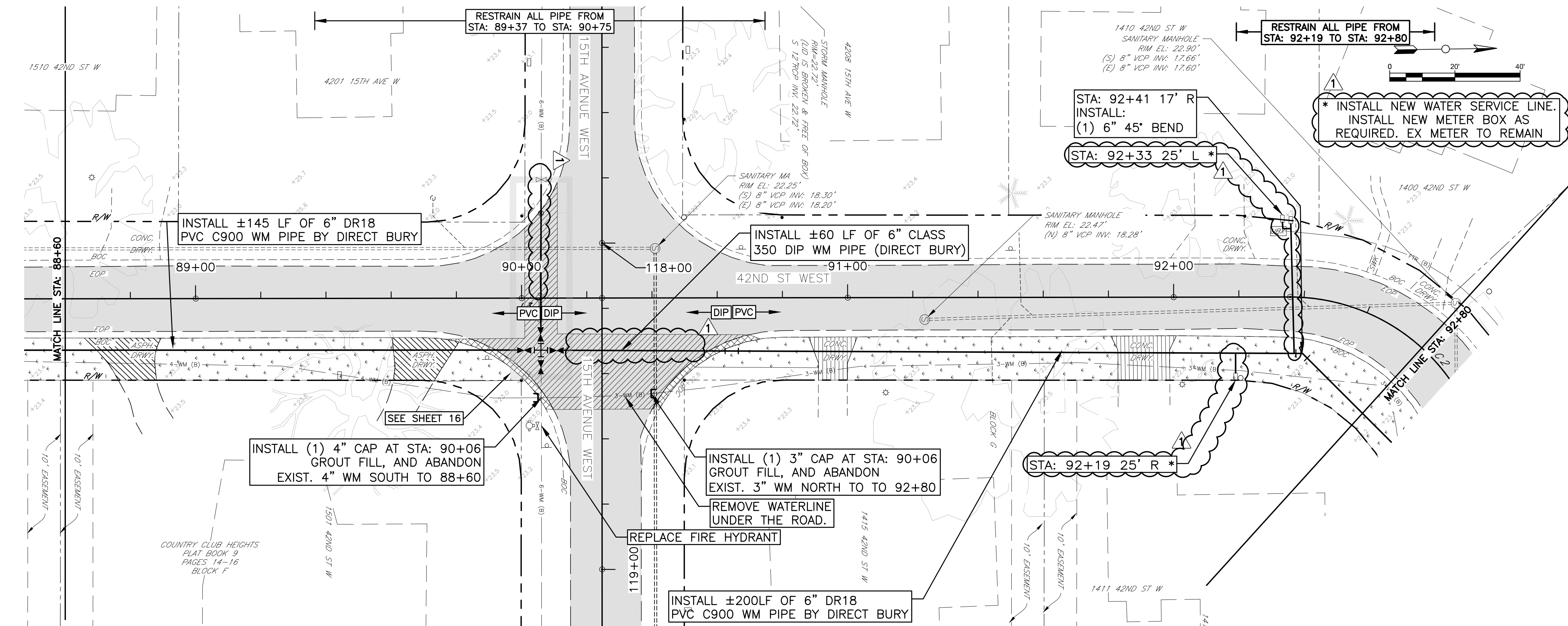
SHEET 23 OF 33

COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util_Eng_Design\PROJ\WTR LINE Proj\Water Line-Country Club Heights\DWG\Country Club Heights_P.Design.dwg,23, 6/17/2018 12:21 PM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

COUNTRY CLUB HEIGHTS
WATERLINE REPLACEMENT
P&P 14TH-16TH AVE W STA 88+60 TO 92+80

NO.	REVISION DESCRIPTION	BY	DATE
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JOHN S. SHANNON, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Date



NOTE:

- CONTRACTOR SHALL PROVIDE ALL MOT, TRAFFIC CONTROL, SIGNING & BARRICADES TO CURRENT FDOT STANDARDS AND SHALL REPLACE ALL PAVEMENT STRIPING & MARKINGS TO CURRENT FDOT STANDARDS.
- CONTRACTOR SHALL COORDINATE ALL WATER SERVICE LINE INSTALLATIONS WITH THE UTILITY DEPARTMENT (CLAUDE JONES, 941-792-8811 X5055) PRIOR TO INSTALLATION. IF REQUIRED, THE CONTRACTOR SHALL INSTALL BACK FLOW PREVENTION ASSEMBLIES (BPA'S) (APOLLO RPLF 4A OR WILKINS 975 XL2) AND VACUUM BREAKERS ON ALL EXTERIOR HOSE BIBBS. IF A BPA IS REQUIRED THE CONTRACTOR MAY NEED TO COORDINATE WITH THE PRIVATE PROPERTY OWNER.
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- CONTRACTOR TO REPLACE EXISTING METER BOXES, PER DETAIL UW-17, IF NOT EQUIVALENT TO A CAST IRON OVAL METER BOX AS MANUFACTURED BY ROME MODEL 1910.

AREA	RESTORATION	QTY. THIS PAGE	UNITS
	BASE AND RESURFACE ASPHALT	171	SY
	CONCRETE CURB RESTORATION	80	LF
	SOD RESTORATION	404	SY
	CONCRETE DRIVEWAY RESTORATION	41	SY
	ASPHALT DRIVEWAY RESTORATION	47	SY



Know what's below
Call before you dig

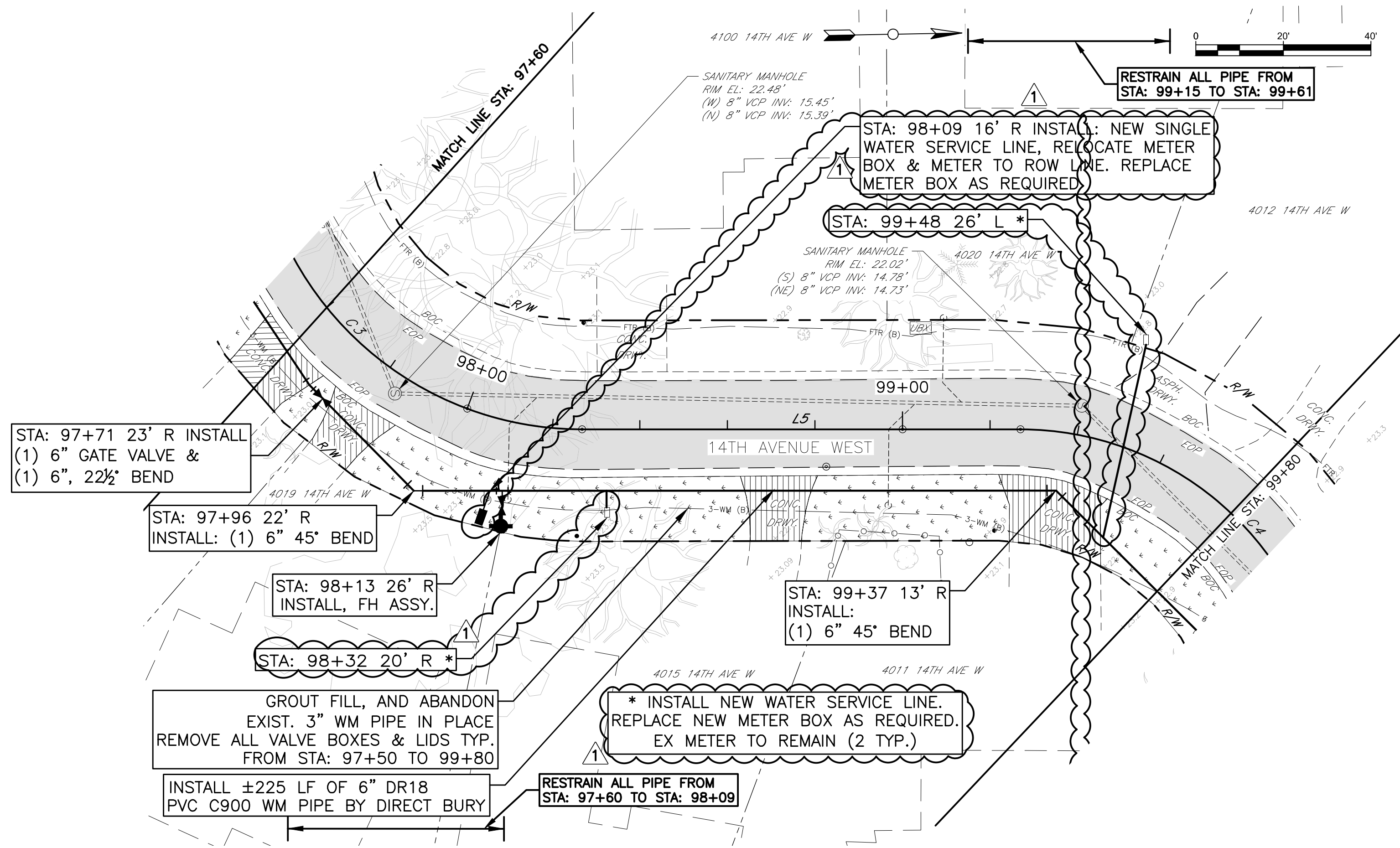


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COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util Eng Design\PROJ\~WTR LINE Proj\Water Line-Country Club Heights DWGS\Country Club Heights P_Design.dwg,25 6/1/2018 12:23 PM Bruce Robertson 1:1, ANSI full bleed D (34.00 x 22.00 inches)

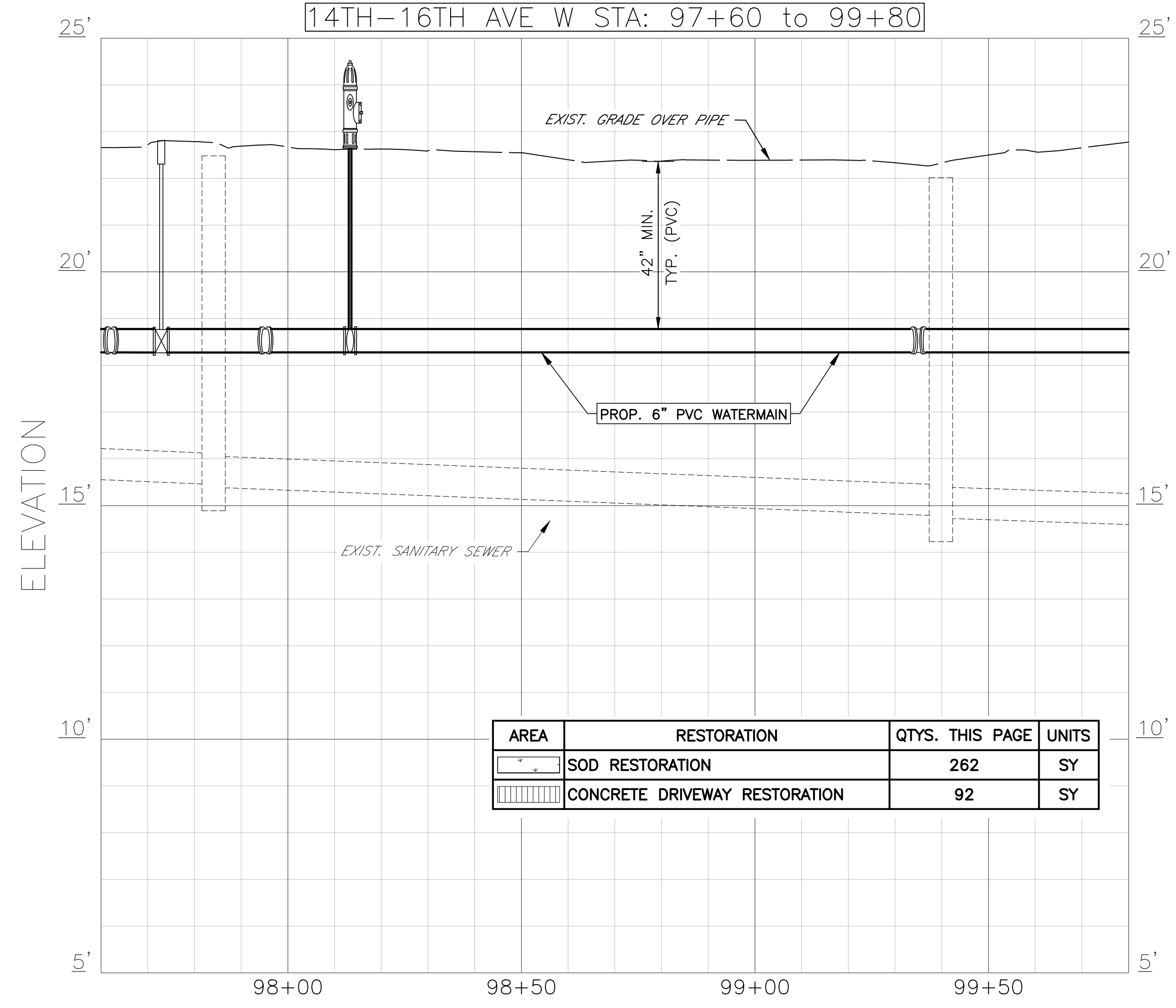


NO.	A						
REVISION DESCRIPTION	BY	DATE					
PLAN REVISIONS	JSS	5/25/18					
PROJECT #	404-6088770						
SURVEY #	14Y13314LS						
SEC./TWN./RGE	33/34S/17E						
VERT. SCALE	1"=2'						
HORIZ. SCALE	1"=20'						
VERTICAL DATUM	NAVD 88						
	BY	DATE					
SURVEYED	GFY	11/2016					
DESIGNED	BLR	03/2017					
DRAWN	BLR	03/2017					

JOHN S. SHOUPE, P.E.
JOHN S. SHOUPE
ORDINANCE NO. 60923
No. 60923
STATE OF
6/4/18
FLORIDA
PROFESSIONAL ENGINEER
Signature Date



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

COUNTRY CLUB HEIGHTS

WATERLINE REPLACEMENT

P&P 14TH-16TH AVE W STA 97+60 TO 99+80

NO.	DATE	BY	REVISION DESCRIPTION
1	5/25/18	JSS	PLAN REVISIONS

PROJECT #	404-6088770
SURVEY #	14Y13314LS
SEC./TWN./RGE	33/34S/17E
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 88

SURVEYED	GFY	DATE	11/2016
DESIGNED	BLR	DATE	03/2017
DRAWN	BLR	DATE	03/2017

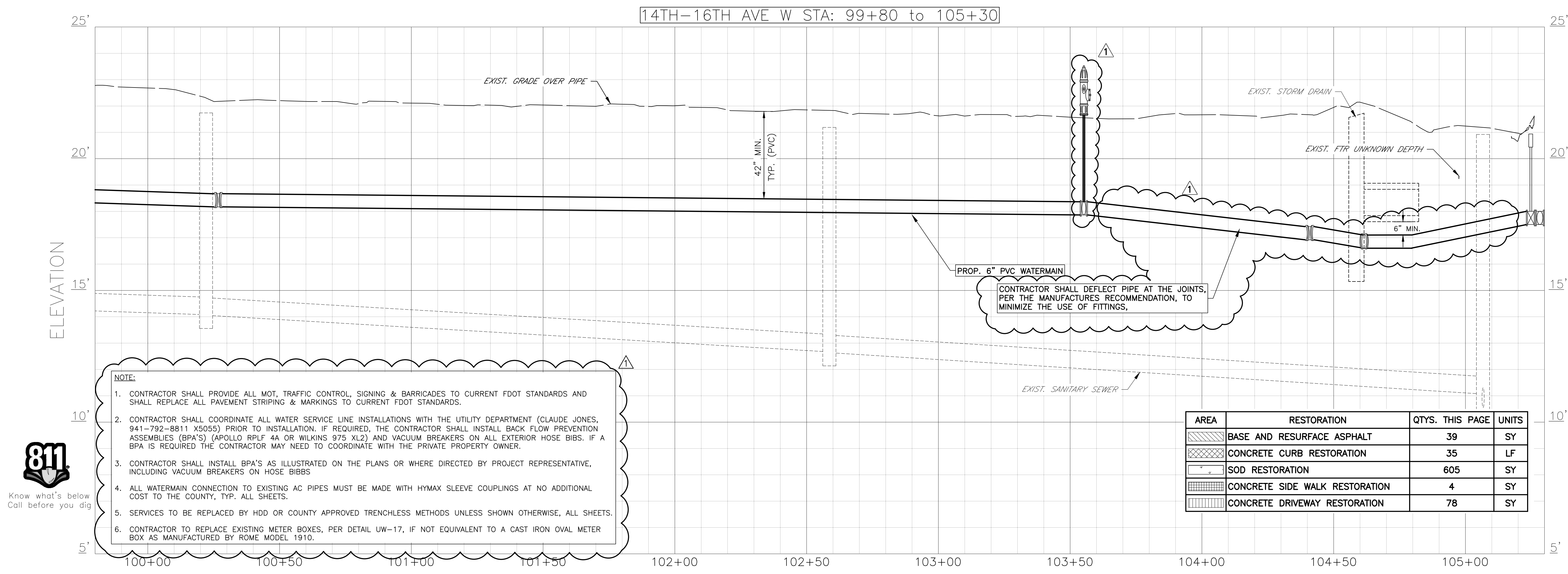
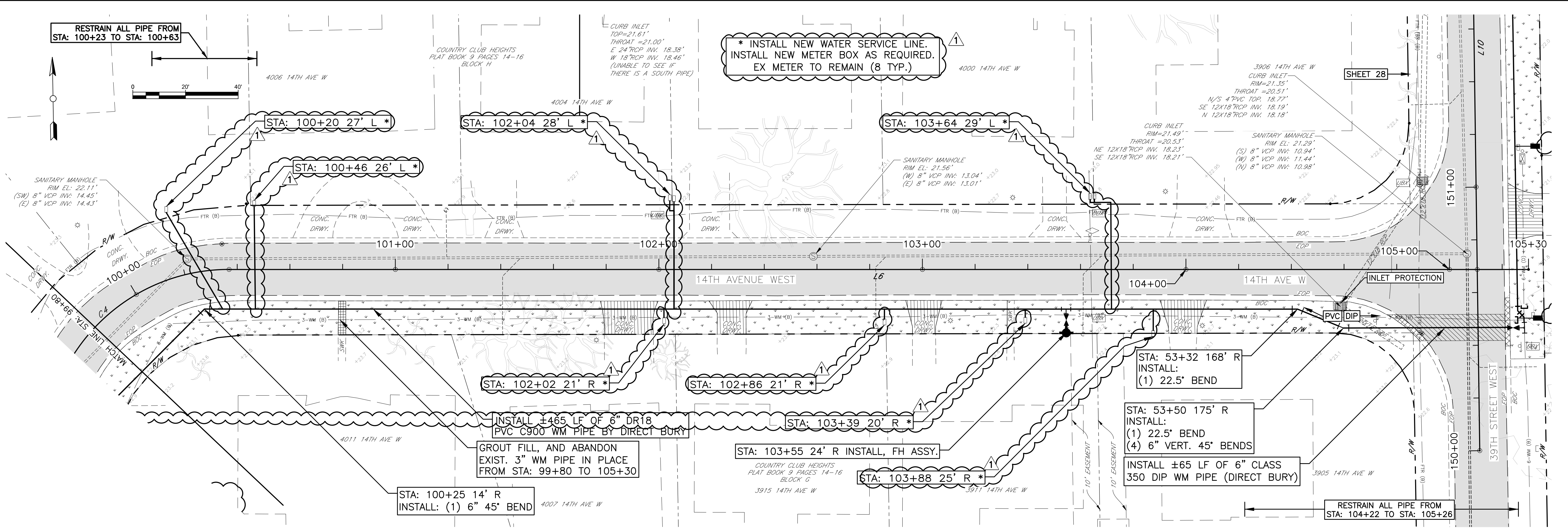
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Know what's below
Call before you dig

JOHN S. SHUBERT, E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
6/4/18
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature

SHEET 26 OF 33

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

COUNTRY CLUB HEIGHTS

WATERLINE REPLACEMENT

P&P 14TH-16TH AVE W STA 99+80 TO 105+30

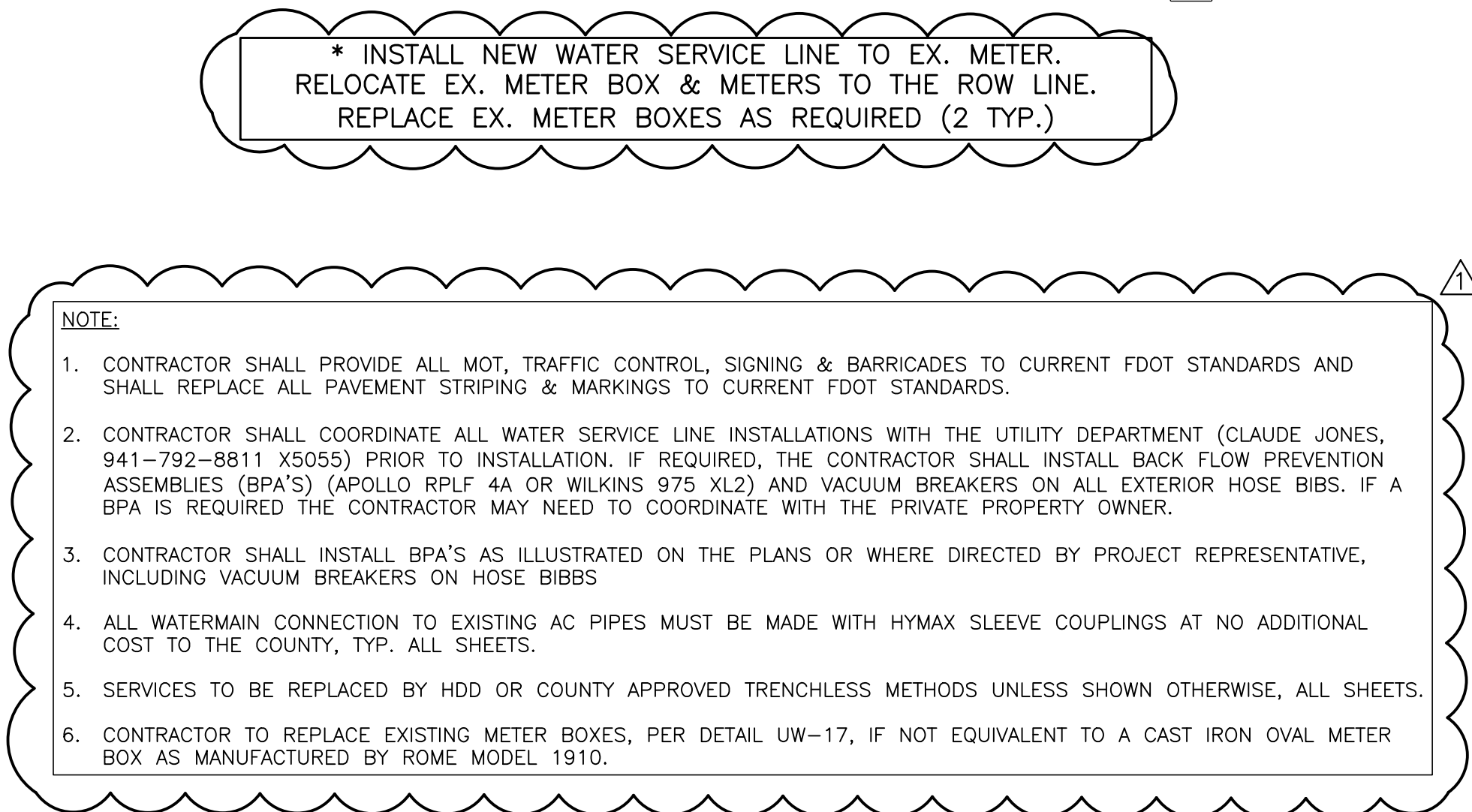
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1	5/25/18	JSS	PLAN REVISIONS

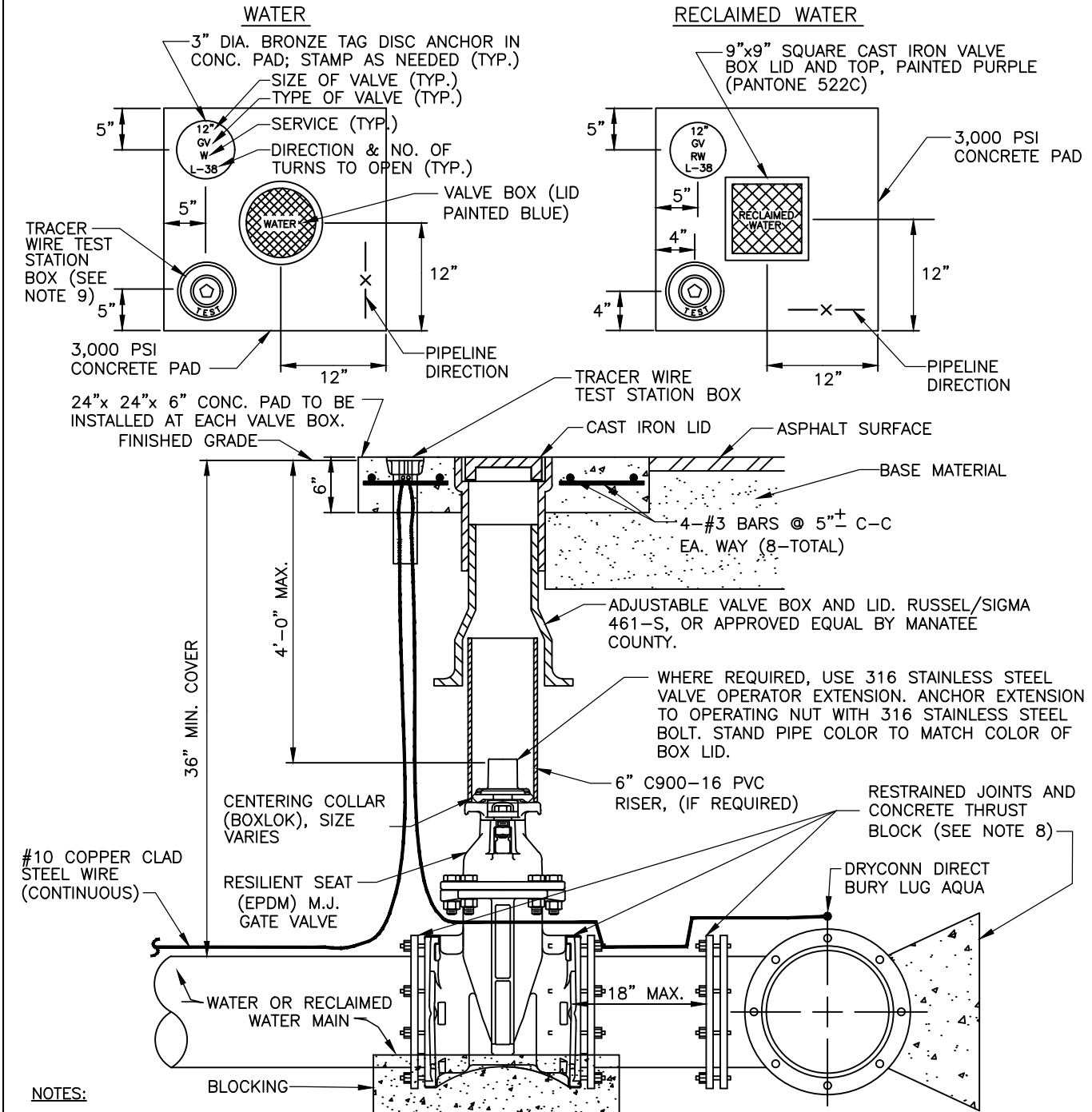
PROJECT #	404-6088770
SURVEY #	14Y13314LS
SEC./TWN./RGE	33/34S/17E
VERT. SCALE	1"=2'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 88
SURVEYED	GFY 11/2016
DESIGNED	BLR 03/2017
DRAWN	BLR 03/2017

JOHN S. SHANNON, P.E.
No. 60923
6/4/18
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET 27 OF 33

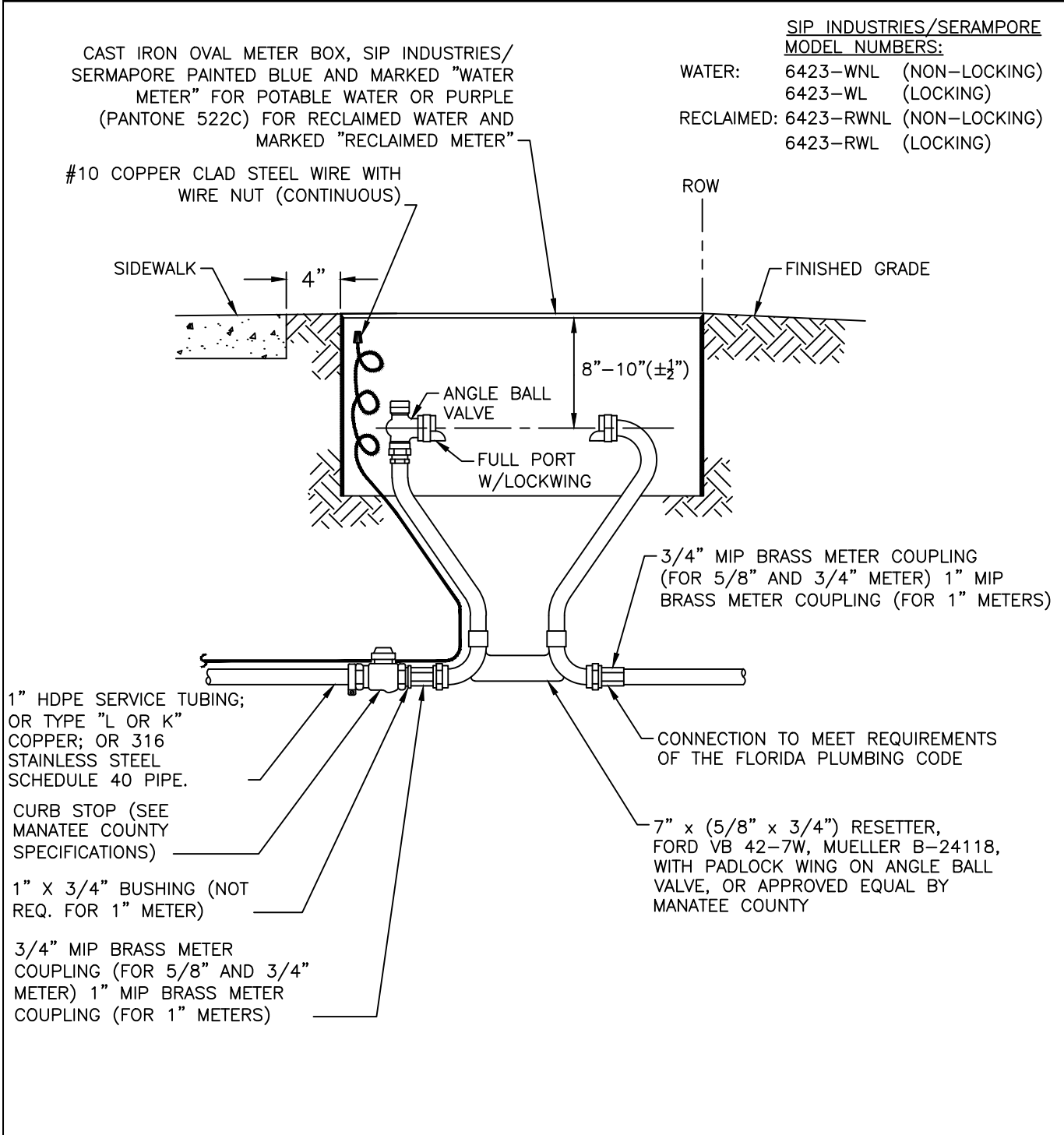
COPYRIGHT 2015 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util_Eng_Design\PROJ\WTR LINE Proj\Water Line-Country Club Heights\DWG\Country Club Heights_P.Design.dwg,27, 6/17/2018 12:24 PM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)





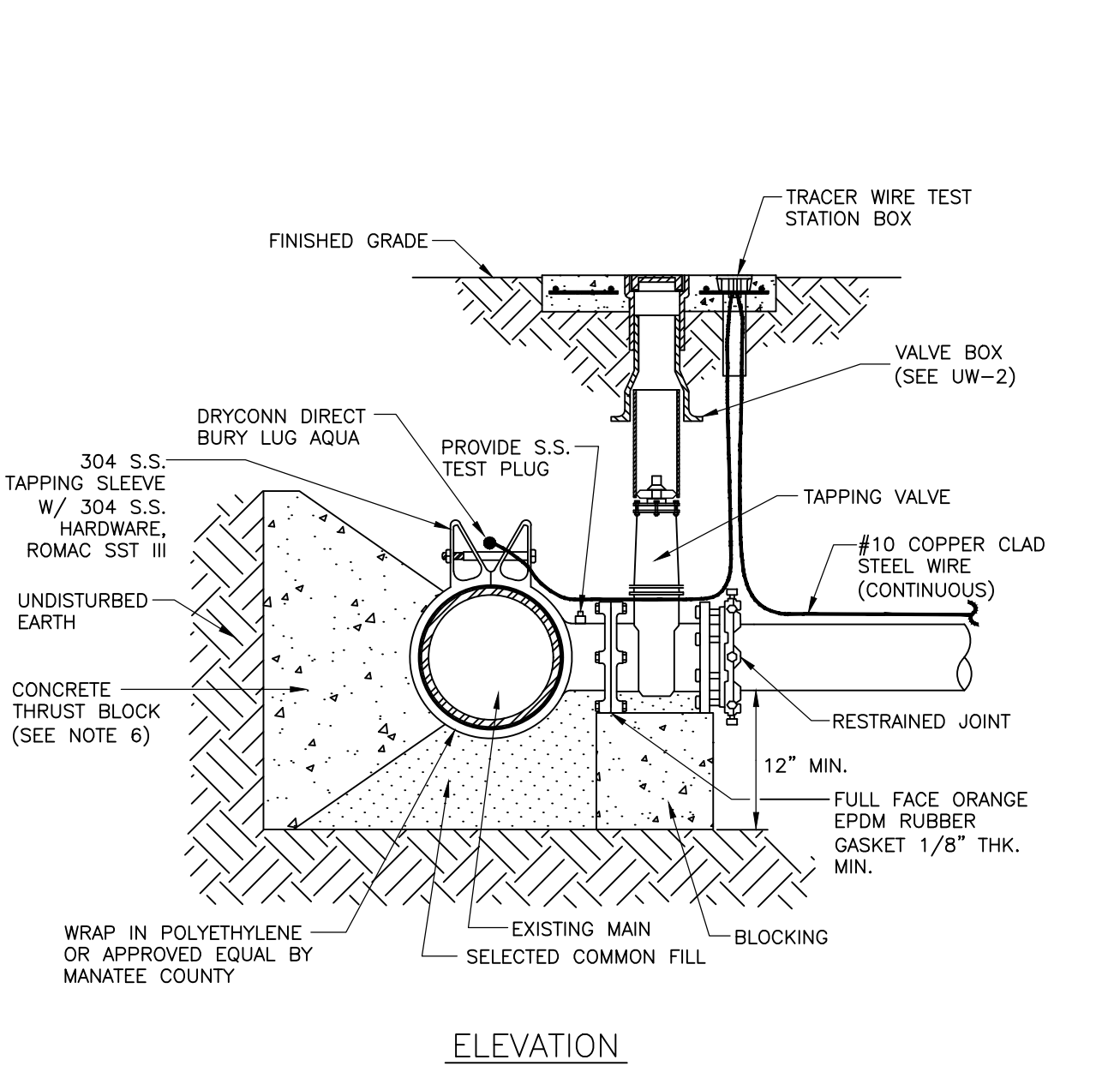
- NOTES:
- "WV" or "RW" to be impressed into the newly-poured concrete curb, along with distance in feet to the valve. If no curb, install a blue disc with "WV" or purple disc with "RW" using a 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
 - ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
 - VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS, CURBS, OR GUTTERS.
 - PRECAST CONCRETE PADS SHALL NOT BE USED.
 - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 - PIPELINE DIRECTION TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
 - TRACER WIRE TEST STATION BOX IS NOT REQUIRED IN VALVE BOX PAD IF THE GATE VALVE IS LOCATED WITHIN 200 FEET OF A WATER SERVICE, BLOW-OFF, BACKFLOW PREVENTER OR FIRE HYDRANT THAT HAS A TRACER WIRE BOX.
 - WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH SPECIFIED FOR "TEES."
 - USE BINGHAM & TAYLOR P202CNG FOR NORMAL YARD SERVICE, WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC, USE P252RD. 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.
 - REFER TO SECTION 1.11 GATE VALVES FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		GATE VALVE, BOX, LID AND TAG	UW-2
REV. BY	DATE		
DATE OF APPROVAL			



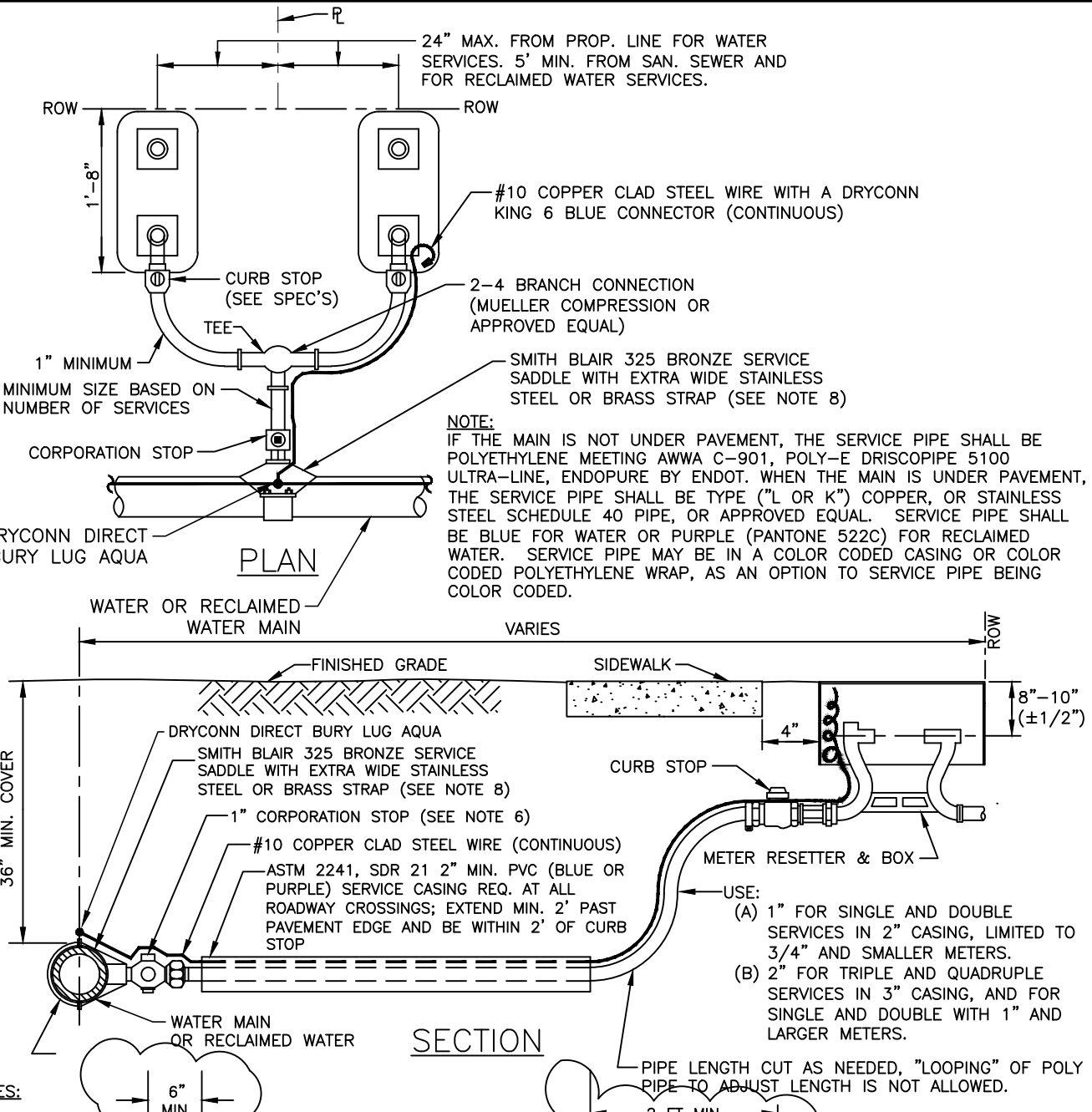
- NOTES:
- FORD 40 SERIES RESETTERS VB43 AND VB44 OR EQUAL FOR 3/4" OR 1" METERS ALSO ALLOWED.
 - METER BOX AND RESETTER ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS. WITH PRIOR APPROVAL BY COUNTY, METER BOXES WITH LOCKABLE LIDS MAY BE LOCATED IN SIDEWALKS.
 - FOR COMPLETE SERVICE CONNECTION ASSEMBLY, SEE DETAIL TYPICAL SERVICE CONNECTION.
 - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE R/W IS ONE FOOT (CUL-DE-SAC W/ MEDIAN) A 10-FOOT-WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
 - 3" MINIMUM CLEARANCE FROM LANDSCAPING PLANTS AND 10' MIN. CLEARANCE FROM TREES TO EDGE OF METER, CLEAR ACCESS OPENING TO STREET.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		METER BOX ASSEMBLY FOR 5/8" X 3/4", 3/4" & 1" METERS	UW-17
REV.	DATE		
		DATE OF APPROVAL	



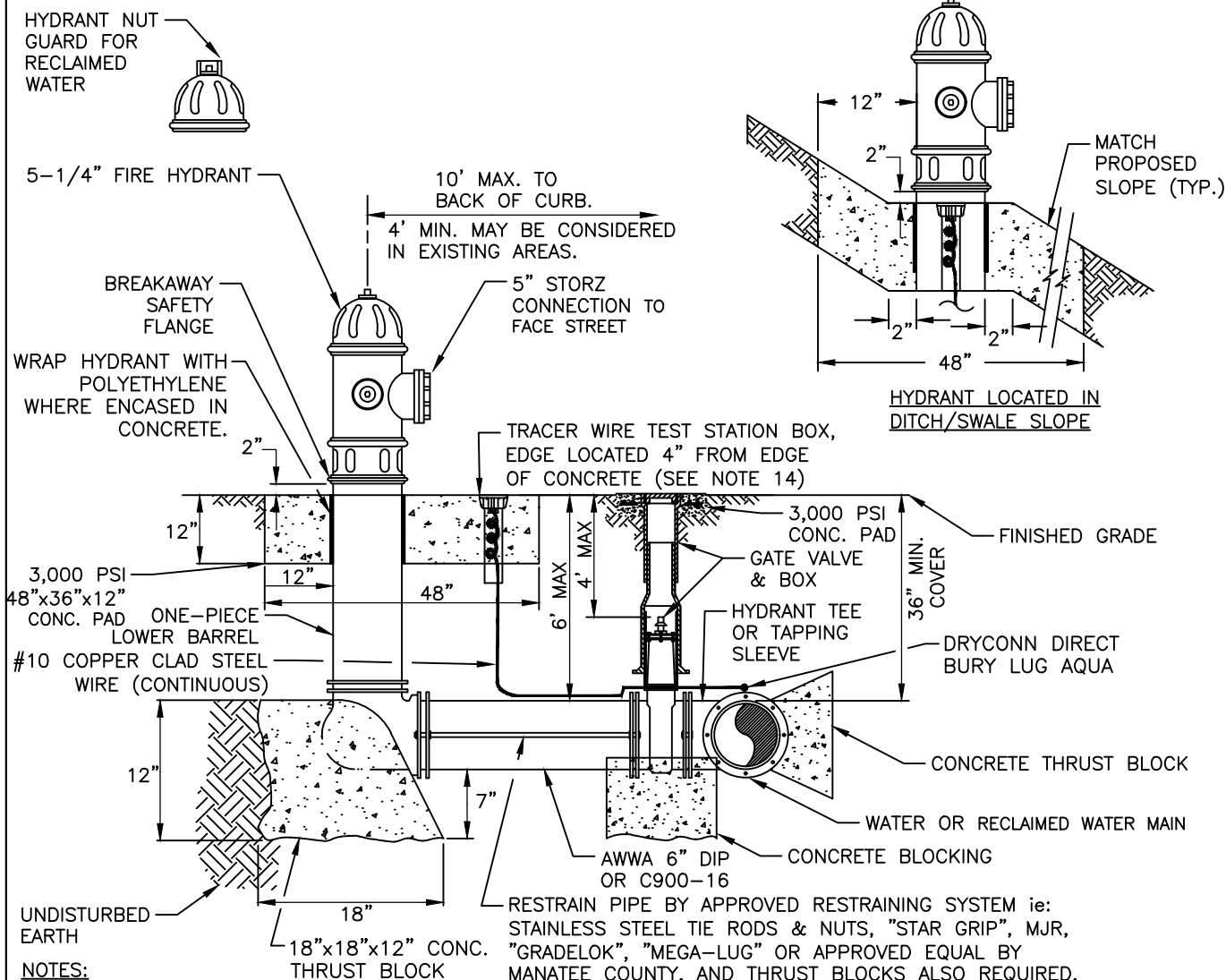
- NOTES:
- PRIOR TO TAPPING, CONTRACTOR TO DEMONSTRATE 60 MINUTE HYDROSTATIC TEST OF THE TAPPING SLEEVE AND VALVE WITH NO LOSS OF 180 PSI PRESSURE FOR WATER AND RECLAIMED WATER.
 - ALL FITTINGS TO BE WRAPPED WITH 20 MIL VISQUEEN AT THRUST BLOCK.
 - ALL TAPS ON CONCRETE WATER MAINS AND LARGER THAN 12" ARE TO BE MADE BY A MANATEE COUNTY APPROVED TAPPING COMPANY. ALL MATERIALS TO BE SUPPLIED BY THE CONTRACTOR.
 - ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS GREATER) FROM A JOINT OR FITTING.
 - CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK IN AND A BACK-HOE TO LOWER TAPPING MACHINE INTO THE HOLE.
 - WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH SPECIFIED FOR "TEES."
 - TRACER WIRE TEST STATION BOX IS REQUIRED AT CONNECTIONS TO EXISTING MAINS.
 - FOR HDPE MAINS, USE ROMAC SST-H STAINLESS STEEL TAPPING SADDLE AND HARDWARE.
 - SEE SECTION 1.11 TAPPING SLEEVES AND VALVES FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			TAPPING SLEEVE AND VALVE (WATER/RECLAIM)	UW-4
BY	DATE			
		DATE OF APPROVAL		



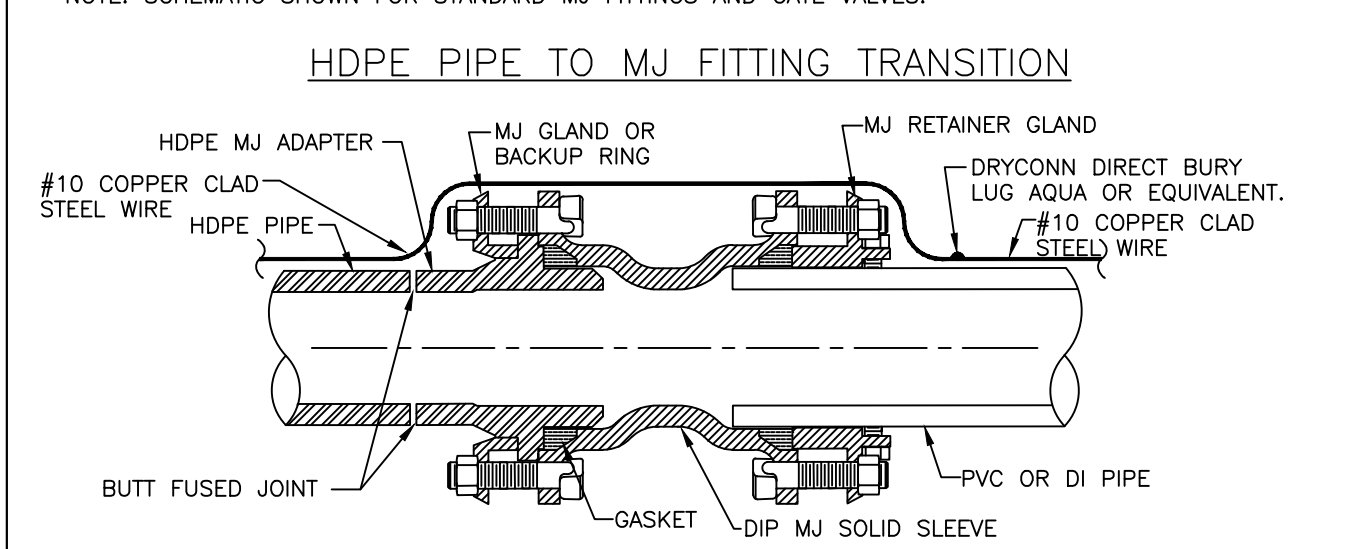
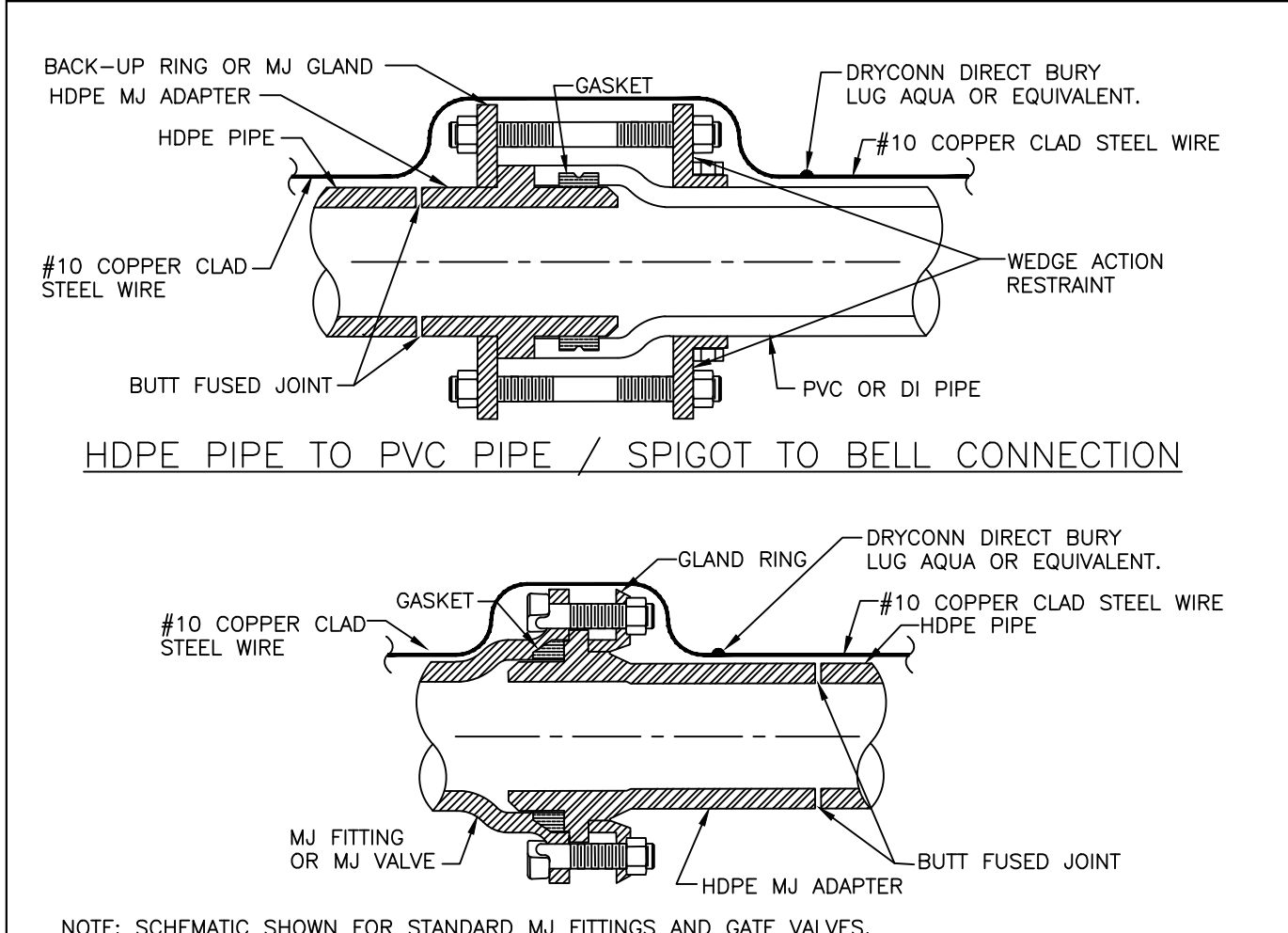
- NOTES:
- ALL SERVICE TAPS TO BE LOCATED IN THE FIELD. TAPS SHALL BE NO CLOSER THAN 2'-0" STAGGERED INTERVALS OR WITHIN 2'-0" FROM BELL OR SPIGOT ENDS.
 - METER BOXES & RESETTERS ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS. WITH PRIOR APPROVAL BY COUNTY, METER BOXES WITH LOCKABLE LIDS MAY BE LOCATED IN SIDEWALKS.
 - "WM" or "RW" to be impressed into the newly poured concrete curb along with distance in feet to the meter. If no curb, install a blue disc with "WM" or a purple disc with "RW" and a 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (IN FEET) FROM THE DISC TO THE METER.
 - #10 COPPER CLAD STEEL COLOR CODED WIRE SHALL BE INSTALLED WITH WATER AND RECLAIMED MAIN AND ALL SERVICES. SERVICE WIRE SHALL BE CONNECTED TO THE TRACER WIRE ALONG THE MAIN, ON DOUBLE SERVICES, WHEN SECOND METER IS OVER 8 FT APART, TWO TRACER WIRES SHALL BE INSTALLED; ONE FOR EACH METER.
 - WATER AND RECLAIMED WATER SERVICE LINES TO BE 5" MINIMUM FROM SEWER SERVICE PIPES.
 - FOR 2" SERVICES REPLACE CORPORATION STOP WITH 2" RESILIENT WEDGE FIP GATE VALVE W/BOX, LID & TAG.
 - WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE ROW IS ONE FOOT (CUL-DE-SAC W/MEDIAN) A 10-FOOT-WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
 - FOR HDPE MAINS, USE ROMAC 306H STAINLESS STEEL OR EQUIVALENT SADDLE.
 - TEMPORARY RESIDENTIAL USE CAN BE PROVIDED BY CONTACTING THE UTILITY CUSTOMER SERVICE. SEE DETAIL UW-24.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL SERVICE CONNECTION	UW-19
BY	DATE		
DATE OF APPROVAL			



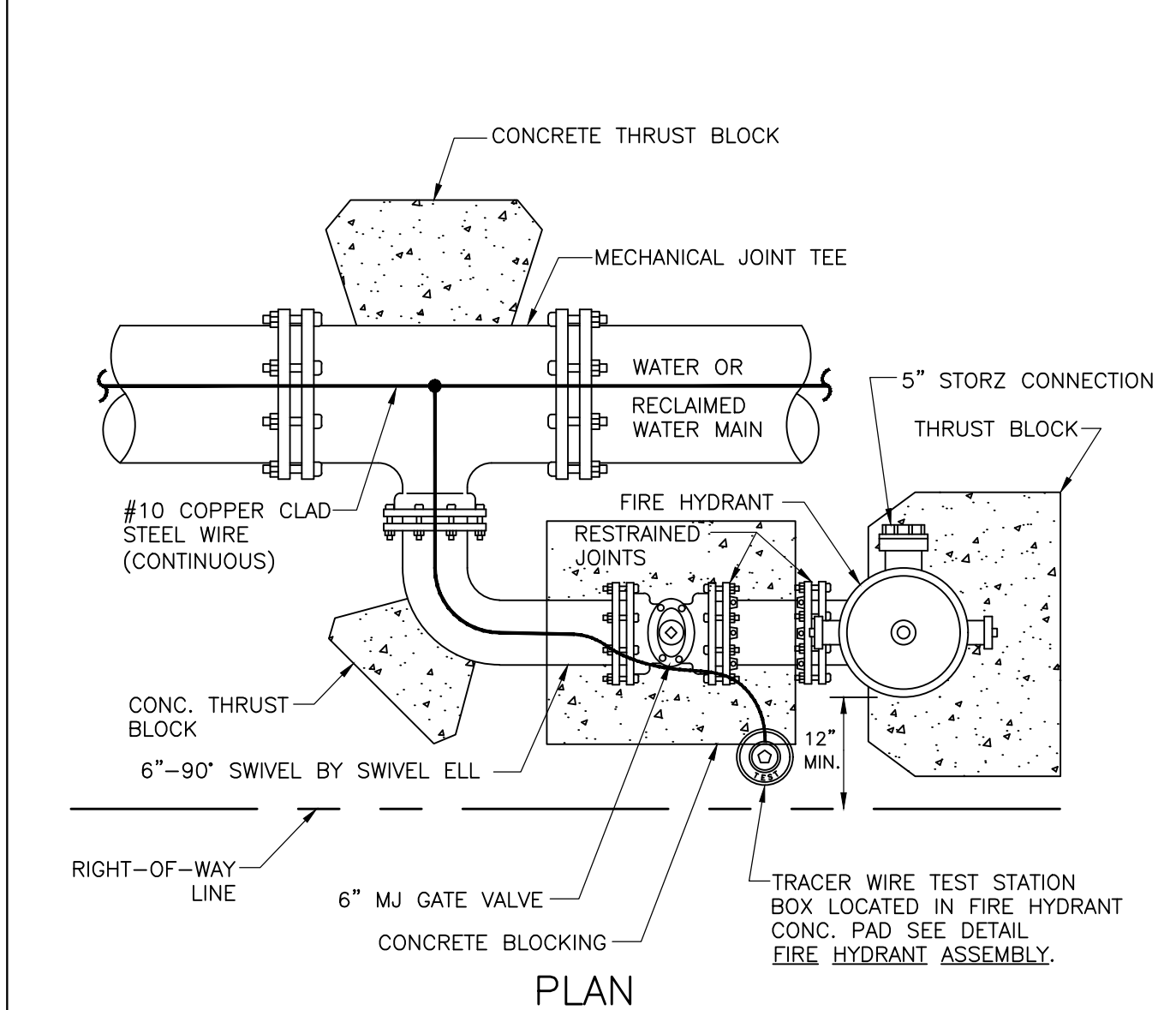
- NOTES:
- WEEPHOLES SHALL BE EXCLUDED FROM THE FIRE HYDRANT.
 - FIRE HYDRANTS SHALL BE A MINIMUM OF 6' OFF EDGE OF PAVEMENT AND 10' MAX. FROM BACK OF CURB. WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, FIRE HYDRANT SHALL BE LOCATED BETWEEN SIDEWALK AND RIGHT-OF-WAY LINE.
 - HYDRANTS SHALL BE FUSION BONDED EPOXY COATED SAFETY YELLOW FOR WATER AND PURPLE (PANTONE 522C) FOR RECLAIMED WATER. HYDRANT SHALL BE DUCTILE IRON CONSTRUCTION.
 - FIRE HYDRANTS SHALL BE PLACED SO THAT STORM WATER FLOWS AWAY FROM THE HYDRANT.
 - FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR ALL WATER LINES.
 - FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
 - RAISED REFLECTIVE PAVEMENT MARKER (BLUE) FOR POTABLE WATER (PURPLE) FOR RECLAIMED WATER SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
 - ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.
 - FIRE HYDRANT VALVE SHALL BE FASTENED DIRECTLY TO TEE.
 - IN-LINE VALVES SHOULD BE LOCATED AT HYDRANT TEES.
 - HYDRANTS SHALL BE LOCATED ON SAME SIDE OF ROAD AS WATER OR RECLAIMED MAIN UNLESS OTHERWISE APPROVED.
 - THERE MUST BE A CLEARANCE OF 7 1/2 FEET FROM FRONT AND BOTH SIDES, AND FOUR FEET TO THE REAR OF THE HYDRANT, TO ABOVE GRADE OBSTRUCTIONS INCLUDING POSTS, FENCES, TREES, ETC. PER THE FLORIDA FIRE PREVENTION CODE.
 - SEE STANDARD DETAIL GATE VALVE, BOX, LID AND TAG.
 - SHOULD THE FIRE HYDRANT'S CONCRETE PAD OVERLAP A SIDEWALK, THE TRACER WIRE TEST STATION BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.
 - IF A HYDRANT IS LOCATED ON THE SLOPE OF A DITCH OR SWALE, THE CONCRETE PAD SHALL CONFORM TO THE FINISH GRADE/SLOPE, THE CONCRETE PAD SHALL BE LEVEL 2' BEHIND & IN FRONT OF THE HYDRANT.
 - SEE SECTION 1.11 HYDRANTS FOR FURTHER DETAILS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		FIRE HYDRANT ASSEMBLY	UW-5
REV. BY	DATE		
DATE OF APPROVAL			



- NOTES:
- ONE #10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRE SHALL BE SECURED TO THE PIPE FOR ALL TYPES OF PIPELINE INSTALLATIONS. THE TRACE WIRE SHALL HAVE A MINIMUM 30-MILS OF POLYETHYLENE INSULATION.

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



- NOTES:
- THIS DETAIL FOR USE ONLY WHEN THE WATER MAIN IS LOCATED TOO CLOSE TO THE RIGHT-OF-WAY LINE TO USE THE FIRE HYDRANT ASSEMBLY DETAIL.
 - SEE STANDARD DETAIL GATE VALVE, BOX, LID AND TAG.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT				FIRE HYDRANT WITH LOCKED 90° BEND	UW—6
REV. BY	DATE				
		DATE OF APPROVAL			

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DR-18 PVC PIPE																			
MAIN PIPE SIZE	HORIZ. BENDS			TEES								REDUCERS				PLUGS & VALVES			
	90°	45°	22.5°	SIZE				LENGTH				SIZE					LENGTH		
24	90	38	18	X24 169	X20 132	X16 90	X12 56	X10 38	X8 6	X20 64	X16 117	X12 158	X10 158		214				
20	78	32	16	X20 141	X16 101	X12 53	X10 24	X8 1	X6 1	X16 65	X12 115	X10 149	X8 149		184				
16	66	27	13	X16 111	X12 67	X10 41	X8 12	X6 1	X4 1	X12 64	X10 107	X8 111	X6 111		151				
12	52	22	10	X12 80	X10 56	X8 31	X6 1	X4 1	X3 1	X10 58	X8 62	X6 86	X4 86		118				
10	44	18	9	X10 63	X8 40	X6 22	X4 1	X3 1	X2 1	X8 33	X6 61	X4 81	X3 81		100				
8	37	15	7	X8 49	X6 18	X4 1	X3 1	X2 1	X1 1	X6 35	X4 60	X3 60	X2 60		83				
6	29	12	6	X6 29	X4 1	X3 1	X2 1	X1 1	X0 1	X4 33	X3 53	X2 53	X1 53		63				
4	21	8	4	X4 12	X3 1	X2 1	X1 1	X0 1	X-1 1						45				

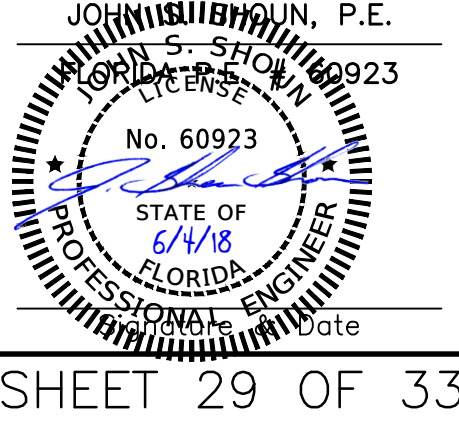
- NOTES:
- RESTRAIN 11.25° BENDS 50% OF LENGTH FOR 22.5° BENDS.
 - ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
 - ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
 - PIPE SIZES ARE GIVEN IN INCHES.
 - RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
 - LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
 - THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
 - RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL RESTRAINED LENGTHS FOR PIPE.
 - ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.18.E OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT						RESTRAINED LENGTHS FOR PVC PIPE	UG-8
REV. BY	DATE	_____ DATE OF APPROVAL					



COUNTRY CLUB HEIGHTS WATERLINE REPLACEMENT DETAILS

DATE	05/29/18				
BY	JSS				
REVISION DESCRIPTION	UW-19 UPDATED				
NO.	1				
PROJECT #	404-6088770				
SURVEY #	14Y13314LS				
SEC./TWN./RGE	33/34S/17E				
SCALE	VARIES				
VERTICAL DATUM	NAVD 88				
SURVEYED	GFY	BY	DATE		
DESIGNED	BLR	03/2017			
DRAWN	BLR	03/2017			



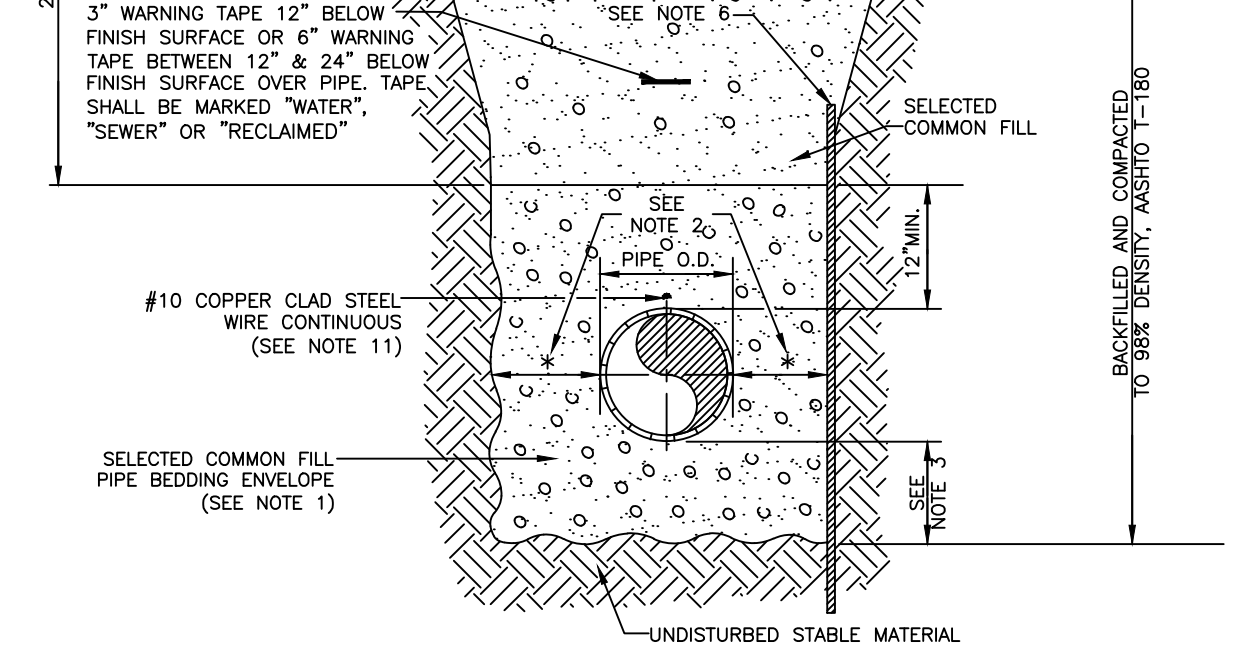
MAIN PIPE SIZE	HORIZ. BENDS			TEES												REDUCERS				PLUGS & VALVES
	90°	45°	22.5°	SIZE LENGTH												SIZE LENGTH				
36	142	59	28	x36	x30	x24	x20	x16	x12	x10	x8	x6	x4	x30	x24	x20	x16	359	453	
30	124	51	25	x30	x33	x24	x20	x16	x12	x10	x8	x6	x4	x24	x16	x12	x10	391	391	
24	106	44	21	x24	x20	x16	x12	x10	x8	x6	x4	x3	x2	x20	x16	x12	x10	327	327	
20	92	38	15	x20	x22	x16	x12	x10	x8	x6	x4	x3	x2	x16	x12	x10	x8	281	281	
16	77	32	15	x16	x17	x12	x10	x8	x6	x4	x3	x2	x1	x12	x8	x6	x4	230	230	
12	61	25	12	x12	x12	x8	x6	x4	x3	x2	x1	x1	x1	x10	x8	x6	x4	181	181	
10	52	22	10	x10	x10	x8	x6	x4	x3	x2	x1	x1	x1	x8	x6	x4	x3	153	153	
8	44	18	9	x8	x8	x6	x4	x3	x2	x1	x1	x1	x1	x6	x4	x3	x2	128	128	
6	34	14	7	x6	x6	x4	x3	x2	x1	x1	x1	x1	x1	x4	x3	x2	x1	98	98	
4	24	10	5	x4	x4	x3	x2	x1	x1	x1	x1	x1	x1	x3	x2	x1	x1	69	69	

[illegible]

1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

RESTRAINED
LENGTHS FOR DIP

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. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
6. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISH GRADE OR 12" BELOW SUBGRADE.
7. BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL.
8. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT.
9. IF THE DRIVEWAY IS 12' OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (¾" WIDE AND 1½" DEEP) AFTER THE CONCRETE HAS SET.
10. IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT.
11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING	UG-14
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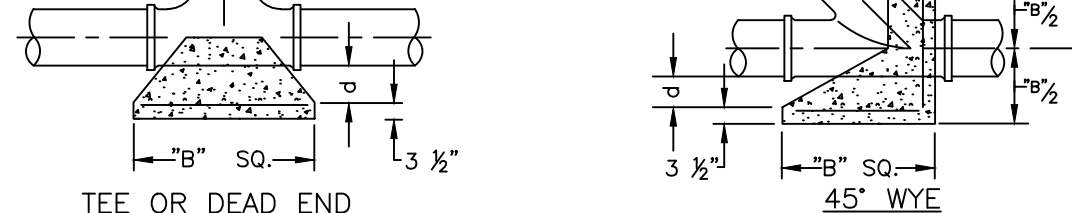


1. SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

RESTRAINED LENGTHS FOR PIPE	UG-10
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	REINFORCEMENT MAT SCHEDULE FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY
---	---

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 WEIGHT=180 PSI WITH AN ALLOWABLE SOIL BEARING=2000 PSF, CONCRETE STRENGTH f_c =3000 PSI, REINFORCEMENT f_s =60.0 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. THRUST BLOCKS SHALL BE USED IN SITUATIONS WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE BOTH REQUIRED.

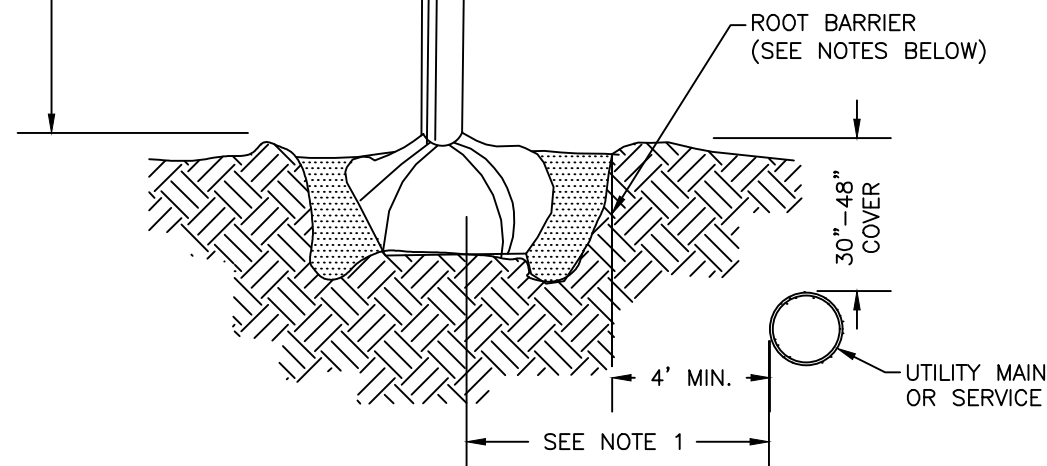


CONCRETE THRUST BLOCKS	UG-7
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1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



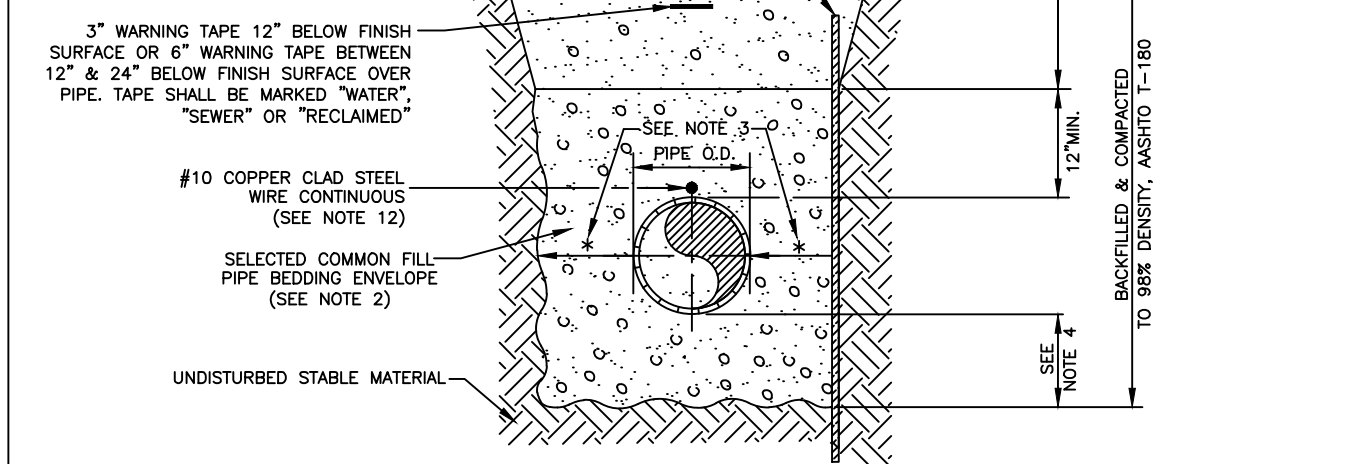
TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
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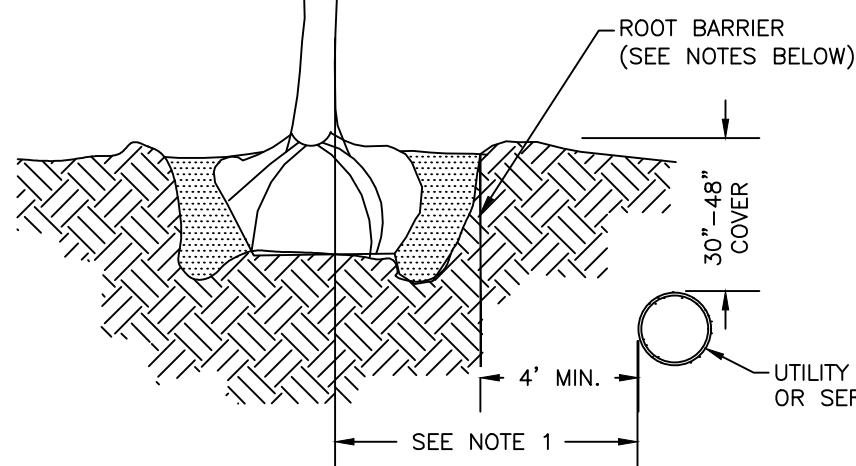
1. THIS DISTANCE SHALL BE 7' MINIMUM WITH ROOT BARRIER AND 10' MINIMUM IF NO ROOT BARRIER IS USED
2. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL MAINS AND SERVICES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH MANATEE COUNTY AND INSPECTED BY MANATEE COUNTY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER OR EQUIVALENT.
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

TYP. SMALL TREE OR PALM TREE WITH ROOT BARRIER	UG-19
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1. BITUMINOUS PAVEMENT SHALL BE REMOVED IN CLEAN STRAIGHT LINES BY SAW CUTTING, WHERE BITUMINOUS PAVEMENT ADJOINS A TRENCH, THE EDGES ADJACENT TO THE TRENCH SHALL BE TRIMMED TO A NEAT STRAIGHT LINE BEHIND SURFACING TO ENSURE THAT ALL AREAS TO BE RESURFACED ARE ACCESSIBLE TO ROLLERS OR TAMPERS USED TO COMPACT THE SUB-GRADE OR PAVING MATERIALS.
2. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. 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.
4. TYPICALLY 4" TO 6".
5. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 2 INCH S-I, WHICHEVER IS GREATER.
7. NOT USED
8. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
9. NEW BASE SHALL MATCH EXISTING; OR BE CRUSHED CONCRETE, 8" MIN. THICKNESS, LBR ≥150, WHICHEVER IS GREATER.
10. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
11. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
12. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
13. NOTES 5, THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A LOCAL ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

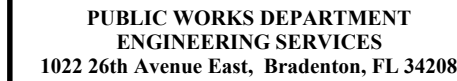


TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-12 MOD.
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1. THIS DISTANCE SHALL BE 10 MINIMUM WITH ROOT BARRIER AND 15 MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL MAINS AND SERVICES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH MANATEE COUNTY AND INSPECTED BY MANATEE COUNTY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER OR EQUIVALENT.
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
6. LARGE PALM TREES INCLUDE ROYAL, WASHINGTONIAN, BISMARCK AND SIMILAR SIZED SPECIES.

TYP. CANOPY TREE, LARGE PALM OR EXOTIC TREE WITH	UG-20
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DETAILS

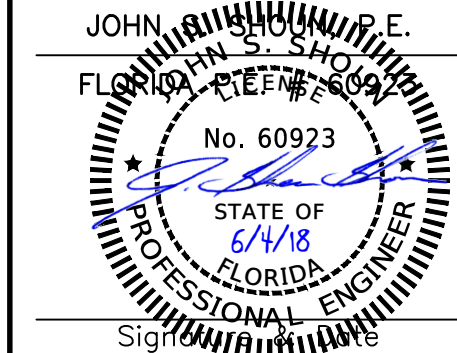
BY	DATE
JSS	5/17/18

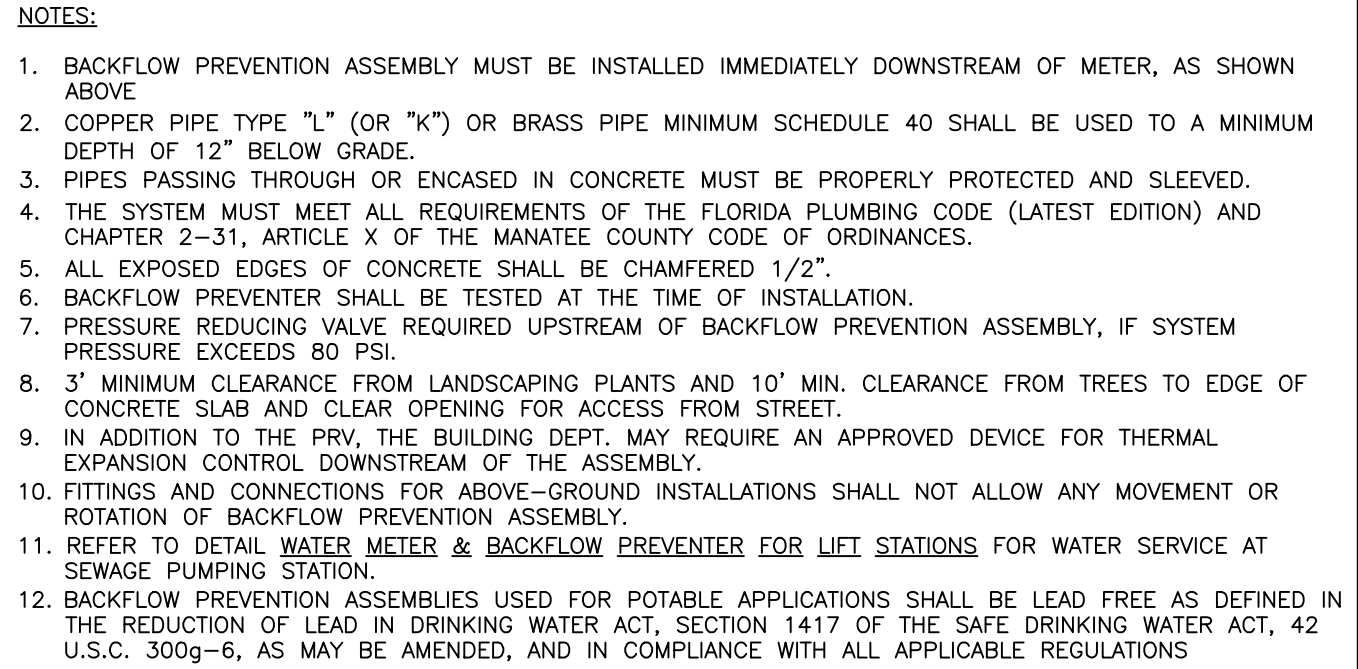
SCRIPTON
-12 MOD.

REVISION DE	
UPDATED UO	

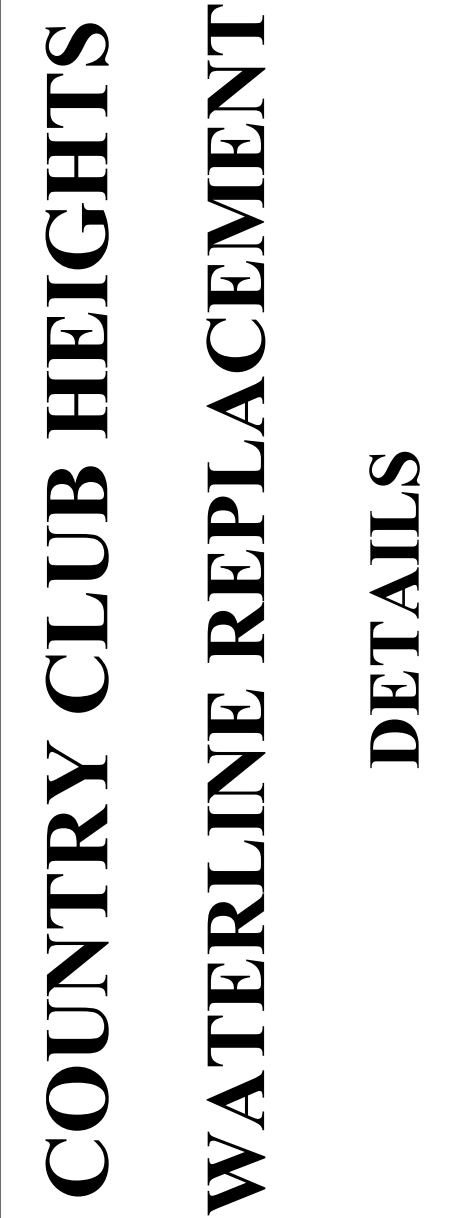
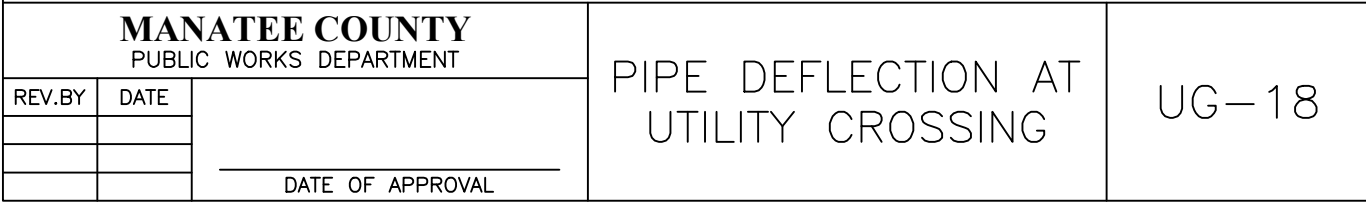
PROJECT #	404-6088770
SURVEY #	14Y13314LS
SEC./TWN./RGE	33/34S/17E
SCALE	VARIES

	BY	DATE
SURVEYED	GFY	11/201
DESIGNED	BLR	03/201
DRAWN	BLR	03/201

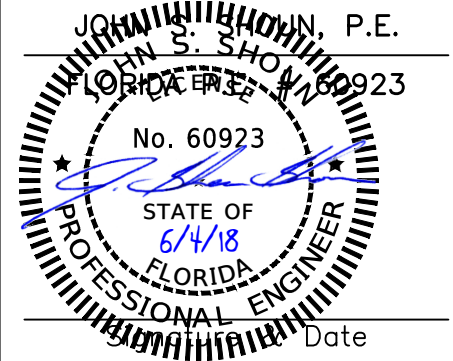




MANATEE COUNTY PUBLIC WORKS DEPARTMENT		3/4" & 1" BACKFLOW PREVENTER	UW-12
REV. BY	DATE		
DATE OF APPROVAL _____			



NO.	REVISION DESCRIPTION	BY	DATE
1	ADDED TWO DETAILS	JSS	5/17/18
PROJECT #		404-6088770	
SURVEY #		14Y13314LS	
SEC./TWN./RGE		33/34S/17E	
SCALE		VARIES	
VERTICAL DATUM		NAVD 88	
	BY	DATE	
SURVEYED	GFY	11/2018	
DESIGNED	BLR	03/2017	
DRAWN	BLR	03/2017	



THIS PAGE IS COMPROMISED OF INFORMATION EXTRACTED FROM THE ORIGINAL TOPOGRAPHIC SURVEY, THAT SURVEY IS AVAILABLE UPON REQUEST.

Topographic Survey

of
In Section 33, Township 34 South, Range 17 East
Manatee County, Florida

DATA SOURCES

- Rosedale Manor Subdivision, recorded in Plat Book 2, Page 89.
- Spinney and Tanski Subdivision, recorded in Plat Book 2, Page 110.
- Bissell Subdivision to Bradentown, recorded in Plat Book 2, Page 124.
- Country Club Court Subdivision, recorded in Plat Book 3, Page 11.
- Country Club Court Subdivision, Second Section, recorded in Plat Book 4, Page 12.
- Poinciana Park Subdivision, recorded in Plat Book 8, Page 68.
- Poinciana Park Subdivision, Second Addition, recorded in Plat Book 8, Page 118.
- Country Club Heights Subdivision recorded in Plat Book 9, Page 14.
- Tomes Subdivision recorded in Plat Book 10 Page 70.
- Country Club Heights Subdivision, First Addition, recorded in Plat Book 15, Page 50.
- Re Subdivision of Golf Club Gardens, recorded in Plat Book 8, Page98.

SURVEYOR'S REPORT

- Unless noted, locations limited to – observable, above ground improvements, no underground improvements have been located except those shown hereon. Some features may be exaggerated for clarity, dimensions shown supersede scaled dimensions.
- This survey does not certify or warranty: title, zoning, easements, or freedom of encumbrances.
- There are no visible encroachments except as shown. The location and existence of underground utilities and underground foundations or any other pertinent attributes to subject property (if any) not abstracted as part of this survey, except as shown.
- No instruments of record reflecting easements, rights–of–way and/or ownership are known by, or were furnished to this surveyor except as shown hereon.
- Not valid without the original raised seal and signature of the Florida Registered Surveyor & Mapper shown hereon.
- Parcel information shown hereon was gathered from the Manatee County Geographic Information Systems property locator web site.
- This survey does not reflect or determine ownership.
- Bearings and coordinates (if any) shown are based on State Plane Coordinates, Florida West Zone–NAD '83(2011), and were derived using the Florida Department of Transportation Virtual Reference Station (VRS) network and checked against National Geodetic Survey (NGS) shared solution for NGS benchmarks COB1024 (PID#D06908) which has published coordinates of (N) 1,145,898.70', (E) 463,015.26', and COB1025 (PID#D06908) which has published coordinates of (N) 1,145,672.92' (E) 460,304.67'.
- The elevations shown hereon are based on National Geodetic Survey (NGS) benchmark COB1024 (NGS PID#D06908), which has a published elevation of 22.41' feet, North American Vertical Datum of 1988 (NAVD88), and NGS benchmark COB1025 (NGS PID#D06908), which has a published elevation of 23.93' feet NAVD88. The conversion factor from NAVD88 to National Geodetic Vertical Datum of 1929 (NGVD29) is (+)0.981', calculated with 'CORPSCON' program.
- Adjoining private properties parcels are subject to all restrictions, rights of way and easements of record, if any.
- Reuse of documents: this document is an instrument of service in respect of the project to which it applies and any reuse without written verification or adaptation by George F. Young, inc. (GFY) for the specific purposes intended will be at the user's sole risk and without liability or legal exposure to GFY and user shall indemnify and hold harmless GFY from all claims, damages, losses and expenses including attorneys fees arising out of or resulting therefrom. Any such verification or adaptation will entitle GFY to further compensation at rates to be agreed upon by user and GFY.
- The expected use of the land, as classified in the Standards of Practice for Surveyors and Mappers (5J–17–F.A.C.), is urban.
- The purpose of this topographic survey was to obtain existing conditions for the design of the replacement of water lines in the Country Club Heights neighborhoods.
- The last field date of the survey: 2nd December 2016.
- Property Identification Number(s) (PID), if any shown hereon, was taken from the Manatee County GIS website and/or the Manatee County Property Appraiser website.
- Utility designation as shown and mapped, performed by George F. Young, Inc.
- This is not a BOUNDARY SURVEY. Right–of–way lines as shown were "best fit" to to found property monuments.

HORIZONTAL CONTROL TABLE

13th AVE W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L1	2600.000			S88° 58' 16.01"E		40+00.00	1147220.15	460311.22	66+00.00	1147173.46	462910.80

14th–16th AVE W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L2	649.261			N89° 05' 54.81"W		80+00.00	1146200.95	461362.38	86+49.26	1146211.16	460713.20
C1	117.700	75.000	089.92	N44° 08' 26.14"W	105.99	86+49.26	1146211.16	460713.20	87+66.96	1146287.22	460639.39
L3	468.734			N00° 49' 02.53"E		87+66.96	1146287.22	460639.39	92+35.70	1146755.91	460646.07
C2	94.468	60.000	090.21	N45° 55' 20.79"E	85.01	92+35.70	1146755.91	460646.07	93+30.16	1146815.04	460707.14
L4	378.837			S88° 58' 20.95"E		93+30.16	1146815.04	460707.14	97+09.00	1146808.25	461085.92
C3	117.810	75.000	090.00	N46° 01' 39.05"E	106.07	97+09.00	1146808.25	461085.92	98+26.81	1146881.89	461162.25
L5	100.142			N01° 01' 39.05"E		98+26.81	1146881.89	461162.25	99+26.95	1146982.02	461164.05
C4	109.956	70.000	090.00	N46° 01' 39.05"E	98.99	99+26.95	1146982.02	461164.05	100+36.91	1147050.75	461235.29
L6	493.093			S88° 58' 20.95"E		100+36.91	1147050.75	461235.29	105+30.00	1147041.91	461728.31

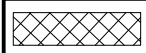
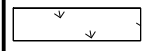
15th AVE W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L7	2709.478			S89° 07' 30.92"E		115+00.00	1146549.73	460326.25	142+09.48	1146508.36	463035.41

17th AVE W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L8	2749.991			S89° 15' 59.07"E		0+00.00	1145877.80	460291.26	27+49.99	1145842.59	463041.02

36th ST W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L9	749.619			N00° 53' 18.47"E		70+00.00	1146496.42	462507.70	77+49.62	1147245.95	462519.32

39th ST W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L10	300.003			N00° 13' 59.45"E		150+00.00	1146973.52	461708.57	153+00.00	1147273.52	461709.79

43rd ST W CONSTRUCTION BASELINE											
Number	Length	Radius	Delta Angle	Line/Chord	Chord Length	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L11	800.000			N00° 51' 14.99"E		30+00.00	1145827.17	460340.46	38+00.00	1146627.08	460352.38

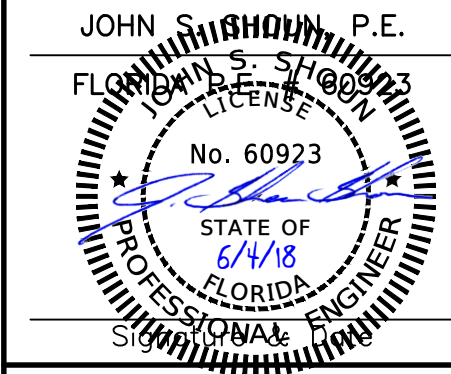
AREA	APROXIMATE PROJECT TOTALS	PROJECT QTYS.	UNITS
	BASE AND RESURFACE ASPHALT	1262	SY
	CONCRETE CURB RESTORATION	565	LF
	SOD RESTORATION	5145	SY
	CONCRETE SIDE WALK RESTORATION	13	SY
	CONCRETE DRIVEWAY RESTORATION	601	SY
	ASPHALT DRIVEWAY RESTORATION	161	SY

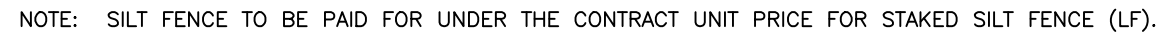


PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

COUNTRY CLUB HEIGHTS WATERLINE REPLACEMENT SURVEY CONTROL

REVISION DESCRIPTION	DATE					
	BY					
NO.						
PROJECT #	404–6088770					
SURVEY #	14Y13314LS					
SEC./TWN./RGE	33/34S/17E					
SCALE	NA					
VERTICAL DATUM	NAVD 88					
	BY	DATE				
SURVEYED	GFY	11/2016				
DESIGNED	BLR	03/2017				
DRAWN	BLR	03/2017				



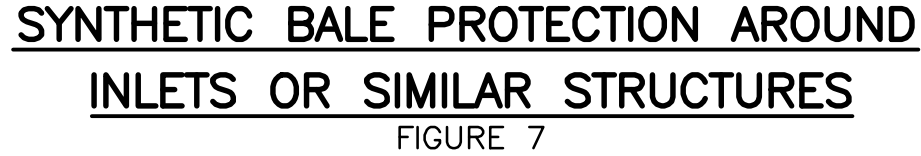


TYPICAL SILT FENCE
FIGURE 2

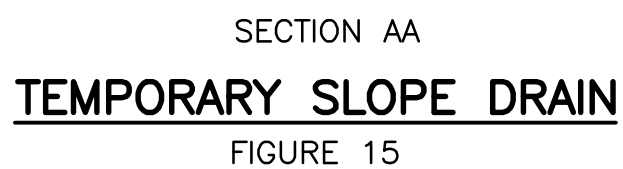
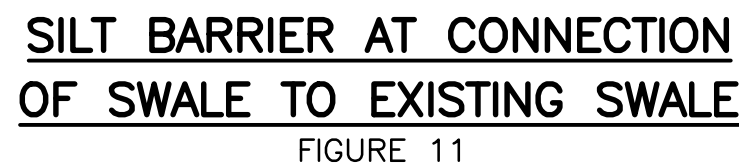
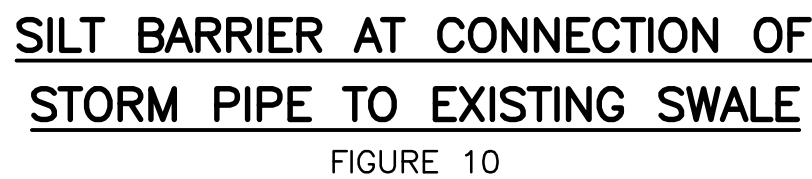
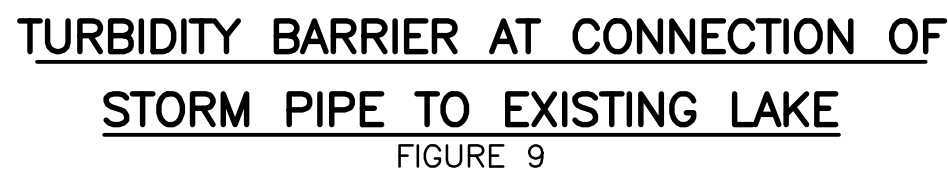


TURBIDITY BARRIERS

FIGURE 4



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



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
PROJECT #		404-6088770		
SURVEY #		14Y13314LS		
SEC./TWN./RGE		33/34S/17E		
SCALE		VARIES		
VERTICAL DATUM		NAVD 88		
		BY	DATE	
SURVEYED		GFY	11/2016	
DESIGNED		BLR	03/2017	
DRAWN		BLR	03/2017	