



VERTICAL DATUM
NAVD 88

100% PLANS

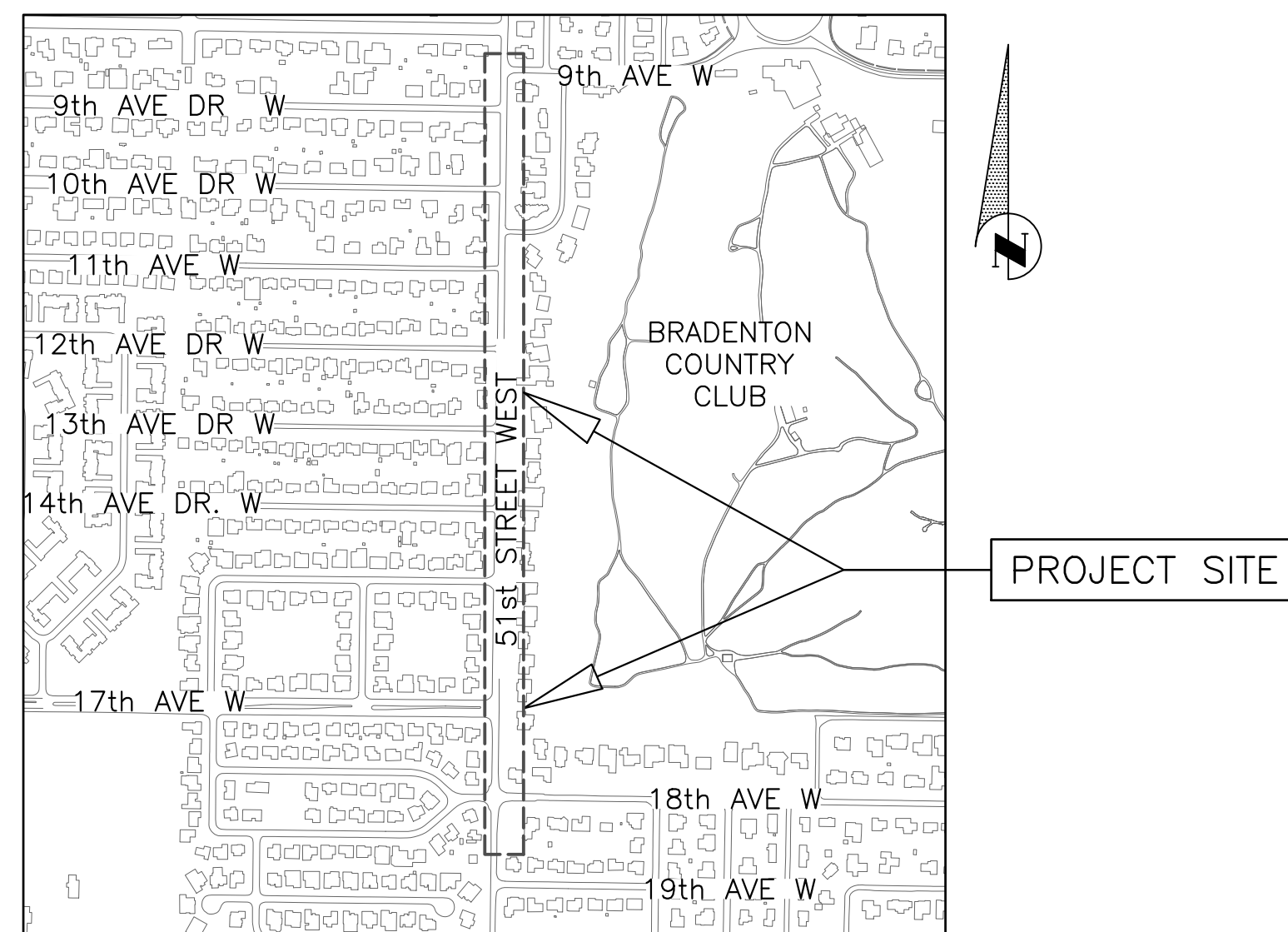
GRAVITY SEWER REPLACEMENT

51st STREET WEST

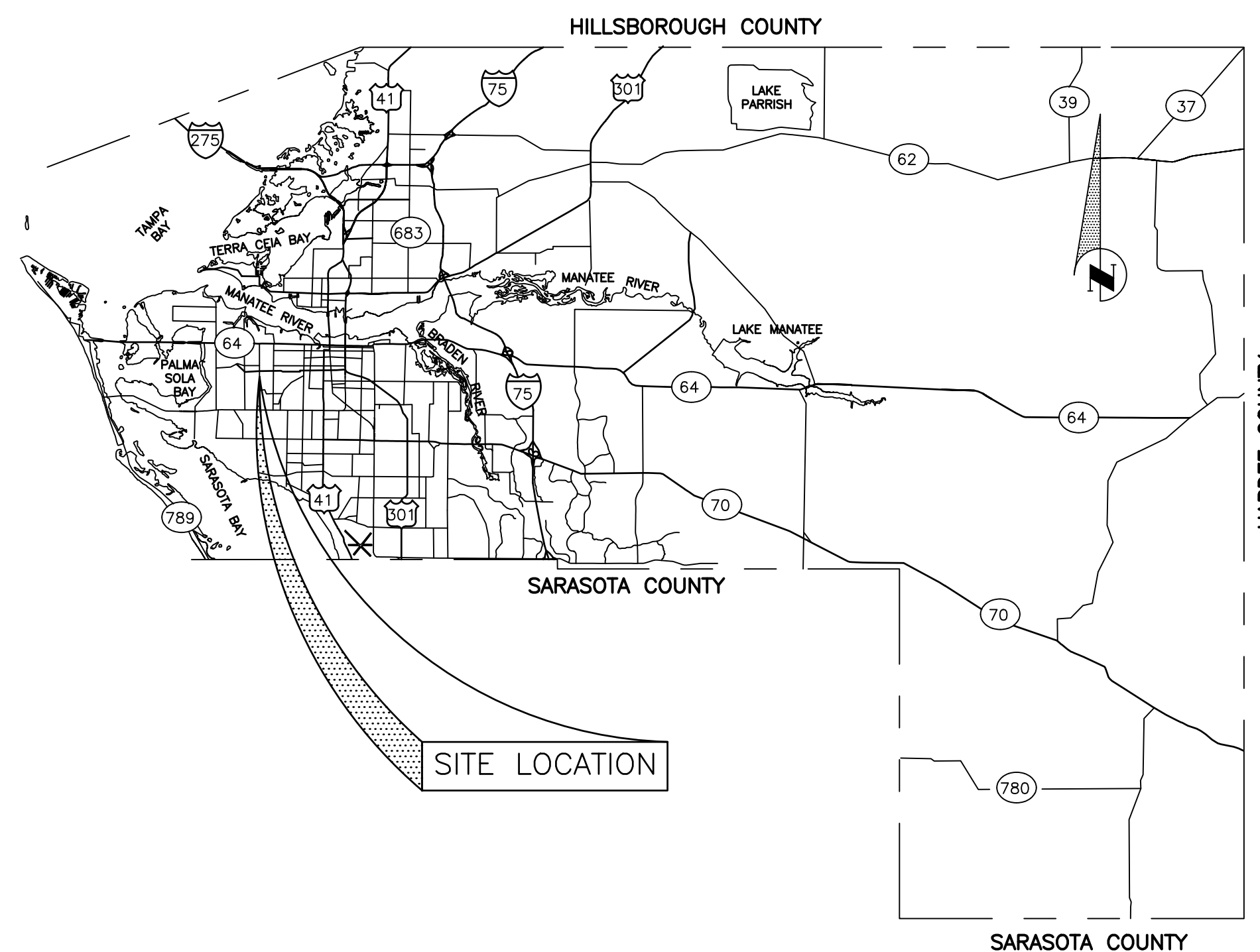
404-6035782

JANUARY 2015

NO.	INDEX OF SHEETS
01	COVER SHEET
02	NOTES & LEGEND
03	EXISTING CONDITIONS, STA 10+00 TO 20+20
04	EXISTING CONDITIONS, STA 20+20 TO 30+40
05	EXISTING CONDITIONS, STA 30+40 TO 40+60
06	EXISTING CONDITIONS, STA 40+60 TO 45+50
07	PROPOSED PLAN & PROFILE, STA 10+00 TO 15+10
08	PROPOSED PLAN & PROFILE, STA 15+10 TO 20+20
09	PROPOSED PLAN & PROFILE, STA 20+20 TO 25+30
10	PROPOSED PLAN & PROFILE, STA 25+30 TO 30+40
11	PROPOSED PLAN & PROFILE, STA 30+40 TO 35+50
12	PROPOSED PLAN & PROFILE, STA 35+50 TO 40+60
13	PROPOSED PLAN & PROFILE, STA 40+60 TO END
14	RESTORATION AREAS, STA 10+00 TO 15+60
15	RESTORATION AREAS, STA 15+60 TO 21+20
16	RESTORATION AREAS, STA 21+20 TO 26+80
17	RESTORATION AREAS, STA 26+80 TO 32+40
18	RESTORATION AREAS, STA 32+40 TO 38+00
19	RESTORATION AREAS, STA 38+00 TO 43+60
20	RESTORATION AREAS, STA 43+60 TO END
21	DETAILS 1
22	DETAILS 2
23	DETAILS 3
24	EROSION CONTROL
25	SURVEY CONTROL



VICINITY MAP
N.T.S.



SITE LOCATION

PROJECT DESCRIPTION

REPLACE APPROX. 3,300 LF OF EXISTING 30" DUCTILE IRON GRAVITY SEWER WITH 30" PVC GRAVITY SEWER, AND REPLACE 10 SEWER MANHOLES ALONG 51ST ST W FROM 9TH AVE W TO 19TH AVE W. TO PREVENT FURTHER DETERIORATION AND POTHOLLING OF THE ASPHALT ROADWAY ABOVE. REPLACEMENT SHALL ALSO INCLUDE EXISTING SEWER LATERALS RECONNECTION AND PIPING BACK TO RIGHT OF WAY AND ASPHALT PAVEMENT, CURB, AND DRIVEWAY REPAIRS.



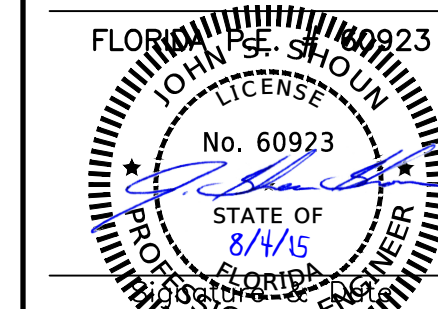
Know what's below
Call before you dig

GRAVITY SEWER REPLACEMENT
51st STREET WEST
COVER SHEET

NO.	REVISION DESCRIPTION	DATE
1		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	VARIES
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT DATE 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

JOHN S. SHOUN, P.E.



GENERAL

- 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
- SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER .
- 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.
- THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "COB 1049" NAVD 1988 ELEVATION 23.94' A VALUE OF (+0.98') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.
- 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.
- 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.
- 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.
- 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.
- 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

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

ENVIRONMENTAL

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
- 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.
- FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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

- 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.

- 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.
- 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.
- 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.
- 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

- ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
- ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.
- 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.
- ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.
- 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.
- 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 LIM 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.
- 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

- 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.
- 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.
- THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
- INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
- PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.
- 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 NOTES AND PROFILES.
- ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
- ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
- 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.
- 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.
- 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.
- 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.
- ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.
- ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
- ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
- THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED, THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WRBD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.
- 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.
- 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.
- 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.
- 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.
- FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
- 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 REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.

MAINTENANCE OF TRAFFIC

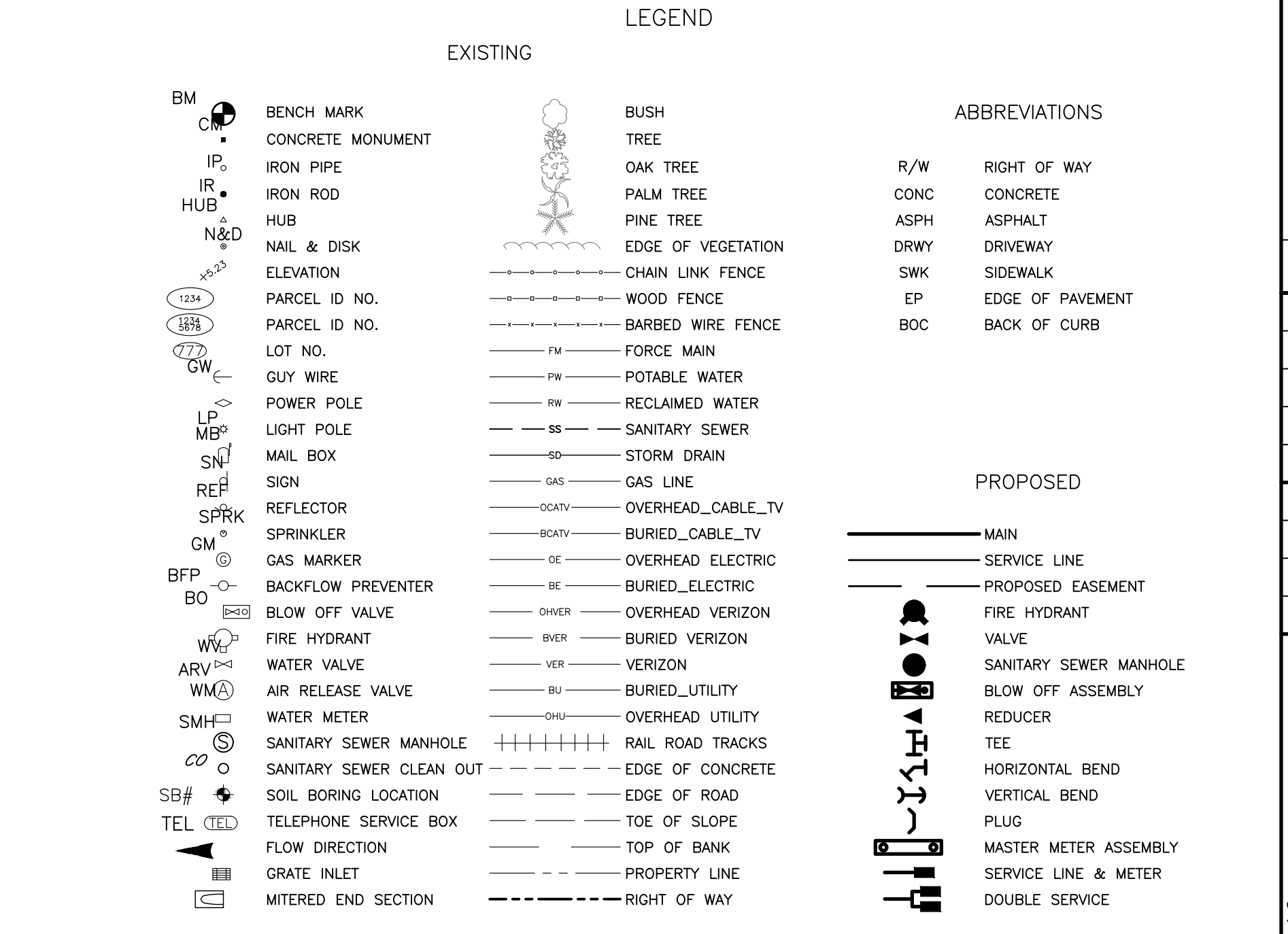
- THE CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROL PLAN IMPLEMENTED. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY AN INDIVIDUAL CERTIFIED TO PREPARE A TRAFFIC CONTROL PLAN IN THE STATE OF FLORIDA THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS LATEST EDITION (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.

- 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.
- 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.
- 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.
- MOTORIZED AND MECHANICAL EQUIPMENT SHALL BE EFFECTIVELY SHIELDED, PADDED, OR LOCATED TO MINIMIZE NOISE.
- 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.
- ACCESS TO ALL SIDE STREETS AND DRIVEWAYS MUST BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
- 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.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORKING NEAR THEIR EXISTING FACILITIES.
- CONSTRUCTION SEQUENCES SHALL BE COORDINATED TO PROVIDE POSITIVE DRAINAGE OF THE TRAVELWAYS AT ALL TIMES.
- 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.
- THE MAXIMUM SPACING BETWEEN WARNING DEVICES USED FOR DELINEATION BETWEEN THE TRAVELWAY(S) AND CONSTRUCTION AREA SHALL BE AS PER FDOT STANDARD INDEX 600.
- 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.
- SEPARATE PAYMENT SHALL BE MADE ONLY FOR THE ITEMS OF WORK LISTED AND IDENTIFIED BY APPROPRIATE PAY ITEM ON THE BID FORM. THE COST OF ANY RELATED WORK NOT SPECIFICALLY IDENTIFIED, BUT WHICH IS REQUIRED FOR SATISFACTORY COMPLETION OF THE WORK, SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT PRICE FOR THE APPROPRIATE BID ITEM.
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTORY OF THE COUNTY PROJECT MANAGER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
- ALL CURB INLET AND JUNCTION BOX STORMWATER STRUCTURES SHALL HAVE HEAVY DUTY RING AND COVER MANHOLE ACCESS. ALL DRAINAGE BOX DETAIL SHALL FOLLOW MANATEE COUNTY CURRENT STANDARD 202 UNLESS IT IS DESIGNATED IN THE PLAN. ALL DRAINAGE BOXES SHALL HAVE A WALL THICKNESS OF 6" MINIMUM.

EMERGENCY CONTACTS

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	FLORIDA POWER & LIGHT GREG COKER 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 725-4430 FAX: (941) 723-4444 EMERGENCY: 1-800-4-OUTAGE Greg.Coker@fpl.com	FLORIDA GAS TRANSMISSION CHAD HARRELL 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 KENDALL COKER (863) 767-4660 kendall.coker@preco.coop
TECO/PEOPLES GAS CO. DAN SHANAHAN 8261 VICO COURT SARASOTA, FL 34240 (941) 342-4030 FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911	MANATEE COUNTY HEALTH DEPT. HANS ROESE 410 6th AVENUE EAST BRADENTON, FL 34208 (941) 748-0747 EXT. 1355 FAX: (941) 750-9364	FDEP, SOUTHWEST DISTRICT ED WATSON 13051 N. TELECOM PKWY TEMPLE TERRACE, FL 33637 (813) 470-5875 FAX: (813) 470-5993	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.
VERIZON FLORIDA INC. JOHN PLOTT 1701 RINGLING BLVD. SARASOTA, FL 34236 (941) 906-6707 FAX: (941) 906-6706 John.Plott@verizon.com	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	BRIGHT HOUSE NETWORKS TOM WRIGHT 5413 E. STATE ROAD 64 BRADENTON, FL 34208-5535 (941) 748-3816 EXT. 21348 Tom.Wright@mybriighthouse.com	SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770



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

GRAVITY SEWER REPLACEMENT

51st STREET WEST

NOTES & LEGEND

NO.	REVISION DESCRIPTION	BY	DATE
1	REVISED NOTES	JSS	07/27/15

PROJECT #	404-6035782	
SURVEY #	13-1816	
SEC./TWN./RGE	28.29.32.33-3417	
SCALE	VARIES	
VERTICAL DATUM	NAVD 1988	
SURVEYED	BY HYATT	DATE 01/2014
DESIGNED	JSS	DATE 04/2014
DRAWN	BLR	DATE 04/2014

JOHN S. SHOUN, P.E.
FLORIDA LICENSE NO. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
8/4/15

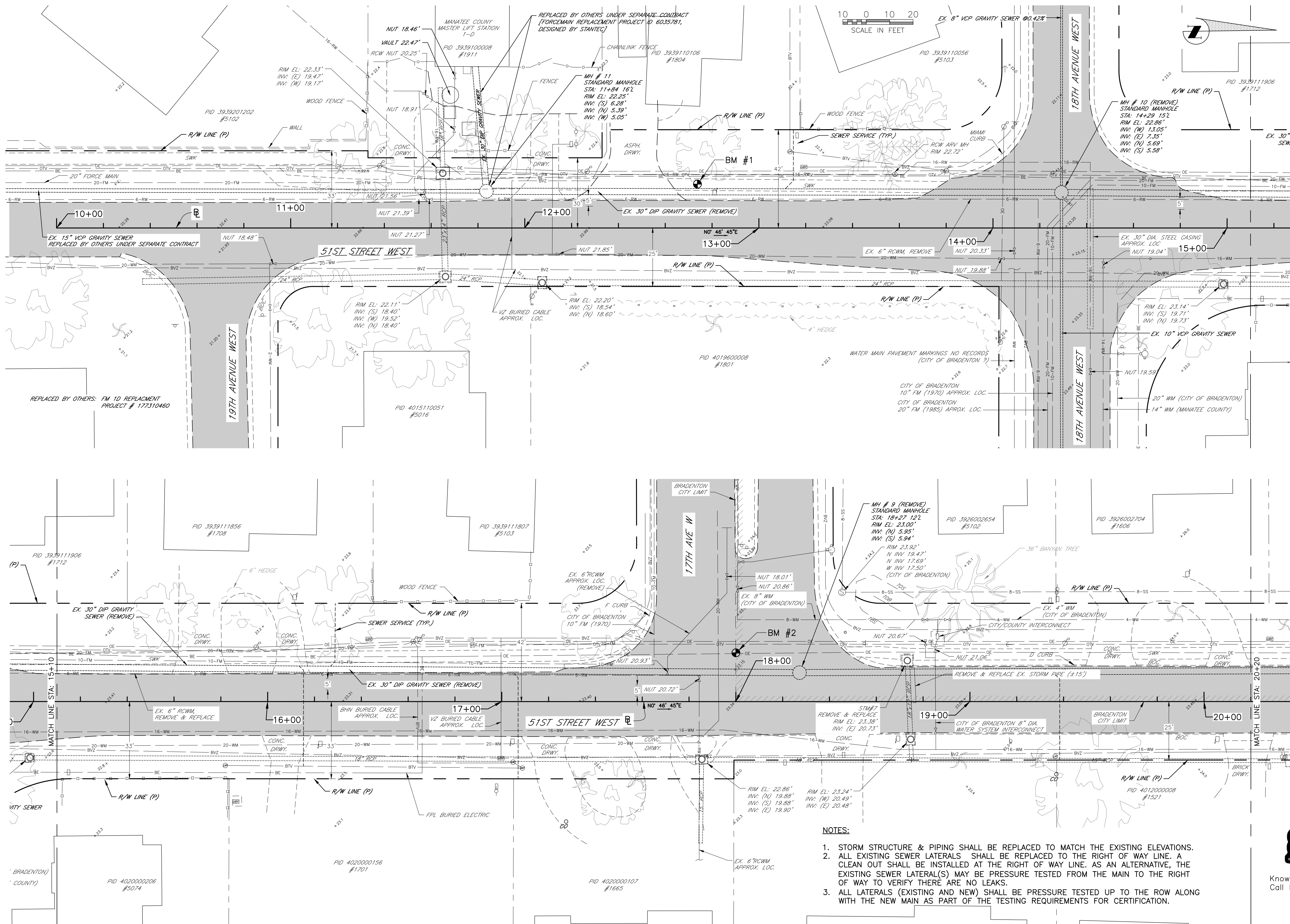
SHEET 10 OF 25

COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT 3: PWD_Engineering_Shore Util_Eng Design\PROJ\SSM SWR Proj\GM-51 St Gravity Replacement\DWG\51st St Gravity Sewer Replacement.dwg:02, 8/4/2015 8:37 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

GRAVITY SEWER REPLACEMENT

51st STREET WEST

EXISTING CONDITIONS, STA 10+00 TO 20+20



- NOTES:**
1. STORM STRUCTURE & PIPING SHALL BE REPLACED TO MATCH THE EXISTING ELEVATIONS.
 2. ALL EXISTING SEWER LATERALS SHALL BE REPLACED TO THE RIGHT OF WAY LINE. A CLEAN OUT SHALL BE INSTALLED AT THE RIGHT OF WAY LINE. AS AN ALTERNATIVE, THE EXISTING SEWER LATERAL(S) MAY BE PRESSURE TESTED FROM THE MAIN TO THE RIGHT OF WAY TO VERIFY THERE ARE NO LEAKS.
 3. ALL LATERALS (EXISTING AND NEW) SHALL BE PRESSURE TESTED UP TO THE ROW ALONG WITH THE NEW MAIN AS PART OF THE TESTING REQUIREMENTS FOR CERTIFICATION.



VERTICAL DATUM: NAVD 88

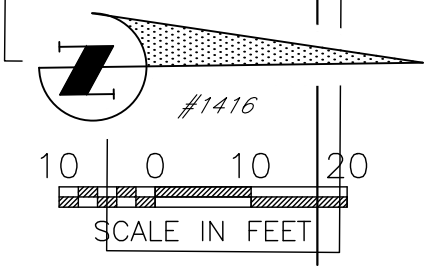
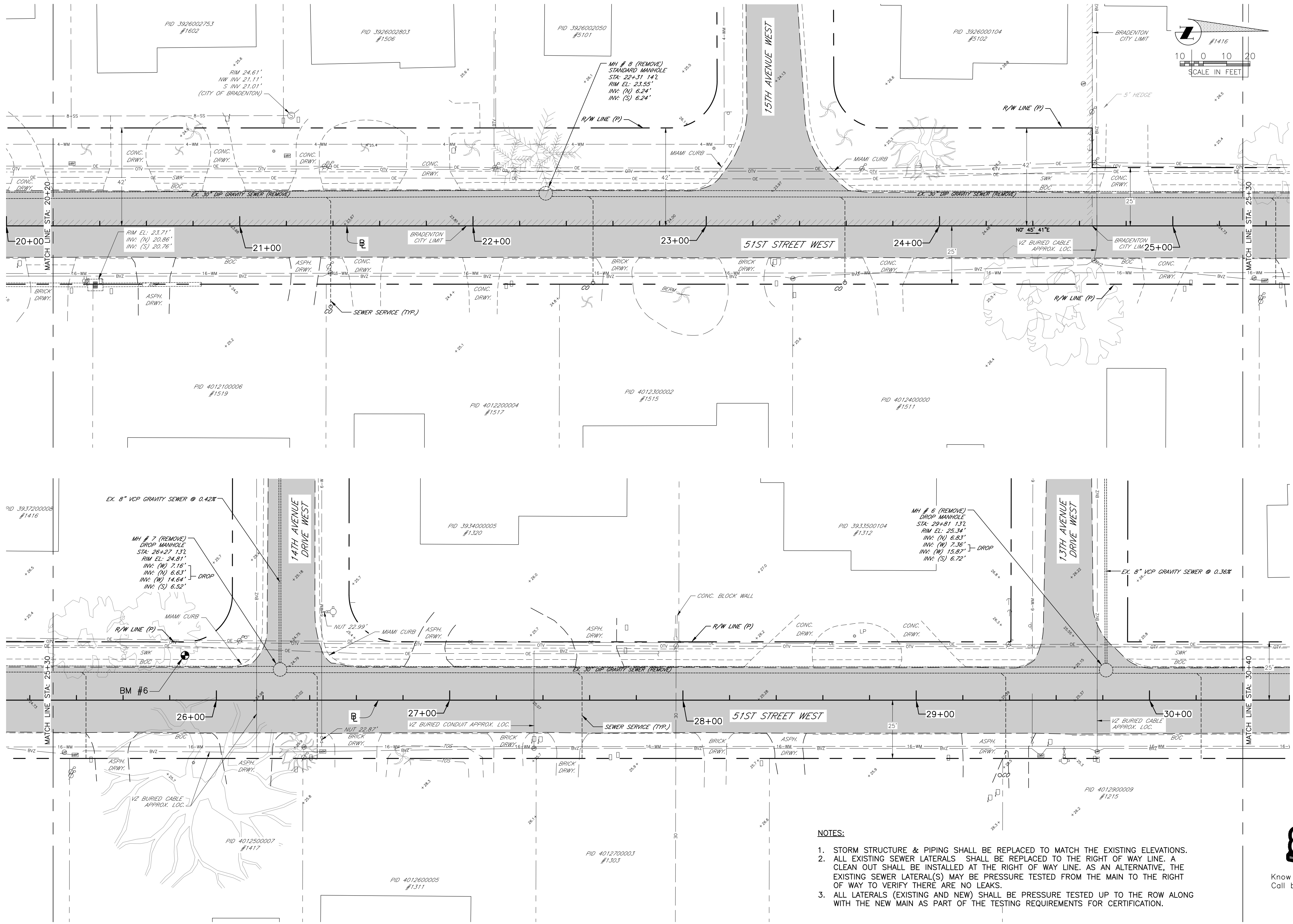
NO.	REVISION DESCRIPTION	BY	DATE
1	REV. TO STORM CALLOUTS, REMOVE & REPLACE 6" RCWM, ADDED NOTES	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29.32.33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

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 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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GRAVITY SEWER REPLACEMENT
51st STREET WEST
EXISTING CONDITIONS, STA 20+20 TO 30+40



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADDED NOTES	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY: HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

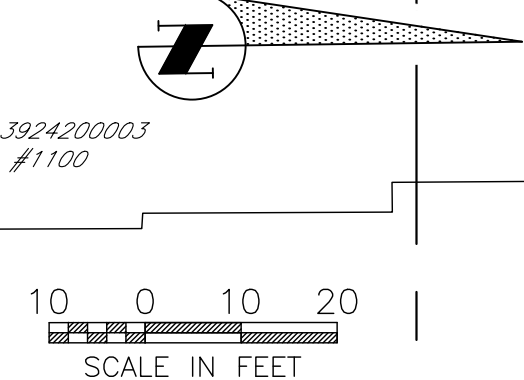
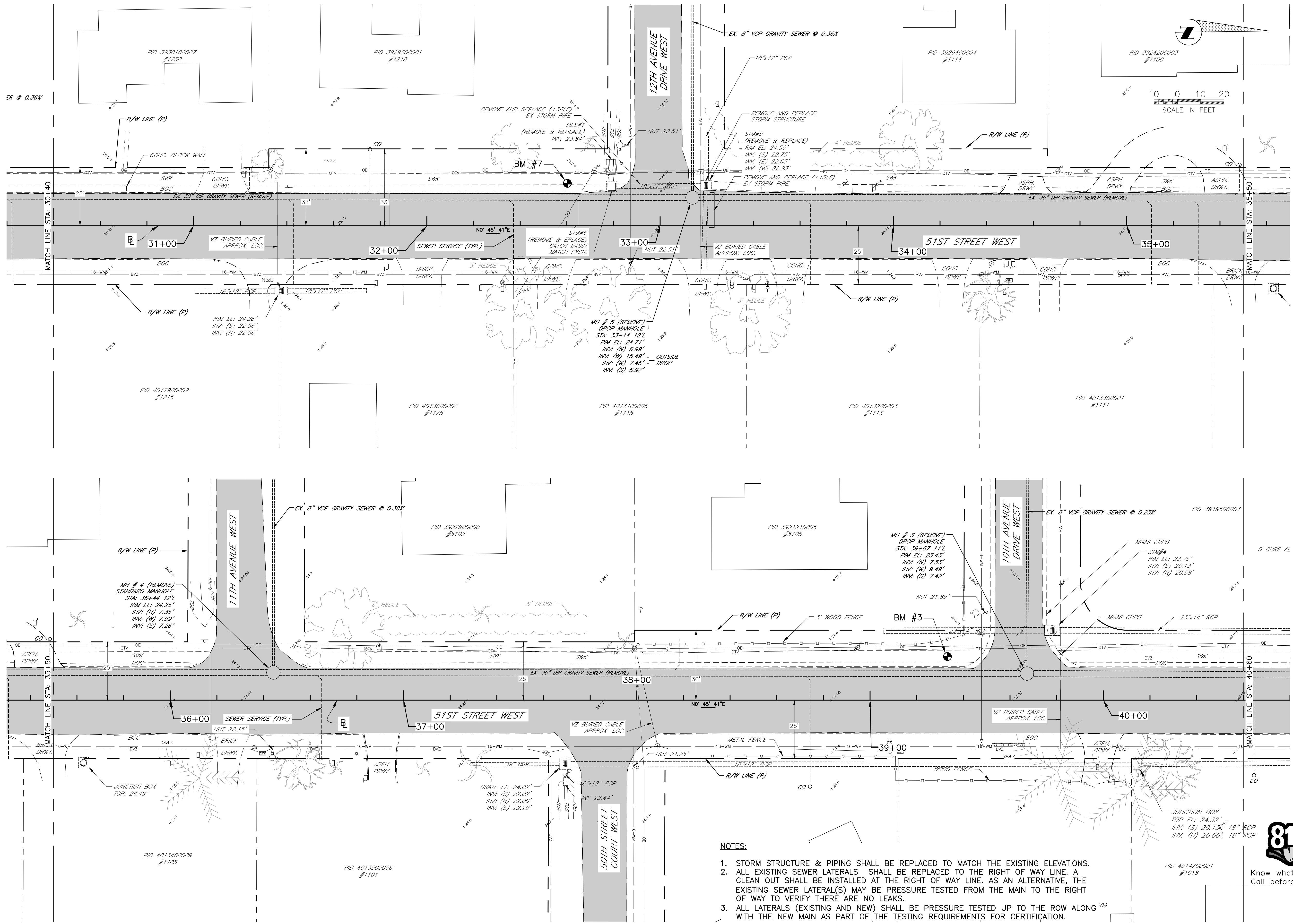
- NOTES:**
1. STORM STRUCTURE & PIPING SHALL BE REPLACED TO MATCH THE EXISTING ELEVATIONS.
 2. ALL EXISTING SEWER LATERALS SHALL BE REPLACED TO THE RIGHT OF WAY LINE. A CLEAN OUT SHALL BE INSTALLED AT THE RIGHT OF WAY LINE. AS AN ALTERNATIVE, THE EXISTING SEWER LATERAL(S) MAY BE PRESSURE TESTED FROM THE MAIN TO THE RIGHT OF WAY TO VERIFY THERE ARE NO LEAKS.
 3. ALL LATERALS (EXISTING AND NEW) SHALL BE PRESSURE TESTED UP TO THE ROW ALONG WITH THE NEW MAIN AS PART OF THE TESTING REQUIREMENTS FOR CERTIFICATION.



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FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
8/4/15

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GRAVITY SEWER REPLACEMENT
51st STREET WEST
EXISTING CONDITIONS, STA 30+40 TO 40+60



VERTICAL DATUM: NAVD 88

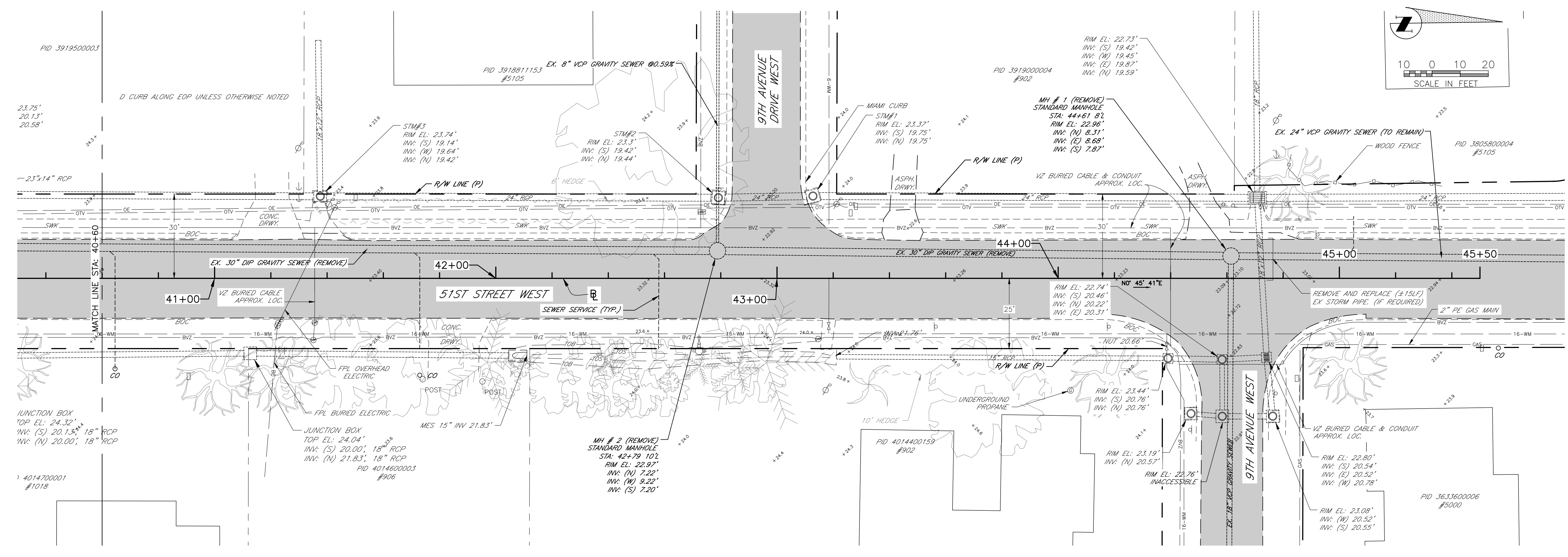
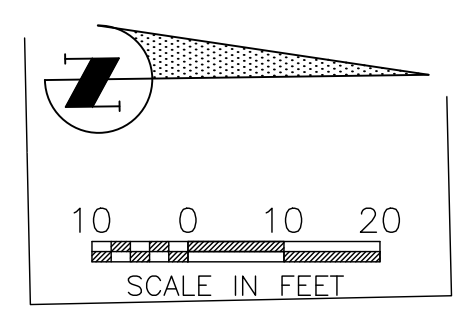
NO.	REVISION DESCRIPTION	BY	DATE
1	REV. TO STORM CALLOUTS, ADDED NOTES	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT 01/2014
DESIGNED	BY JSS 04/2014
DRAWN	BY BLR 04/2014

- NOTES:**
1. STORM STRUCTURE & PIPING SHALL BE REPLACED TO MATCH THE EXISTING ELEVATIONS.
 2. ALL EXISTING SEWER LATERALS SHALL BE REPLACED TO THE RIGHT OF WAY LINE. A CLEAN OUT SHALL BE INSTALLED AT THE RIGHT OF WAY LINE. AS AN ALTERNATIVE, THE EXISTING SEWER LATERAL(S) MAY BE PRESSURE TESTED FROM THE MAIN TO THE RIGHT OF WAY TO VERIFY THERE ARE NO LEAKS.
 3. ALL LATERALS (EXISTING AND NEW) SHALL BE PRESSURE TESTED UP TO THE ROW ALONG WITH THE NEW MAIN AS PART OF THE TESTING REQUIREMENTS FOR CERTIFICATION.



JOHN S. SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
8/1/15
SHEET 25 OF 25



GRAVITY SEWER REPLACEMENT
51st STREET WEST
EXISTING CONDITIONS, STA 40+60 TO 45+50

NOTES:

1. STORM STRUCTURE & PIPING SHALL BE REPLACED TO MATCH THE EXISTING ELEVATIONS.
2. ALL EXISTING SEWER LATERALS SHALL BE REPLACED TO THE RIGHT OF WAY LINE. A CLEAN OUT SHALL BE INSTALLED AT THE RIGHT OF WAY LINE. AS AN ALTERNATIVE, THE EXISTING SEWER LATERAL(S) MAY BE PRESSURE TESTED FROM THE MAIN TO THE RIGHT OF WAY TO VERIFY THERE ARE NO LEAKS.
3. ALL LATERALS (EXISTING AND NEW) SHALL BE PRESSURE TESTED UP TO THE ROW ALONG WITH THE NEW MAIN AS PART OF THE TESTING REQUIREMENTS FOR CERTIFICATION.

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	REV. TO STORM CALLOUTS, ADDED NOTES	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY: HYATT DATE: 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014



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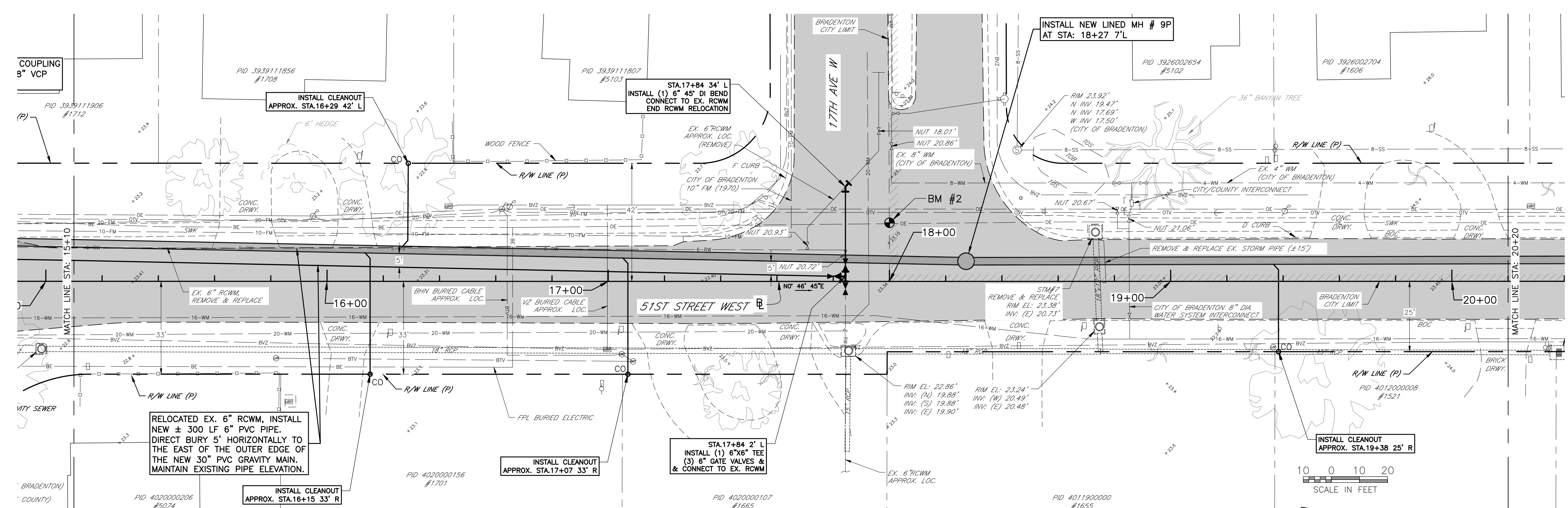
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No. 60923
STATE OF FLORIDA
8/1/15

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GRAVITY SEWER REPLACEMENT

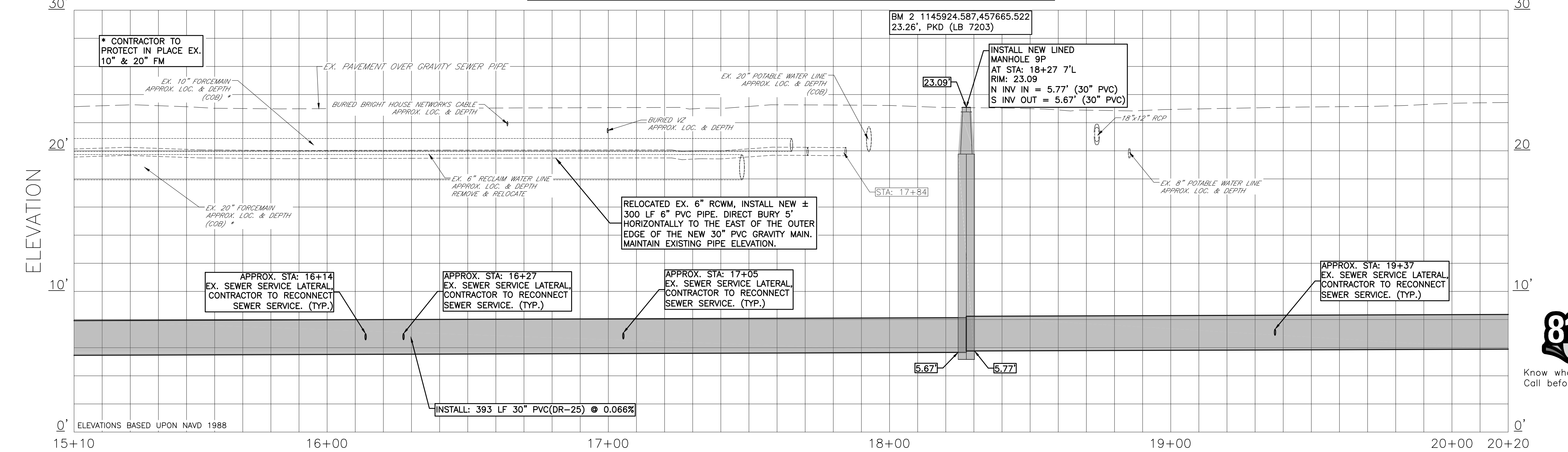
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 15+10 TO 20+20



- NOTES:**
- CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 - SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED.
 - CONTRACTOR TO LOCATE EXISTING SEWER SERVICES & INSTALL NEW SEWER SERVICES W/CLEANOUTS AT THE RIGHT-OF-WAY AND CONNECT TO 30" PVC SEWER MAIN W/30"x6" PVC FITTINGS.
 - THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AND DRIVEWAYS. A MINIMUM 10' WIDE CLEAR STABILIZED ACCESS MEANS TO ALL DEAD END ROADS SHALL BE PROVIDED TO ALLOW 24 HOUR ACCESS FOR EMERGENCY VEHICLES.

51ST STREET WEST GRAVITY SEWER STA: 15+10 to 20+20



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	ADD 6" RCW MAIN RELOCATION		
	REV. NOTES		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY: HYATT DATE: 01/2014
DESIGNED	JSS DATE: 04/2014
DRAWN	BLR DATE: 04/2014

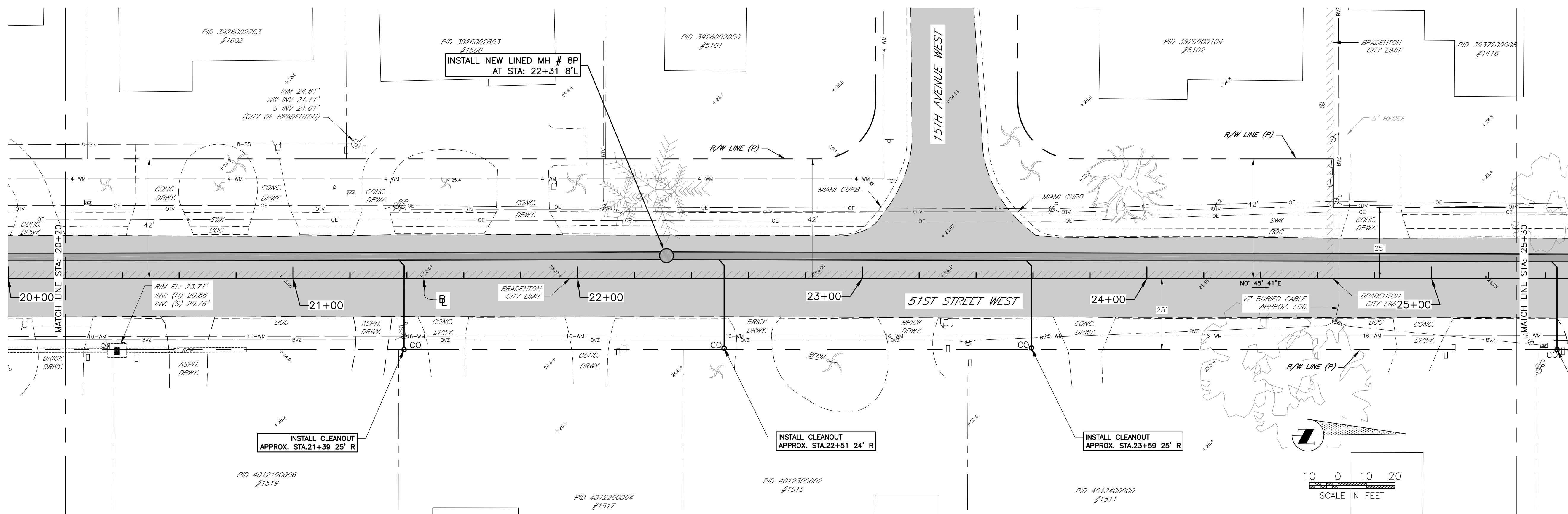


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GRAVITY SEWER REPLACEMENT

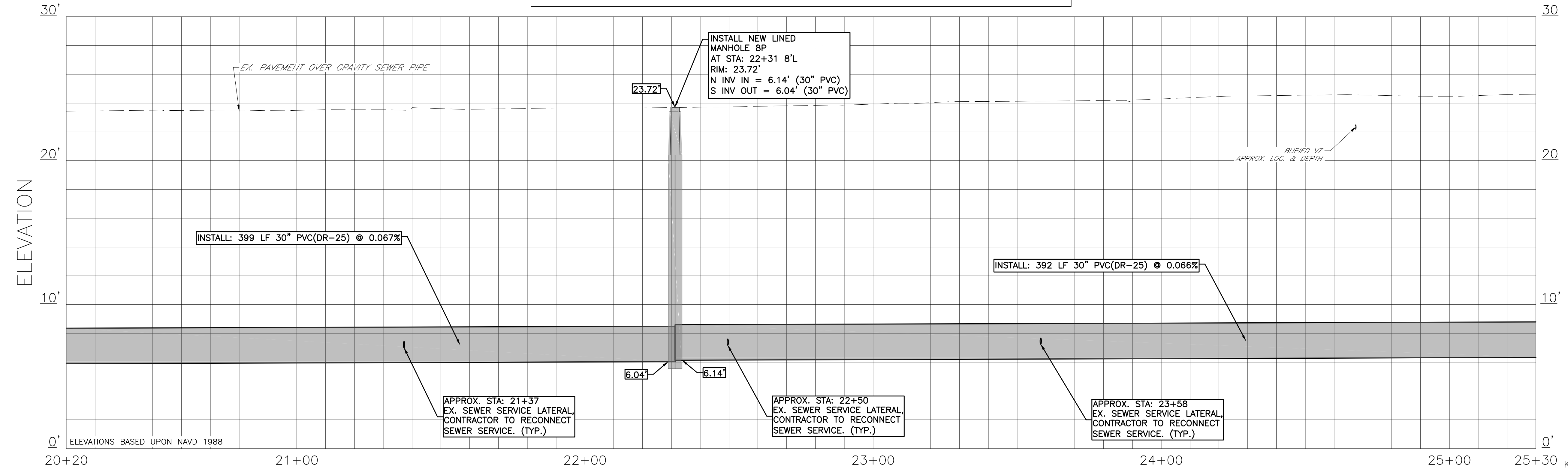
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 20+20 TO 25+30



- NOTES:**
- CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 - SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED
 - CONTRACTOR TO LOCATE EXISTING SEWER SERVICES & INSTALL NEW SEWER SERVICES W/CLEANOUTS AT THE RIGHT-OF-WAY AND CONNECT TO 30" PVC SEWER MAIN W/30"x6" PVC FITTINGS
 - THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AND DRIVEWAYS. A MINIMUM 10' WIDE CLEAR STABILIZED ACCESS MEANS TO ALL DEAD END ROADS SHALL BE PROVIDED TO ALLOW 24 HOUR ACCESS FOR EMERGENCY VEHICLES.

51ST STREET WEST GRAVITY SEWER STA: 20+20 to 25+30



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	REV. NOTES		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

JOHN S. SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
8/4/15



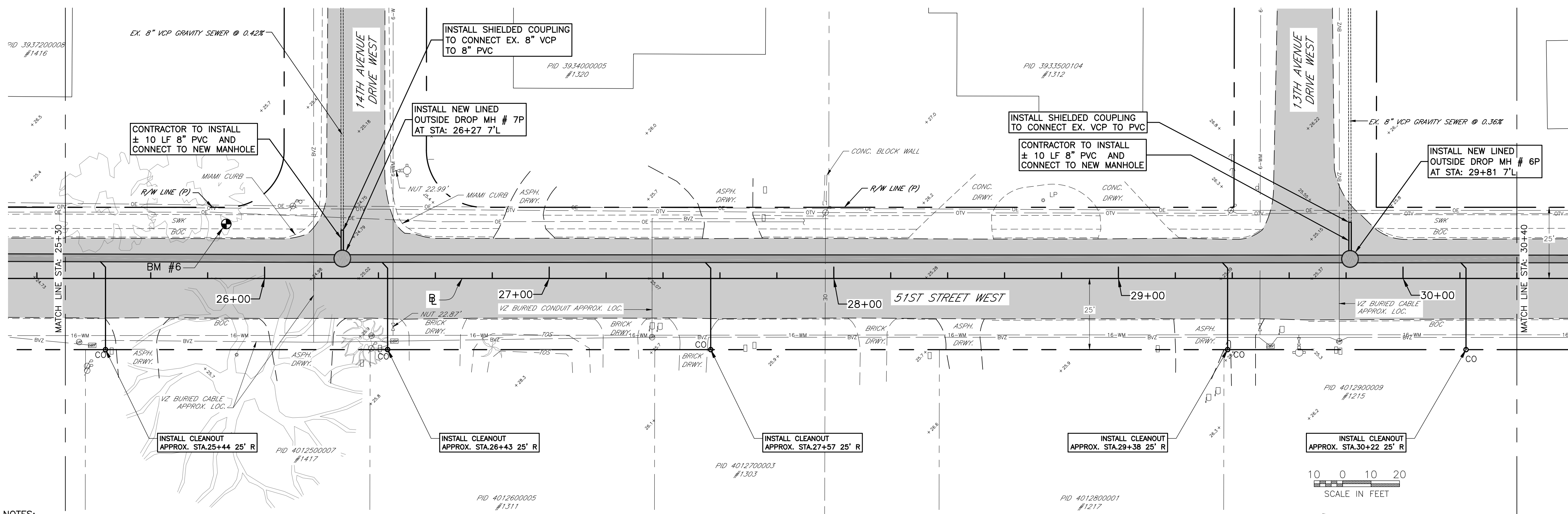
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GRAVITY SEWER REPLACEMENT

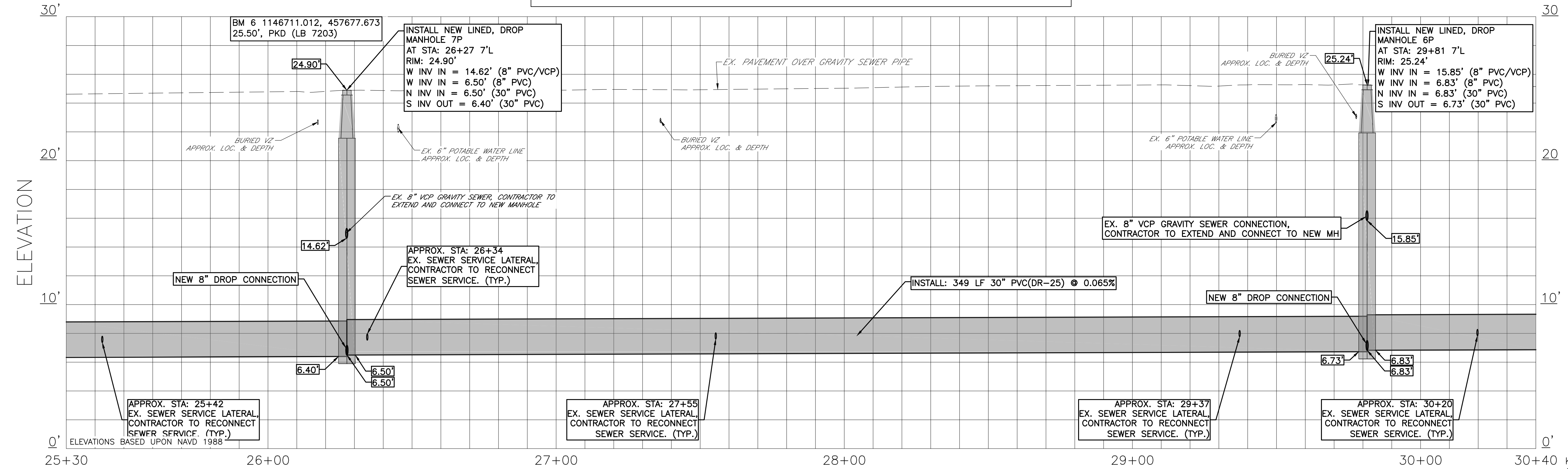
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 25+30 TO 30+40



- NOTES:**
- CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 - SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED
 - CONTRACTOR TO LOCATE EXISTING SEWER SERVICES & INSTALL NEW SEWER SERVICES W/CLEANOUTS AT THE RIGHT-OF-WAY AND CONNECT TO 30" PVC SEWER MAIN W/30"x6" PVC FITTINGS
 - THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AND DRIVEWAYS. A MINIMUM 10' WIDE CLEAR STABILIZED ACCESS MEANS TO ALL DEAD END ROADS SHALL BE PROVIDED TO ALLOW 24 HOUR ACCESS FOR EMERGENCY VEHICLES.

51ST STREET WEST GRAVITY SEWER STA: 25+30 to 30+40



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	ADD SIDE STREET MAIN REPLACEMENT		
	REV. NOTES		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

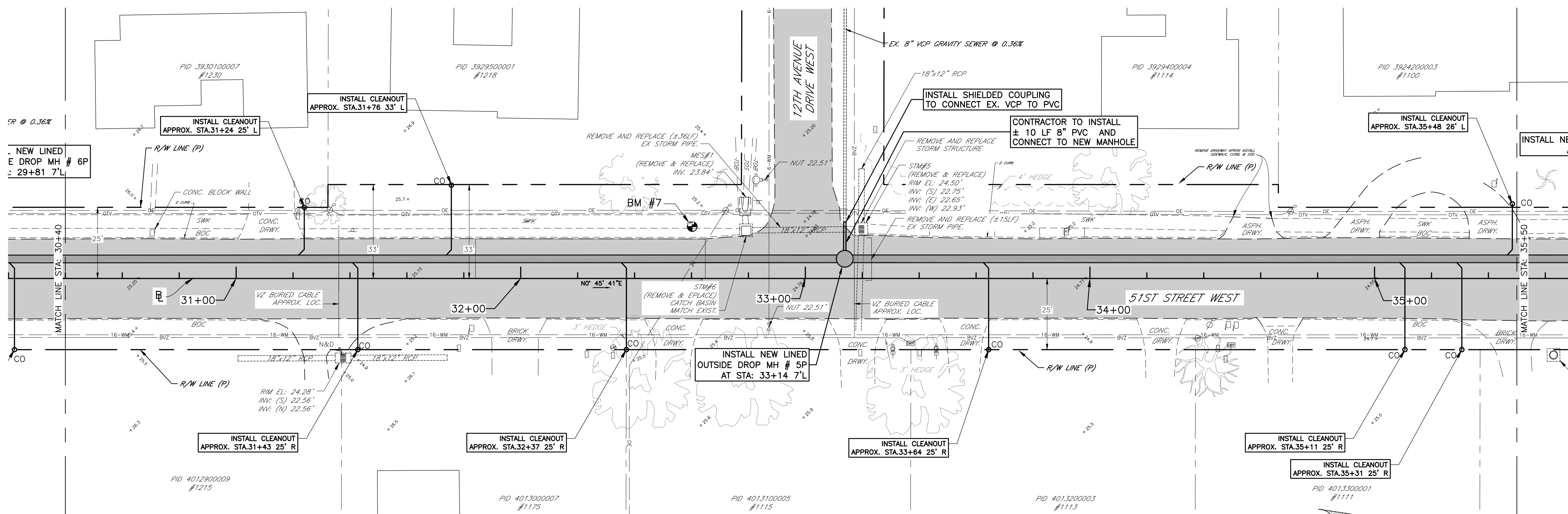
JOHN S. SHOUN, P.E.
FLORIDA LICENSE No. 60923
8/4/15
PROFESSIONAL ENGINEER



GRAVITY SEWER REPLACEMENT

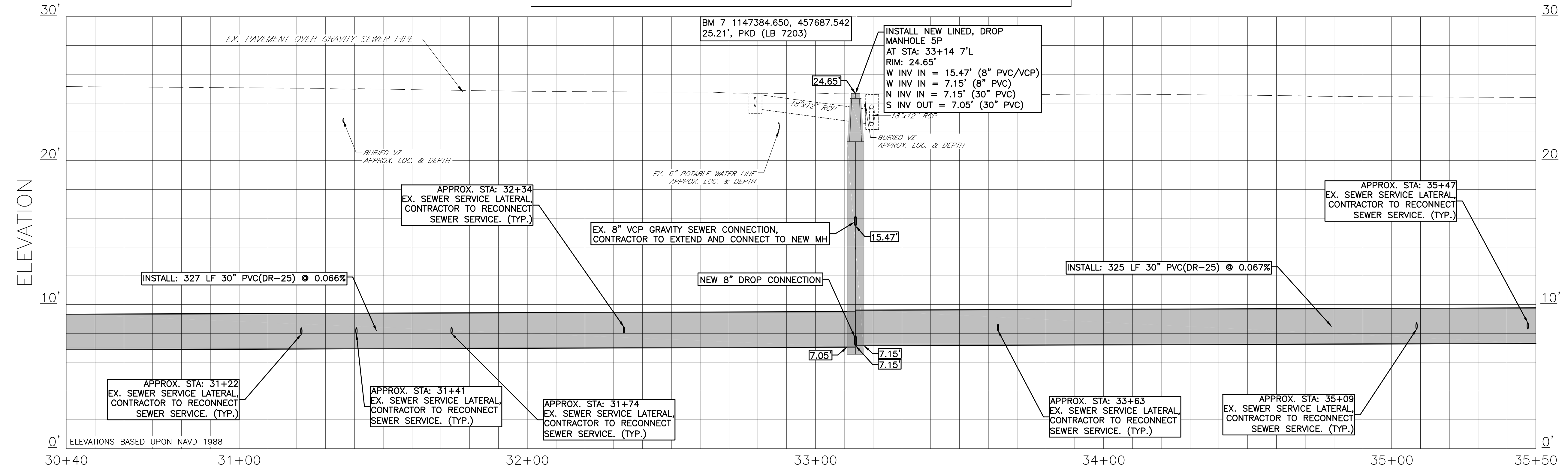
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 30+40 TO 35+50



- NOTES:**
1. CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 2. SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED
 3. CONTRACTOR TO LOCATE EXISTING SEWER SERVICES & INSTALL NEW SEWER SERVICES W/CLEANOUTS AT THE RIGHT-OF-WAY AND CONNECT TO 30" PVC SEWER MAIN W/30"x6" PVC FITTINGS
 4. THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.
 5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AND DRIVEWAYS. A MINIMUM 10' WIDE CLEAR STABILIZED ACCESS MEANS TO ALL DEAD END ROADS SHALL BE PROVIDED TO ALLOW 24 HOUR ACCESS FOR EMERGENCY VEHICLES.

51ST STREET WEST GRAVITY SEWER STA: 30+40 to 35+50



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	ADD SIDE STREET MAIN REPLACEMENT		
	REV. STORM CALL OUTS		
	REV. NOTES		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
	BY DATE
SURVEYED	HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

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

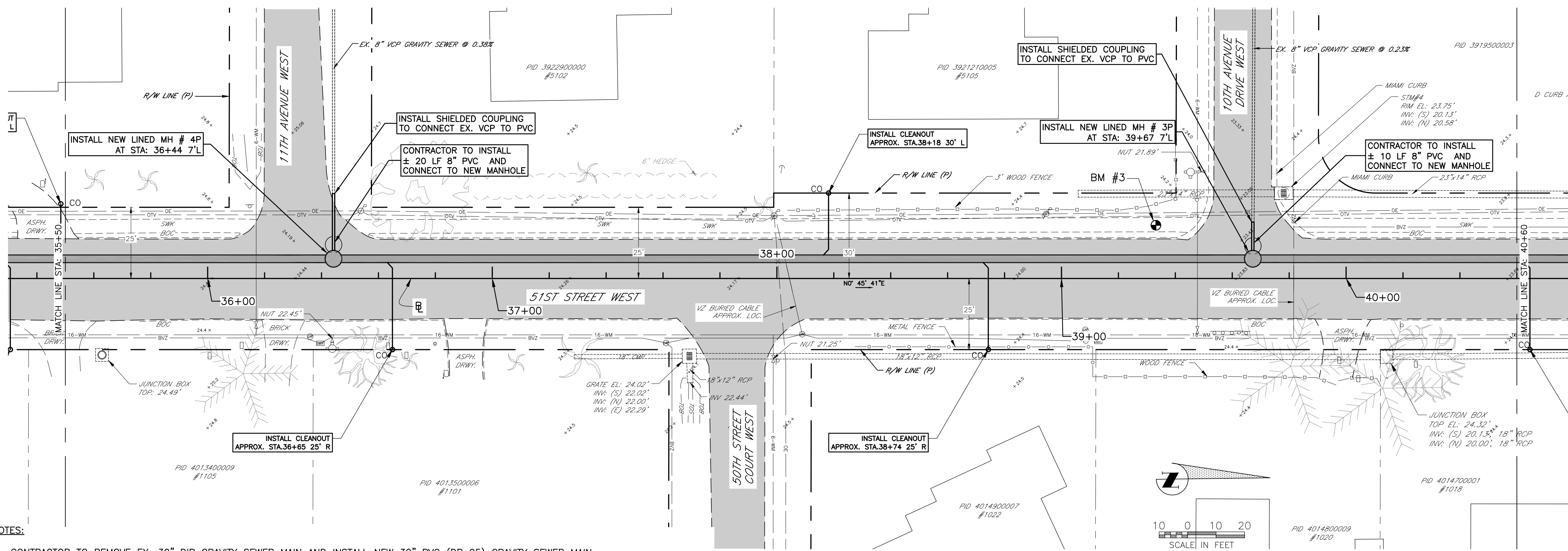


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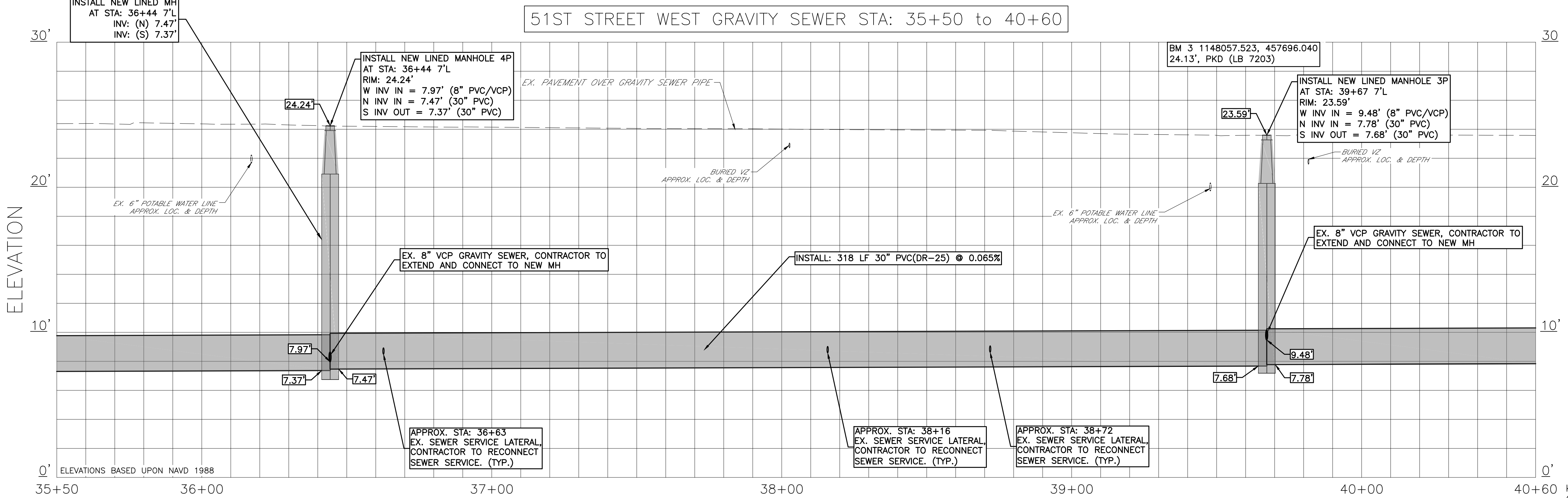
GRAVITY SEWER REPLACEMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 35+50 TO 40+60



- NOTES:**
- CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 - SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED.
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VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	ADD SIDE STREET MAIN REPLACEMENT		
	REV. NOTES		

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED BY	HYATT
DESIGNED BY	JSS
DRAWN BY	BLR

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

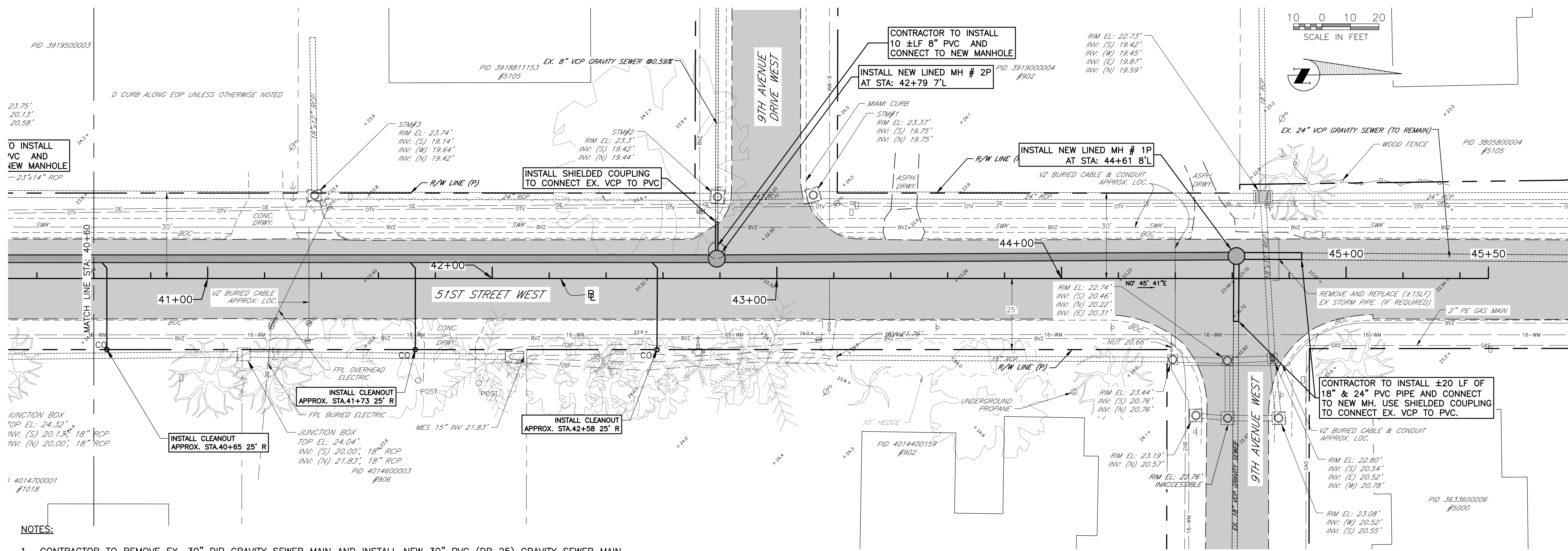


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GRAVITY SEWER REPLACEMENT

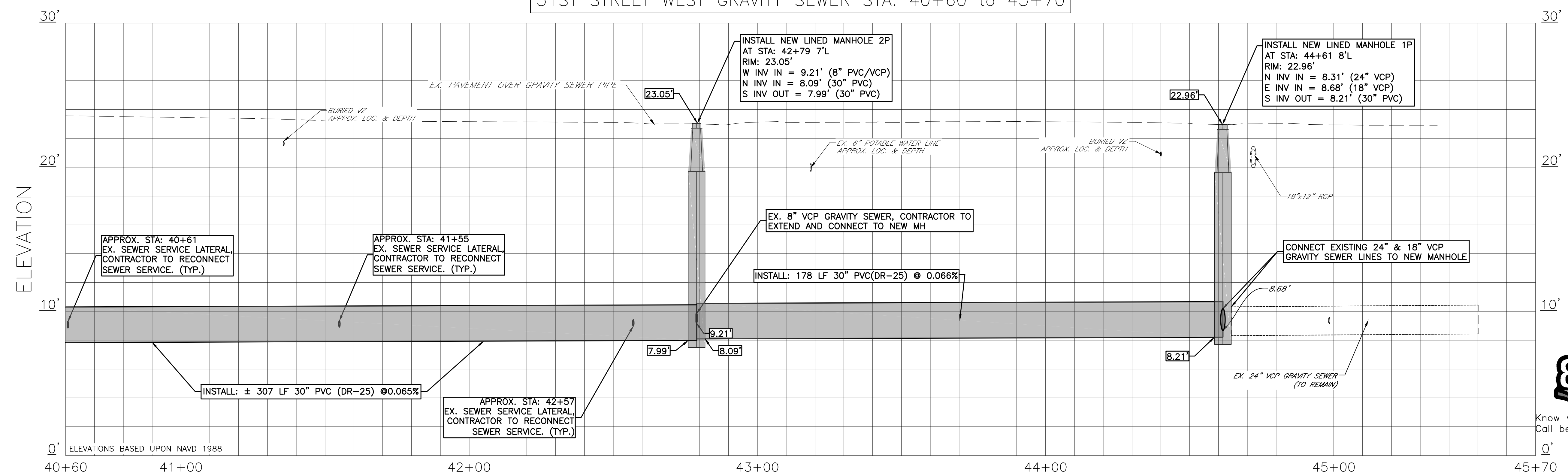
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 40+60 TO END



- NOTES:**
- CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN.
 - SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED.
 - CONTRACTOR TO LOCATE EXISTING SEWER SERVICES & INSTALL NEW SEWER SERVICES W/CLEANOUTS AT THE RIGHT-OF-WAY AND CONNECT TO 30" PVC SEWER MAIN W/30"x6" PVC FITTINGS.
 - THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AND DRIVEWAYS. A MINIMUM 10' WIDE CLEAR STABILIZED ACCESS MEANS TO ALL DEAD END ROADS SHALL BE PROVIDED TO ALLOW 24 HOUR ACCESS FOR EMERGENCY VEHICLES.

51ST STREET WEST GRAVITY SEWER STA: 40+60 TO 45+70



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
	ADD SIDE STREET MAIN REPLACEMENT		
	REV. NOTES		

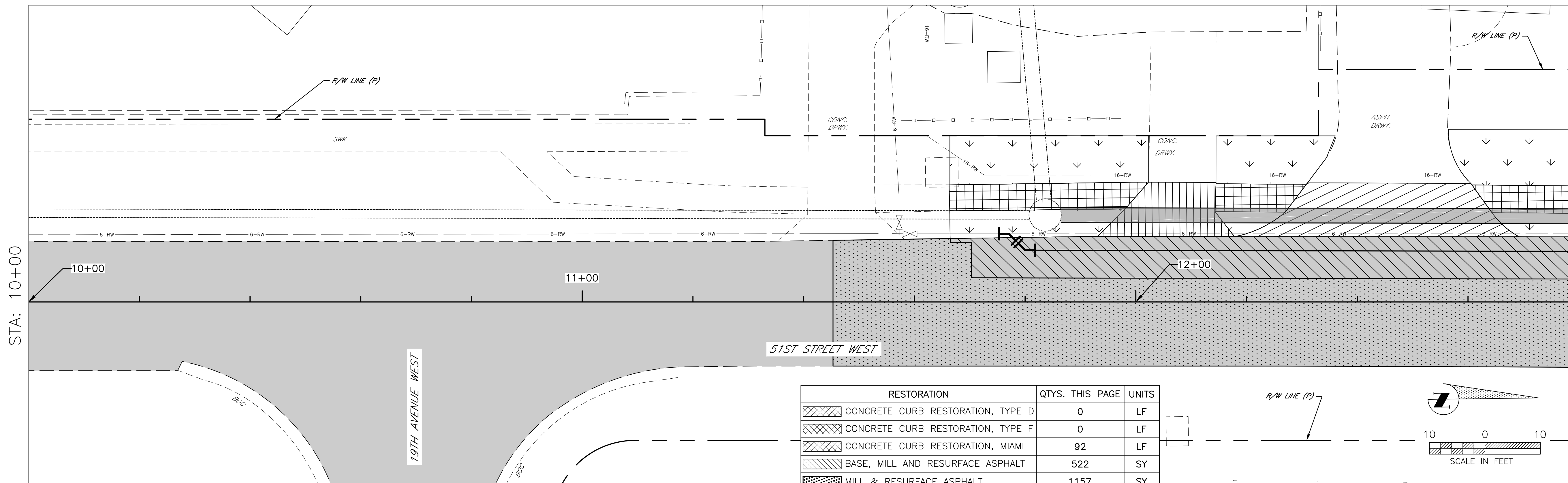
PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29.32.33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988
SURVEYED	HYATT 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

JOHN S. SHOUN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
LICENSED PROFESSIONAL ENGINEER

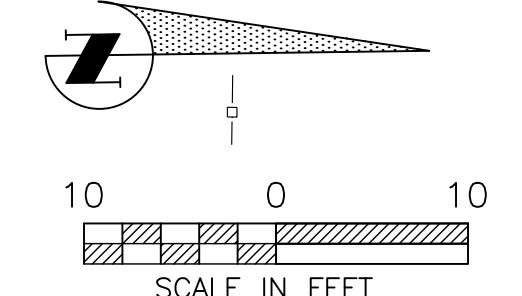
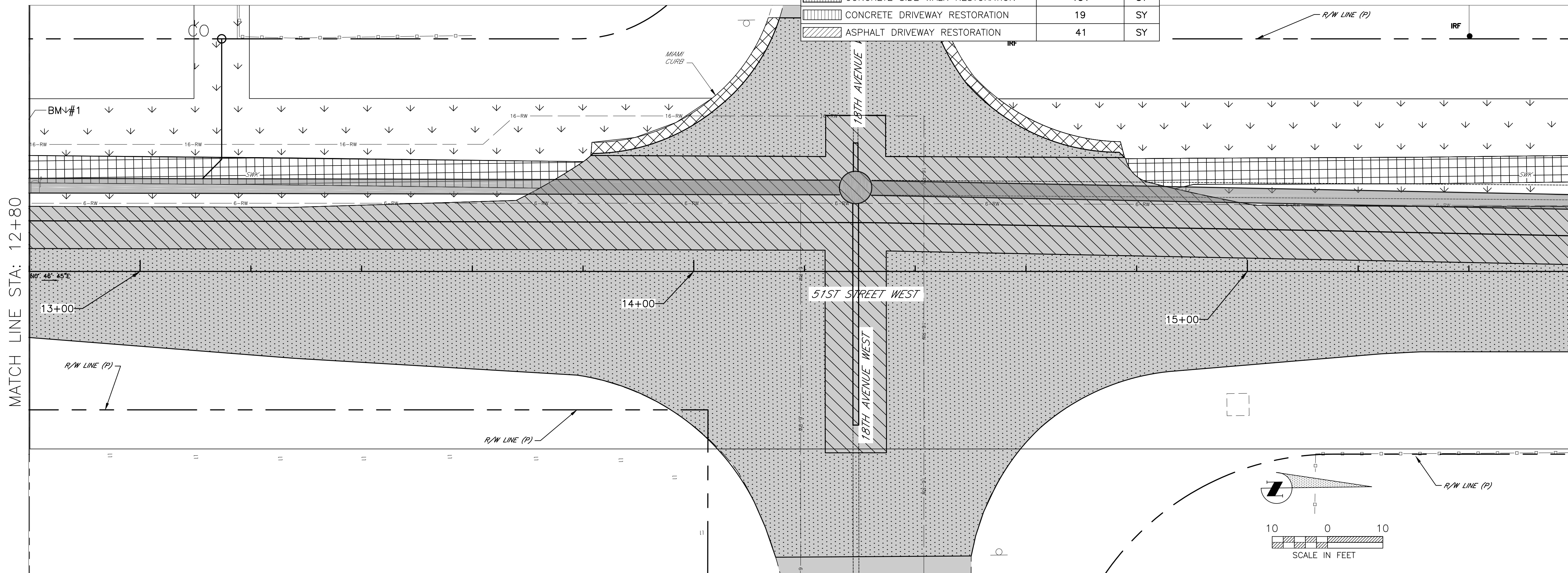
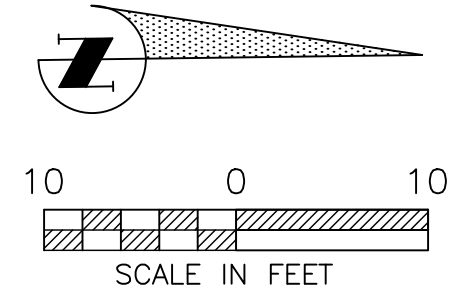
GRAVITY SEWER REPLACEMENT

51st STREET WEST

RESTORATION AREAS, STA 10+00 TO 15+60



RESTORATION	QTYS. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	0	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	92	LF
BASE, MILL AND RESURFACE ASPHALT	522	SY
MILL & RESURFACE ASPHALT	1157	SY
SOD	440	SY
CONCRETE SIDE WALK RESTORATION	131	SY
CONCRETE DRIVEWAY RESTORATION	19	SY
ASPHALT DRIVEWAY RESTORATION	41	SY



MATCH LINE STA: 12+80

MATCH LINE STA: 15+60

SHEET 15

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT DATE 01/2014
DESIGNED	BY JSS DATE 04/2014
DRAWN	BY BLR DATE 04/2014

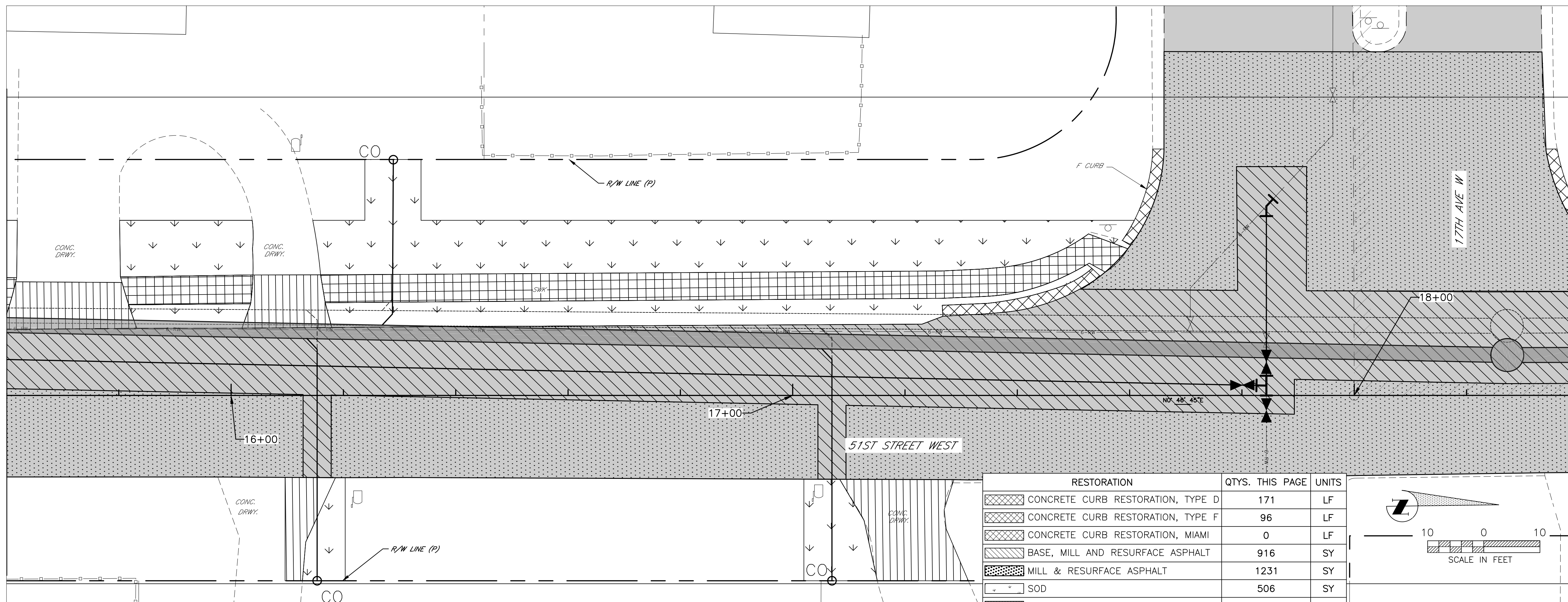
JOHN S. SHOUN, P.E.
 LICENSE No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

GRAVITY SEWER REPLACEMENT

51st STREET WEST

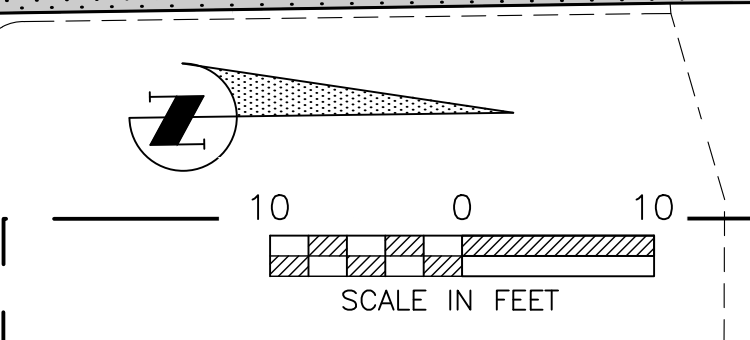
RESTORATION AREAS, STA 15+60 TO 21+20

SHEET 14
MATCH LINE STA: 15+60

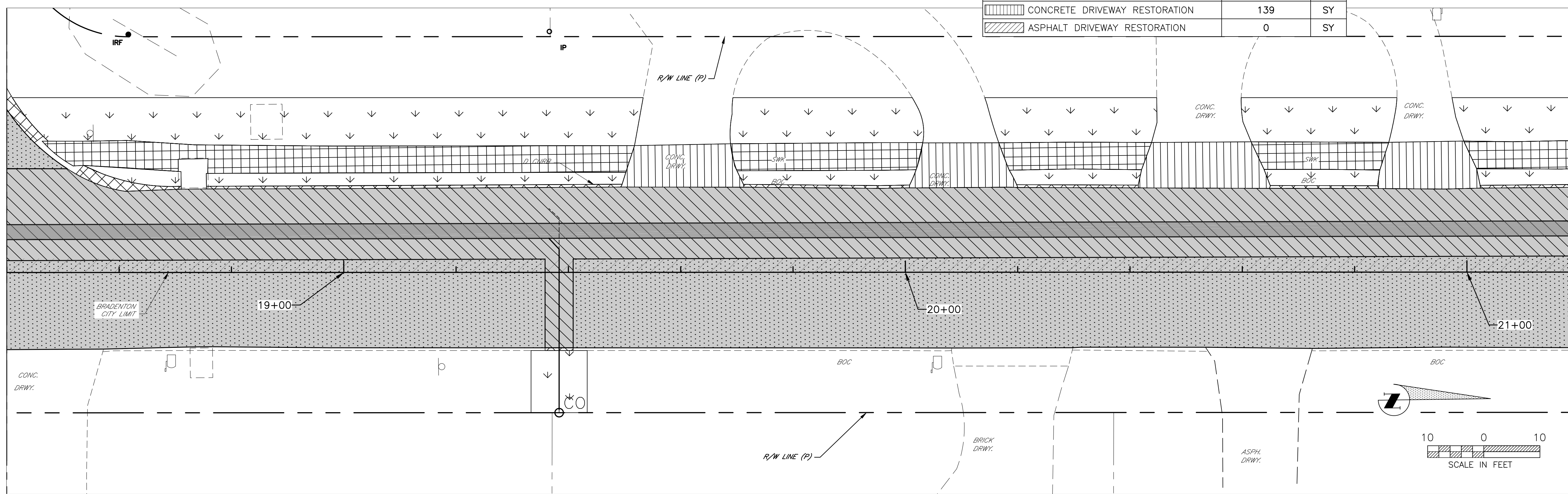


MATCH LINE STA: 18+20

RESTORATION	QTY. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	171	LF
CONCRETE CURB RESTORATION, TYPE F	96	LF
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	916	SY
MILL & RESURFACE ASPHALT	1231	SY
SOD	506	SY
CONCRETE SIDE WALK RESTORATION	200	SY
CONCRETE DRIVEWAY RESTORATION	139	SY
ASPHALT DRIVEWAY RESTORATION	0	SY



SHEET 15
MATCH LINE STA: 18+20



MATCH LINE STA: 21+20

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	JSS	07/27/15

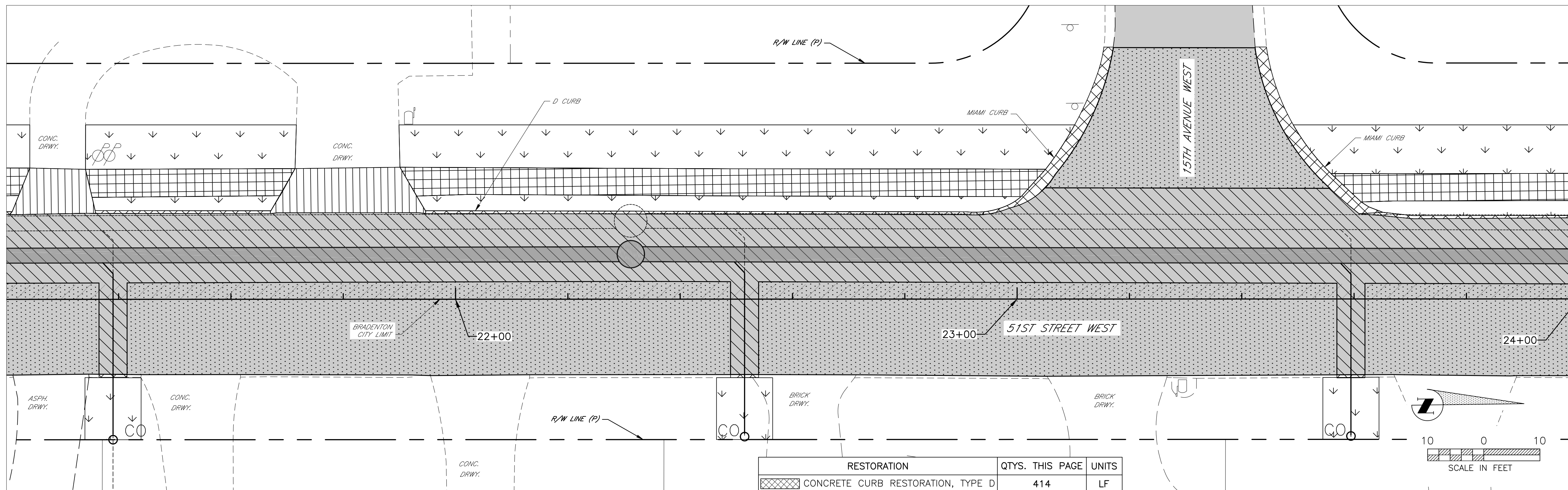
PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT 01/2014
DESIGNED	BY JSS 04/2014
DRAWN	BY BLR 04/2014

JOHN J. SHOU, P.E.
FLORIDA P.E. # 60923
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature & Date

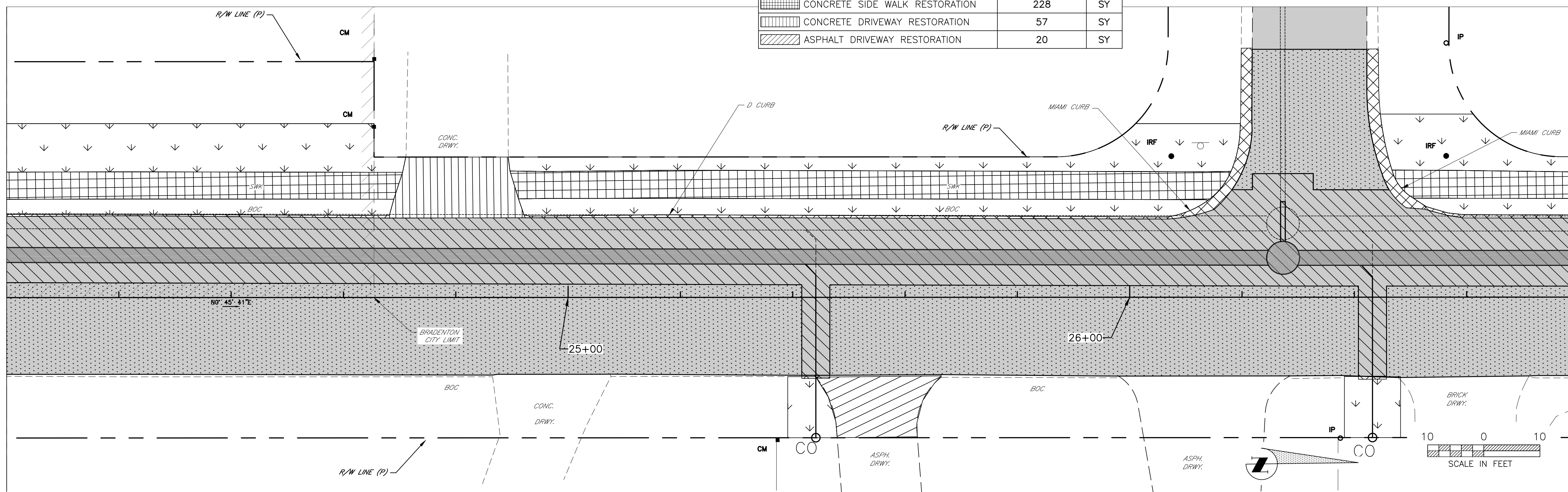
GRAVITY SEWER REPLACEMENT

51st STREET WEST

RESTORATION AREAS, STA 21+20 TO 26+80



RESTORATION	QTYS. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	414	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	152	LF
BASE, MILL AND RESURFACE ASPHALT	846	SY
MILL & RESURFACE ASPHALT	1122	SY
SOD	462	SY
CONCRETE SIDE WALK RESTORATION	228	SY
CONCRETE DRIVEWAY RESTORATION	57	SY
ASPHALT DRIVEWAY RESTORATION	20	SY



MATCH LINE STA: 24+00

VERTICAL DATUM: NAVD 88

MATCH LINE STA: 26+80

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	JSS	07/27/15

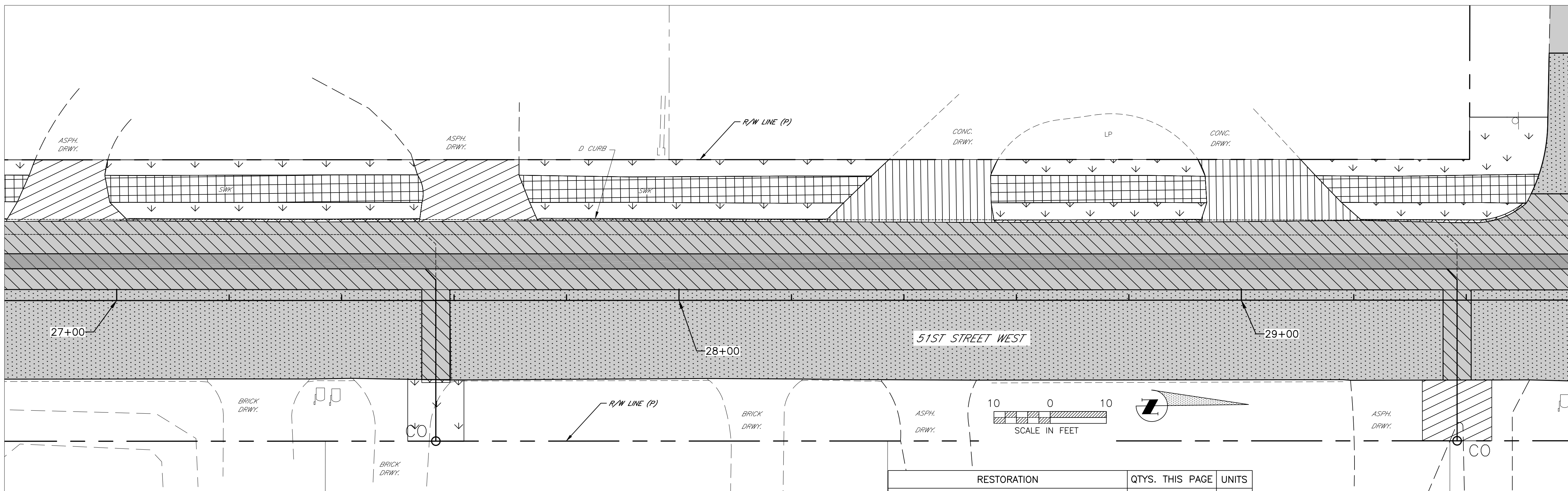
JOHN S. SHORR, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
Professional Engineer
Signature: _____ Date: _____

GRAVITY SEWER REPLACEMENT

51st STREET WEST

RESTORATION AREAS, STA 26+80 TO 32+40

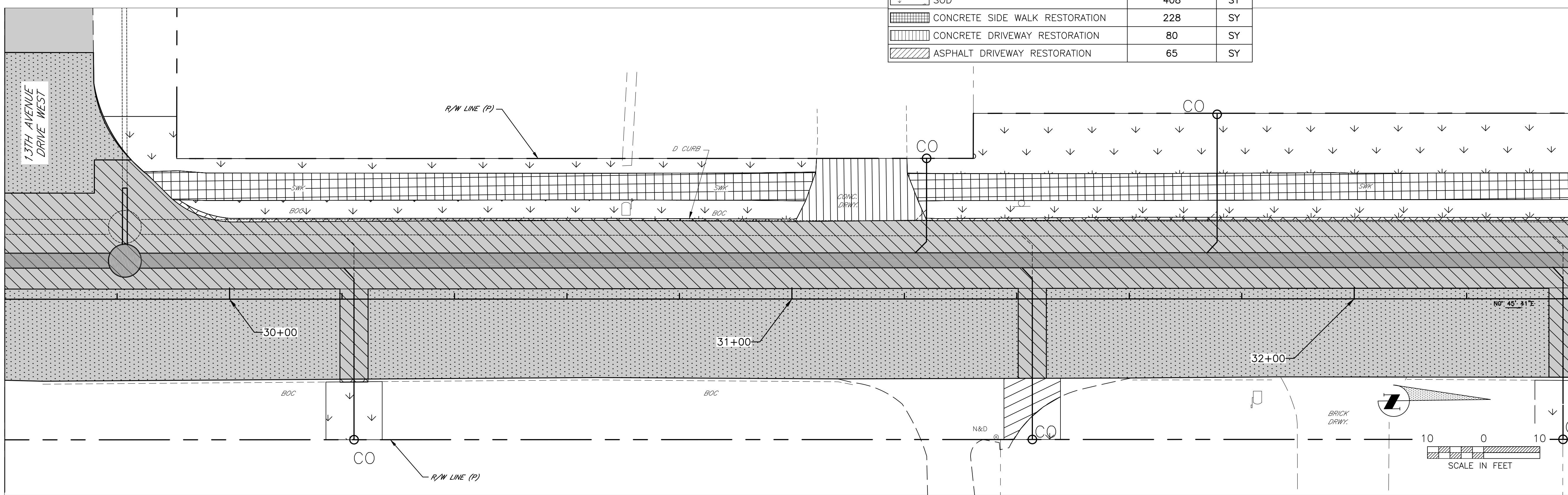
SHEET 16
MATCHLINE STA: 26+80



MATCH LINE STA: 29+60

RESTORATION	QTY. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	412	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	827	SY
MILL & RESURFACE ASPHALT	1013	SY
SOD	408	SY
CONCRETE SIDE WALK RESTORATION	228	SY
CONCRETE DRIVEWAY RESTORATION	80	SY
ASPHALT DRIVEWAY RESTORATION	65	SY

MATCH LINE STA: 29+60



MATCH LINE STA: 32+40

VERTICAL DATUM: NAVD 88

SHEET 18

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN B. SHORR, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
8/4/15

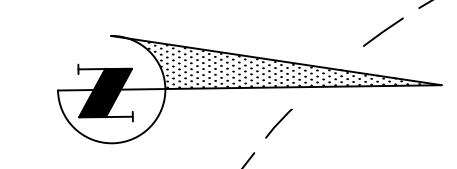
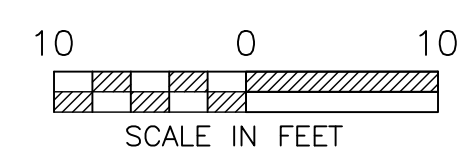
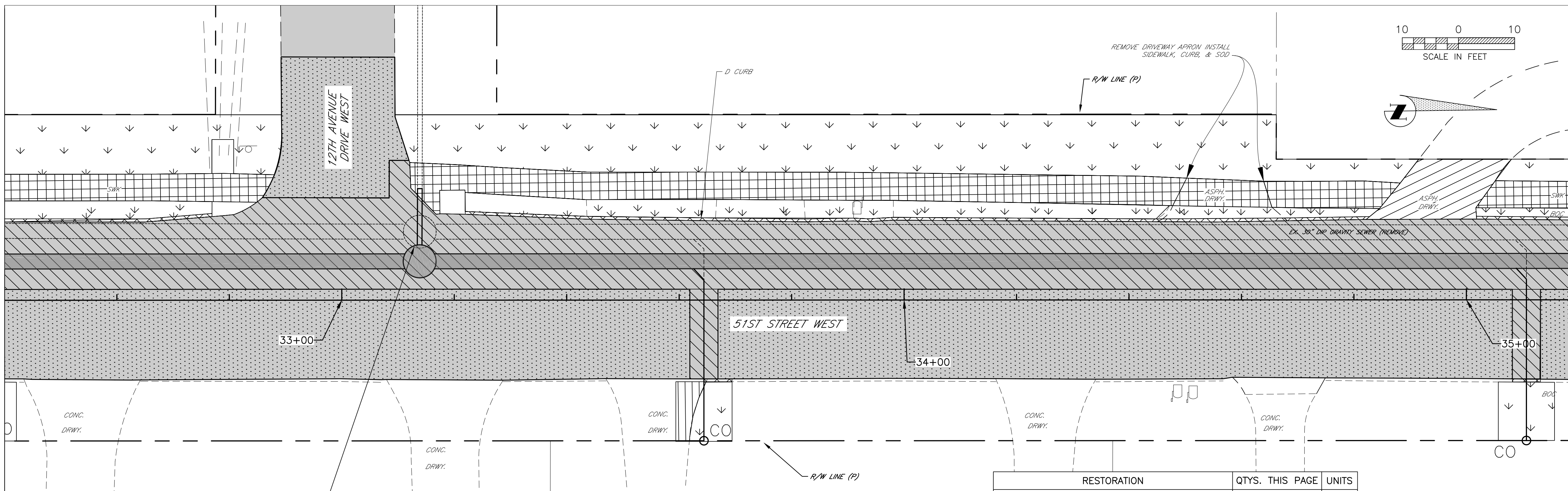
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util_Eng_Design\PROJ\58M_SWR_Proj\GM-51 St Gravity Sewer Replacement.dwg:17, 8/4/2015 8:38 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 Inches)

GRAVITY SEWER REPLACEMENT

51st STREET WEST

RESTORATION AREAS, STA 32+40 TO 38+00

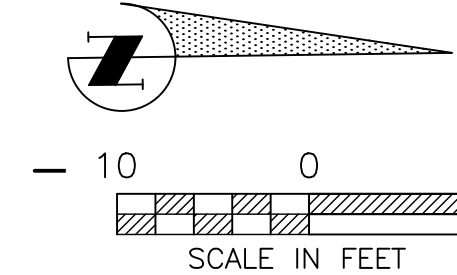
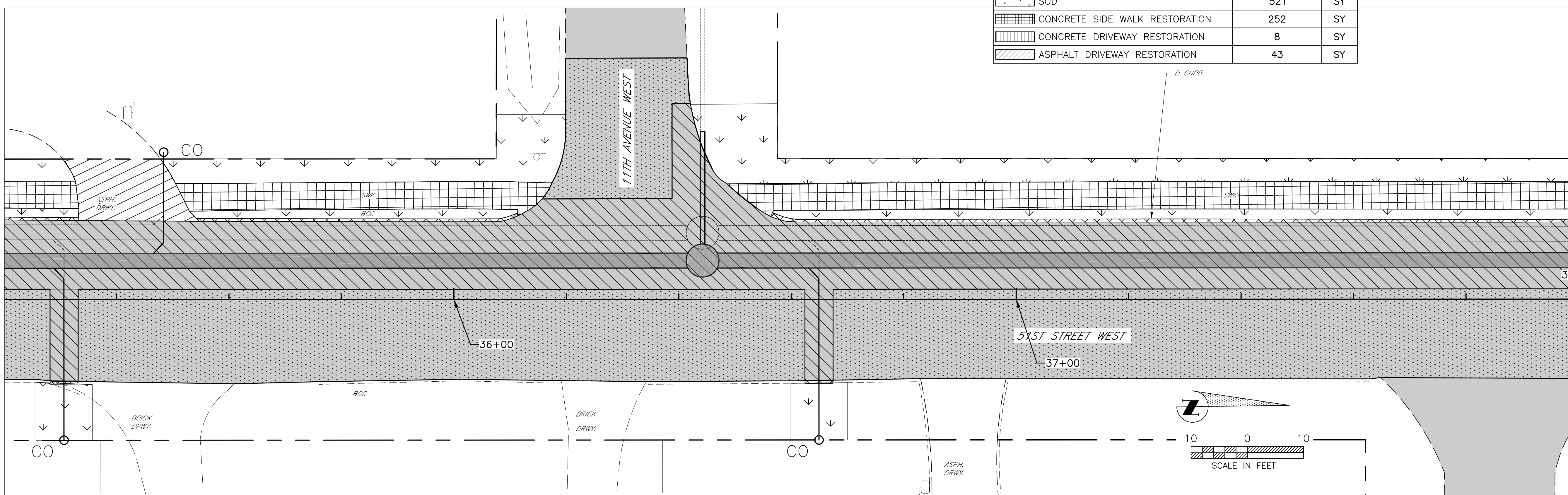
SHEET 17
MATCHLINE STA: 32+40



MATCH LINE STA: 35+10

RESTORATION	QTYS. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	457	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	839	SY
MILL & RESURFACE ASPHALT	1077	SY
SOD	521	SY
CONCRETE SIDE WALK RESTORATION	252	SY
CONCRETE DRIVEWAY RESTORATION	8	SY
ASPHALT DRIVEWAY RESTORATION	43	SY

MATCH LINE STA: 35+10



MATCH LINE STA: 38+00

VERTICAL DATUM: NAVD 88

SHEET 19

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	BLR	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOLUN, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
8/4/15

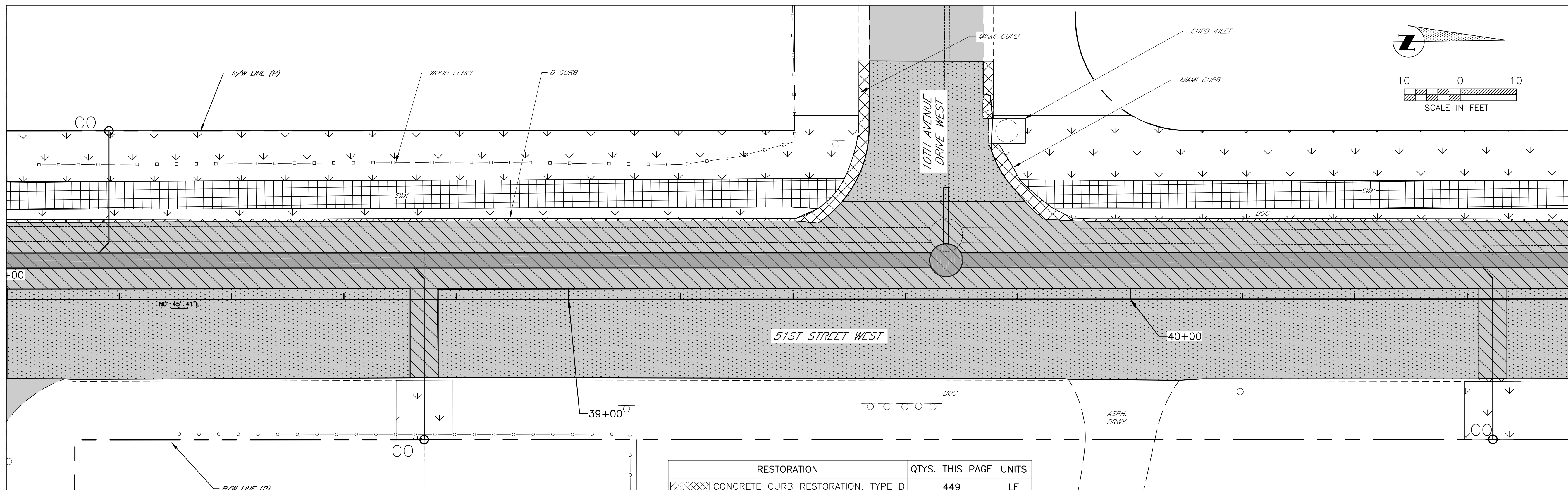
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\JUL Eng Design\PROJ\SSM SWR Proj\GM-51 St Gravity Replacement\DWG\51st St Gravity Replacement.dwg, 8/4/2015 8:38 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

GRAVITY SEWER REPLACEMENT

51st STREET WEST

RESTORATION AREAS, STA 38+00 TO 43+60

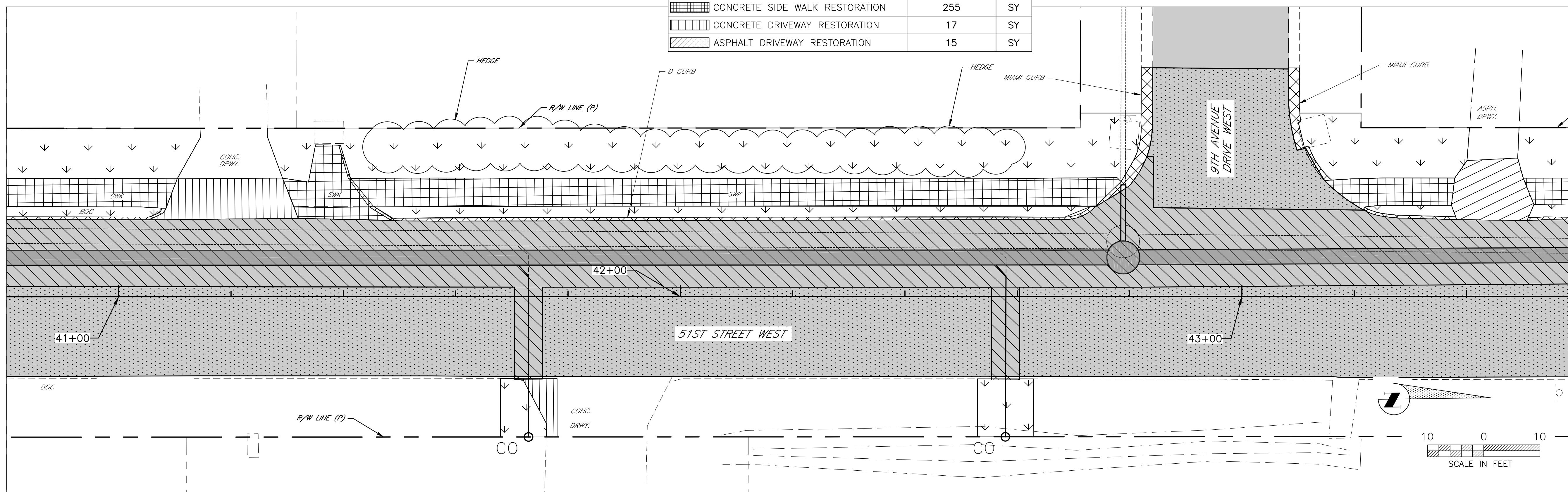
SHEET 18
MATCHLINE STA: 38+00



MATCH LINE STA: 40+80

RESTORATION	QTY. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	449	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	123	LF
BASE, MILL AND RESURFACE ASPHALT	808	SY
MILL & RESURFACE ASPHALT	1100	SY
SOD	611	SY
CONCRETE SIDE WALK RESTORATION	255	SY
CONCRETE DRIVEWAY RESTORATION	17	SY
ASPHALT DRIVEWAY RESTORATION	15	SY

MATCH LINE STA: 40+80



MATCH LINE STA: 43+60

VERTICAL DATUM: NAVD 88

SHEET 20

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	BLR	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

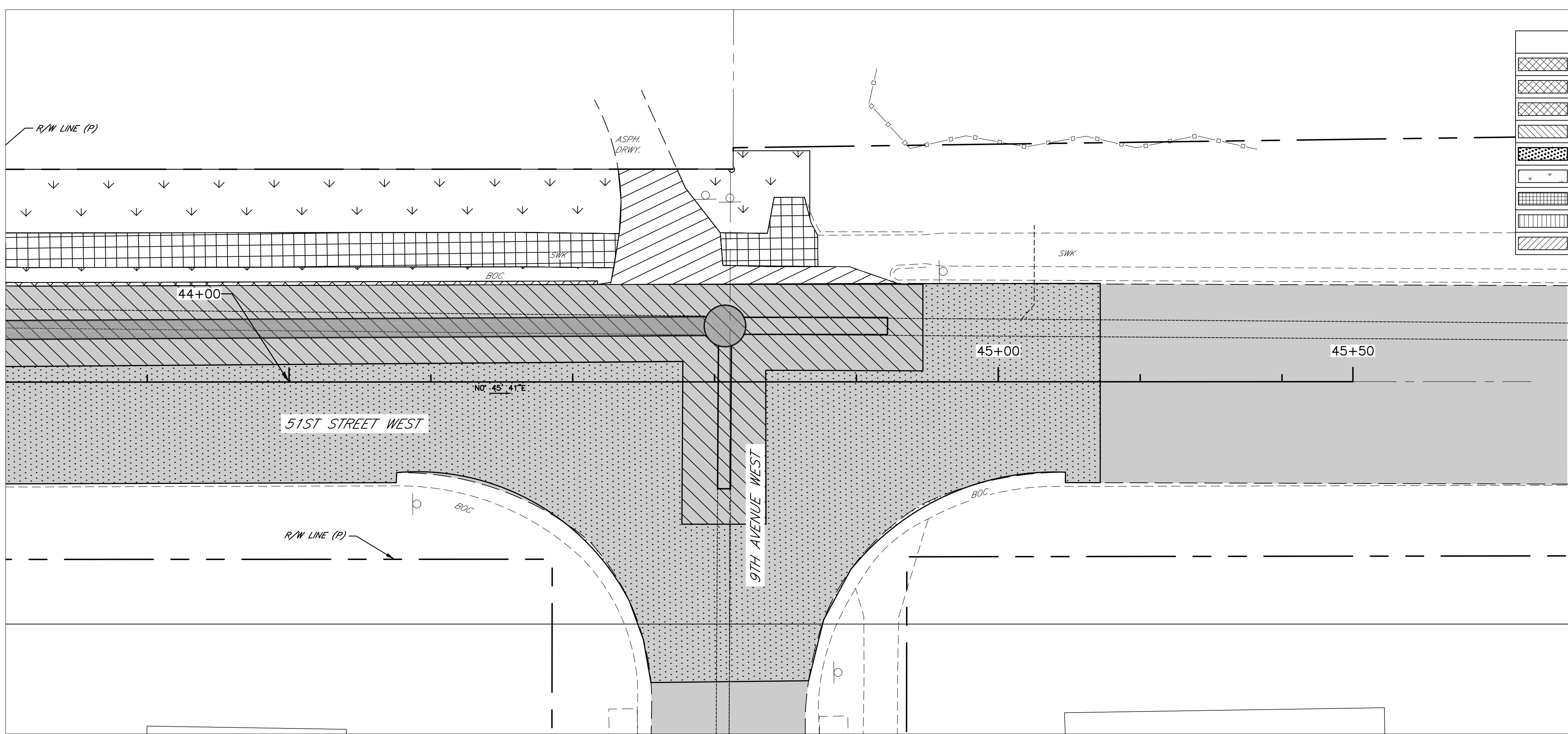
JOHN SIBBON, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
8/4/15

GRAVITY SEWER REPLACEMENT

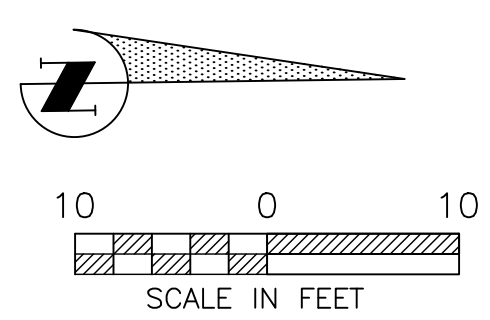
51st STREET WEST

RESTORATION AREAS, STA 43+60 TO END

SHEET 19
MATCHLINE STA: 43+60



RESTORATION	QTYS. THIS PAGE	UNITS
CONCRETE CURB RESTORATION, TYPE D	84	LF
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	192	SY
MILL & RESURFACE ASPHALT	396	SY
SOD	122	SY
CONCRETE SIDE WALK RESTORATION	57	SY
CONCRETE DRIVEWAY RESTORATION	0	SY
ASPHALT DRIVEWAY RESTORATION	29	SY



VERTICAL DATUM: NAVD 88

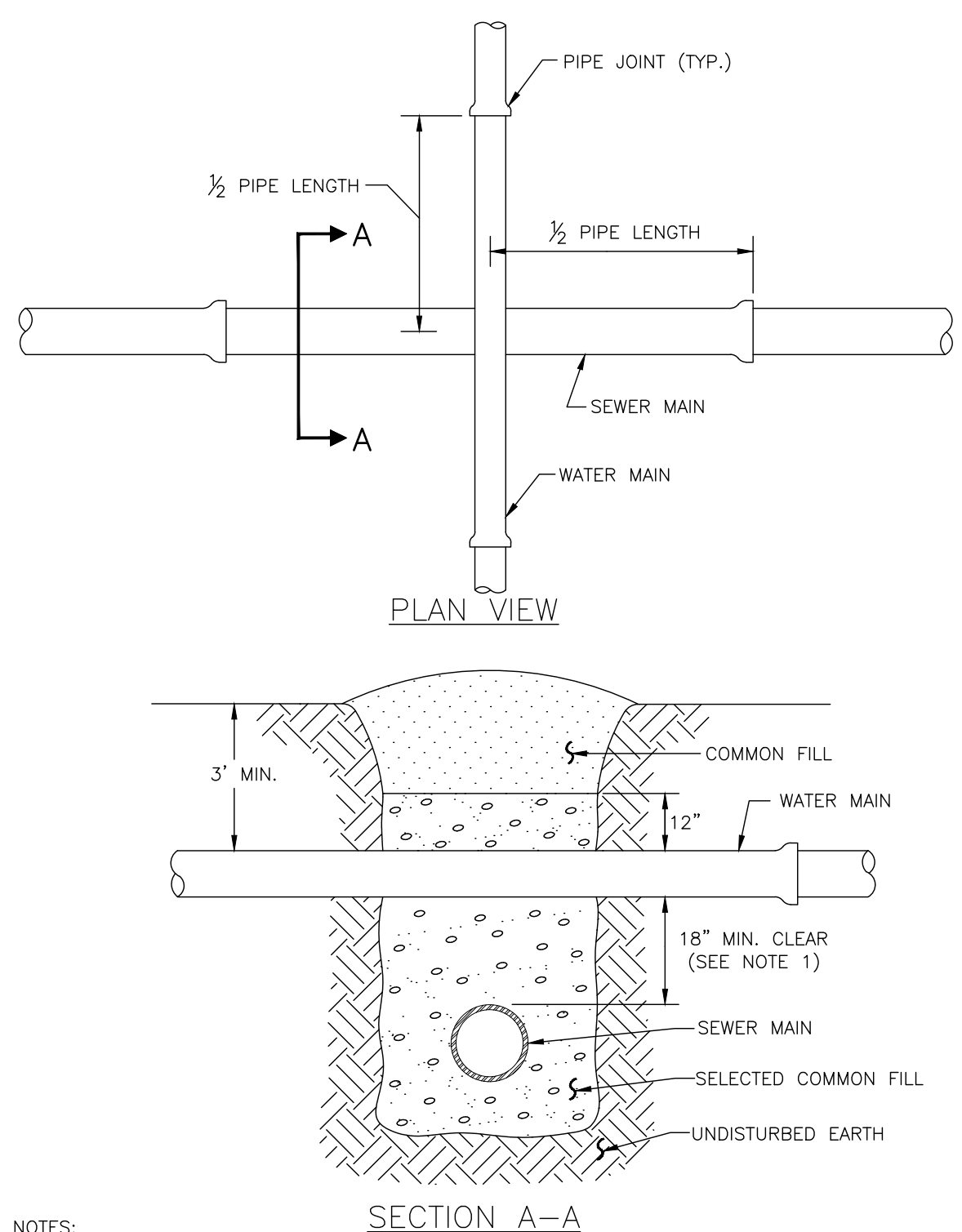
NO.	REVISION DESCRIPTION	BY	DATE
1	ADD BASE & MILL AREA	BLR	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT DATE 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

JOHN H. SHISHO, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
8/4/15
PROFESSIONAL ENGINEER
Signature: _____ Date: _____

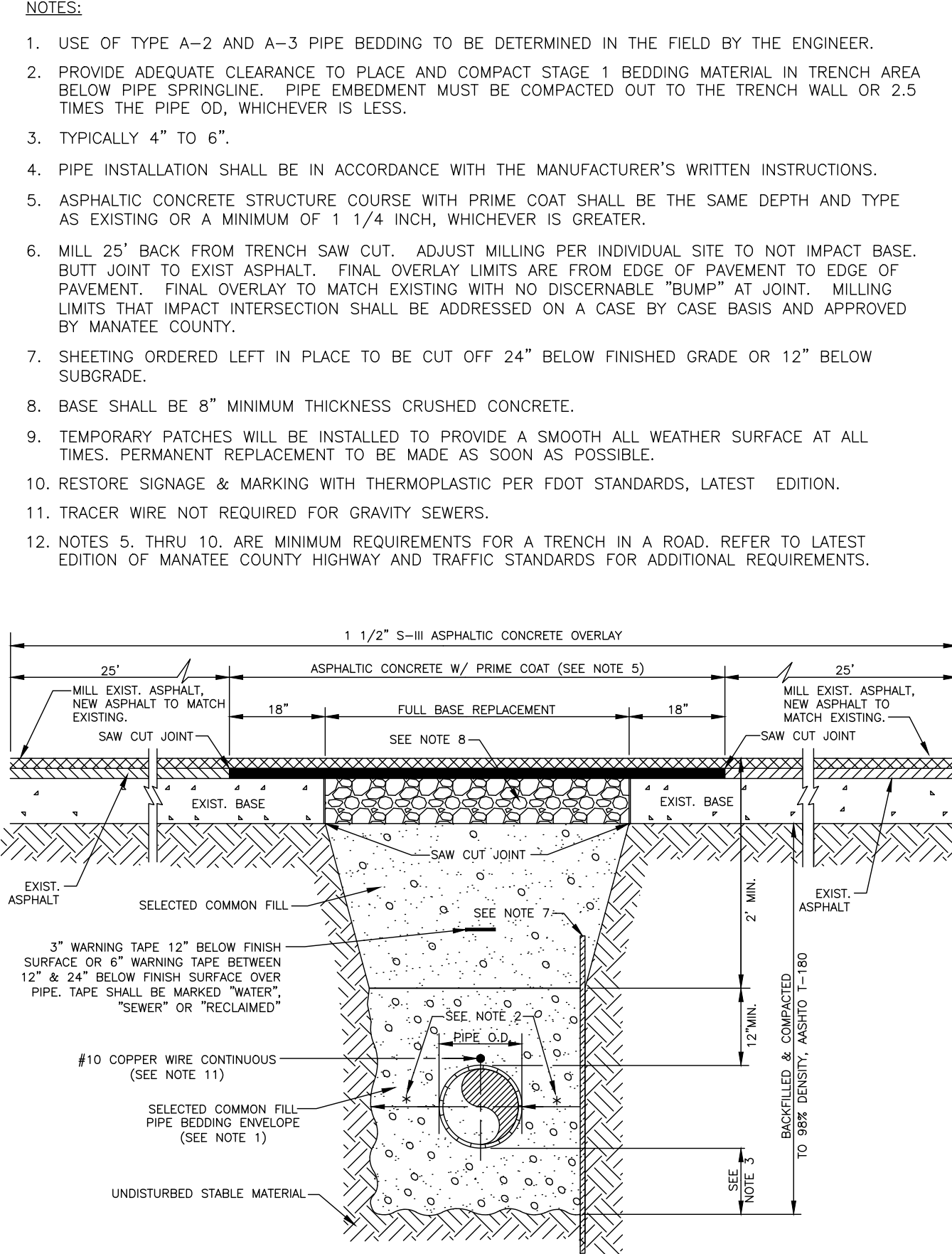
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering\Share\JH\Eng Design\PROG\SSM SWR Proj\GM-51 St Gravity Replacement\DWG\51st St Gravity Sewer Replacement.dwg, 8/4/2015 8:38 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

GRAVITY SEWER REPLACEMENT
51st STREET WEST
DETAILS 1



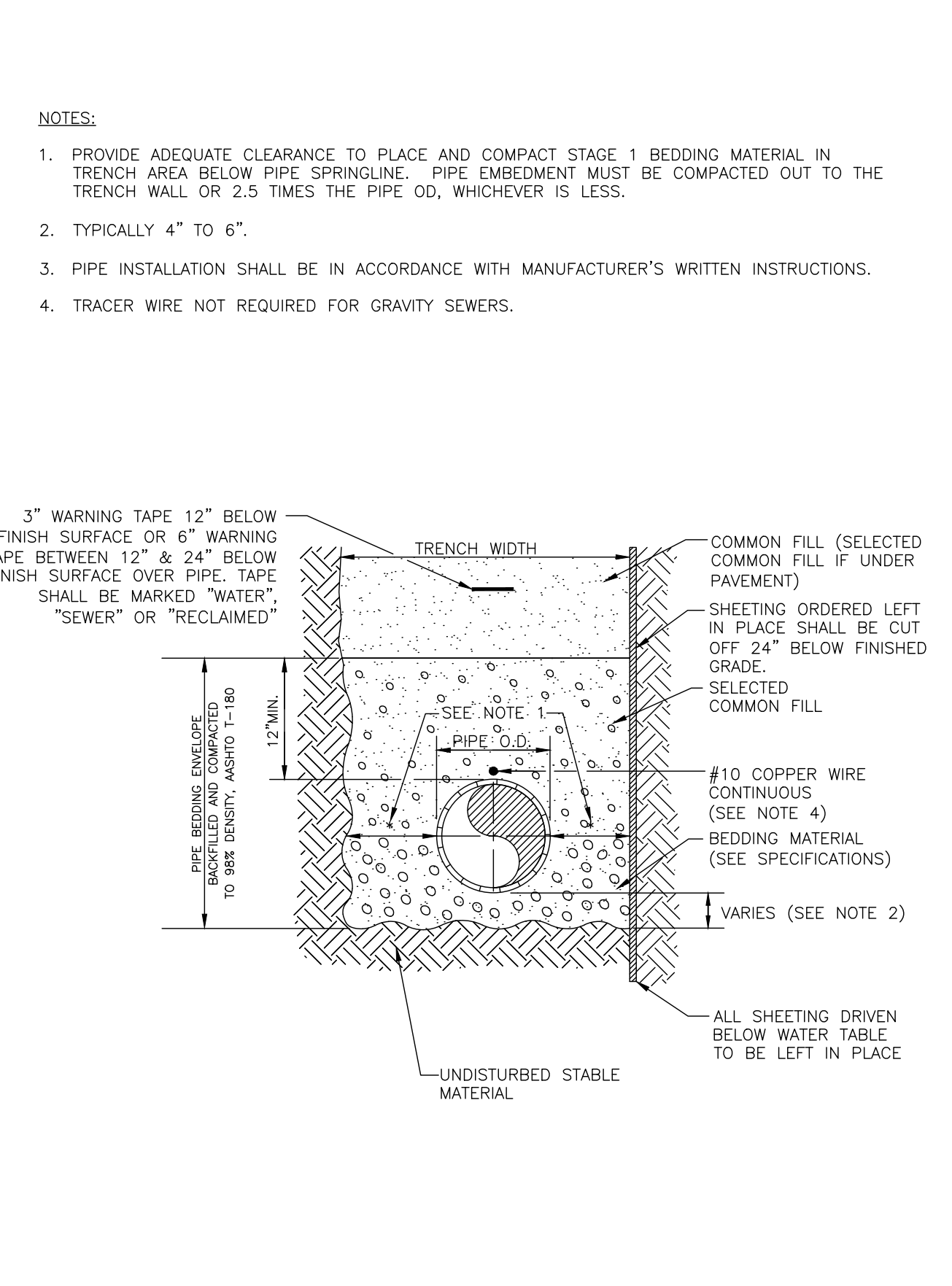
NOTES:

- 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.



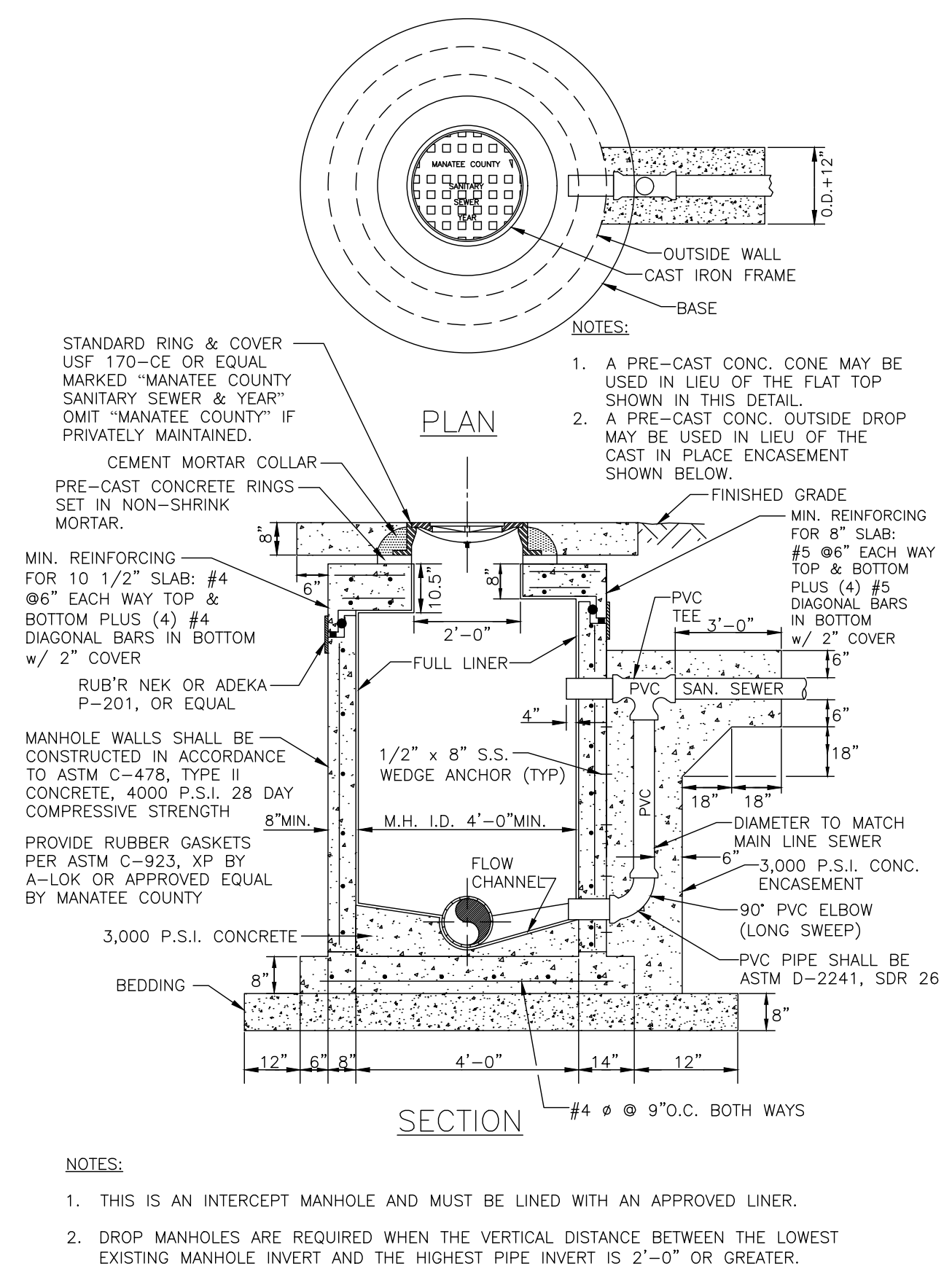
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING
UG-12

REV. BY: DATE: JANUARY 7, 2014
CLB/BR: 03/11



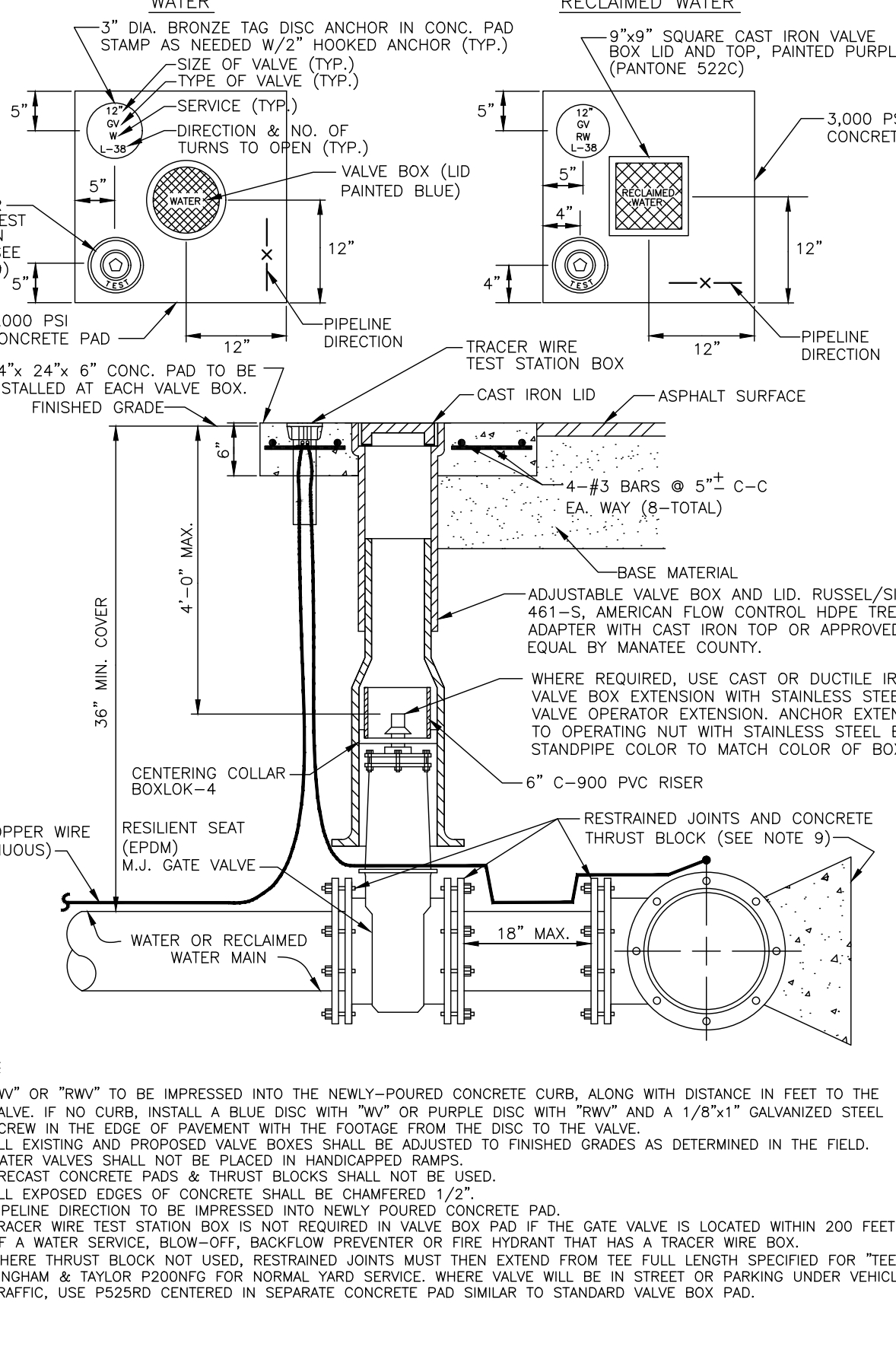
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
TRENCH WITH TYPE A-2 PIPE BEDDING
UG-15

REV. BY: DATE: JANUARY 7, 2014
CLB/BR: 11/10



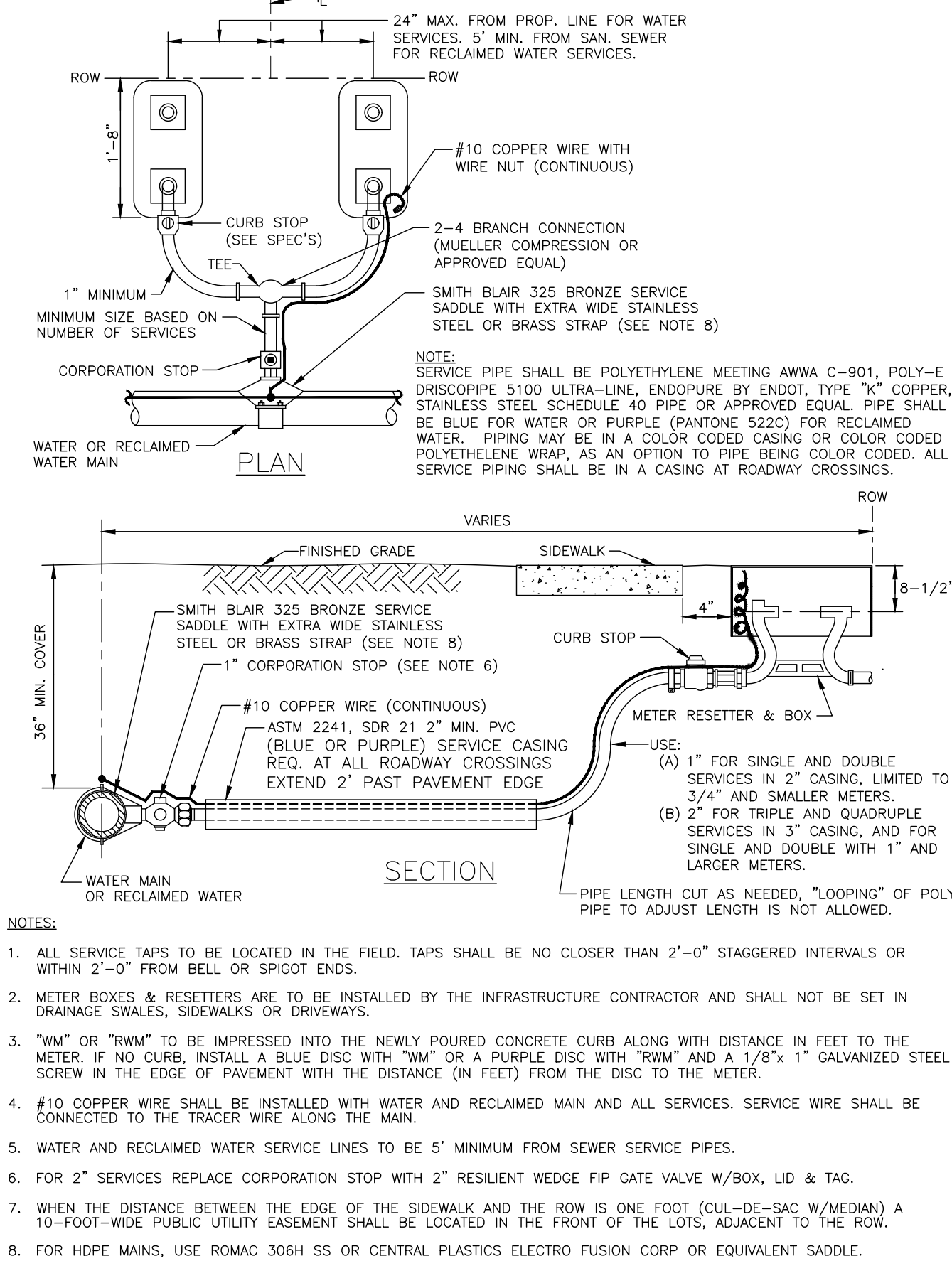
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
GRAVITY SEWER STANDARD DROP CONNECTION
US-6

REV. BY: DATE: JANUARY 7, 2014
CLB/KE: 11/10
WT/BR: 4/13



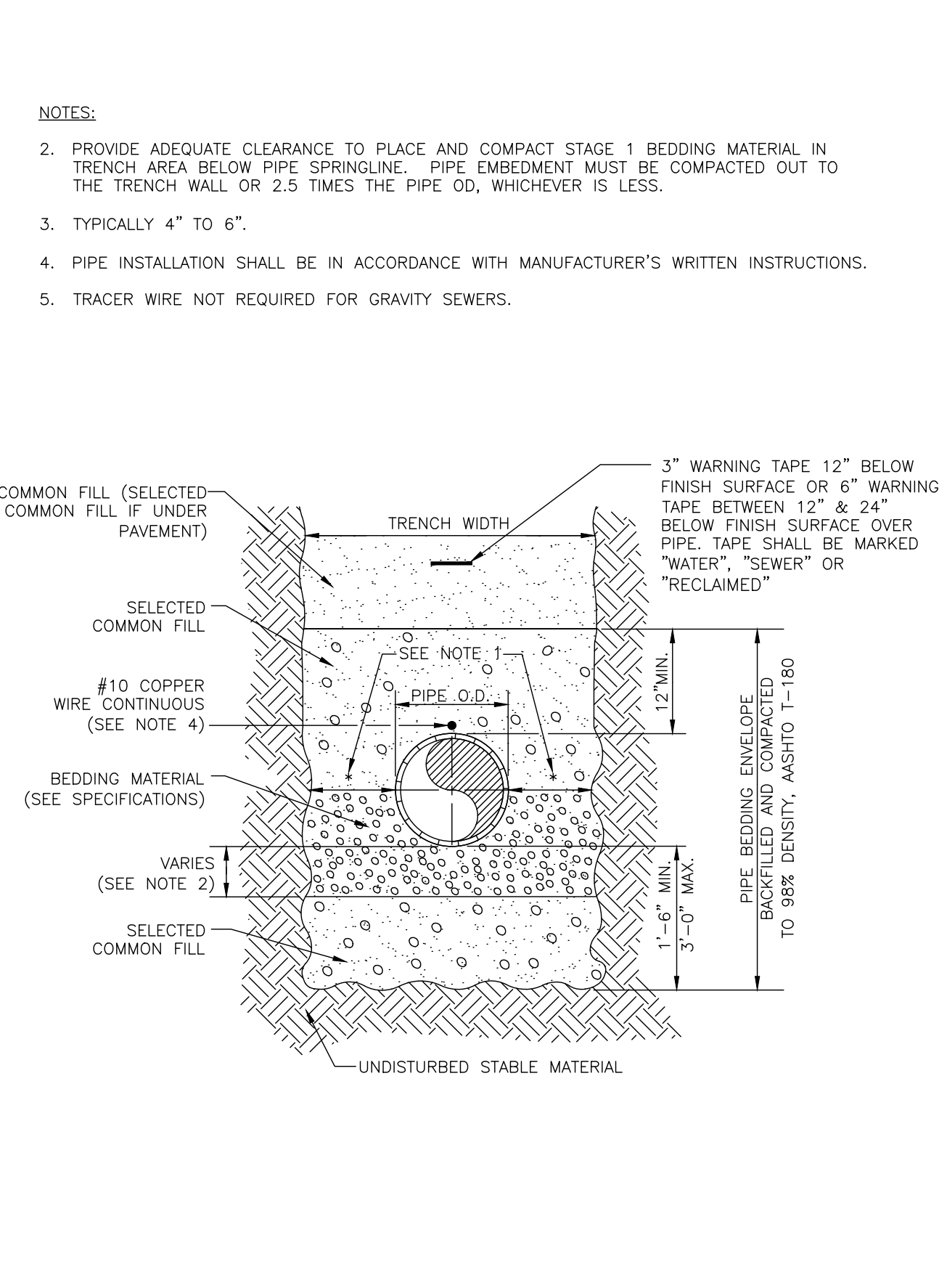
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
GATE VALVE, BOX, LID AND TAG
UW-2

REV. BY: DATE: JANUARY 7, 2014
CLB/KE: 11/10



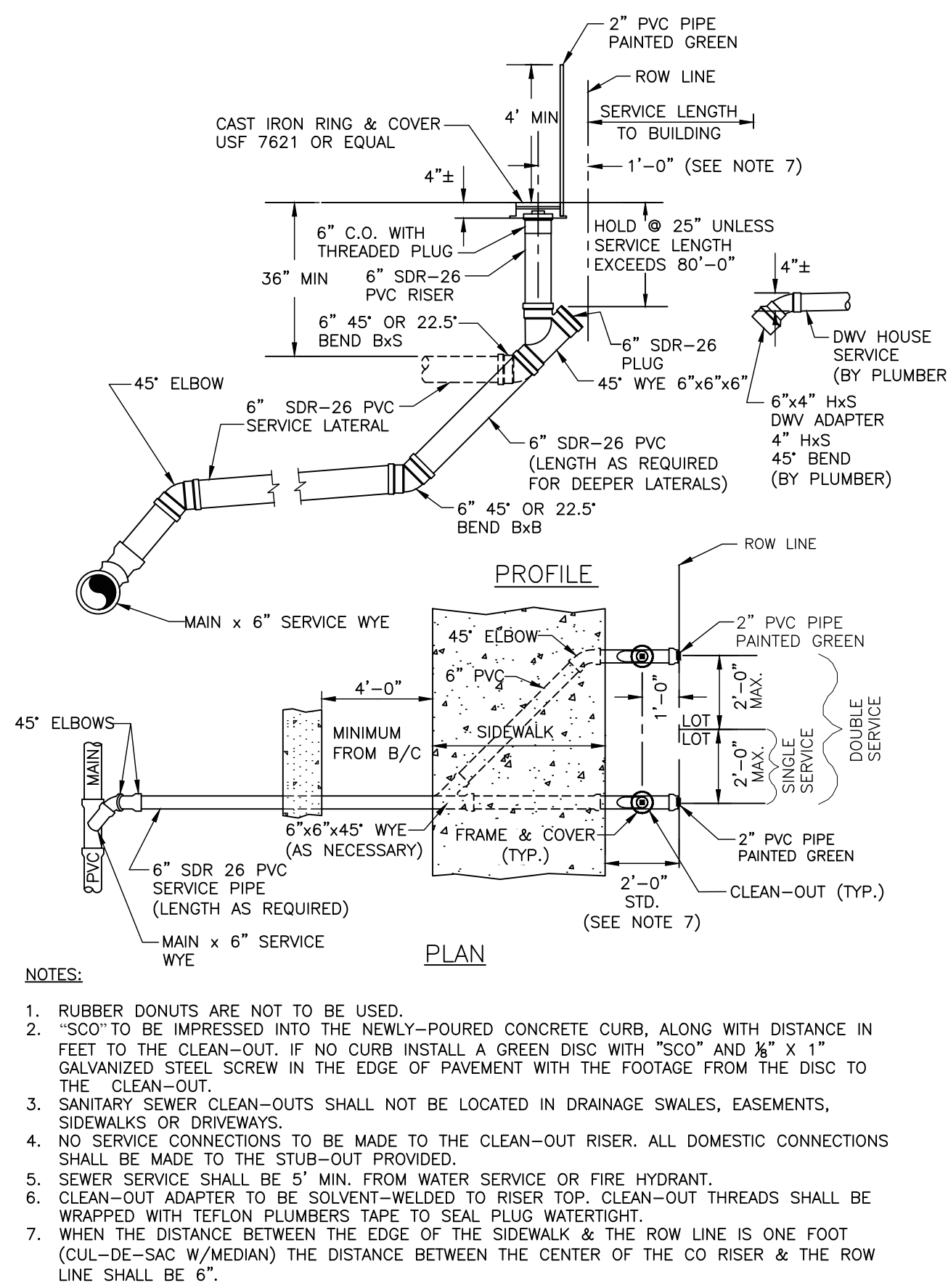
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
TYPICAL SERVICE CONNECTION
UW-19

REV. BY: DATE: JANUARY 7, 2014
CLB/BR: 11/10



MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
TRENCH WITH TYPE A-3 PIPE BEDDING
UG-16

REV. BY: DATE: JANUARY 7, 2014
CLB/BR: 11/10



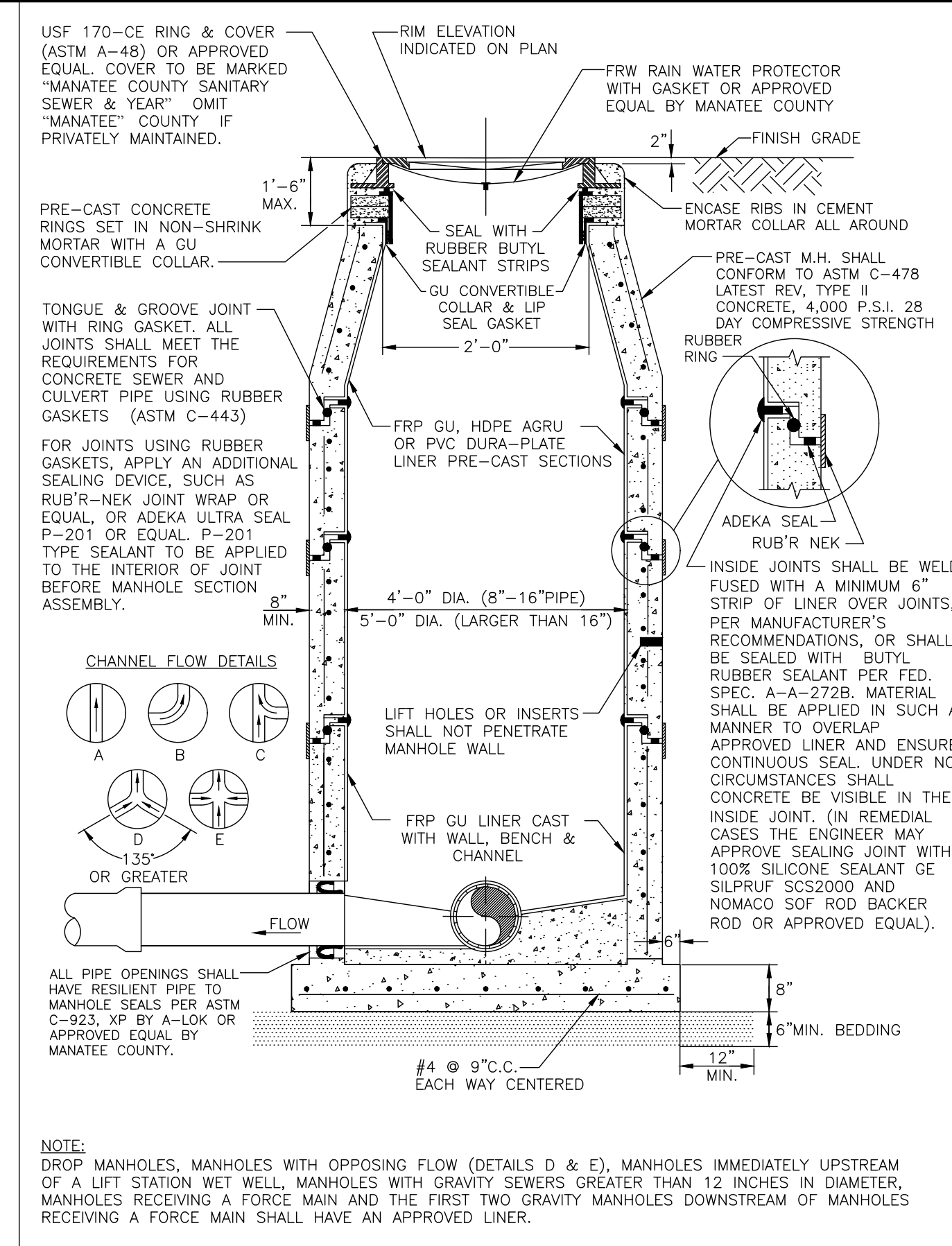
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT
SINGLE AND DOUBLE SERVICE CONNECTION
US-13

REV. BY: DATE: JANUARY 7, 2014
CLB/DOM: 11/10
WT/BR: 6/13

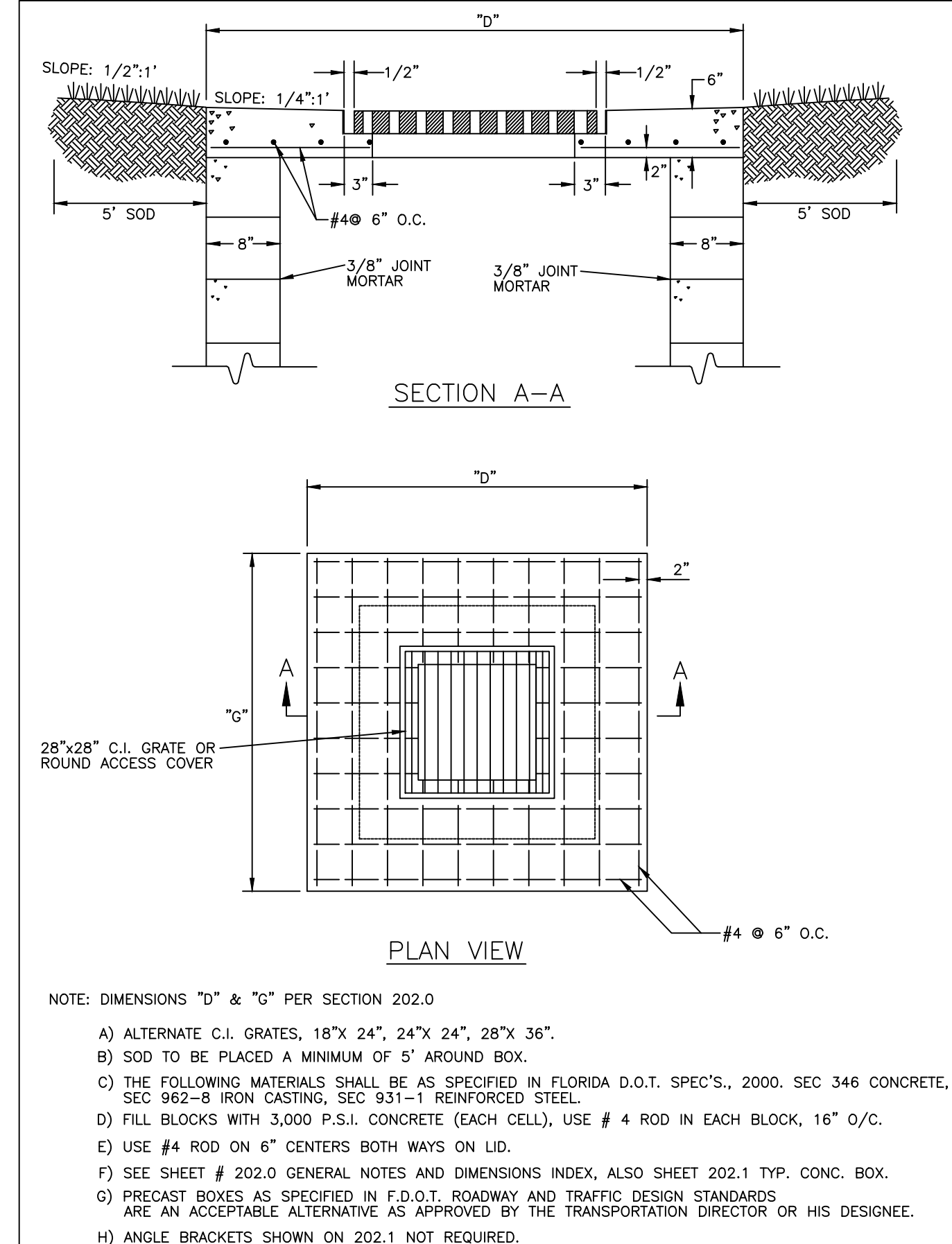
NO.	REVISION DESCRIPTION	BY	DATE
1	REV. DETAILS	JSS	07/27/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29.32.33-3417
SCALE	
VERTICAL DATUM	NAVD 1988
SURVEYED	BY: HYATT DATE: 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

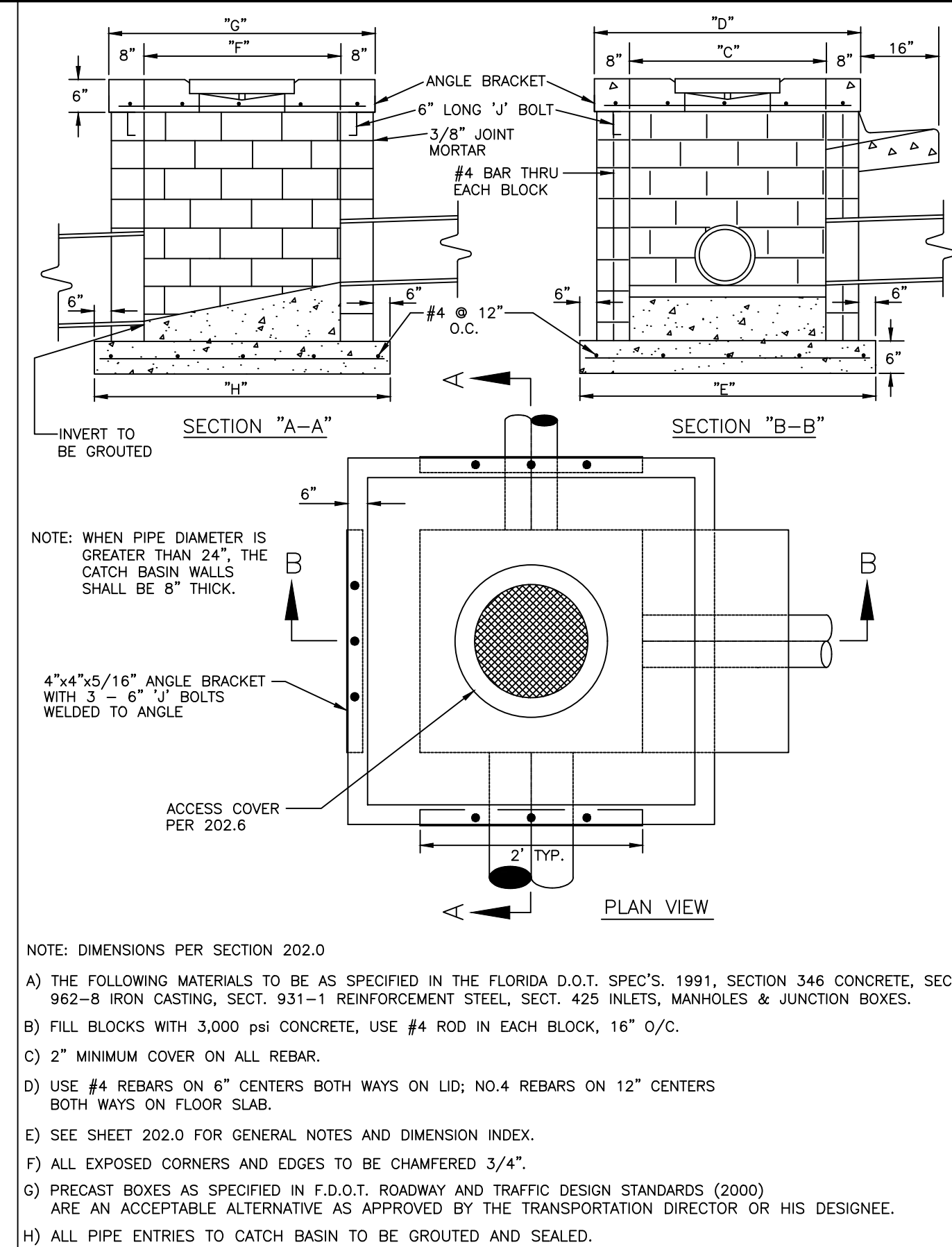
JOHN H. SHOSHOE
FLORIDA P.E. # 60923
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature: _____ Date: _____



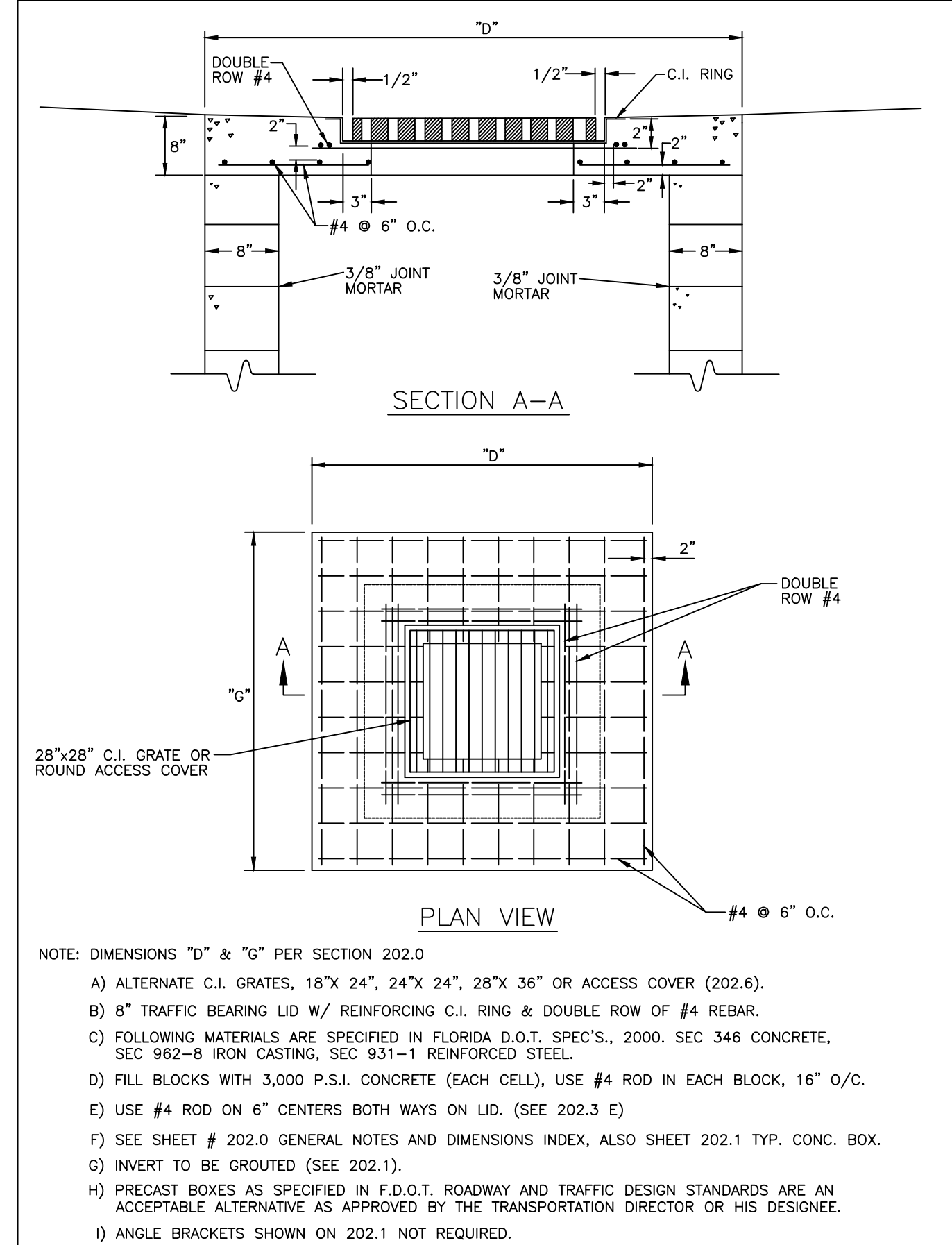
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR TURBULENT FLOW	US-3
REV. BY	DATE	DATE OF APPROVAL	
CLB/CB	11/10	JANUARY 7, 2014	



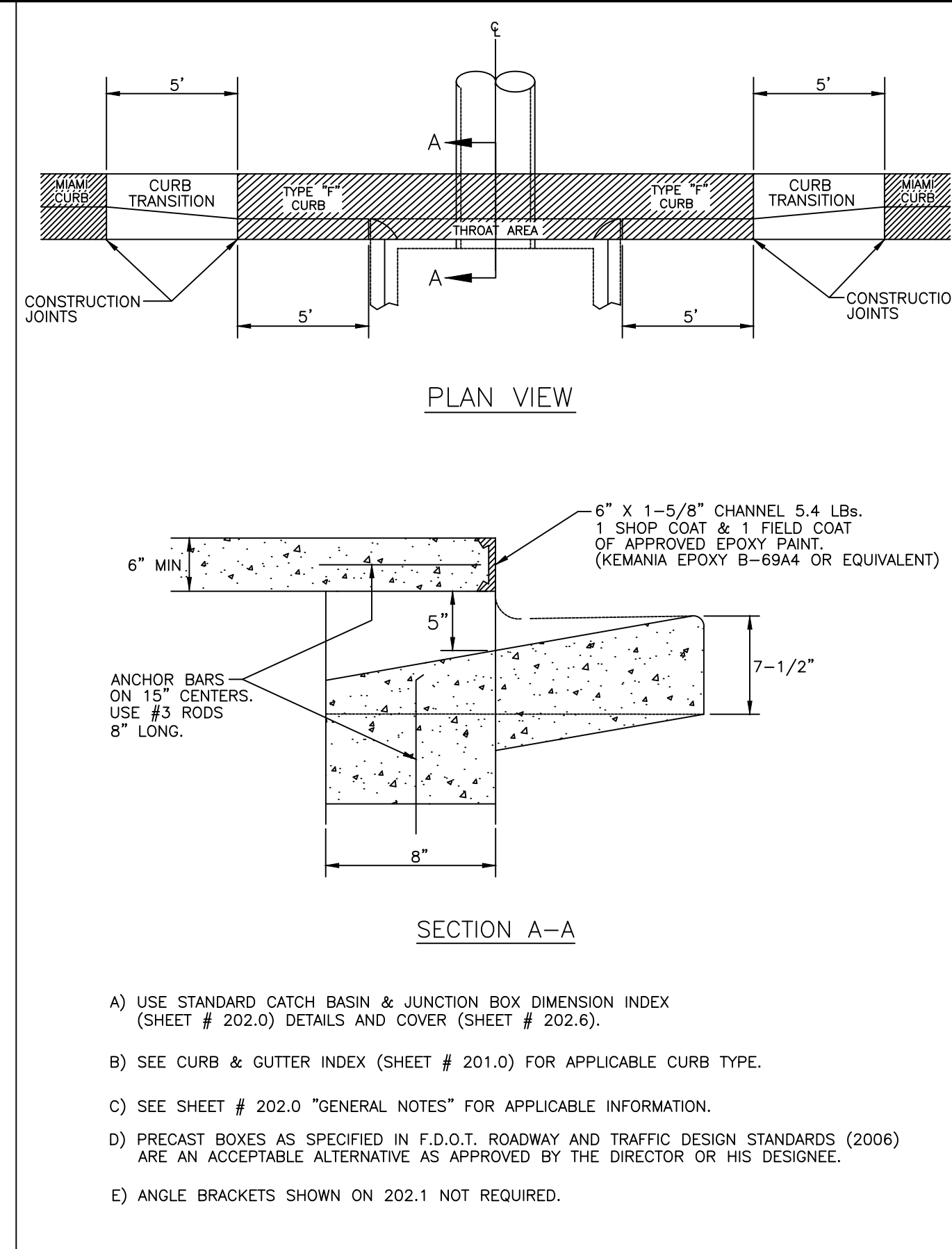
MANATEE COUNTY TRANSPORTATION DEPARTMENT		NON-TRAFFIC BEARING BOX LID	202.4
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



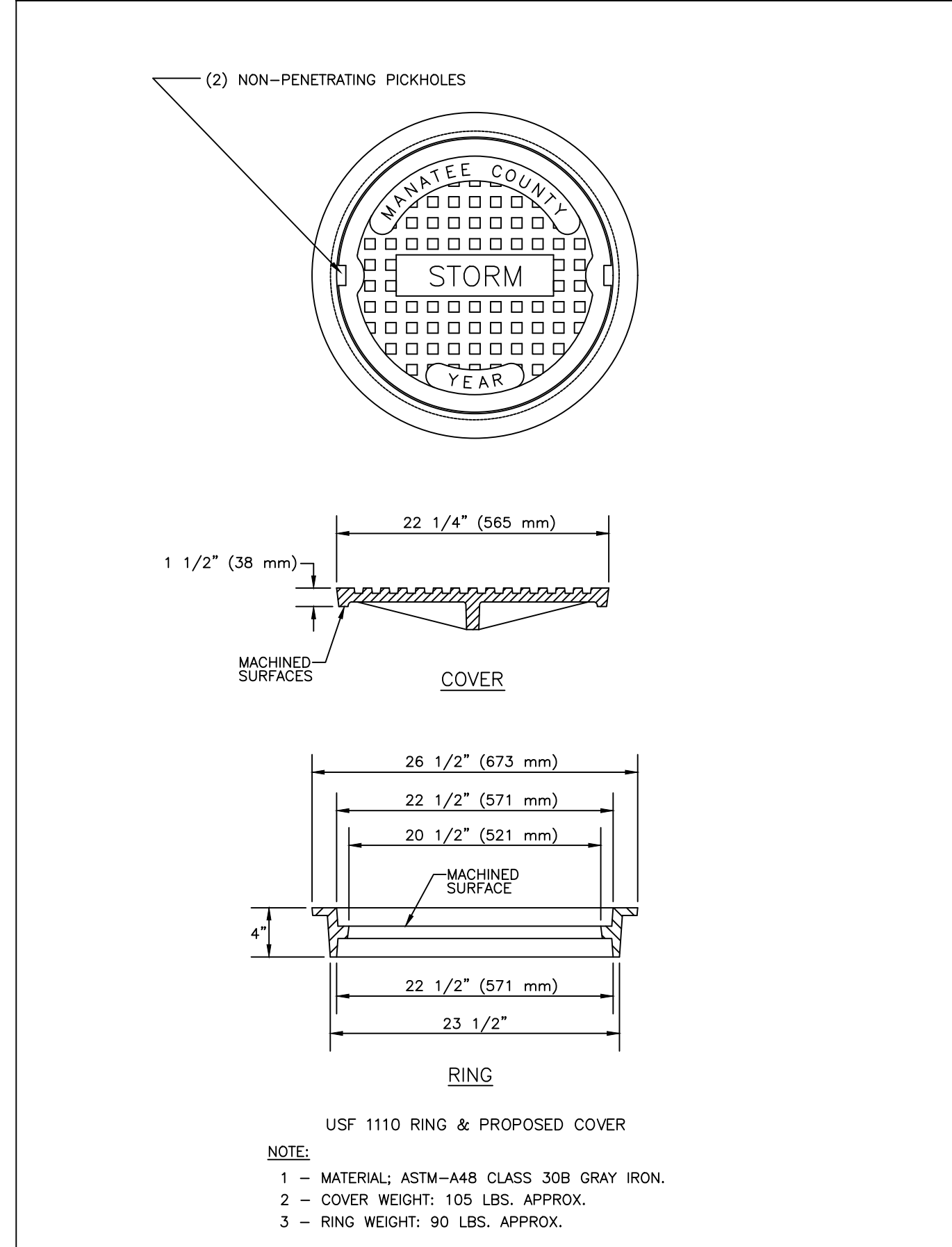
MANATEE COUNTY TRANSPORTATION DEPARTMENT		TYPICAL CONC. BLOCK BOX	202.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



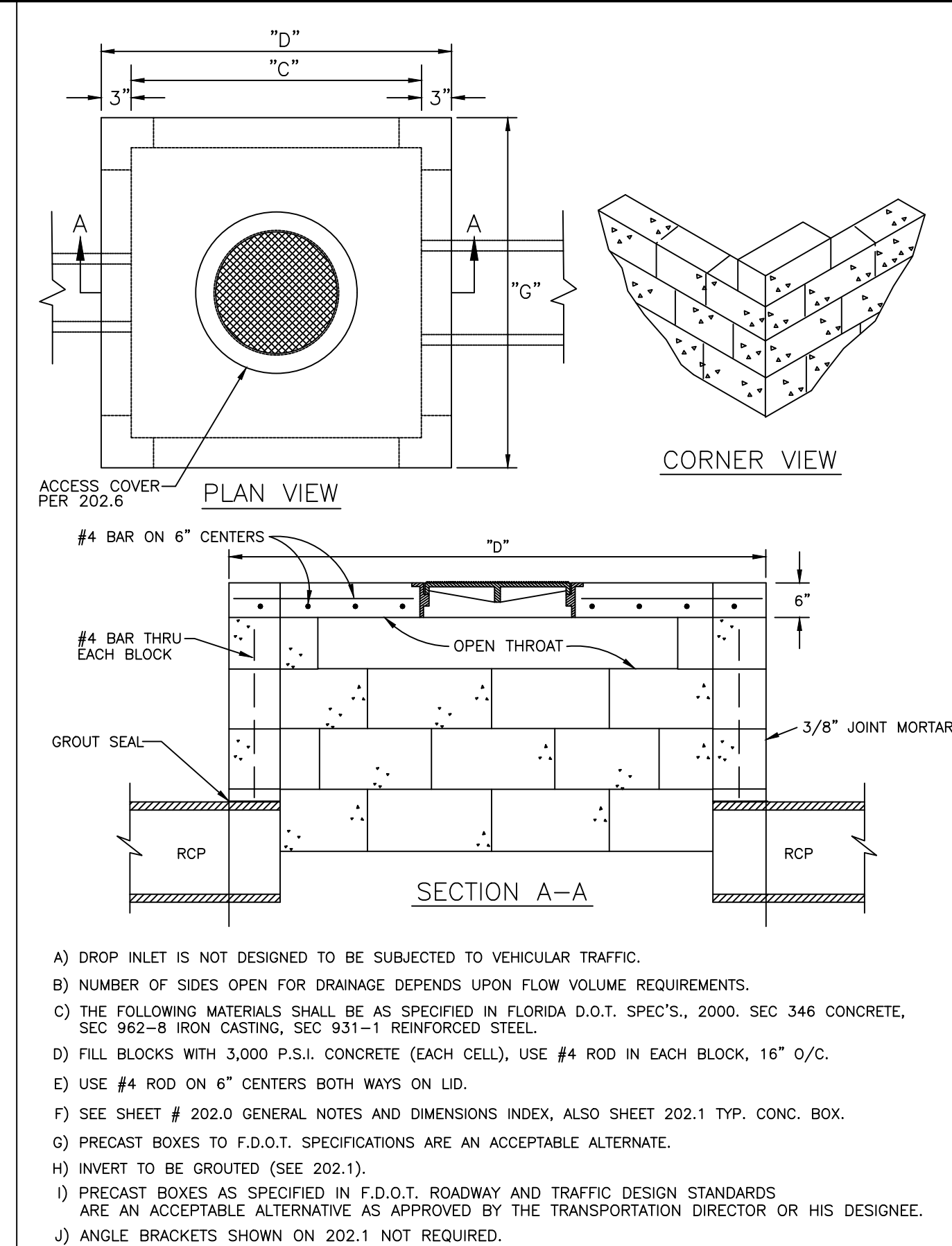
MANATEE COUNTY TRANSPORTATION DEPARTMENT		TRAFFIC BEARING BOX LID	202.5
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



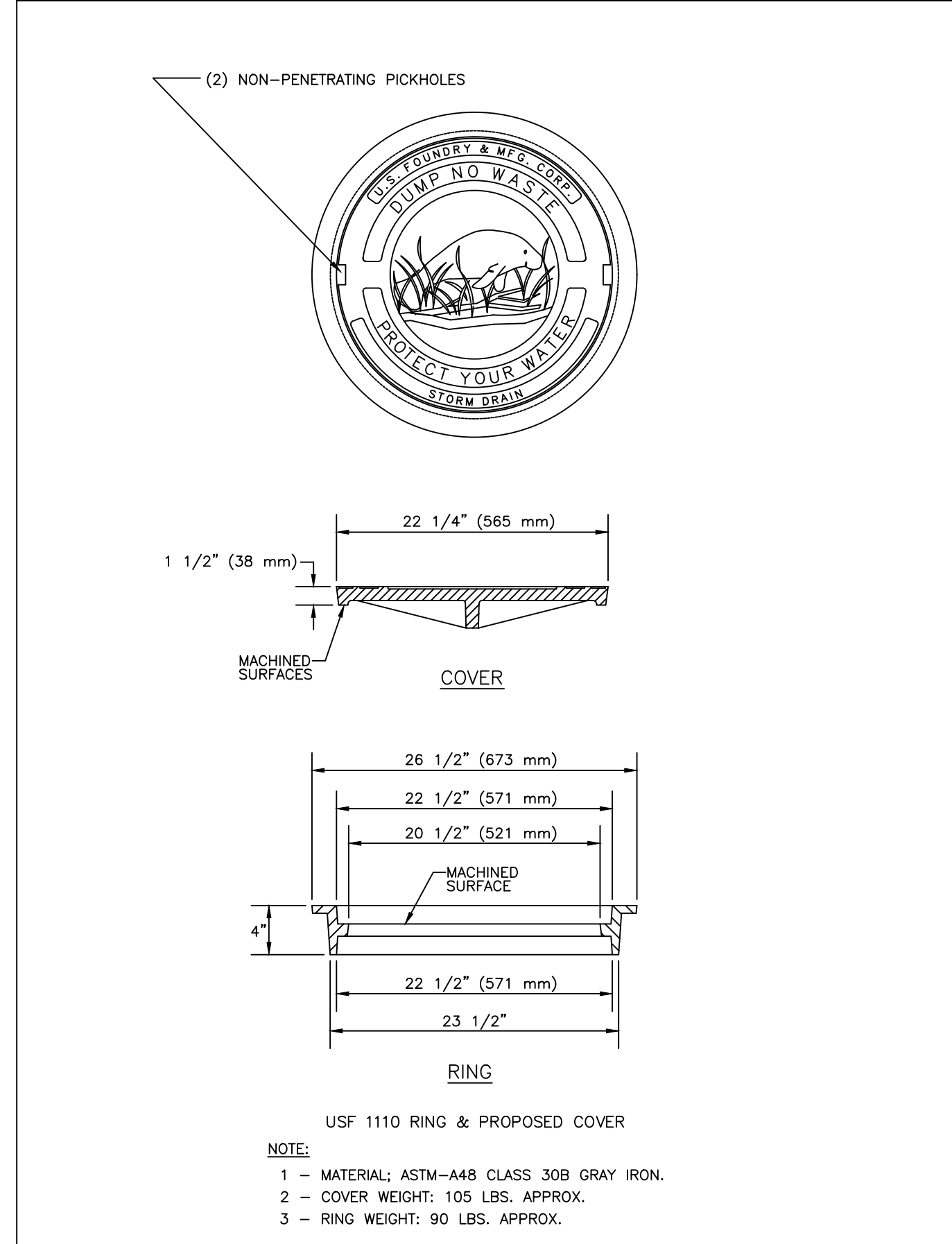
MANATEE COUNTY TRANSPORTATION DEPARTMENT		CURB INLET	202.2
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



MANATEE COUNTY TRANSPORTATION DEPARTMENT		ACCESS COVER FOR STORMWATER JUNCTION BOX (PUBLIC)	203.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



MANATEE COUNTY TRANSPORTATION DEPARTMENT		THROAT DETAIL FOR DROP INLET	202.3
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



MANATEE COUNTY TRANSPORTATION DEPARTMENT		ACCESS COVER FOR CATCH BASIN & THROAT INLET (PUBLIC)	203.2
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL	
		6/12/07	



GRAVITY SEWER REPLACEMENT
51st STREET WEST
DETAILS 2

NO.	1	REVISION DESCRIPTION	REV. DETAILS	BY	JSS	DATE	07/27/15
PROJECT #	404-6035782						
SURVEY #	13-1816						
SEC./TWN./RGE	28.29,32.33-3417						
SCALE							
VERTICAL DATUM	NAVD 1988						
SURVEYED	HYATT	BY		DATE	01/2014		
DESIGNED	JSS	BY		DATE	04/2014		
DRAWN	BLR	BY		DATE	04/2014		

GRAVITY SEWER REPLACEMENT
51st STREET WEST
DETAILS 3

NOTE: FILTER FABRIC NOT REQUIRED WHEN AN O-RING GASKET IS USED.

ISOMETRIC VIEW

NOTE: FILTER FABRIC MATERIAL MUST MEET THE FOLLOWING ASTM REQUIREMENTS:

- ASTM D 4595
- ASTM D 4632
- ASTM D 4533
- ASTM D 4833
- ASTM D 4491

BUTT JOINT

BELL JOINT

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	104.0

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	104.0

SECTION A-A
(SEE SHEET 301.0)

S.W. = SIDEWALK	"A"	S.W. + A + 10"	"X"	"B"
5'	0	5.8'	5.8'	5'
6'	0	6.8'	6.8'	6'
7'	0	7.8'	7.3'	6.5'
8'	0	8.8'	7.3'	6.5'
5'	2.5'	7.8'	7.8'	5'
5'	2.5'	8.3'	8.1'	4.8'
5'	3'	8.8'	8.2'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5'	10.8'	9.1'	3.1'

SECTION B-B
(SEE SHEET 301.0)

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	302.1

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	302.1

ELLIPTICAL PIPE

DIMENSIONS & QUANTITIES

Rise R	Span S	X	A	B	C	E	F	G	M			
									Single Pipe	Double Pipe	Triple Pipe	Quad Pipe
12"	18"	2'-10"	1.97	1.62	3.59	1.56	4'	1.50	4.92	7.75	10.58	13.42
14"	25"	3'-4"	2.01	1.99	4.00	1.89	5'	1.90	5.38	8.71	12.04	15.36
19"	30"	4'-0"	2.11	2.92	5.03	2.73	6'	2.37	6.04	10.04	14.04	18.04
24"	36"	5'-0"	2.20	3.85	6.05	3.56	7'	2.85	6.79	11.79	16.79	21.79
29"	45"	5'-11"	2.34	4.79	7.13	4.39	8'	3.19	7.50	13.42	19.33	25.25
34"	55"	7'-0"	2.43	5.72	8.19	5.23	9'	3.57	8.25	15.05	22.25	29.25
36"	60"	7'-10"	2.52	6.46	8.98	5.89	9'	3.95	8.92	16.75	24.58	32.42
43"	66"	8'-11"	2.67	7.39	10.01	6.73	10'	4.28	9.67	18.58	27.50	36.42
45"	75"	9'-11"	2.71	8.33	11.04	7.56	11'	4.59	10.42	20.33	30.25	40.17
53"	83"	10'-8"	2.80	9.26	12.06	8.39	12'	4.77	11.08	21.75	32.42	43.08
58"	91"	11'-8"	2.90	10.19	13.09	9.23	13'	5.01	11.83	23.50	35.17	46.83

SECTION

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	102.1

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	102.1

ROUND PIPE

DIMENSIONS AND QUANTITIES

D	X	A	B	C	E	F	G	M			
								Single Pipe	Double Pipe	Triple Pipe	Quad Pipe
15"	2'-7"	1.92	2.18	4.10	2.06	5'	1.22	4.63	7.21	9.79	12.37
18"	2'-10"	1.97	2.74	4.71	2.56	6'	1.41	4.92	7.75	10.58	13.42
24"	3'-5"	2.06	3.85	5.91	3.56	7'	1.73	5.50	8.92	12.33	15.75
30"	4'-3"	2.15	4.95	7.10	4.56	8'	2.00	6.08	10.33	14.58	18.83
36"	5'-1"	2.25	6.08	8.33	5.56	9'	2.24	6.67	11.79	16.83	21.92
42"	6'-0"	2.34	7.21	9.55	6.56	10'	2.45	7.25	13.25	19.25	25.25
48"	6'-9"	2.43	8.33	10.76	7.56	11'	2.65	7.83	14.58	21.33	28.08
54"	7'-8"	2.52	9.44	11.99	8.56	12'	2.83	8.42	16.08	23.75	31.42
60"	8'-8"	2.62	10.56	13.18	9.56	14'	3.00	9.00	17.50	26.00	34.50
66"	9'-2"	2.71	11.68	14.39	10.56	15'	3.18	9.58	18.75	27.92	37.08
72"	10'-0"	2.80	12.80	15.61	11.56	16'	3.30	10.16	20.16	30.16	40.16

SECTION

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	102.2

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	102.2

TYPICAL SIDEWALK LOCATION

ALTERNATE SIDEWALK LOCATION

SECTION

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	301.1

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	301.1

MITERED END SECTION FOR ROUND, SINGLE & MULTIPLE PIPES

TRUNCATED DOME

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	302.3

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	302.3

SECTION A-A
(SEE SHEET 301.0)

SECTION B-B
(SEE SHEET 301.0)

MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	401.8

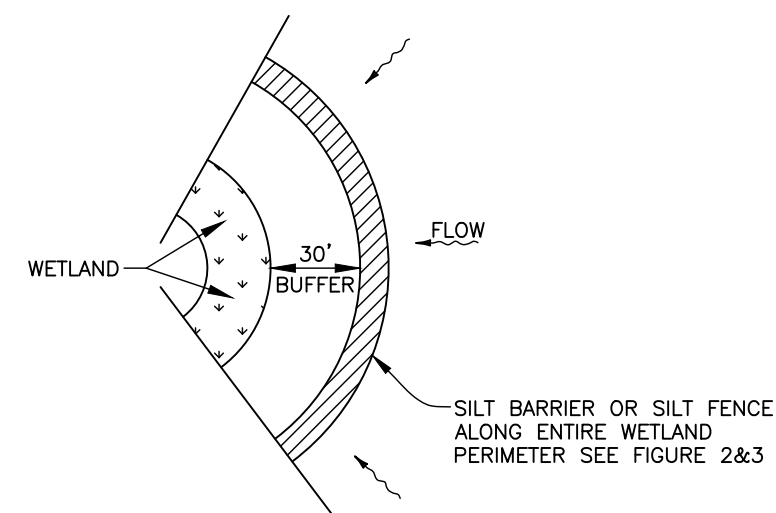
MANATEE COUNTY TRANSPORTATION DEPARTMENT

REV. BY	DATE	DESCRIPTION	QUANTITY
	6/12/07	DATE OF B.O.C.C. APPROVAL	401.8

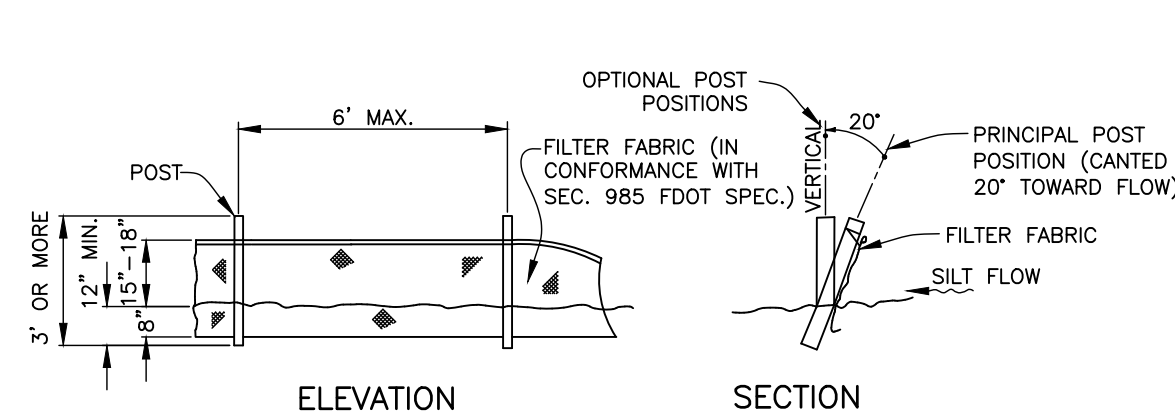
NO.	REV. DETAILS	DATE	BY	REVISION DESCRIPTION
1		07/27/15	JSS	

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29.32.33-3417
SCALE	
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT DATE 01/2014
DESIGNED	BY JSS DATE 04/2014
DRAWN	BY BLR DATE 04/2014

MANATEE COUNTY PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
Signature: _____ Date: _____

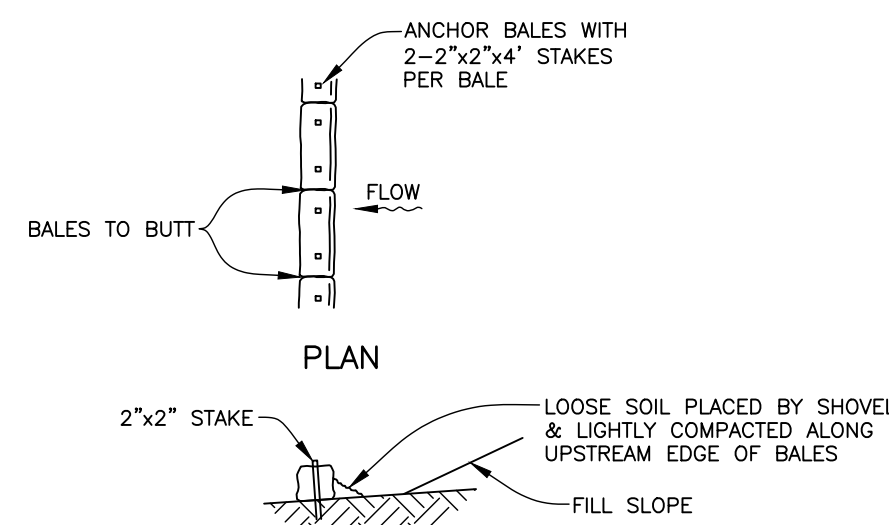


WETLAND BUFFER
FIGURE 1

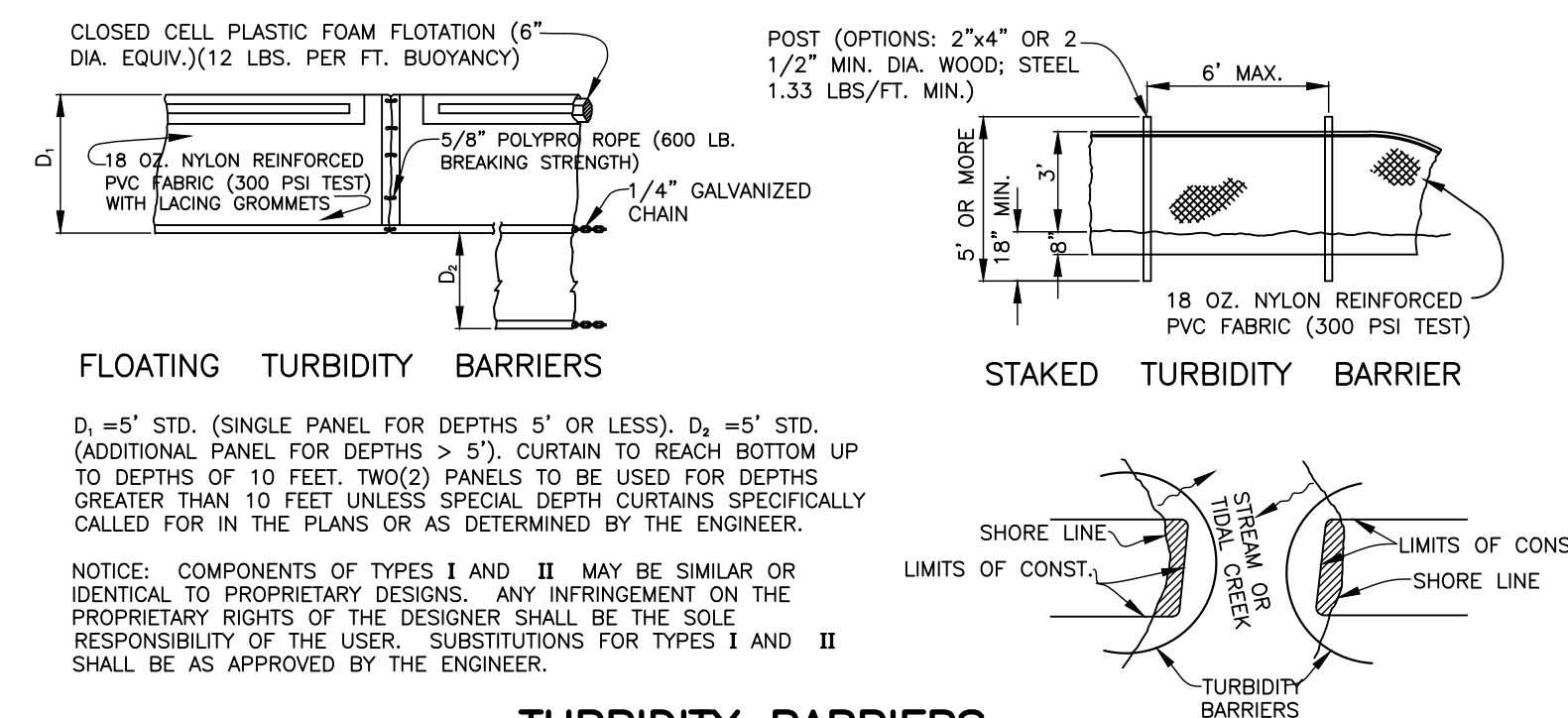


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

TYPICAL SILT FENCE
FIGURE 2



TYPICAL BALE SILT BARRIER
FIGURE 3



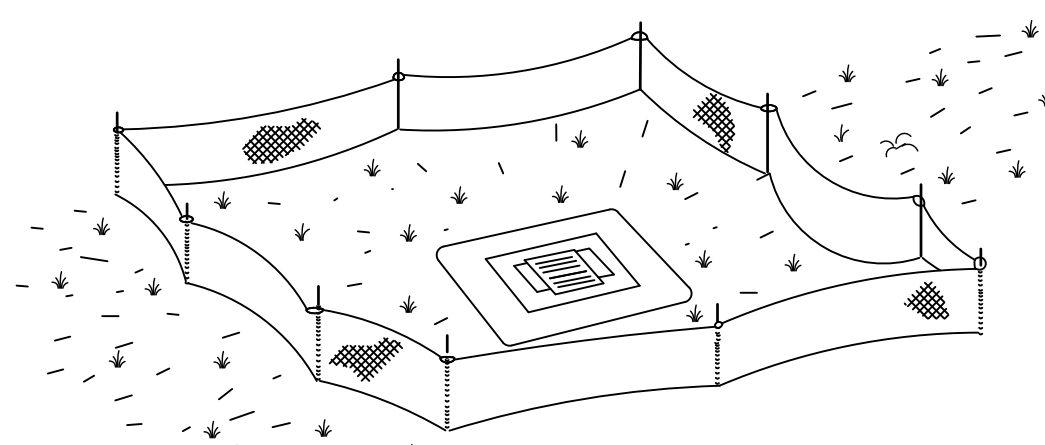
FLOATING TURBIDITY BARRIERS

STAKED TURBIDITY BARRIER

D_1 = 5" STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D_2 = 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.

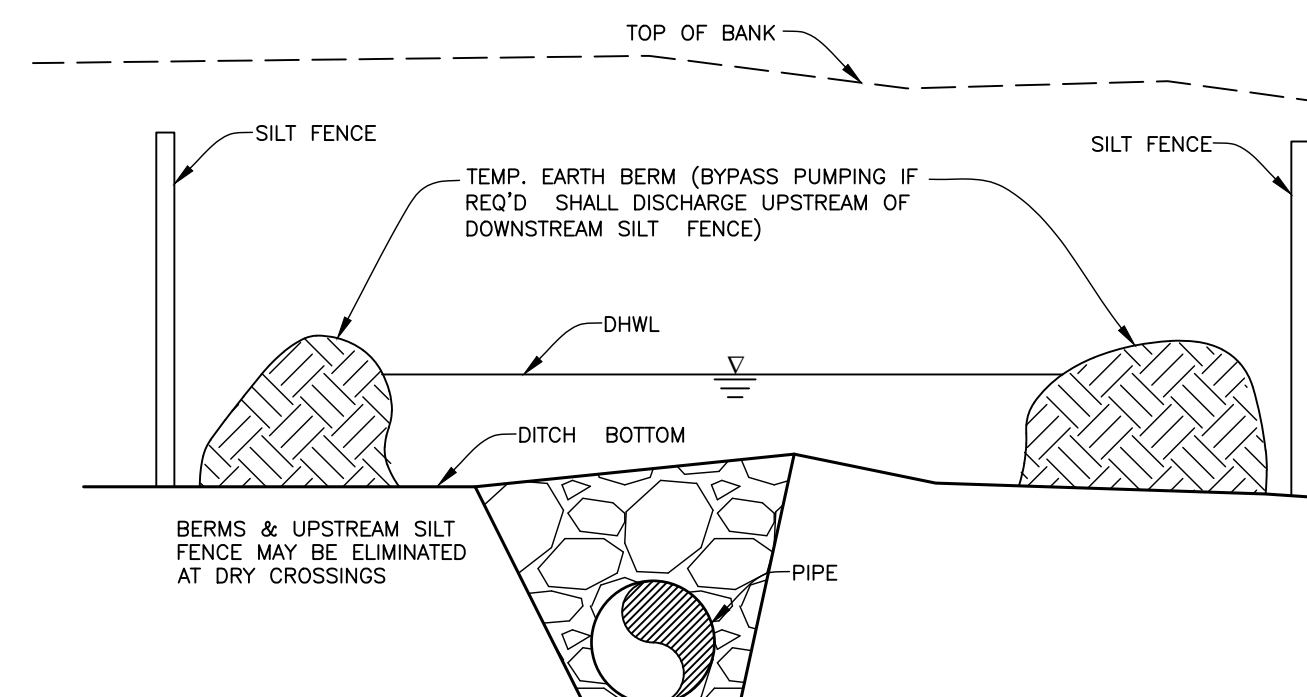
NOTE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

TURBIDITY BARRIERS
FIGURE 4

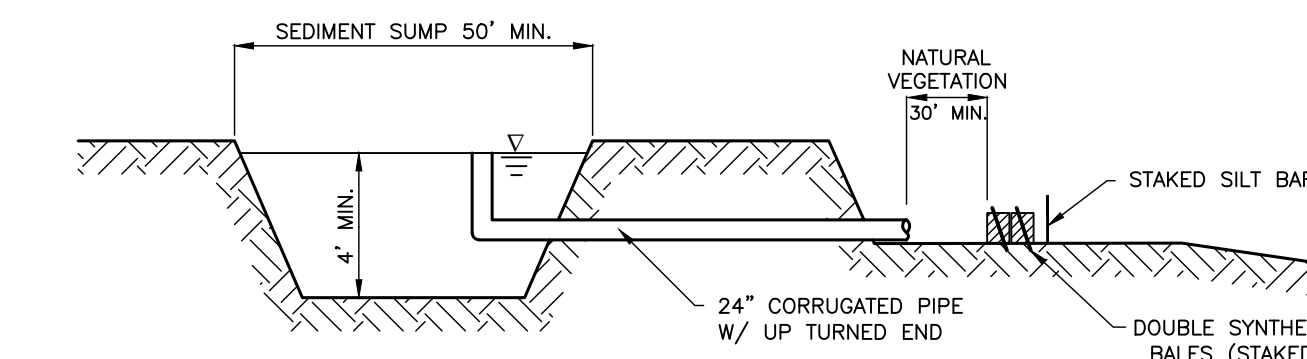


TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS

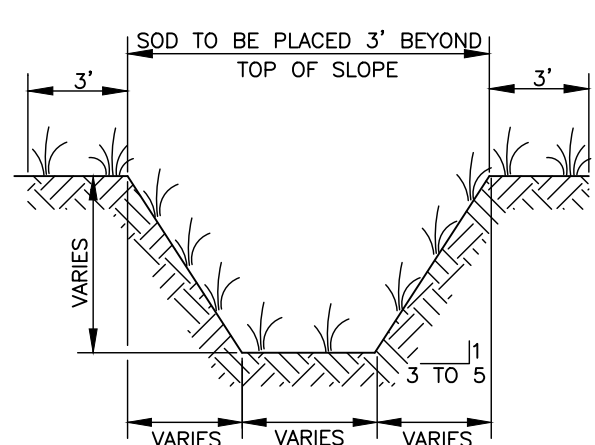
**STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS**
FIGURE 8



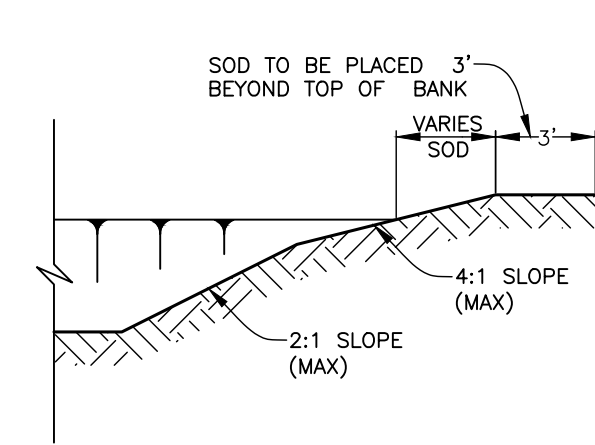
UNDERGROUND PIPE CROSSING
FIGURE 12



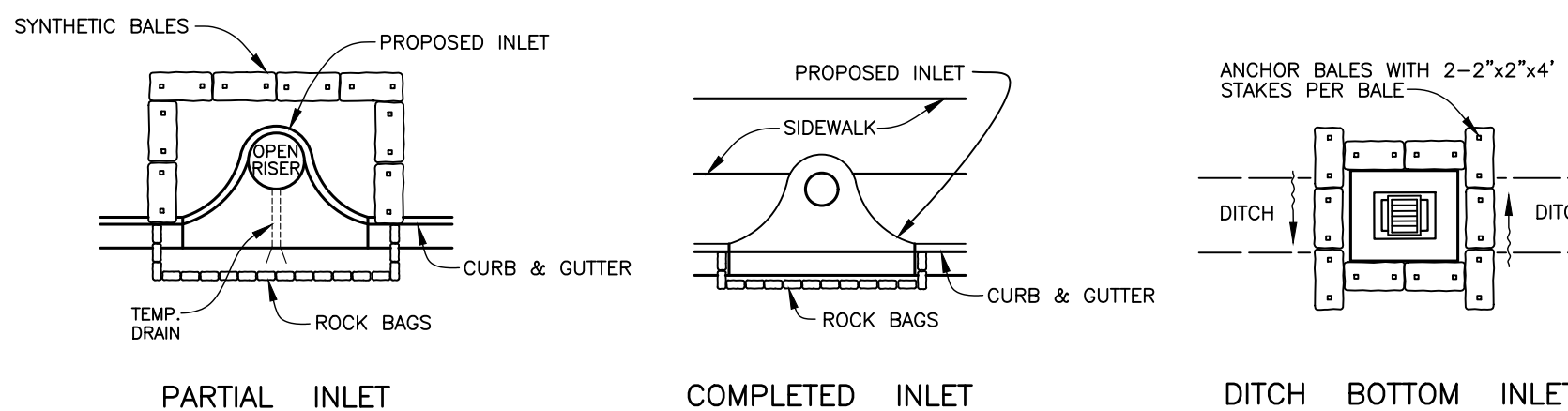
SEDIMENT SUMP SECTION
FIGURE 16



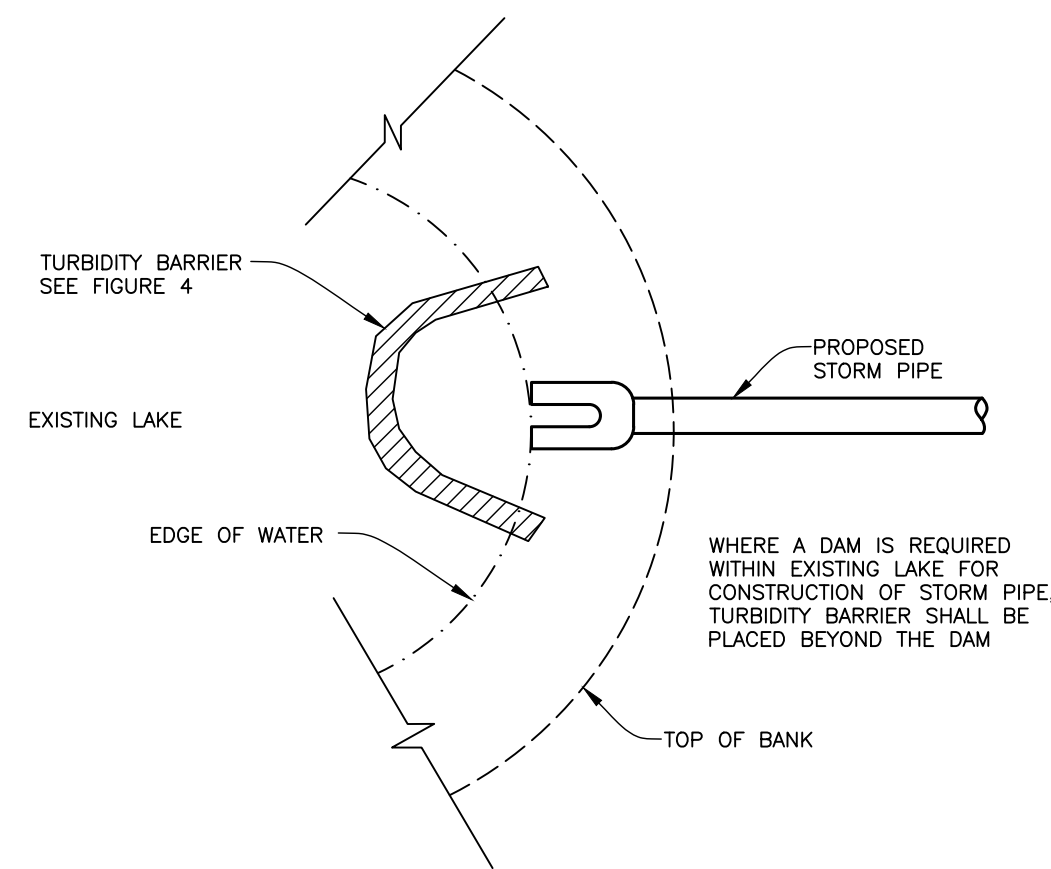
TYPICAL SWALE SECTION
FIGURE 5



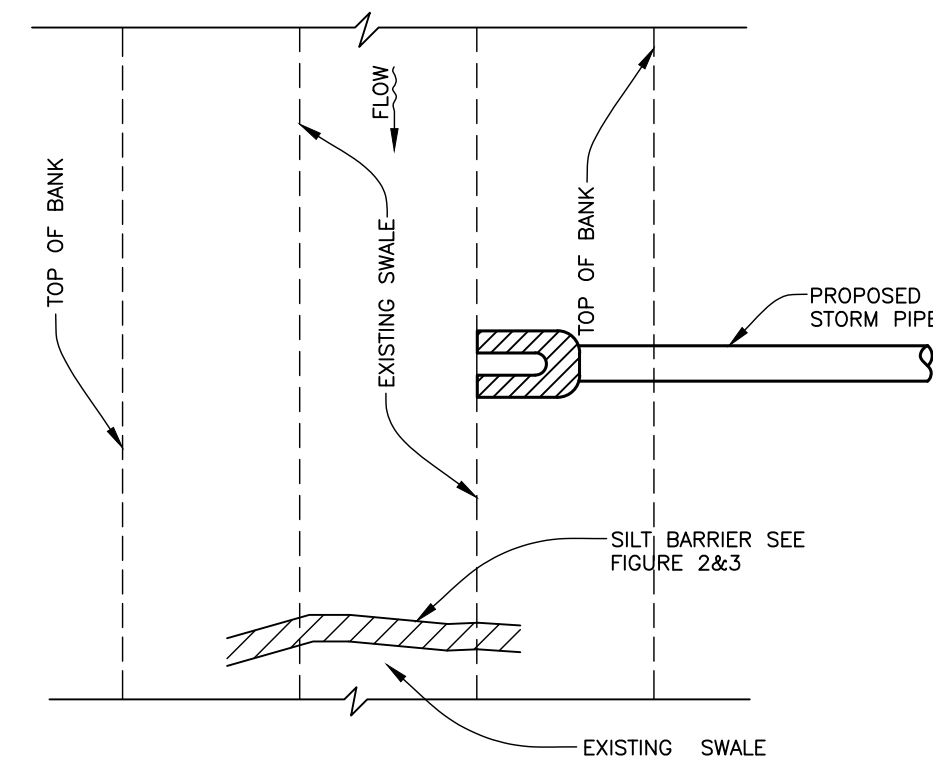
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



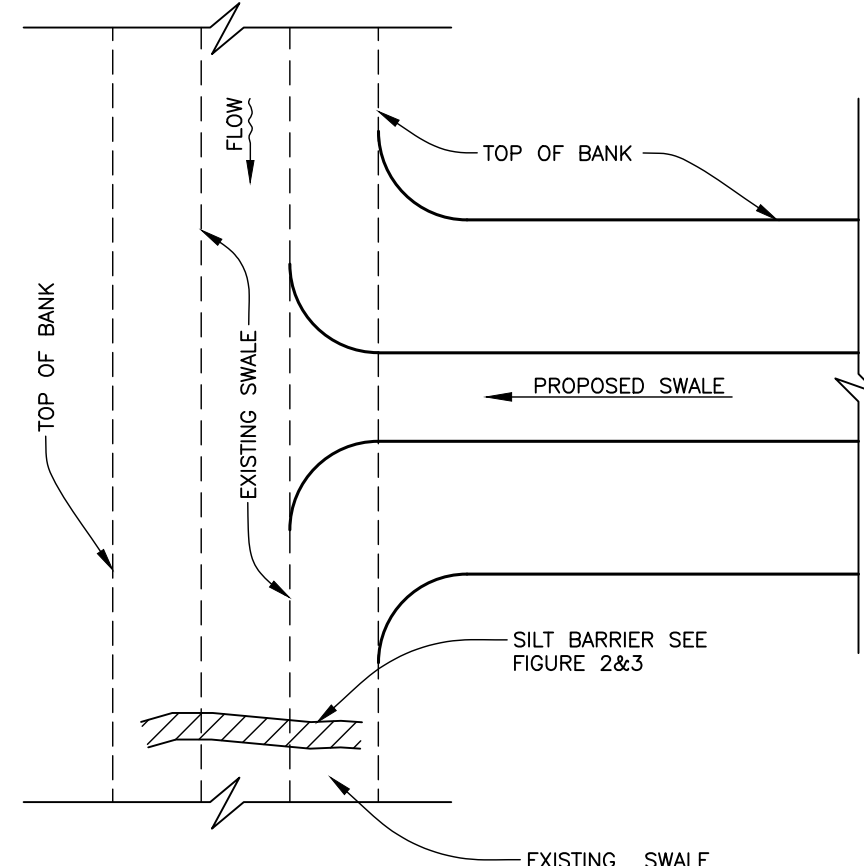
**SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES**
FIGURE 7



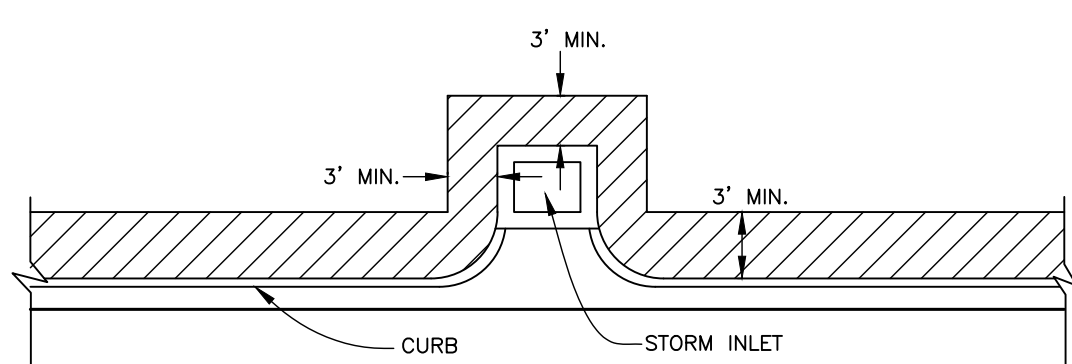
**TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE**
FIGURE 9



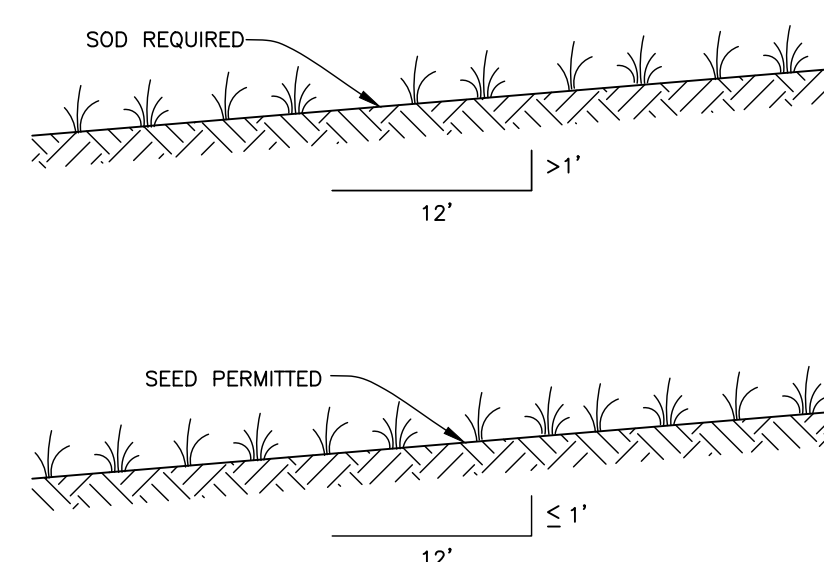
**SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE**
FIGURE 10



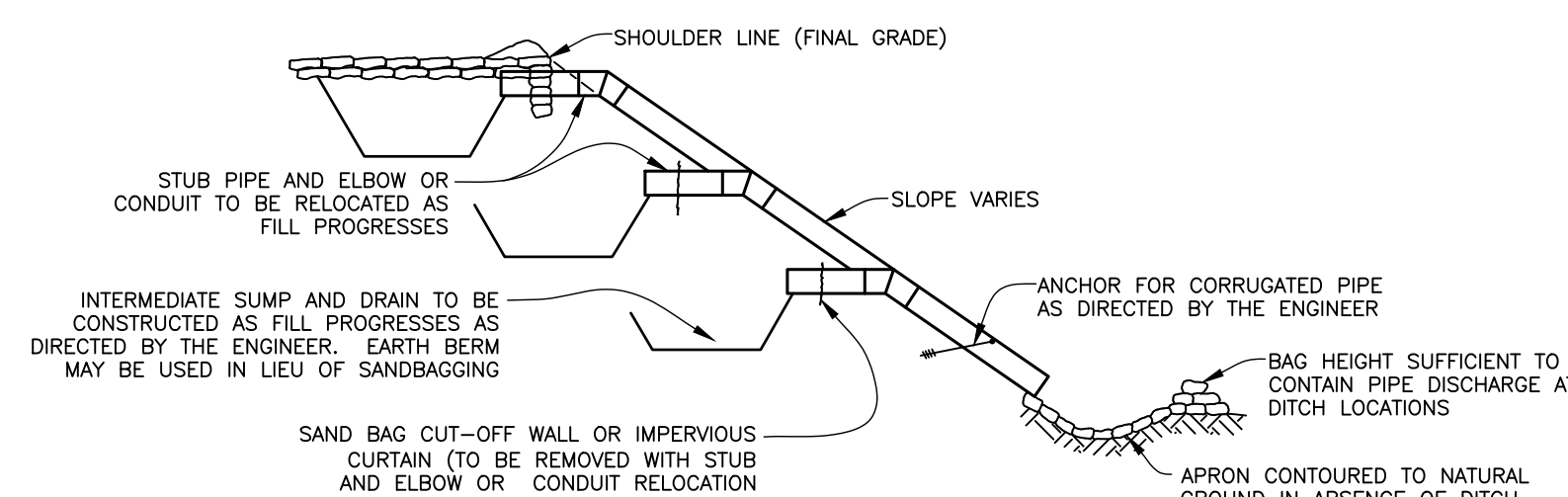
**SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE**
FIGURE 11



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



GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15

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

NO.	REVISION DESCRIPTION	REV. SHEET #	DATE
1			07/27/15

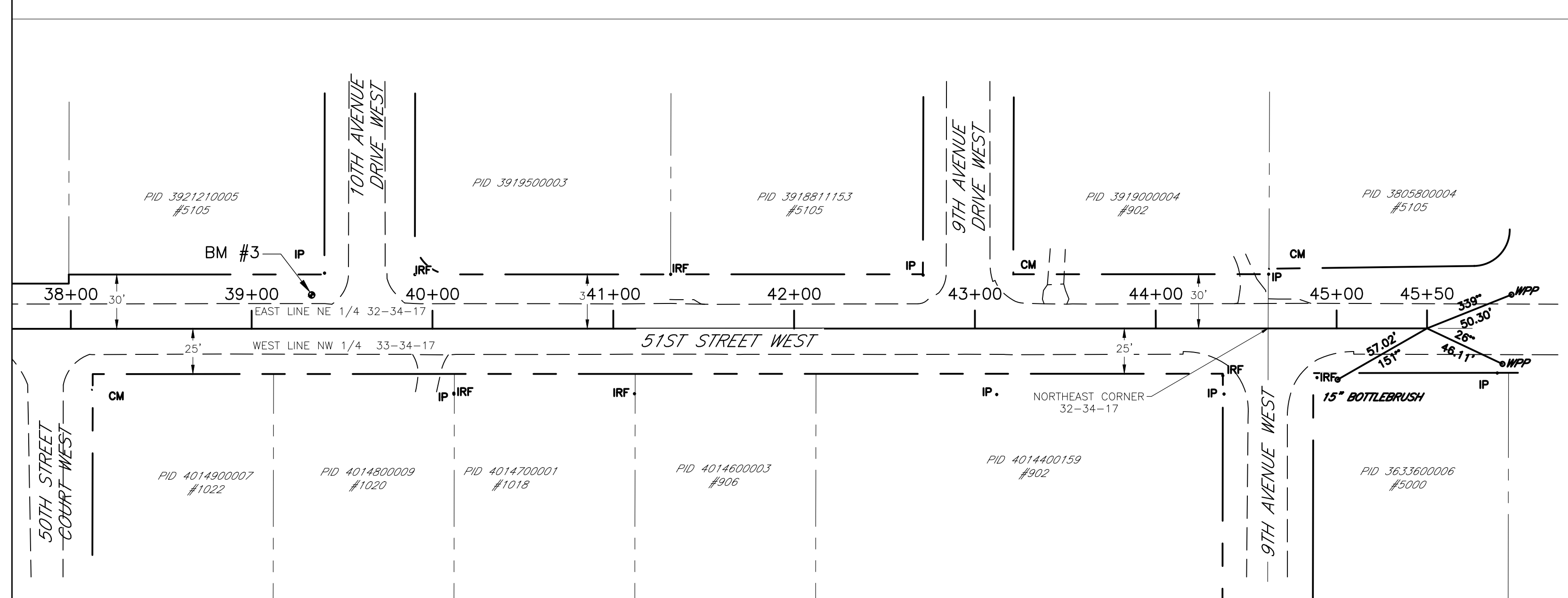
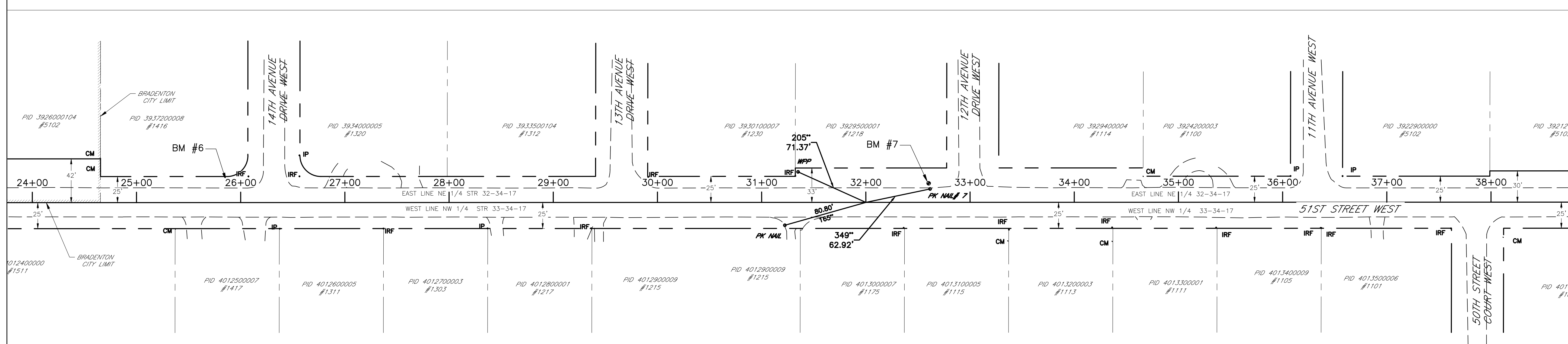
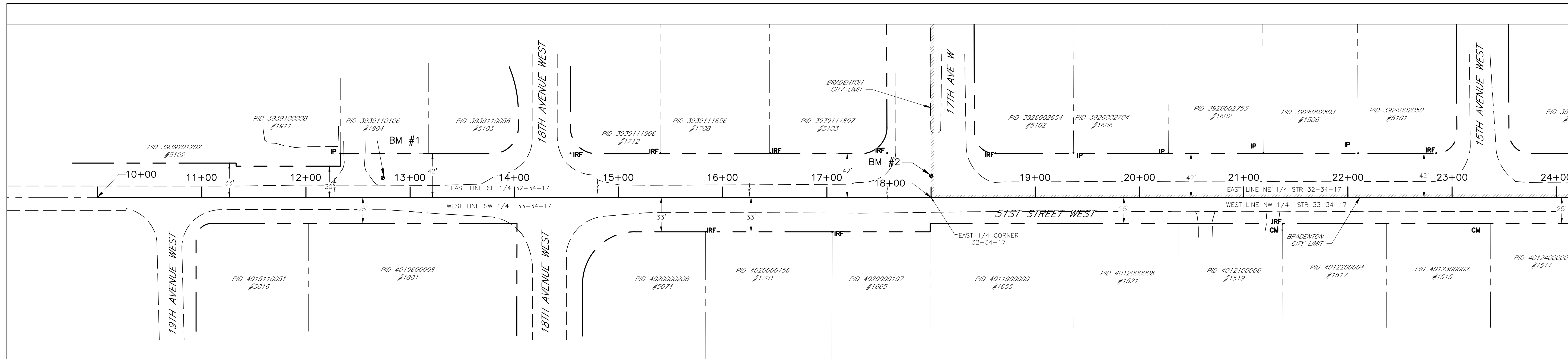
PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	VARIES
VERTICAL DATUM	NAVD 1988
SURVEYED	BY HYATT 01/2014
DESIGNED	BY JSS 04/2014
DRAWN	BY BLR 04/2014

JOHN R. SHAW, P.E.
Professional Engineer
No. 60923
STATE OF FLORIDA
8/4/15
Signature: _____ Date: _____



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

GRAVITY SEWER REPLACEMENT
51st STREET WEST
SURVEY CONTROL



SURVEYOR'S NOTES:

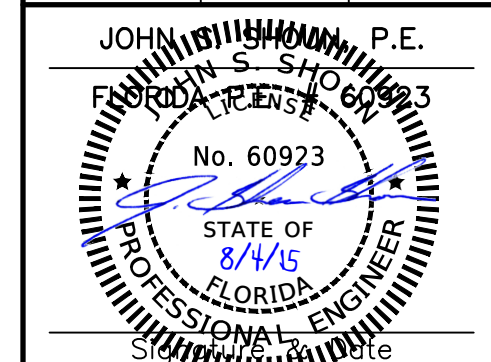
1. THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "COB 1049" NAVD 1988 ELEVATION 23.94'. A VALUE OF (+0.98') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.
2. THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2007 ADJUSTMENT).
3. TITLE WORK WAS NOT PROVIDED FOR THIS SURVEY. RIGHT-OF-WAY LINES SHOWN HEREIN ARE BASED ON FOUND BOUNDARY MONUMENTATION TOGETHER WITH PUBLIC INFORMATION AVAILABLE ON MANATEE COUNTY CLERKS WEBSITE.
4. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
5. THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.

SITE CONTROL				
DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 1	1145398.328	457660.468	22.60'	PKD (LB 7203)
BM 2	1145924.587	457665.522	23.26'	PKD (LB 7203)
BM 3	1148057.523	457696.040	24.13'	PKD (LB 7203)
BM 6	1146711.012	457677.673	25.50'	PKD (LB 7203)
BM 7	1147384.650	457687.542	25.21'	PKD (LB 7203)

NO.	REVISION DESCRIPTION	DATE
1		07/27/15

BY	DATE
JSS	07/27/15

PROJECT #	404-6035782	
SURVEY #	13-1816	
SEC./TWN./RGE	28.29,32.33-3417	
SCALE	1"=50'	
VERTICAL DATUM	NAVD 1988	
SURVEYED	BY	DATE
HYATT		01/2014
DESIGNED	BY	DATE
JSS		04/2014
DRAWN	BY	DATE
BLR		04/2014



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