



VERTICAL DATUM
NAVD 88

100% PLANS

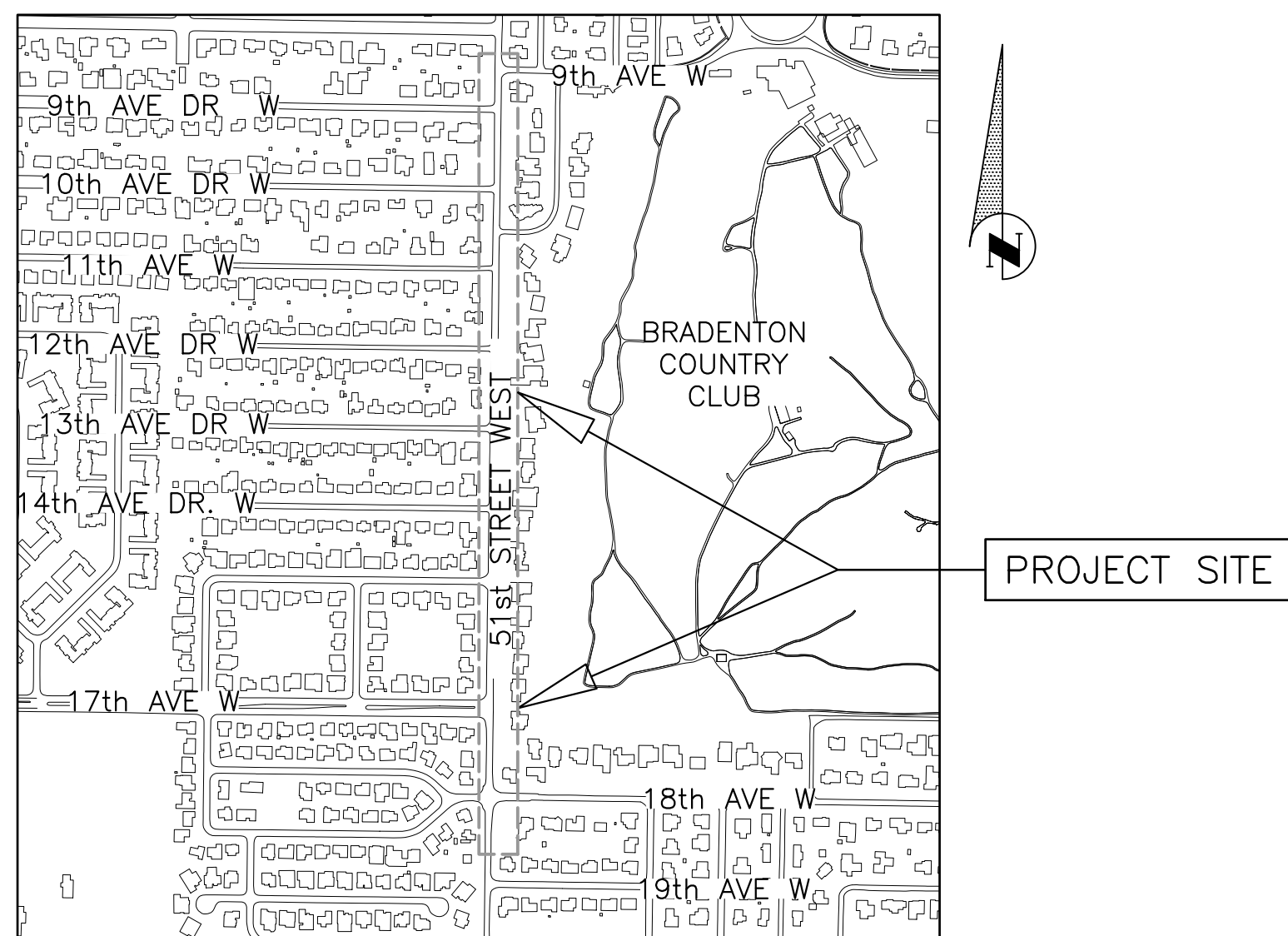
GRAVITY SEWER REPLACEMENT

51st STREET WEST

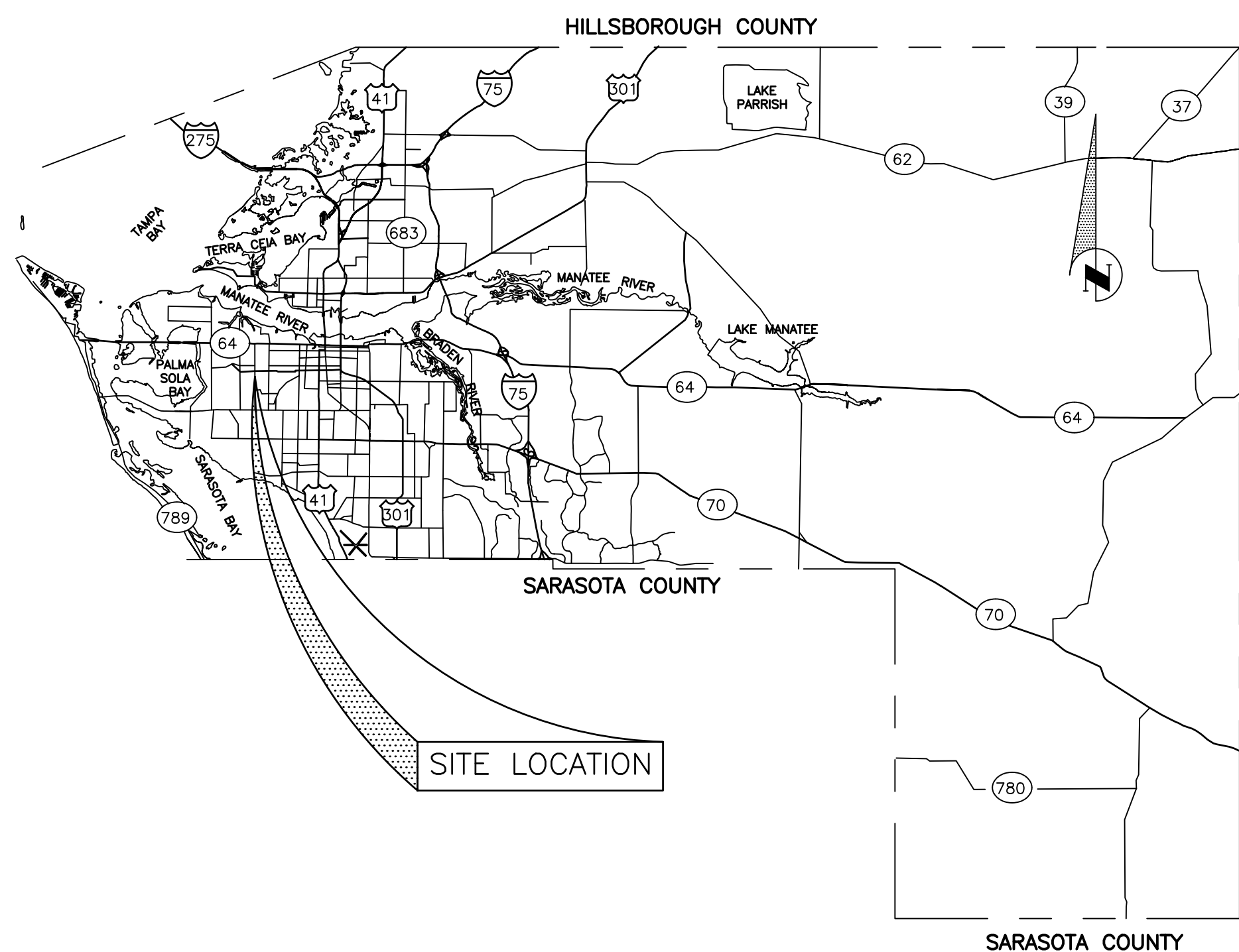
404-6035782

JANUARY 2015

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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 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.

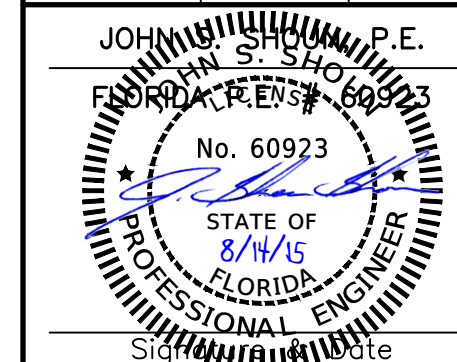
GRAVITY SEWER REPLACEMENT
51st STREET WEST
COVER SHEET

NO.	REVISION DESCRIPTION	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 DATE 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014



Know what's below
Call before you dig

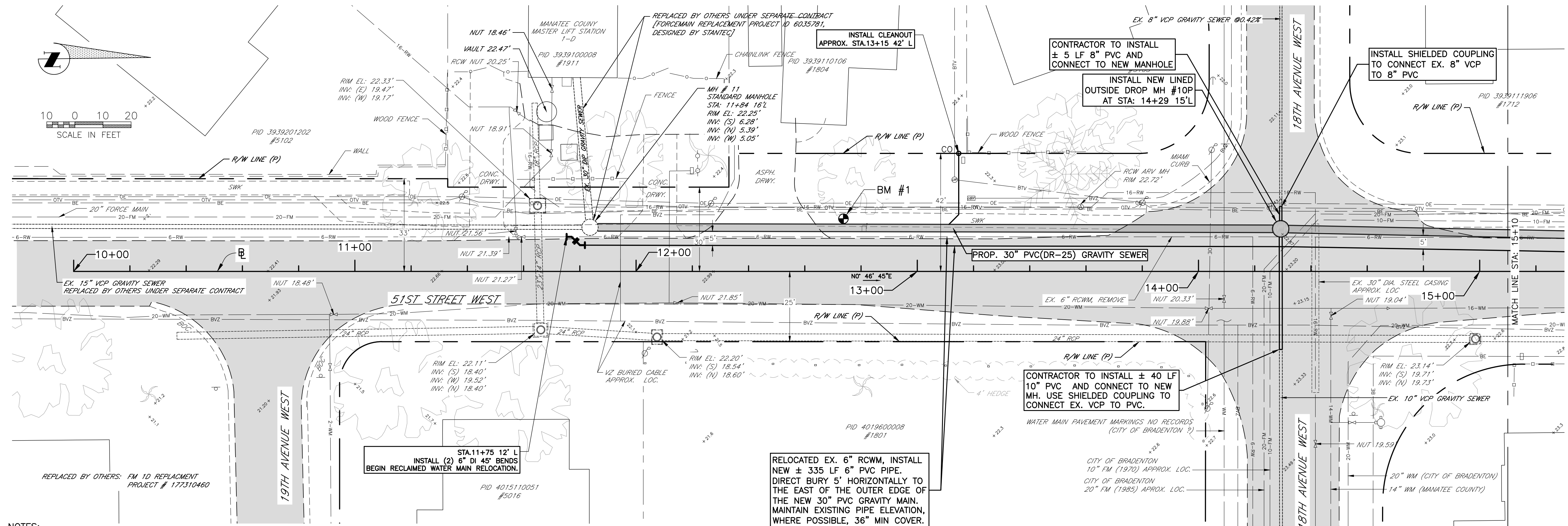


COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util_Eng_Design\PROJ\SMR SWR Proj\GM-51 St Gravity Replacement\DWG\51st Gravity Replacement.dwg, 01: 8/14/2015 1:55 PM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

GRAVITY SEWER REPLACEMENT

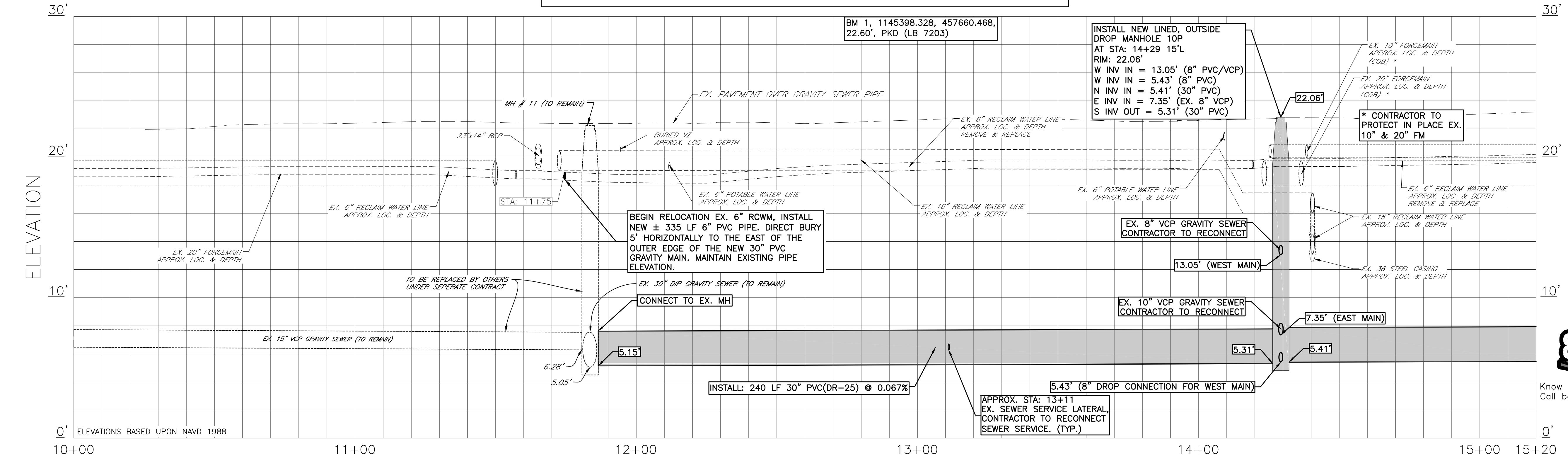
51st STREET WEST

PROPOSED PLAN & PROFILE, STA 10+00 TO 15+10



- 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" SDR-26 PVC GASKETED SADDLE W/ S.S. STRAPS.
 - 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: 10+00 to 15+20



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
2	ADD SIDE STREET MAIN REPLACEMENT		
3	ADD 6" RCW MAIN RELOCATION		
4	REV. NOTES		
5	REV. NOTES	JSS	08/12/15

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 01/2014
DESIGNED	JSS 04/2014
DRAWN	BLR 04/2014

JOHN H. SPICER, E.
Professional Engineer
No. 60923
STATE OF FLORIDA
Professional Engineer
Signature: _____ Date: _____

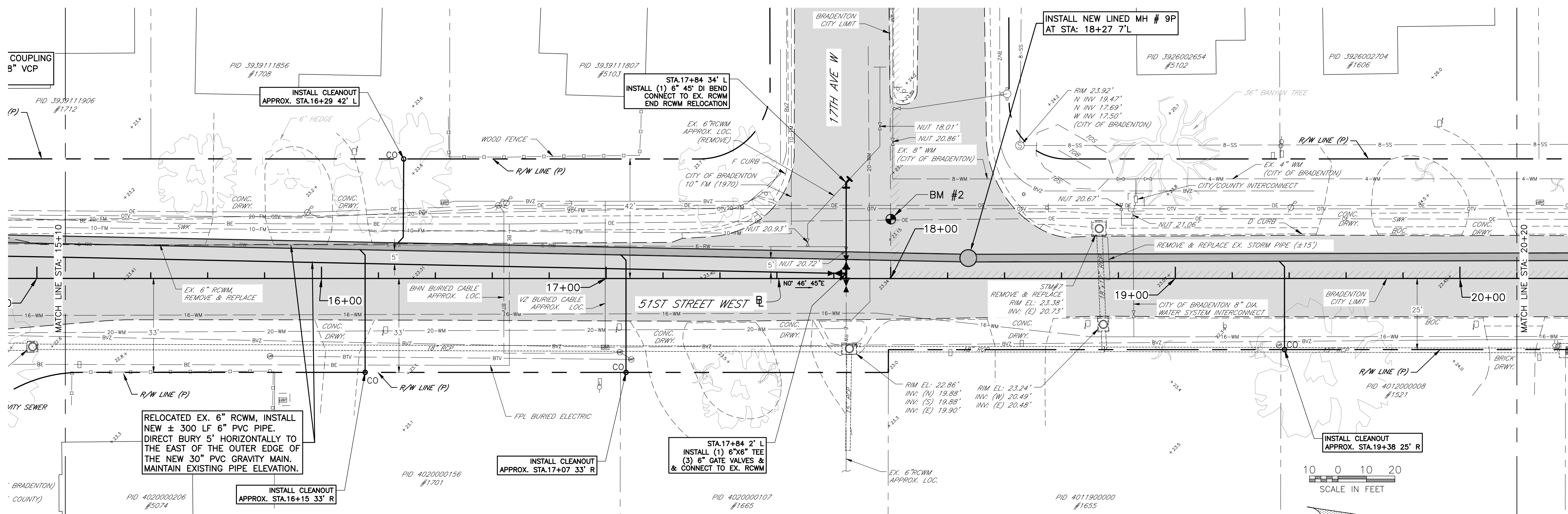


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GRAVITY SEWER REPLACEMENT

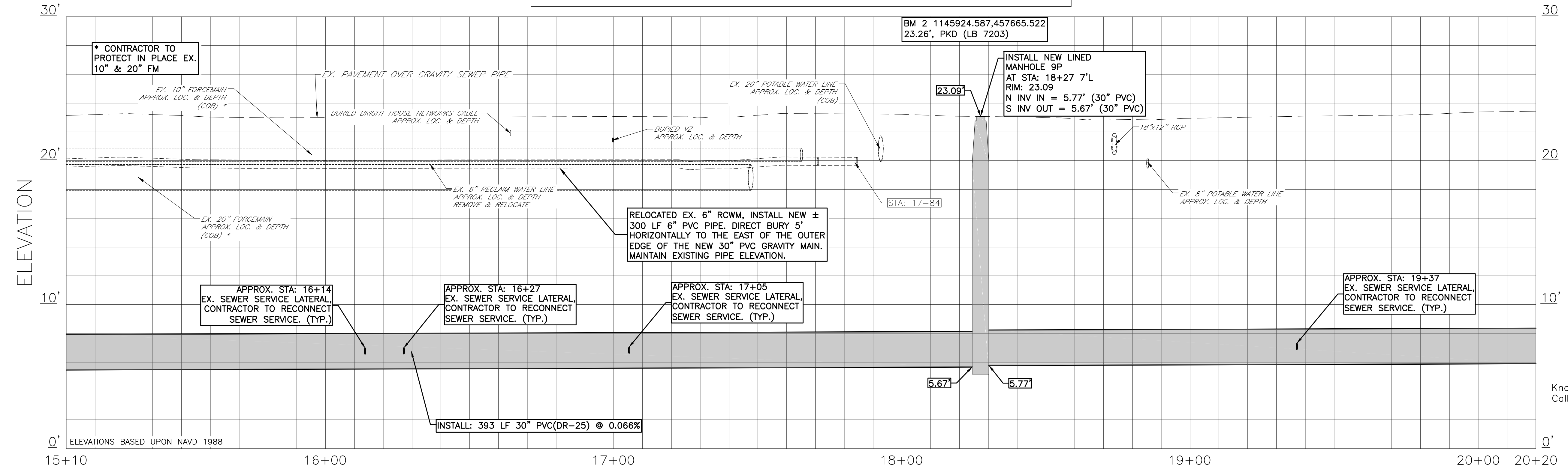
51st STREET WEST

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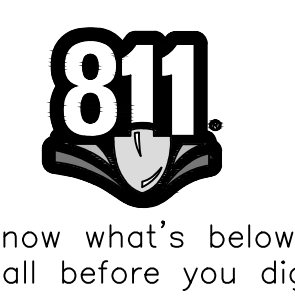
51ST STREET WEST GRAVITY SEWER STA: 15+10 to 20+20



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
2	ADD 6" RCW MAIN RELOCATION	JSS	08/12/15
	REV. NOTES		
	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: DATE
DESIGNED	HYATT 01/2014
DRAWN	JSS 04/2014
	BLR 04/2014

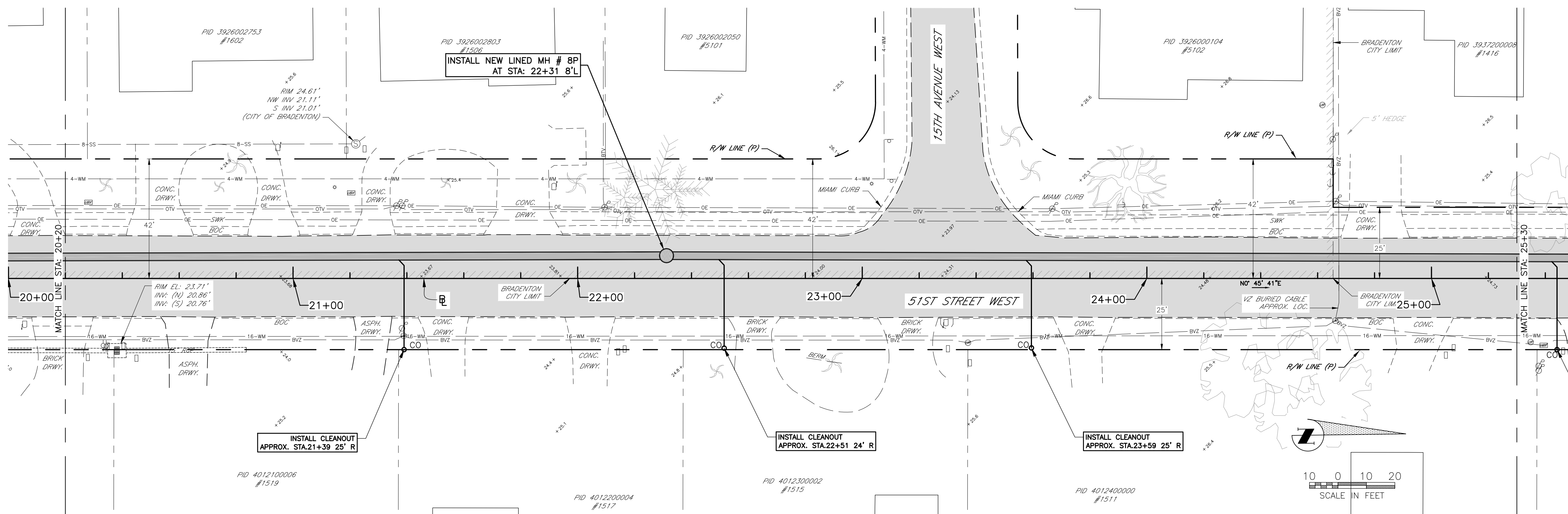


JOHN S. SHORR, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
8/14/15
STATE OF FLORIDA
PROFESSIONAL ENGINEER

GRAVITY SEWER REPLACEMENT

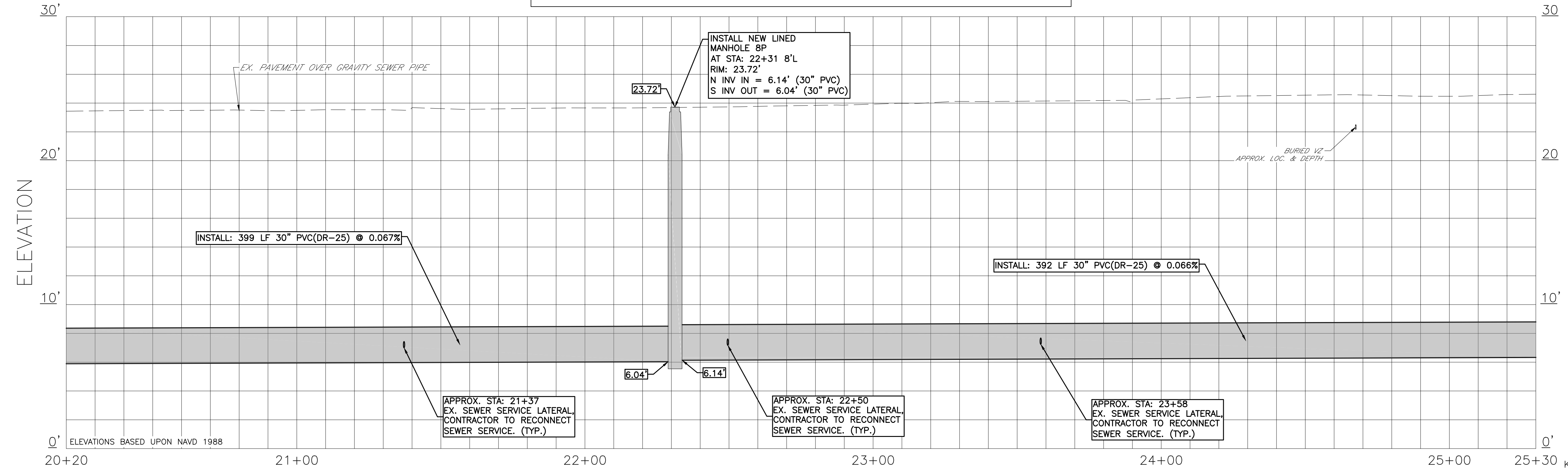
51st STREET WEST

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
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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
2	REV. NOTES	JSS	08/12/15

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

JOHNNY S. SPHON, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER



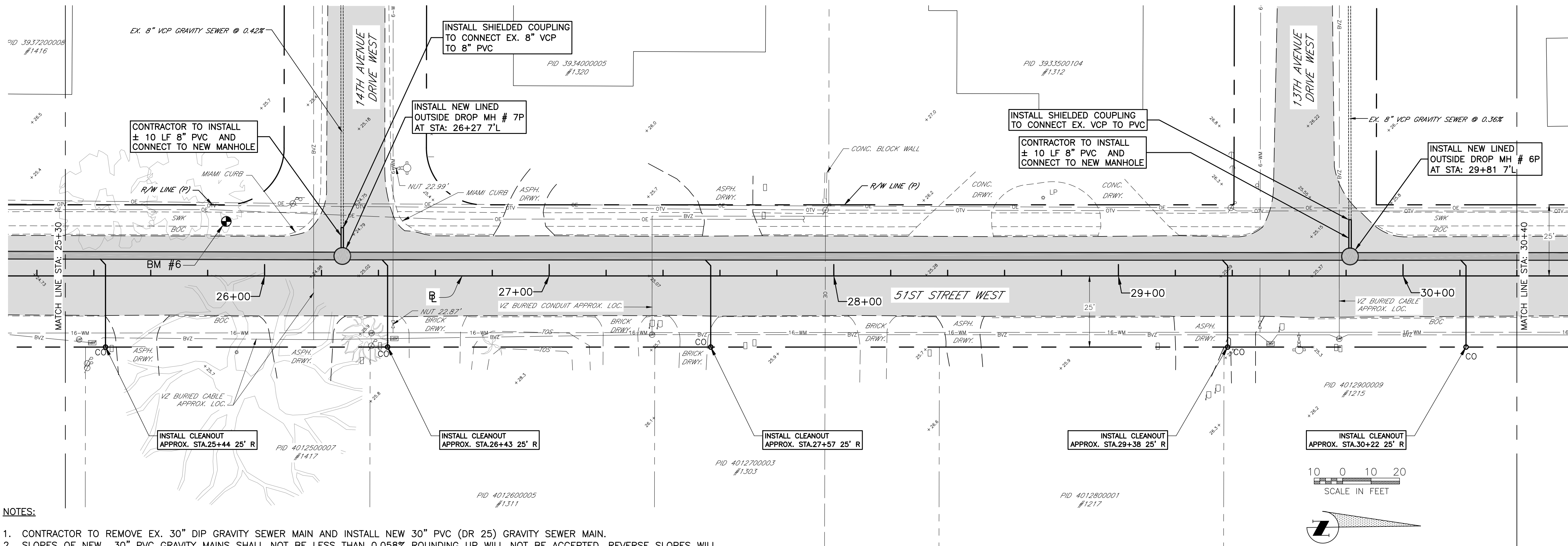
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GRAVITY SEWER REPLACEMENT

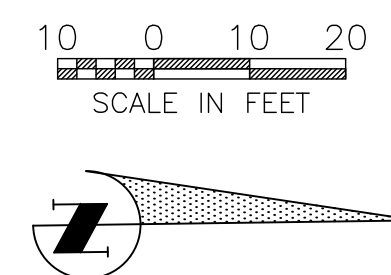
51st STREET WEST

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

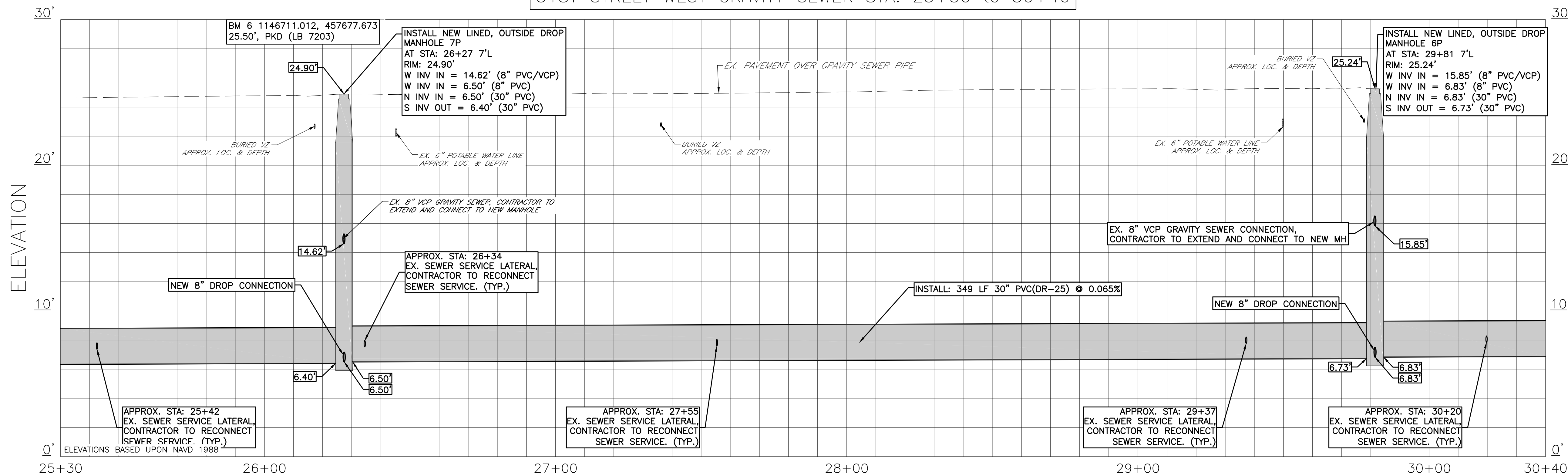


NOTES:

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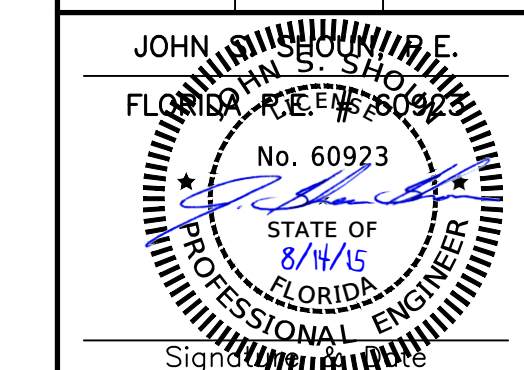
51ST STREET WEST GRAVITY SEWER STA: 25+30 to 30+40



VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
2	ADD SIDE STREET MAIN REPLACEMENT	JSS	08/12/15
	REV. NOTES		
	REV. NOTES		

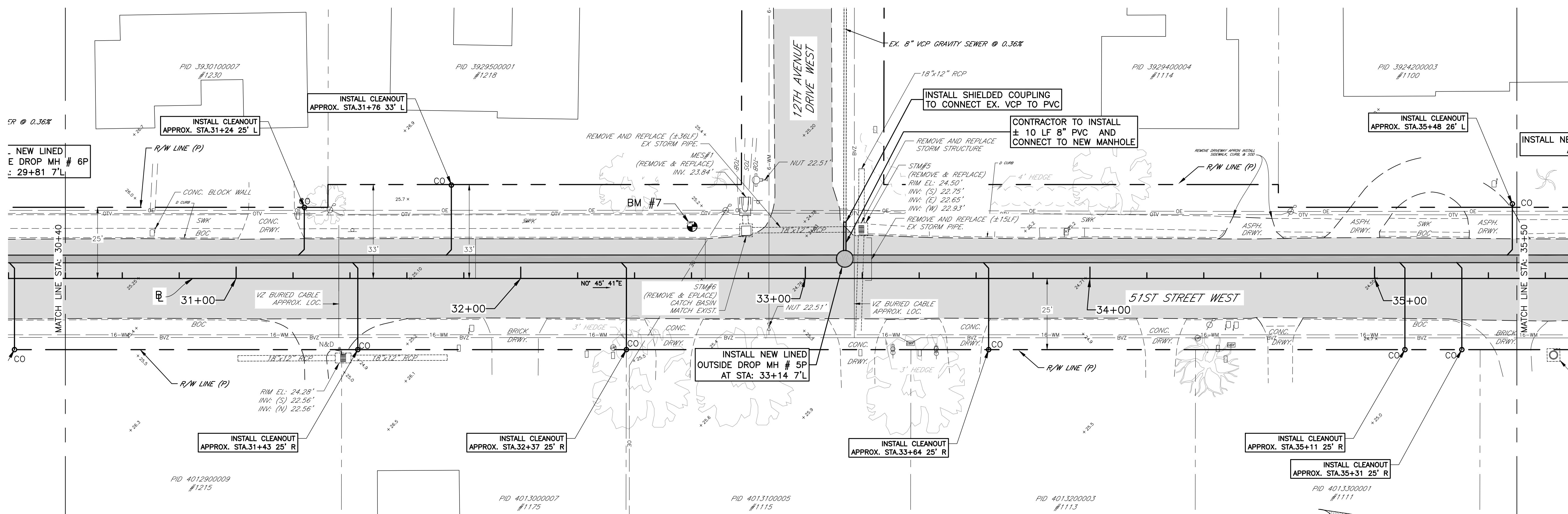
PROJECT #	404-6035782
SURVEY #	13-1816
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VERT. SCALE	1"=4'
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VERTICAL DATUM	NAVD 1988
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DRAWN	JSS 04/2014
	BLR 04/2014



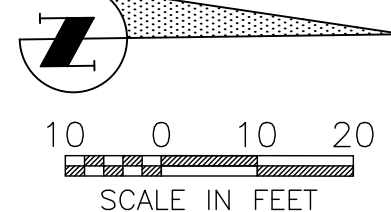
GRAVITY SEWER REPLACEMENT

51st STREET WEST

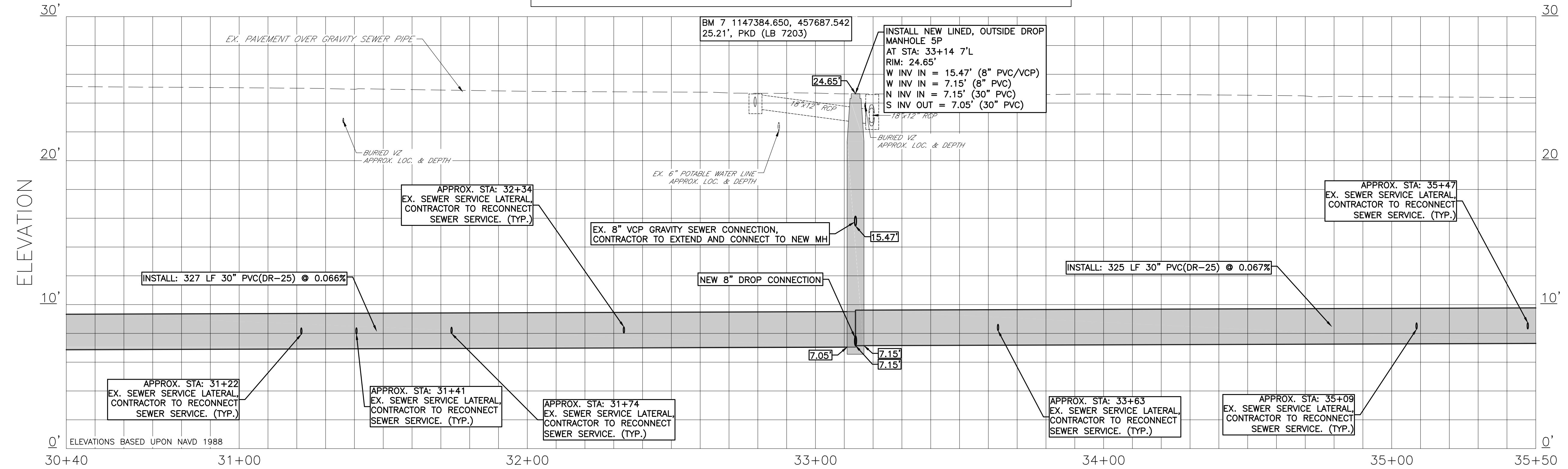
PROPOSED PLAN & PROFILE, STA 30+40 TO 35+50



- NOTES:**
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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		
2	REV. NOTES	JSS	08/12/15

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



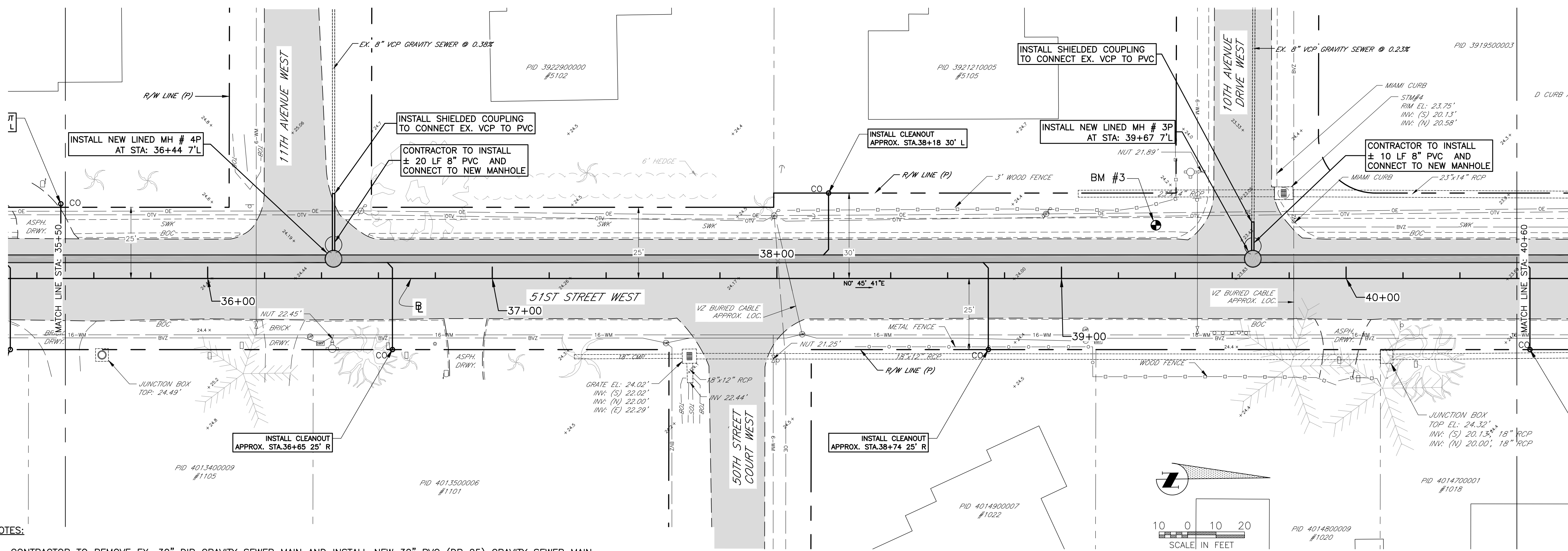
Know what's below
Call before you dig

JOHN S. SHOOK, P.E.
FLORIDA REGISTERED PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
8/14/15
PROFESSIONAL ENGINEER
Signature: [Signature]

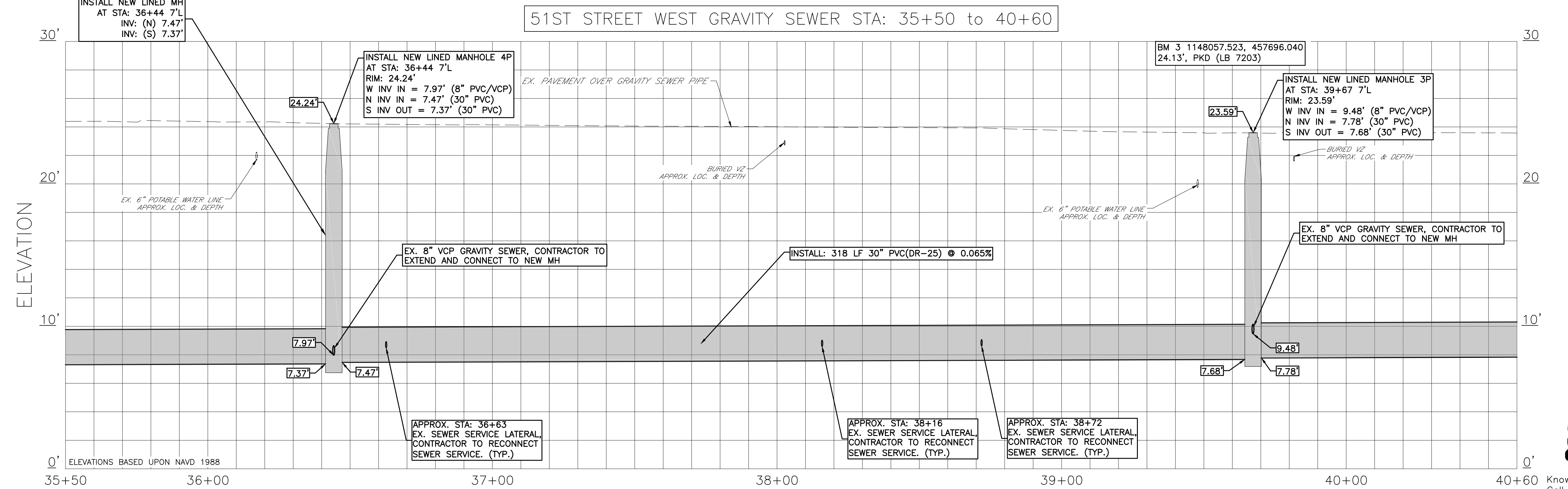
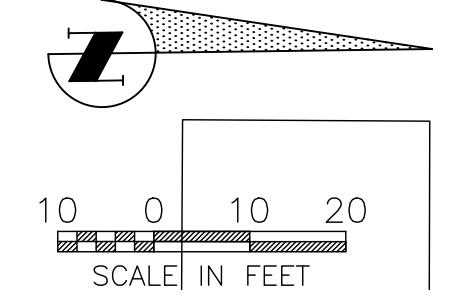
GRAVITY SEWER REPLACEMENT

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.
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VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE
1	ADD SERVICE CONNECTION + CO	JSS	07/27/15
2	ADD SIDE STREET MAIN REPLACEMENT	JSS	08/12/15
	REV. NOTES		
	REV. NOTES		

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

JOHN W. SHORR, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Signature

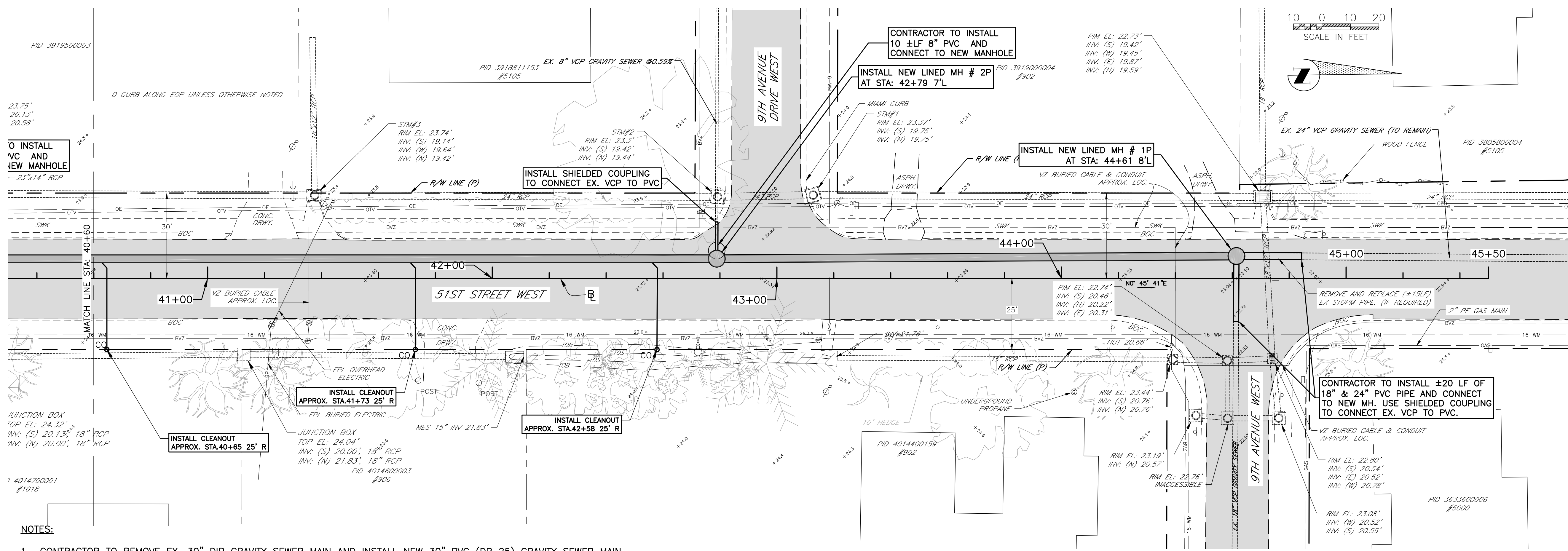


Know what's below
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GRAVITY SEWER REPLACEMENT

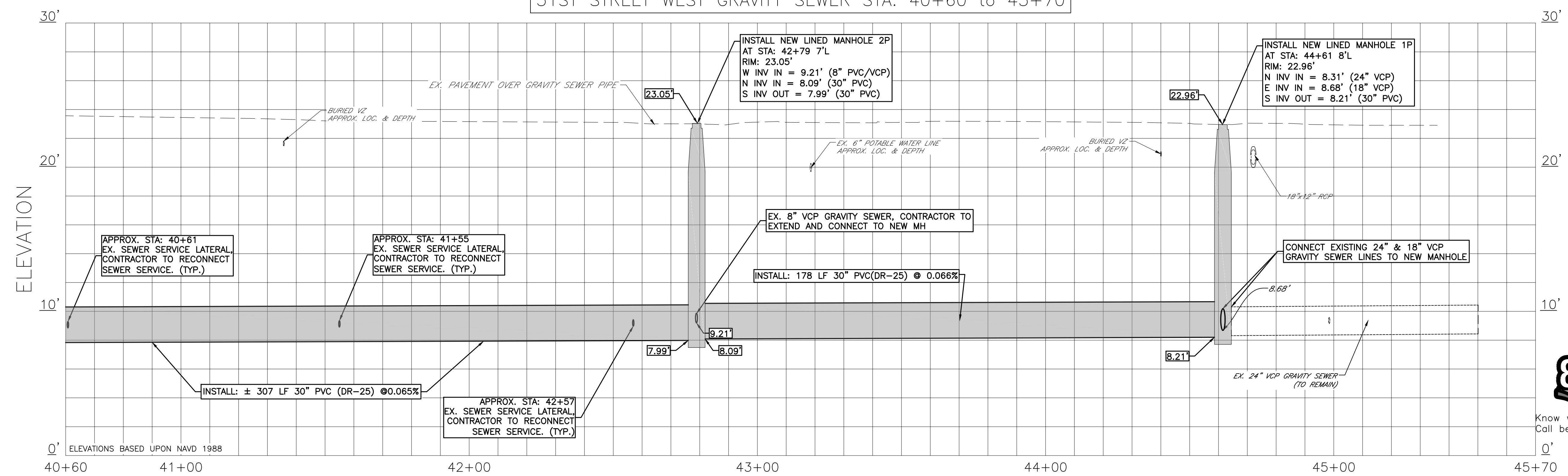
51st STREET WEST

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.
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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
2	ADD SIDE STREET MAIN REPLACEMENT	JSS	08/12/15
	REV. NOTES		
	REV. NOTES		

PROJECT #	404-6035782
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VERT. SCALE	1"=4'
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VERTICAL DATUM	NAVD 1988
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DESIGNED	HYATT 01/2014
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	BLR 04/2014

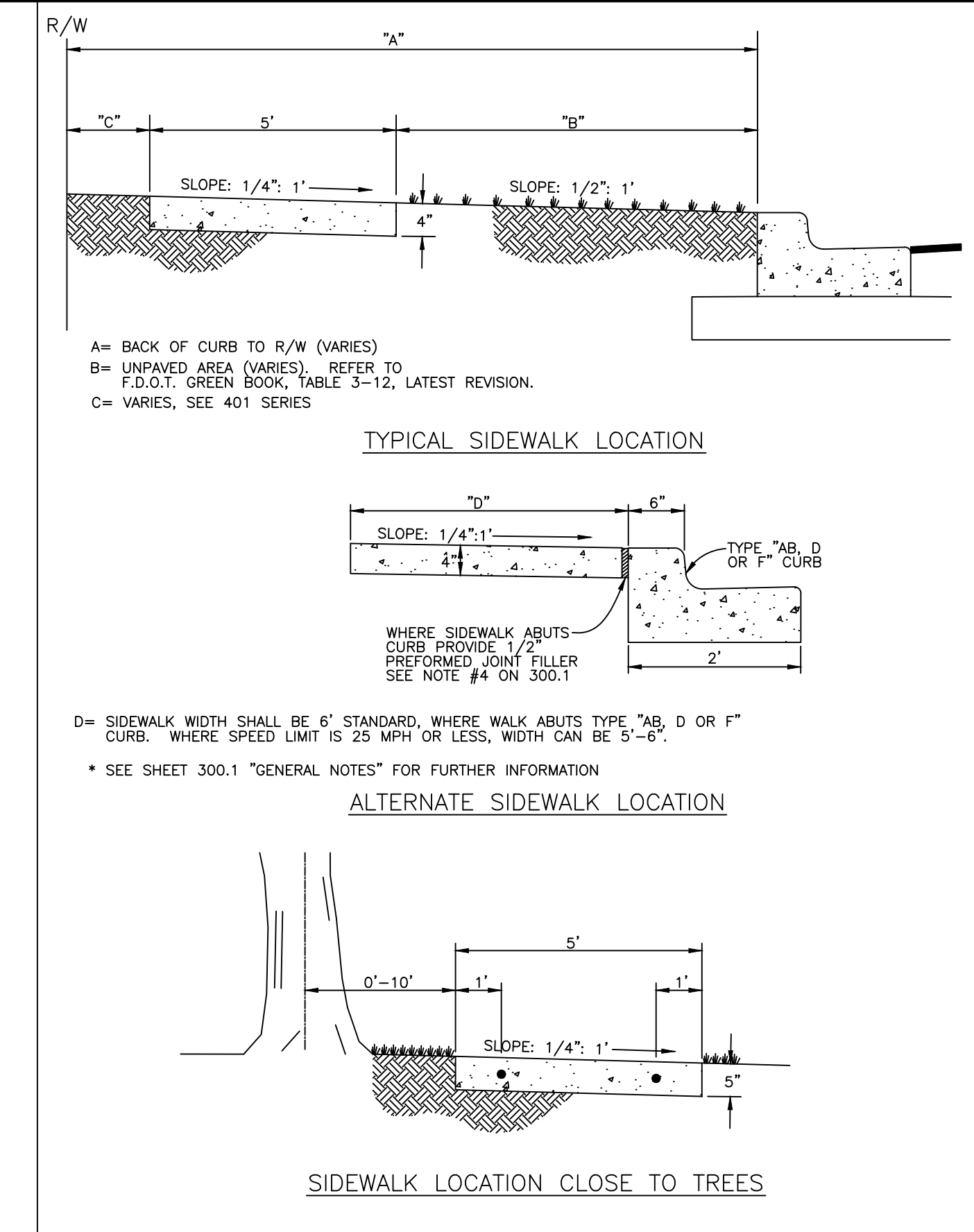
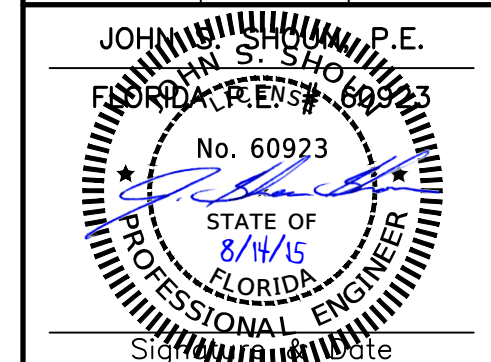
JOHN BRUNNEN, P.E.
FLORIDA PROFESSIONAL ENGINEER
No. 60923
8/14/15
Signature: [Signature]

GRAVITY SEWER REPLACEMENT
51st STREET WEST
DETAILS 3

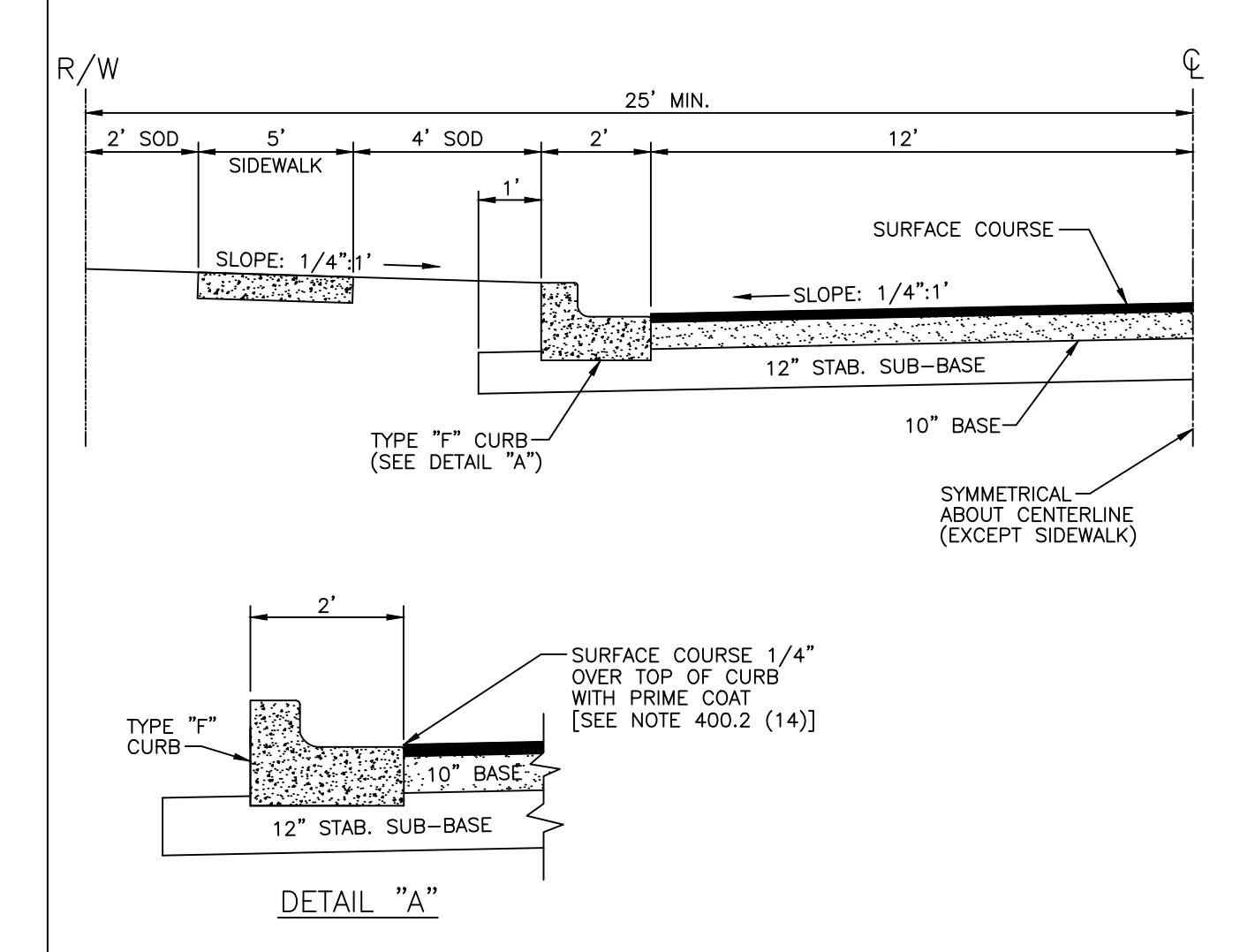
NO.	REVISION DESCRIPTION	BY	DATE
1	REV. DETAILS	JSS	07/27/15
2	REV. DETAILS	JSS	08/13/15

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28.29,32.33-3417
SCALE	
VERTICAL DATUM	NAVD 1988
SURVEYED	BY: HYATT DATE: 01/20/14
DESIGNED	JSS DATE: 04/20/14
DRAWN	BLR DATE: 04/20/14

MANATEE COUNTY TRANSPORTATION DEPARTMENT	URBAN INDUSTRIAL	401.6
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

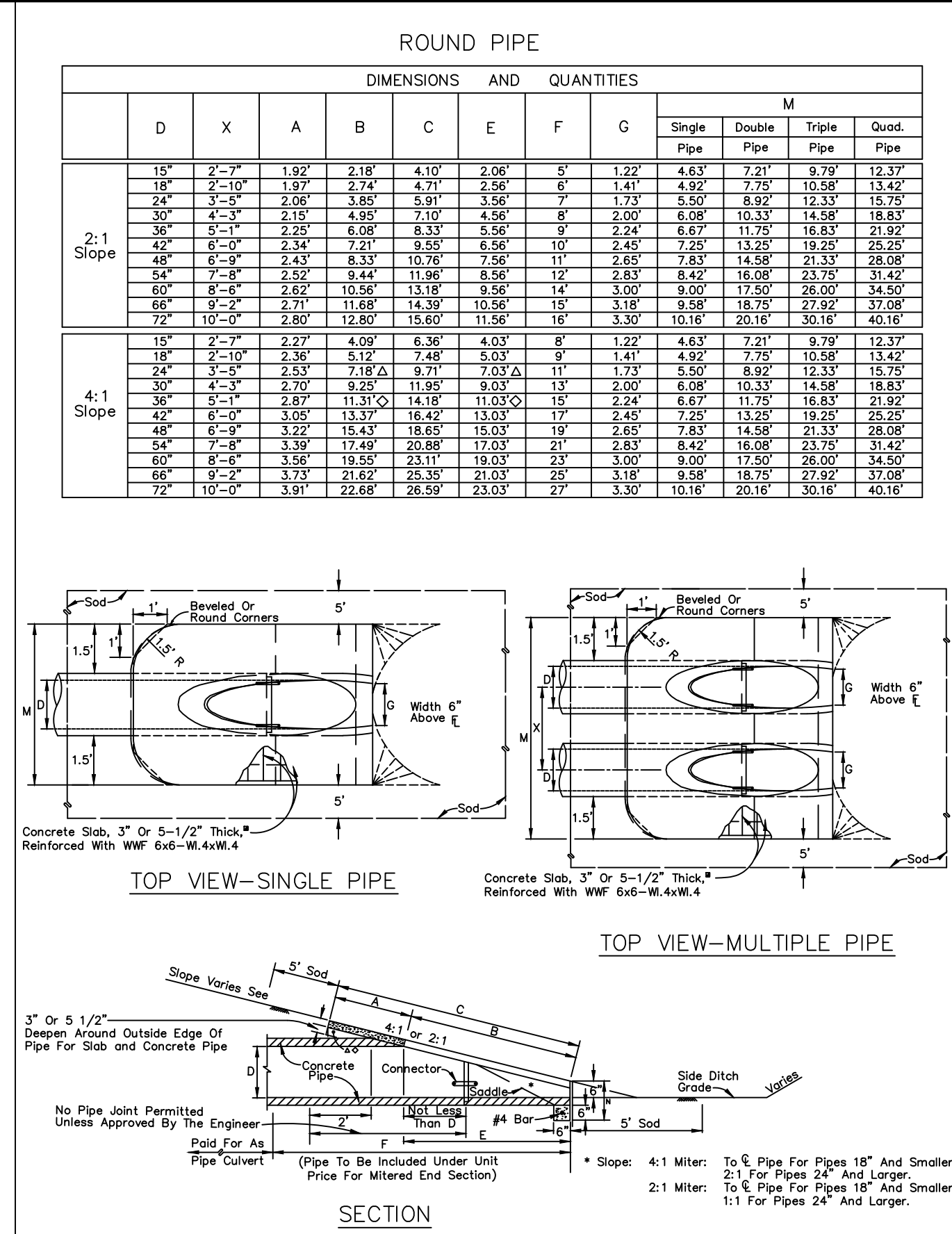


MANATEE COUNTY TRANSPORTATION DEPARTMENT	SIDEWALK REQUIREMENTS	301.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

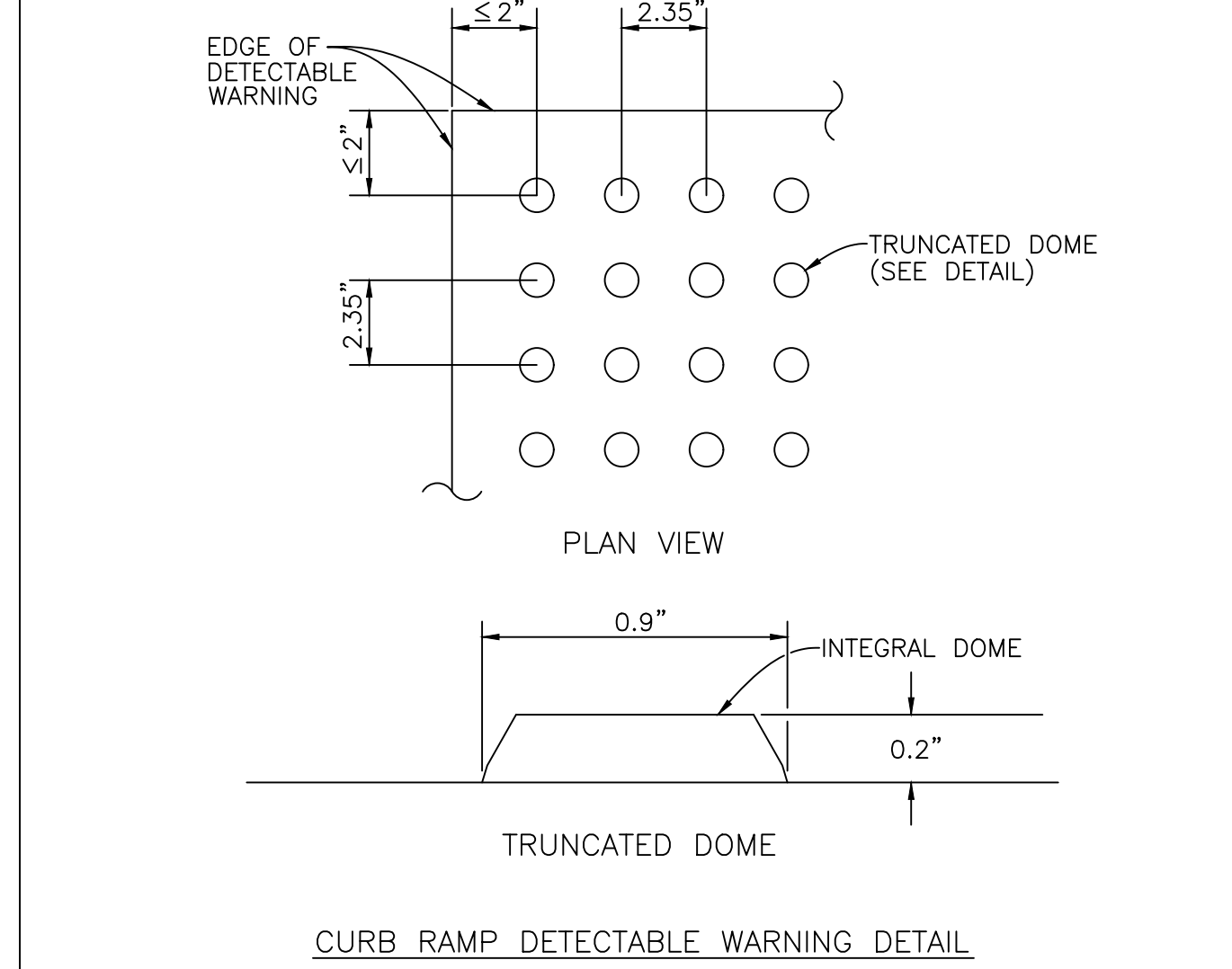


- NOTES:**
- ASPHALT CONCRETE SURFACE COURSE SHALL BE 3" MINIMUM THICKNESS. TWO LIFTS OF ASPHALT SHALL BE STANDARD PRACTICE. THE FIRST LIFT SHALL BE 2" OF S-I, THE SECOND LIFT SHALL BE 1" OF S-III.
 - 10" BASE COURSE 800 LBS. PER SQ. YD. LIME ROCK * COMPACTED TO 98% MODIFIED PROCTOR DENSITY OR 10" SOIL CEMENT.*
 - 12" STABILIZED SUB-BASE SHELL MARL BLENDED WITH SANDY SUB-GRADE MINIMUM LBR 60, 98% T180 AASHTO.
 - SIDEWALK SHALL BE CONSTRUCTED PER SECTION 300.
 - SEE SECTION 201.0 FOR CURB AND GUTTER TYPES.
 - NO PORTION OF A DRAINAGE PIPE SHALL BE ALLOWED IN THE SUB-BASE.
 - LABORATORY TESTS ARE REQUIRED TO SUBSTANTIATE STRUCTURAL SECTION DESIGN. SPECIFICATIONS SHOWN ON THIS SHEET ARE MINIMUM REQUIREMENTS.
 - SODDING SHALL BE INSTALLED PER SECTION 400.1 (8)
- * OR APPROVED EQUAL, MEETING SAME STRUCTURAL NUMBER.

MANATEE COUNTY TRANSPORTATION DEPARTMENT	URBAN INDUSTRIAL	401.6
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

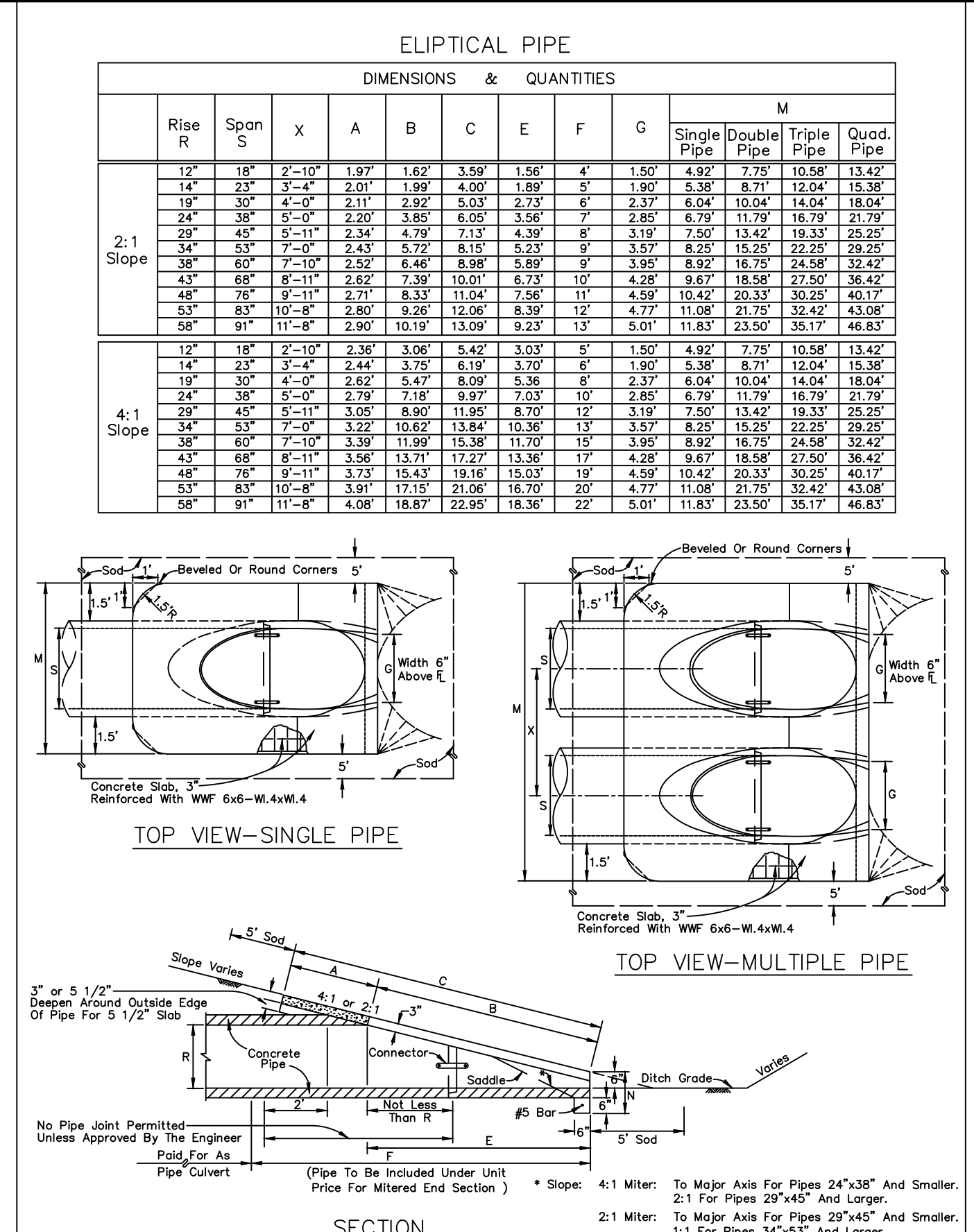


MANATEE COUNTY TRANSPORTATION DEPARTMENT	MITERED END SECTION FOR ROUND, SINGLE & MULTIPLE PIPES	102.2
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

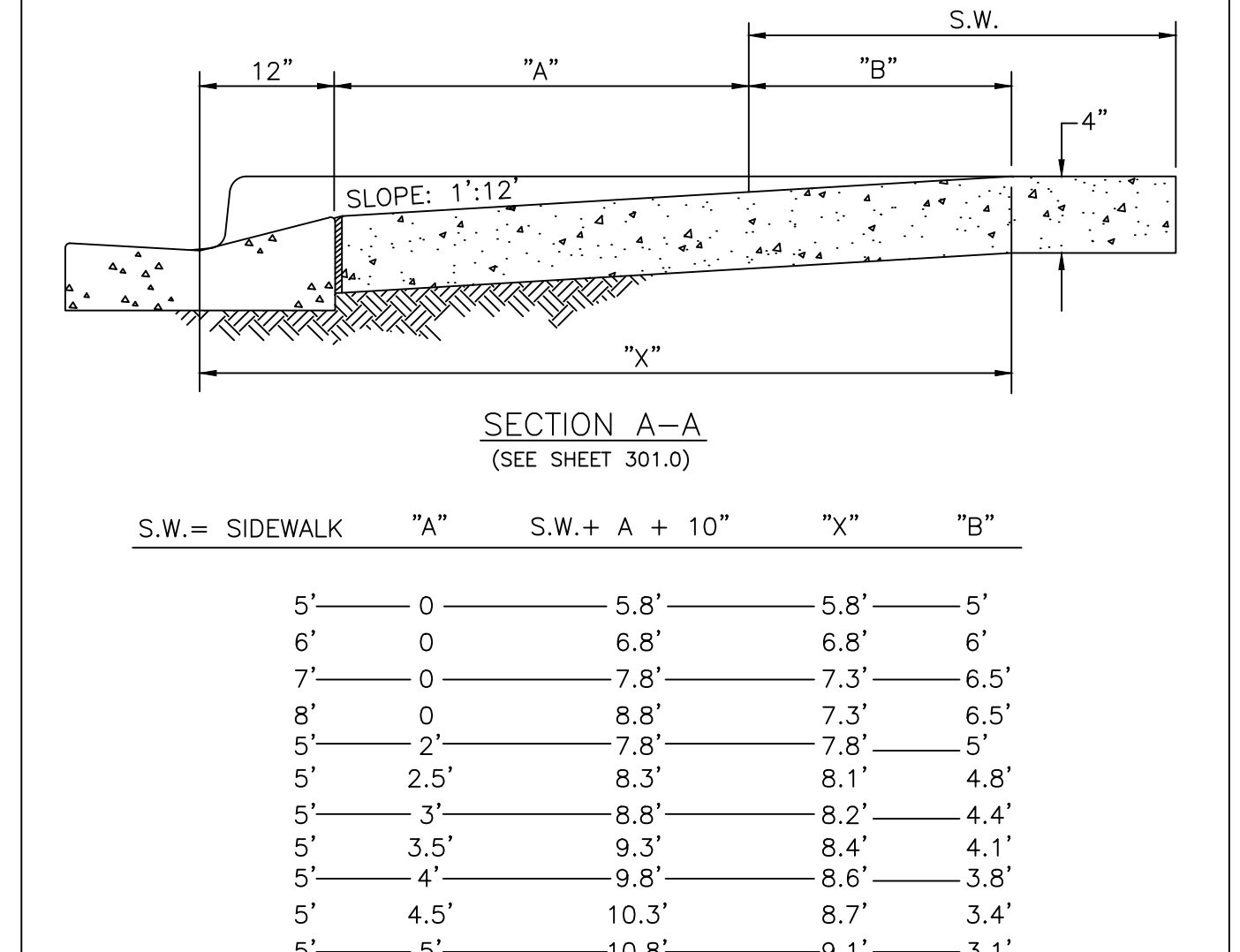


- NOTES:**
- DETECTABLE WARNINGS ON WALKING SURFACES**
- THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.
- DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.2 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCH AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.
- THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
- THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY:
- $$\text{CONTRAST} = \frac{[(B1-B2)/B1] \times 100}{1}$$
- WHERE B1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND B2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.
- NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THUS, B1 NEVER EQUALS 100 AND B2 IS ALWAYS GREATER THAN 0.

MANATEE COUNTY TRANSPORTATION DEPARTMENT	CURB RAMP DETECTABLE WARNINGS	302.3
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

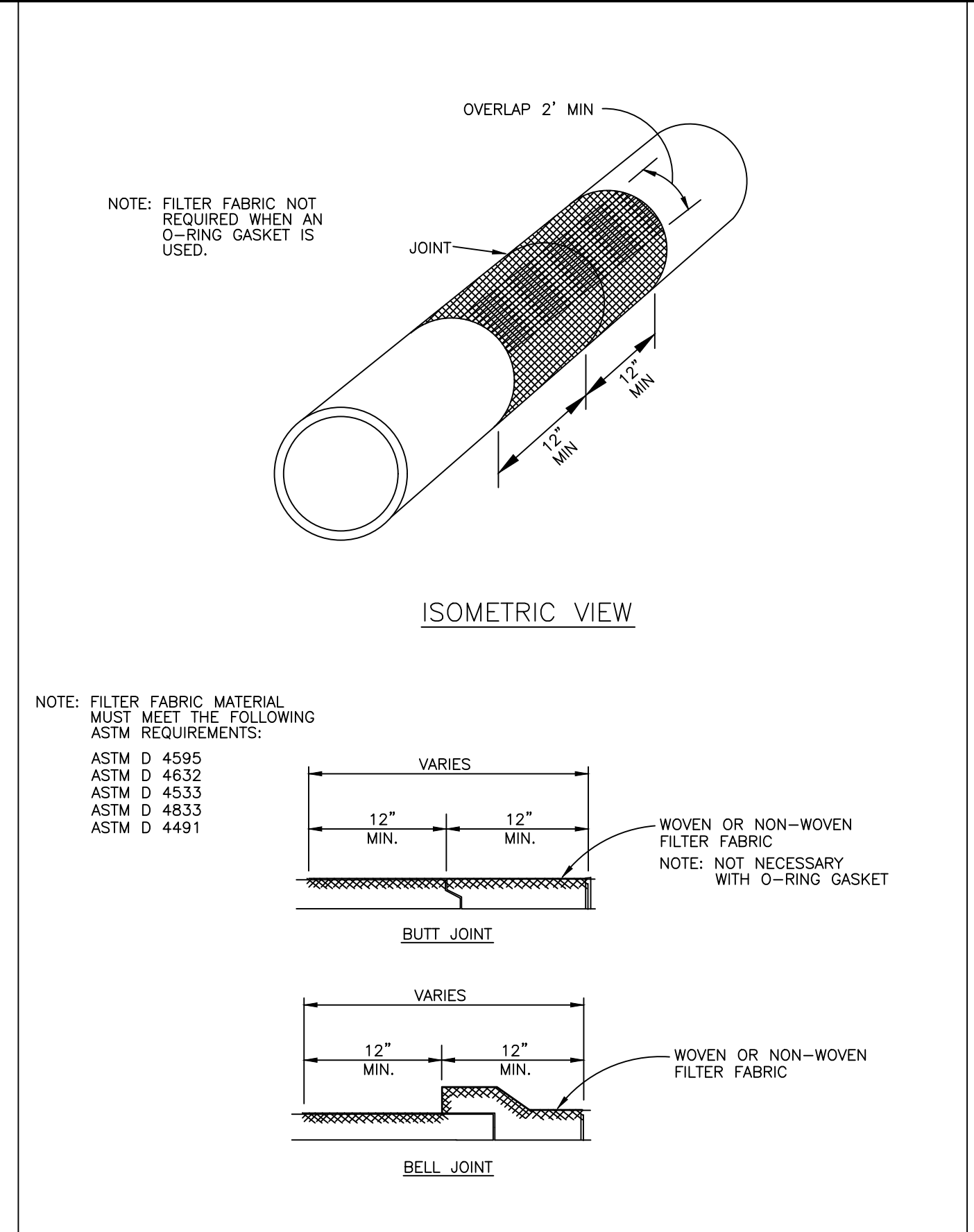


MANATEE COUNTY TRANSPORTATION DEPARTMENT	MITERED END SECTION FOR ELLIPTICAL, SINGLE, AND MULTIPLE PIPES	102.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	

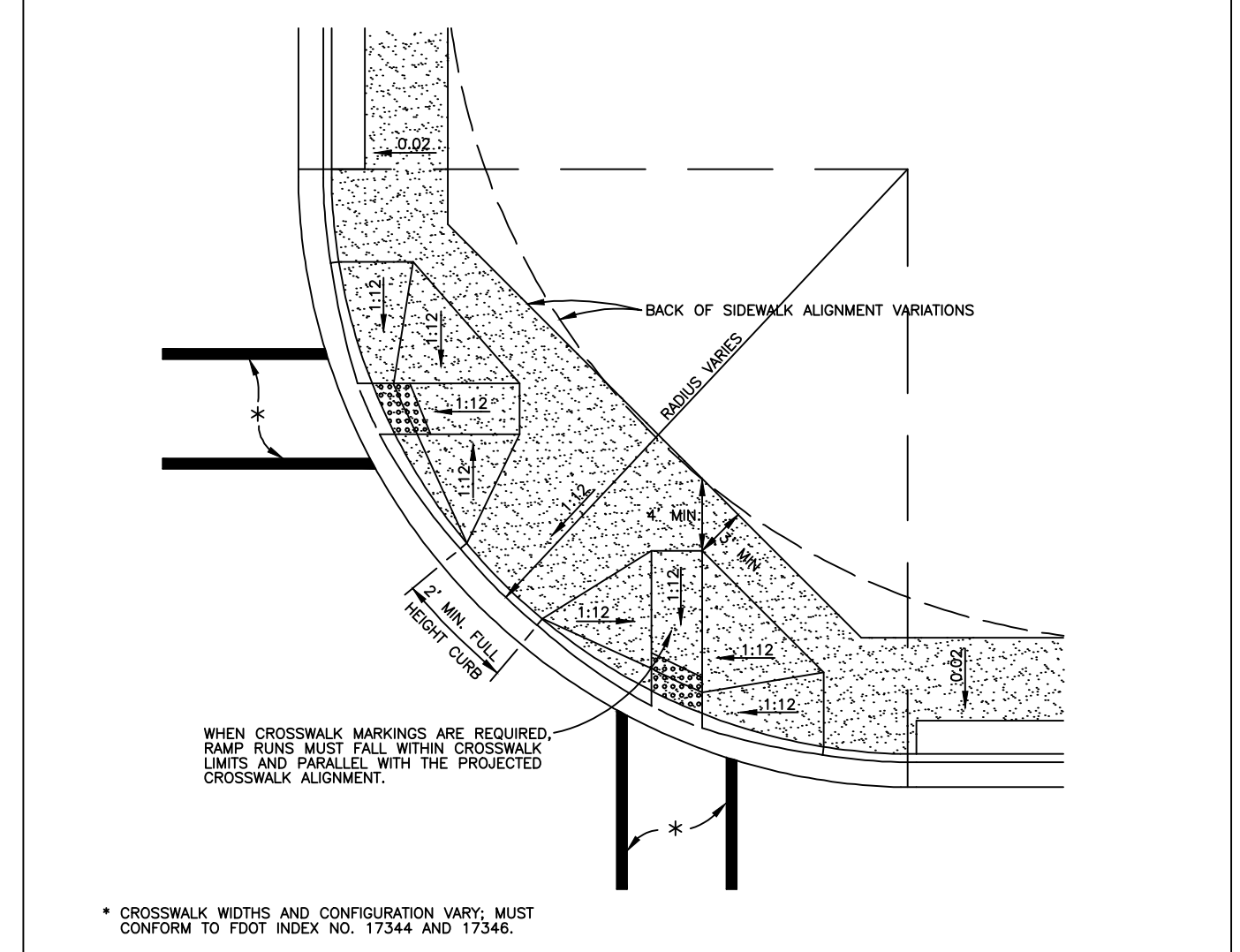


- NOTES:**
- FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.O.D.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT	HANDICAPPED RAMP SHEET 2	302.2
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	



MANATEE COUNTY TRANSPORTATION DEPARTMENT	FILTER FABRIC JACKET	104.0
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	



- NOTES:**
- CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN ON PLANS.
 - SEE SHEETS # 300.1 "GENERAL NOTES" & # 301.2 "HANDICAPPED RAMP" SHT 2 FOR FURTHER REQUIREMENTS.
 - RADIUS OF CURB VARIES AS FOLLOWS:
 - 25' RAD. LOCAL STREET WITH ALLEY.
 - 25' RAD. LOCAL STREET WITH LOCAL STREET.
 - 35' RAD. LOCAL STREET WITH THOROUGHFARE OR COLLECTOR.
 - 50' RAD. THOROUGHFARE WITH THOROUGHFARE
 - CURB RADIUS SHOULD BE A MINIMUM OF 50' WHERE INDUSTRIAL AND BUS TRAFFIC (5% OR MORE) IS ANTICIPATED ON LOWER CLASSIFICATION ROADWAYS.
 - BOTH LOCATION OPTIONS FOR HANDICAPPED RAMP ARE SHOWN. ENGINEER MAY SELECT EITHER, WHICHEVER FITS THE SITUATION.
- NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.O.D.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT	HANDICAPPED RAMP SHEET 1	302.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL
	6/12/07	