



Know what's below
Call before you dig



64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT

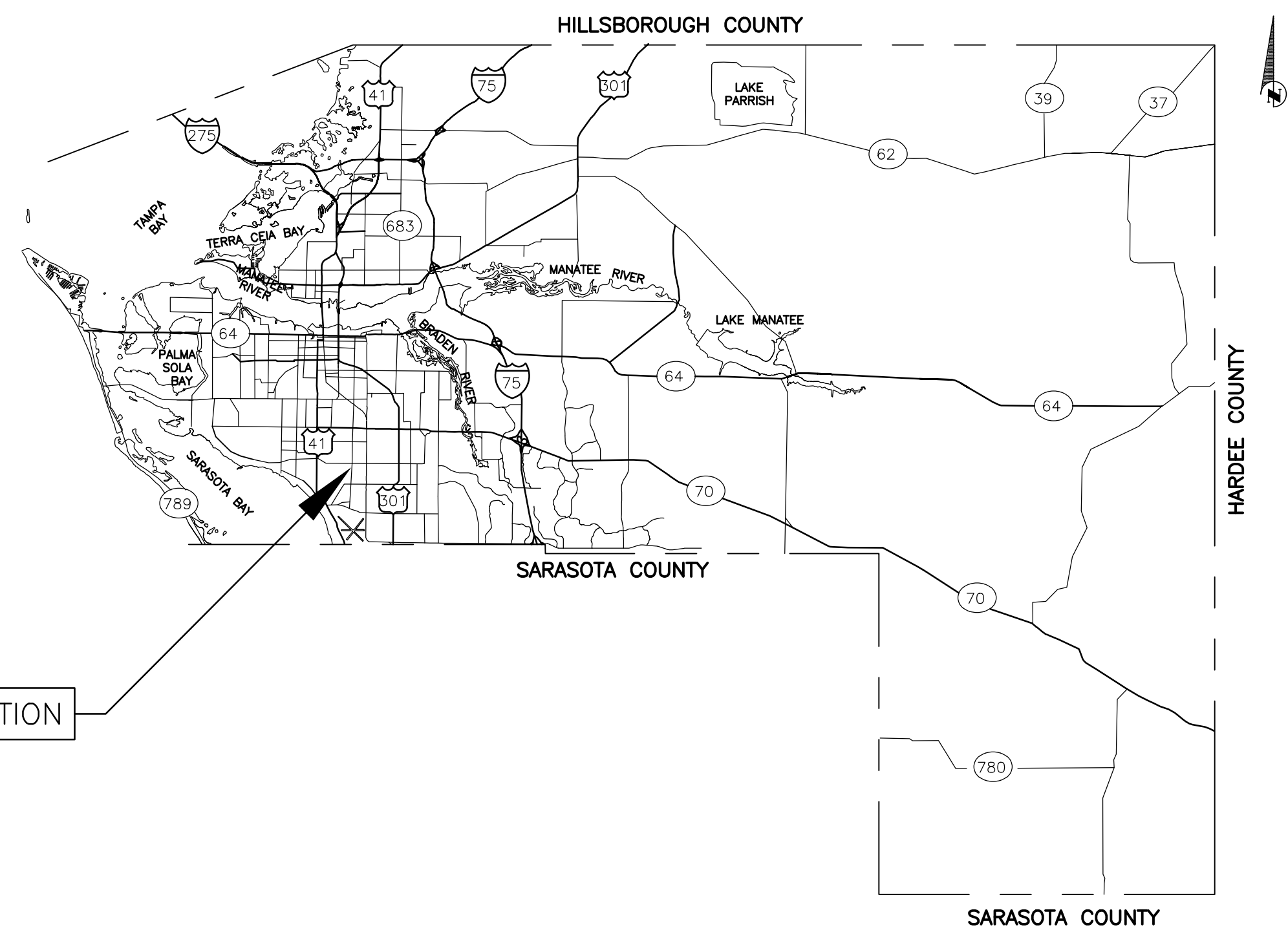
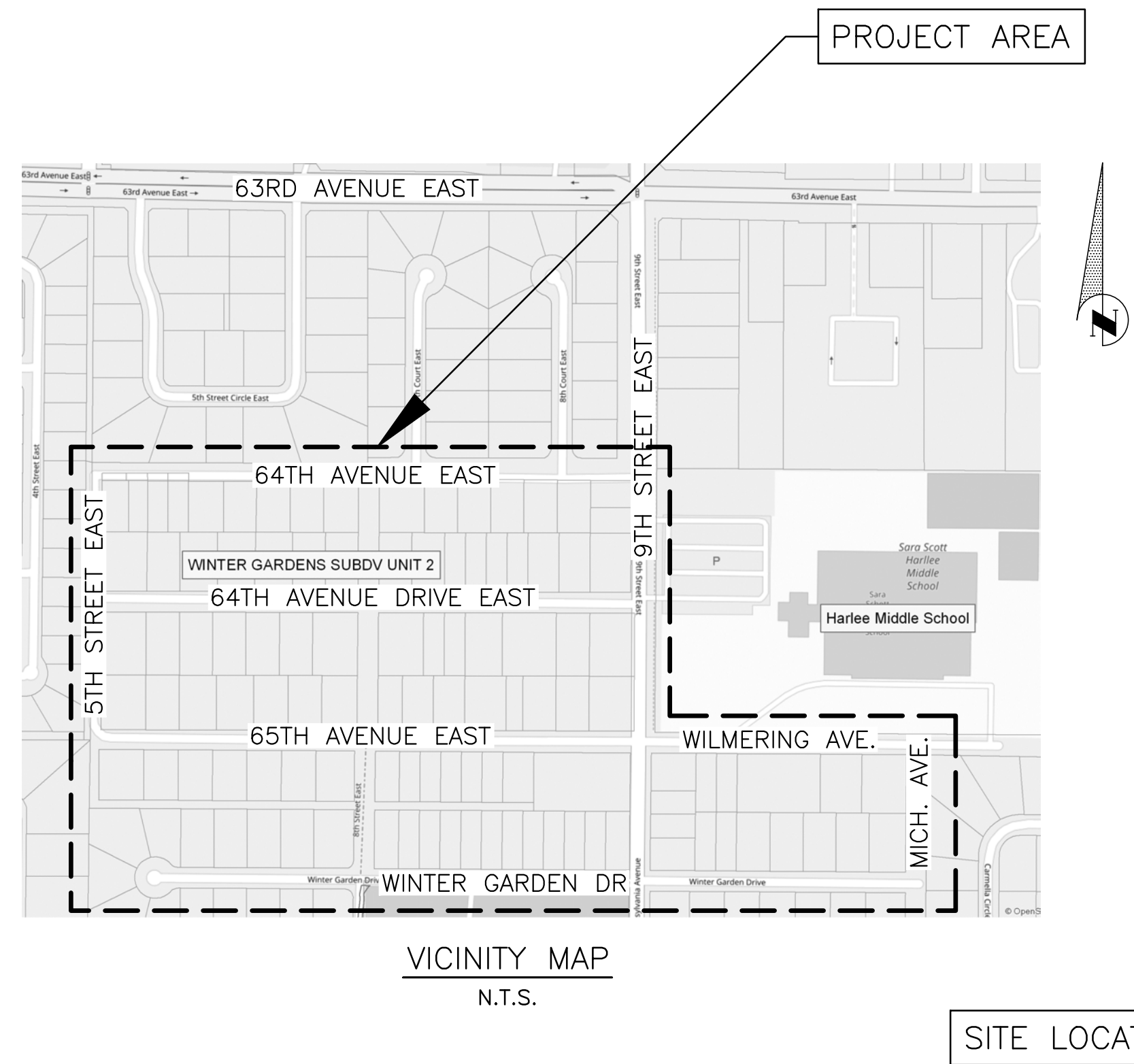
404-6046070

BID PLANS

AUGUST 2022

NO.	SHEET
01	Cover
02	Notes & Legend
03	Key Sheet
04	Plan & Profile 64th Ave E [STA 135+00 to 143+80]
05	Plan & Profile 64th Ave E [STA 138+70 to 143+80]
06	Plan & Profile 64th Ave E [STA 143+80 to 148+34]
07	Plan & Profile 64th Ave Dr E [STA 115+00 to 120+30]
08	Plan & Profile 64th Ave Dr E [STA 120+30 to 126+10]
09	Plan & Profile 64th Ave Dr E [STA 126+10 to 128+27]
10	Plan & Profile 65th Ave E [STA 85+00 to 90+30]
11	Plan & Profile 65th Ave E [STA 90+30 to 96+10]
12	Plan & Profile 65th Ave E [STA 96+10 to 101+90]
13	Plan & Profile Wimerling Ave E [STA 101+90 to 105+20]
14	Plan & Profile Winter Garden Dr [STA 64+50 to 69+30]
15	Plan & Profile Winter Garden Dr [STA 69+30 to 75+10]
16	Plan & Profile Winter Garden Dr [STA 75+10 to 80+90]
17	Plan & Profile Winter Garden Dr [STA 80+90 to 83+50]
18	Plan & Profile 5th St E [STA 49+75 to 55+30]
19	Plan & Profile 5th St E [STA 55+30 to 56+50]
20	Plan & Profile 9th St E
21	Pavement Resoration Plan
22	Survey Control & S.U.E. V.V.H. TABLE
23	Survey Baseline Reference
24	Details
25	Details
26	Details
27	Details
28	Erosion Control

64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
COVER



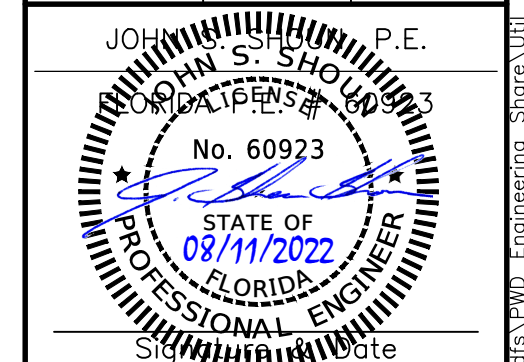
PROJECT DESCRIPTION

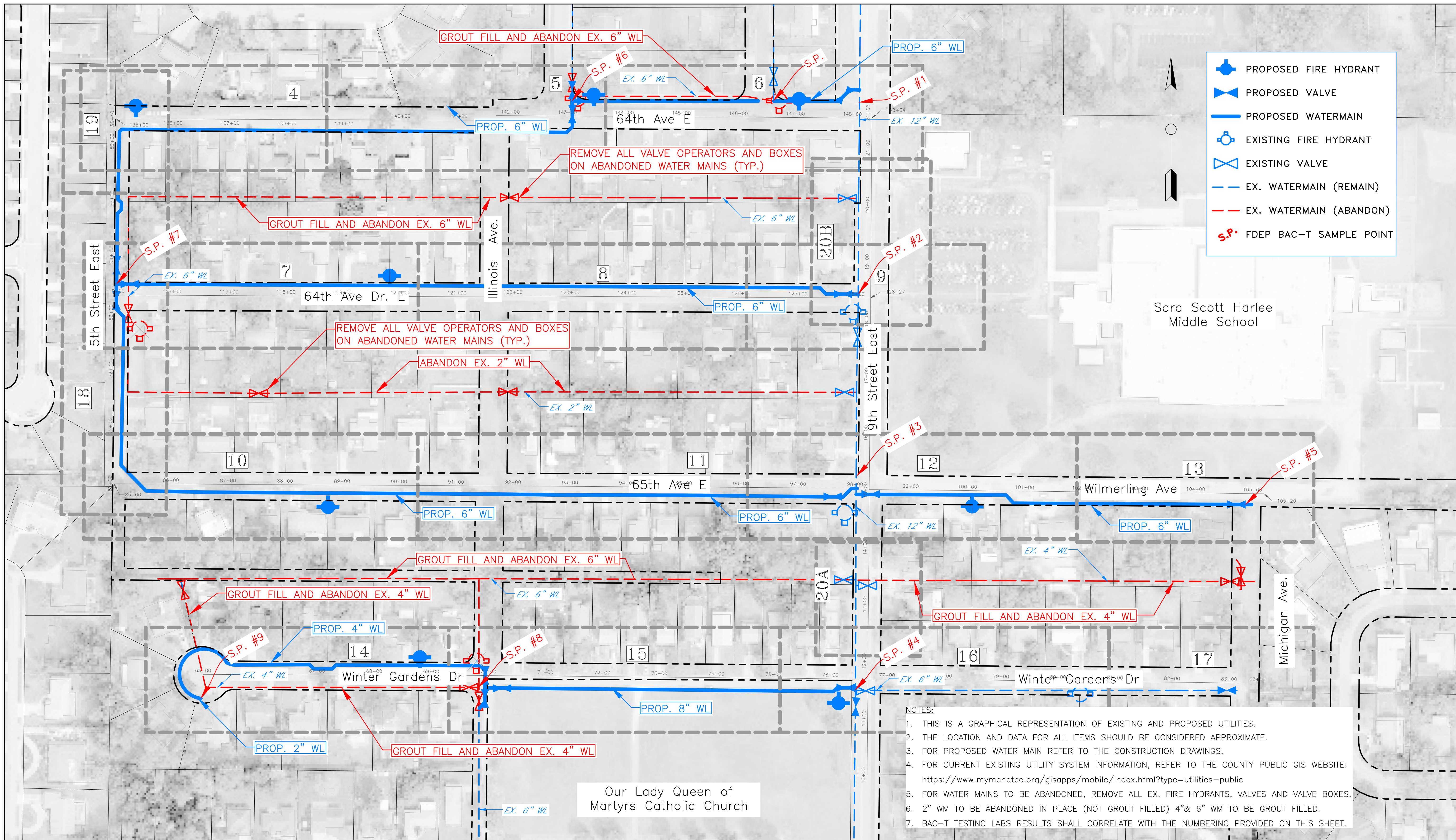
DECOMMISSION APPROXIMATELY 5,000 LINEAR FEET OF WATER MAIN IN BACKYARD EASEMENTS OR WITH POOR ACCESS AND INSTALL APPROX. 7,700 LINEAR FEET OF NEW WATER MAIN, RELOCATE ALL METERS & SERVICES TO PUBLIC ROW. THE PURPOSE IS TO IMPROVE FIRE PROTECTION, WATER QUALITY, & REDUCE MAINTENANCE & OPERATION COSTS.

CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED AS NOT TO INTERFERE WITH SCHOOL VEHICULAR AND/OR PEDESTRIAN TRAFFIC ON 9TH ST E, WILMERLING AVE, AND SURROUNDING ROADWAYS. THE CONTRACTOR SHALL PROVIDE A PROJECT SCHEDULE TO DEMONSTRATE NO IMPACTS DURING SCHOOL OPERATING HOURS, PARTICULARLY DURING TIMES OF PARENT AND/OR BUS DROP-OFF AND PICK-UP.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	25/35/17
SCALE	N.T.S.
BY	DATE
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020





	PROPOSED FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED WATERMAIN
	EXISTING FIRE HYDRANT
	EXISTING VALVE
	EX. WATERMAIN (REMAIN)
	EX. WATERMAIN (ABANDON)
	S.P. FDEP BAC-T SAMPLE POINT

Sara Scott Harlee Middle School

Our Lady Queen of Martyrs Catholic Church

- NOTES:
1. THIS IS A GRAPHICAL REPRESENTATION OF EXISTING AND PROPOSED UTILITIES.
 2. THE LOCATION AND DATA FOR ALL ITEMS SHOULD BE CONSIDERED APPROXIMATE.
 3. FOR PROPOSED WATER MAIN REFER TO THE CONSTRUCTION DRAWINGS.
 4. FOR CURRENT EXISTING UTILITY SYSTEM INFORMATION, REFER TO THE COUNTY PUBLIC GIS WEBSITE:
<https://www.mymanatee.org/gisapps/mobile/index.html?type=utilities-public>
 5. FOR WATER MAINS TO BE ABANDONED, REMOVE ALL EX. FIRE HYDRANTS, VALVES AND VALVE BOXES.
 6. 2" WM TO BE ABANDONED IN PLACE (NOT GROUT FILLED) 4" & 6" WM TO BE GROUT FILLED.
 7. BAC-T TESTING LABS RESULTS SHALL CORRELATE WITH THE NUMBERING PROVIDED ON THIS SHEET.

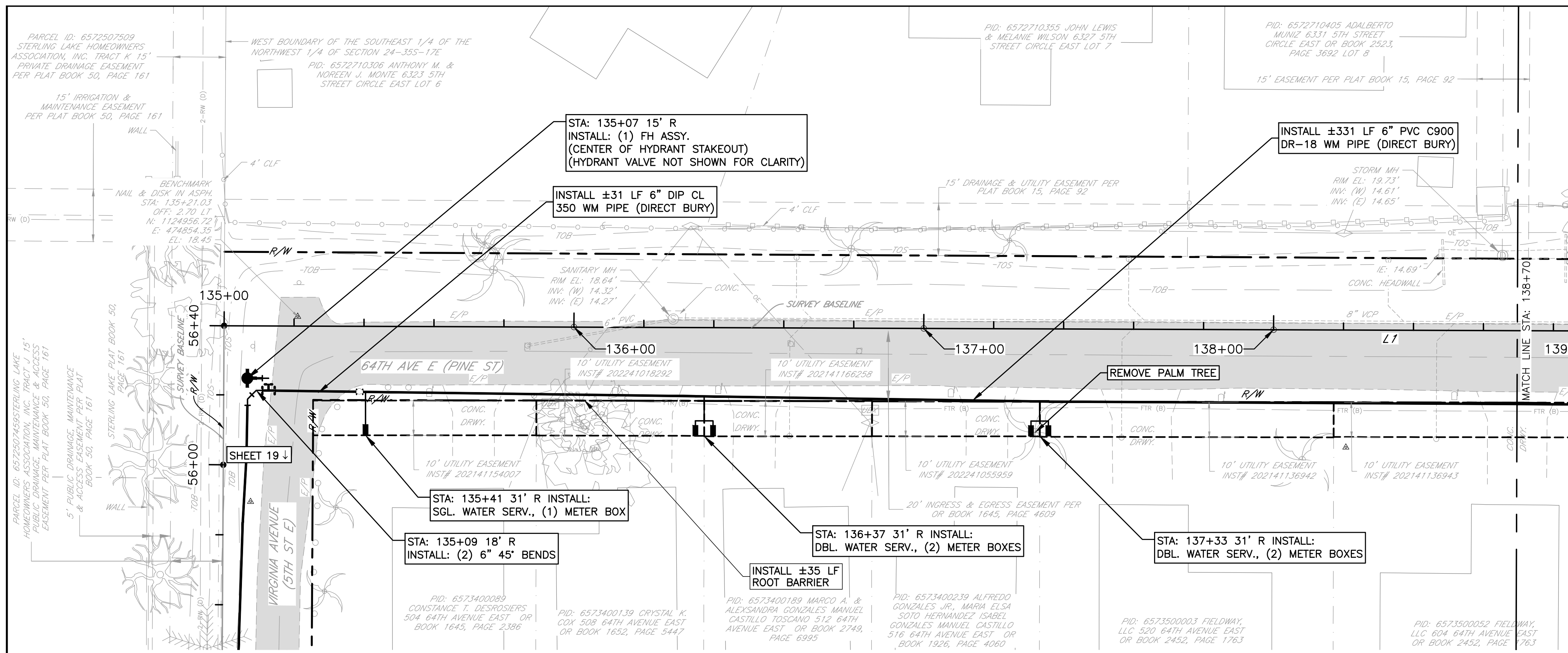
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT KEY SHEET

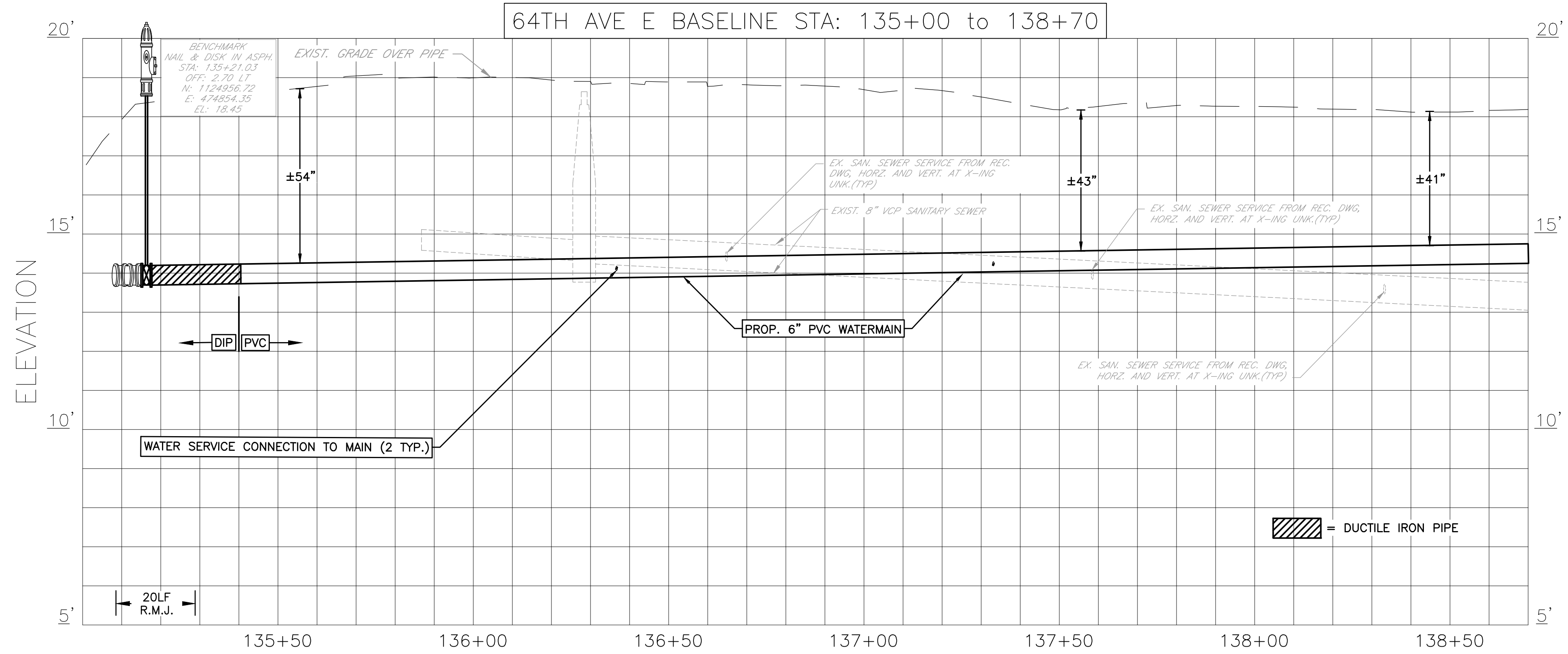


PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	1" = 80'
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

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



- CONSTRUCTION NOTES (APPLICABLE TO ALL PLAN AND PROFILE SHEETS):**
- PRIOR TO INSTALLATION, CONTRACTOR SHALL HAVE ALL PROPOSED EASEMENTS FOR THIS PROJECT STAKED FOR REFERENCE, TO ENSURE PROPER INSTALLATION OF THE METER BOX AND/OR BPA IS CENTERED IN THE EASEMENT AND ALL ABOVEGROUND ITEMS LOCATED IN RELATION TO THE EASEMENT LIMITS.
 - WATER CONNECTIONS TO THE EXISTING RESIDENCES ARE UNKNOWN. THE CONTRACTOR/PLUMBER MAY SHIFT LOCATIONS OF THE PROPOSED WATER METER TO OPPOSITE PROPERTY CORNER TO CREATE A MORE EFFICIENT ALIGNMENT TO THE EXISTING WATER SERVICE CONNECTION AT THE RESIDENCE.
 - ALL METER BOXES PROPOSED AND/OR RELOCATED SHALL BE INSTALLED PER UW-21, UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL COORDINATE ALL WATER SERVICE LINE INSTALLATIONS WITH THE UTILITY DEPARTMENT (JAMES LEE @ 941-792-8811 x5055) PRIOR TO INSTALLATION. THE CONTRACTOR SHALL INSTALL 3/4-INCH REDUCE PRESSURE BACKFLOW PREVENTION ASSEMBLIES (BPA'S) (WILKINS 975XL2 OR APOLLO VALVE RPLF4A) WITH VACUUM BREAKERS ON ALL EXTERIOR HOSE BIBBS, UNLESS OTHERWISE NOTED. SOME LOTS WILL RECEIVE 1-INCH RPZ BPA, AS NOTED IN THE PLANS.
 - LOCATION OF EXISTING SEWER SERVICE LATERALS ARE APPROXIMATE. PRIOR TO INSTALLATION OF THE PROPOSED MAIN, THE CONTRACTOR SHALL VERIFY THE LATERALS' LOCATION BOTH HORIZONTALLY AND VERTICALLY AND NOTIFY THE COUNTY TO WHICH LATERALS SHALL BE IN CONFLICT WITH THE PROPOSED MAIN'S DEPTH. CONTRACTOR SHALL DETERMINE AND NOTIFY COUNTY OF THE OPTIMAL OVERALL DEPTH TO AVOID SEWER LATERALS. WITH COUNTY APPROVAL, THE PROPOSED MAIN MAY BE SLIGHTLY ADJUSTED TO AVOID CONFLICTS WITH THE EXISTING LATERALS. IN EXTREME CASES, THE EXISTING SEWER LATERALS SHALL BE VERTICALLY RE-ALIGNED TO AVOID CONFLICTS WITH THE PROPOSED MAIN AND ELIMINATE ANY NEED FOR THE INSTALLATION OF AN AIR RELEASE VALVE (ARV). 6-INCH MIN. VERTICAL CLEARANCE IS REQUIRED FROM THE WATER MAIN.
 - WATER SERVICE TAPS SHALL NOT BE LOCATED UNDER DRIVEWAYS.
 - INSTALLATION OF THE PROPOSED PIPE SHALL BE AS SHOWN IN THE PLAN AND PROFILE VIEWS, UNLESS REVISIONS ARE APPROVED BY THE COUNTY. THE DEPTH OF BURY OR TOP OF PIPE ELEVATION ARE TO BE AS INDICATED BY THE ELEVATION GRID, UNLESS OTHERWISE STATED ON THE PLANS BY ELEVATION CALLOUTS OR SPOT GRADES. IT IS EXPECTED THE INSTALLATION OF THE PIPE OR APPURTENANCES SHALL MATCH THE ELEVATIONS SHOWN IN THE CONSTRUCTION PLANS.
 - ALL NECESSARY DEVIATIONS BEYOND THE ACCEPTED TOLERANCES WILL NOT BE ACCEPTED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE COUNTY.
 - INSTALLATION VERTICAL AND HORIZONTAL TOLERANCES SHALL BE AS STATED IN THE SPECIFICATION DOCUMENT, SECTION 02617, 1.01.J. PIPE PLACED OUT OF TOLERANCE IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO COST TO THE COUNTY.
 - CONTRACTOR SHALL EXPOSE AND SURVEY THE EXISTING TOP OF "PIPE" ELEVATION AT ALL PROPOSED UTILITY CROSSINGS. THIS INFORMATION SHALL BE PROVIDED ON THE RECORD DRAWINGS.
 - CONTRACTOR SHALL USE A TAPE MEASURE AND PROVIDE PHOTOGRAPHIC EVIDENCE THAT ALL MINIMUM REQUIRED HORIZONTAL OR VERTICAL DISTANCES HAVE BEEN PROVIDED. THESE PHOTOS SHALL BECOME PART OF THE PROJECT FILE. PHOTOS SHALL BE LABELED WITH THE BASELINE STATION NUMBERING AND UPLOADED TO eBUILDER WITHIN 1 TO 2 DAYS OF THE CROSSING INSTALLATIONS. THIS REQUIREMENTS SHALL APPLY TO ALL CROSSINGS. THESE PHOTOS SHALL BE USED TO SUPPORT THE AS-BUILT RECORD INFORMATION.
 - NEW METER BOXES ARE GENERALLY REQUIRED. HOWEVER, ALL EXISTING, UNDAMAGED, ROME 1910 CAST IRON METER BOXES MAY BE REUSED. REPLACE ALL OTHERS WITH CURRENT STANDARD.
 - CONTRACTOR SHALL NOT USE LEVERAGE OR MECHANICAL MEANS TO ALIGN THE PIPE AND/OR FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING-LOADED".
 - ALL DISTURBED EX. DRAINAGE DITCHES/SWALES SHALL BE RE-GRADED TO ORIGINAL CONDITION TO PROVIDE POSITIVE DRAINAGE.
 - ALL COST TO RESTORE PROPERTY IN THE ROW DURING PIPE INSTALLATION SHALL BE INCLUDED IN THE COST OF THE PIPE BID ITEM, IF NOT SPECIFICALLY ADDRESSED BY OTHER BID ITEMS.
 - THERE SHALL BE 3-FOOT MINIMUM HORIZONTAL SEPARATION BETWEEN THE PROPOSED WATER MAIN AND EXISTING/PROPOSED STRUCTURES.
 - ANY PROPOSED AIR RELEASE VALVES (ARV) SHALL BE INSTALLED AFTER THE FIRST DRAFT OF THE RECORD DRAWINGS ARE REVIEWED TO ENSURE THE ARVS ARE INSTALLED AT THE ACTUAL HIGH POINTS OF THE NEW INSTALLED MAINS.
 - ALL OF THE SIGNING AND PAVEMENT MARKINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MUTCD, FDOT DESIGN STANDARDS AND THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT HIGHWAY, TRAFFIC AND STORMWATER STANDARDS. TRAFFIC CONTROL DEVICES THAT DO NOT CONFORM TO THESE DOCUMENTS, AND THAT ARE WITHIN THE PUBLICLY MAINTAINED RIGHT-OF-WAY, IF ACCEPTABLE, WILL REQUIRE AN EXECUTED MAINTENANCE AGREEMENT PRIOR TO APPROVAL OF CONSTRUCTION PLANS.

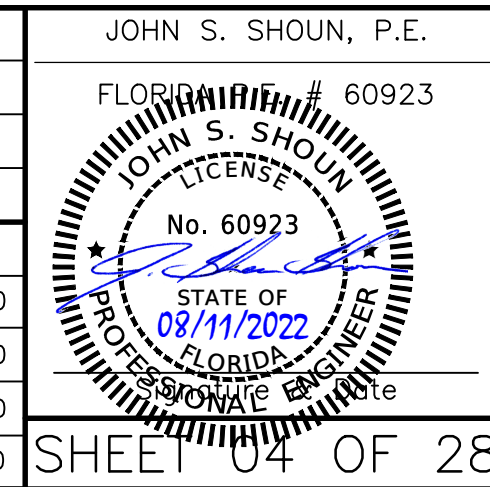


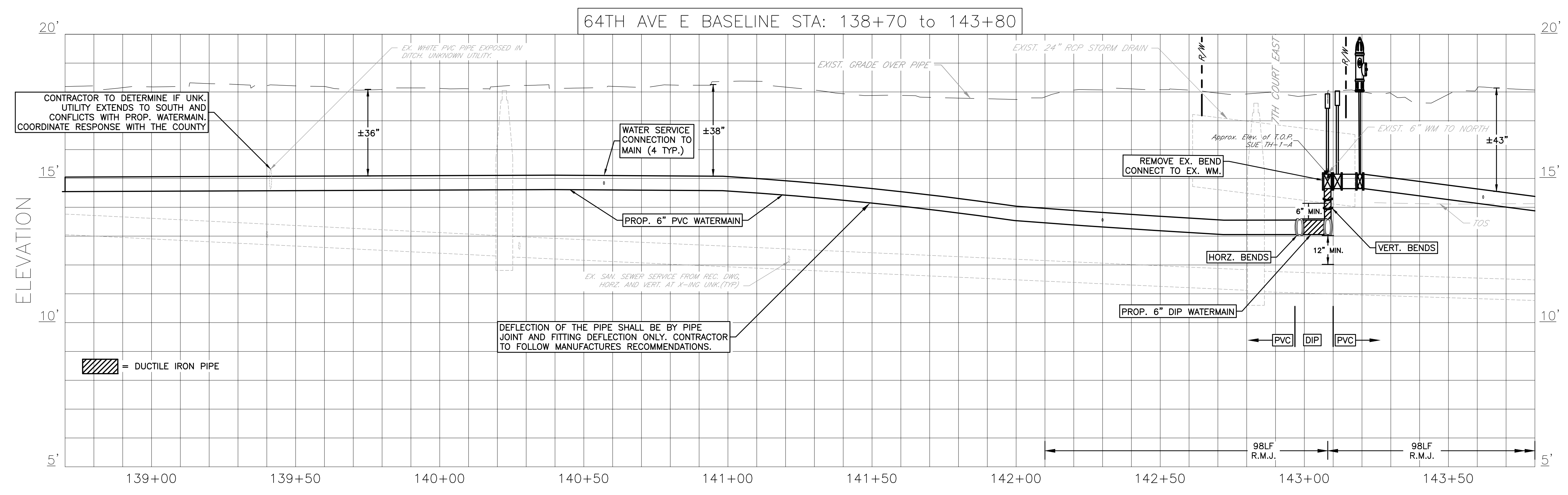
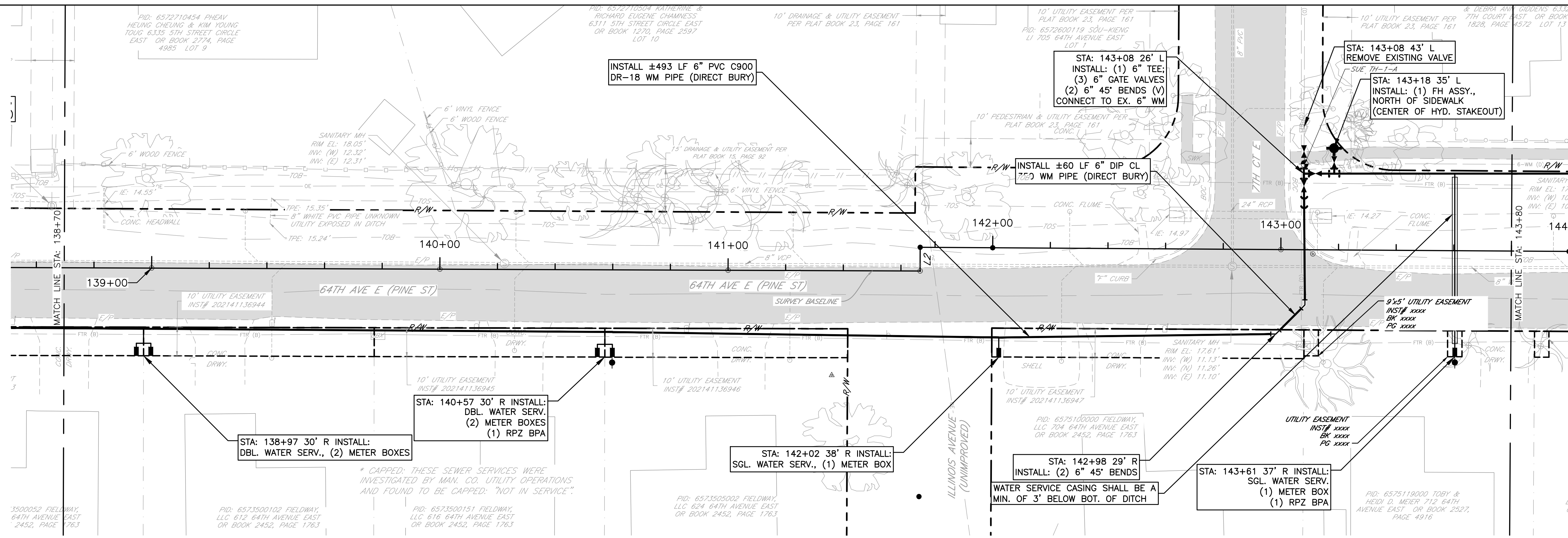
NO.	REVISION DESCRIPTION	BY	DATE

**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 64TH AVE E [STA 135+00 TO 143+80]**



PROJECT #	404-6046070	JOHN S. SHOUN, P.E.
SURVEY #	WA-2	FLORIDA # 60923
SEC./TWN./RGE	24/35S/17E	
SCALE	SEE PLAN	
SURVEYED	SUR/TECH 05/2020	
DESIGNED	JSS/BLR 06/2020	
DRAWN	BLR/JSS 06/2020	
CHECKED	JR 10/2020	





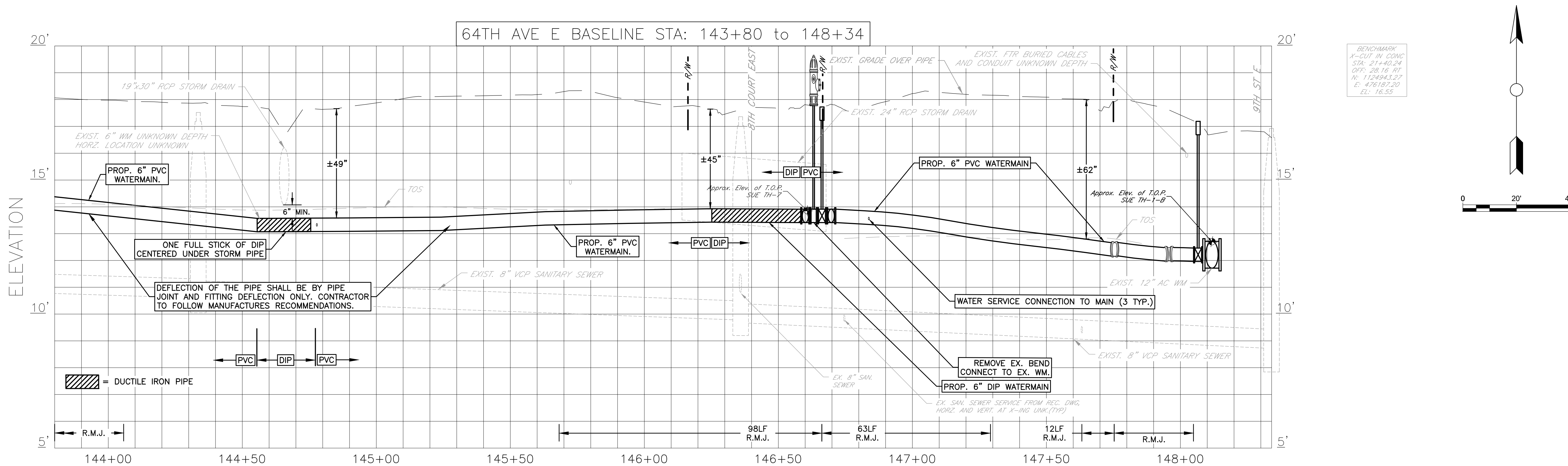
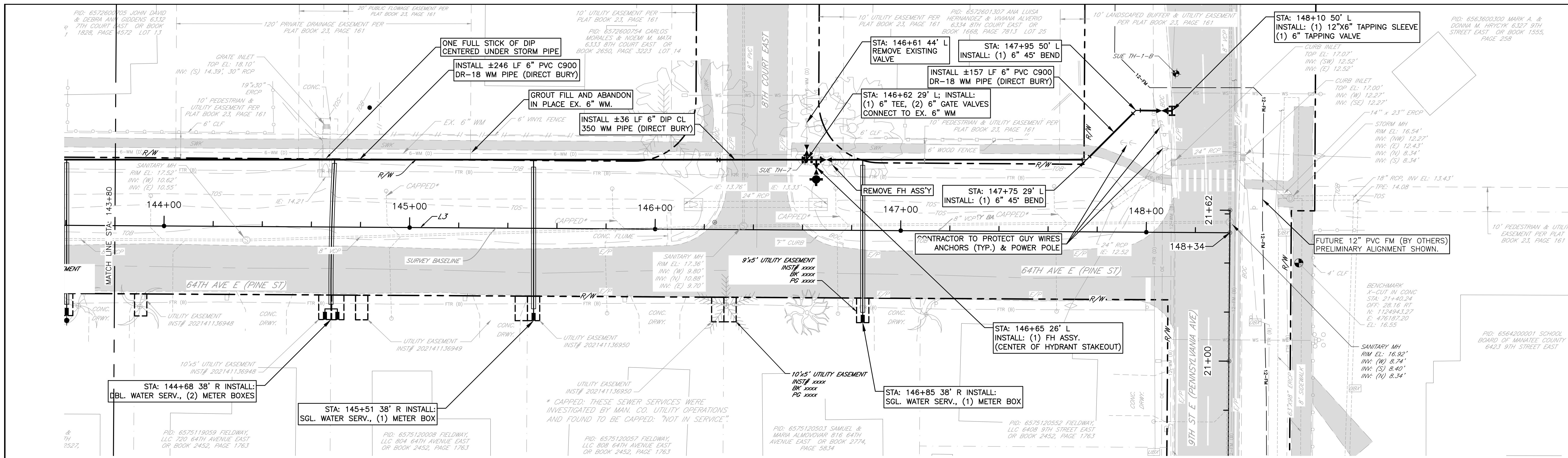
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 64TH AVE E [STA 138+70 TO 143+80]



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 FLORIDA LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 08/11/2022



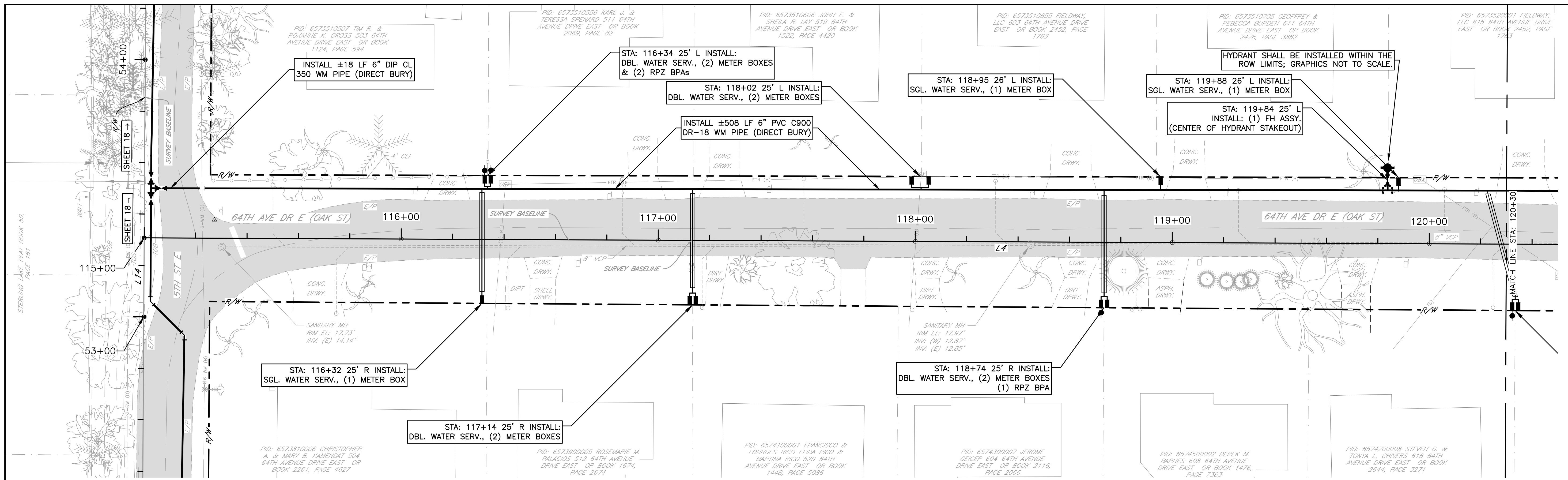
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64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT PLAN & PROFILE 64TH AVE E [STA 143+80 TO 148+34]

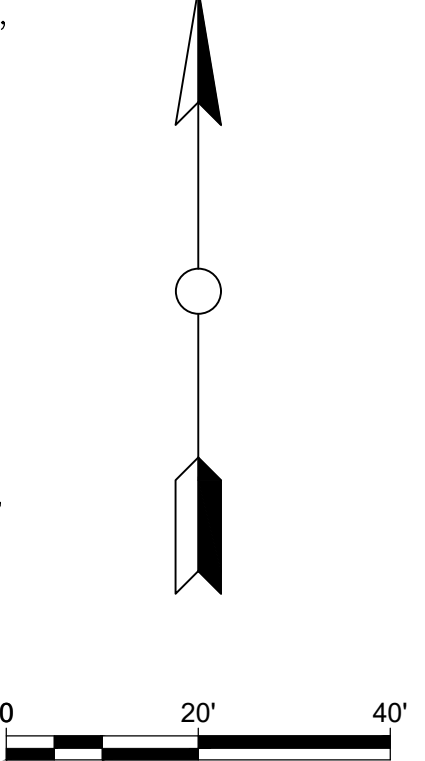
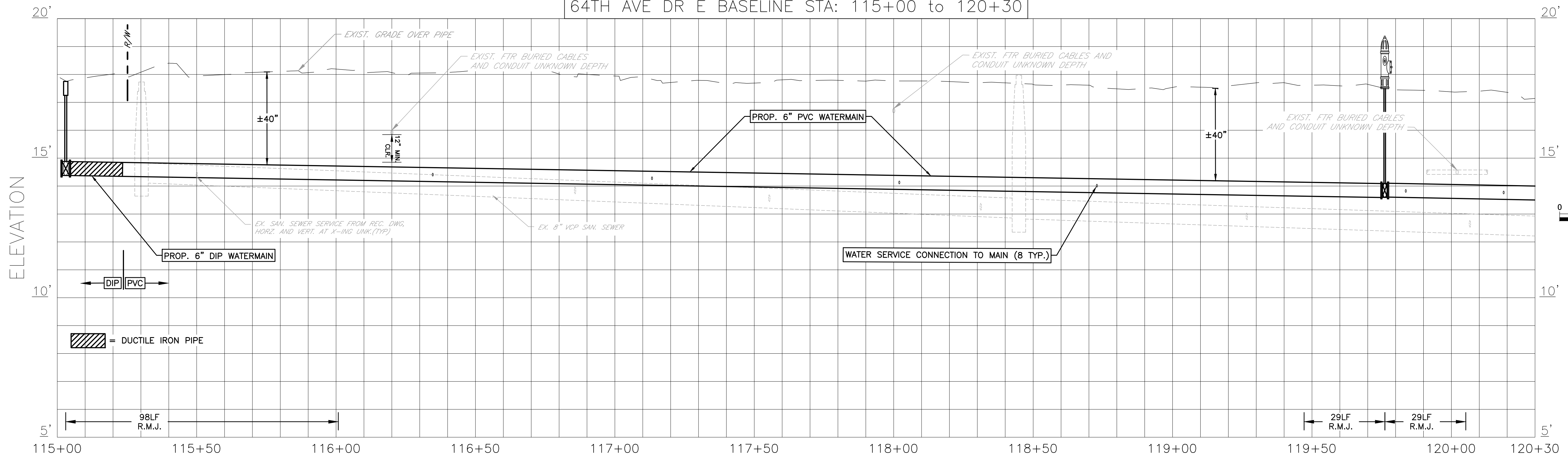


PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
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 SHEET 06 OF 28

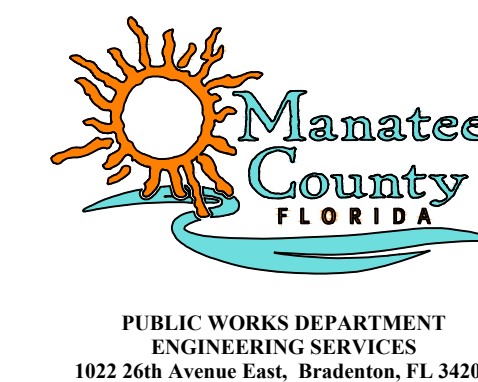


64TH AVE DR E BASELINE STA: 115+00 TO 120+30



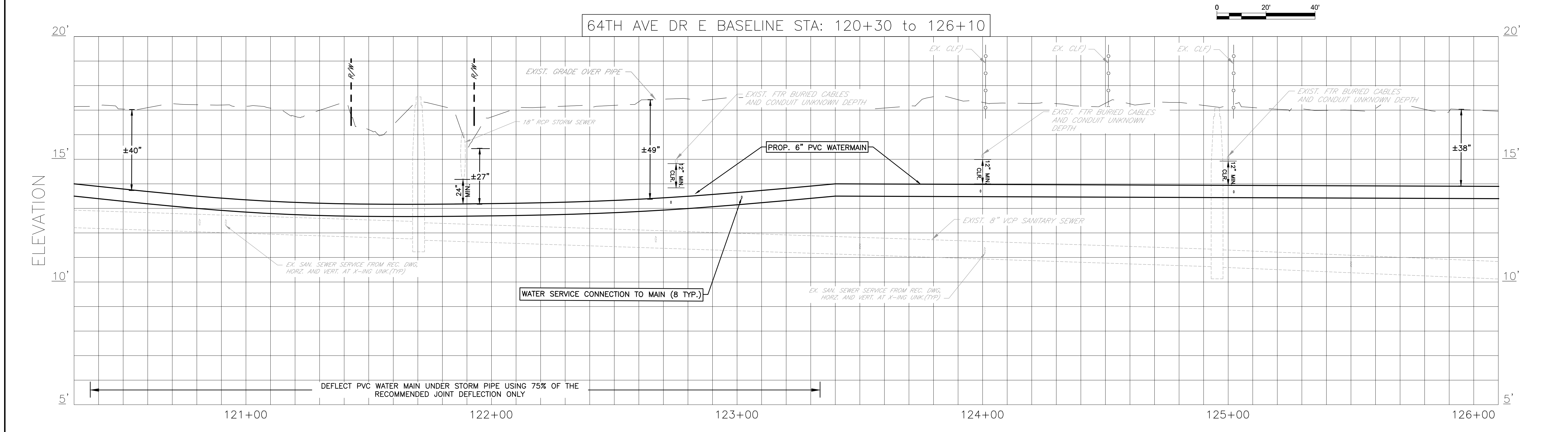
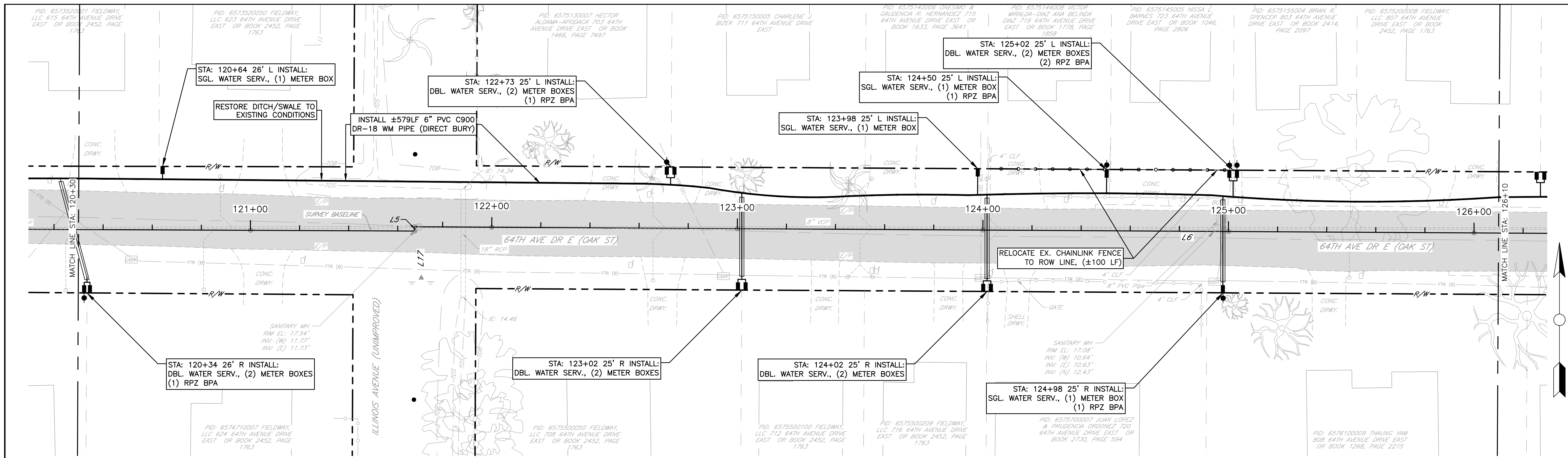
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**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 64TH AVE DR E [STA 115+00 TO 120+30]**



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

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



NO.	REVISION DESCRIPTION	BY	DATE

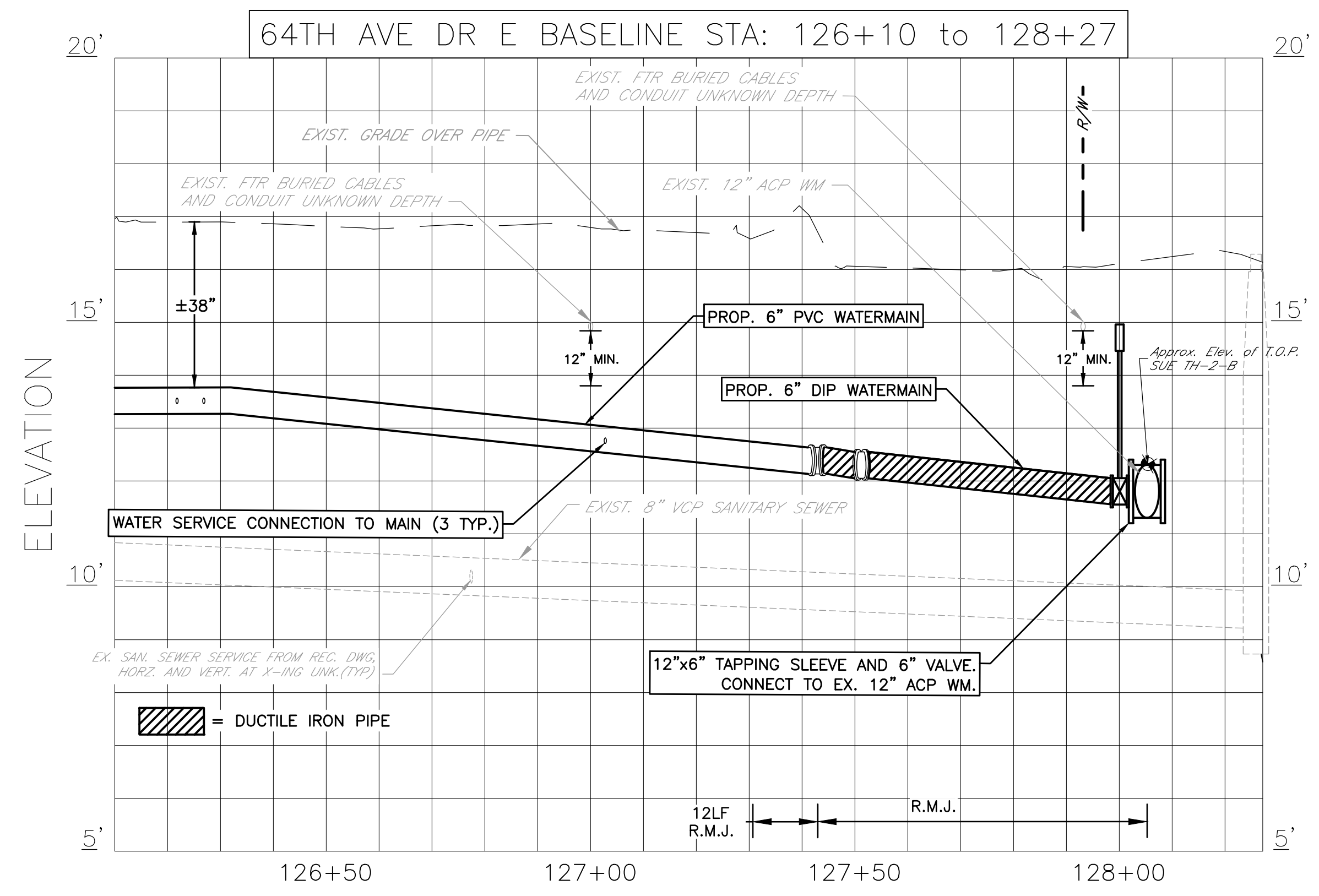
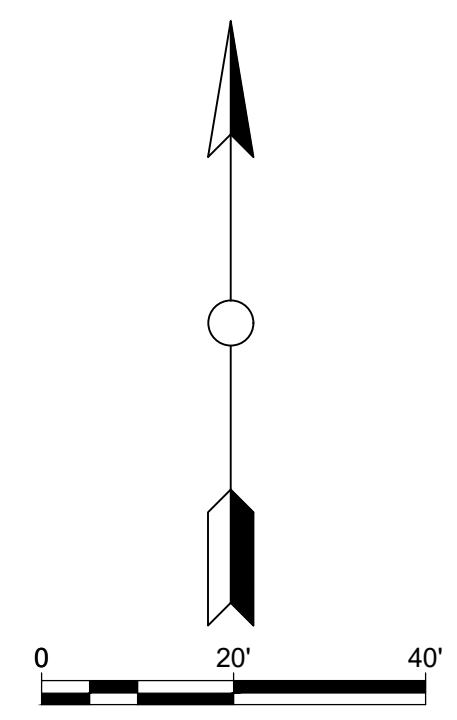
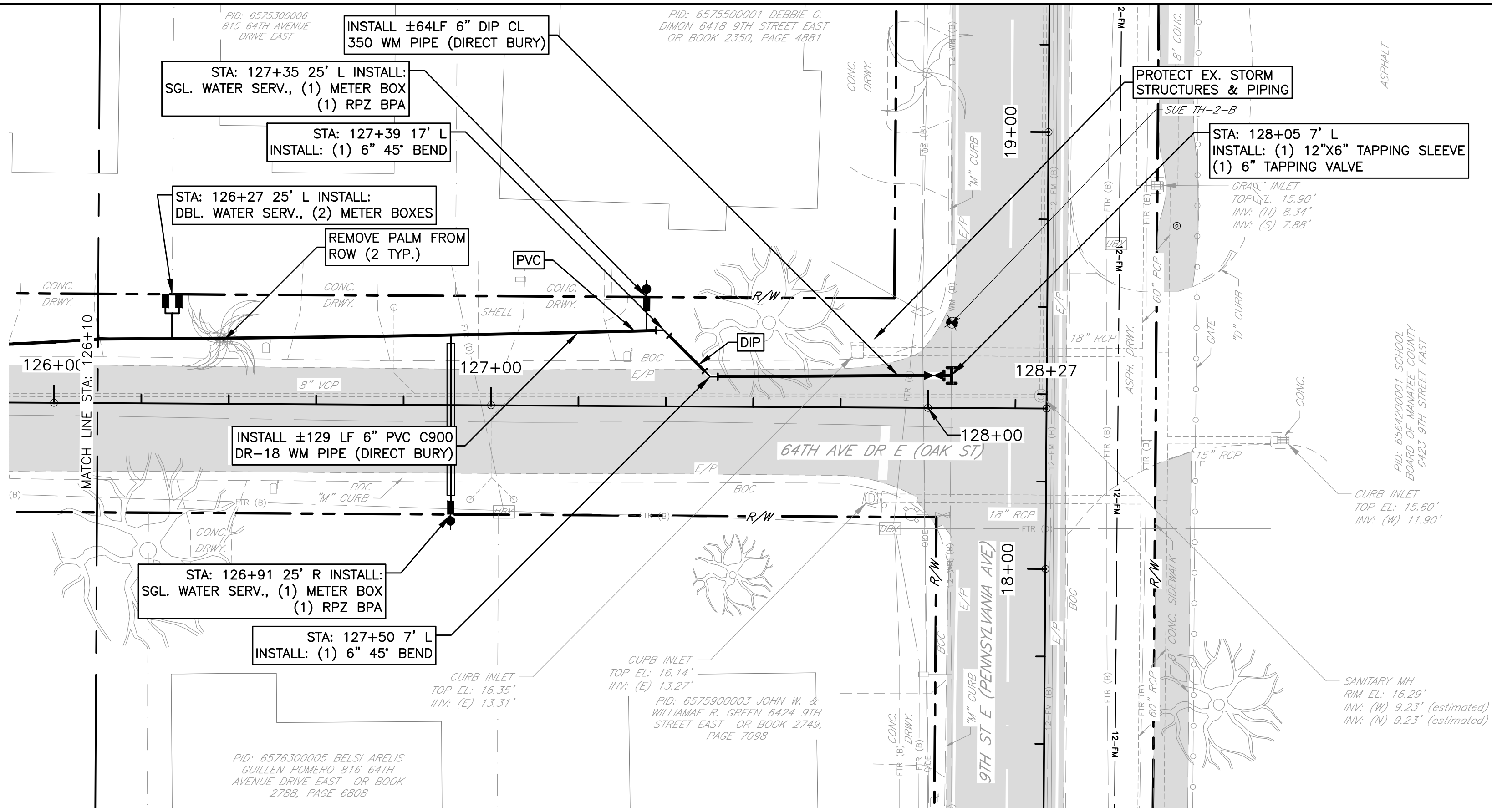
64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 64TH AVE DR E [STA 120+30 TO 126+10]



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
BY	DATE
SURVEYED SURVTECH	05/2020
DESIGNED JSS/BLR	06/2020
DRAWN BLR/JSS	06/2020
CHECKED JR	10/2020

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 No. 60923
 08/11/2022
 SHEET 08 OF 28

C:\Users\jshoun\OneDrive\Documents\64th Ave Dr E - Winter Gardens Dr - Water Main Replacement - Plan & Profile.dwg, 8/17/2022 2:05 PM, Bruce Robertson, P.E., ANS full based on 124+00 x 22+00 (inches), 10/20/2022



NO.	REVISION DESCRIPTION	BY	DATE

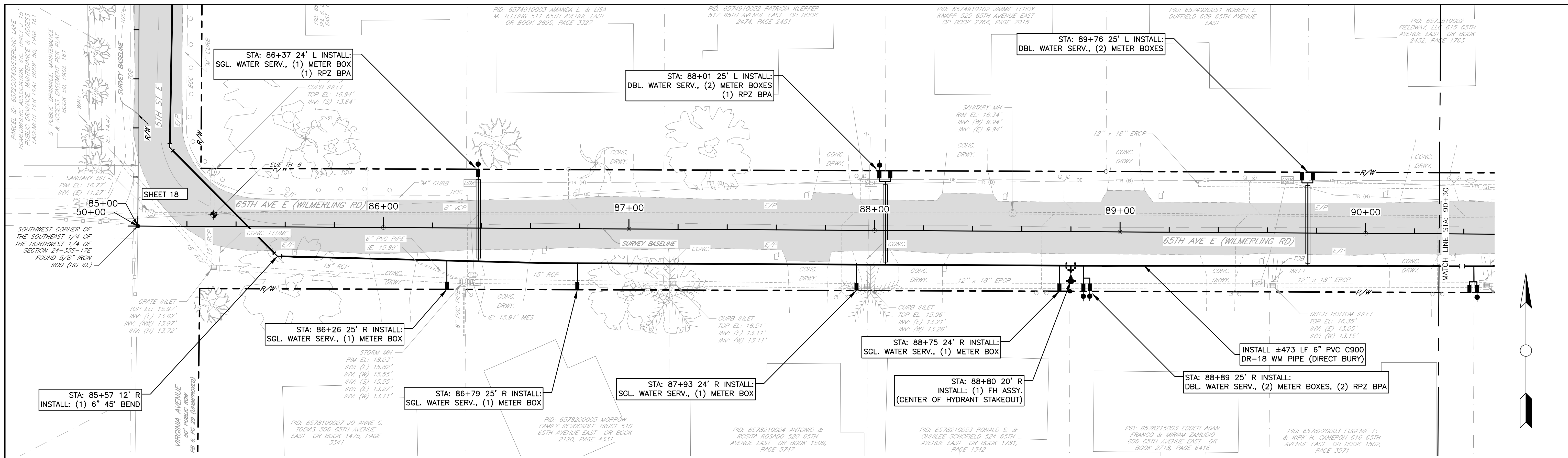
64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 64TH AVE DR E [STA 126+10 TO 128+27]



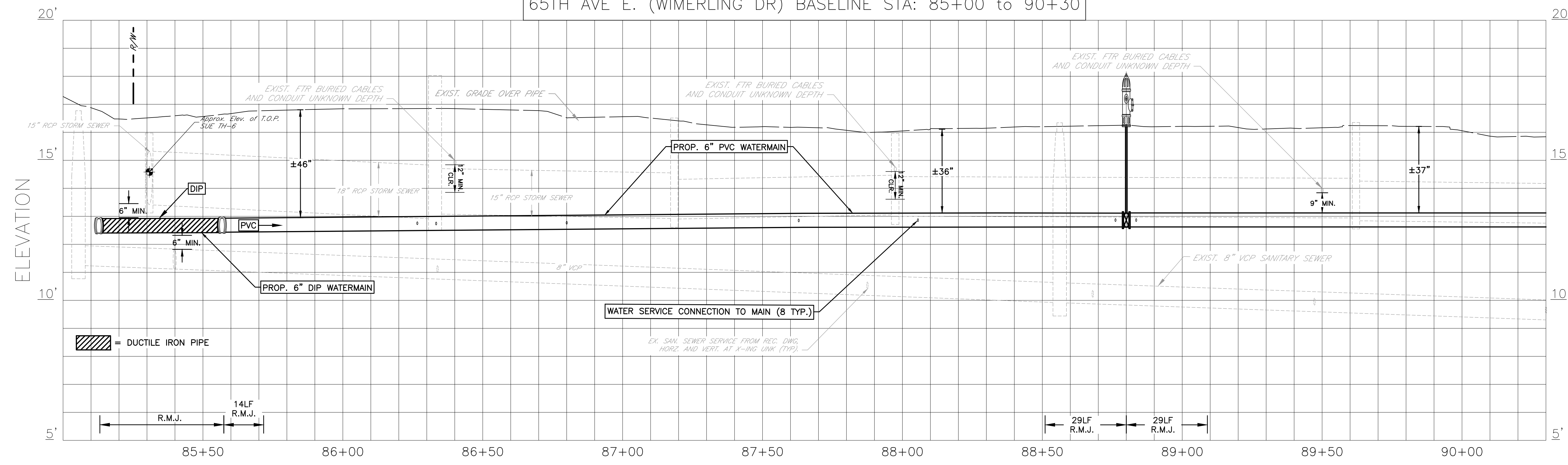
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SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
BY	DATE
SURVEYED SURVTECH	05/2020
DESIGNED JSS/BLR	06/2020
DRAWN BLR/JSS	06/2020
CHECKED JR	10/2020

JOHN S. SHOUN, P.E.
 FLORIDA PROFESSIONAL ENGINEER
 No. 60923
 08/11/2022
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

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65TH AVE E. (WIMERLING DR) BASELINE STA: 85+00 TO 90+30



NO.	REVISION DESCRIPTION	BY	DATE

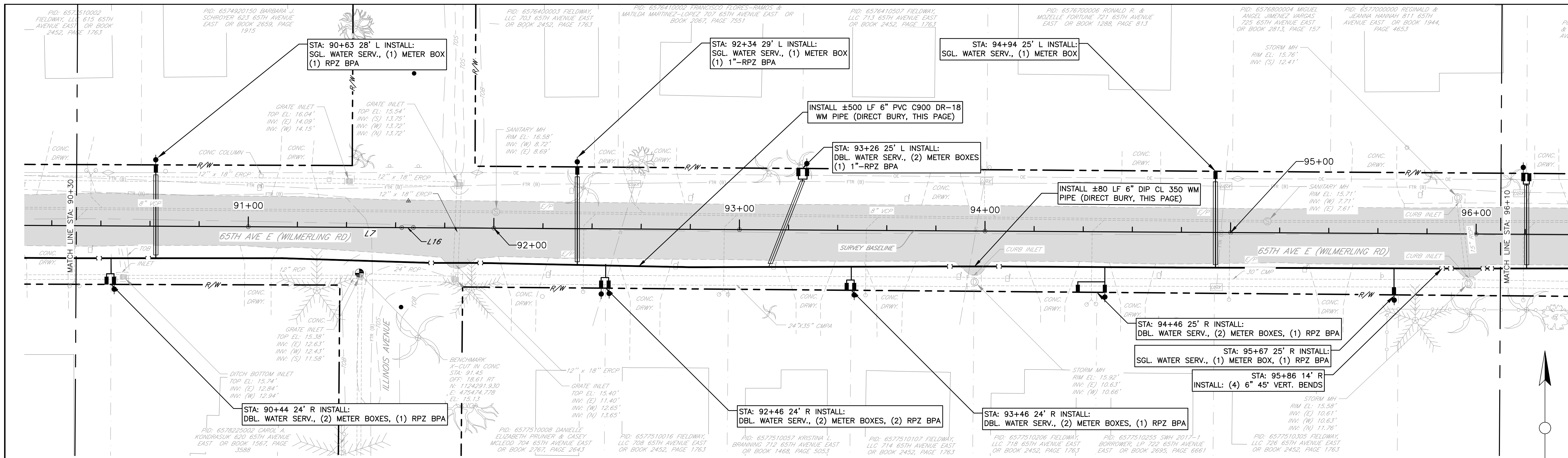
**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 65TH AVE E [STA 85+00 TO 90+30]**



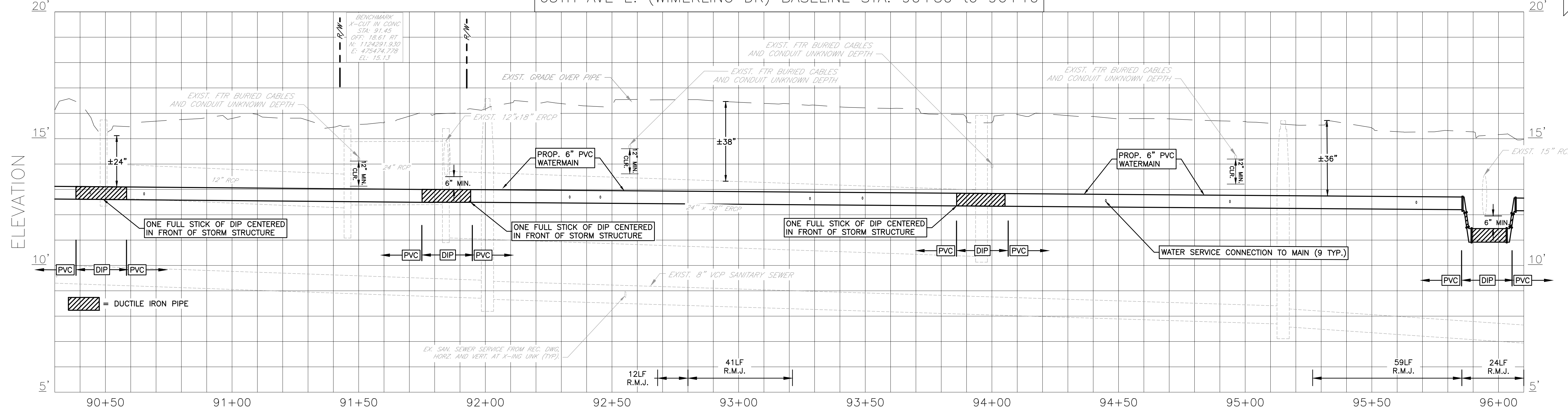
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SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
BY	DATE
SURVEYED SURVTECH	05/2020
DESIGNED JSS/BLR	06/2020
DRAWN BLR/JSS	06/2020
CHECKED JR	10/2020

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 STATE OF FLORIDA
 08/11/2022
 SHEET 10 OF 28

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65TH AVE E. (WIMERLING DR) BASELINE STA: 90+30 TO 96+10



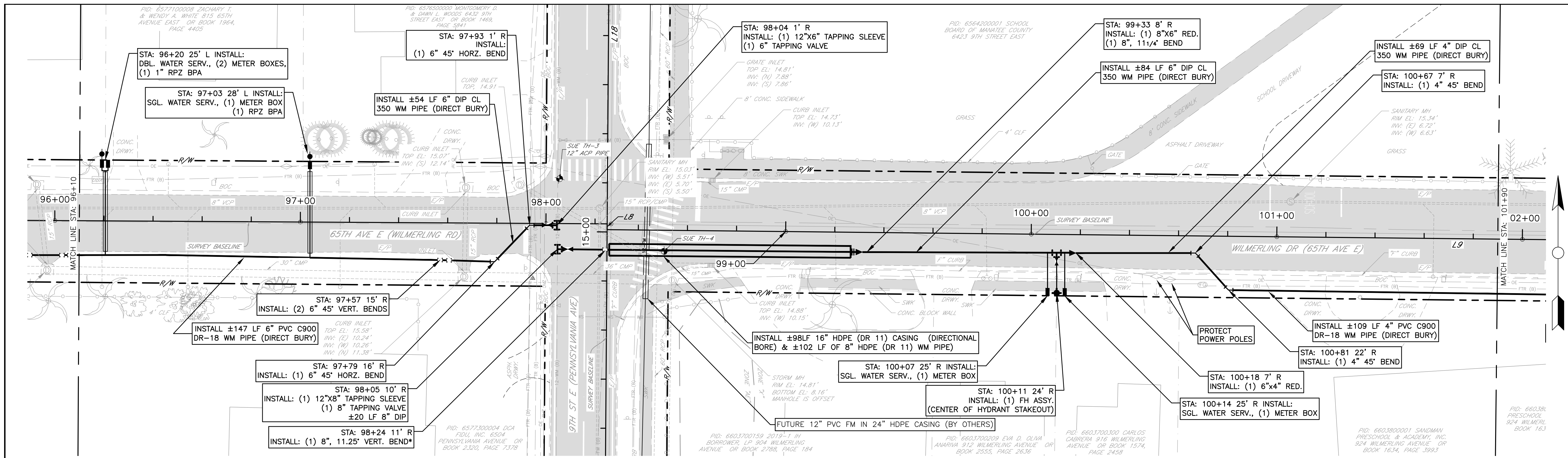
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64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT PLAN & PROFILE 65TH AVE E [STA 90+30 TO 96+10]

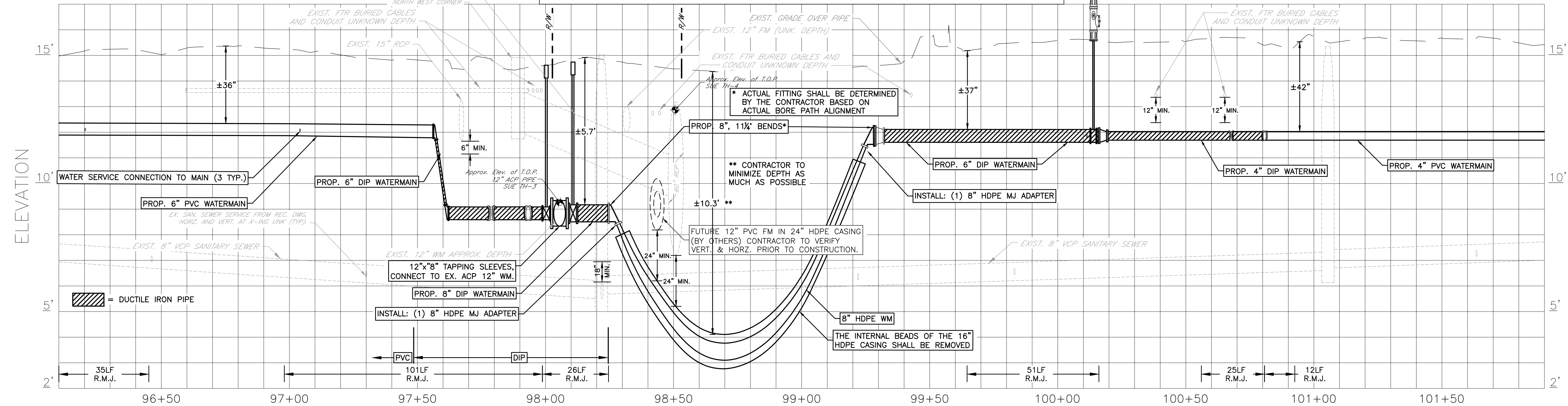


PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
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DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 EXPIRES 12/31/2022



65TH AVE E. (WIMERLING DR) BASELINE STA: 96+10 to 101+90



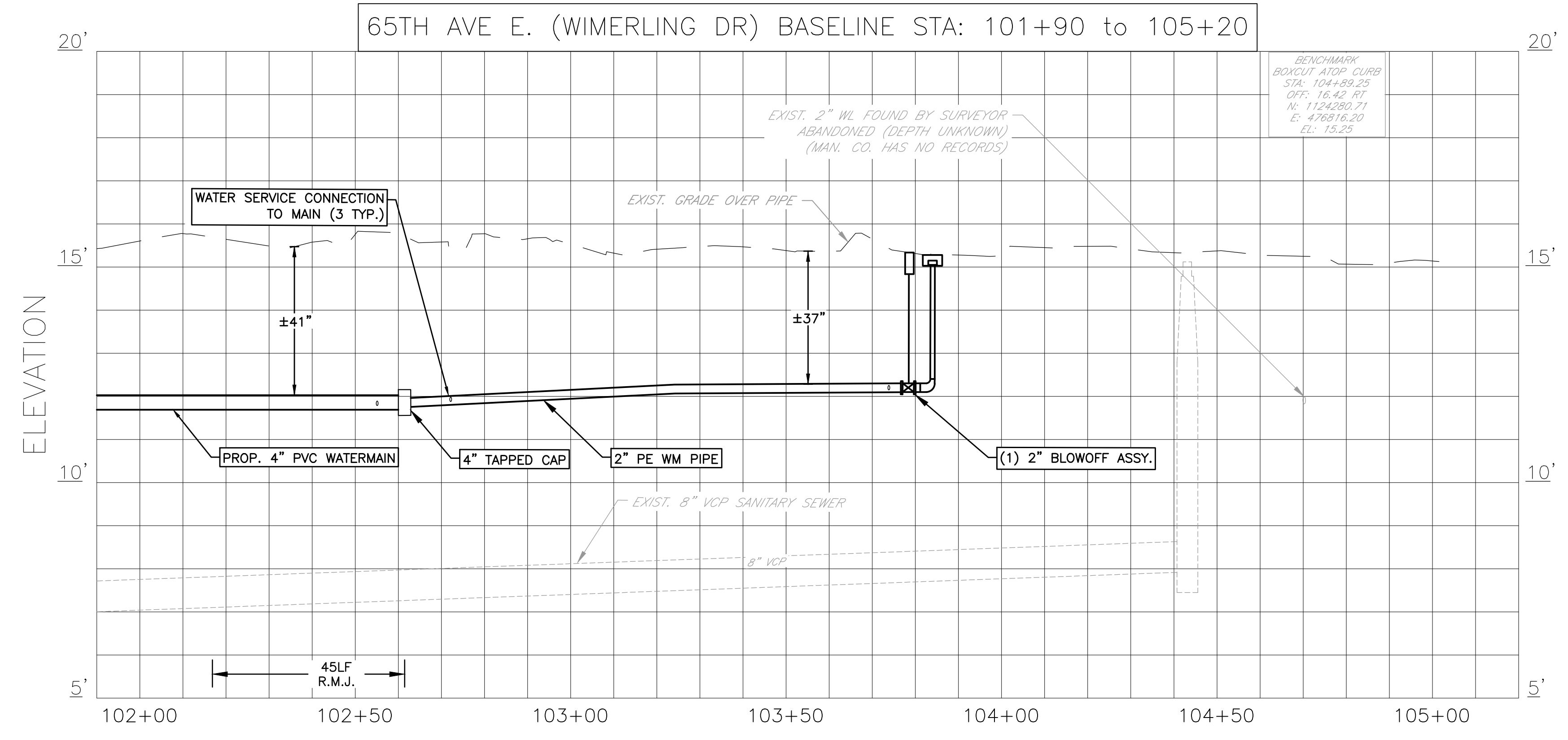
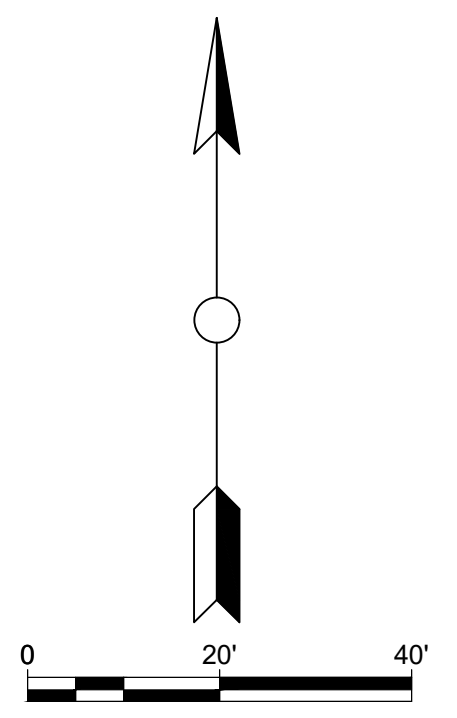
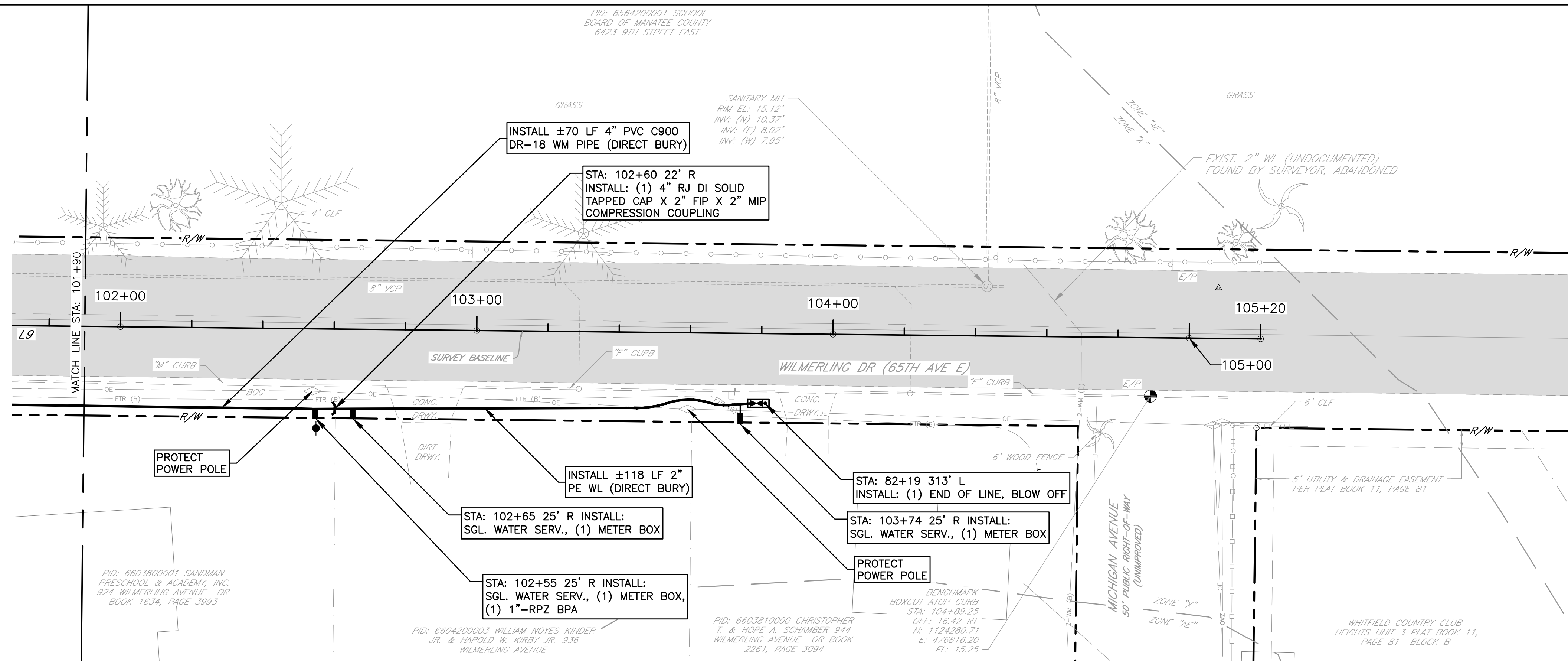
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**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 65TH AVE E [STA 96+10 TO 101+90]**



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
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 No. 60923
 08/11/2022



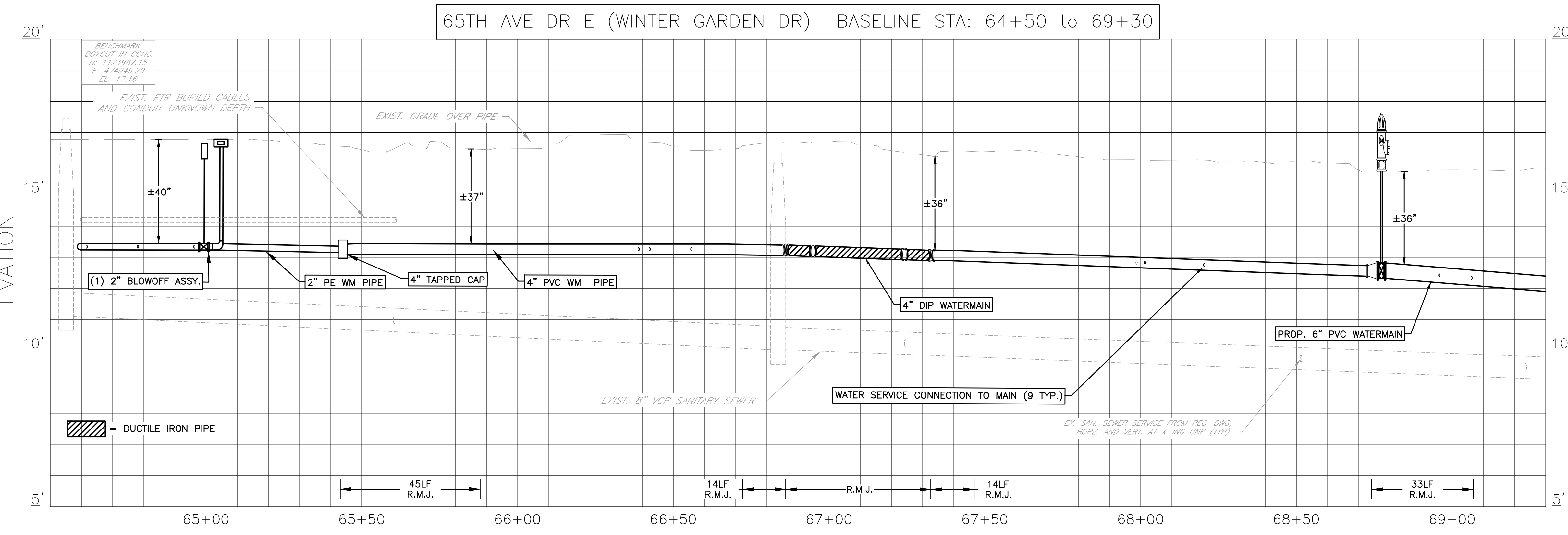
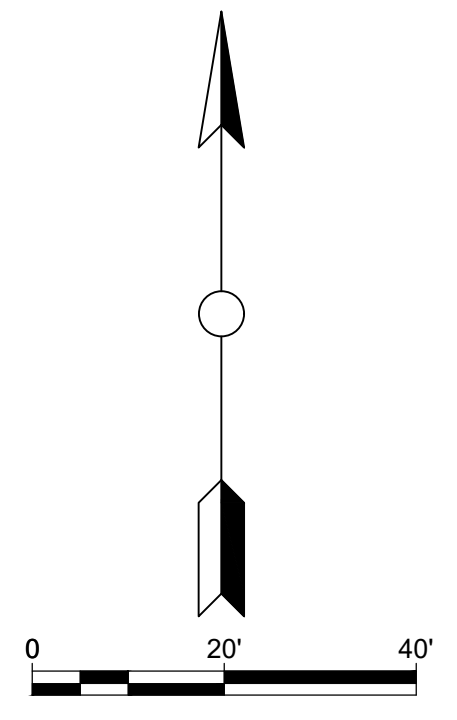
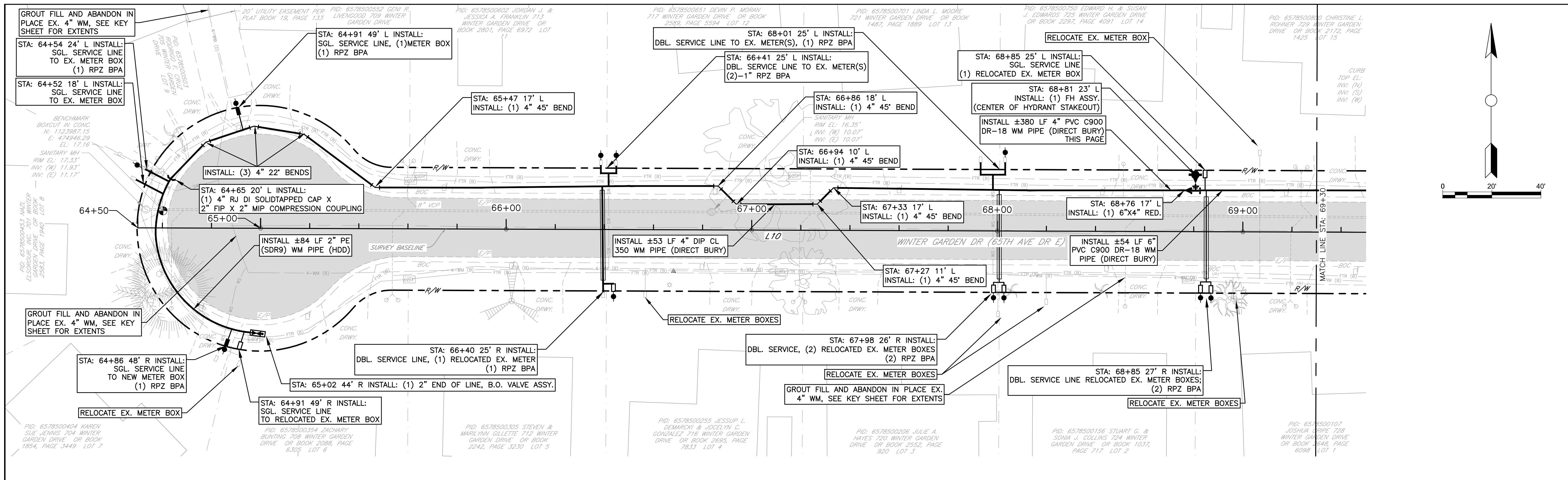
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64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE WIMERLING AVE E [STA 101+90 TO 105+20]



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 FLORIDA LICENSE NO. 60923
 03/11/2022
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER



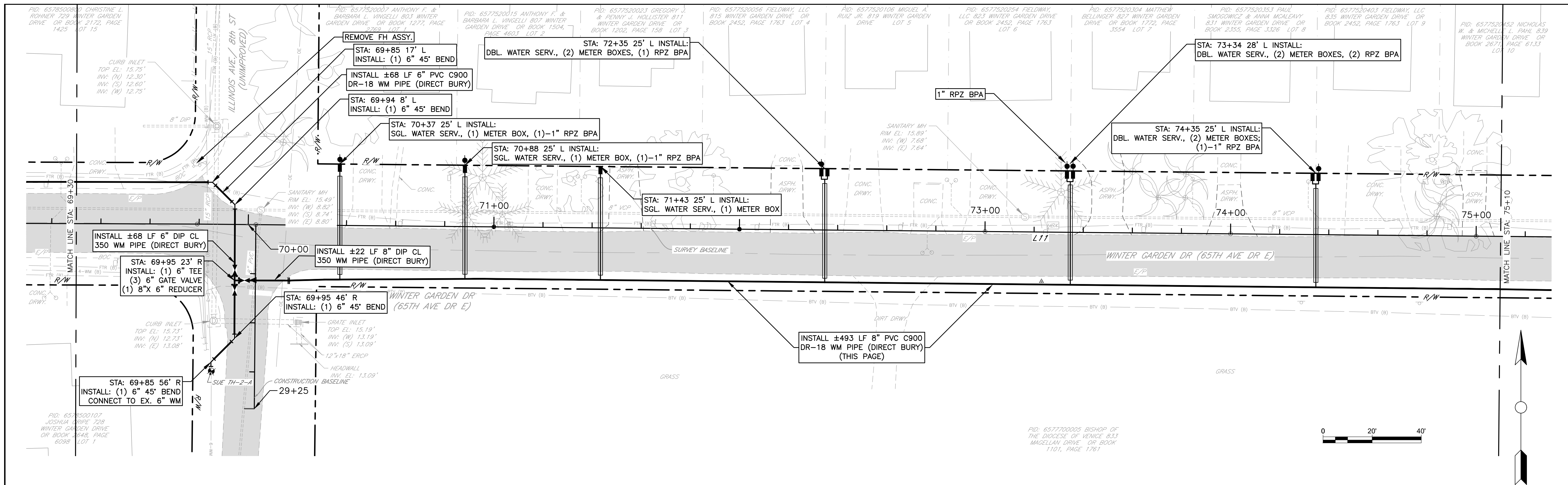
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE WINTER GARDEN DR [STA 64+50 TO 69+30]

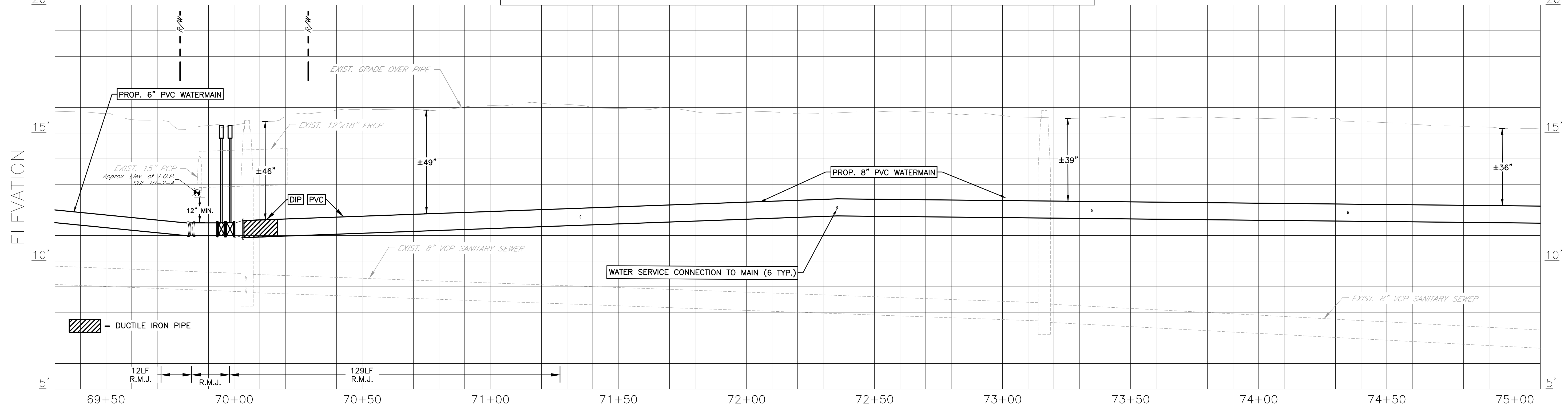


PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOEN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 Signature & Date



65TH AVE DR E (WINTER GARDEN DR) BASELINE STA: 69+30 TO 75+10



NO.	REVISION DESCRIPTION	BY	DATE

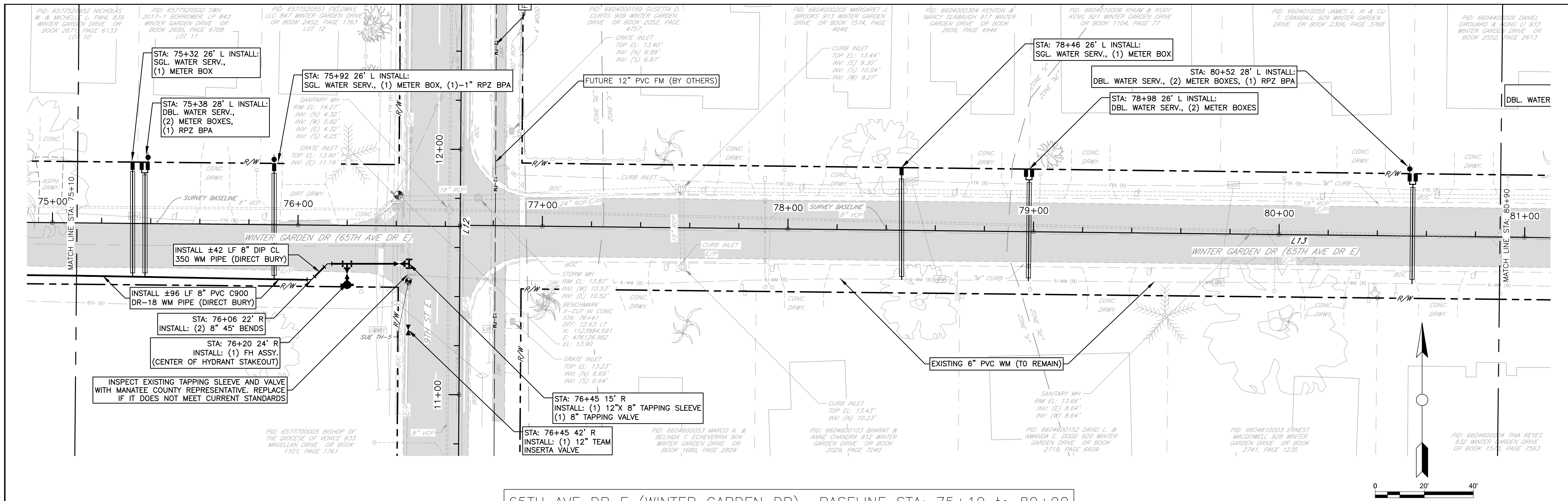
**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE WINTER GARDEN DR [STA 69+30 TO 75+10]**



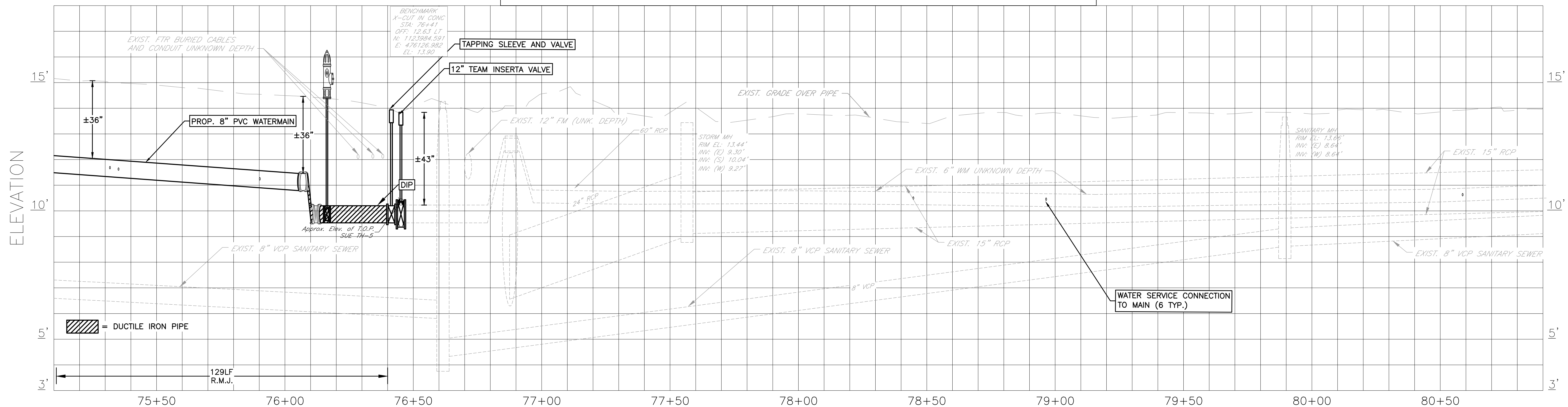
PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
BY	DATE
SURVEYED SURVTECH	05/2020
DESIGNED JSS/BLR	06/2020
DRAWN BLR/JSS	06/2020
CHECKED JR	10/2020

JOHN S. SHOUN, P.E.
 FLORIDA PROFESSIONAL ENGINEER
 LICENSE NO. 60923
 EXPIRES 08/11/2022
 STATE OF FLORIDA
 SHEET 15 OF 28

C:\Users\jshoun\OneDrive\Desktop\64th Ave-65th Ave Dr-Winter Gardens Dr\Design\DWG\15_8-7-2022_2-06 PM_Brace Reservation_11_1_ANSI full based D (34-00 x 22-00 inches)_10-2016.rvt



65TH AVE DR E (WINTER GARDEN DR) BASELINE STA: 75+10 TO 80+90



NO.	REVISION DESCRIPTION	BY	DATE

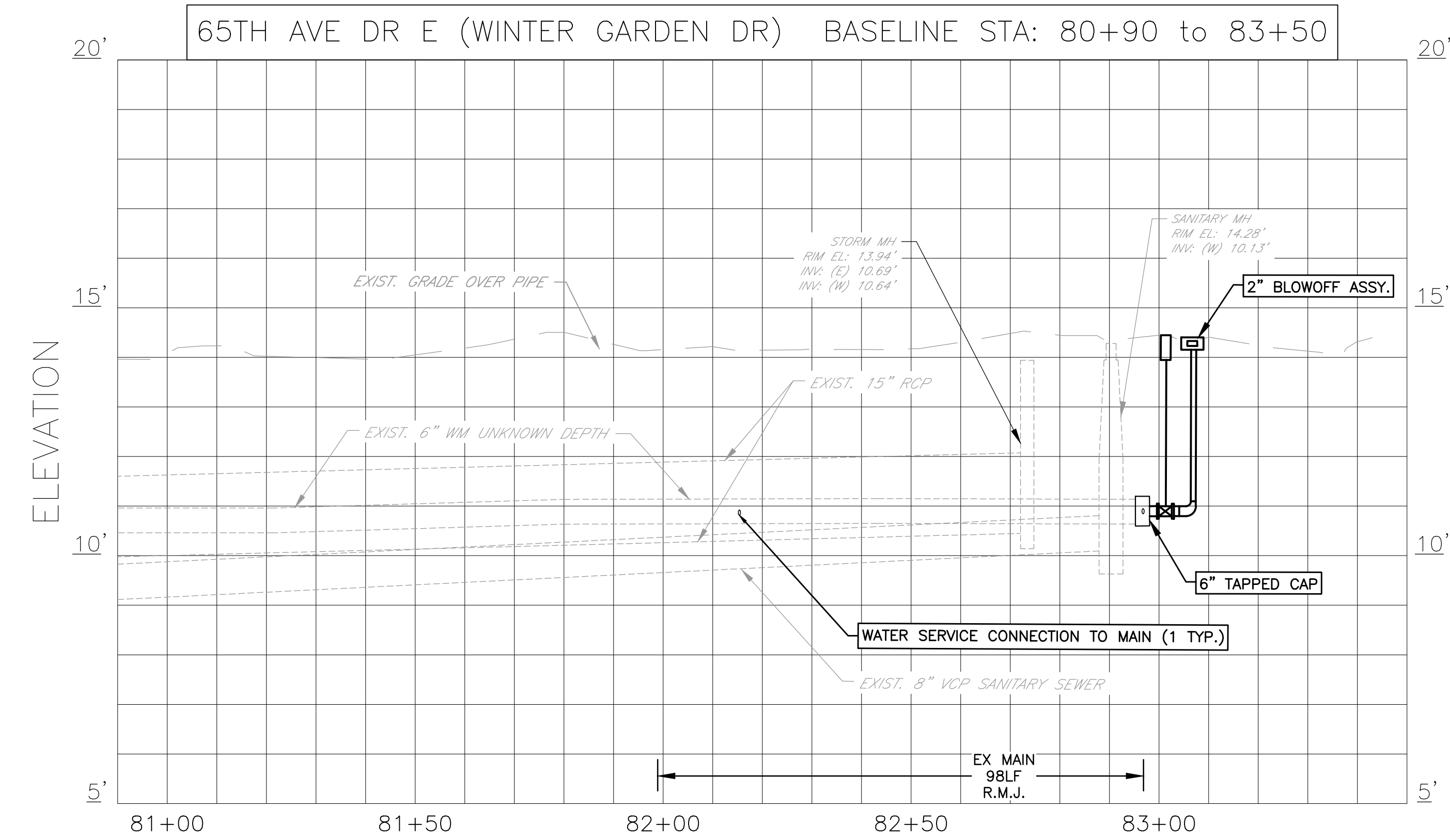
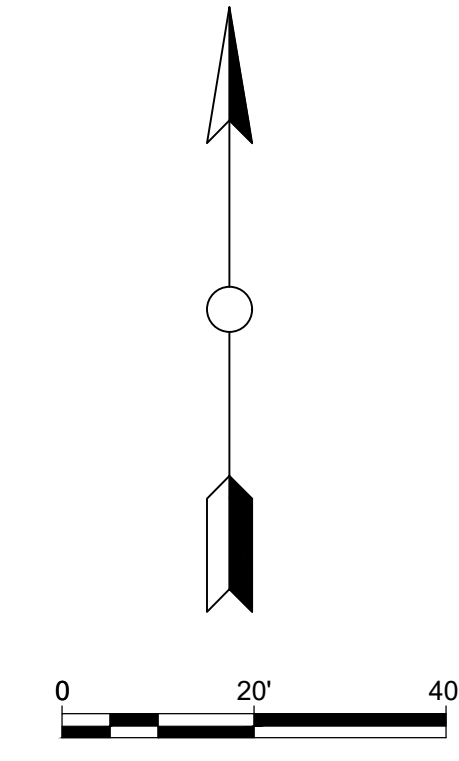
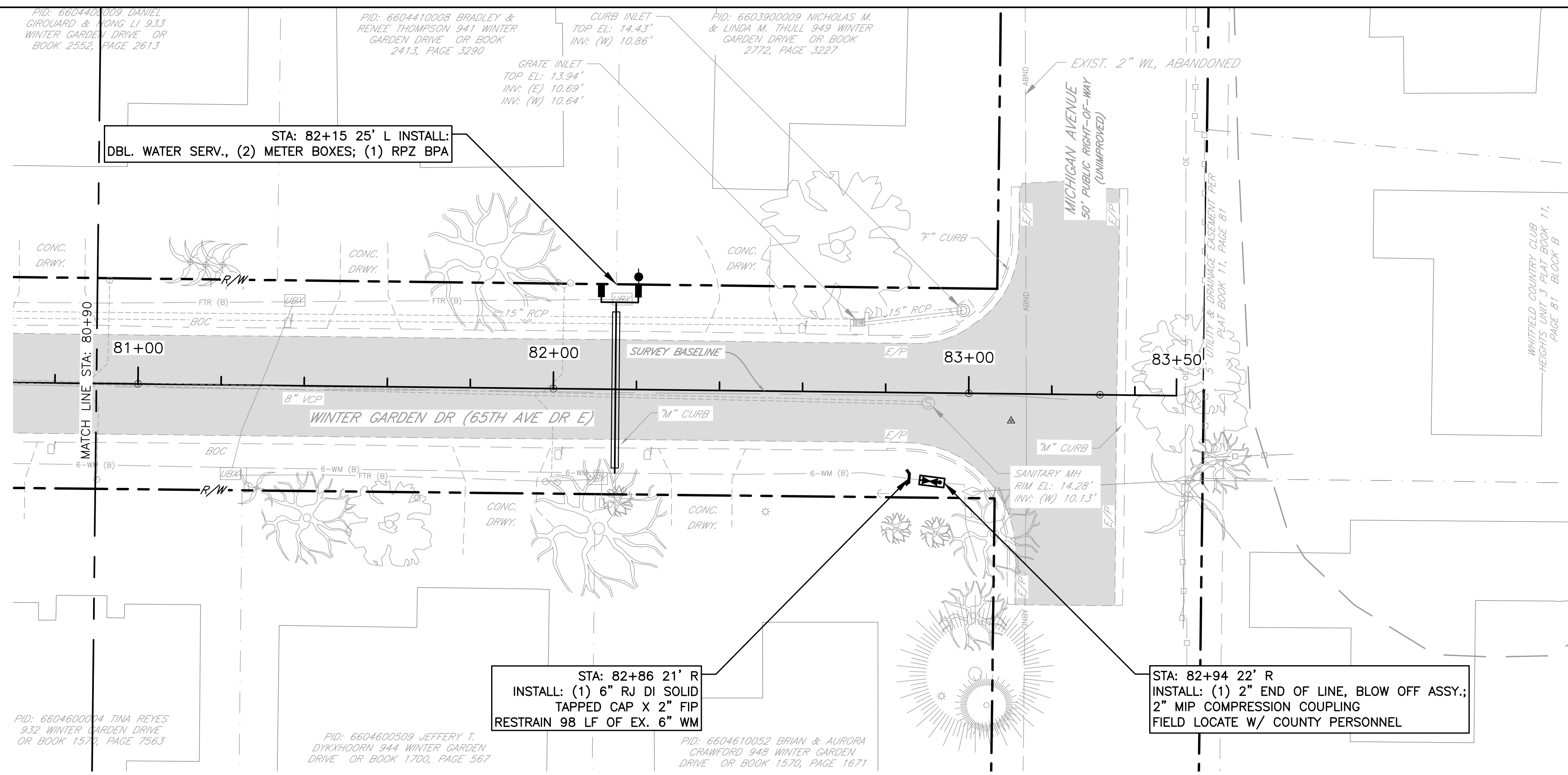
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WATER MAIN REPLACEMENT
PLAN & PROFILE WINTER GARDEN DR [STA 75+10 TO 80+90]**



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 FLORENCE S. SHOUN
 LICENSE
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 Signed _____ Date _____

\Users\jss\Projects\65th Ave Dr E - Winter Gardens\DWG\16_8-17-2022_207 PM Bruce Reservation_11_1_ANSI full sized D (34x100 x 22x100 inches)_10-2016.rvt



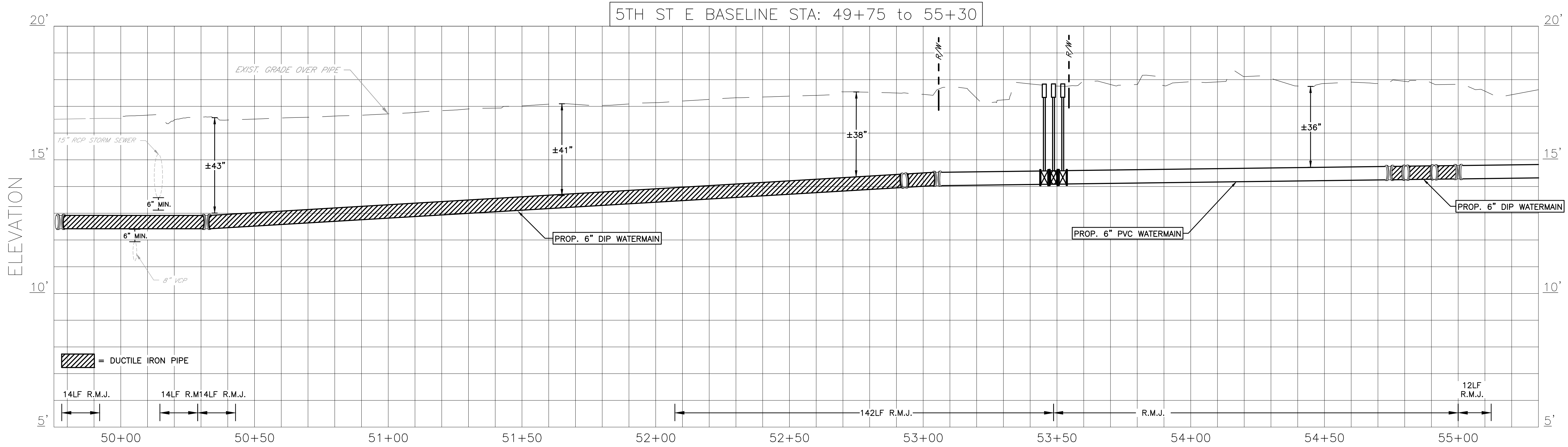
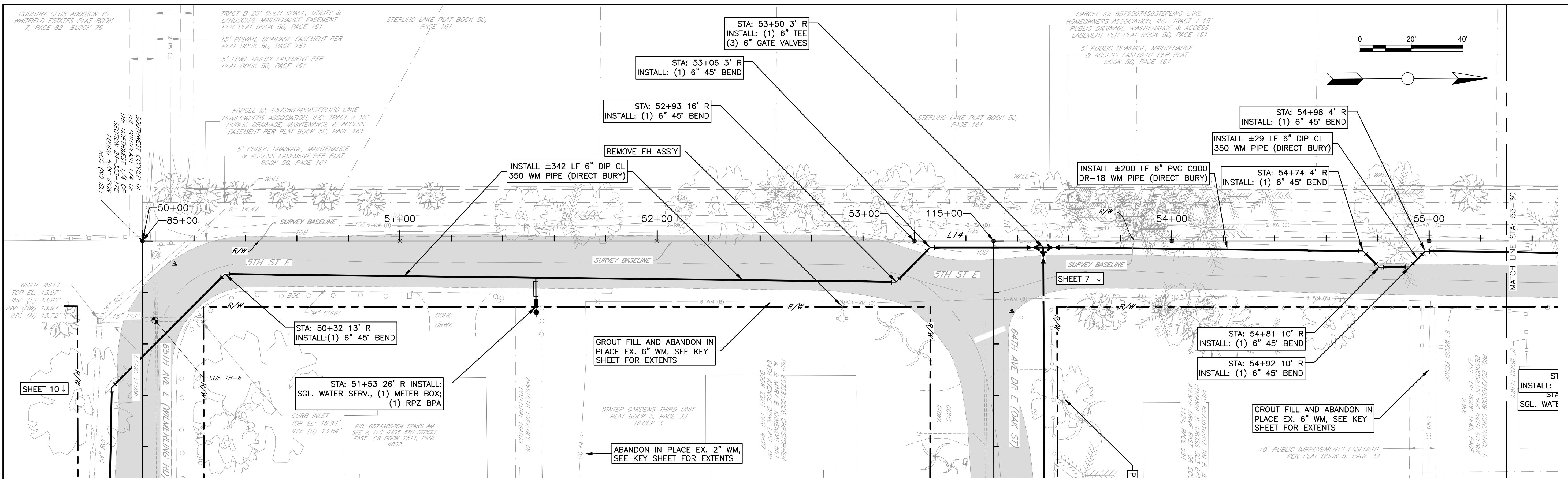
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE WINTER GARDEN DR [STA 80+90 TO 83+50]



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

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



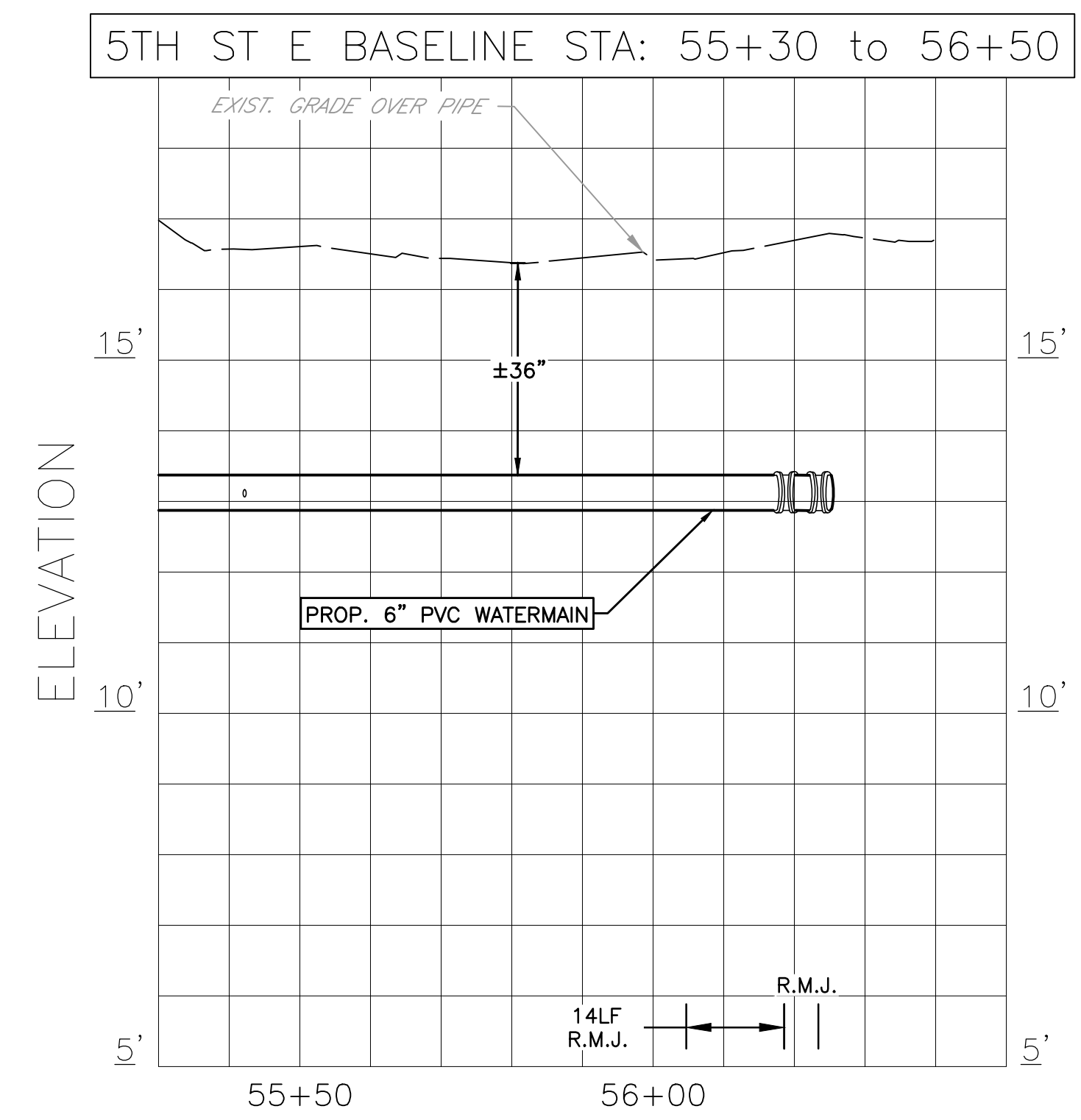
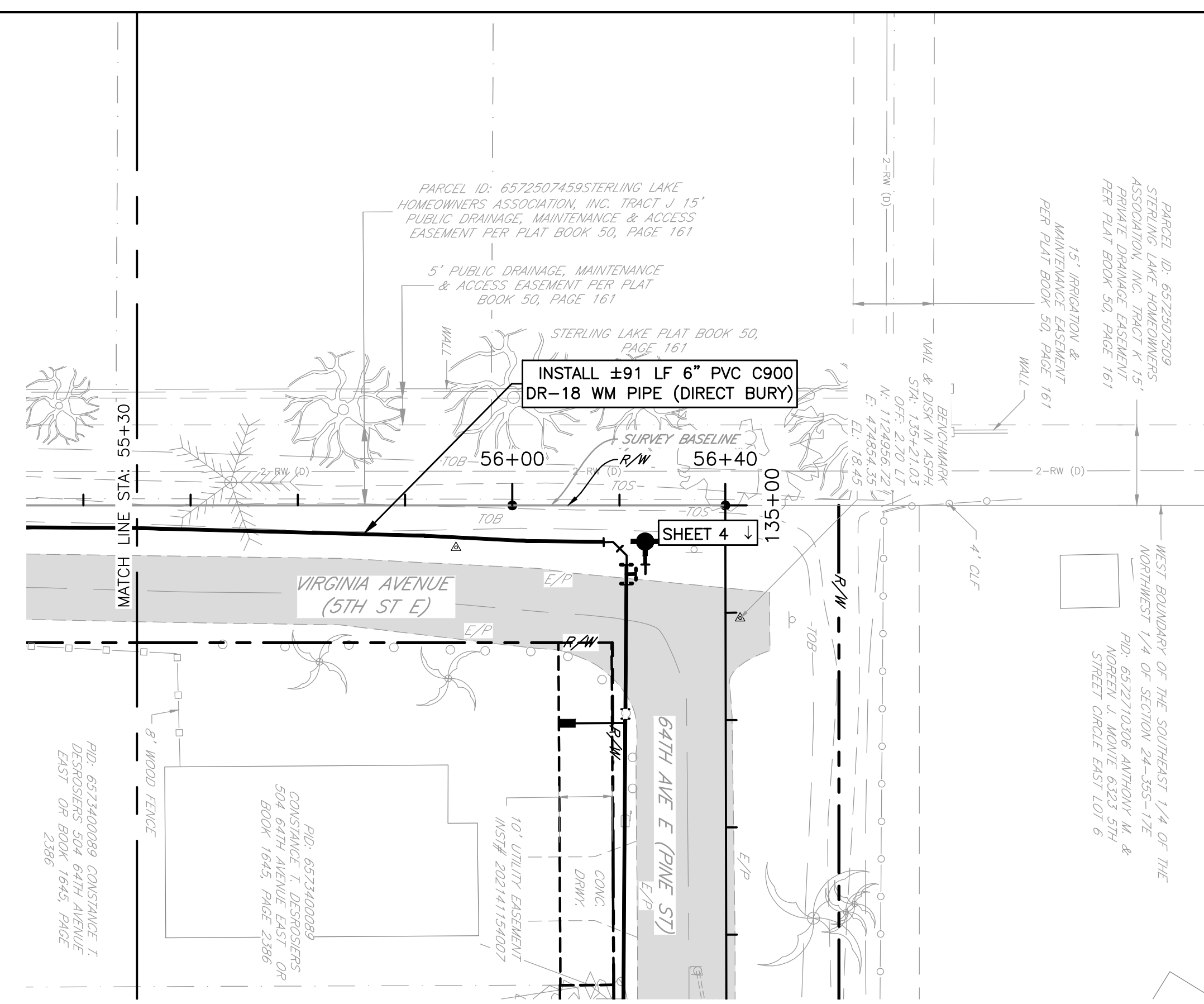
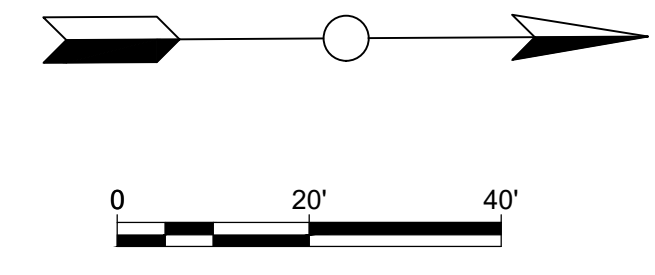
NO.	REVISION DESCRIPTION	BY	DATE

**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 5TH ST E [STA 49+75 TO 55+30]**



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 No. 60923
 08/11/2022



NO.	REVISION DESCRIPTION	BY	DATE

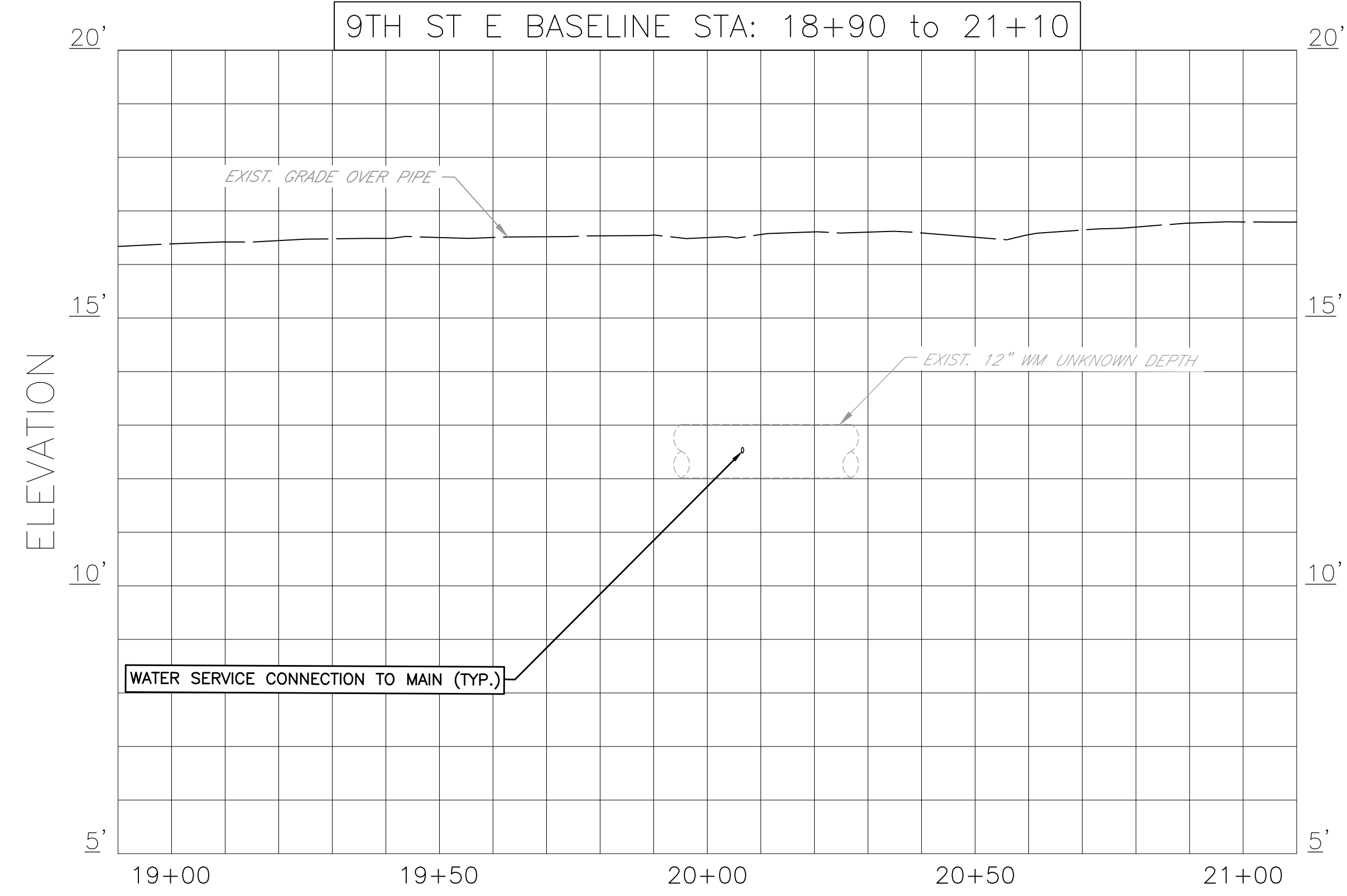
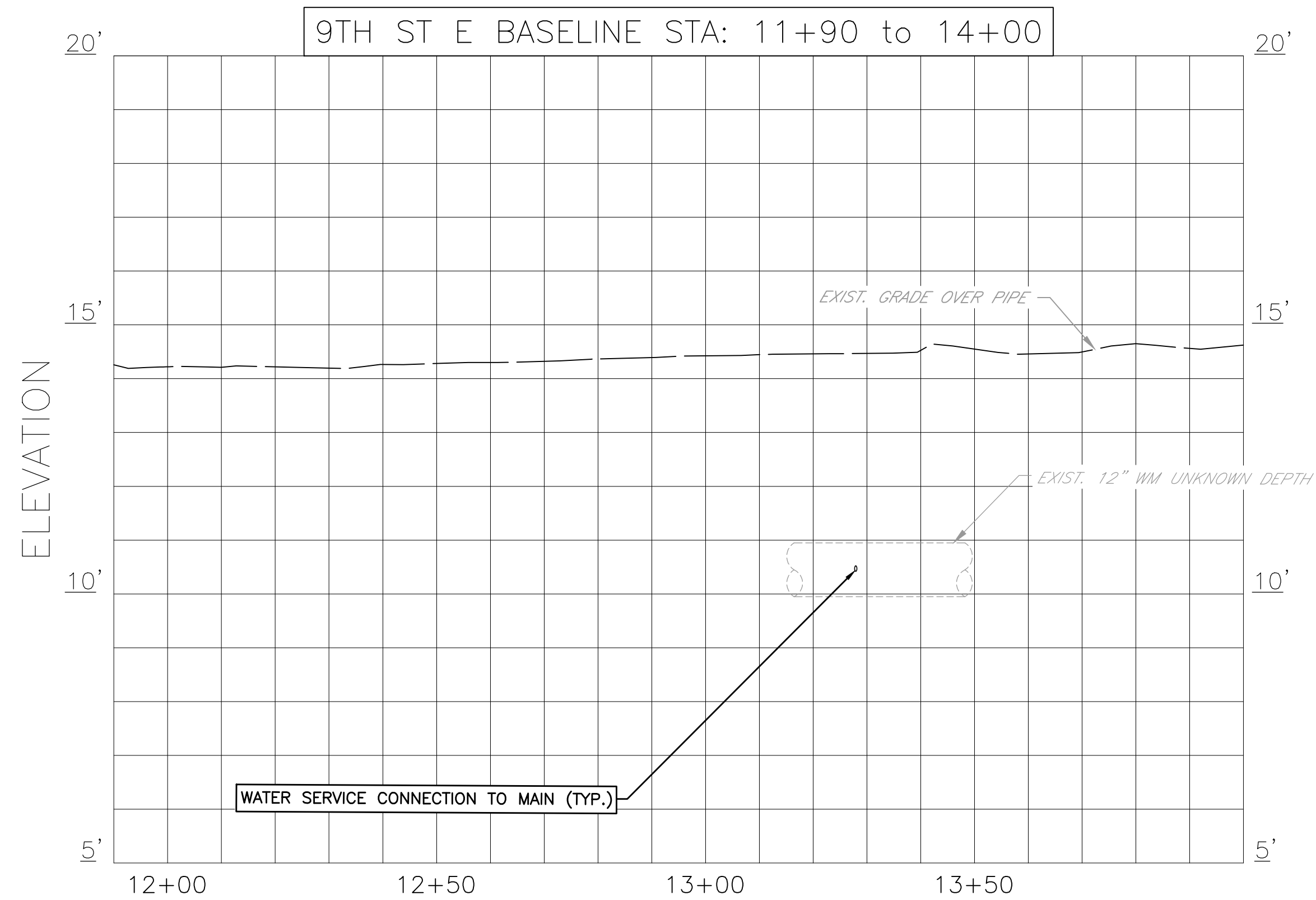
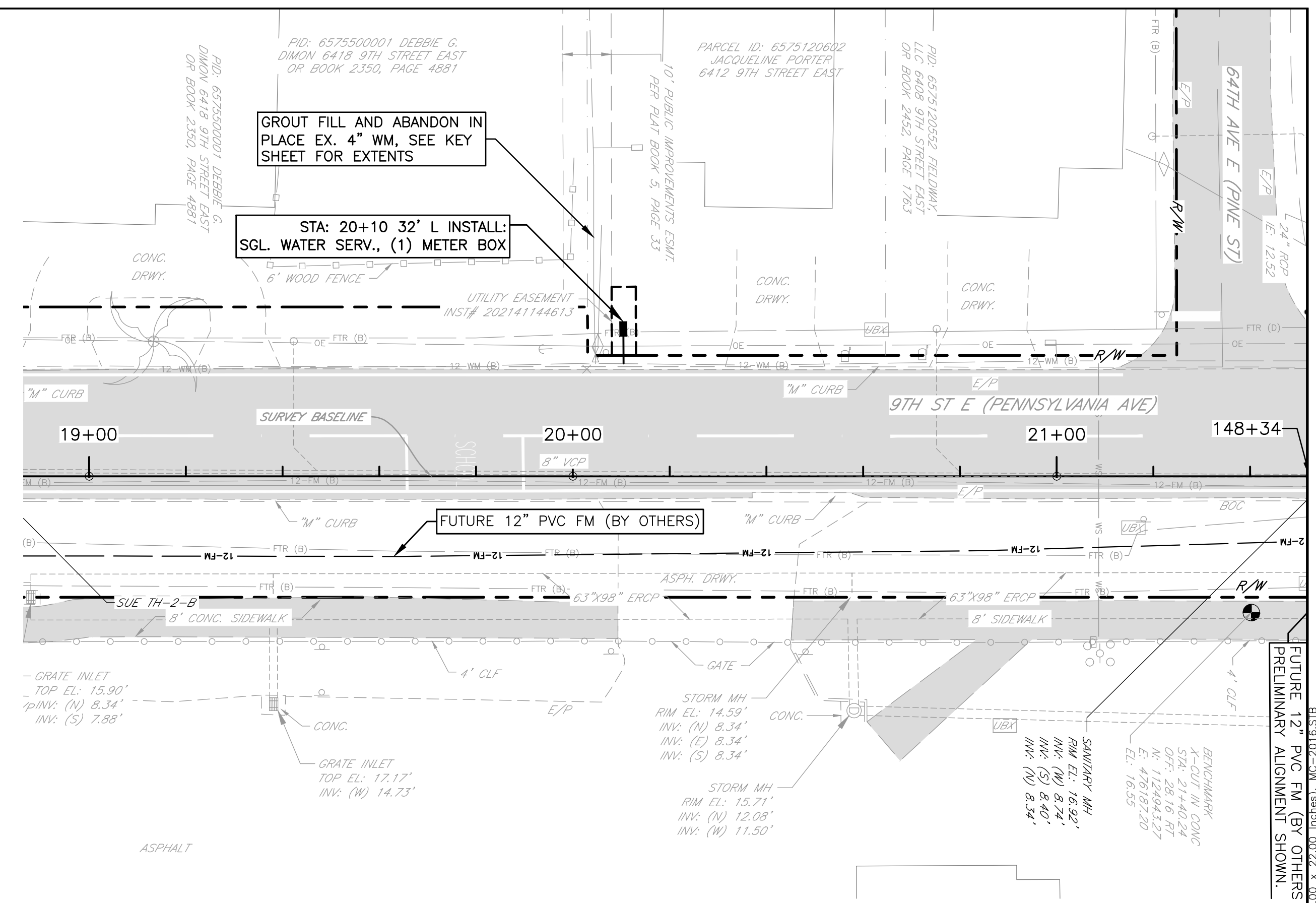
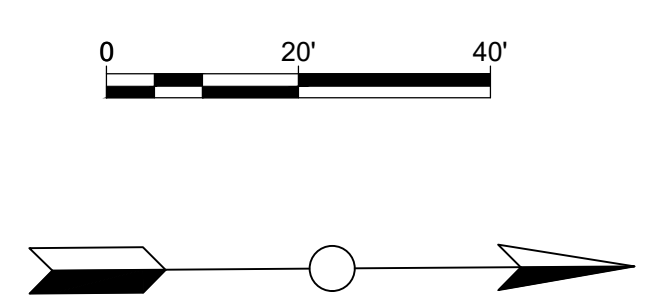
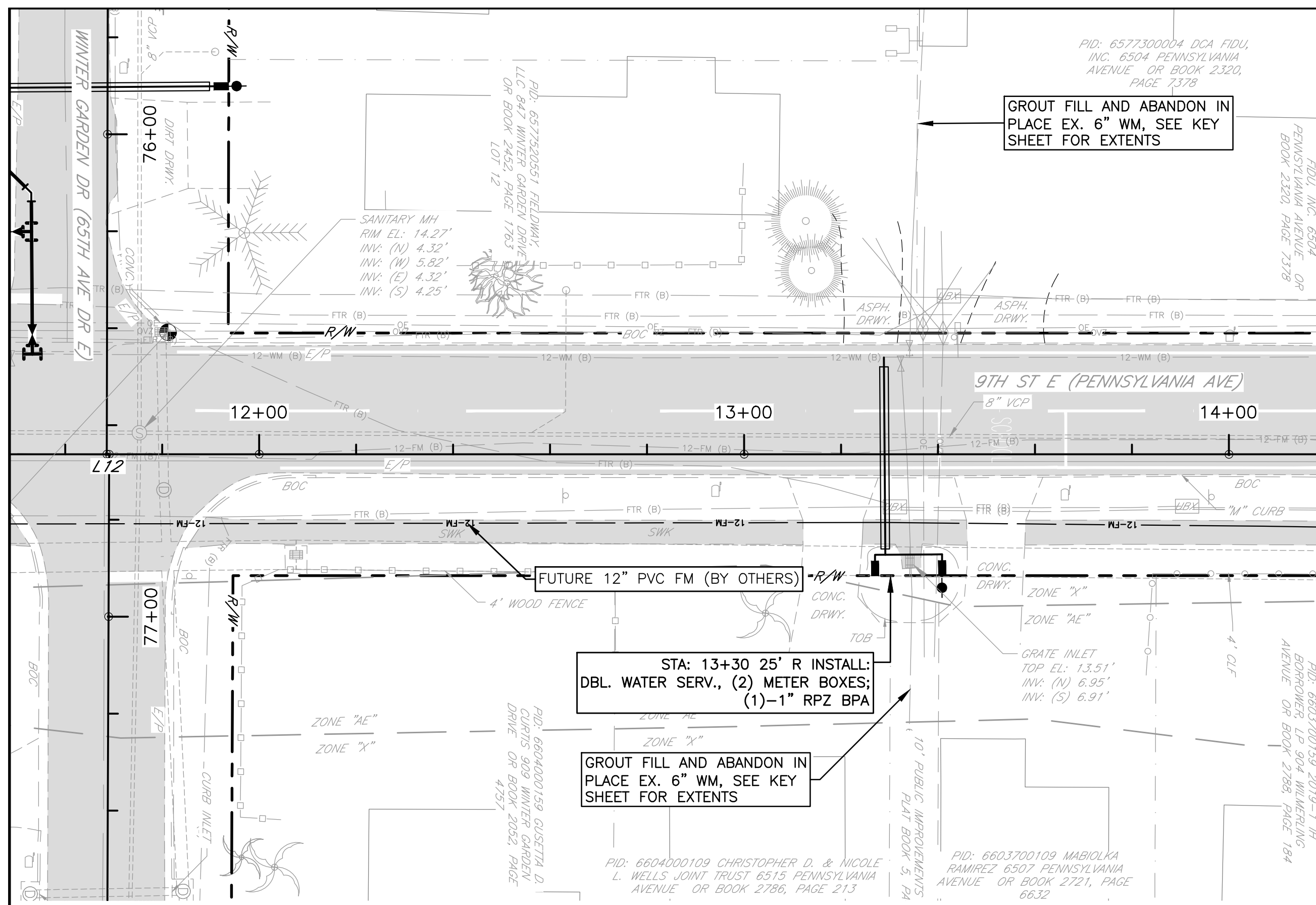
64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PLAN & PROFILE 5TH ST E [STA 55+30 TO 56+50]



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

JOHN S. SHOUN, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 08/11/2022

I:\Projects\2022\2022-207 PM Bruce Robertson - 11 - ANS full based D (34.00 x 22.00 inches) - MC-2018.18



NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT PLAN & PROFILE 9TH ST E



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
BY	DATE
SURVEYED SURVTECH	05/2020
DESIGNED JSS/BLR	06/2020
DRAWN BLR/JSS	06/2020
CHECKED JR	10/2020

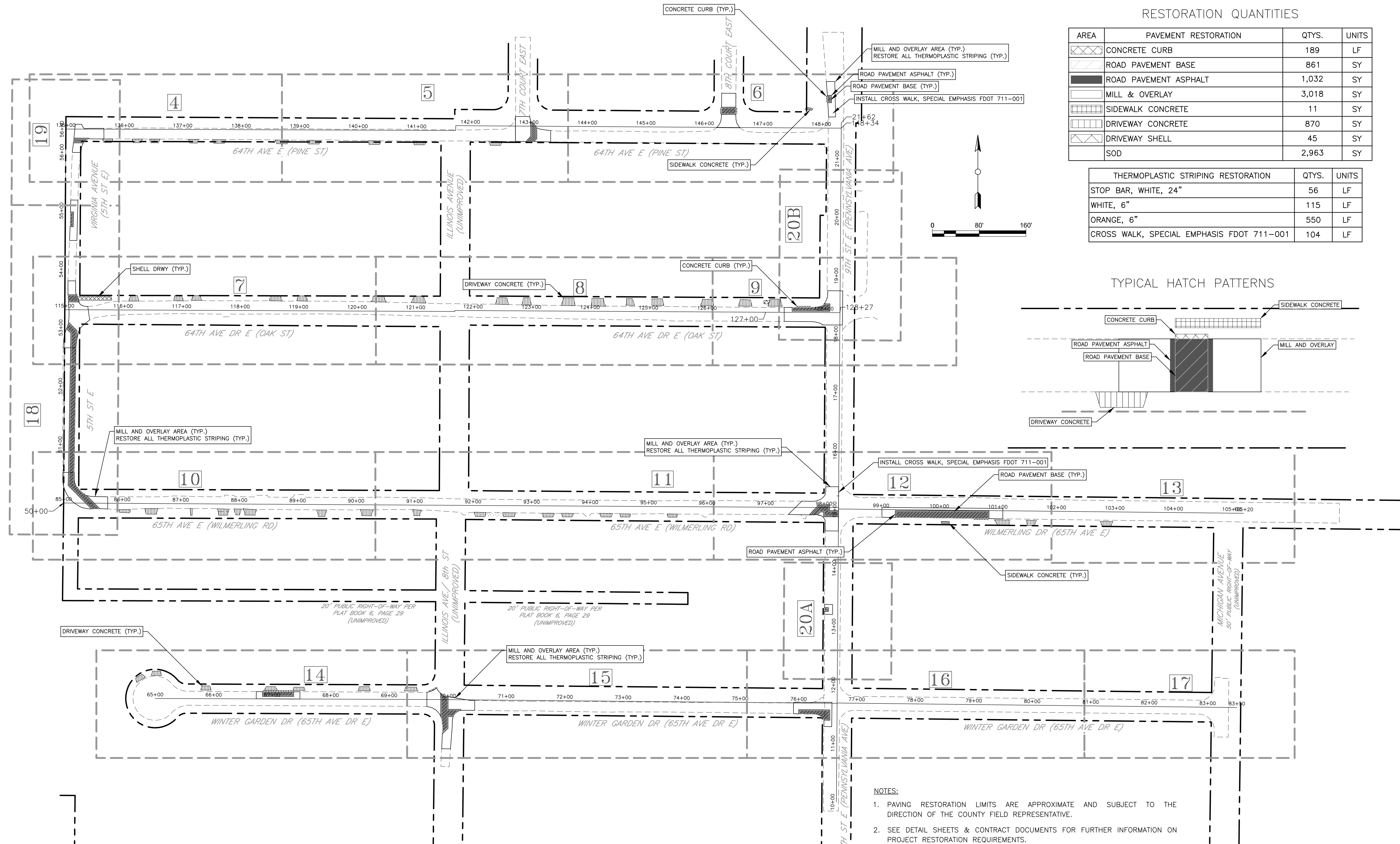
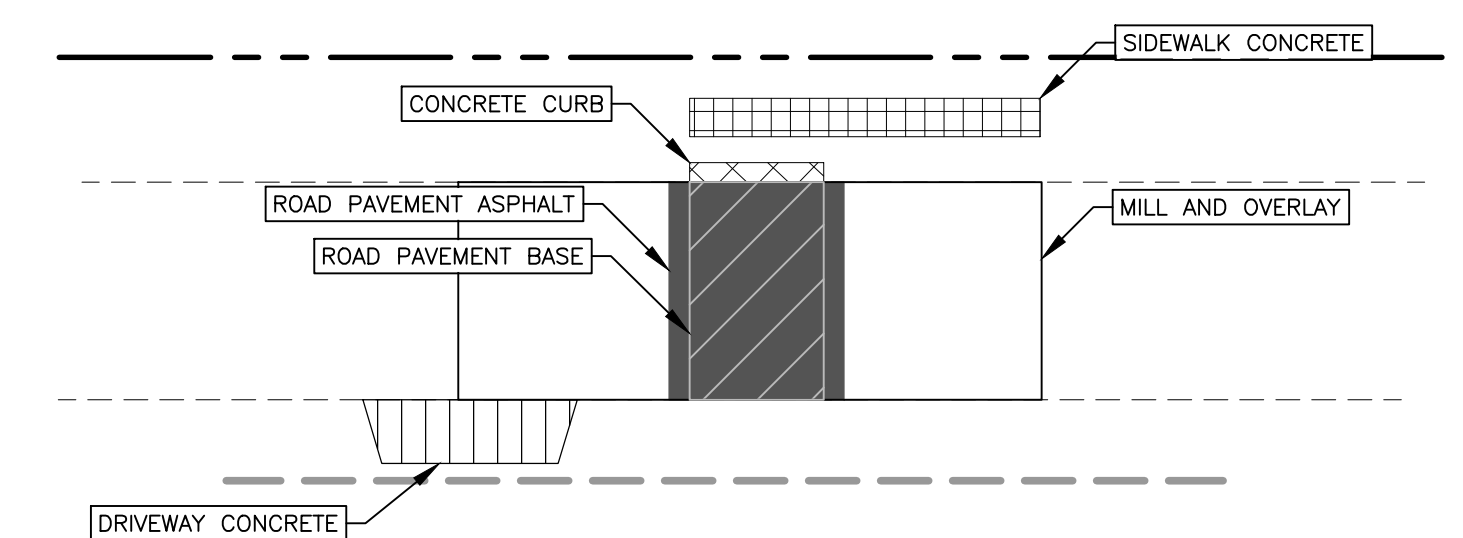
JOHN S. SHOUN, P.E.
 LICENSE NO. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 SIGNATURE: _____ DATE: _____

RESTORATION QUANTITIES

AREA	PAVEMENT RESTORATION	QTYS.	UNITS
	CONCRETE CURB	189	LF
	ROAD PAVEMENT BASE	861	SY
	ROAD PAVEMENT ASPHALT	1,032	SY
	MILL & OVERLAY	3,018	SY
	SIDEWALK CONCRETE	11	SY
	DRIVEWAY CONCRETE	870	SY
	DRIVEWAY SHELL	45	SY
	SOD	2,963	SY

THERMOPLASTIC STRIPING RESTORATION		QTYS.	UNITS
STOP BAR, WHITE, 24"		56	LF
WHITE, 6"		115	LF
ORANGE, 6"		550	LF
CROSS WALK, SPECIAL EMPHASIS FDOT 711-001		104	LF

TYPICAL HATCH PATTERNS



- NOTES:
- PAVING RESTORATION LIMITS ARE APPROXIMATE AND SUBJECT TO THE DIRECTION OF THE COUNTY FIELD REPRESENTATIVE.
 - SEE DETAIL SHEETS & CONTRACT DOCUMENTS FOR FURTHER INFORMATION ON PROJECT RESTORATION REQUIREMENTS.

NO.	REVISION DESCRIPTION	BY	DATE

**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
PAVEMENT RESORATION PLAN**



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	SEE PLAN
SURVEYED	SUR/TECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

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

THE INFORMATION BELOW IS EXTRACTED FROM THE SURVEYORS REPORT FOR THE PURPOSE OF CONSTRUCTION. THE FULL SURVEYORS REPORT AND CAD DELIVERABLES ARE AVAILABLE UPON REQUEST, FROM THE MANATEE COUNTY, PUBLIC WORKS DEPARTMENT, UTILITY ENGINEERING DIVISION.

PURPOSE:

THE PURPOSE OF THIS SURVEY IS TO DEPICT THE EXISTING PLANIMETRIC FEATURES AND TOPOGRAPHIC DATA WITHIN THE PUBLIC RIGHT-OF-WAY BOUNDARIES IN ORDER TO ASSIST THE DESIGN AND CONSTRUCTION OF REMOVING AND REPLACING EXISTING WATERMAINS THROUGHOUT THE COUNTY SPECIFIED AREA OF INTEREST.

DATA SOURCES:

THE BEARING STRUCTURE FOR THIS SURVEY, AS DEPICTED WITHIN THE AFORESAID ELECTRONIC DRAWING FILE, IS BASED ON A NORTH AMERICAN DATUM (NAD) 1983 FLORIDA STATE PLANE WEST ZONE, BEARING OF N 00°24'41" E FOR THE SURVEY BASELINE OF 9TH STREET EAST

THIS SURVEY HAS BEEN PERFORMED WITHOUT THE BENEFIT OF TITLE POLICIES OR ABSTRACTS. THEREFORE, THE SIGNING SURVEYOR AND MAPPER CAN MAKE NO GUARANTEES TO OWNERSHIP OR ENCUMBRANCES.

LIMITATIONS:

THE ORIGINAL FIELDWORK FOR THIS SURVEY COMMENCED ON MARCH 17, 2020 AND WAS COMPLETED ON MAY 21, 2020.

THIS IS NOT A BOUNDARY SURVEY, THUS THE RIGHT-OF-WAY MONUMENTS DEPICTED WITHIN THE ELECTRONIC DRAWING FILE WERE SOLELY LOCATED IN ORDER TO CREATE THE ESTABLISHED RIGHT-OF-WAY BOUNDARY GEOMETRY, PROPERTY BOUNDARIES, EASEMENTS, AND THE ASSOCIATED BASELINES OF SURVEY. THE PROPERTY BOUNDARIES DEPICTED WITHIN THE ELECTRONIC DRAWING FILE WERE CREATED PER FOUND MONUMENTATION ALONG THE ASSOCIATED RIGHT-OF-WAY BOUNDARIES OR CALCULATED PER THE AFORESAID RECORDED DOCUMENTS WITHIN THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA. THIS IS NOT A BOUNDARY SURVEY, THUS SAID PROPERTY BOUNDARIES ARE NOT EXACT.

EASEMENTS/RIGHT-OF-WAY:

NO EASEMENT AND/OR RIGHT-OF-WAY INFORMATION WAS PROVIDED, THUS ALL EASEMENT AND RIGHT-OF-WAY INFORMATION DEPICTED WITHIN THE AFORESAID ELECTRONIC DRAWING FILE IS PER THE AFORESAID RECORDED DOCUMENTS WITHIN THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA.

PROJECT DATUMS:

HORIZONTAL:

THE HORIZONTAL DATUM UTILIZED FOR THIS PROJECT IS NAD 1983 FLORIDA WEST ZONE, 2011 ADJUSTMENT, U.S. SURVEY FEET. THE CONTROL UTILIZED TO ESTABLISH SAID DATUM WAS "GIS 080" BEING A NATIONAL GEODETIC SURVEY (NGS) HORIZONTAL CONTROL STATION.

VERTICAL:

THE VERTICAL DATUM UTILIZED FOR THIS PROJECT IS NORTH AMERICAN VERTICAL DATUM (NAVD) 1988, U.S. SURVEY FEET. THE BENCHMARKS UTILIZED WERE MANATEE COUNTY BENCHMARK "126-88-03" AND "126-88-04" WITH ELEVATIONS OF 15.97 FEET AND 16.91 FEET, RESPECTIVELY.

THE VERTICAL DATUM CONVERSION PER "VERTCON" FROM NAVD 1988 TO NATIONAL GEODETIC VERTICAL DATUM (NGVD) 1929 IS: NGVD 1929 = NAVD 1988 + 0.997 FEET,

PREPARED FOR AND CERTIFIED TO:
MANATEE COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA
SURVEYOR AND MAPPER IN RESPONSIBLE CHARGE:
RESPECTFULLY SUBMITTED, AND CERTIFIED BY:
SURVTECH SOLUTIONS, INC.

STACY L. BROWN, P.S.M. #6516 VICE PRESIDENT
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

SUE/ VVH TABLE

Location	Northing	Easting	Approximate	Utility Type	Utility Owner	Size	Material
	Florida West	Florida West	T.O.P. Elevation			(Outside Diameter)	
	NAD 1983	NAD 1983	Feet				
	US Survey Feet	US Survey Feet					
1-A	1124988.7	475633.4	15.1	Water	Manatee County	6 1/2"	PVC
1-B	1125020.4	476137.2	12.7	Water	Manatee County	12 1/2"	ACP
2-A	1123918.4	475471.0	12.7	Water	Manatee County	6 1/2"	PVC
2-B	1124659.6	476135.2	12.3	Water	Manatee County	12 1/2"	PVC
3	1124324.9	476135.1	9.3	Water	Manatee County	12 1/2"	ACP
4	1124295.4	476177.7	12.9	Drainage	Manatee County	60"	RCP
5	1123949.6	476131.0	10.3	Water	Manatee County	12 1/2"	ACP
6	1124319.0	474860.4	14.6	Drainage	Manatee County	15"	RCP
				Sanitary	Manatee County	8 1/2"	VCP
7	1124985.2	475986.1	13.8	Water	Manatee County	6 1/2"	PVC

Note: T.O.P. Elevations are approximations based upon measure down distance subtracted from the TIN surface at that point. These are NOT FROM A MEASURED GROUND ELEVATION. This is best available data.

CONSTRUCTION BASELINE HORIZONTAL CONTROL TABLE

64th Ave E Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L1	666.62	S89° 46' 51.97"E	135+00.00	141+66.62	1124954.10	474833.30	1124951.55	475499.92
L2	8.22	N00° 16' 55.98"E	141+66.62	141+74.84	1124951.55	475499.92	1124959.77	475499.96
L3	659.18	S89° 38' 03.72"E	141+74.84	148+34.02	1124959.77	475499.96	1124955.57	476159.12

64th Ave Dr E Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L4	666.91	S89° 44' 06.01"E	115+00.00	121+66.91	1124645.10	474831.49	1124642.02	475498.39
L5	1.74	N00° 16' 55.98"E	121+66.91	121+68.65	1124642.02	475498.39	1124643.76	475498.40
L6	658.47	S89° 40' 06.82"E	121+68.65	128+27.12	1124643.76	475498.40	1124639.95	476156.86

WILMERLING Dr. (65th Ave E) Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L7	1324.93	S89° 39' 36.86"E	85+00.00	98+24.93	1124314.38	474829.55	1124306.52	476154.46
L8	2.35	S00° 24' 41.41"W	98+24.93	98+27.29	1124306.52	476154.46	1124304.17	476154.44
L9	692.71	S89° 23' 28.06"E	98+27.29	105+20.00	1124304.17	476154.44	1124296.81	476847.12

Winter Garden Dr Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L10	479.21	S89° 47' 31.83"E	65+00.00	69+79.21	1123980.04	474986.08	1123978.30	475465.28
L11	686.80	S89° 27' 28.77"E	69+79.21	76+66.01	1123978.30	475465.28	1123971.80	476152.06
L12	0.51	N00° 24' 41.41"E	76+66.01	76+66.53	1123971.80	476152.06	1123972.32	476152.06
L13	665.04	S89° 21' 04.20"E	76+66.53	83+31.57	1123972.32	476152.06	1123964.79	476817.06

5th St E Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L14	639.73	N00° 20' 10.75"E	50+00.00	56+39.73	1124314.38	474829.55	1124954.10	474833.30

9th St E Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L18	1161.50	N00° 24' 41.41"E	10+00.00	21+61.50	1123803.26	476150.85	1124964.73	476159.19

Illinois Ave Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L15	332.38	N00° 29' 45.36"E	30+00.00	33+32.38	1123978.08	475489.16	1124310.45	475492.04
L16	4.72	S89° 39' 36.86"E	33+32.38	33+37.11	1124310.45	475492.04	1124310.42	475496.76
L17	641.14	N00° 16' 55.98"E	33+37.11	39+78.25	1124310.42	475496.76	1124951.55	475499.92

Michigan Av Baseline								
SEGMENT	LENGTH	DIRECTION	START STATION	END STATION	START NORTHING	START EASTING	END NORTHING	END EASTING
L19	332.32	N00° 43' 27.39"E	150+00.00	153+32.32	1123964.79	476817.06	1124297.08	476821.26

NO.	REVISION DESCRIPTION	BY	DATE

**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
SURVEY CONTROL & S.U.E. V.V.H. TABLE**

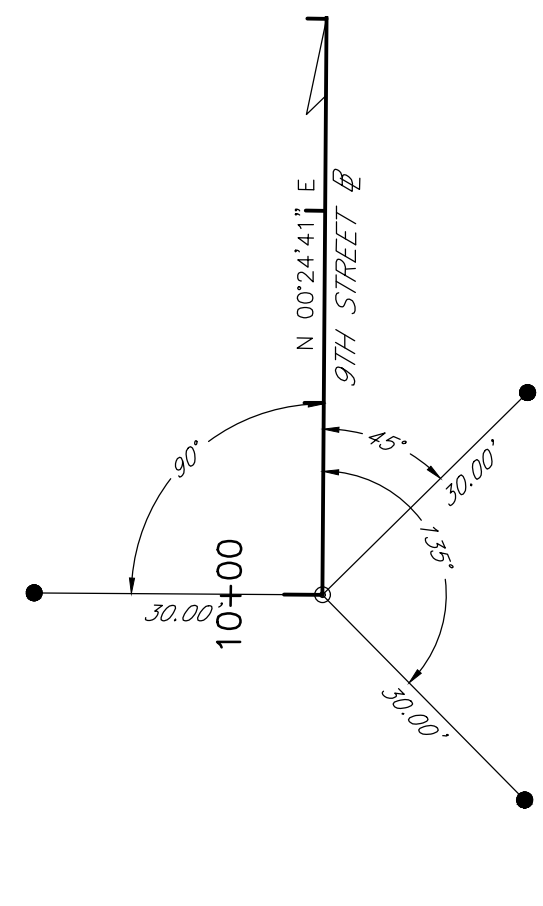


PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	N.T.S.
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

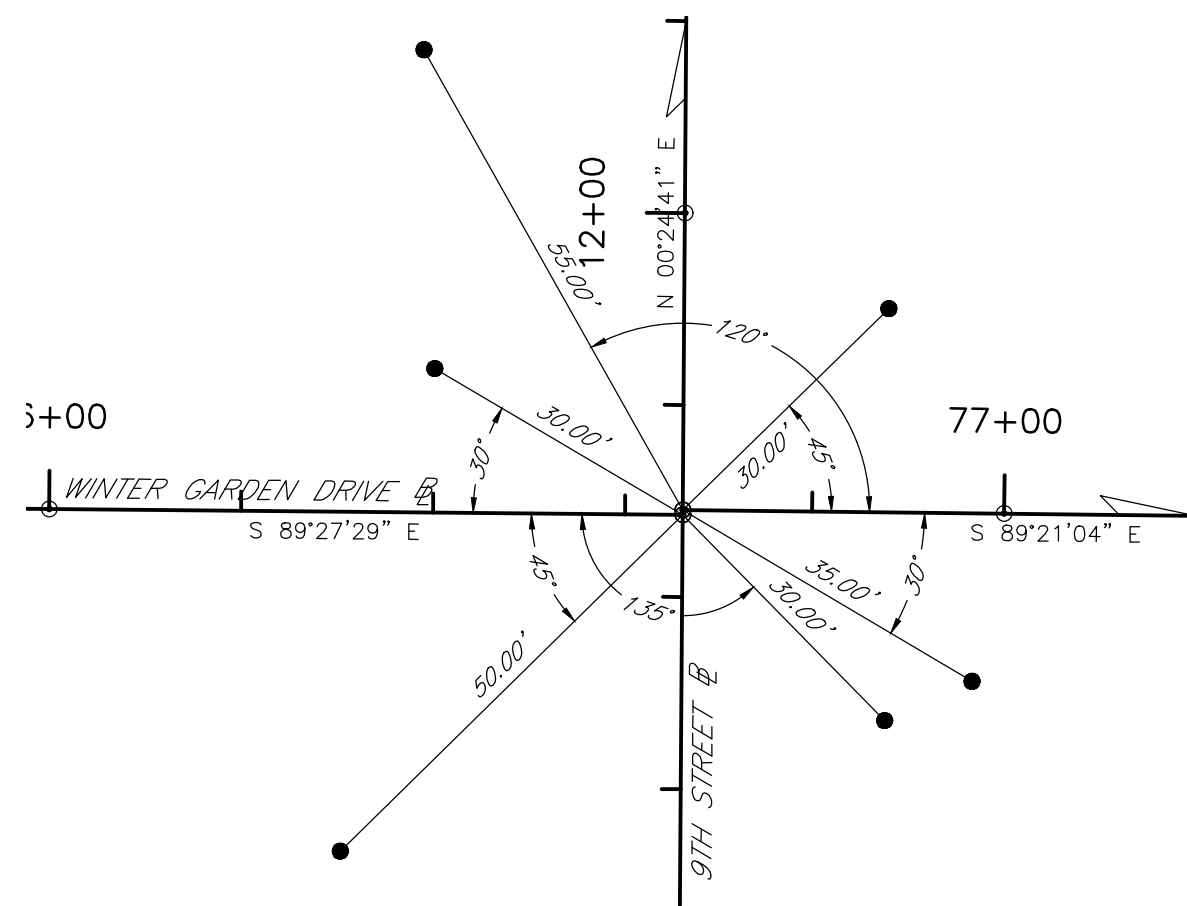
JOHN S. SHOUN, P.E.

 SHEET 22 OF 28

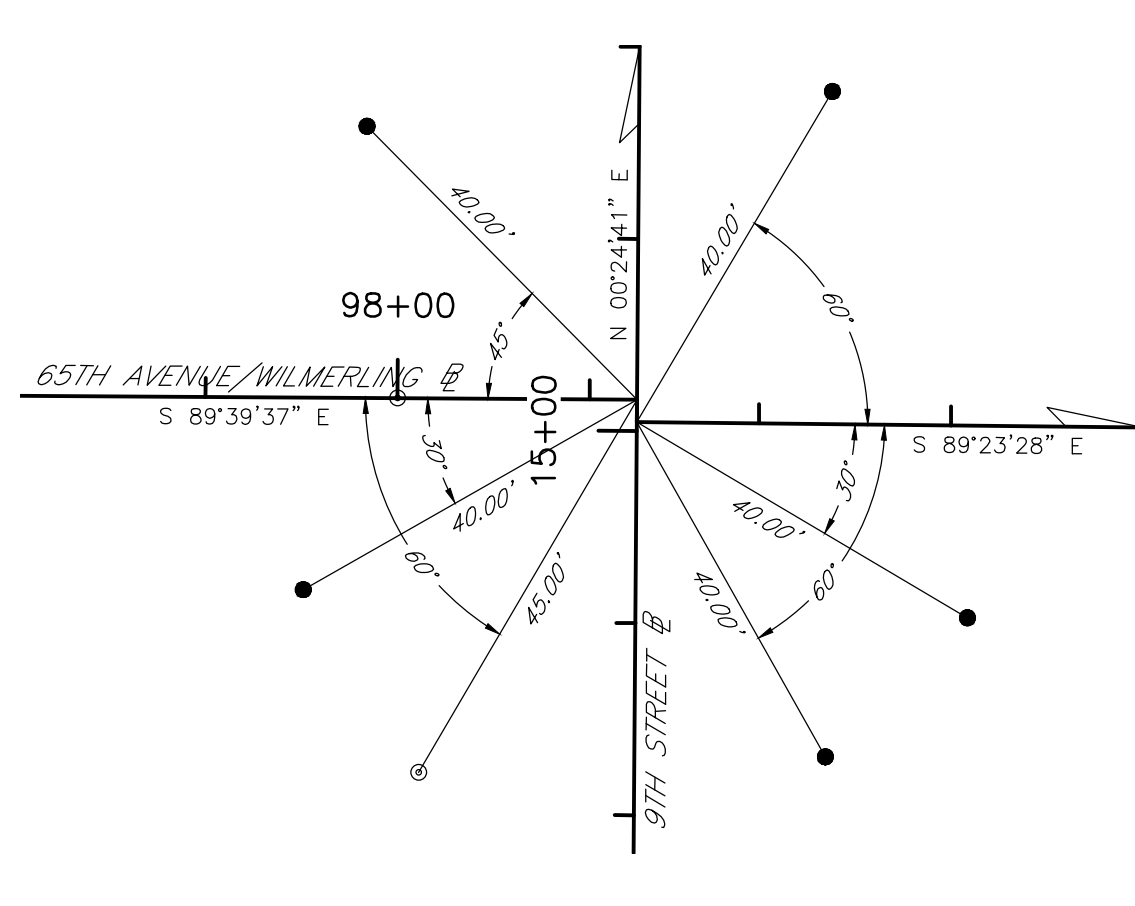
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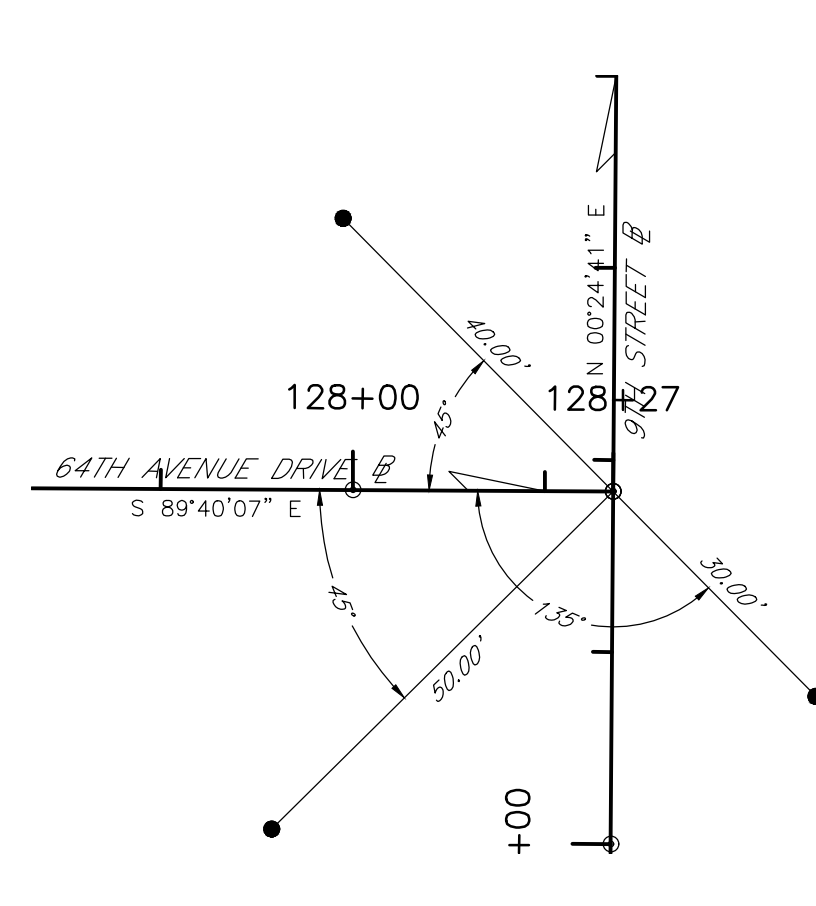
9TH STREET BASELINE BEGIN
STA: 10+00.00



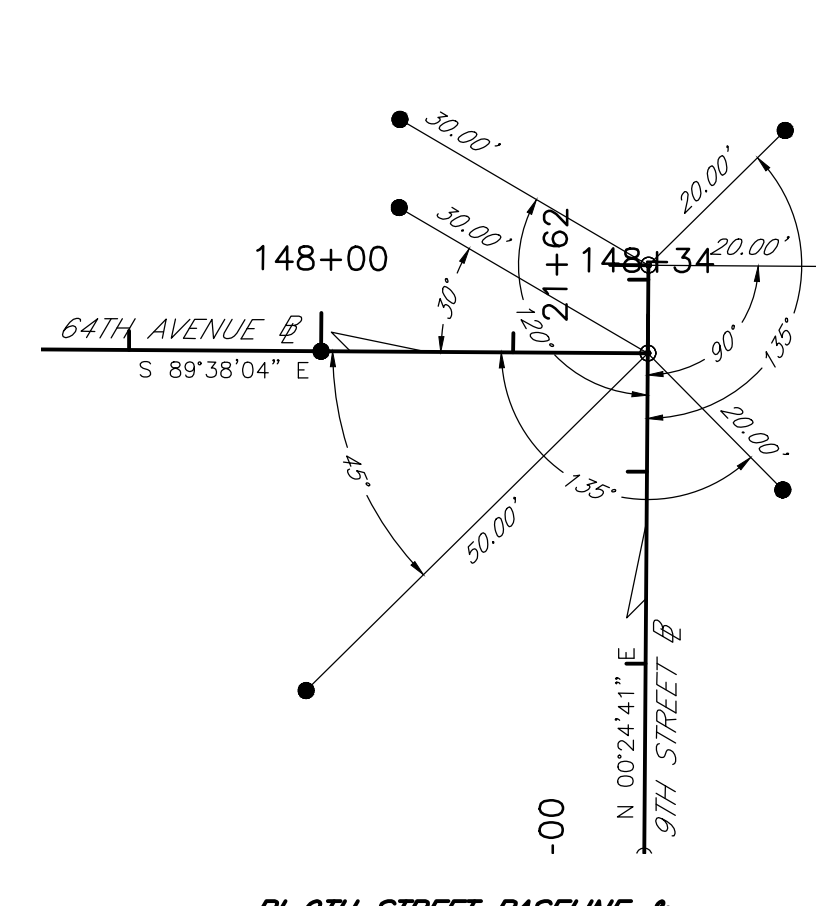
PI WINTER GARDEN DRIVE BASELINE & 9TH STREET BASELINE
STA: 76+66.01 = STA: 11+68.55
PI WINTER GARDEN DRIVE BASELINE - SHIFT & 9TH STREET BASELINE
STA: 76+66.53 = STA: 11+69.06



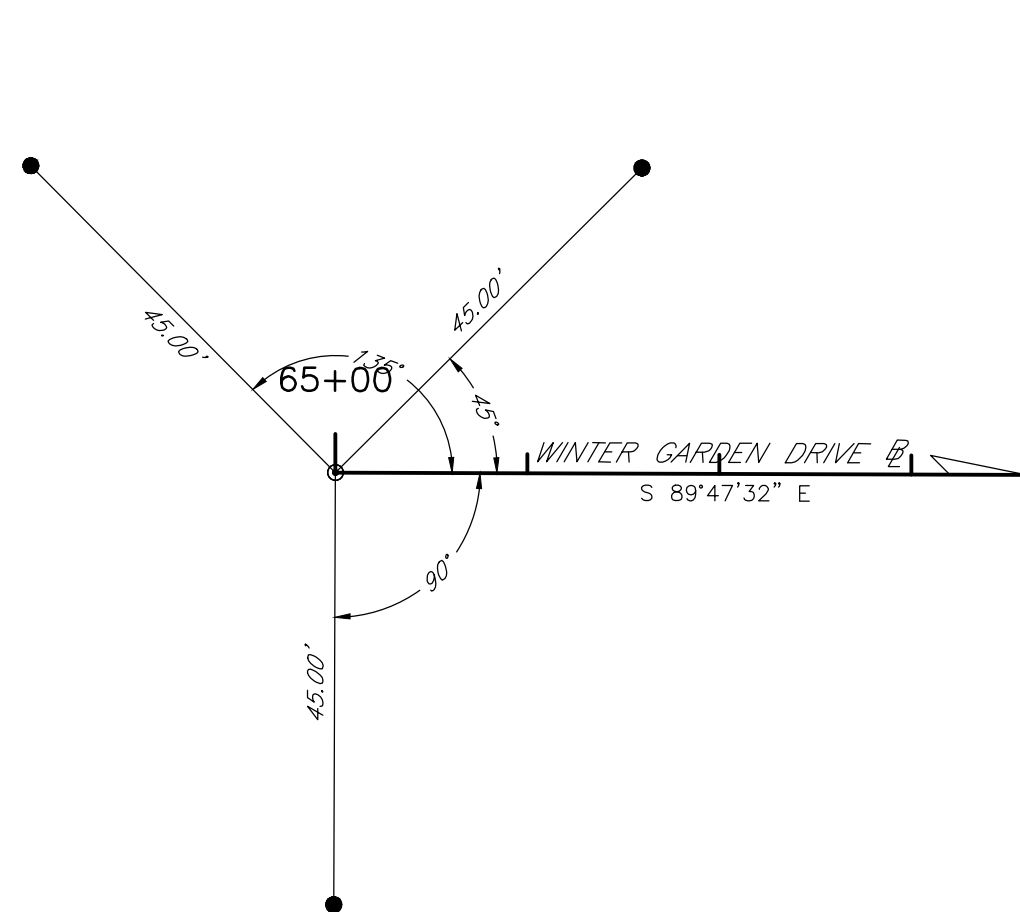
PI 65TH AVENUE/WILMERLING BASELINE & 9TH STREET BASELINE
STA: 98+24.93 = STA: 15+03.27
PI 65TH AVENUE/WILMERLING BASELINE - SHIFT & 9TH STREET BASELINE
STA: 98+27.29 = STA: 15+00.92



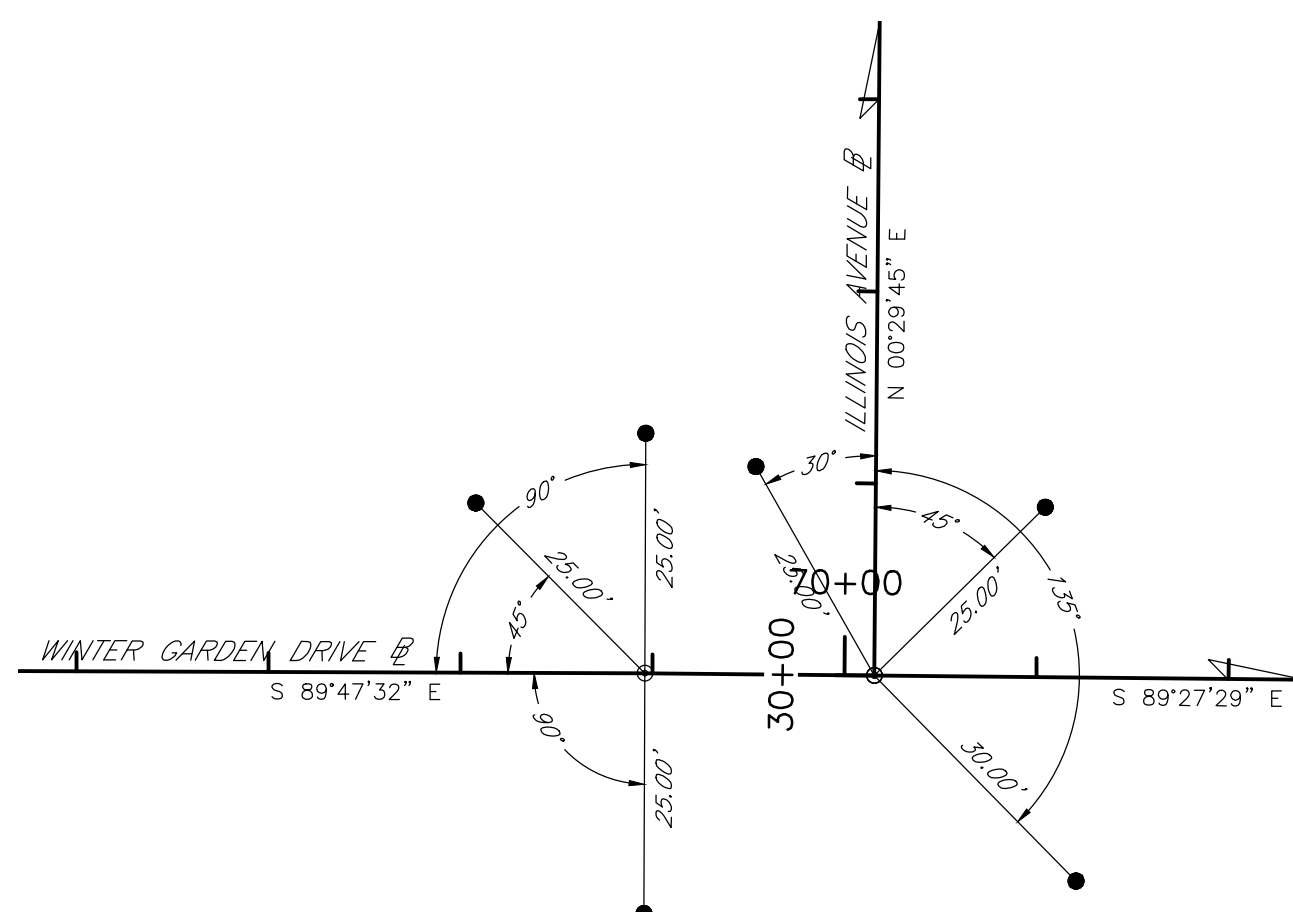
PI 9TH STREET BASELINE & 64TH AVENUE DRIVE BASELINE - END
STA: 18+36.72 = STA: 128+27.12



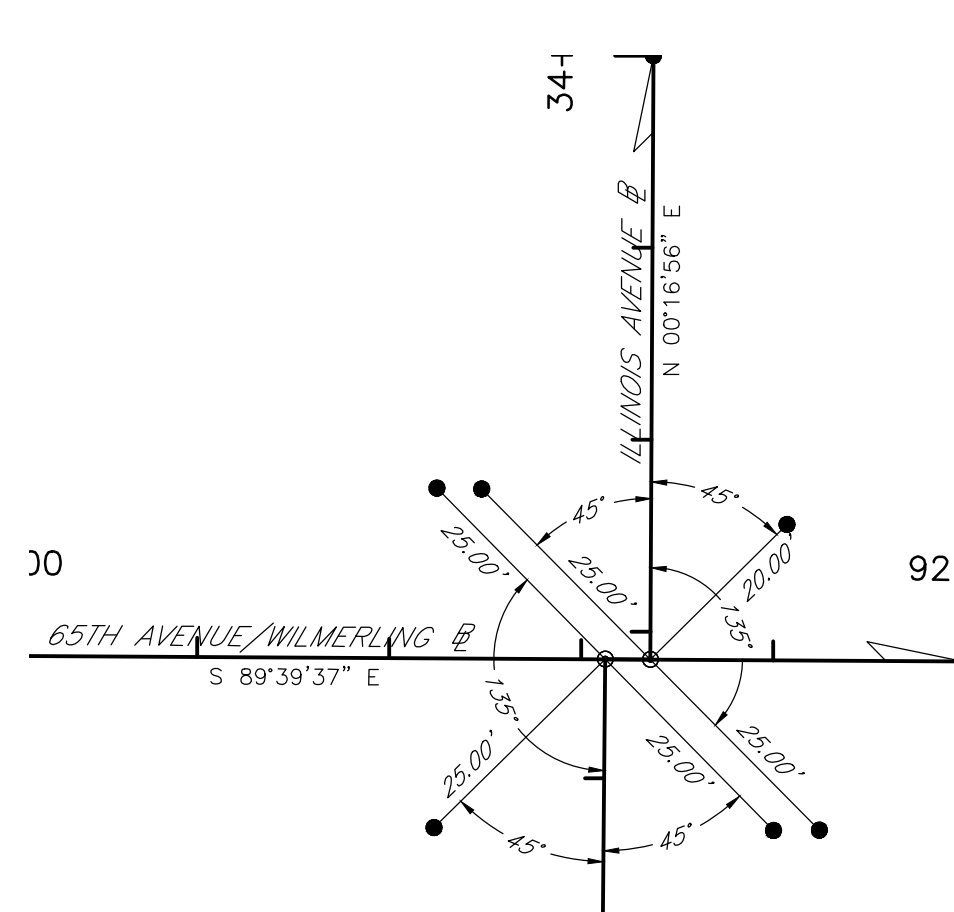
PI 9TH STREET BASELINE & 64TH AVENUE BASELINE - END
STA: 21+52.34 = STA: 148+34.02
9TH STREET BASELINE END STA: 21+61.50



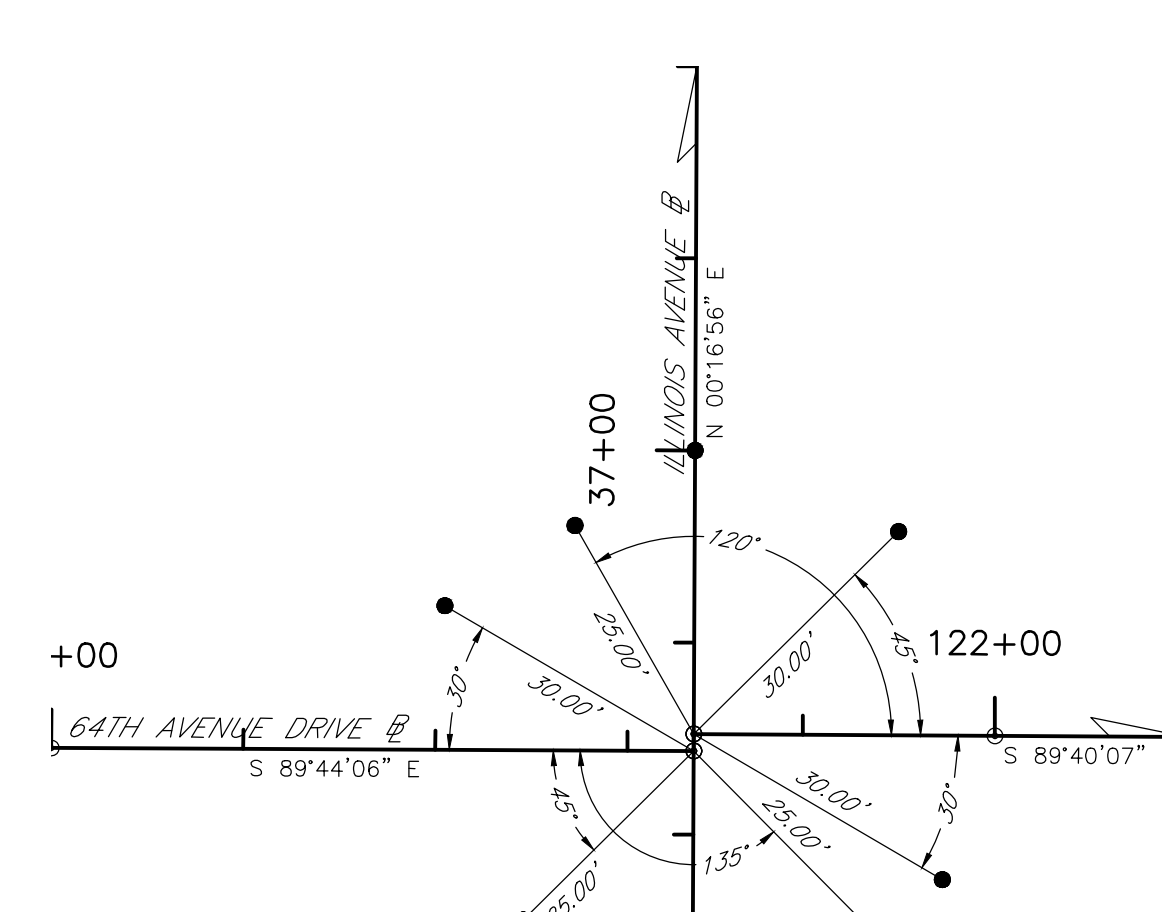
WINTER GARDEN DRIVE BASELINE BEGIN
STA: 65+00.00



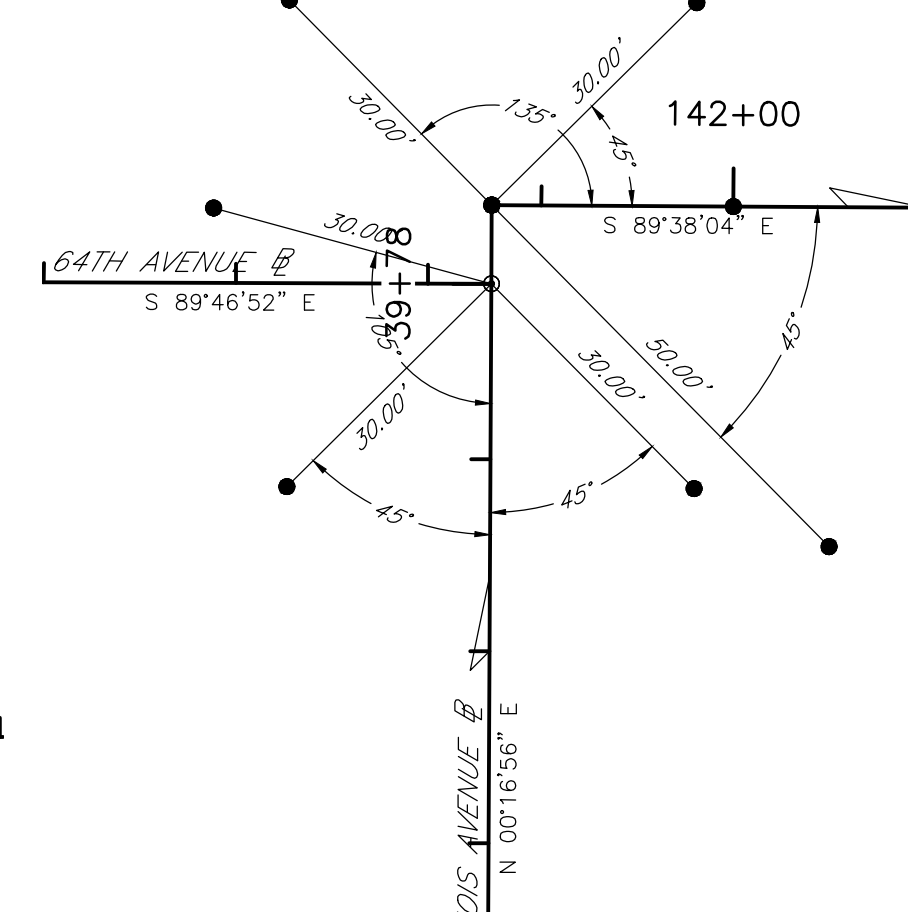
POINT OF DEFLECTION WINTER GARDEN DRIVE BASELINE & ILLINOIS AVENUE BASELINE - BEGIN
STA: 69+79.21
PI WINTER GARDEN DRIVE BASELINE & ILLINOIS AVENUE BASELINE - BEGIN
STA: 70+03.09 = STA: 30+00.00



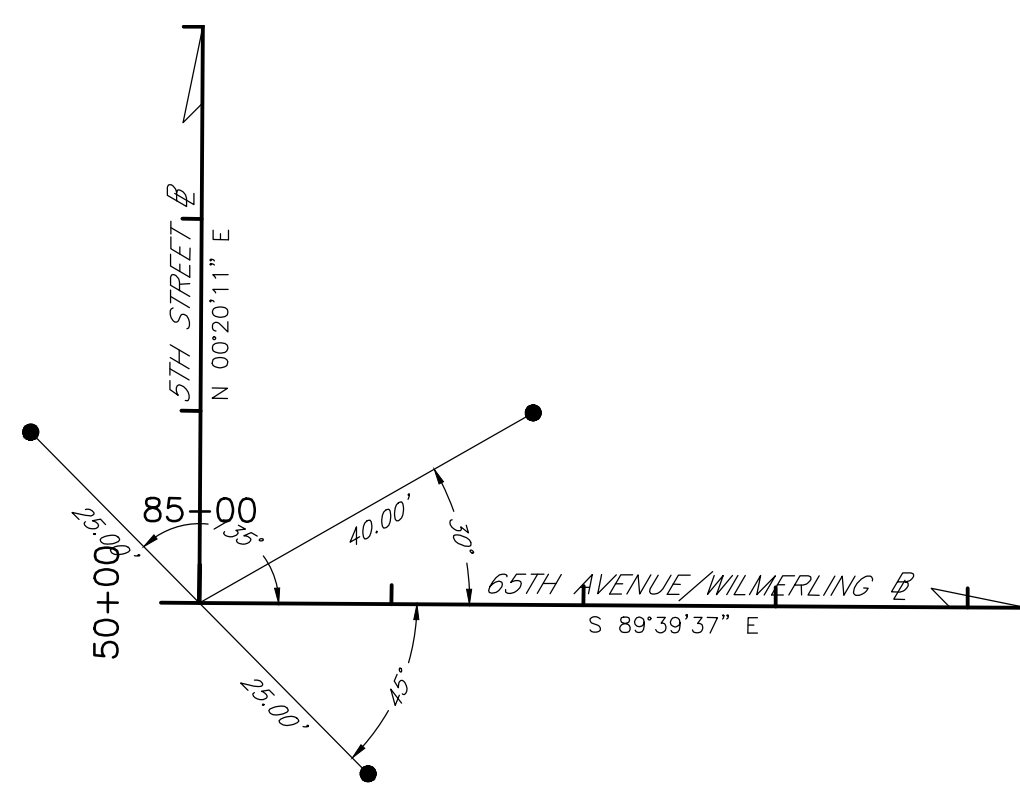
PI 65TH AVENUE/WILMERLING BASELINE & ILLINOIS AVENUE BASELINE
STA: 91+62.50 = STA: 33+32.38
PI 65TH AVENUE/WILMERLING BASELINE & ILLINOIS AVENUE BASELINE - SHIFT
STA: 91+67.22 = STA: 33+37.11



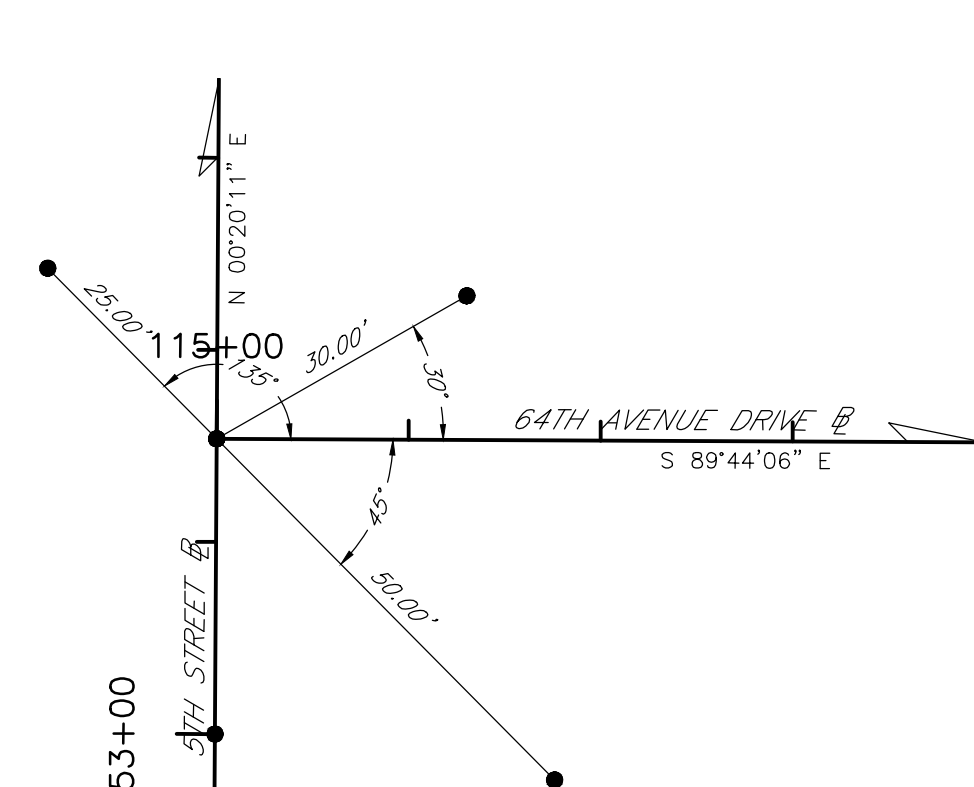
PI 64TH AVENUE DRIVE BASELINE & ILLINOIS AVENUE BASELINE
STA: 121+66.91 = STA: 36+68.71
PI 64TH AVENUE DRIVE BASELINE - SHIFT & ILLINOIS AVENUE BASELINE
STA: 121+68.65 = STA: 36+70.45



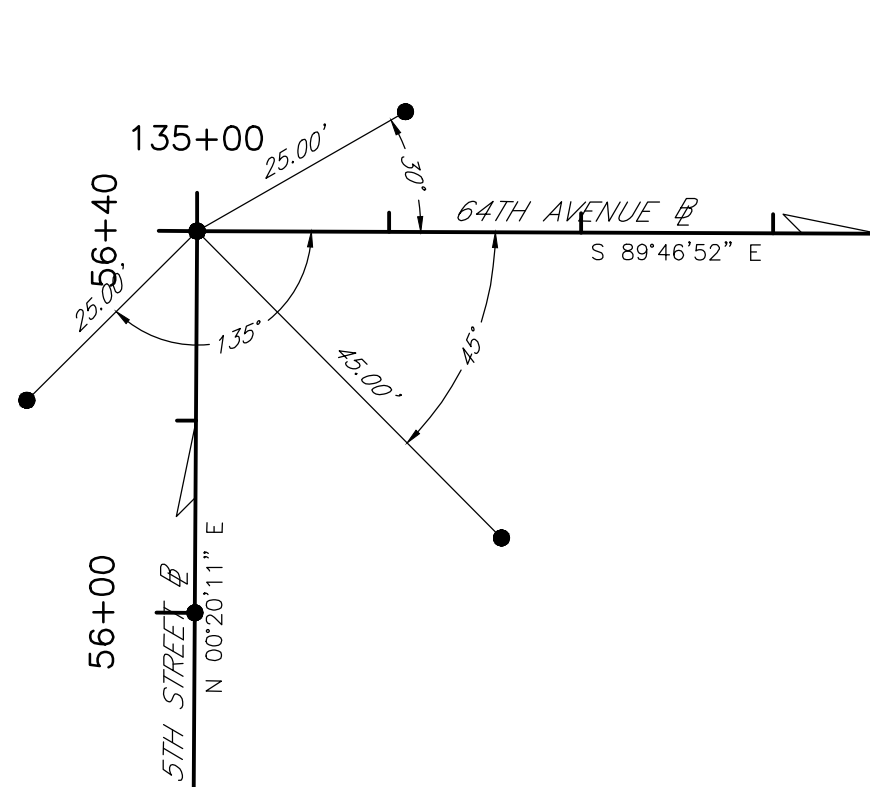
PI 64TH AVENUE BASELINE & ILLINOIS AVENUE BASELINE - END
STA: 141+66.62 = STA: 39+78.25
64TH AVENUE BASELINE - SHIFT STA: 141+74.84



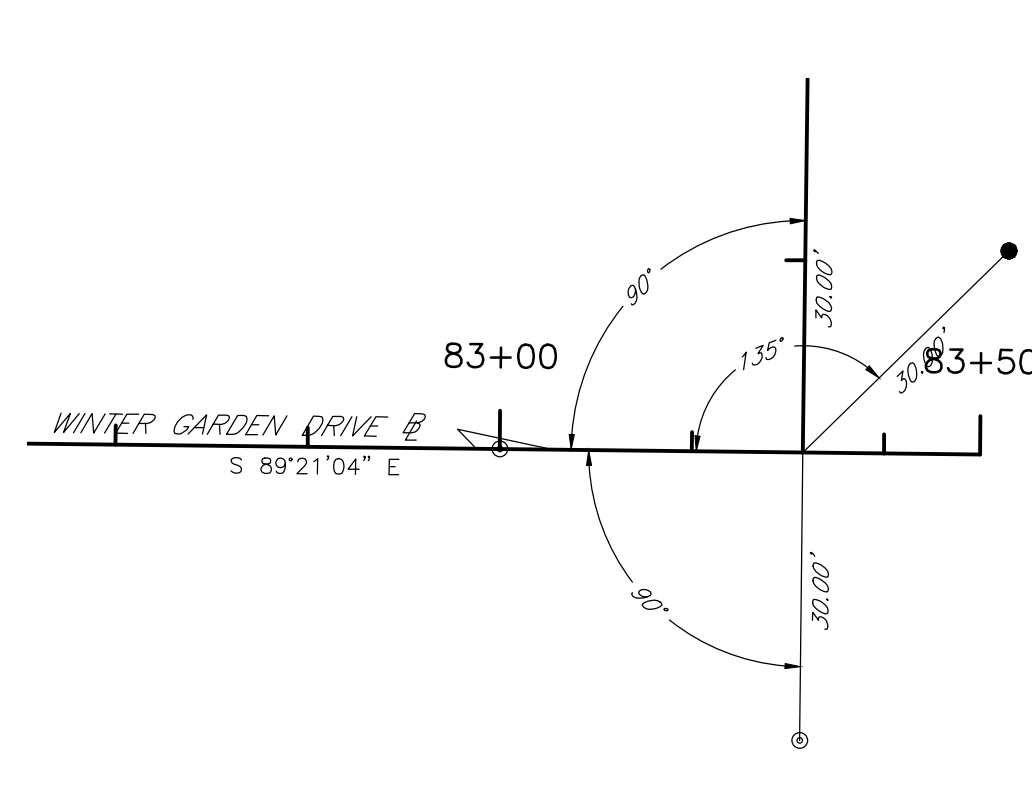
PI 5TH STREET BASELINE - BEGIN & 65TH AVENUE/WILMERLING BASELINE - BEGIN
STA: 50+00.00 = STA: 85+00.00



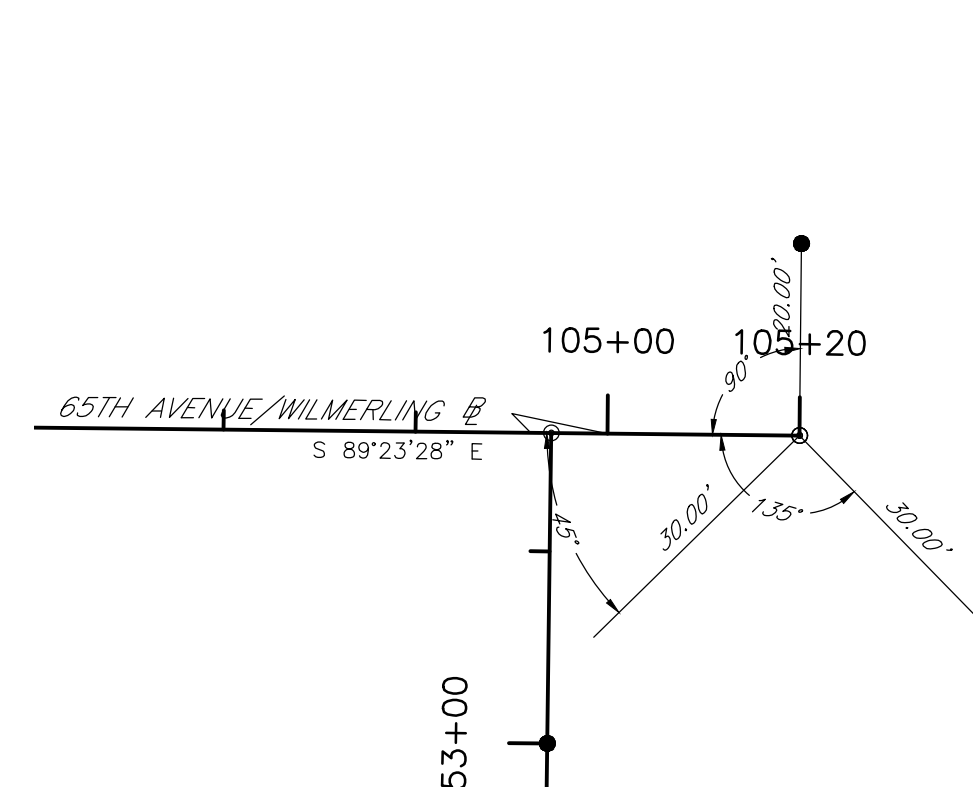
PI 5TH STREET BASELINE & 64TH AVENUE DRIVE BASELINE - BEGIN
STA: 53+30.73 = STA: 115+00.00



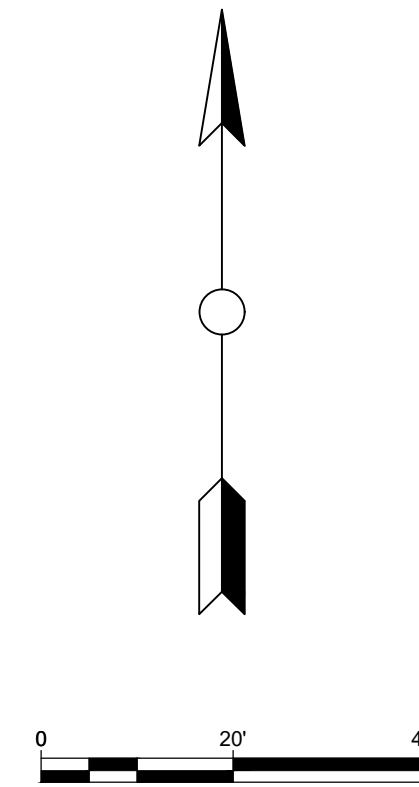
PI 5TH STREET BASELINE - END & 64TH AVENUE BASELINE - BEGIN
STA: 56+39.74 = STA: 135+00.00



WINTER GARDEN DRIVE BASELINE END
STA: 83+31.57



65TH AVENUE/WILMERLING BASELINE END
STA: 105+20.00



SURVEY INFORMATION PROVIDED BY SURVTECH SOLUTIONS, INC.

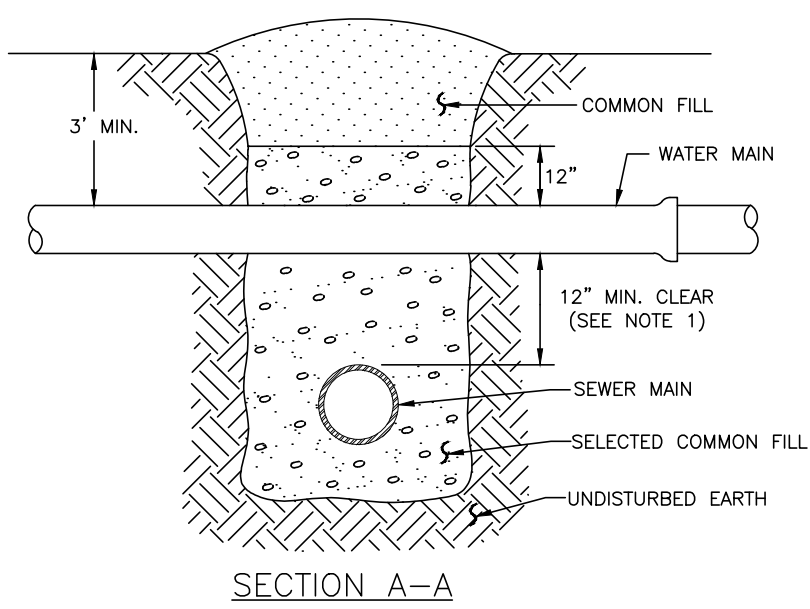
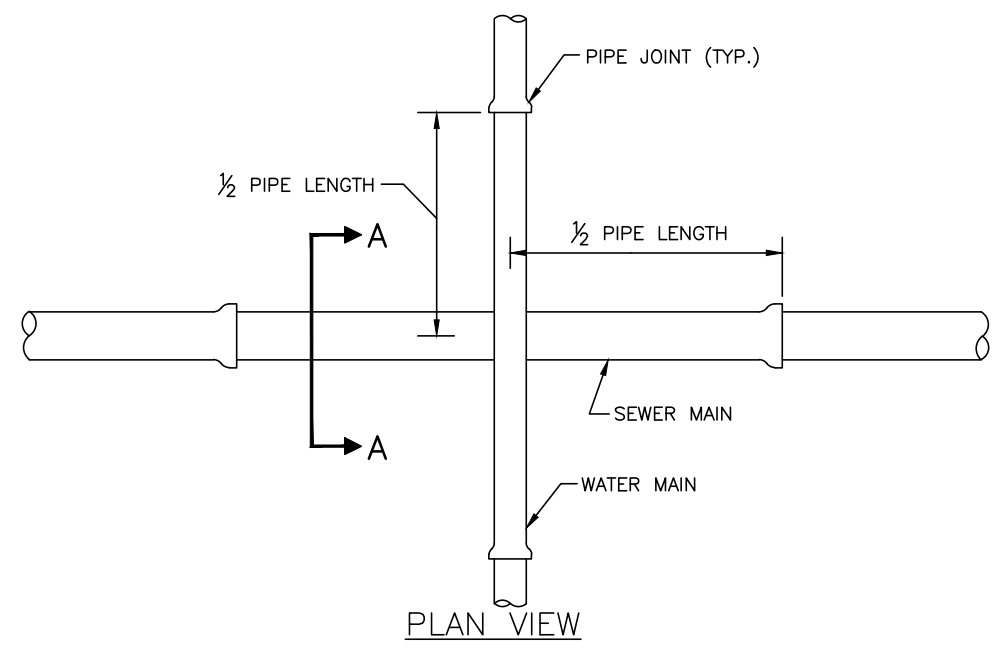
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT SURVEY BASELINE REFERENCE



PROJECT #	404-6046070
SURVEY #	WA-2
SEC./TWN./RGE	24/35S/17E
SCALE	N.T.S.
SURVEYED	SURVTECH 05/2020
DESIGNED	JSS/BLR 06/2020
DRAWN	BLR/JSS 06/2020
CHECKED	JR 10/2020

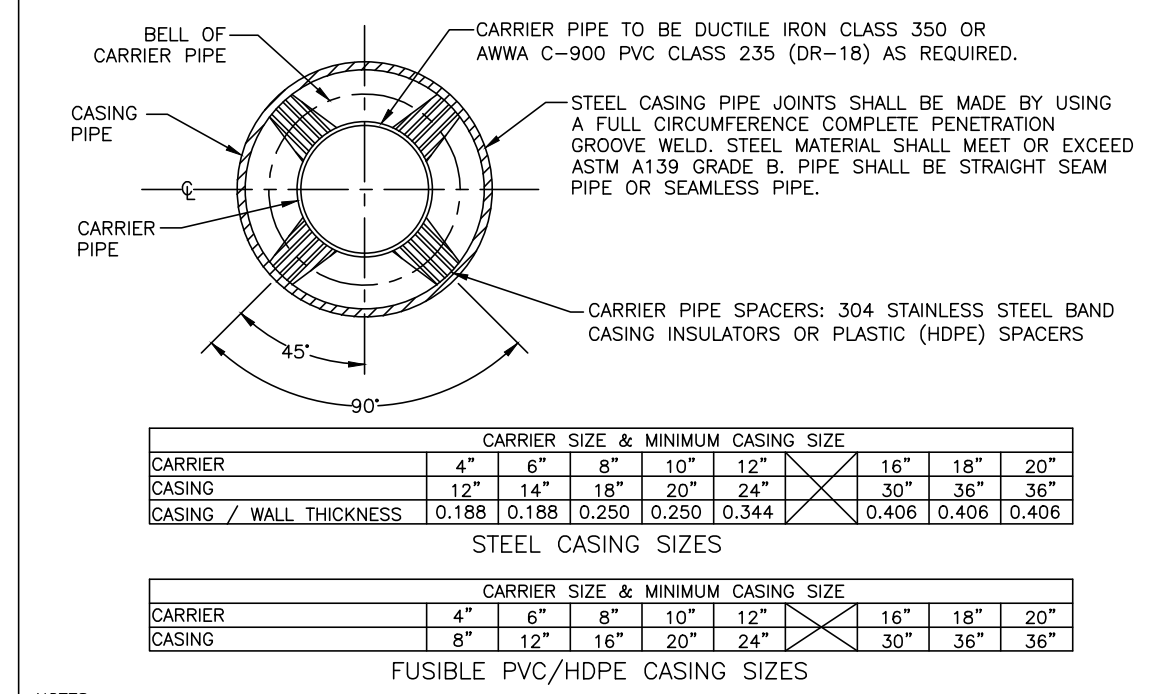
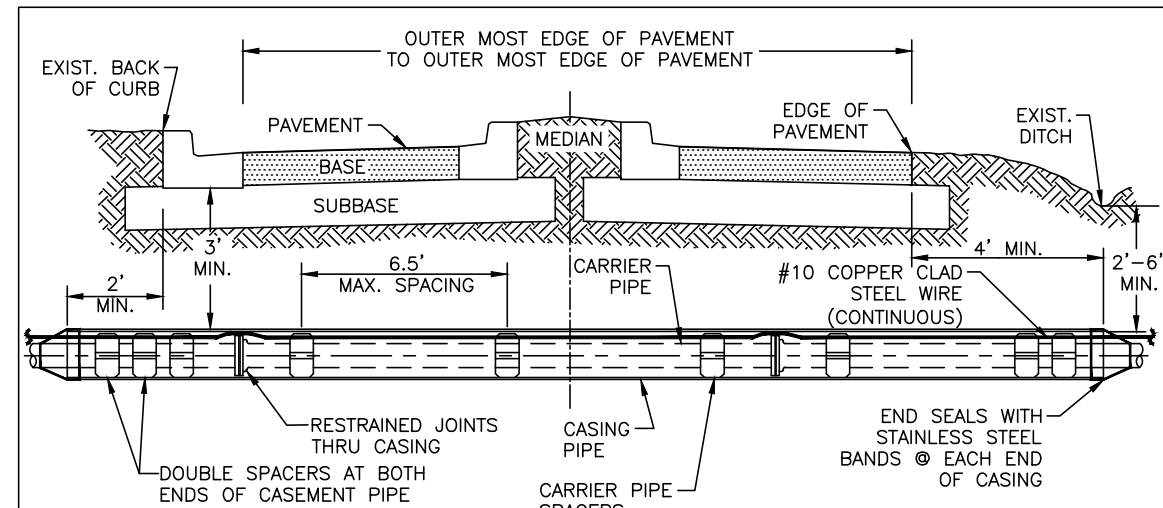
JOHN S. SHOUN, P.E.
 No. 60923
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSE EXPIRES 08/11/2022



NOTES:

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

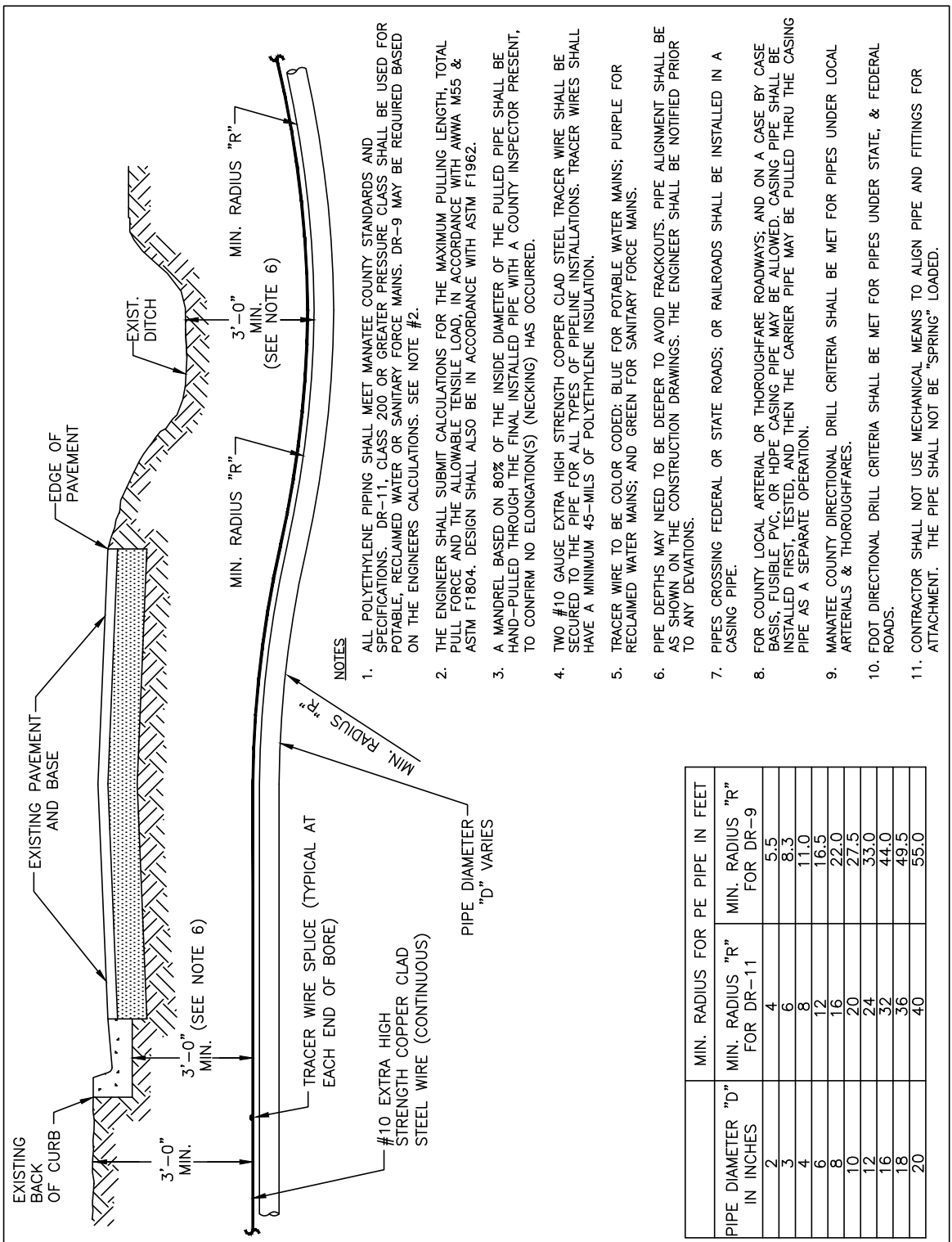
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		TYPICAL NEW WATER & SEWER LINE CROSSING	UG-2
REV. BY	DATE	DATE OF APPROVAL	



NOTES:

- THE ENGINEER OF RECORD MAY SELECT A LARGER CASING DIAMETER, INCREASE WALL THICKNESS, AND/OR INCREASE DEPTH OF BURY DUE TO EXTERNAL LOADS WITH COUNTY APPROVAL PRIOR TO PERFORMING THE WORK.
- ALL PIPES CROSSING A FEDERAL OR STATE ROAD; OR RAILROADS SHALL BE INSTALLED IN A CASING PIPE.
- ALL PIPES CROSSING A COUNTY LOCAL ARTERIAL AND THROUGHFARE ROADWAYS SHALL BE IN A CASING PIPE.
- SPLIT-STEEL CASINGS MAY BE USED ON EXISTING COUNTY MAINS ONLY.
- FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS, REFER TO THE F.O.T. UTILITY ACCOMMODATION MANUAL, LATEST EDITION.
- HDPE CASING SHALL HAVE ALL WELD BEADS REMOVED FROM THE INSIDE SURFACE SUCH THAT THE JOINT SURFACES SHALL BE SMOOTH. NO CASING SPACERS ARE REQUIRED WITH HDPE CASING.
- *14-INCH DIAMETER MAINS ARE NOT TO BE INSTALLED.
- FUSIBLE PVC/HDPE CASINGS SHALL BE PRESSURE TESTED AND COLOR-CODED PER SERVICE APPLICATIONS.

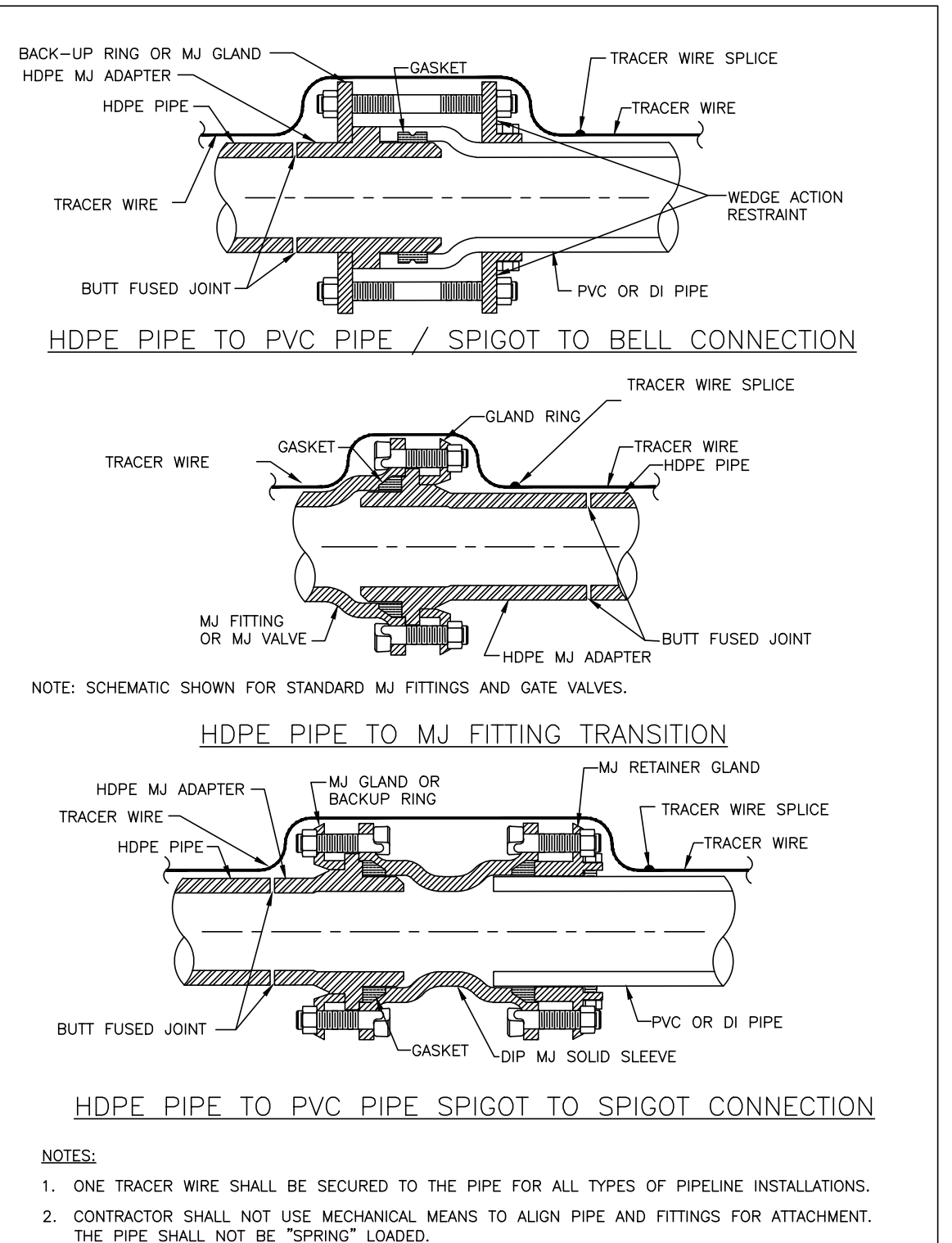
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		CASING CROSSING	UG-3
REV. BY	DATE	DATE OF APPROVAL	
JSS	6/22		



NOTES:

- ALL POLYETHYLENE PIPING SHALL MEET MANATEE COUNTY STANDARDS AND BE USED FOR POTABLE, RECLAIMED WATER OR SANITARY FORCE MAINS. DR-9 MAY BE REQUIRED BASED ON THE ENGINEER'S CALCULATIONS. SEE NOTE #2.
- PIPE JOINTS AND THE ALLOWABLE JOINT SPACING SHALL BE IN ACCORDANCE WITH ASTM F1982.
- A MANHOLE BASED ON THE INSIDE DIAMETER OF THE PIPED PIPE SHALL BE INSTALLED TO CONFIRM NO ELONGATIONS (NECKING) HAS OCCURRED.
- TWO #10 GAUGE EXTRA HIGH STRENGTH COPPER CLAD STEEL TRACER WIRES SHALL HAVE A MINIMUM 45-INCHES OF POLYETHYLENE INSULATION.
- TRACER WIRE TO BE COLOR CODED: BLUE FOR POTABLE WATER MAINS; PURPLE FOR RECLAIMED WATER MAINS; AND GREEN FOR SANITARY FORCE MAINS.
- AS SHOWN ON THE CONSTRUCTION DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY DEVIATIONS.
- CASING PIPES CROSSING FEDERAL OR STATE ROADS OR RAILROADS SHALL BE INSTALLED IN A CASING PIPE.
- FOR COUNTY LOCAL ARTERIAL OR THROUGHFARE ROADWAYS, AND ON A CASE BY CASE BASIS, FUSIBLE PVC OR HDPE CASING PIPE MAY BE ALLOWED. CASING PIPE SHALL BE INSTALLED IN A CASING PIPE WITH A MINIMUM 45-INCHES OF POLYETHYLENE INSULATION. THIS DETAIL CAN ALSO BE UTILIZED FOR RESTORATION NEEDS OF ROADWAYS WITH ADDITIONAL LANES.
- MANATEE COUNTY DIRECTIONAL DRILL CRITERIA SHALL BE MET FOR PIPES UNDER LOCAL ROADS.
- EDGE DIRECTIONAL DRILL CRITERIA SHALL BE MET FOR PIPES UNDER STATE & FEDERAL ROADS.
- CONTRACTOR SHALL NOT USE MECHANICAL MEANS TO ALIGN PIPE AND FITTINGS FOR ATTACHMENT. THE PIPE SHALL NOT BE "SPRING" LOADED.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT		DIRECTIONAL BORE ROADWAY CROSSING	UG-4
REV. BY	DATE	DATE OF APPROVAL	
JSS	6/22		



REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR C900-16 PVC PIPE (DR-18)

MAIN PIPE SIZE	HORIZ. BENDS			TEES		REDUCERS		PLUGS & VALVES	
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH
24	90	38	18	X24	169	X20	132	X16	90
20	78	32	16	X20	141	X16	101	X12	64
16	66	27	13	X16	111	X12	67	X8	41
12	52	22	10	X12	80	X8	56	X6	31
10	44	18	9	X10	63	X8	40	X6	24
8	37	15	7	X8	49	X6	30	X4	18
6	29	12	6	X6	29	X4	19	X3	12
4	21	8	4	X4	12	X3	9	X2	6

NOTES:

- RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5° BENDS.
- ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
- ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
- PIPE SIZES ARE GIVEN IN INCHES.
- RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
- LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 180 PSI.
- THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFETY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
- RESTRAINED LENGTHS TO BE APPLIED TO PIPELINES PER DETAIL UG-10 RESTRAINED LENGTHS FOR PIPE.
- ALL RESTRAINED JOINT HARDWARE SHALL CONFORM TO 1.11.17 OF THE PUBLIC WORKS UTILITIES STANDARDS MANUAL.
- ALL THREE "LEGS" OF TEES SHALL BE RESTRAINED PER THE STATED LENGTH IN THE TABLE.

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

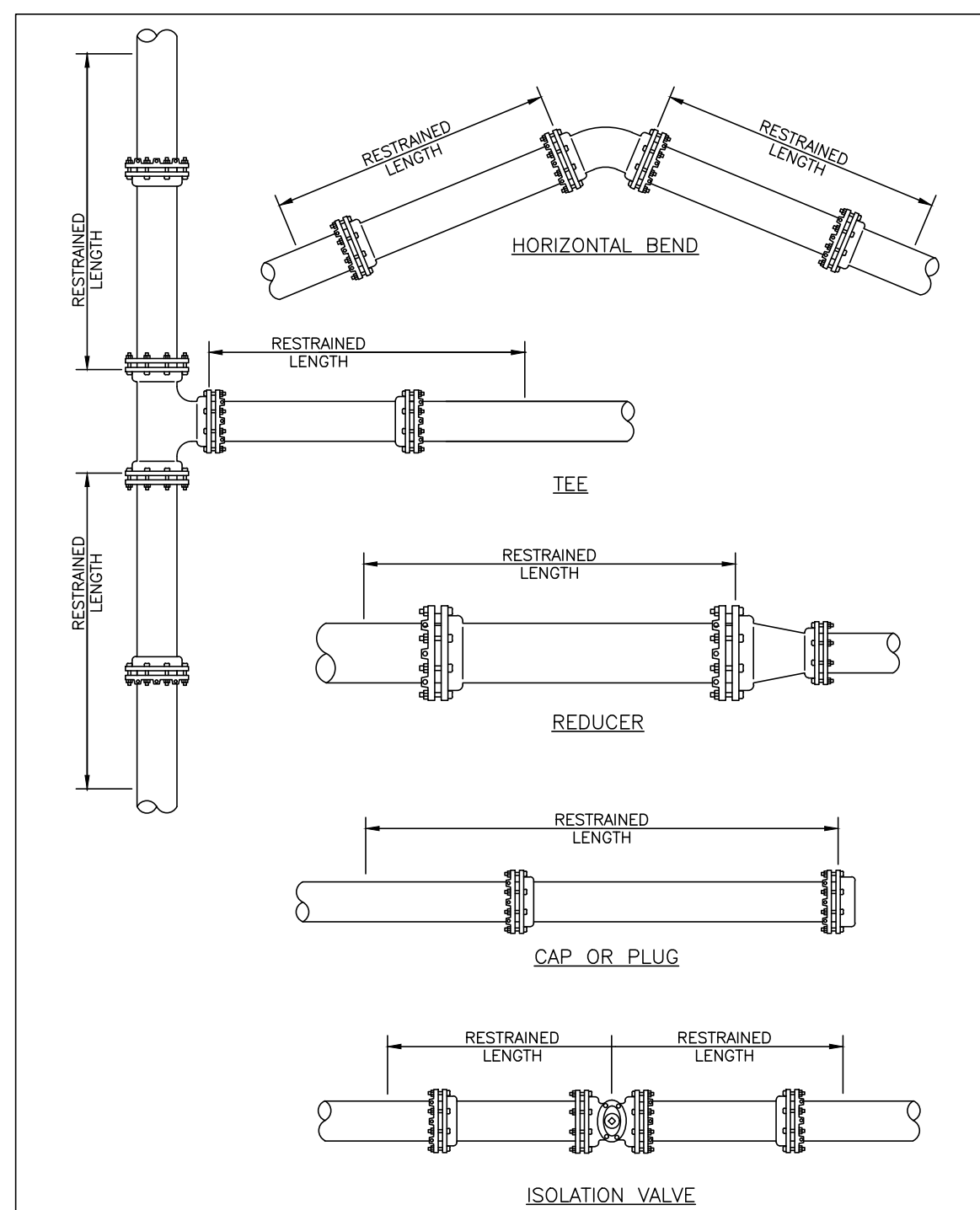
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS			TEES		REDUCERS		PLUGS & VALVES	
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH
36	142	59	28	X36	130	X30	109	X24	84
30	124	51	25	X30	124	X24	101	X18	76
24	106	44	21	X24	106	X18	84	X12	64
20	92	38	18	X20	92	X15	72	X10	54
16	77	32	15	X16	77	X12	60	X8	45
12	61	25	12	X12	61	X9	48	X6	36
10	52	22	10	X10	52	X8	40	X4	31
8	44	18	9	X8	44	X6	34	X3	27
6	34	14	7	X6	34	X4	26	X2	21
4	24	10	5	X4	24	X3	18	X1	15

NOTE:

- SEE UG-8, RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

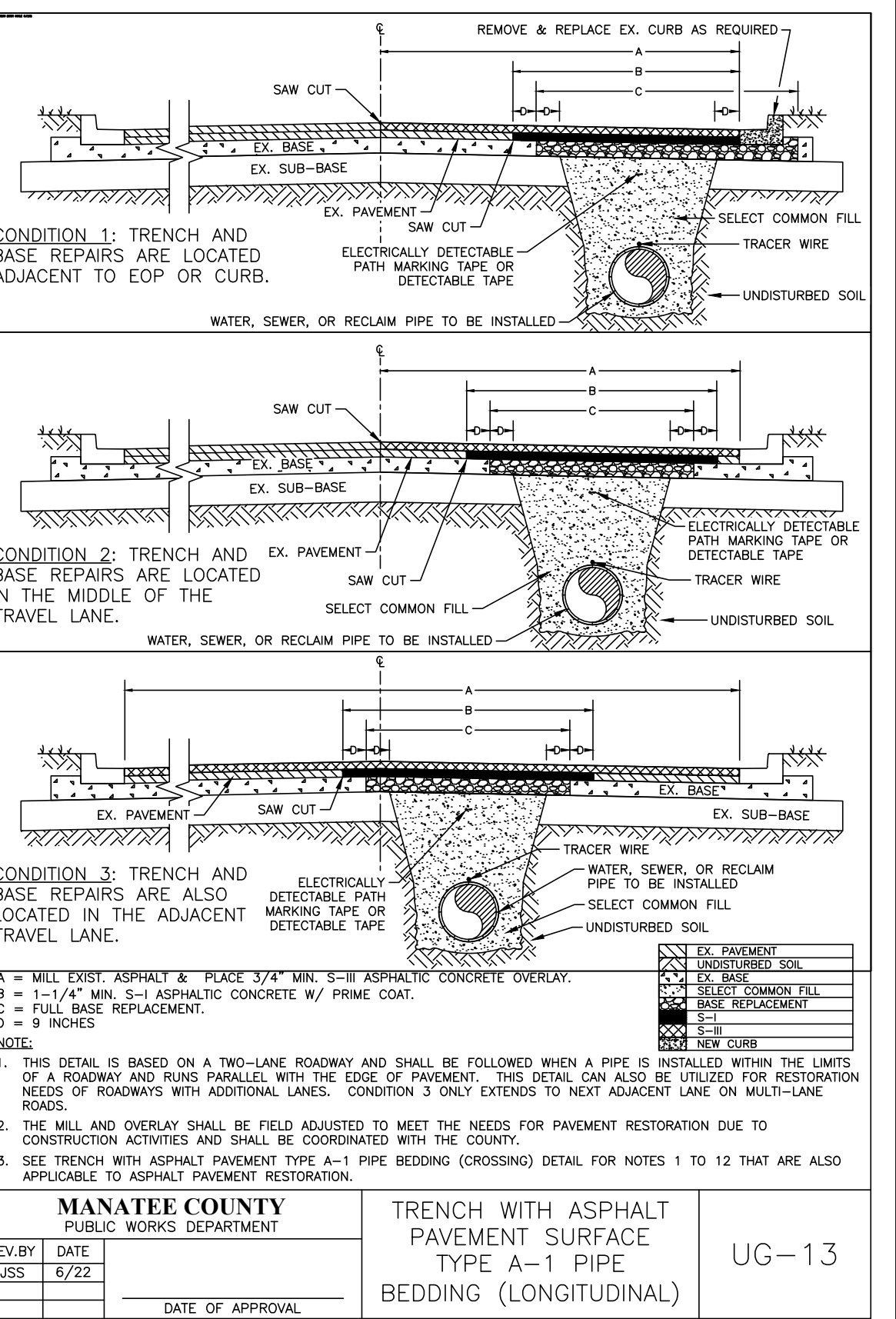
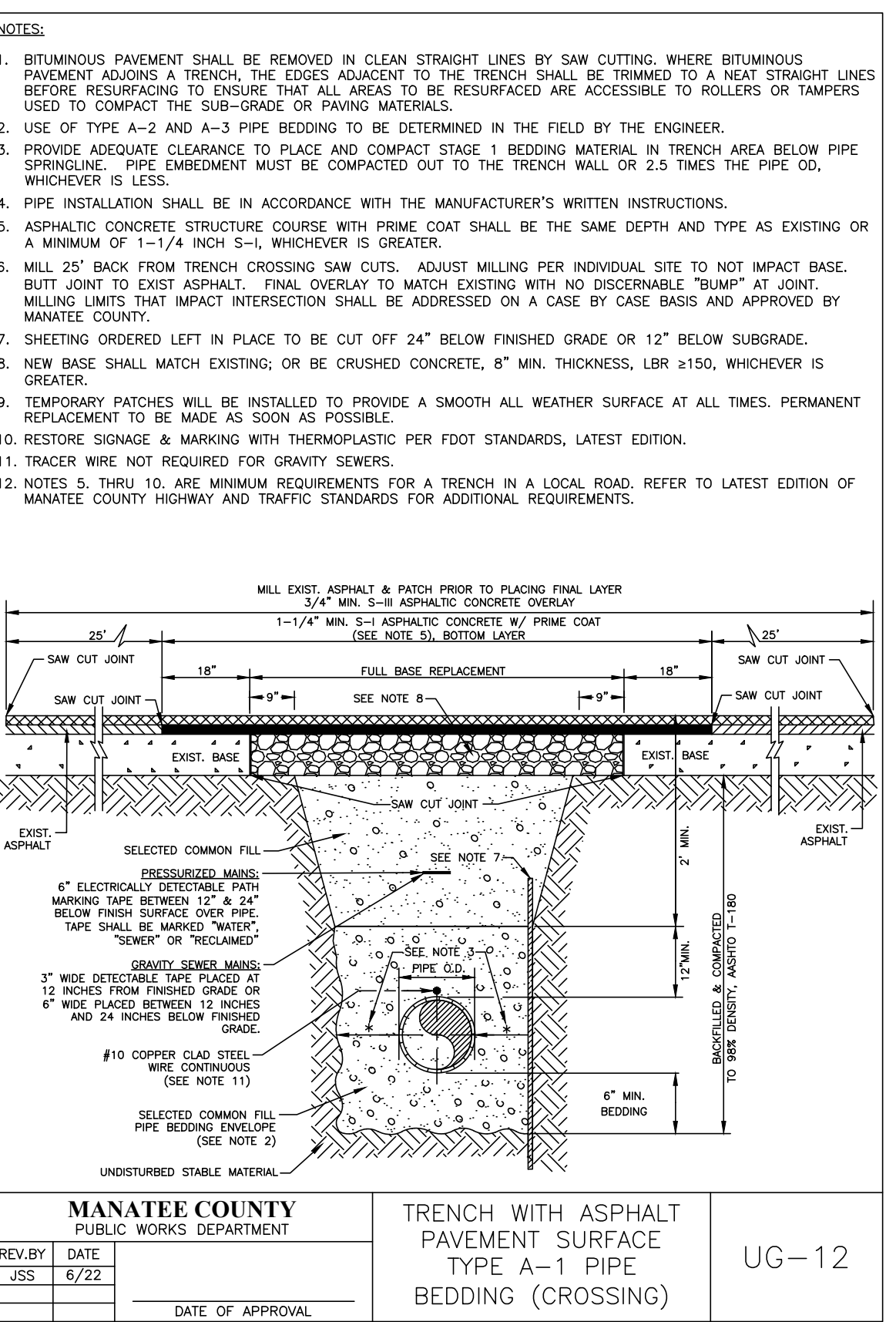
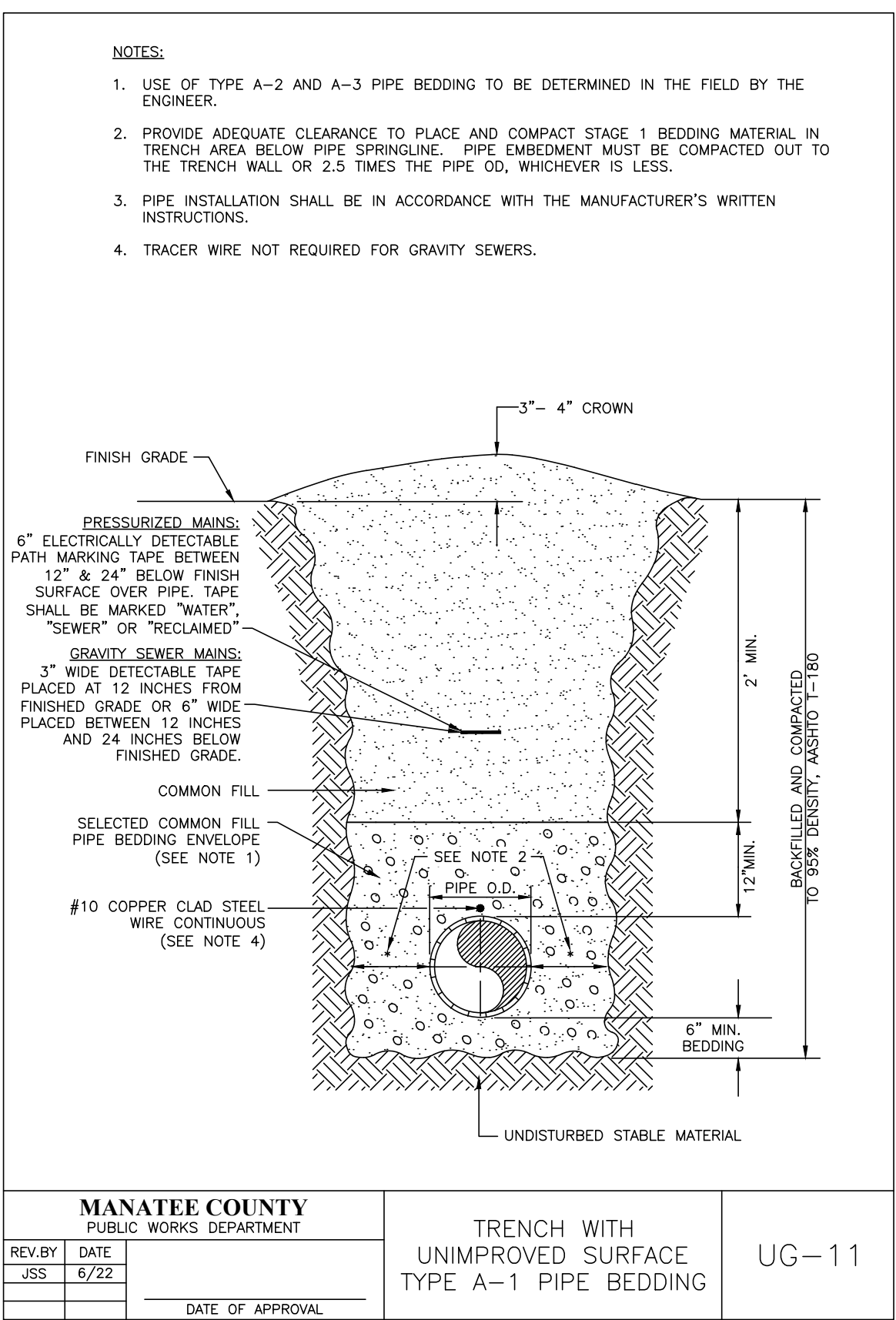
MANATEE COUNTY PUBLIC WORKS DEPARTMENT		RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY	DATE	DATE OF APPROVAL	



NOTE:

- SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 10 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

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

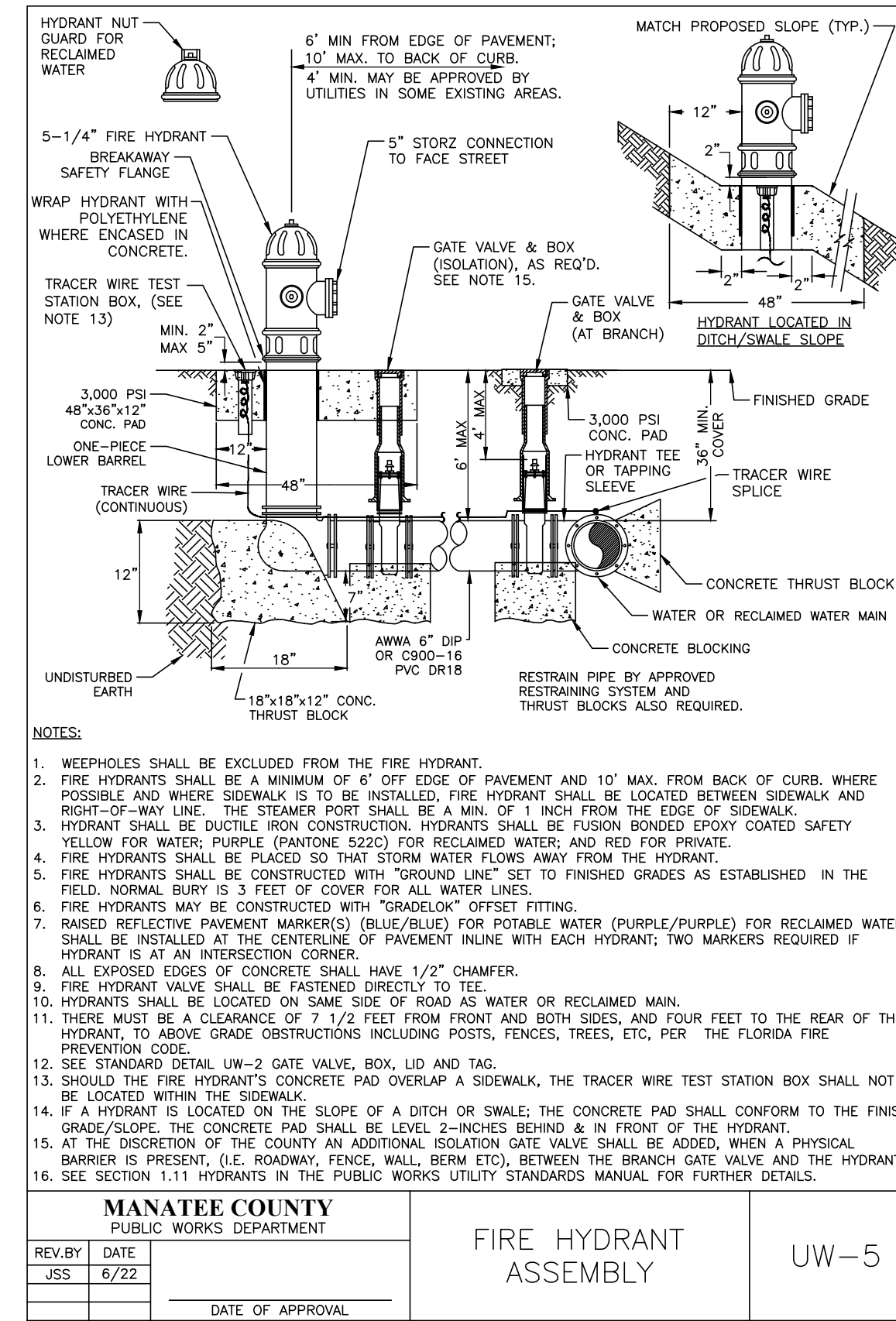
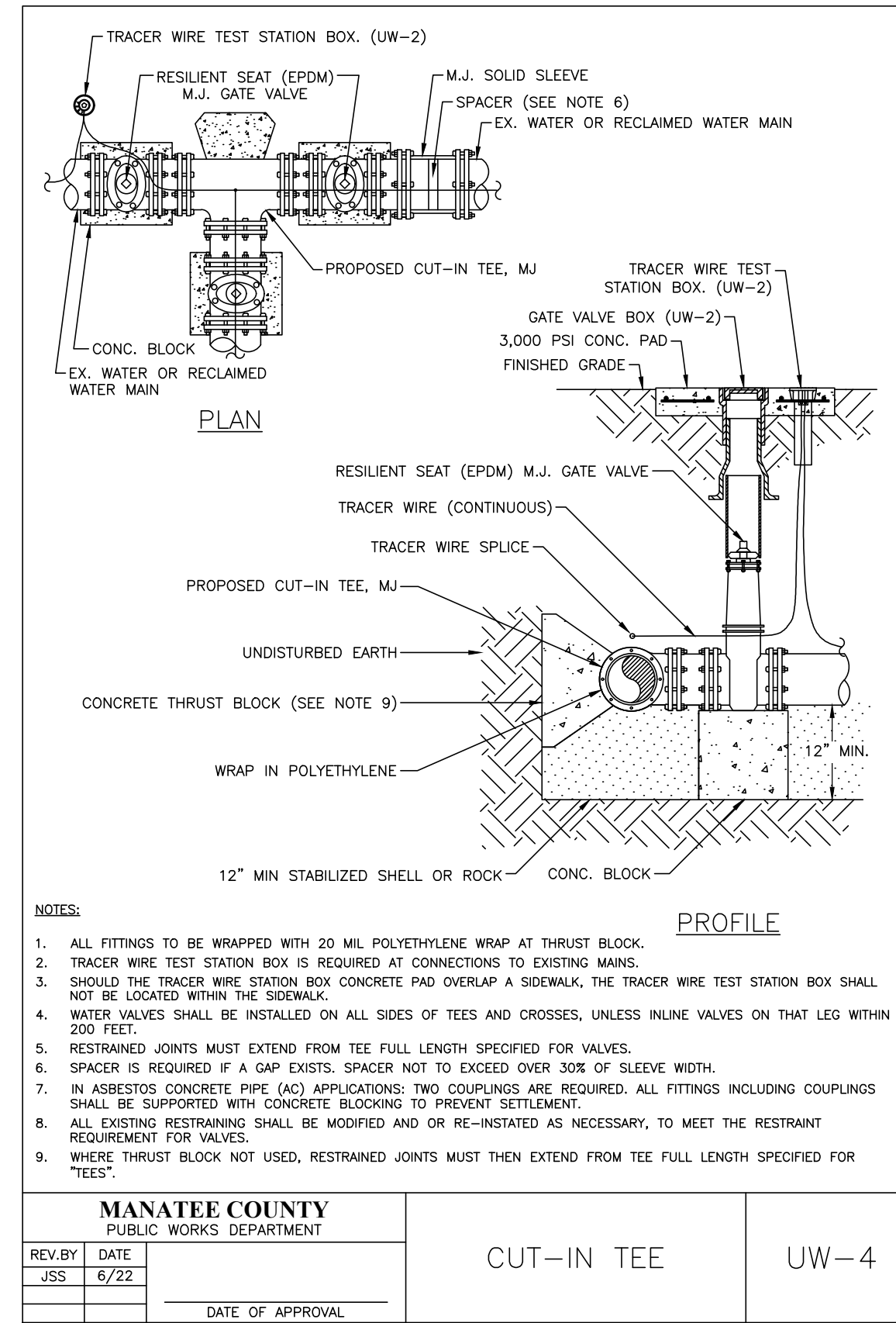
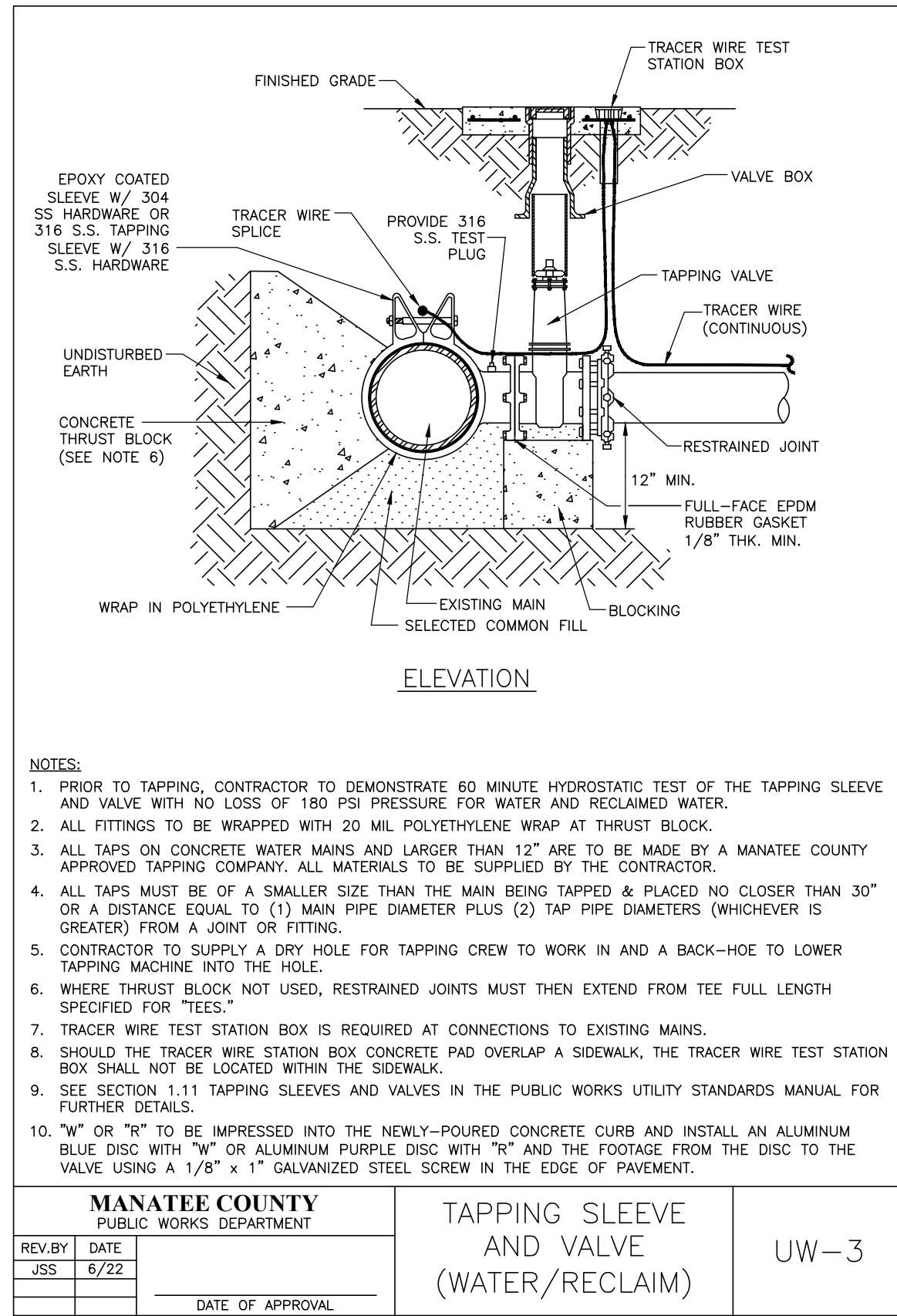
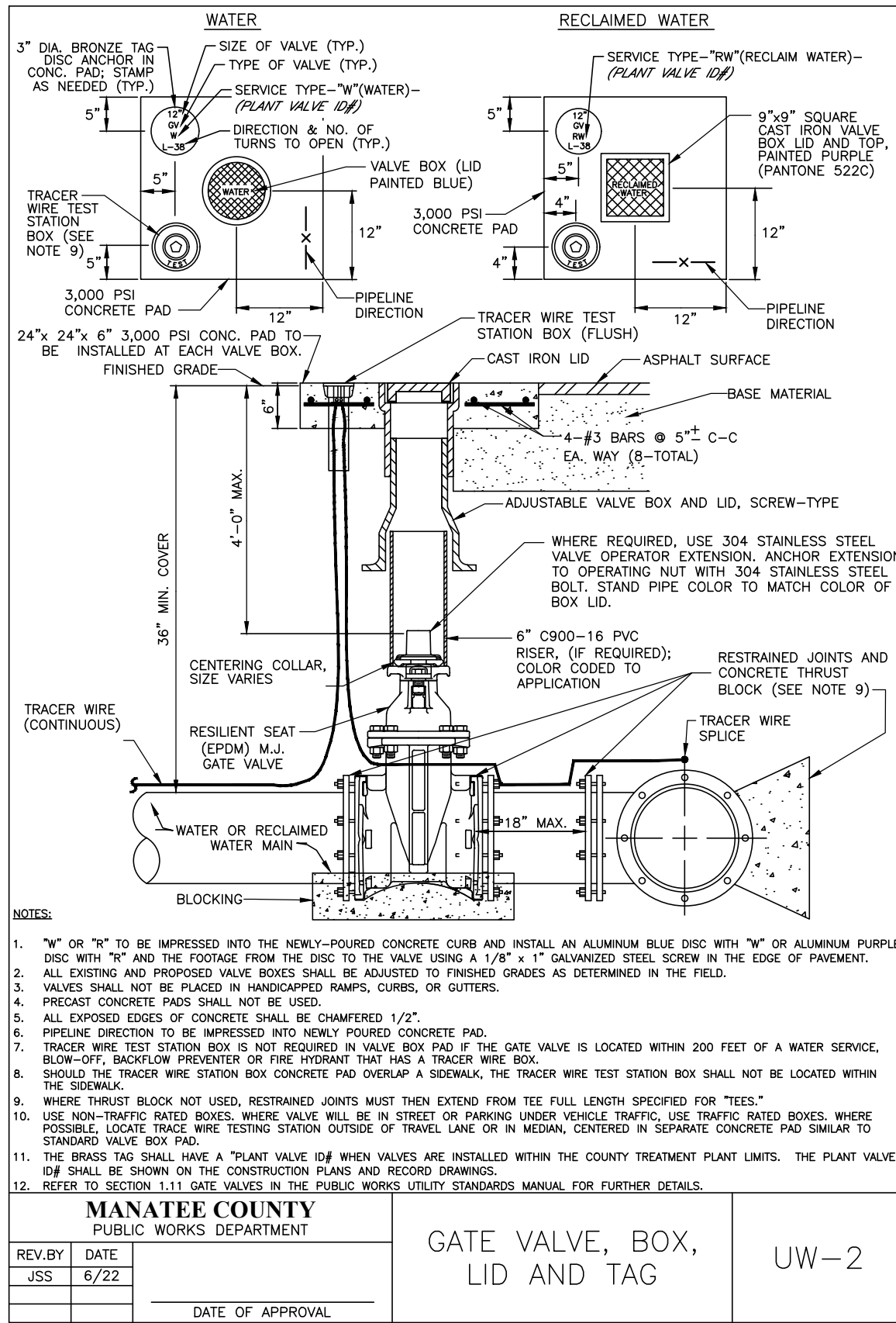
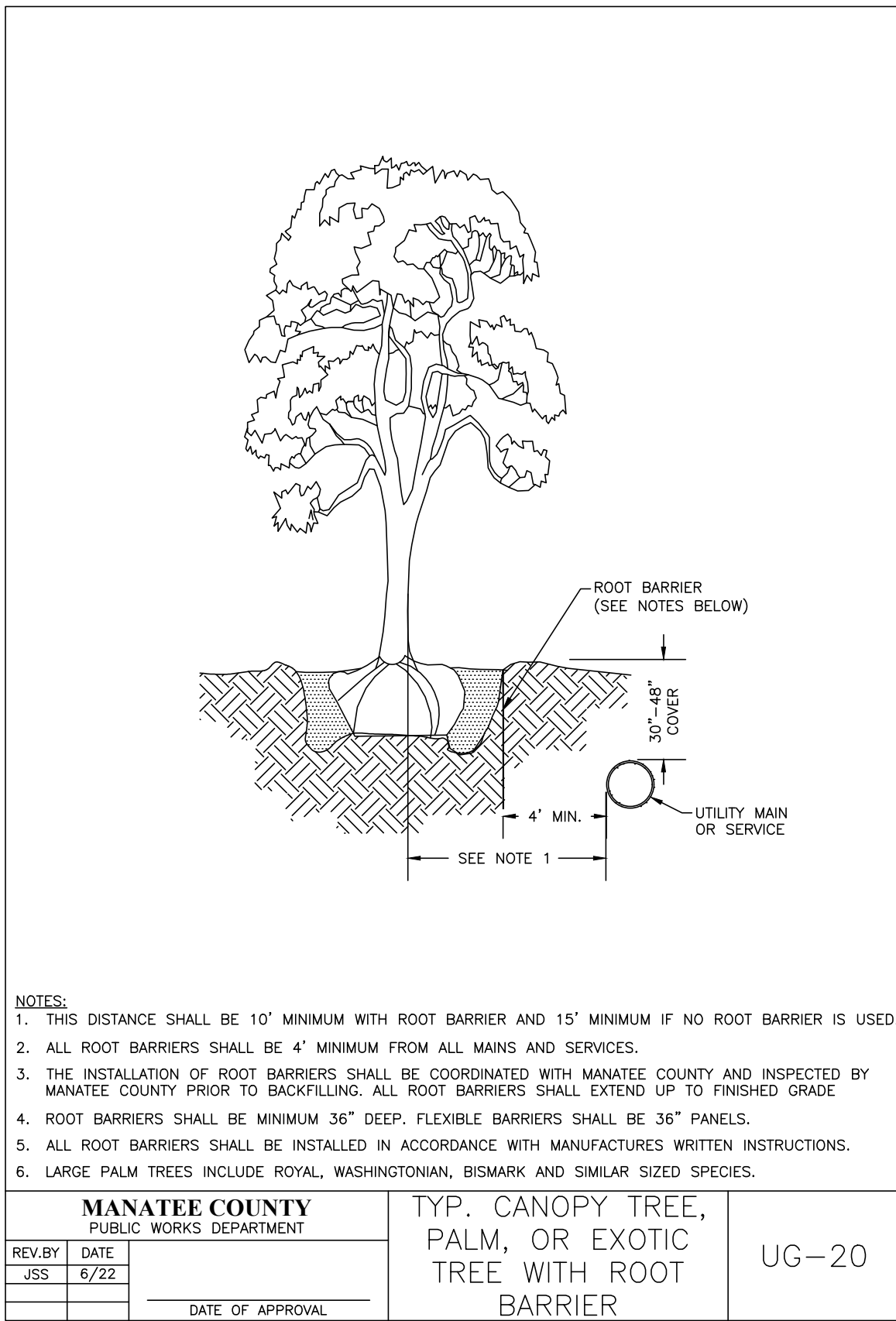
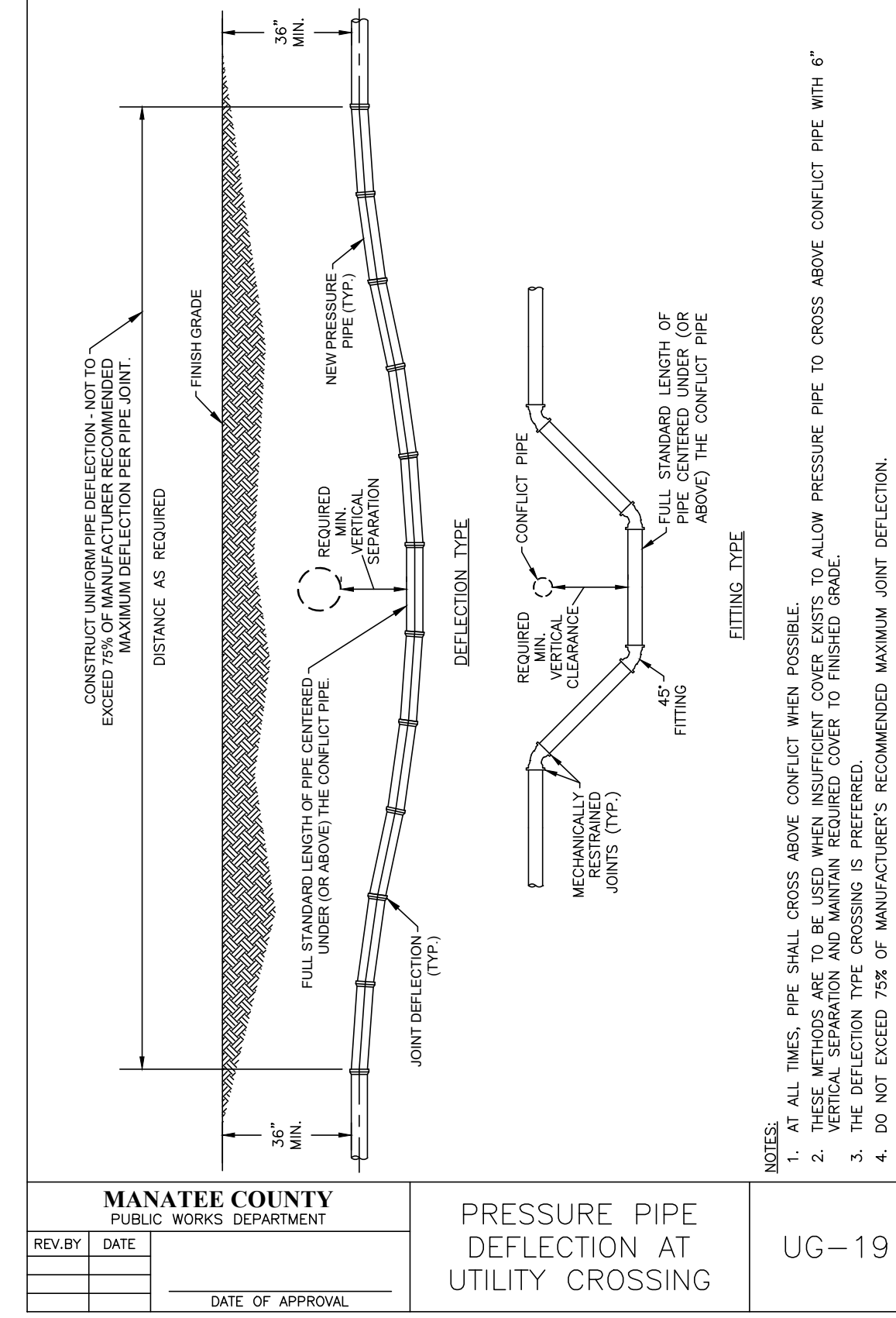
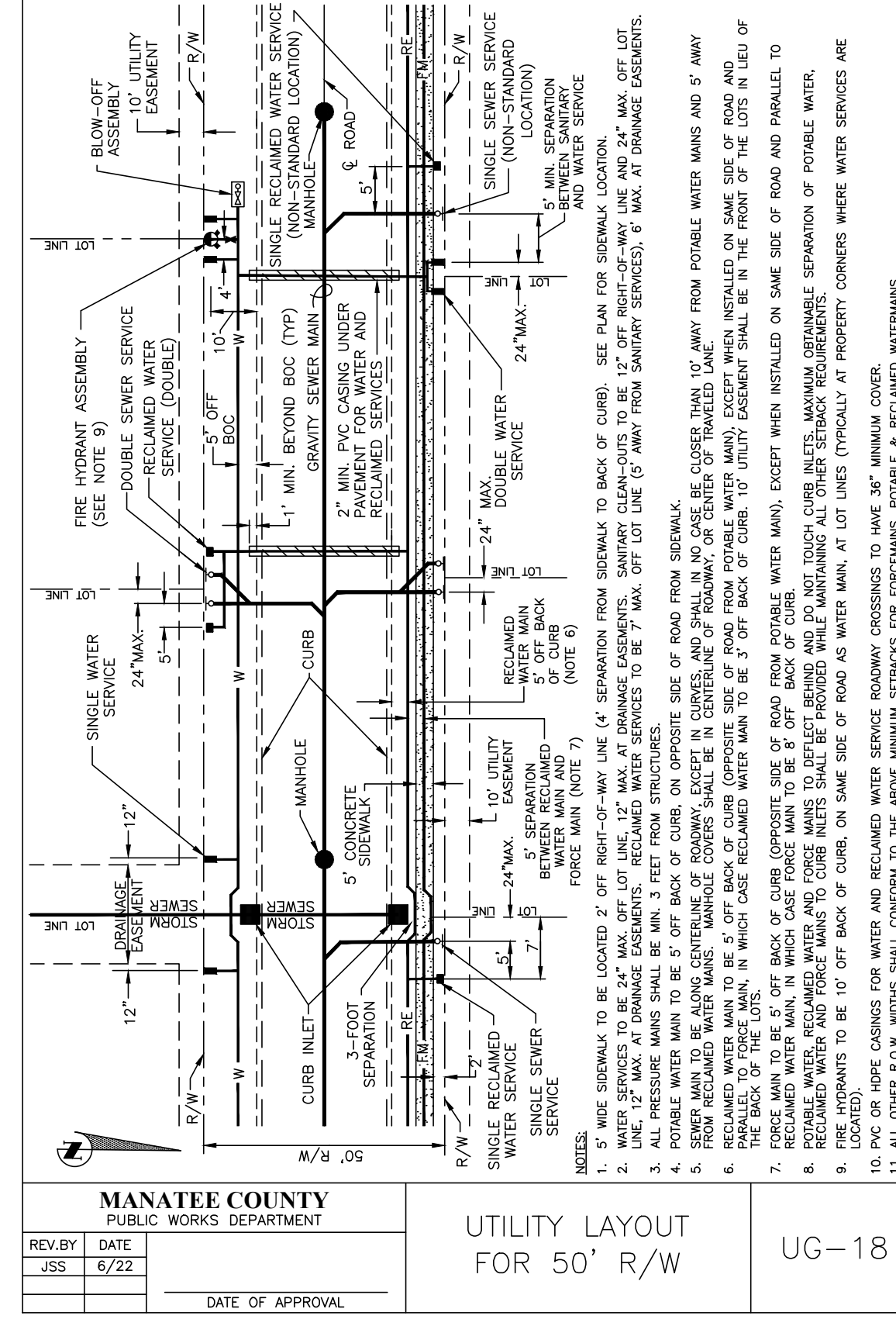
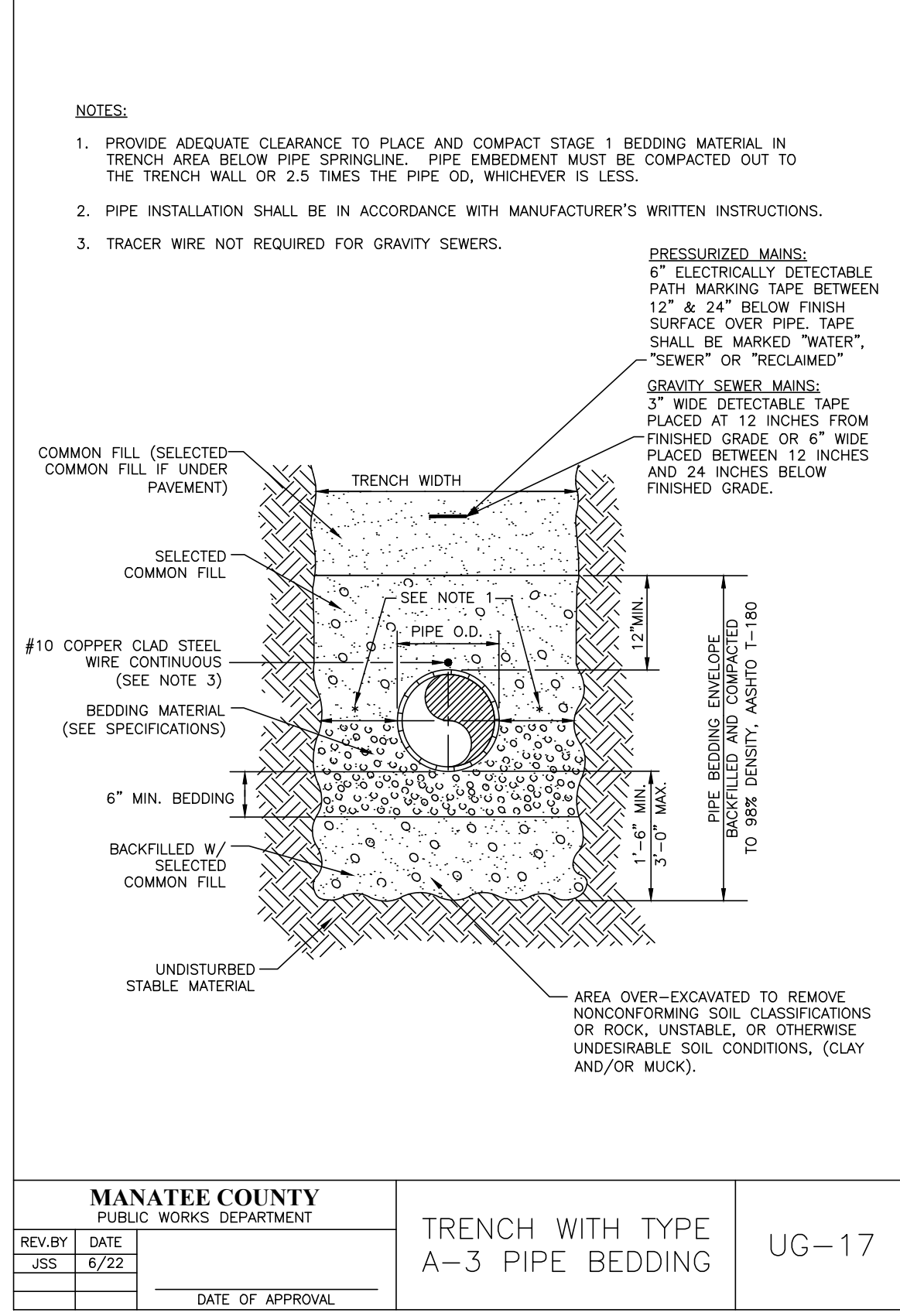
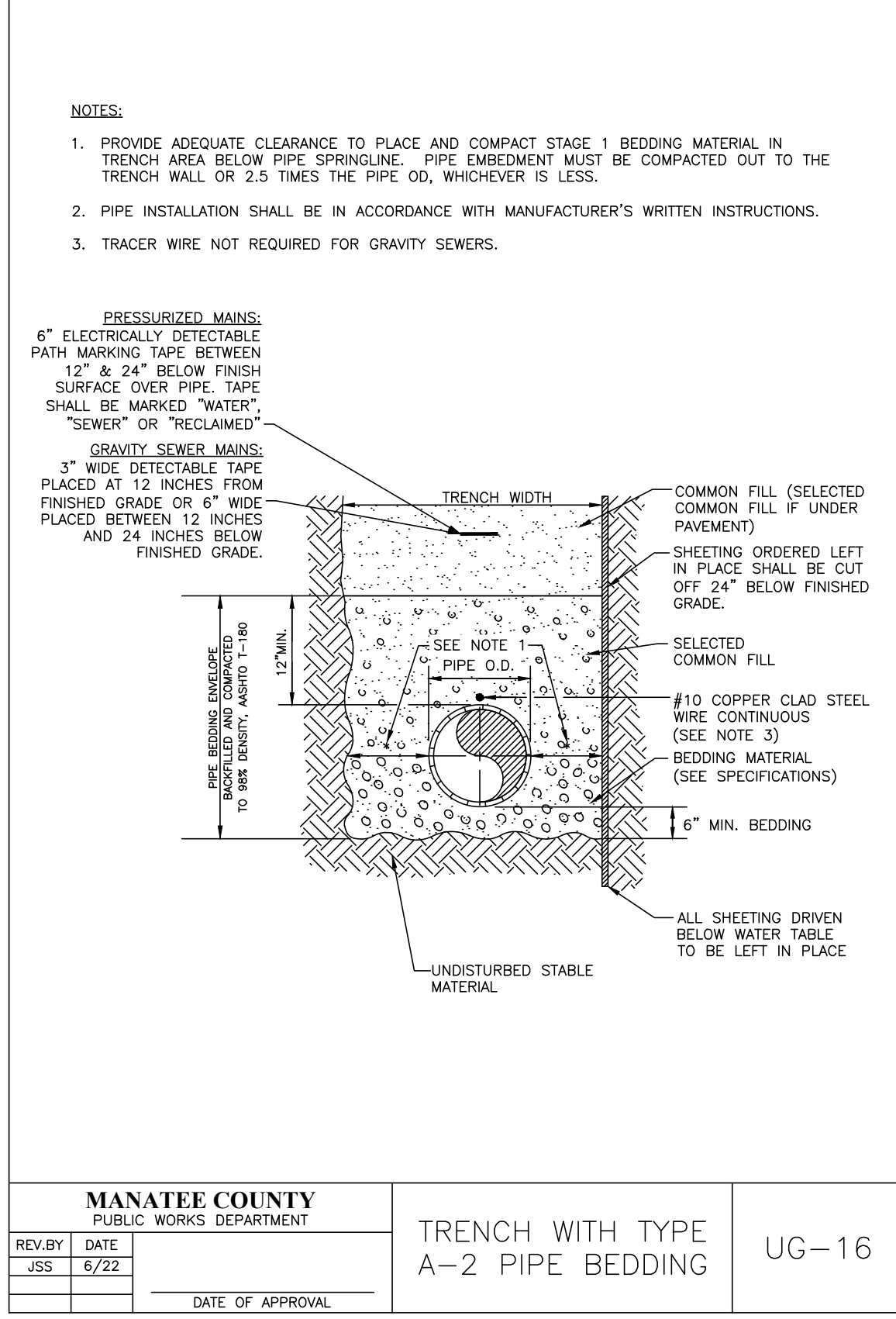
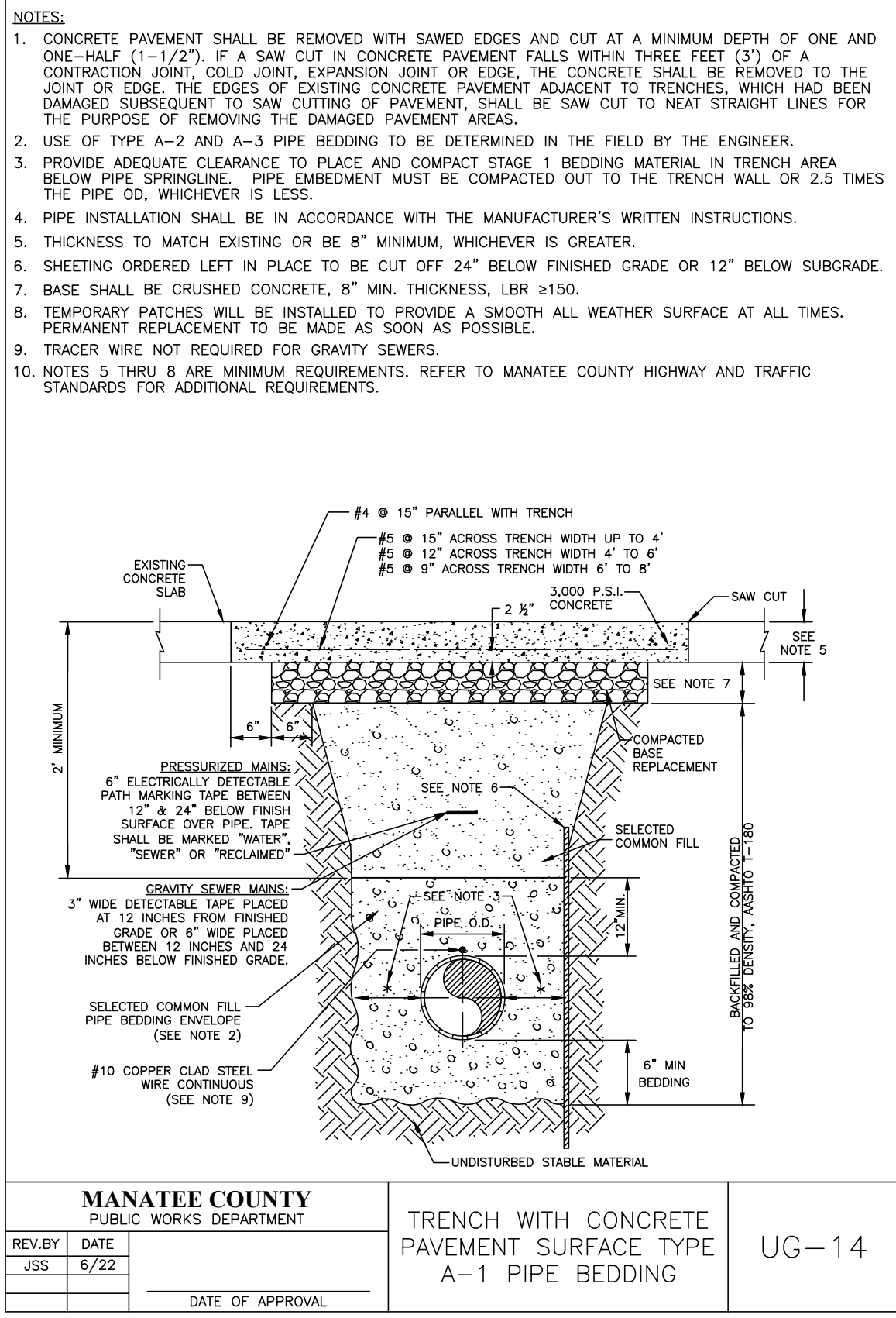


NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT DETAILS



PROJECT #	404-6046070	JOHN S. SHOUN, P.E.
SURVEY #	WA-2	FLORIDA LICENSE No. 60923
SEC./TWN./RGE	24/35S/17E	STATE OF FLORIDA PROFESSIONAL ENGINEER
SCALE	N.T.S.	DATE 08/11/2022
SURVEYED	SUR/TECH 05/2020	DESIGNED
DESIGNED	JSS/BLR 06/2020	DRAWN
DRAWN	BLR/JSS 06/2020	CHECKED
CHECKED	JR 10/2020	SHEET 24 OF 28



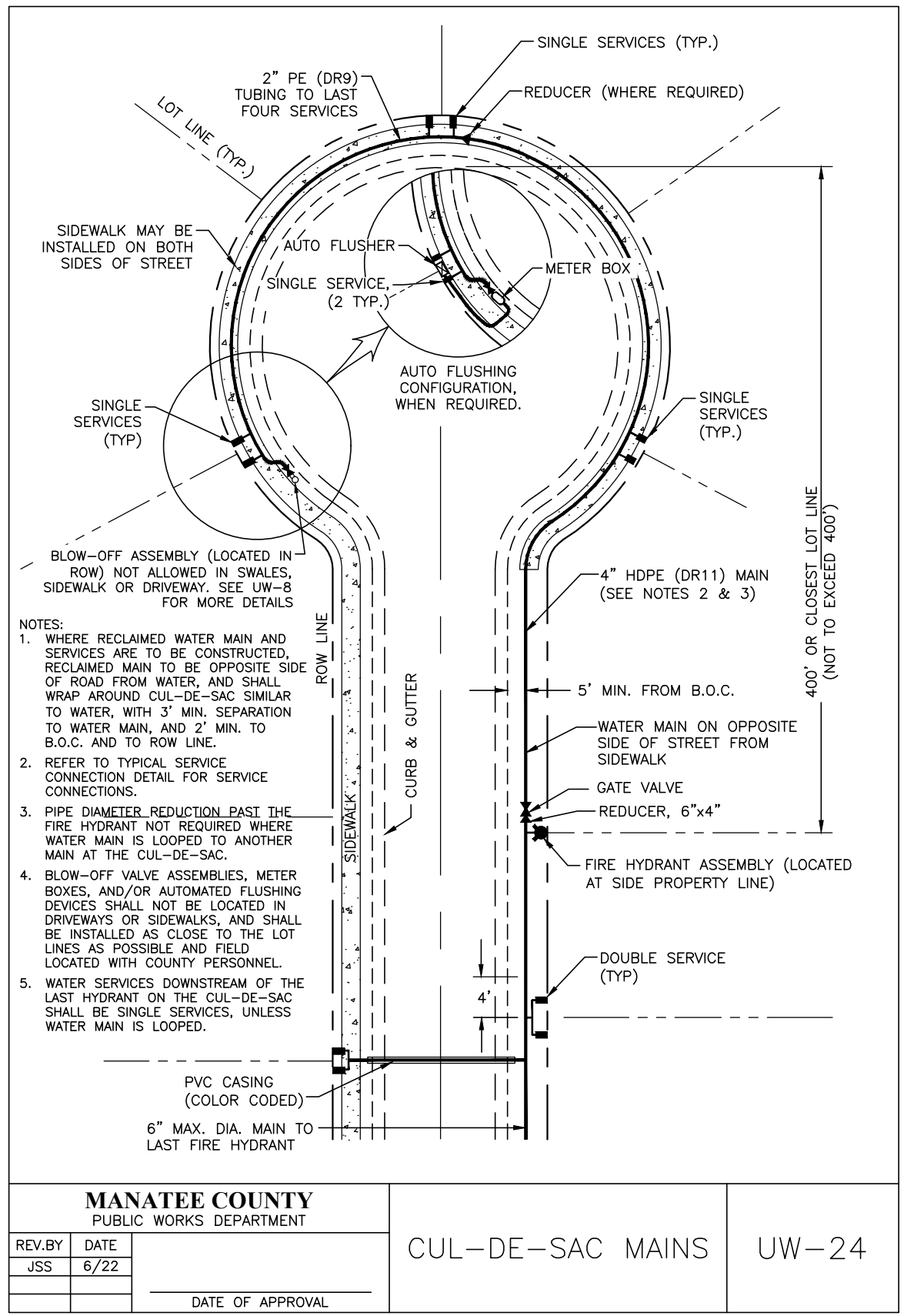
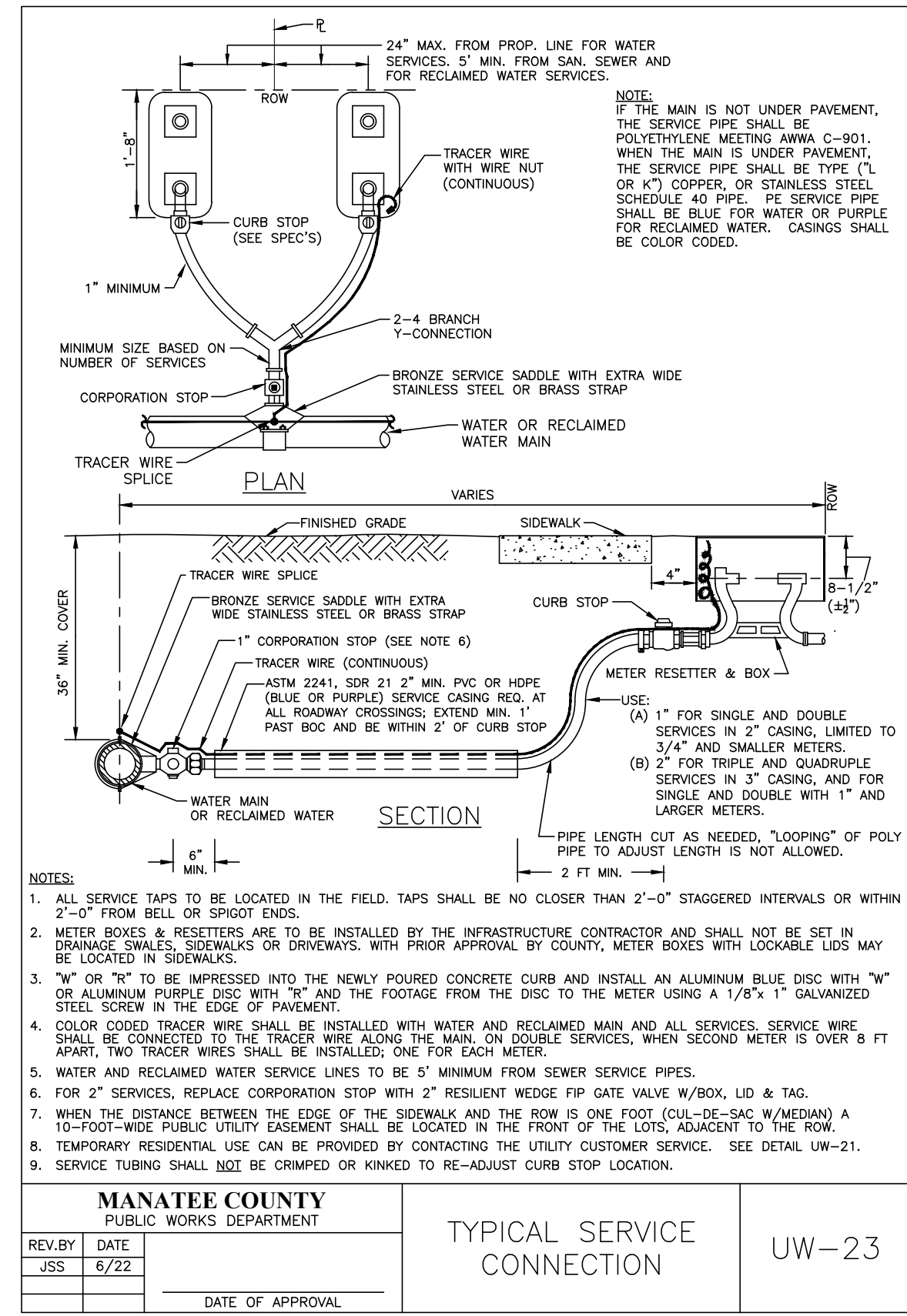
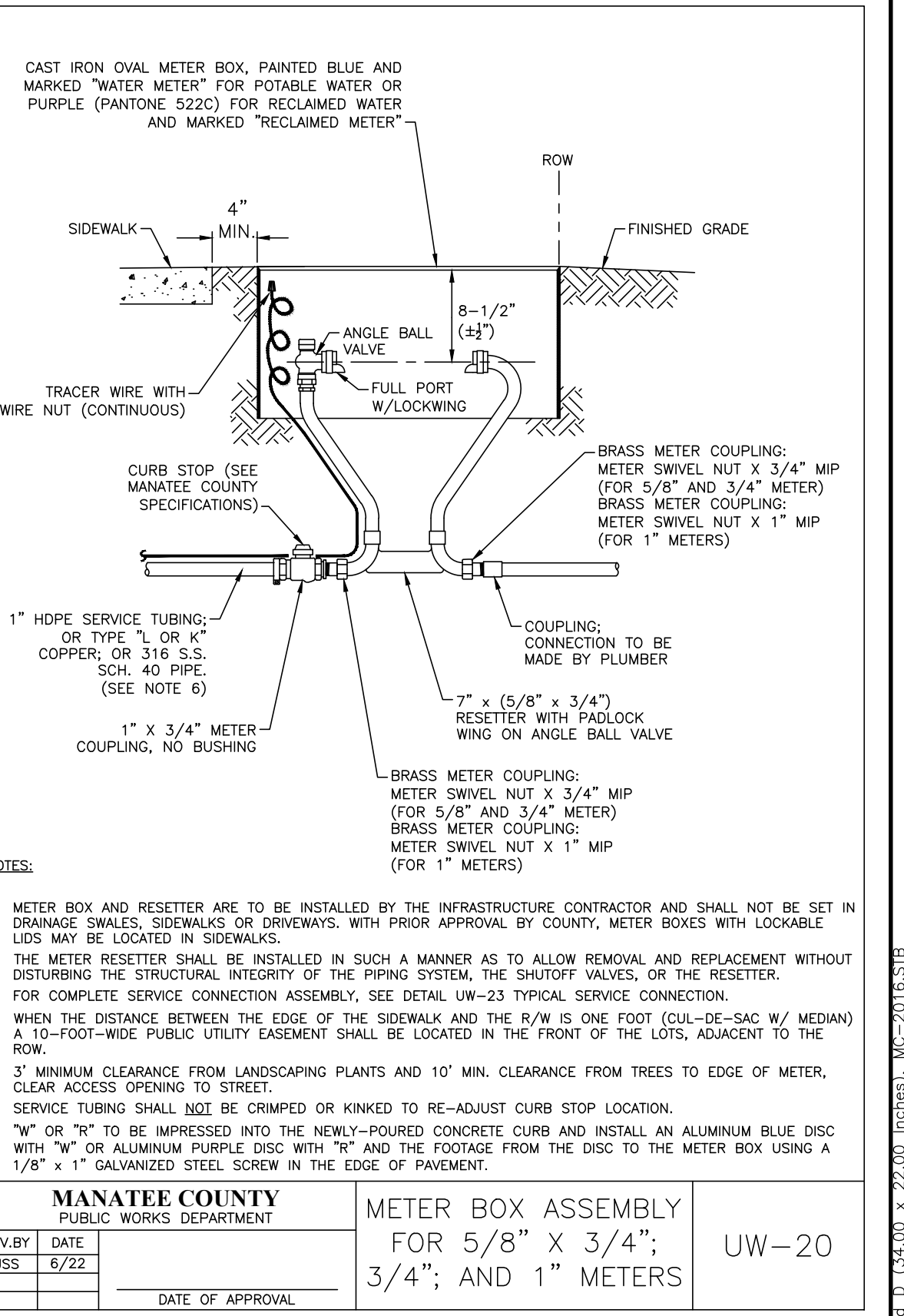
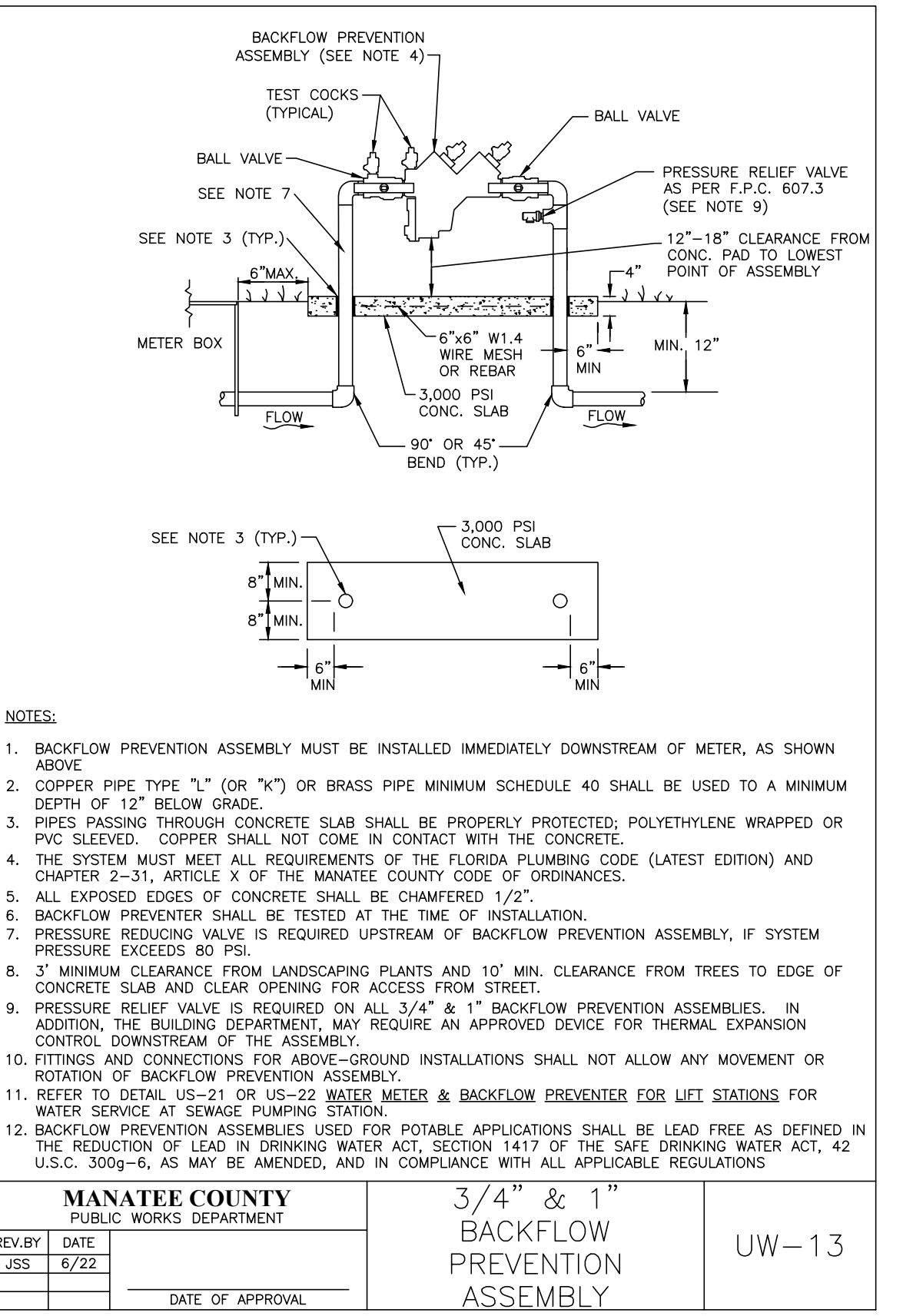
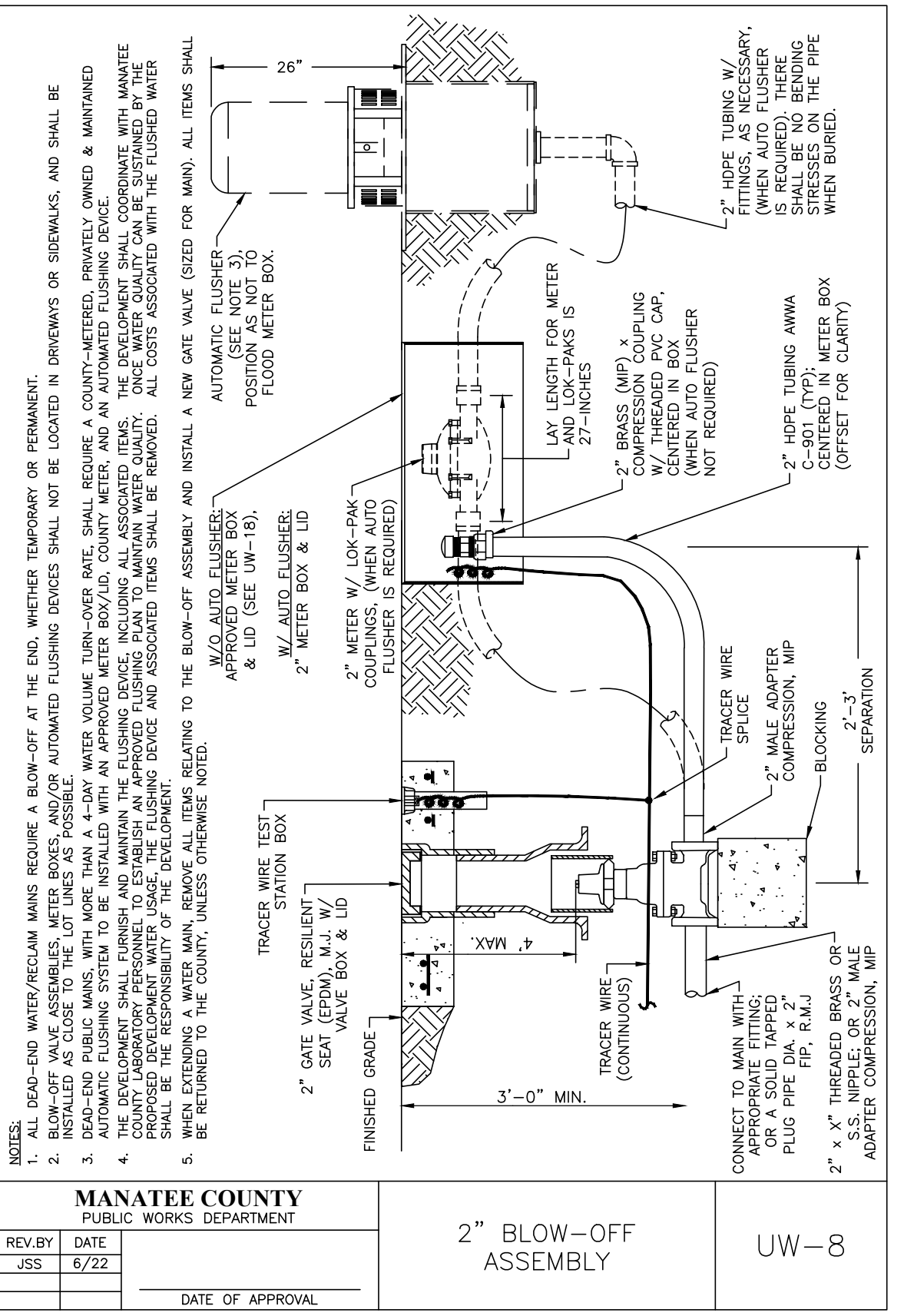
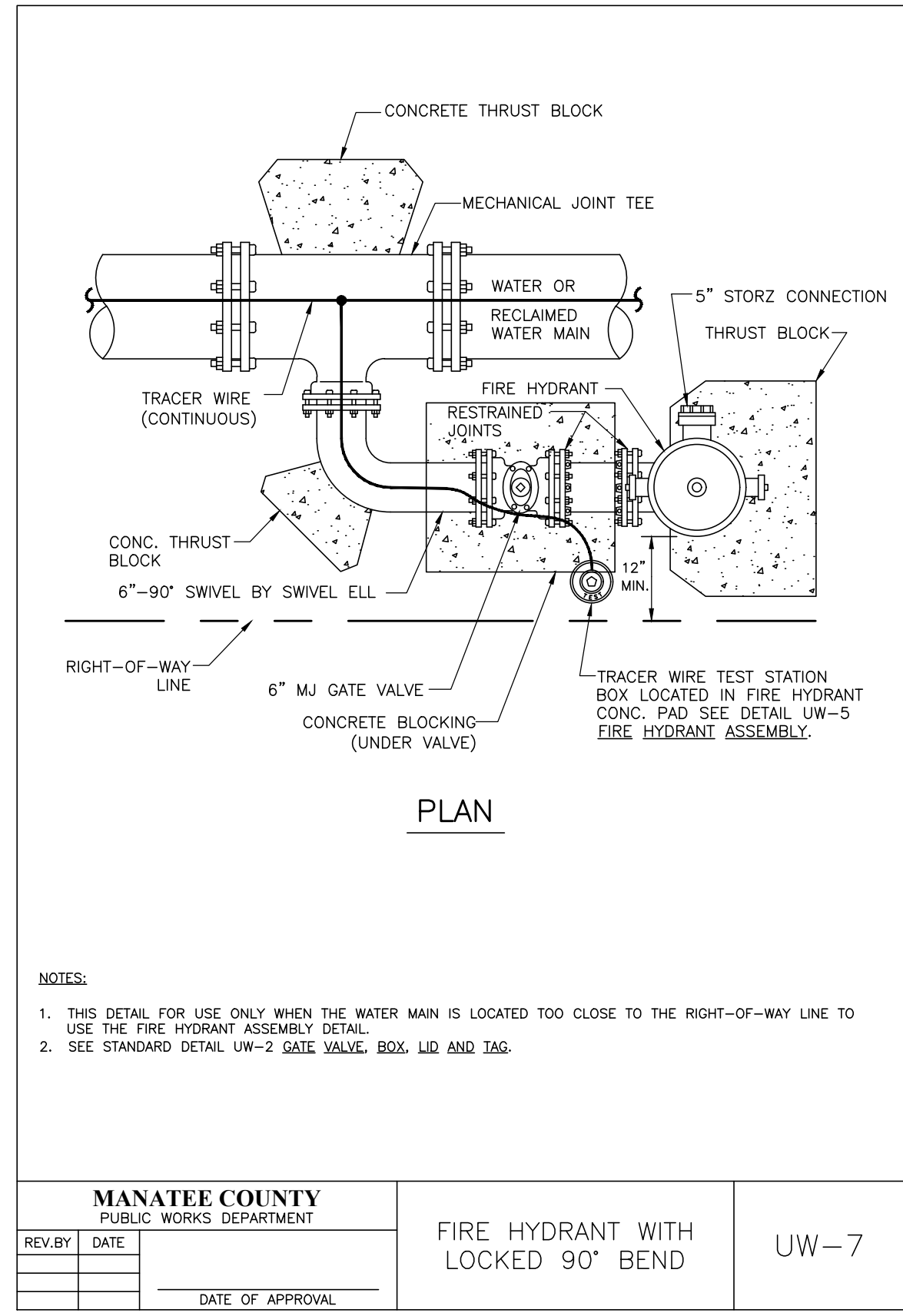
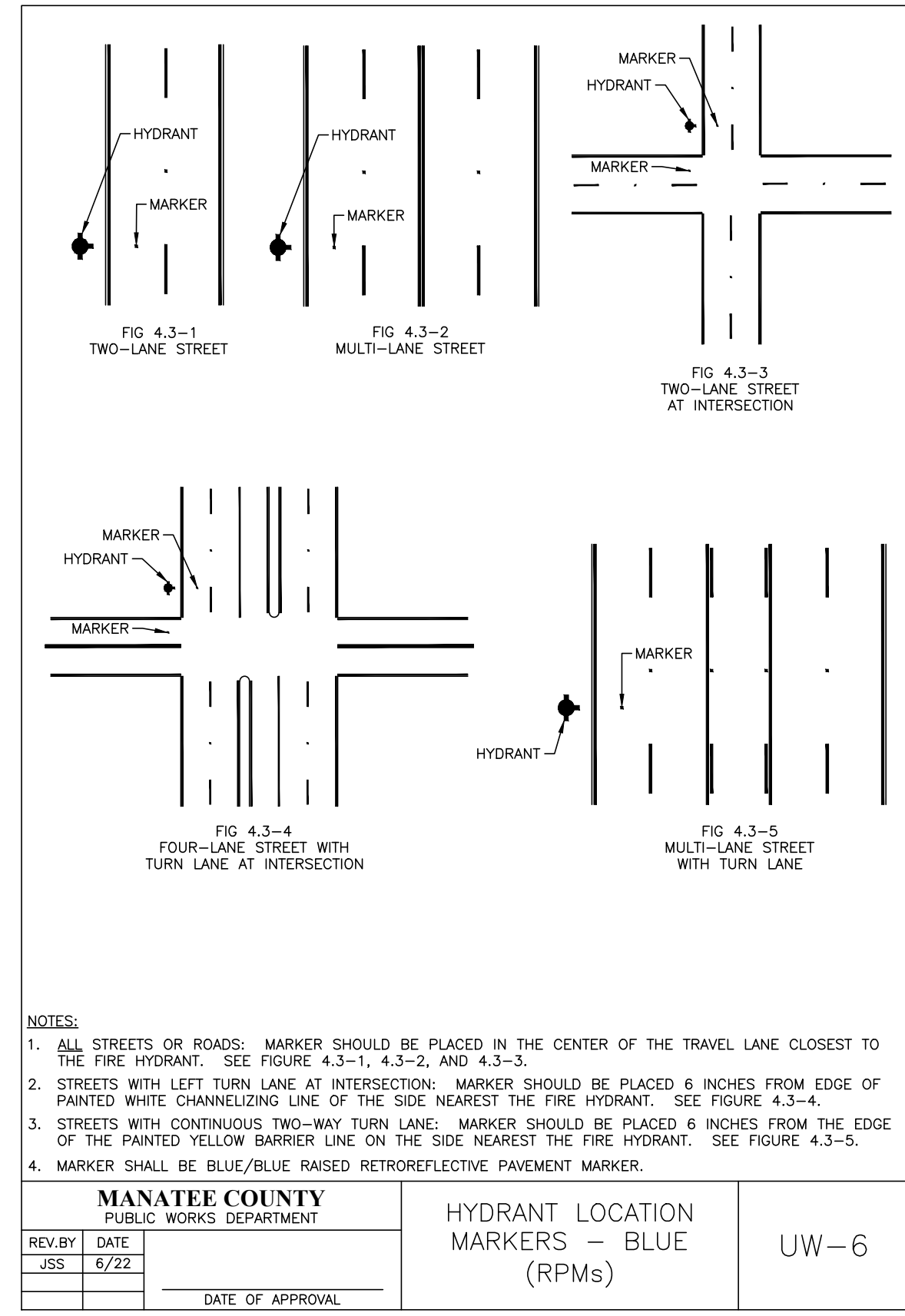
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT DETAILS

PROJECT #	404-6046070	JOHN S. SHOUN, P.E.
SURVEY #	WA-2	FLORIDA PROFESSIONAL ENGINEER No. 60923
SEC./TWN./RGE	24/35S/17E	STATE OF FLORIDA 08/11/2022
SCALE	N.T.S.	
SURVEYED	SUR/TECH 05/2020	
DESIGNED	JSS/BLR 06/2020	
DRAWN	BLR/JSS 06/2020	
CHECKED	JR 10/2020	

SHEET 25 OF 28

C:\Users\jss\Desktop\64th Ave-65th Ave Dr-Winter Gardens Dr-Water Main Replacement - 11 - ANS (Full Sheet) 04.000 (7/22/2022 2:05 PM) - Project: Water - Systems - Utilities - Winter Gardens - Cover - Notes - Details - UG-14, UG-16, UG-17, UG-18, UG-19, UW-2, UW-3, UW-4, UW-5
 Manatee County Public Works Department
 1022 26th Avenue East, Bradenton, FL 34208



NO.	REVISION DESCRIPTION	BY	DATE

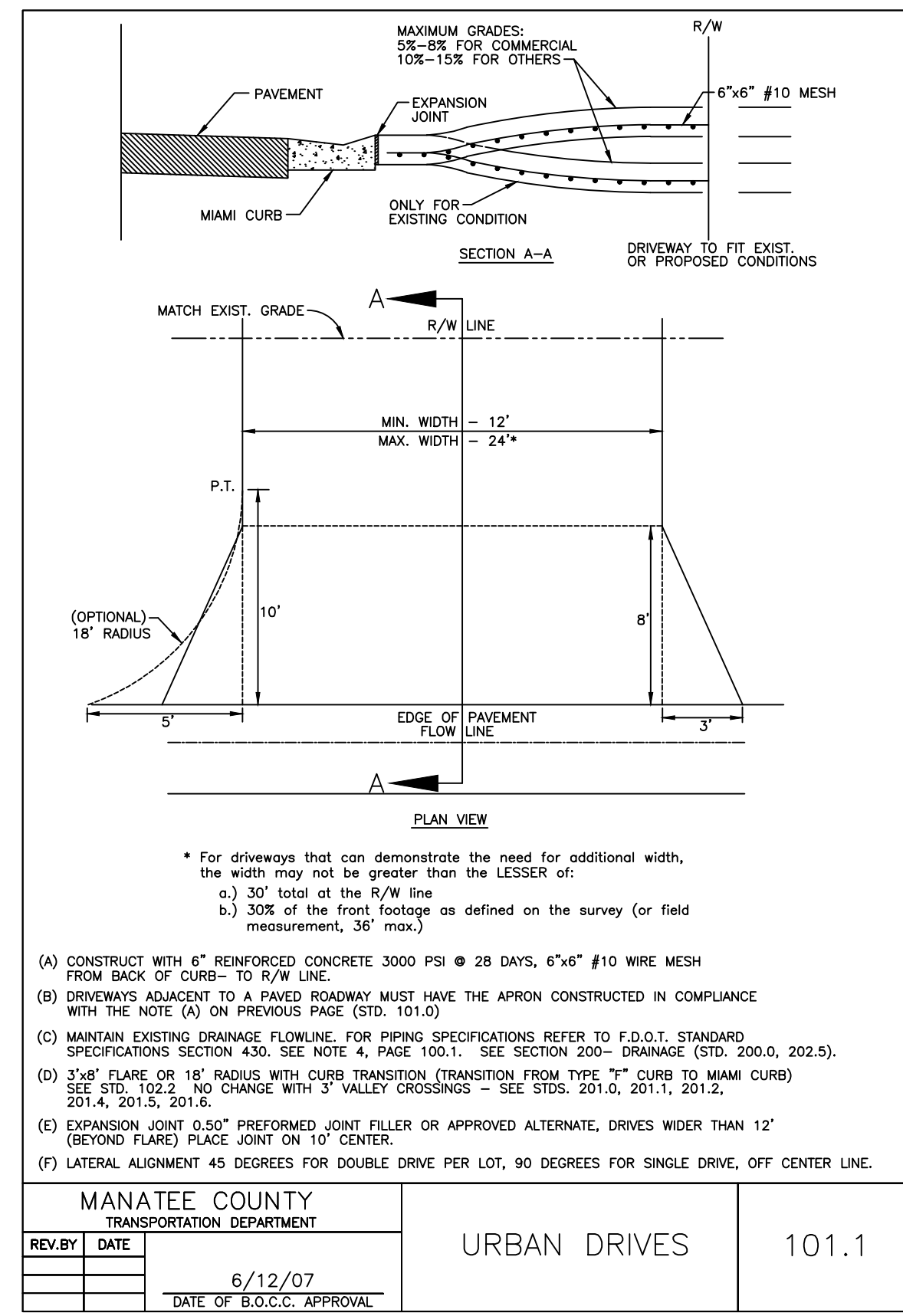
64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT DETAILS



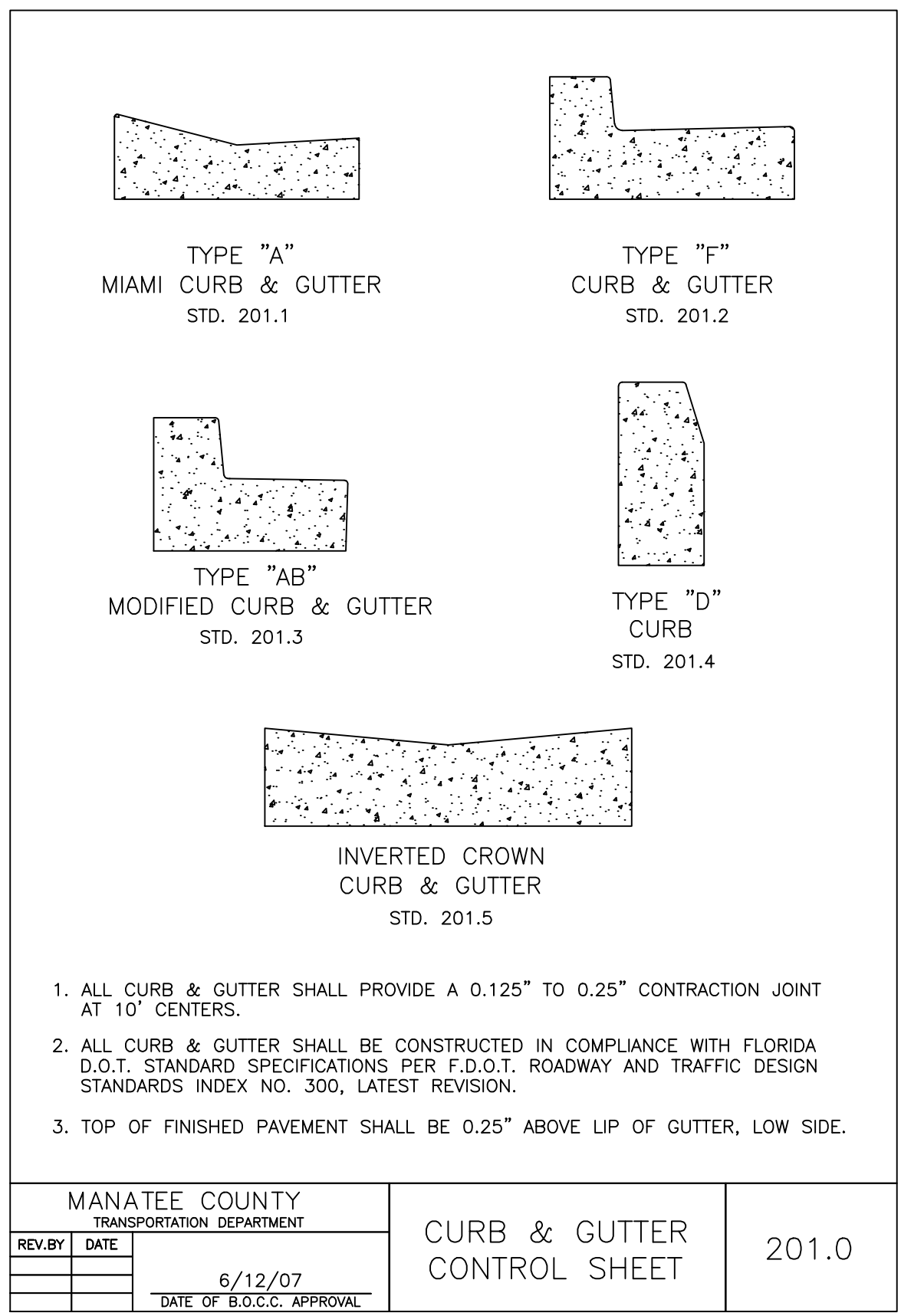
PROJECT #	404-6046070	JOHN S. SHOUN, P.E.
SURVEY #	WA-2	FLORIDA PROFESSIONAL ENGINEER LICENSE No. 60923
SEC./TWN./RGE	24/35S/17E	DATE: 02/11/2022
SCALE	N.T.S.	DATE: _____
SURVEYED	SUR/TECH 05/2020	DATE: _____
DESIGNED	JSS/BLR 06/2020	DATE: _____
DRAWN	BLR/JSS 06/2020	DATE: _____
CHECKED	JR 10/2020	DATE: _____

SHEET 26 OF 28

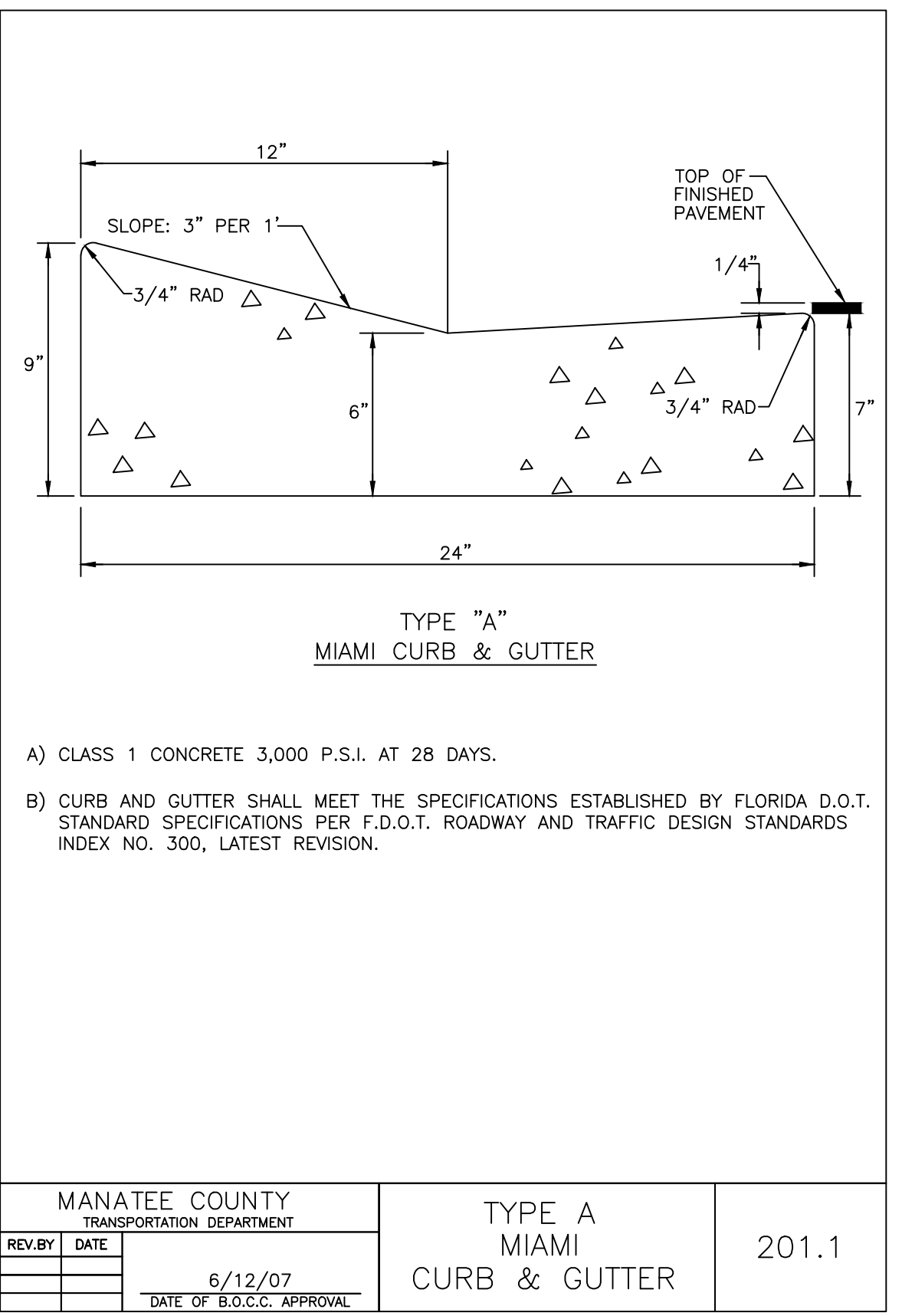
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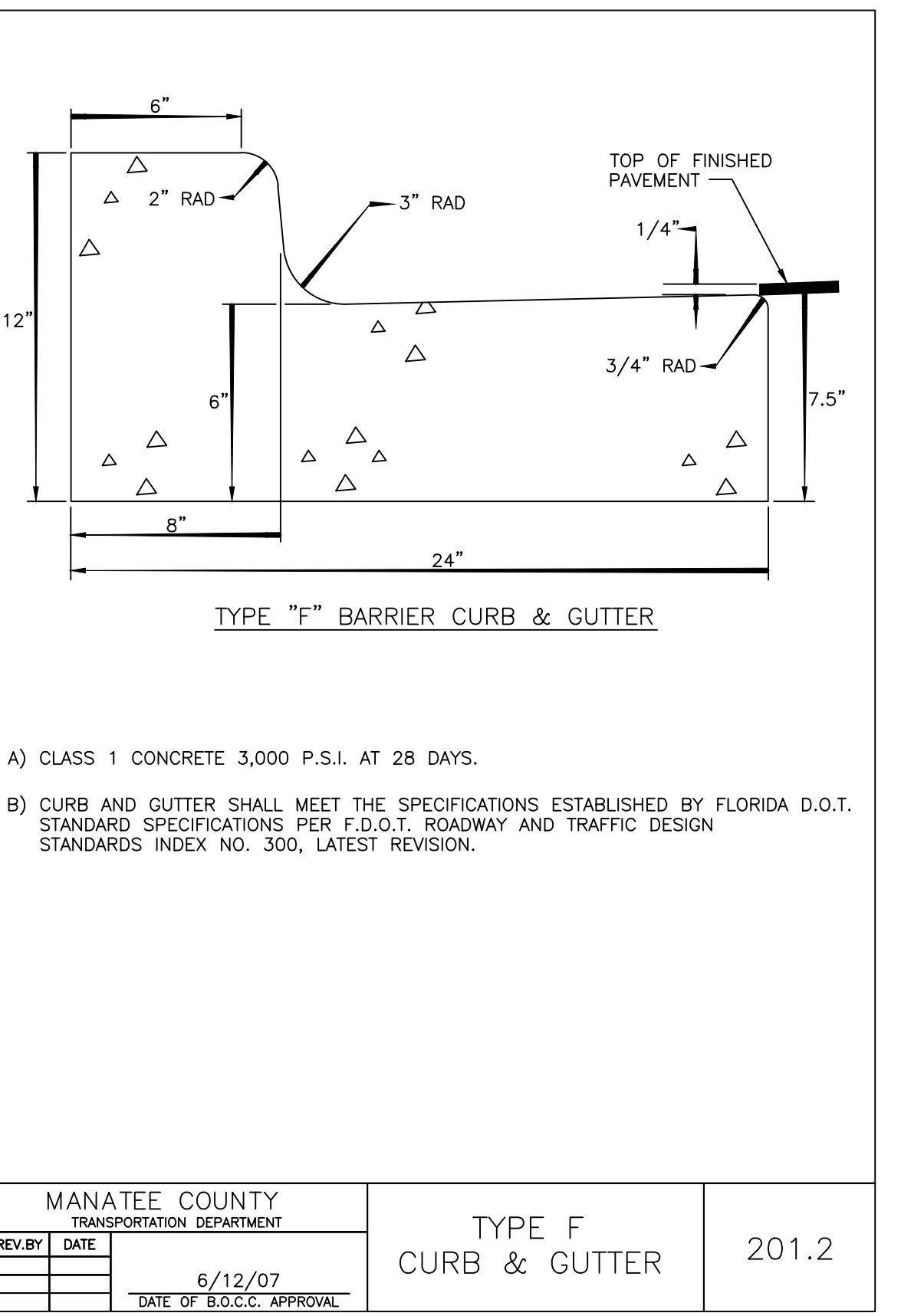
MANATEE COUNTY TRANSPORTATION DEPARTMENT	URBAN DRIVES	101.1
REV. BY DATE	6/12/07	DATE OF B.O.C.C. APPROVAL



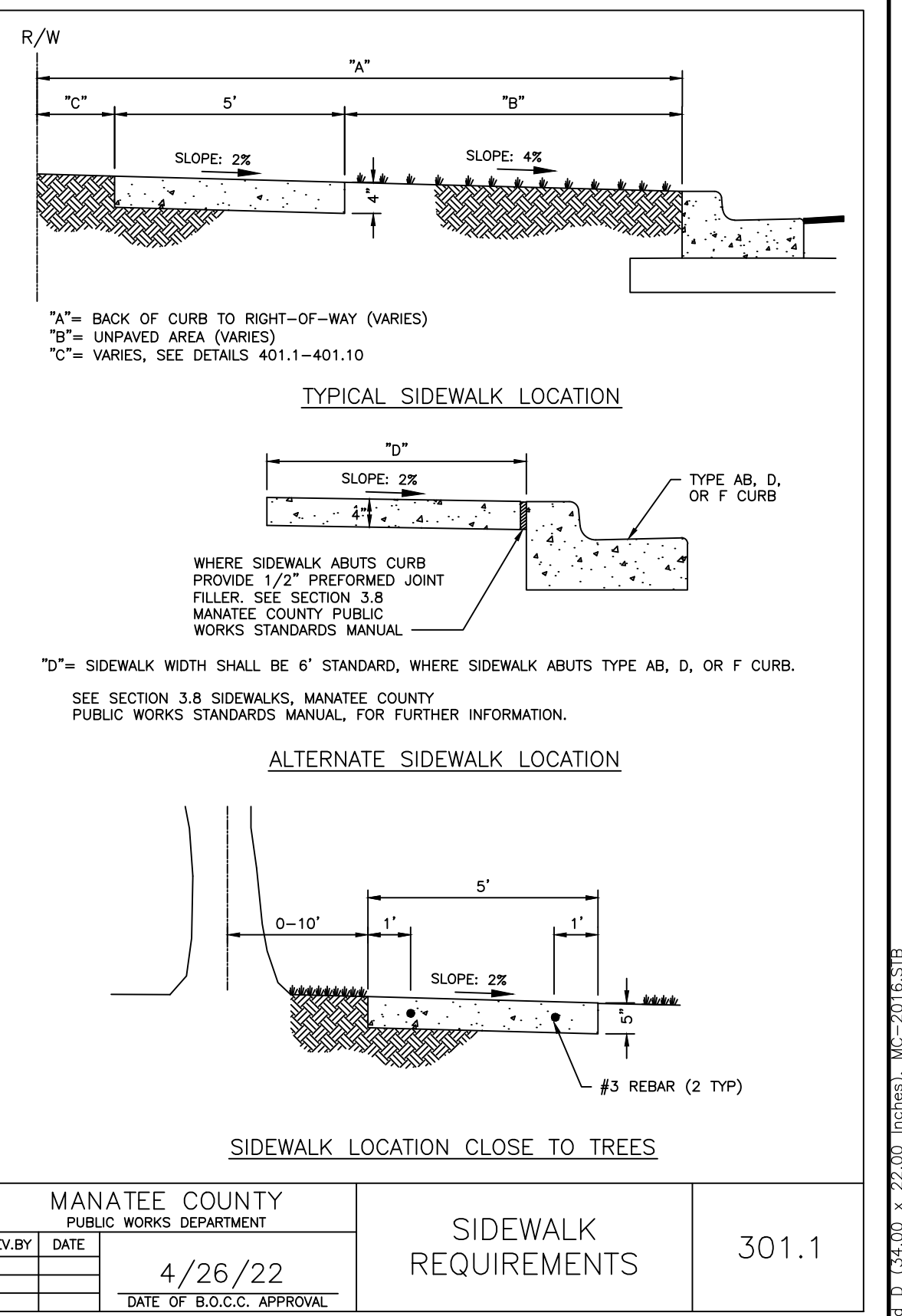
MANATEE COUNTY TRANSPORTATION DEPARTMENT	CURB & GUTTER CONTROL SHEET	201.0
REV. BY DATE	6/12/07	DATE OF B.O.C.C. APPROVAL



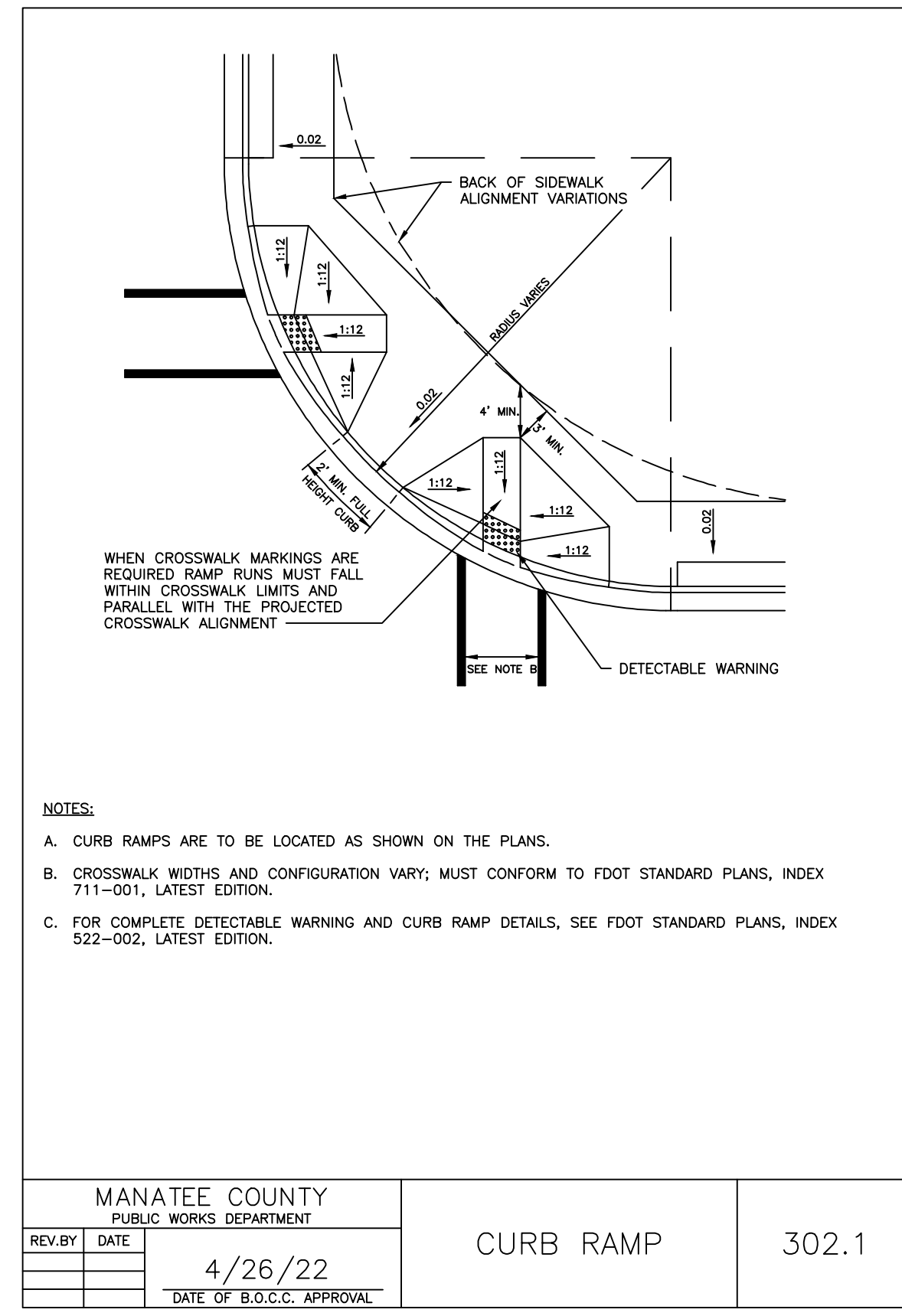
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REV. BY DATE	6/12/07	DATE OF B.O.C.C. APPROVAL



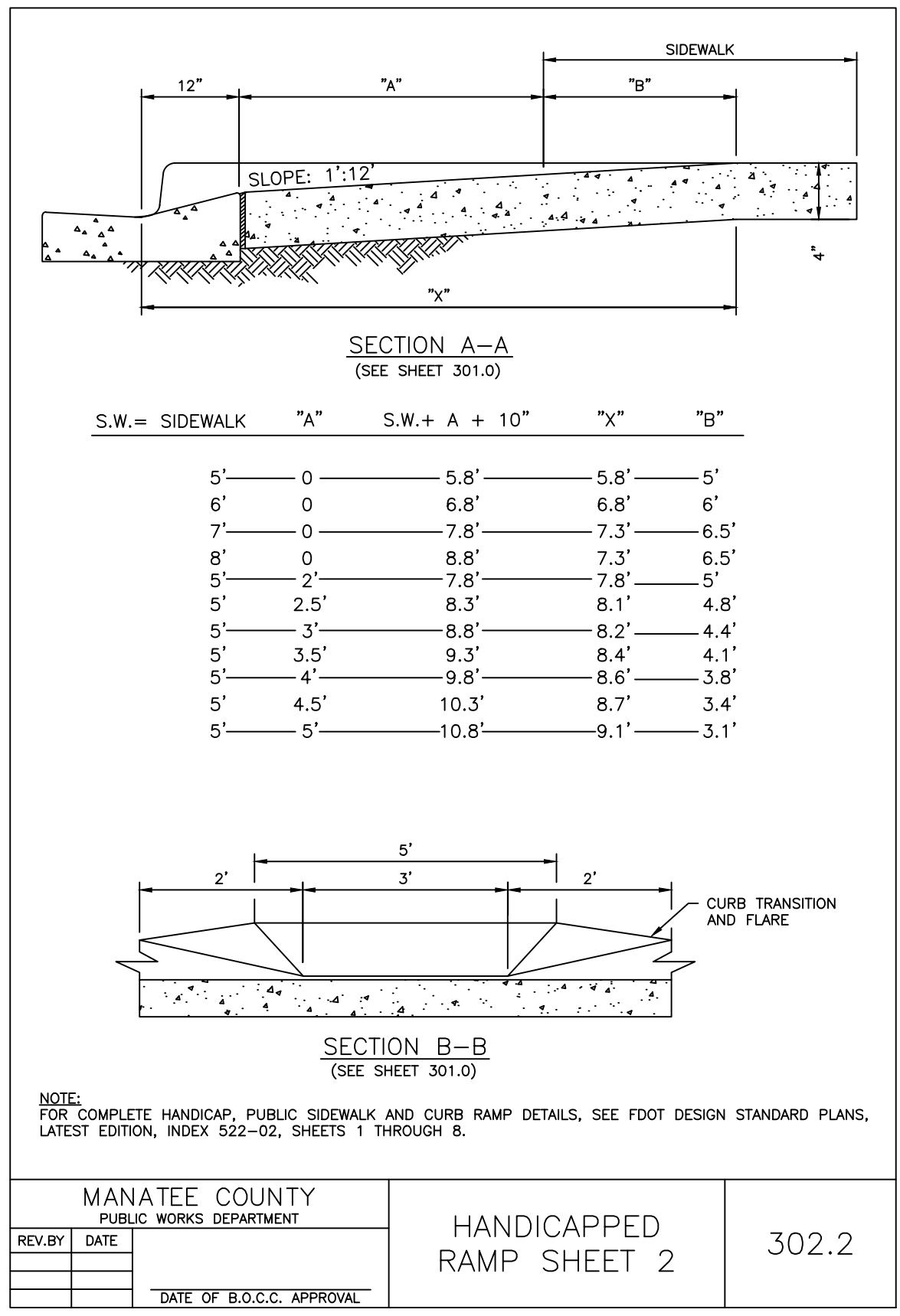
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REV. BY DATE	6/12/07	DATE OF B.O.C.C. APPROVAL



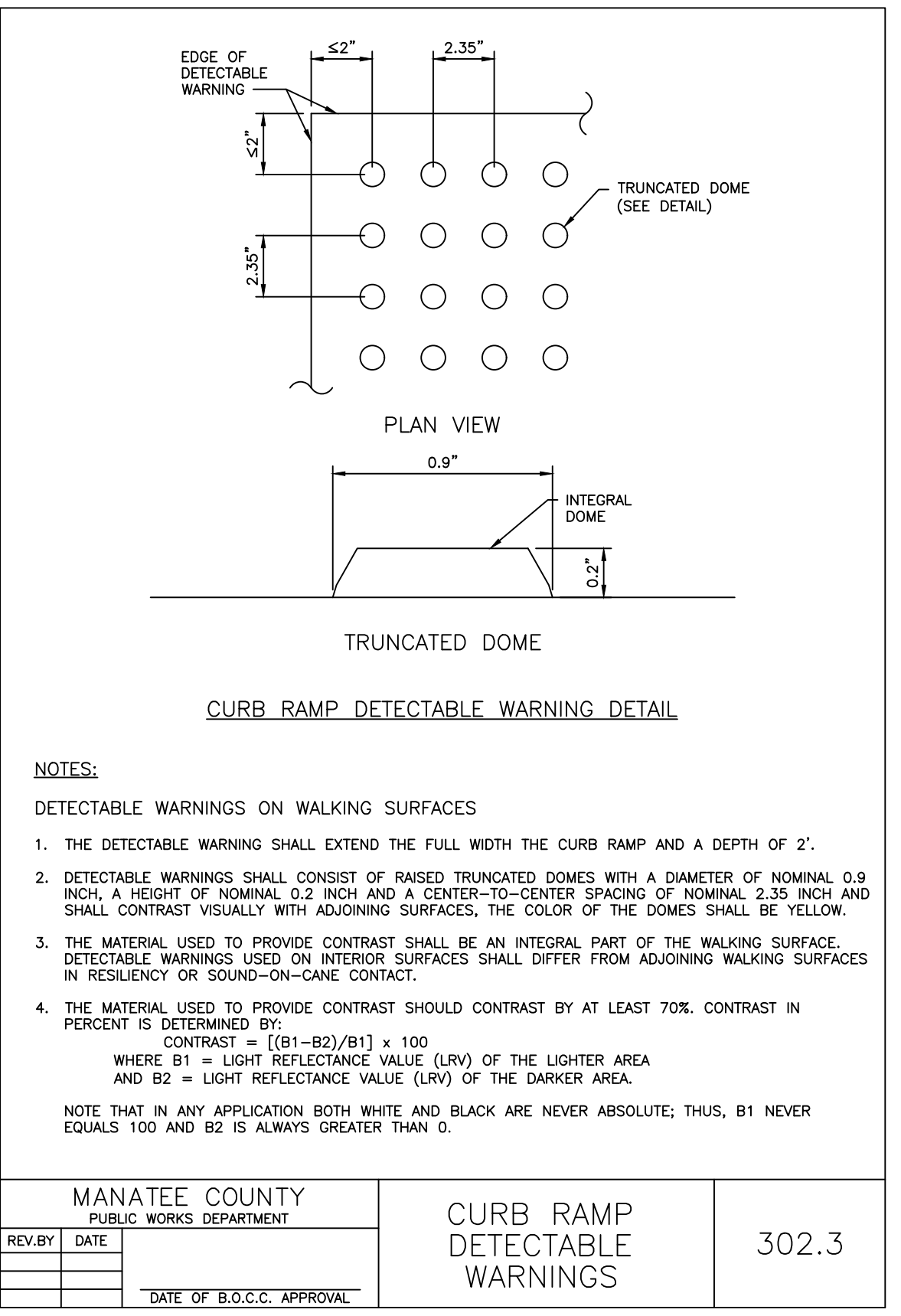
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SIDEWALK REQUIREMENTS	301.1
REV. BY DATE	4/26/22	DATE OF B.O.C.C. APPROVAL



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	CURB RAMP	302.1
REV. BY DATE	4/26/22	DATE OF B.O.C.C. APPROVAL



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	HANDICAPPED RAMP SHEET 2	302.2
REV. BY DATE	4/26/22	DATE OF B.O.C.C. APPROVAL



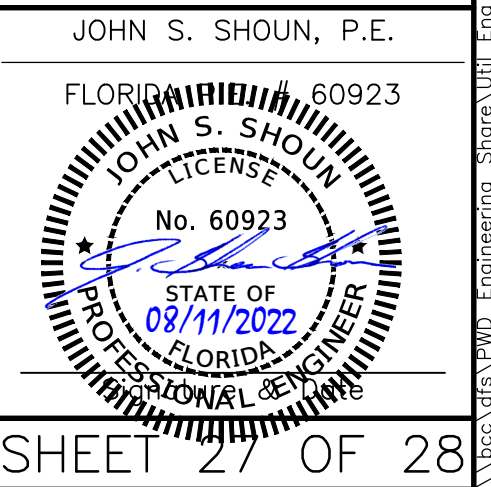
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	CURB RAMP DETECTABLE WARNINGS	302.3
REV. BY DATE	4/26/22	DATE OF B.O.C.C. APPROVAL

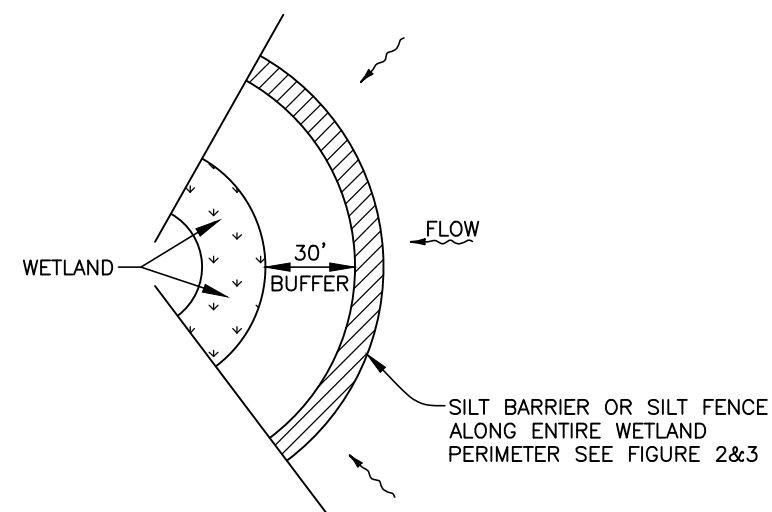
NO.	REVISION DESCRIPTION	BY	DATE

64TH AVE-65TH AVE DR-WINTER GARDENS DR WATER MAIN REPLACEMENT DETAILS

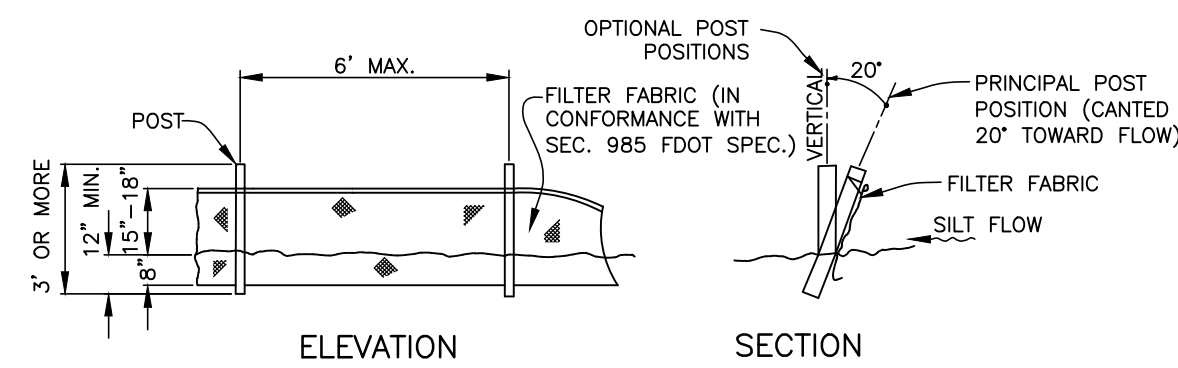


PROJECT #	404-6046070	JOHN S. SHOUN, P.E.
SURVEY #	WA-2	FLORIDA LICENSE NO. 60923
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SCALE	N.T.S.	
SURVEYED	SURVTECH 05/2020	
DESIGNED	JSS/BLR 06/2020	
DRAWN	BLR/JSS 06/2020	
CHECKED	JR 10/2020	

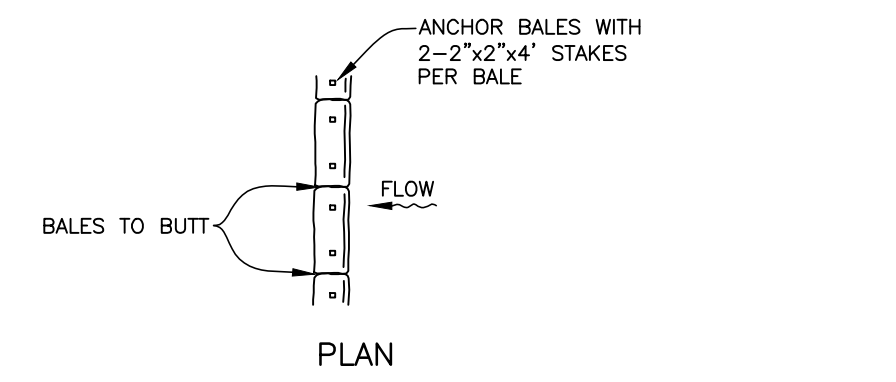




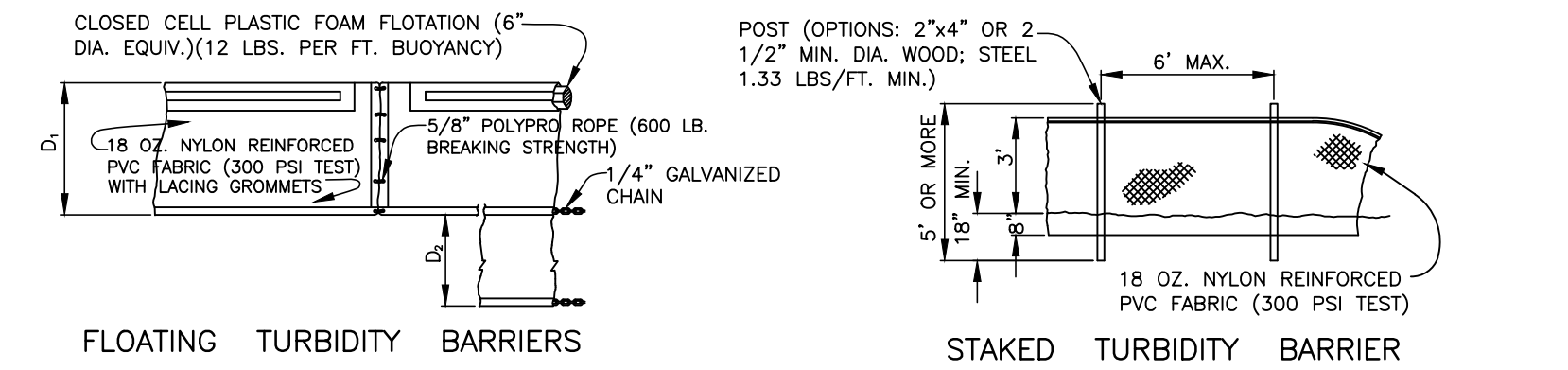
WETLAND BUFFER
FIGURE 1



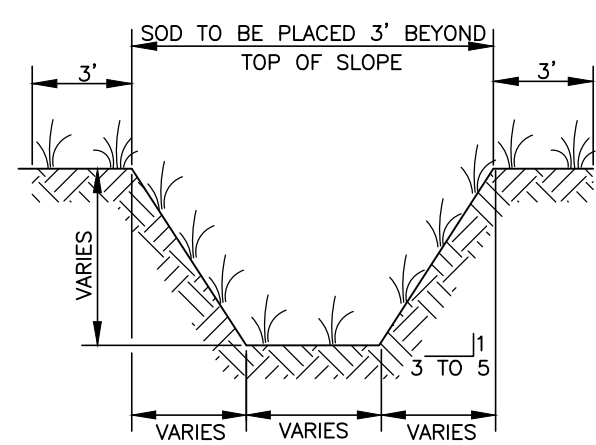
TYPICAL SILT FENCE
FIGURE 2



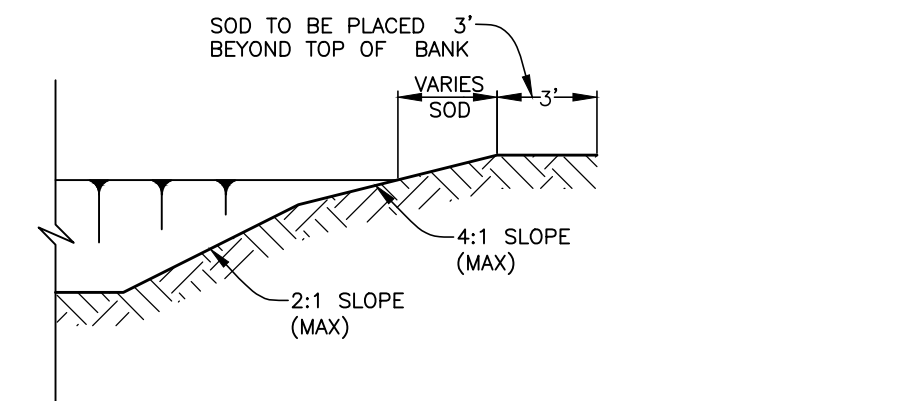
TYPICAL BALE SILT BARRIER
FIGURE 3



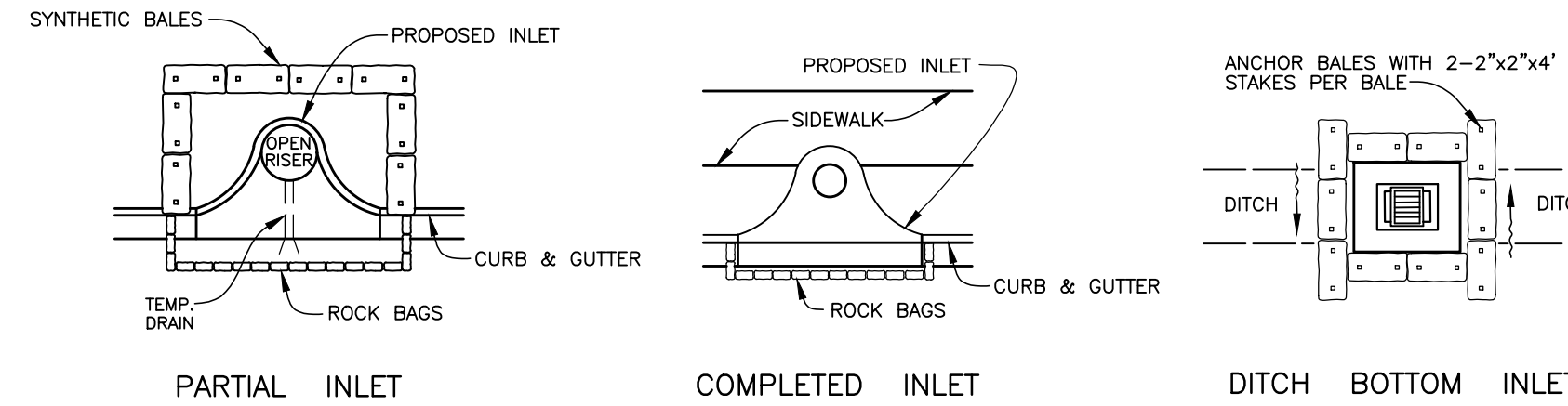
TURBIDITY BARRIERS
FIGURE 4



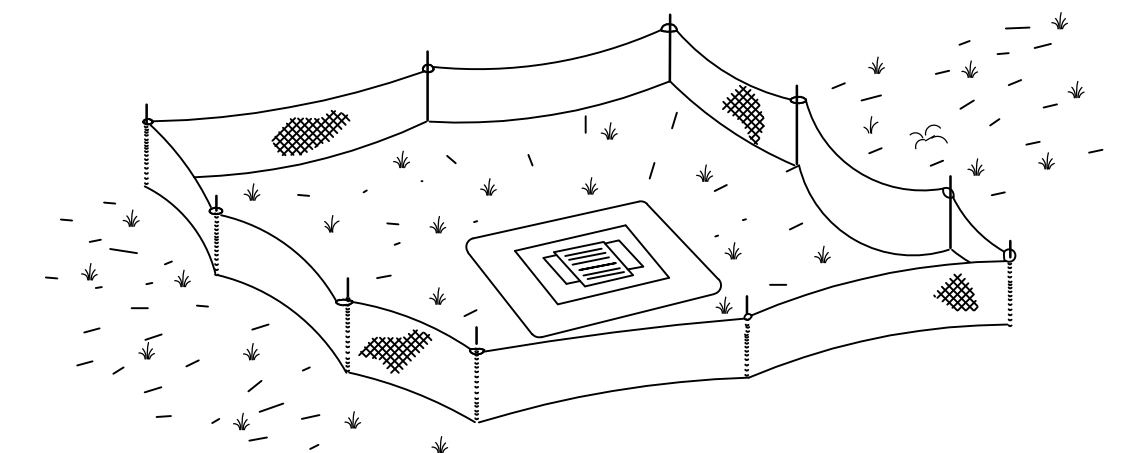
TYPICAL SWALE SECTION
FIGURE 5



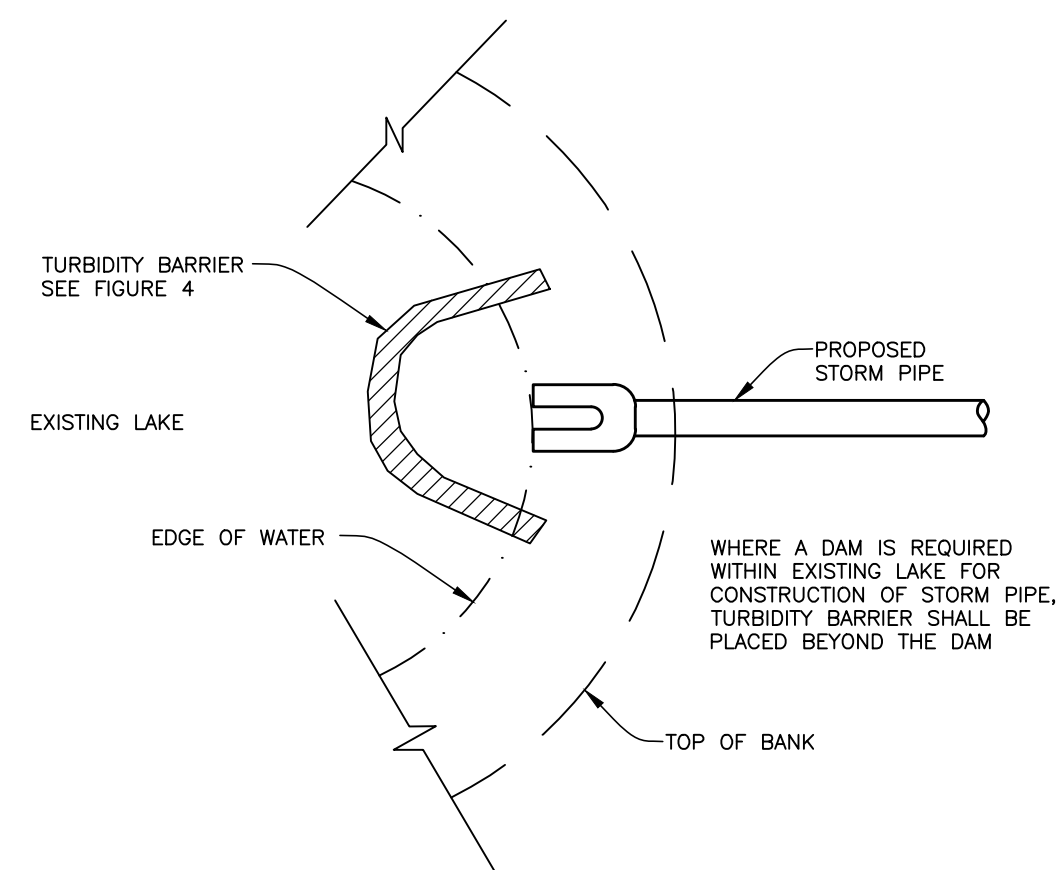
TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6



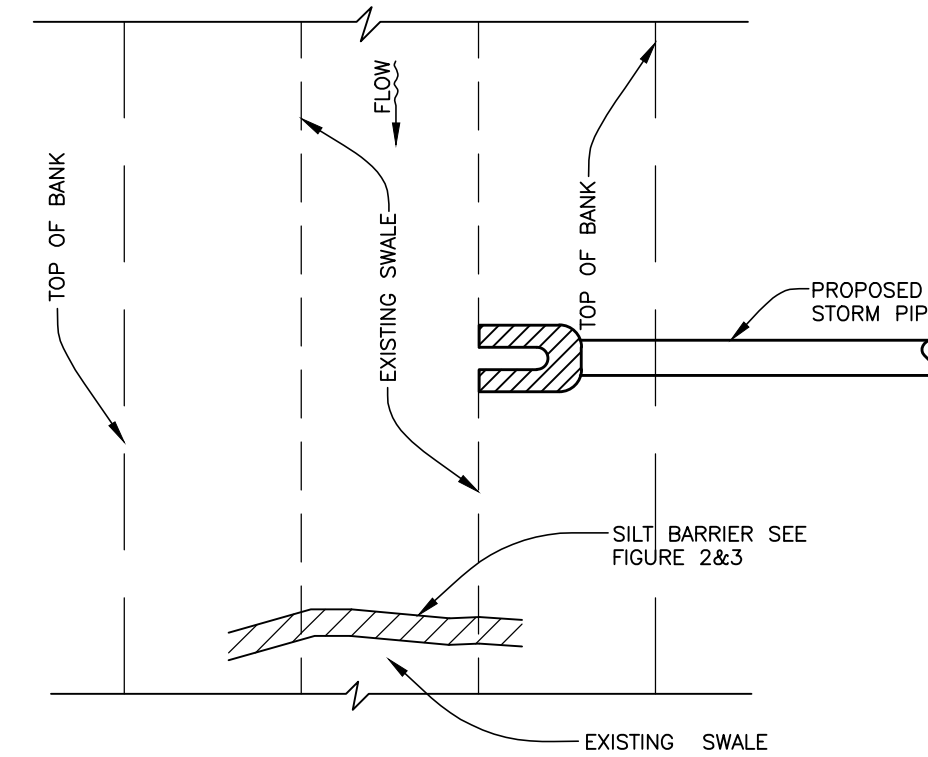
SYNTHETIC BALE PROTECTION AROUND
INLETS OR SIMILAR STRUCTURES
FIGURE 7



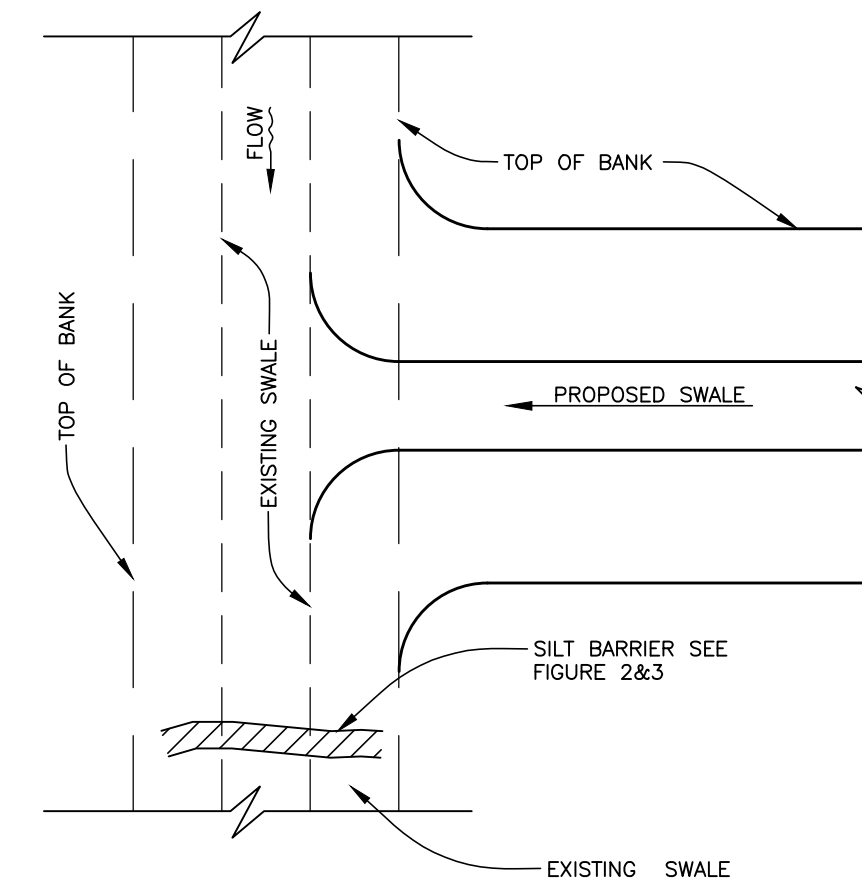
TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS
STAKED SILT BARRIER OR SILT FENCE
PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



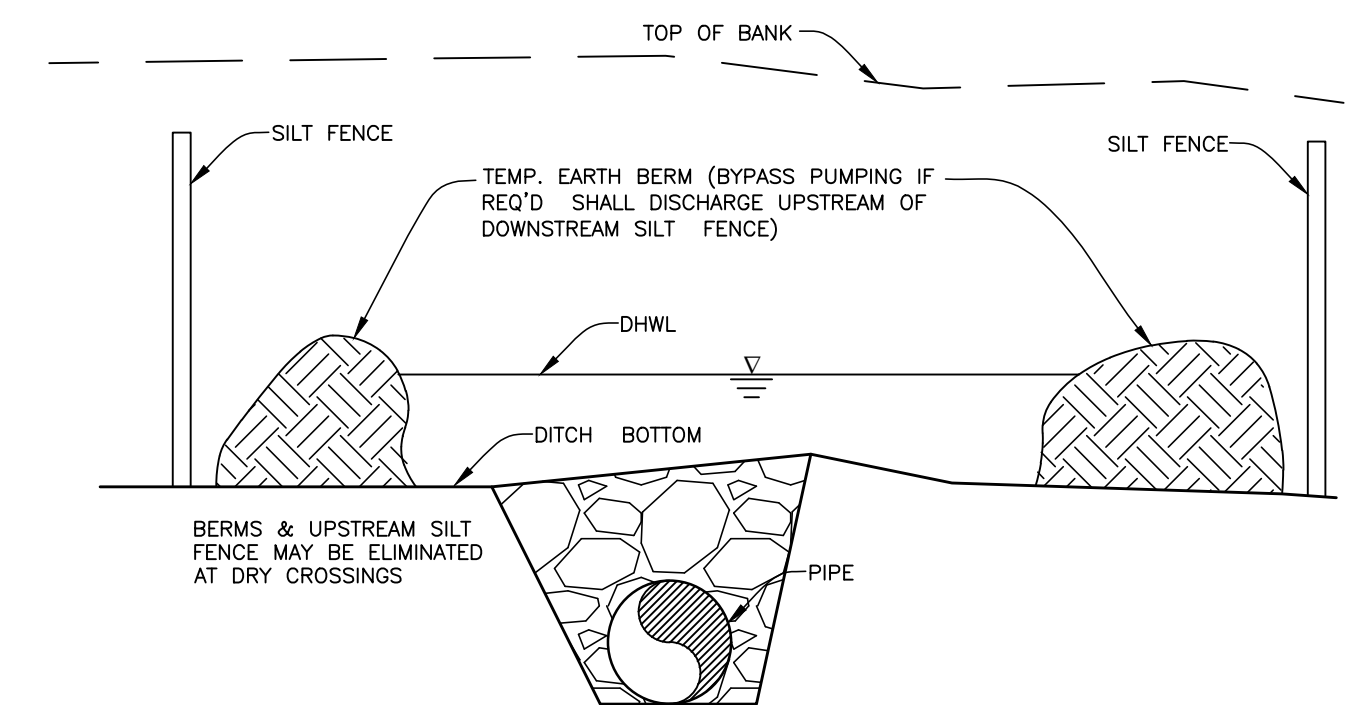
TURBIDITY BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING LAKE
FIGURE 9



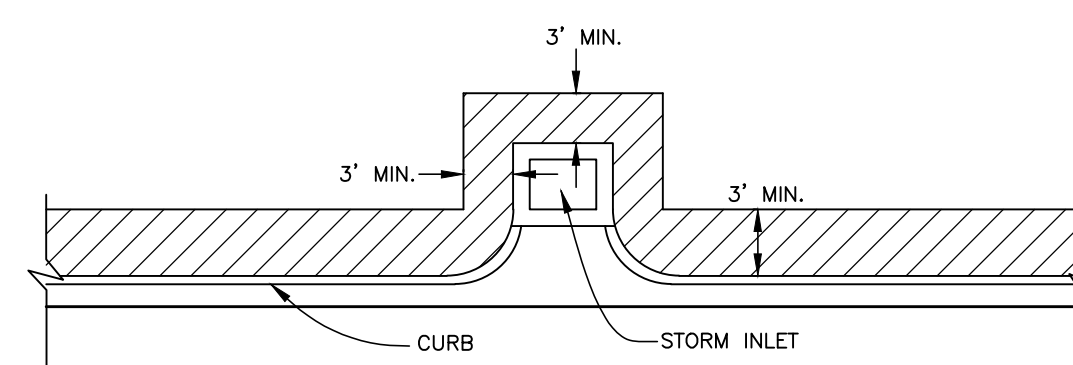
SILT BARRIER AT CONNECTION OF
STORM PIPE TO EXISTING SWALE
FIGURE 10



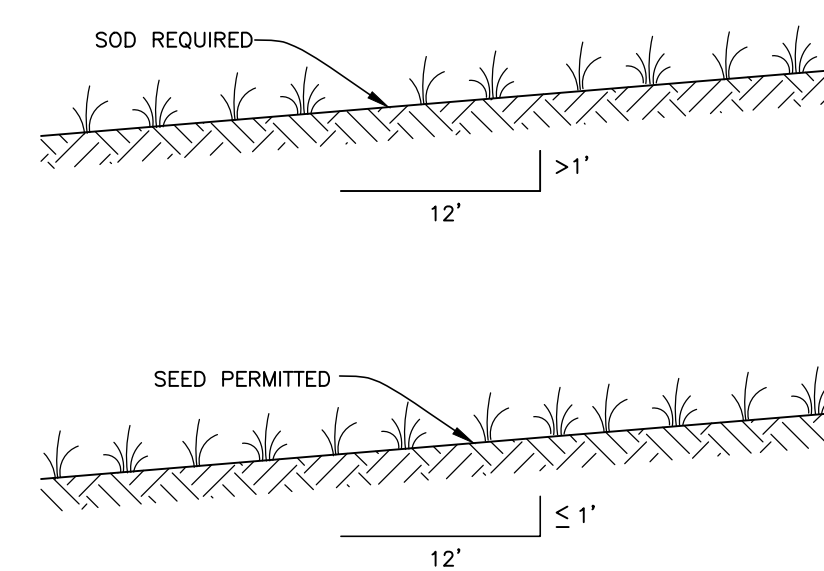
SILT BARRIER AT CONNECTION
OF SWALE TO EXISTING SWALE
FIGURE 11



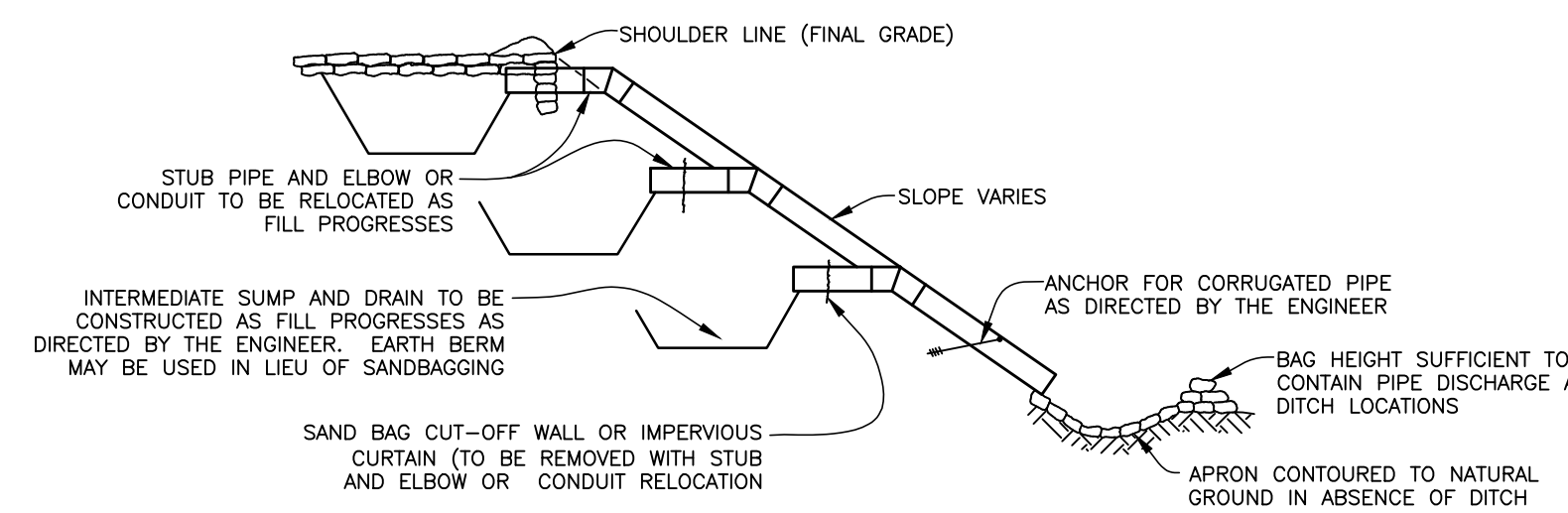
UNDERGROUND PIPE CROSSING
FIGURE 12



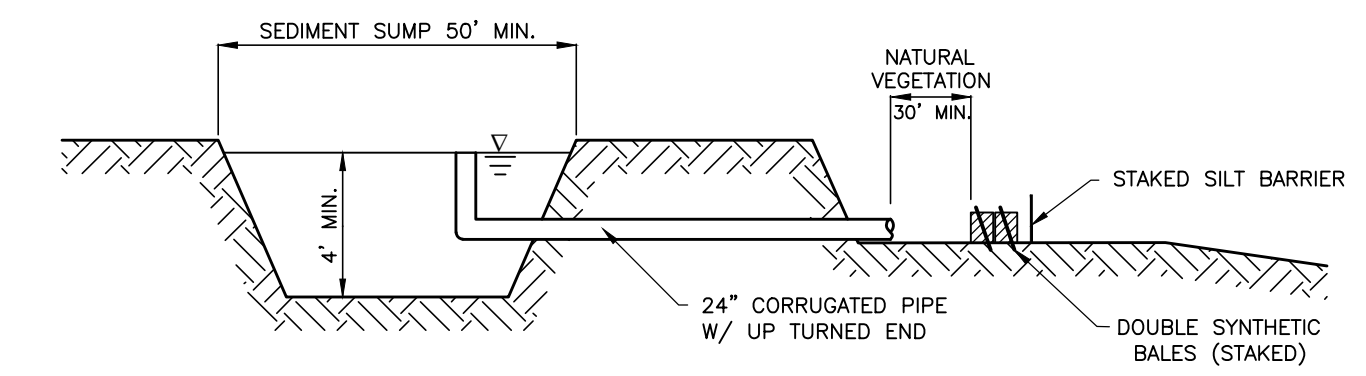
SOD ALONG CURB
AND AROUND INLET
FIGURE 14



GRASS SLOPES
FIGURE 13



SECTION AA
TEMPORARY SLOPE DRAIN
FIGURE 15



SEDIMENT SUMP SECTION
FIGURE 16

NOTE:
REFERENCE THE STATE OF FLORIDA EROSION
AND SEDIMENT CONTROL DESIGNER AND
REVIEWER MANUAL, LATEST EDITION, FOR ALL
TEMPORARY EROSION CONTROL MEASURES

NO.	REVISION DESCRIPTION	BY	DATE

**64TH AVE-65TH AVE DR-WINTER GARDENS DR
WATER MAIN REPLACEMENT
EROSION CONTROL**



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JOHN S. SHOUN, P.E.
FLORIDA LICENSE NO. 60923
08/11/2022
STATE OF FLORIDA
PROFESSIONAL ENGINEER