

CONSTRUCTION DRAWINGS FOR GALVANIZED PIPE REPLACEMENT PROGRAM COLLEGE STREET AREA -

JEA AVAIL. NO.: 2020-1747
JEA PROJ. NO.: 8006342
ETM PROJ. NO.: 18-171



PLAN APPROVAL IS SUBJECT TO THE
FOLLOWING NOTES AND CONDITIONS:

**VERTICAL DATUM USED FOR
THIS PROJECT: NAVD 88**

GENERAL	
City Development Number	4161.344
Currency Application Number	
Property Appraiser Number (RE #)	
Zoning Designation	
ZONING Application(s) (if any)	
PUD Ordinance Number	
FIRM - Community - Panel	-
Flood Zones (Show in Plans)	
Base Flood Elev. (Show in Plans)	-
Vertical Datum Used for Project	NAVD 88
JEA Availability Number	2020-1747
<u>SUBDIVISION</u>	
PSD Number	XXX
City Private Inspection	XXX
Public or Private Roads	XXX
Subdivision ("111") Disk Provided?	XXX
<u>NON-SUBDIVISION</u>	
North American Industry	
Classification System (NAICS)	XXX
Impervious Area (Sq. Ft.)	N/A

100% SUBMITTAL
APRIL 23, 2021

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All construction shall be performed in accordance with the approved plans and comply with all standard city policies and practices. City approval is contingent upon any required state or federal permit approvals such as those from the Department of Environmental Protection or the St. Johns River Water Management District (SJRWMD).

Plan approval through Development Services does not include utilities. Proposed water, sewer or electric construction must be approved separately through the respective utility company. In most cases, this will be:

CITY: Except for new subdivision infrastructure construction, all work performed within a City of Jacksonville right-of-way or easement requires a Right-of-way Permit. The contractor performing the proposed work must have a current Right-of-way Bond on file with Development Services. Right-of-way Permit applications are processed at:

STATE: All work performed within a state right-of-way requires a permit from the Florida Department of Transportation (FDOT). It is the developer's responsibility to obtain required FDOT permits or maintenance-of-traffic approvals for work within FDOT right-of-ways. The FDOT regional office can be contacted at (904) 360-5200. Any changes to the approved plans needed for FDOT approval must be submitted to Development Services as revisions.

RAILROAD: Railroad companies may require special approvals or permits to work within their right-of-ways. It is the developer's responsibility to obtain permission from any railroad right-of-way owner before performing any work within their right-of-way.

Annual reports in compliance with the SJRWMD stormwater permits are required from the maintenance entity of all stormwater management facilities. Send copies of the reports to:

The owner of any project one (1) acre or larger is required to provide a Notice of Intent (NOI) in accordance with criteria set forth in the city's NPDES permit within 48 hours of beginning construction. Send NOI and NOI fee to:

The contractor shall contact Environmental Quality Division, Erosion and Sedimentation Control Section (ESC) to provide verification that applicable stormwater permits have been obtained and to schedule a pre-construction ESC site inspection:

Plan review and approval does not relieve the contractor of complying with all applicable State Fire Codes.

Underground contractor shall submit to the Fire Marshall for approval complete specs for all underground pipe and fittings relating to fire protection PRIOR to installation and inspection. Contractor shall include manufacturer's name and pipe ID along with contractor's state license number.

A Site Work Permit is required for this project.

☐ Tree Fund payment is due: _____ inches at \$ _____ = \$ _____

☐ Article 25 funds are due: _____ inches at \$ _____ = \$ _____

TRAFFIC SIGNS

Metro Name (each) _____

Standard (each) _____

Stop/Yield (each) _____

Design (per plat) 1 per plat

Installation (per hour) 1 per 2 signs (rounded up)

_____ Streetlights Required

NOTE: Traffic sign costs change from time to time. Consult Attachment 8 of the Land Development Procedures Manual (<http://ldpm.jaxdev.com/>) for the current rates before paying for any sign installations.

No lane closures allowed from 7 a.m. till 9 a.m. and from 4 p.m. till 6 p.m.

PREPARED BY:
ENGLAND, THIMS, & MILLER, INC.



JEA REFERENCE DOCUMENTS IN EFFECT DURING DESIGN:
Water and Wastewater Standards Manual (Jan, 2020)
Water, Wastewater, and Reclaimed Water Design Guidelines (Jan, 2020)



IFB BID NO.:
BID DUE DATE:
TIME OF RECEIPT:
TIME OF OPENING:
BID PLACE:

RPB
M D, 2021 (Tuesday)
12:00 pm
2:00 PM
21 W. CHURCH ST.
TOWER LOBBY, SUITE 103
JACKSONVILLE, FL 32202

NOT APPLICABLE
APPLICABLE

SURVEY AND LOCATE DATA:

- ☐ ☒ 1. ALL ELEVATIONS ARE BASED ON U.S.C.&G.S. DATUM AND SHOWN IN FEET.
- ☐ ☒ 2. ELEVATIONS ARE BASED ON NAVD 88.
- ☐ ☒ 3. LOCATION OF EXISTING UTILITIES OBTAINED BY SOFT DIG LOCATES WHERE SHOWN ON PLANS, OR INCLUDED WITH BID SPECS.
- ☐ ☒ 4. EXISTING WATER AND SEWER LINES ARE SHOWN AS PER FIELD LOCATES AND SUBDIVISION AS-BUILT PLANS.
- ☐ ☒ 5. UNDERGROUND UTILITIES WERE LOCATED UTILIZING GROUND PENETRATING RADAR (GPR) AND A DIGITAL LOCATOR. CONTRACTOR SHALL BE AWARE THAT IN SOME CASES UTILITIES HAVE BEEN LOCATED, AND SURVEY HAS BEEN COMPLETED ONLY ON ONE SIDE OF THE ROAD.
- ☐ ☒ 6. ALL PIPE LENGTHS SHOWN ON PLAN AND PROFILES ARE FROM CENTER TO CENTER OF MANHOLES, CATCH BASINS, INLETS ETC. OR ALONG THE CENTER LINE OF FORCE MAINS AND WATER MAINS.
- ☐ ☒ 7. INVERT ELEVATIONS SHOWN ON DRAWINGS REFER TO THE CENTERLINE OF MANHOLES, UNLESS OTHERWISE INDICATED.
- ☐ ☒ 8. THE LOCATION OF ALL EXISTING SEWER AND WATER SERVICE LINES MAY NOT BE INDICATED ON THESE PLANS. THE LOCATION OF NEW SERVICES SHALL BE VERIFIED IN THE FIELD.
- ☐ ☒ 9. BENCHMARK DATA: _____ PER SURVEY _____

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):

- ☐ ☒ 1. CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS.
- ☐ ☒ 2. CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS
- ☒ ☐ 3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CONSUMPTIVE USE PERMIT (C.U.P.) THROUGH THE ST. JOHNS WATER MANAGEMENT DISTRICT SHOULD DEWATERING ACTIVITIES BE REQUIRED.
- ☐ ☒ 4. THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND C.O.J. ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS.
- ☐ ☒ 5. ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 2019, AND CITY OF JACKSONVILLE STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS.
- ☐ ☒ 6. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED.
- ☐ ☒ 7. THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS.
- ☐ ☒ 8. TREE PROTECTION SHALL BE IN ACCORDANCE WITH JACKSONVILLE ORDINANCE CODE 656 AND/OR AS DETAILED ON SPECIFIC PLAN SHEETS. NO TRIMMING OF OVERHANGING TREE LIMBS WILL BE ALLOWED. USE SMALLER EQUIPMENT IF NECESSARY.
- ☐ ☒ 9. THE CONTRACTOR SHALL LOCATE THE DRAINAGE INLET STRUCTURES IN THE PROJECT AREA AND ERECT SEDIMENTATION CONTROL DEVICES AS NECESSARY PER THE CITY OF JACKSONVILLE STORMWATER POLLUTION PREVENTION PLAN.
- ☐ ☒ 10. CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION.

EXISTING UTILITY PROTECTION:

1. IN ORDER TO REDUCE THE DISRUPTION AND COST OF UTILITY DAMAGES OCCURRING IN THE DUVAL COUNTY RIGHT-OF-WAY AND EASEMENTS, THE CONTRACTOR SHALL PREVENT DAMAGES TO EXISTING UTILITIES CAUSED BY HIS WORK THROUGH FIELD VERIFICATION OF THE LOCATION OF THE EXISTING UTILITIES. IN THE CASE OF OPEN EXCAVATION, VERIFICATION MAY BE PERFORMED DURING THE CONTRACTORS WORK. IN THE CASE OF DIRECTIONAL DRILLING, VERIFICATION SHALL TAKE PLACE PRIOR TO MOBILIZATION OF THE DRILLING EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES AS NEEDED TO AVOID CONTACT. EXISTING UTILITIES SHALL BE EXPOSED USING DETECTION EQUIPMENT OR OTHER ACCEPTABLE MEANS. SUCH METHODS MAY INCLUDE BUT SHALL NOT BE LIMITED TO "SOFT DIG" EQUIPMENT AND GROUND PENETRATING RADAR (GPR). THE EXCAVATOR SHALL BE HELD LIABLE FOR DAMAGES CAUSED TO THE CITY'S/JEA'S INFRASTRUCTURE AND THE EXISTING FACILITIES OF OTHER UTILITY COMPANIES.
3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID ALL UTILITIES, OTHER STRUCTURES AND OBSTRUCTIONS BOTH ABOVE AND BELOW GROUND SURFACE. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

ABBREVIATIONS:

AC	ASBESTOS CEMENT	INT.	INTERSECTION
A.G.	ALLEY GRATE	INV.	INVERT
B.	BASE LINE	I.P.	IRON PIPE
B.M.	BENCH MARK	J.W.W.	JACKSONVILLE WATER WORKS
BC	BOTTOM OF CURVE	LT.	LEFT
C.B.	CATCH BASIN	MB	MAIL BOX
C.I.	CAST IRON	M.H.	MANHOLE
©	CENTER LINE	N.T.S.	NOT TO SCALE
C.E.P.	CITY ELECTRIC POLE	O.E.	OVERHEAD ELECTRIC
CONC.	CONCRETE	O.T.	OVERHEAD TELEPHONE
CONST.	CONSTRUCTION	P.R.M.	PERMANENT REFERENCE
C.M.P.	CORRUGATED METAL PIPE	P.V.C.	POLYVINYL CHLORIDE
C.M.P.A.	CORRUGATED METAL PIPE ARCH	r	RADIUS
CULV.	CULVERT	R	RATE
C&G	CURB & GUTTER	R.C.P.	R.C.P.
C	CUT	RT	RIGHT
D.B.I.	DITCH BOTTOM INVERT	R.W	RIGHT OF WAY
D.W. OR DR	DRIVEWAY	R.D.	ROOF DRAIN
D.I.	DUCTILE IRON	S/W	SIDE WALK
E.O.P.	EDGE OF PAVEMENT	S.B.T.	SOUTHERN BELL TELEPHONE
ELEV.	ELEVATION	STA	STATION
ERCP	ELLIPTICAL REINFORCED CONC. PIPE	TC	TOP OF CURVE
EXP. JT.	EXPANSION JOINT	U.G.E.	UNDERGROUND ELECTRIC
F	FILL	U.G.T.	UNDERGROUND TELEPHONE
F.H.	FIRE HYDRANT	U.S.C. & G.S.	UNITED STATES COASTAL & GEODETIC SURVEY
FL	FLOW LINE	V.C.	VITRIFIED CLAY
FM	FORCE MAIN	WM	WATER METER
GALV./GLV	GALVANIZED	W.V.	WATER VALVE
G	GAS LINE	WLP	WOOD LIGHT POLE
G.V.	GAS VALVE	WPP	WOOD POWER POLE
HDPE	HIGH DENSITY POLYETHYLENE PIPE	WTP	WOOD TELEPHONE POLE
H.W.	HEAD WALL		
H.C.	HIGH CURB		

RESTORATION NOTES:

1. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LANDMARKS WHICH MAY BE DISTURBED BY CONSTRUCTION. KNOWN CORNER LOCATIONS ARE AVAILABLE FROM THE CITY OF JACKSONVILLE ENGINEERING DIVISION.
2. THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION.
3. TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH CITY OF JACKSONVILLE/FDOT STANDARD SPECIFICATIONS.
4. SIDEWALKS, DRIVEWAYS AND CURBING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH JACKSONVILLE STANDARD SPECIFICATIONS. SIDEWALKS REMOVED AND REPLACED IN CURB AND GUTTER AREAS AT INTERSECTIONS SHALL HAVE HANDICAP RAMPS INSTALLED. DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT ALONG THE RIGHT-OF-WAY LINE OR NEAREST JOINT AND REMOVED AND REPLACED TO THE EDGE OF STREET.
5. GRASS SOD SHALL BE FURNISHED AND PLACED IN THE AREAS DISTURBED OR DAMAGED BY THE CONSTRUCTION OPERATION.
6. ALL PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH THE CITY OF JACKSONVILLE/FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
7. UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER C.O.J. CASE X (10) PAVEMENT REPLACEMENT DETAIL.
8. CONTRACTOR MUST MAINTAIN AND PRESERVE NEWLY GRADED AREAS AND REPAIR AREAS WHERE SETTLING AND EROSION HAVE OCCURRED.

UTILITY CONTACTS:

A. AT&T ~	-----904-699-4976
B. CITY OF JACKSONVILLE ~ PUBLIC WORKS DEPT. ~	-----904-630-2489
C. CITY OF JACKSONVILLE ~ TRAFFIC OPERATIONS	-----904-630-2489
D. FLORIDA DEPT. OF TRANSPORTATION	-----904-360-5200
E. JEA ~ GENERAL INFORMATION	-----904-665-6000
F. JEA ~ PROJECT OUTREACH	-----904-665-7500
G. JEA ~ POWER OUTAGES	-----904-665-6000
H. JEA ~ SEWER PROBLEMS	-----904-665-4902
I. JEA ~ WATER PROBLEMS	-----904-665-4801
J. COMCAST ~ EMERGENCY HOTLINE	-----904-380-6341
K. TECO/PEOPLES GAS	-----904-443-7316
L. SUNSHINE ONE CALL	-----811

GENERAL LEGEND

	EXISTING	PROPOSED
RIGHT OF WAY LINE	---	---
CENTER LINE	---	---
LIMITS OF CONSTRUCTION	---	---
FENCE (HEIGHT & MATL. INDICATED)	X 6' CHAIN LINK X	X 6' CHAIN LINK X
DITCH OR SWALE	~~~~~	~~~~~
DRAIN PIPE	— D — D —	— D — D —
CATCH BASIN		
STORM DRAIN GRATE		
STORM SEWER (SIZE & MATL. INDICATED)	--- 24" RCP ---	--- 24" RCP ---
STORM SEWER (SIZE & MATL. INDICATED)	--- 18" CMP ---	--- 18" CMP ---
CULVERT W/ENDWALLS (SIZE & MATL. INDICATED)	--- 18" CMP ---	--- 18" CMP ---
WATER MAIN SIZE, TYPE INDICATED	— W — 6" PVC —	— 8" W —
GRAVITY SEWER SIZE, TYPE INDICATED	— S — 8" PVC — S —	— S — 8" PVC —
SEWER FORCE MAIN SIZE, TYPE INDICATED	— FM — 10" PVC —	— 12" FM —
LINE VALVE		
CHECK VALVE		
FIRE HYDRANT		
VALVE (TYPE INDICATED)		
END CAP		
PLUG (AT END OF LINE)		
VALVE (TYPE INDICATED)		
REDUCER		
FIRE HYDRANT		
HOUSE CONNECTION (SEWER)		
SPOT ELEVATION		
MANHOLE - TYPE (IF INDICATED) E - ELECTRIC S - SANITARY D - STORM T - TELEPHONE		
CLEAN OUT		
SPRINKLER HEAD		
TEMPORARY SAMPLING TAP POINT (BACTERIOLOGICAL SAMPLING POINT)		
SILT HAY BARRIER		
SIDEWALK		

UTILITY SYMBOLS

ELECTRIC POLE OR S.B.T. POLE (WOOD)	OR (WITH LIGHT)
WOOD POWER POLE	WPP
ELECTRIC POLE OR S.B.T. POLE (CONC.)	OR (WITH LIGHT)
CONCRETE POWER POLE	CPP
GUY WIRE	
TRAFFIC SIGNAL POLE	
IRON PIPE	I.P.
UNDERGROUND TELECOMMUNICATION LINE	---UGT---
UNDERGROUND GAS LINE	---UGG---
UNDERGROUND FIBER OPTIC LINE	---UFO---
OVERHEAD UTILITIES	---OH---
UNDERGROUND WATER LINE	---UGW---
UNDERGROUND SANITARY SEWER LINE (GRAVITY)	---S---
UNDERGROUND SANITARY SEWER LINE (FORCE MAIN)	---FM---
WATER METER	
WATER METER WITH TOUCHREAD	WM(TR)
TELEPHONE BOX	T
CATV BOX	CATV
CONCRETE MONUMENT	CM
GAS VALVE	
SOIL BORING (NUMBER INDICATED)	B-1
SOFT DIG (TEST HOLE) (NUMBER INDICATED)	TH1
BENCHMARK	
TREE, SIZE & TYPE INDICATED	12" O
MAIL BOX	MB
SIGN - TYPE INDICATED	
BUSH, SHRUB OR HEDGE	
FULL DEPTH ASPHALT PAVEMENT REPLACEMENT	
ASPHALT PAVEMENT OVERLAY	
INDICATES DRIVEWAY/SIDEWALK TO BE AND REPLACED	

NOT APPLICABLE
APPLICABLE

INSTALLATION NOTES:

- ☒ ☐ 1. CONTRACTOR TO REHABILITATE ALL MANHOLES ON PIPE BURST SEWERS VIA COATING/LINING PER JEA SPECIFICATION 446-2, UNLESS OTHERWISE NOTED ON THE PLANS.
- ☒ ☐ 2. CONTRACTOR TO RENEW, REHABILITATE, REPLACE OR REINSTALL AS APPLICABLE ALL SERVICE LATERALS TO R.O.W. LINE.
- ☒ ☐ 3. CONTRACTOR TO INSTALL SEWER SERVICE PIPING A MINIMUM OF 60 INCHES BELOW GRADE. WHERE NEW SANITARY SEWER MAIN IS LESS THAN 5 FEET DEEP, THE SEWER SERVICE PIPE SHALL BE INSTALLED AS DEEP AS POSSIBLE.
- ☐ ☒ 4. WHEN THE DISTANCE BETWEEN A POWER POLE AND THE TRENCH IS LESS THAN THE TRENCH DEPTH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH JEA ELECTRICAL PERSONNEL TO SECURE POWER POLES. THE CONTACTS FOR JEA ARE AS FOLLOWS:

RICHARD HEALD, EMAIL: healds@jea.com

A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED FOR AN OUTSIDE MEETING WITH JEA ELECTRICAL TO DISCUSS THE REQUIRED WORK. ADDITIONAL TIME WILL BE REQUIRED BY JEA ELECTRICAL FOR ANY REQUIRED WORK TO BE ACCOMPLISHED.

- ☐ ☒ 5. ALL NEW STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
- ☐ ☒ 6. THE DESIGN FOR THE PROJECT IS BASED UPON THE "OPEN-CUT" METHOD OF CONSTRUCTION, IF USING ALTERNATIVE MEANS OR METHODS, THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS FOR THAT MEANS OR METHOD.
- ☐ ☒ 7. THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS AT SERVICE CONNECTIONS. THE MEANS AND METHODS SHALL BE LEFT TO THE DISCRETION OF THE CONTRACTOR, SUBJECT TO THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. NO EXISTING ACTIVE SERVICE SHALL BE LEFT INTERRUPTED AT THE END OF THE WORK DAY.
- ☐ ☒ 8. CONTRACTOR SHALL PROVIDE ADDITIONAL CORPORATION STOPS FOR FILLING AND DRAINING PURPOSES DURING CONSTRUCTION AS NEEDED. CORPORATION STOPS ARE TO BE PLUGGED AND LEFT IN PLACE. INDICATE CORPORATION STOP LOCATIONS ON RECORD DRAWINGS (AS-BUILTS).
- ☐ ☒ 9. WATER AND SEWER SERVICES SHALL BE TRANSFERRED TO THE NEW MAIN UPON COMPLETION AND F.D.E.P./J.E.A. CERTIFICATION, AND PRIOR TO THE EXISTING MAINS BEING ABANDONED.
- ☐ ☒ 10. IF EXISTING VALVES ARE IN UNPAVED AREAS AND ARE TO BE TAKEN OUT OF SERVICE, THEY SHALL BE CLOSED AND THE VALVE BOX AND COVER SHALL BE REMOVED. IF THE VALVES ARE UNDER PAVED AREAS, THEY SHALL BE CLOSED, THE VALVE BOX GROUT FILLED AND THE COVER REMOVED.
- ☐ ☒ 11. CONTRACTOR SHALL REPLACE EXISTING WATER METER BOXES WHEN DEEMED NECESSARY BY THE JEA INSPECTOR.
- ☐ ☒ 12. CONTRACTOR TO PROVIDE ADDITIONAL DEPTH OF BURY VIA PIPE JOINT DEFLECTION TO ACCOMMODATE VALVE SELECTION PER JEA STANDARDS.
- ☐ ☒ 13. WATER METERS MAY REQUIRE RELOCATION FOR CONSTRUCTION, CONTRACTOR SHALL CONTACT JEA METER DEPARTMENT AND RELOCATE WATER METERS AS NECESSARY.
- ☐ ☒ 14. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL OBTAIN ALL GEOTECHNICAL AND TOPOGRAPHIC SURVEY DATA AND LOCATIONS OF ABOVE GROUND AND UNDERGROUND UTILITIES. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED.
- ☐ ☒ 15. SHEET PILING WILL BE REQUIRED ON ALL EXCAVATIONS DEEPER THAN 16 FEET.
- ☐ ☒ 16. ALL WATER, RECLAIMED WATER, AND WASTEWATER CONSTRUCTION SHALL BE PROVIDED BY A CONTRACTOR QUALIFIED, AS REQUIRED UNDER THE CURRENT FLORIDA STATUTE, OR BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FS.
- ☐ ☒ 17. THE CONTRACTOR SHALL CONTACT THE JEA, AND SCHEDULE A PRE-CONSTRUCTION MEETING, TO BE HELD PRIOR TO INITIATING THE JEA WATER AND WASTEWATER UTILITY WORK, INCLUDING ALL UTILITY MAIN TAPS BY THE CONTRACTOR.
- ☒ ☐ 18. JEA WATER AND WASTEWATER TAP FEES, JEA WATER AND SEWER CAPACITY FEES, AND JEA METER FEES SHALL BE PAID PRIOR TO THE WATER METER INSTALLATION. WATER METERS WILL NOT BE INSTALLED PRIOR TO THE ISSUANCE OF REQUIRED ACCEPTANCE (TRANSFER OF OWNERSHIP) DOCUMENTS, WHICH MAY INCLUDE THE ISSUANCE OF A REGULATORY CLEARANCE LETTER (COC) FOR THE WATER AND WASTEWATER IMPROVEMENTS, COMPLETION, AND APPROVAL OF FINAL INSPECTION AND APPROVED AS-BUILT DRAWINGS.
- ☒ ☐ 19. FINAL CONNECTION TO THE JEA SYSTEM MAY BE CONTINGENT UPON THE CONSTRUCTION, DEDICATION, AND FINAL ACCEPTANCE (TRANSFER OF OWNERSHIP/MAINTENANCE) OF THE JEA OFF-SITE UTILITIES.
- ☐ ☒ 20. THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR THE WATER, RECLAIMED WATER, AND WASTEWATER IMPROVEMENTS SHALL CONFORM TO THE LATEST JEA AND FDEP RULES. THE MINIMUM HORIZONTAL SEPARATION REQUIREMENTS BETWEEN THE PROPOSED WATER AND WASTEWATER UTILITIES AND PONDS OR STRUCTURES SHALL CONFORM TO THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.
- ☐ ☒ 21. WATER AND WASTEWATER PIPES LESS THAN 24-INCHES IN DIAMETER SHALL BE CONSTRUCTED WITH A MINIMUM 30-INCHES COVER IN UNPAVED OR SIDEWALK AREAS AND A MINIMUM OF 36-INCHES COVER IN PAVED AREAS. THE MAXIMUM COVER FOR UTILITIES, BOTH OPEN CUT AND UTILIZING HORIZONTAL DIRECTIONAL DRILL METHODS, SHALL COMPLY WITH THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.
- ☐ ☒ 22. WATER AND WASTEWATER PRESSURE MAINS AND SERVICES SHALL PASS A JEA PRESSURE AND LEAKAGE TEST AT 150-PSI MINIMUM, OR TWO TIMES OPERATING PRESSURE, FOR TWO HOURS. IN ADDITION, WATER MAINS SHALL BE DISINFECTED AND PASS A BACTERIOLOGICAL ANALYSIS. ALL TESTS SHALL CONFORM TO JEA AND FDEP RULES, REGULATIONS, AND AWWA C6051. THE JEA INSPECTOR SHALL BE NOTIFIED 72-HOURS (MIN) PRIOR TO PERFORMING THESE TESTS. NO FINAL CONNECTION(S) TO EXISTING POTABLE WATER MAINS SHALL BE MADE UNTIL THE NEW MAIN IS PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE.
- ☒ ☐ 23. RESIDENTIAL SERVICES USING RECLAIMED WATER FOR IRRIGATION MUST HAVE A JEA APPROVED BACKFLOW PREVENTER INSTALLED ON EACH POTABLE WATER SERVICE PRIOR TO THE INSTALLATION OF A JEA RECLAIMED WATER METER. THE INSTALLATION OF A BACKFLOW PREVENTER SHALL BE IN ACCORDANCE WITH THE JEA RULES AND REGULATIONS FOR WATER, SEWER AND RECLAIMED WATER SERVICES, APPENDIX B, CROSS CONNECTION CONTROL POLICY.
- ☒ ☐ 24. FOR DEVELOPMENTS UTILIZING RECLAIMED WATER, A JEA APPROVED RECLAIMED WATER SIGNAGE PLAN SHALL BE IMPLEMENTED PRIOR TO THE INSTALLATION OF THE RECLAIMED WATER METERS.
- ☒ ☐ 25. ALL BACKFLOW PREVENTERS SHALL BE IN ACCORDANCE WITH JEA CROSS CONNECTION PROGRAM. BACKFLOW PREVENTERS MUST BE TESTED AFTER INSTALLATION BY A CERTIFIED TESTER AND ANNUALLY THEREAFTER. JEA CONTACT: PERMITTING (904) 665-7988.
- ☒ ☐ 26. BACKFLOW PREVENTERS ON FIRE LINES OR COMBINATION FIRE/POTABLE MAINS SHALL HAVE FREEZE PROTECTION.

England-Thins & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218
TEL: (904) 642-8990
FAX: (904) 642-8945
REC-00002584 LC-0000516

ETM
VISION - EXPERIENCE - RESULTS

NO.	BY	DATE	REVISIONS
6			
4			
3			
2			

DESIGNER	N. BOLATETE	DESIGN ENGINEER	NICOLE BOLATETE
DRAWN BY	A. ANDERSON	FLORIDA REGISTRATION NO.	74921
CHECKED BY	N. BOLATETE		
DATE			

DESIGNER	N. BOLATETE	DESIGN ENGINEER	NICOLE BOLATETE
DRAWN BY	A. ANDERSON	FLORIDA REGISTRATION NO.	74921
CHECKED BY	N. BOLATETE		
DATE			

JEASm
Building Community™

**GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
GENERAL NOTES AND LEGEND**

NO. SHEETS	18-171
SHEET NO.	44
DRAWING NO.	GT-1
PROJ. NO.	18-171
DATE:	APRIL 23, 2021
SCALE:	AS NOTED

INDEX OF DRAWINGS:

SHEET NUMBER	DRAWING NUMBER	SHEET TITLE	SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
1	-	COVER SHEET	STORMWATER POLLUTION PREVENTION PLANS		
2	G-1	GENERAL NOTES AND LEGEND	20	ESC-1	EROSION AND SEDIMENT CONTROL PLAN
3	G-2	INDEX OF DRAWINGS	21	ESC-2	EROSION AND SEDIMENT CONTROL PLAN
4	G-3	ENGINEER OF RECORD SIGNATURE PAGE	22	ESC-2A	EROSION AND SEDIMENT CONTROL PLAN
5	G-4	MISCELLANEOUS NOTES AND DETAILS	23	ESC-3	EROSION AND SEDIMENT CONTROL PLAN
6	G-5	MASTER SITE PLAN	24	ESC-4	EROSION AND SEDIMENT CONTROL PLAN
WATER MAIN PLANS			25	ESC-5	EROSION AND SEDIMENT CONTROL PLAN
7	C-1	WATER MAIN PLAN	26	ESC-6	EROSION AND SEDIMENT CONTROL DETAILS
8	C-2	WATER MAIN PLAN	TRAFFIC CONTROL PLANS		
9	C-2A	WATER MAIN PLAN	27	TTCP-1	TTCP - GENERAL NOTES
10	C-3	WATER MAIN PLAN	28	TTCP-2	TTCP - PHASE 1
11	C-4	WATER MAIN PLAN	29	TTCP-3	TTCP - PHASE 1
12	C-5	WATER MAIN PLAN	30	TTCP-4	TTCP - PHASE 2
13	C-6	VVH TABLE AND BORING DETAILS	31	TTCP-5	TTCP - PHASE 2
14	C-7	INTERSECTION STRIPING DETAIL	32	TTCP-6	TTCP - PHASE 3
WATER MAIN DETAILS			33	TTCP-7	TTCP - PHASE 3
15	W-STD-1	WATER MAIN DETAILS	34	TTCP-8	TTCP - PHASE 3
16	W-STD-2	WATER MAIN DETAILS	35	TTCP-9	TTCP - PHASE 4
17	W-STD-3	WATER MAIN DETAILS	36	TTCP-10	TTCP - PHASE 4
18	W-STD-4	WATER MAIN DETAILS	37	TTCP-11	TTCP - PHASE 5
19	W-STD-5	WATER MAIN DETAILS	38	TTCP-12	TTCP - PHASE 6
			39	TTCP-13	TTCP - PHASE 6
			40	TTCP-14	TTCP - PHASE 7
			41	TTCP-15	TTCP FDOT DETAILS
			42	TTCP-16	TTCP FDOT DETAILS
			43	TTCP-17	TTCP FDOT DETAILS
			44	TTCP-18	TTCP FDOT DETAILS

SURVEY LEGEND

LEGEND:

BC BACK OF CURVE
BFP BACK FLOW PREVENTER
BGV COMMUNICATIONS UNDERGROUND VAULT
BOL BOLLARD
C&G CONCRETE CURB AND GUTTER
CB CHORD BEARING
CBS CATCH BASIN
CH CHORD DISTANCE
CI CURB INLET
CLF CHAIN LINK FENCE
CMP CORRUGATED METAL PIPE
CONC CONCRETE
CPP CORRUGATED PLASTIC PIPE
CUP CONCRETE UTILITY POLE
DLP DELINEATOR POST
DMH DRAINAGE MANHOLE
ECMP ELLIPTICAL CORRUGATED METAL PIPE
ELV ELEVATION
EP EDGE OF PAVEMENT
ERCP ELLIPTICAL REINFORCED CONCRETE PIPE
EW CONCRETE ENDWALL
EWB ELECTRIC WIRE PULL BOX
FH FIRE HYDRANT
FNC FENCE
GLV GALVANIZED

LEGEND (CONTINUED):

GYA GUY ANCHOR
INV INVERT
IP IRON PIPE
IRC IRON ROD AND CAP
L ARC LENGTH
LT LEFT
M.B. MAP BOOK
MES CONCRETE MITERED END SECTION
MH MANHOLE
MUP METAL UTILITY POLE
N&D NAIL AND DISK
O.R.B. OFFICIAL RECORDS BOOK
O.R.V. OFFICIAL RECORDS VOLUME
P.B. PLAT BOOK
PG. PAGE
PVC POLYVINYL CHLORIDE PIPE
R RADIUS
RCP REINFORCED CONCRETE PIPE
RP REFLECTOR POST
RT RIGHT
R/W RIGHT OF WAY
SMH SANITARY MANHOLE
SPWY CONCRETE SPILLWAY
STA. STATION
TER COMMUNICATIONS RISER

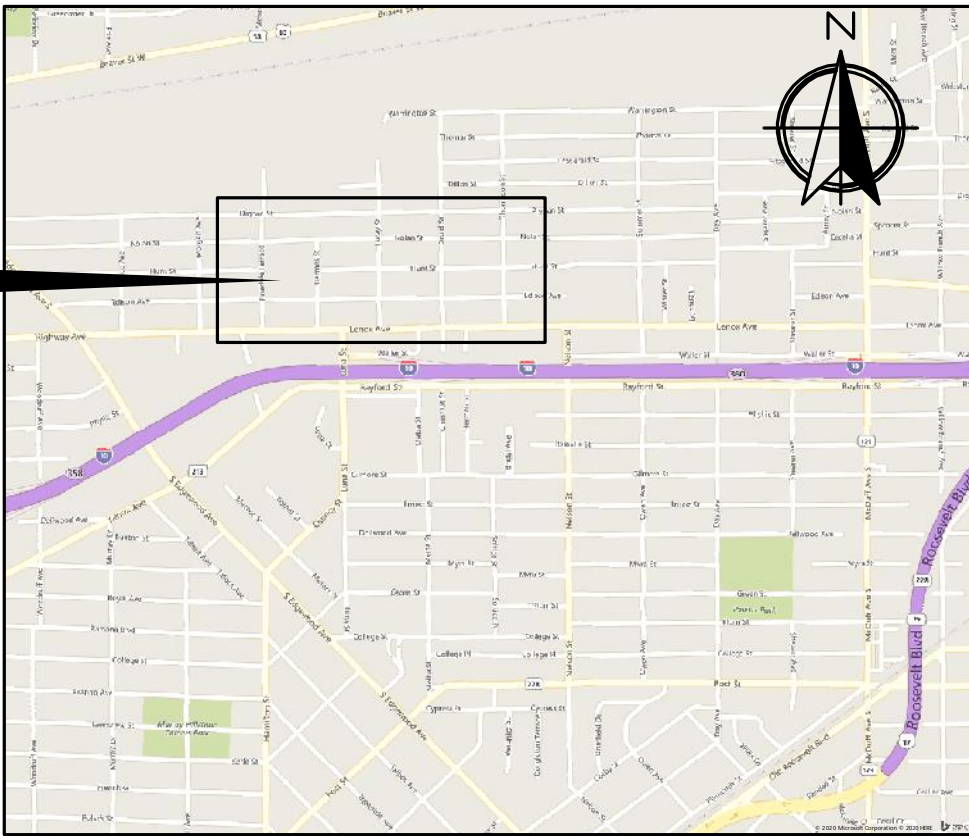
LEGEND (CONTINUED):

TH TEST HOLE
TMH COMMUNICATIONS MANHOLE
TOB TOP OF BANK
TPD TELEPHONE PEDESTAL
TSC COMMUNICATIONS SERVICE CABINET
UNK UNKNOWN
WLP WOOD LIGHT POLE
WM WATER METER
WPF WOOD PRIVACY FENCE
WUP WOOD UTILITY POLE
WV WATER VALVE
-UGT- UNDERGROUND TELECOMMUNICATION LINE
-UGG- UNDERGROUND GAS LINE
-UFO- UNDERGROUND FIBER OPTIC LINE
-OH- OVERHEAD UTILITIES
-UGW- UNDERGROUND WATER LINE
-S- UNDERGROUND SANITARY SEWER LINE (GRAVITY)
-FM- UNDERGROUND SANITARY SEWER LINE (FORCE MAIN)
Δ CENTRAL ANGLE
⊕ BENCHMARK
⊙ TEST HOLE LOCATION
Ⓢ BLOCK NUMBER
⦿ SIGN

TREE LEGEND:

CAM CAMPHOR
CED CEDAR
HOL HOLLY
MAG MAGNOLIA
ORMTL ORNAMENTAL CLUSTER
CPM CRAPE MYRTLE CLUSTER

PROJECT LOCATION



VICINITY MAP
NOT TO SCALE

NO. SHEETS
44
SHEET NO.
DRAWING NO.
G-2

PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
INDEX OF DRAWINGS

DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE:
CHECKED BY: N. BOLATETE
DATE:
JEA
Building Communitysm

DESIGN ENGINEER
NICOLE BOLATETE
FLORIDA REGISTRATION NO.
74921

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1			

ETM
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England-Thims & Miller, Inc.
14775 Old St. Augustine Road
St. Augustine, FL 32085
TEL: (904) 842-8890
FAX: (904) 844-9445
REG. - 00002384 LC - 00005116

DRAWING INDEX	
DRAWING NUMBER	DRAWING TITLE
--	COVER SHEET
G-1	GENERAL NOTES AND LEGEND
G-2	INDEX OF DRAWINGS
G-3	ENGINEER OF RECORD SIGNATURE PAGE
G-4	MISCELLANEOUS NOTES AND DETAILS
G-5	MASTER SITE PLAN
C-1	WATER MAIN PLAN
C-2	WATER MAIN PLAN
C-2A	WATER MAIN PLAN
C-3	WATER MAIN PLAN
C-4	WATER MAIN PLAN
C-5	WATER MAIN PLAN
C-6	VVH TABLE AND BORING DETAILS
C-7	INTERSECTION STRIPING DETAIL
W-STD-1	JEA STANDARD WATER AND REUSE DETAILS
W-STD-2	JEA STANDARD WATER AND REUSE DETAILS
W-STD-3	JEA STANDARD WATER AND REUSE DETAILS
W-STD-4	JEA STANDARD WATER AND REUSE DETAILS
W-STD-5	JEA STANDARD WATER AND REUSE DETAILS
ESC-1	EROSION AND SEDIMENT CONTROL PLAN
ESC-2	EROSION AND SEDIMENT CONTROL PLAN
ESC-2A	EROSION AND SEDIMENT CONTROL PLAN
ESC-3	EROSION AND SEDIMENT CONTROL PLAN
ESC-4	EROSION AND SEDIMENT CONTROL PLAN
ESC-5	EROSION AND SEDIMENT CONTROL PLAN
ESC-6	EROSION AND SEDIMENT CONTROL DETAILS

THE FLORIDA PROFESSIONAL ENGINEER NAMED HEREIN SHALL BE RESPONSIBLE FOR THE DRAWINGS LISTED IN THIS BOX IN ACCORDANCE WITH RULE 61G15-23-003, F.A.C. THESE SHEETS HAVE BEEN SIGNED AND SEALED USING A DIGITAL SIGNATURE BY: NICOLE BOLATETE P.E. NUMBER: 74921

ENGLAND-THIMS & MILLER, INC.
14775 OLD ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258
PHONE (904) 642-8990
CERTIFICATE OF AUTHORIZATION NUMBER: 00002584

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DRAWING INDEX	
DRAWING NUMBER	DRAWING TITLE
G-3	ENGINEER OF RECORD SIGNATURE PAGE
TTCP-1	TTCP GENERAL NOTES
TTCP-2	TTCP - PHASE 1
TTCP-3	TTCP - PHASE 1
TTCP-4	TTCP - PHASE 2
TTCP-5	TTCP - PHASE 2
TTCP-6	TTCP - PHASE 3
TTCP-7	TTCP - PHASE 3
TTCP-8	TTCP - PHASE 3
TTCP-9	TTCP - PHASE 4
TTCP-10	TTCP - PHASE 4
TTCP-11	TTCP - PHASE 5
TTCP-12	TTCP - PHASE 6
TTCP-13	TTCP - PHASE 6
TTCP-14	TTCP - PHASE 7
TTCP-15	TTCP FDOT INDEX - 1
TTCP-16	TTCP FDOT INDEX - 2
TTCP-17	TTCP FDOT INDEX - 3
TTCP-18	TTCP FDOT INDEX - 4

THE FLORIDA PROFESSIONAL ENGINEER NAMED HEREIN SHALL BE RESPONSIBLE FOR THE DRAWINGS LISTED IN THIS BOX IN ACCORDANCE WITH RULE 61G15-23-003, F.A.C. THESE SHEETS HAVE BEEN SIGNED AND SEALED USING A DIGITAL SIGNATURE BY: MATTHEW MAGGIORE P.E. NUMBER: 55371

ENGLAND-THIMS & MILLER, INC.
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NO. SHEETS 44	PROJ. NO. 18-171
SHEET NO. 4	DATE: APRIL 23, 2021
DRAWING NO. G-3	SCALE: AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
ENGINEER OF RECORD SIGNATURE PAGE



DESIGNER: N. BOLATETE	DESIGN ENGINEER
DRAWN BY: A. ANDERSON	
CHECKED BY: N. BOLATETE	
DATE:	

NICOLE BOLATETE
FLORIDA REGISTRATION NO.
74921

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REG - 00002584 LC - 0000516

1. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF THE CONTRACTOR'S EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID SO AS TO BE FAMILIAR WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE COMPLETED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION CONTRACT. THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OR 811 (811) PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING. THE CONTRACTOR IS ALSO REQUIRED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF OR WITHIN THE PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE ISSUES THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.
3. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES, IMPROVEMENTS, UTILITIES, RECEPTOR LINES, AND CONTACT ALL APPROPRIATE AGENCIES AND ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION OR ORDERING ANY MATERIALS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD GRASSES PER ST. JOHNS COUNTY STANDARDS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSISTANCE REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL THAT WILL REQUIRE REMOVAL AND/OR TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED. FAILURE OF THE CONTRACTOR TO IDENTIFY/QUANTIFY THE AMOUNT OF UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED OR TO OBTAIN A BID FROM AN APPROPRIATE SOURCE TO RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION CONTRACT.
6. ALL MATERIALS AND WORKMANSHIP SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER AND DUAL COUNTY FOR A PERIOD OF 12 MONTHS FROM DATE OF ACCEPTANCE BY THE OWNER AND DUAL COUNTY.
7. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS. IF THE COMMENCED CONSTRUCTION DISCLOSES ANY DISCREPANCY BETWEEN THE SHOWN ARTS TO THE ACTUAL LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY. THIS DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN OR NEAR EXISTING UTILITIES AND IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR AND SHALL REPAIR OR PAY FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS AND ENGINEERS OF THE LOCATION OF EXISTING UTILITIES WHICH ARE SHOWN TO BE CONNECTED, AND NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES.
8. UNLESS DIRECTED OTHERWISE BY THE OWNER OR THE ENGINEER, THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH COUNTY REQUIREMENTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING DUAL COUNTY RIGHT-OF-WAY PERMITS FOR WORK IN THE COUNTY RIGHT-OF-WAY OR EASEMENT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING OF SEDIMENTATION PERMIT RESULTING FROM RAINFALL EVENTS DURING THE CONSTRUCTION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REGULATORY PERMITS ISSUED FOR THE PROJECT.
10. THE CONTRACTOR SHALL COORDINATE THE PROJECT PROPOSED COUNTY OR STATE RIGHT-OF-WAY WITH THE APPROPRIATE AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION & REPAIR.
11. IF DETERMINING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND THE ENGINEER FOR APPROVAL OF ALL DETERMINING OPERATIONS PRIOR TO COMMENCEMENT.
12. PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO RIVERS, STREAMS, LAKES, AND BAYS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTION PLAN AND THE TEST RESULTS TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT OFFICE. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE,

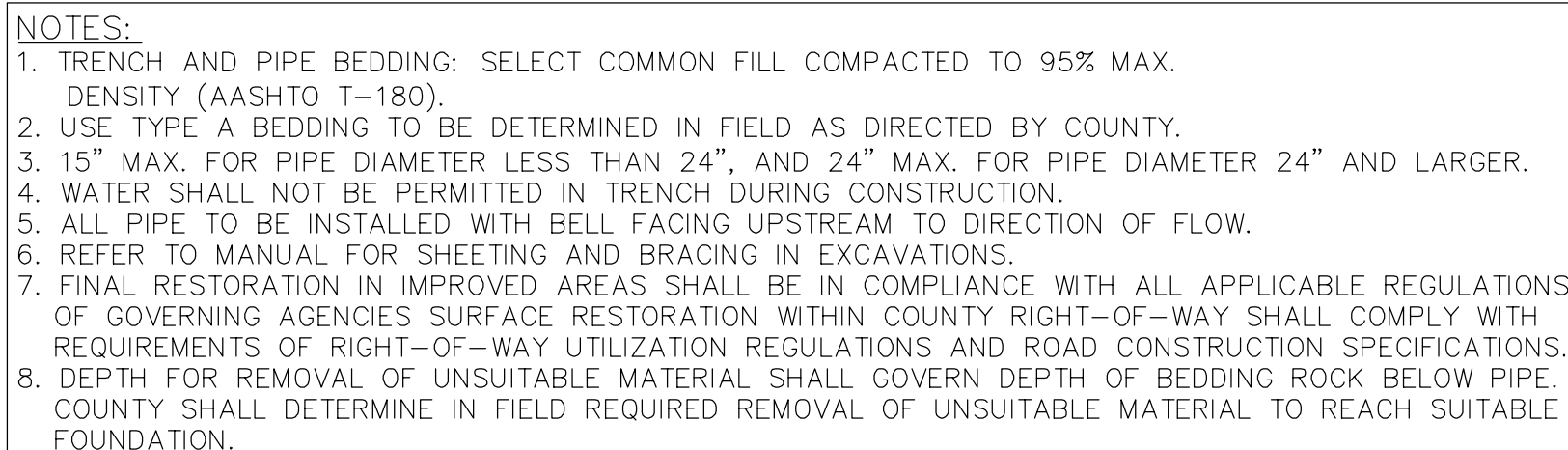


N.T.S

11. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH DUAL COUNTY STANDARDS AND SHALL BE FILLED WITH PAVENTIAL STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL INVESTIGATION REPORT PREPARED BY EGS FLORIDA, LLC, EGS NO. 35-29874 DATED: 2-27-2020.
14. CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, BERMS, RIGHTS-OF-WAYS AND EASEMENTS (INCLUDING ELECTRICAL EASEMENTS) IS INCLUDED IN THIS PROJECT.
15. ALL ACCESS EASEMENTS ARE TO BE STABILIZED AND DRIVABLE.
16. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR.
17. BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH ST. JOHNS COUNTY FIRE MARSHALL AND ALL OTHER PERMITTING AUTHORITIES BY THE CONTRACTOR.
18. UNSUITABLE MATERIALS UNDER UTILITY OR STORM PIPE, STRUCTURES, EXISTING BUILDING PAD OR HARDSCAPE ELEMENTS SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
19. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT AND PAY THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.
20. ALL UNDERGROUND UTILITIES TO BE INSTALLED UNDER PAVEMENT MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
21. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
22. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL MATERIALS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY OR STORM PIPE OR STRUCTURE.
23. AUGER BORINGS PROVIDED BY PROJECT GEOTECHNICAL ENGINEER (REFER TO GENERAL SITE NOTE 13).
24. FLOOD ZONE BASED ON FEMA INSURANCE RATE MAPS PLAN NO. 120909C0195F, DATED: 12/17/2010.
25. FOR SEDIMENT AND EROSION CONTROL PLANS, DETAILS AND NOTES REFER TO DRAWINGS 20 - 25. THE CONTRACTOR IS TO COORDINATE WITH AUTHORITY FOR INSPECTIONS PRIOR TO CLEARING OPERATIONS.
26. TOPOGRAPHIC INFORMATION BASED ON NORTH AMERICAN VERTICAL DATUM OF 1985 (NAVD85) AS DETERMINED BY RMA.
27. BOUNDARY INFORMATION BASED ON SURVEY PROVIDED BY RMA.
28. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF "COUNTY STANDARD SPECIFICATIONS FOR DUAL COUNTY, FLORIDA", (LATEST VERSION) AND ALL CURRENT COUNTY STANDARD DETAILS. THE CONTRACT SHALL BE PERFORMED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS FORTH IN THE GEOTECHNICAL INVESTIGATION REPORT PROVIDED BY PROJECT GEOTECHNICAL ENGINEER (SEE GENERAL NOTE 13 FOR INFORMATION), IF MORE STRINGENT THAN COUNTY REQUIREMENTS.
29. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR OWNER.
30. SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCHMARKS, IS REQUIRED IN COMPLIANCE WITH SECTION 1.0.0.0 OF THE DUAL COUNTY LAND DEVELOPMENT PROCEDURES MANUAL, SECTION 9, "AS-BUILTS" OF THE DEVELOPMENT REVIEW PROCESS PRIOR TO SCHEDULING A FINAL INSPECTION OF THE BUILDING BY THE BUILDING DEPARTMENT OR THE FIRE MARSHALL.
31. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CIVIL ENGINEER TO DETERMINE IF THIS PROJECT IS WITHIN THE COUNTY'S JURISDICTION FOR INSPECTION. IF SO THEN, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE COUNTY FOR PRE-CONSTRUCTION MEETING AND INSPECTIONS.
32. FOR BOUNDARY, ROADWAY AND LOT GEOMETRY INFORMATION SEE PLAT.
33. PROJECT LOCATION: DUAL COUNTY, FLORIDA
34. THESE PLANS WERE GENERATED UTILIZING AUTOCAD CIVIL 3D 2019.
35. THESE PLANS ARE PREPARED IN GENERAL COMPLIANCE WITH THE DUAL COUNTY LAND DEVELOPMENT PROCEDURES MANUAL, DATED 3/25/20.



N.T.S.



NOTES:

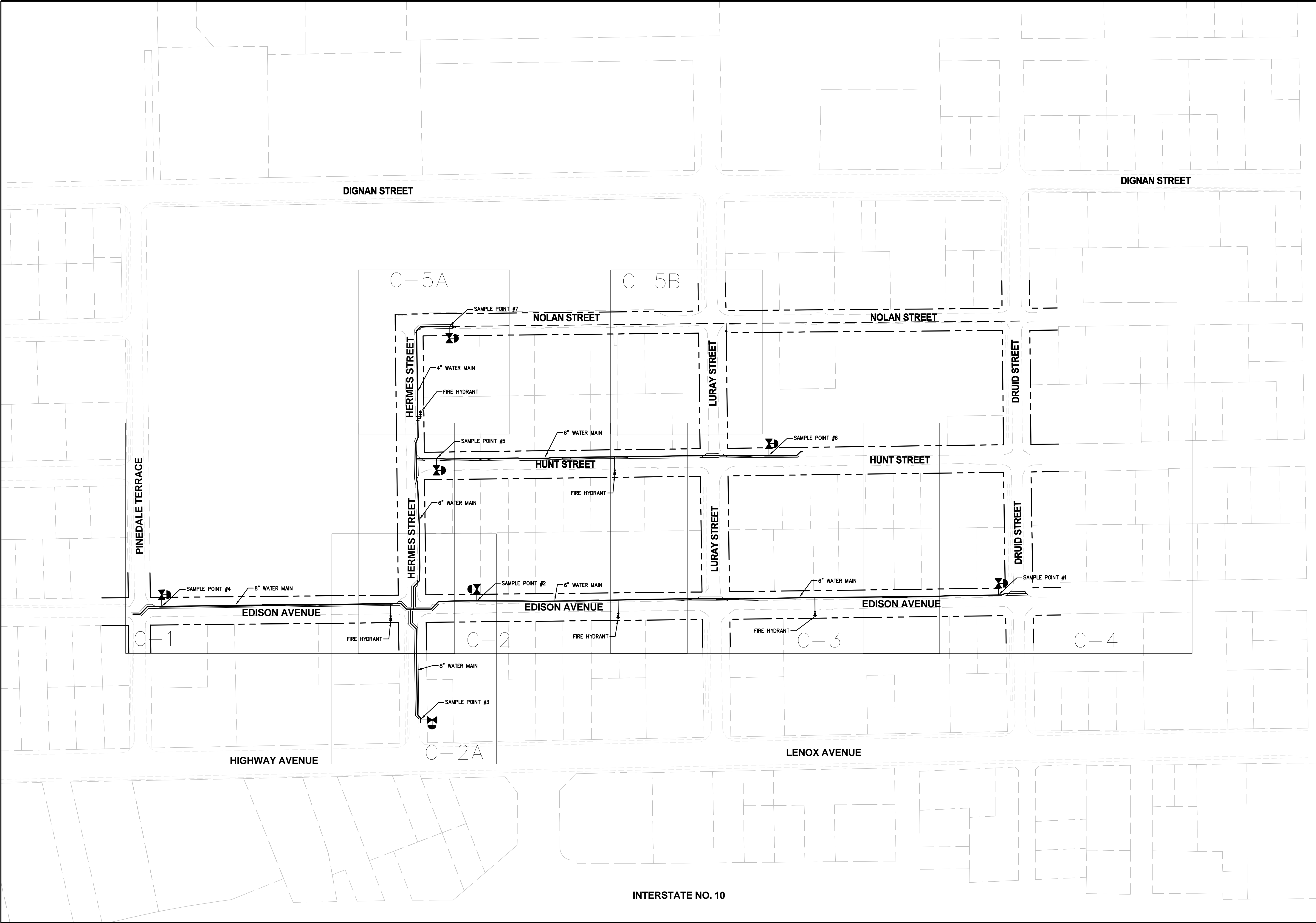
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX.DENSITY (AASHTO T-180).
2. USE TYPE A BEDDING TO BE DETERMINED IN FIELD AS DIRECTED BY COUNTY.
3. 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN TRENCH DURING CONSTRUCTION.
5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO DIRECTION OF FLOW.
6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

N.T.S.

NO.	BY	DATE	REVISIONS
6			
5			
4			
3			
2			
1			

DESIGNER:	N. BOLATETE	DESIGN ENGINEER
DRAWN BY:	A. ANDERSON	
DATE:		
CHECKED BY:	N. BOLATETE	
DATE:		FLORIDA REGISTRATION NO.
		74921

NO. SHEETS 44	PROJ. NO. 18-171
SHEET NO.	DATE: APRIL 23, 2021
DRAWING NO. G-4	SCALE: AS NOTED



NO. SHEETS
44

SHEET NO.

DRAWING NO.
G-5

PROJ. NO. 18-171

DATE: APRIL 23, 2021

SCALE: AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM

COLLEGE STREET AREA - PACKAGE G

MASTER SITE PLAN

DESIGNER: N. BOLATETE

DRAWN BY: A. ANDERSON

DATE:

CHECKED BY: N. BOLATETE

DATE:

DESIGN ENGINEER

NICOLE BOLATETE

FLORIDA REGISTRATION NO. 74921

ETM

England-Thims & Miller, Inc.

14775 Old St. Augustine Road

Altamonte Springs, FL 32714

TEL: (804) 842-8890

FAX: (804) 646-9465

REG. - 00002584 LC - 00005116

VISION • EXPERIENCE • RESULTS

NO.

BY

DATE

REVISIONS

6

4

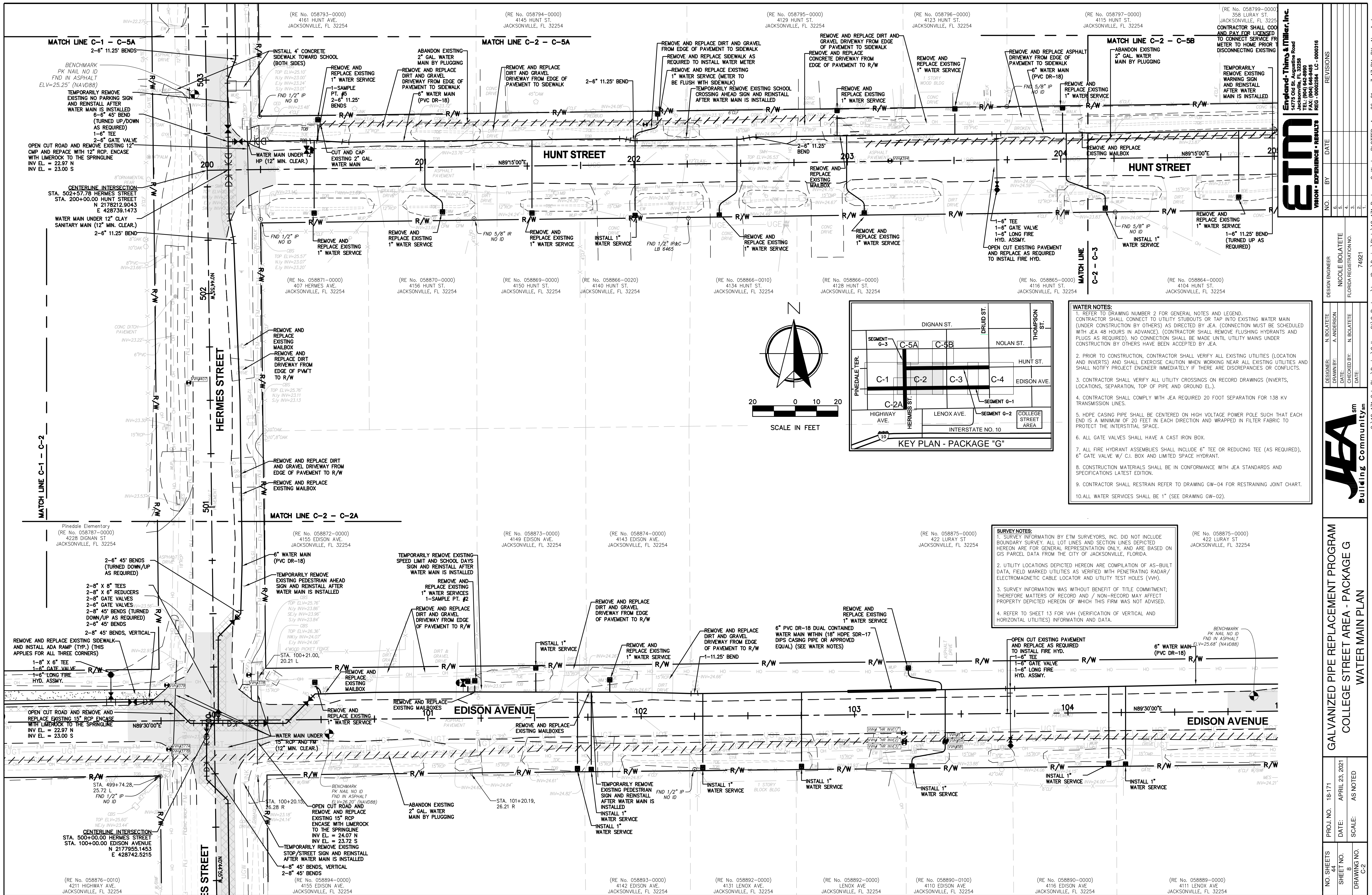
3

2

G:\18-171 Galv Pipe\Design\College St\G_Package\G_Plot\G_Plot18-171 Package-G-Msite.dwg PLOTTED: Apr. 26, 21 = 3:47 PM. BY: Alex Anderson

10. ALL WATER SERVICES SHALL BE 1" (SEE DRAWING GW-02).

4. REFER TO SHEET 13 FOR VVH (VERIFICATION OF VERTICAL AND HORIZONTAL UTILITIES) INFORMATION AND DATA.



England-Thins & Miller, Inc.
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REG. 0000254 LC 0000196

NO.	BY	DATE	REVISIONS
1	N. BOLATETE	APRIL 23, 2021	AS NOTED

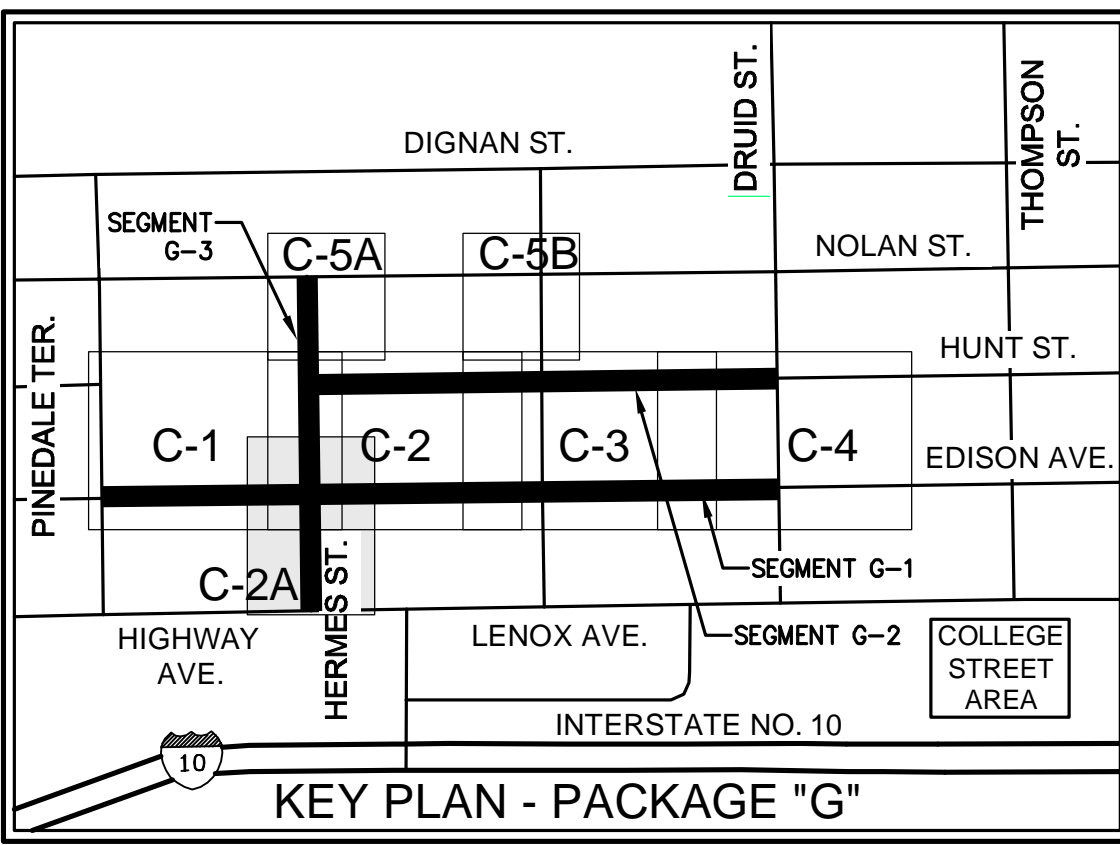
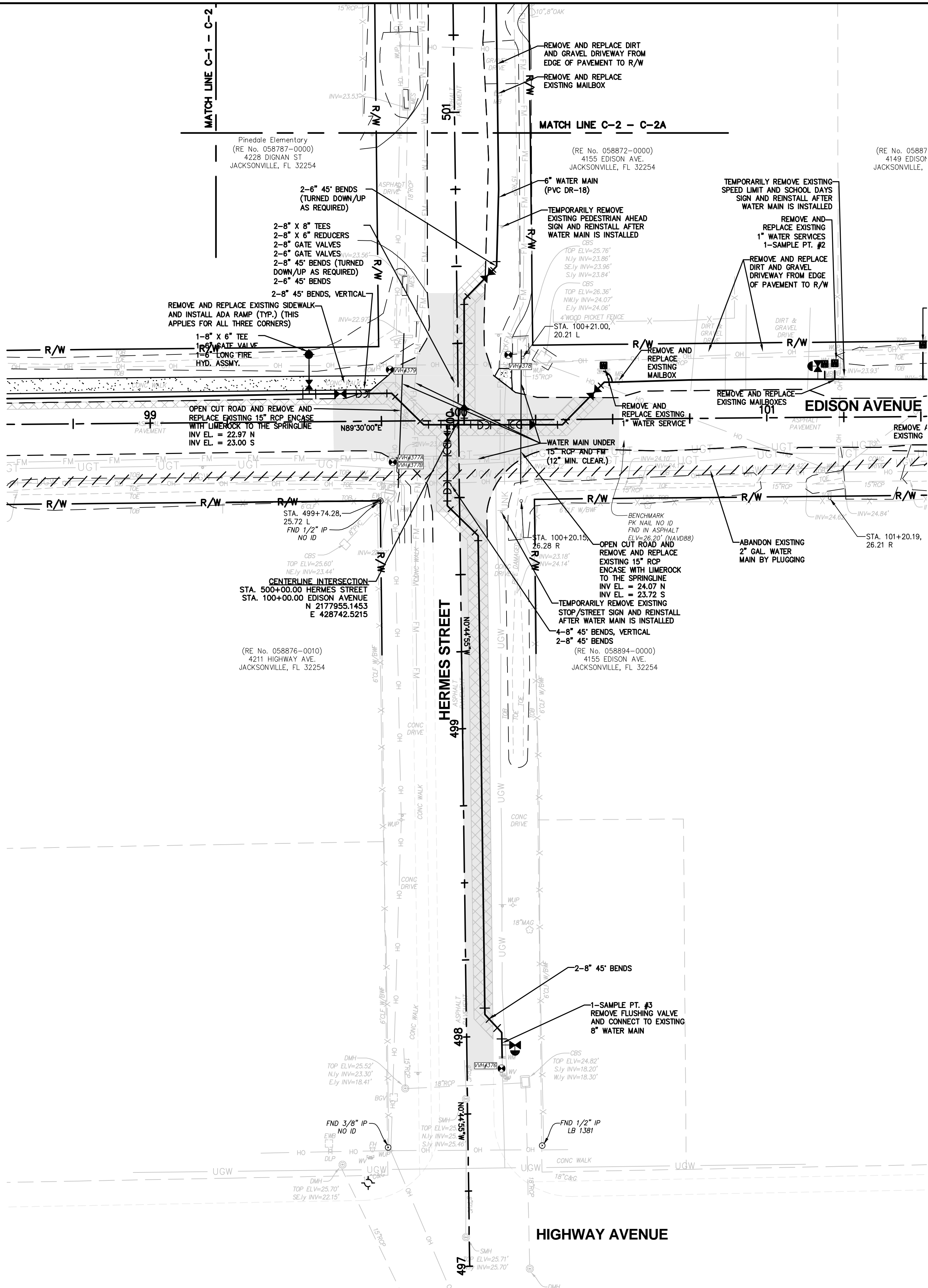
DESIGNER	N. BOLATETE
DRAWN BY	A. ANDERSON
CHECKED BY	N. BOLATETE
DATE	

JEA
Building Community

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
WATER MAIN PLAN

PROJ. NO.	18-171
DATE:	APRIL 23, 2021
SCALE:	AS NOTED

NO. SHEETS	44
SHEET NO.	44
DRAWING NO.	C-2

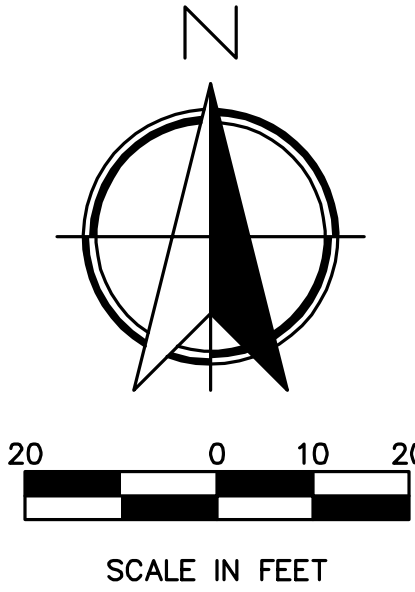


SURVEY NOTES:

1. SURVEY INFORMATION BY ETM SURVEYORS, INC. DID NOT INCLUDE BOUNDARY SURVEY. ALL LOT LINES AND SECTION LINES DEPICTED HEREON ARE FOR GENERAL REPRESENTATION ONLY, AND ARE BASED ON GIS PARCEL DATA FROM THE CITY OF JACKSONVILLE, FLORIDA.
2. UTILITY LOCATIONS DEPICTED HEREON ARE COMPILATION OF AS-BUILT DATA, FIELD MARKED UTILITIES AS VERIFIED WITH PENETRATING RADAR/ELECTROMAGNETIC CABLE LOCATOR AND UTILITY TEST HOLES (VW).
3. SURVEY INFORMATION WAS WITHOUT BENEFIT OF TITLE COMMITMENT; THEREFORE MATTERS OF RECORD AND / NON-RECORD MAY AFFECT PROPERTY DEPICTED HEREON OF WHICH THIS FIRM WAS NOT ADVISED.
4. REFER TO SHEET 13 FOR VW (VERIFICATION OF VERTICAL AND HORIZONTAL UTILITIES) INFORMATION AND DATA.

WATER NOTES:

1. REFER TO DRAWING NUMBER 2 FOR GENERAL NOTES AND LEGEND. CONTRACTOR SHALL CONNECT TO UTILITY STUBOUTS OR TAP INTO EXISTING WATER MAIN (UNDER CONSTRUCTION BY OTHERS) AS DIRECTED BY JEA. (CONNECTION MUST BE SCHEDULED WITH JEA 48 HOURS IN ADVANCE). (CONTRACTOR SHALL REMOVE FLUSHING HYDRANTS AND FLUGS AS REQUIRED). NO CONNECTION SHALL BE MADE UNTIL UTILITY MAINS UNDER CONSTRUCTION BY OTHERS HAVE BEEN ACCEPTED BY JEA.
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3. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE AND GROUND EL.).
4. CONTRACTOR SHALL COMPLY WITH JEA REQUIRED 20 FOOT SEPARATION FOR 138 KV TRANSMISSION LINES.
5. HDPE CASING PIPE SHALL BE CENTERED ON HIGH VOLTAGE POWER POLE SUCH THAT EACH END IS A MINIMUM OF 20 FEET IN EACH DIRECTION AND WRAPPED IN FILTER FABRIC TO PROTECT THE INTERSTITIAL SPACE.
6. ALL GATE VALVES SHALL HAVE A CAST IRON BOX.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE 6" TEE OR REDUCING TEE (AS REQUIRED), 6" GATE VALVE W/ C.I. BOX AND LIMITED SPACE HYDRANT.
8. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH JEA STANDARDS AND SPECIFICATIONS LATEST EDITION.
9. CONTRACTOR SHALL RESTRAIN REFER TO DRAWING GW-04 FOR RESTRAINING JOINT CHART.
10. ALL WATER SERVICES SHALL BE 1" (SEE DRAWING GW-02).



England-Thins & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32254
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FAX: (904) 642-8890
REC: 0000254 LC: 000016

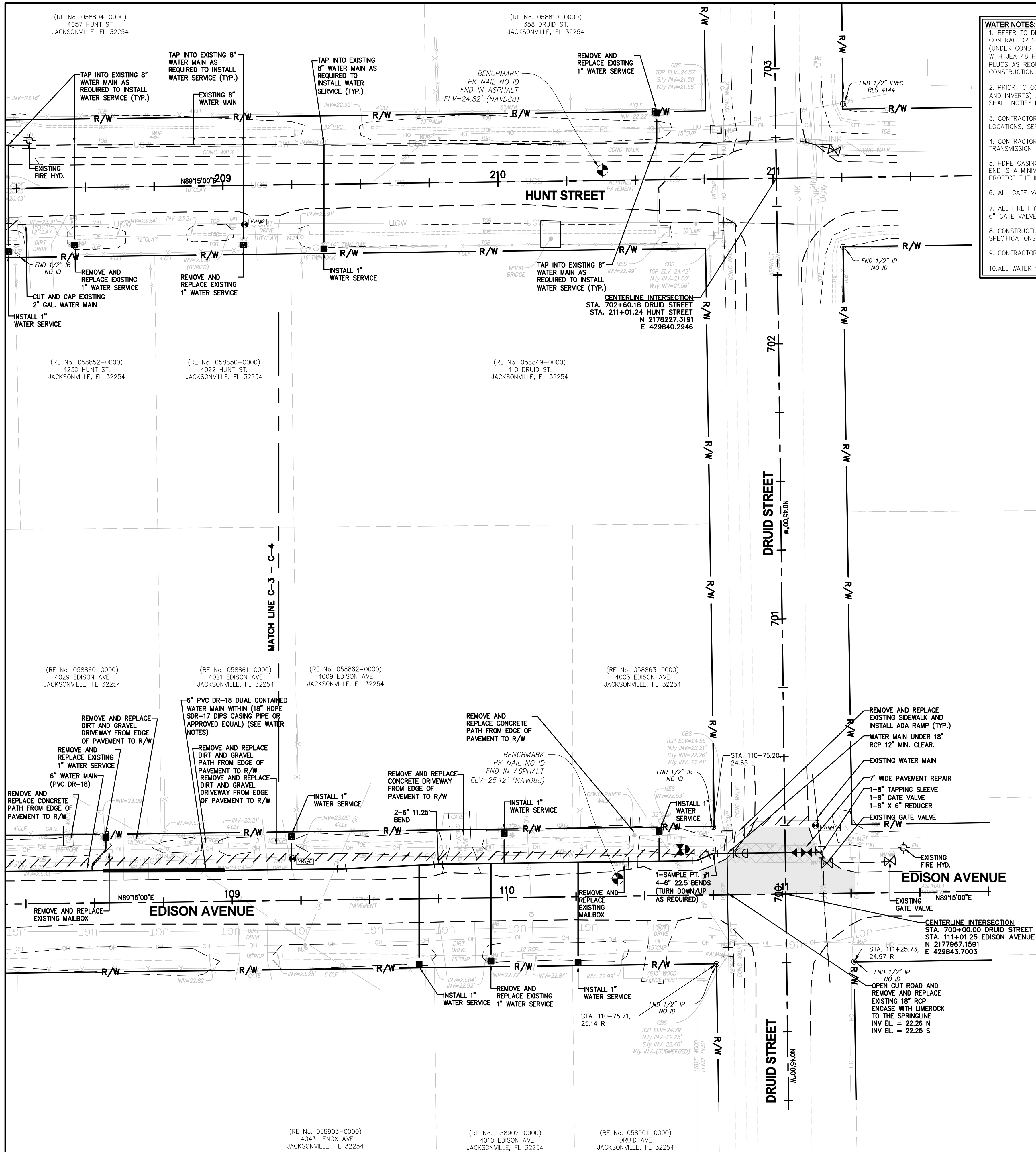
NO.		DATE		REVISIONS	
1.	BY	DATE			
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6.					

DESIGNER	N. BOLATETE	DESIGN ENGINEER	NICOLE BOLATETE
DRAWN BY	A. ANDERSON		
CHECKED BY	N. BOLATETE	FLORIDA REGISTRATION NO.	74921
DATE			



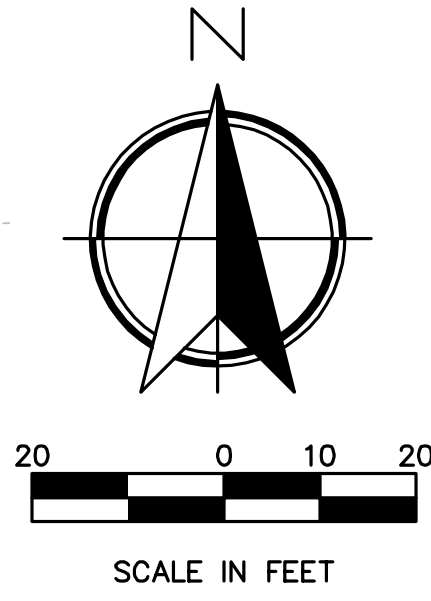
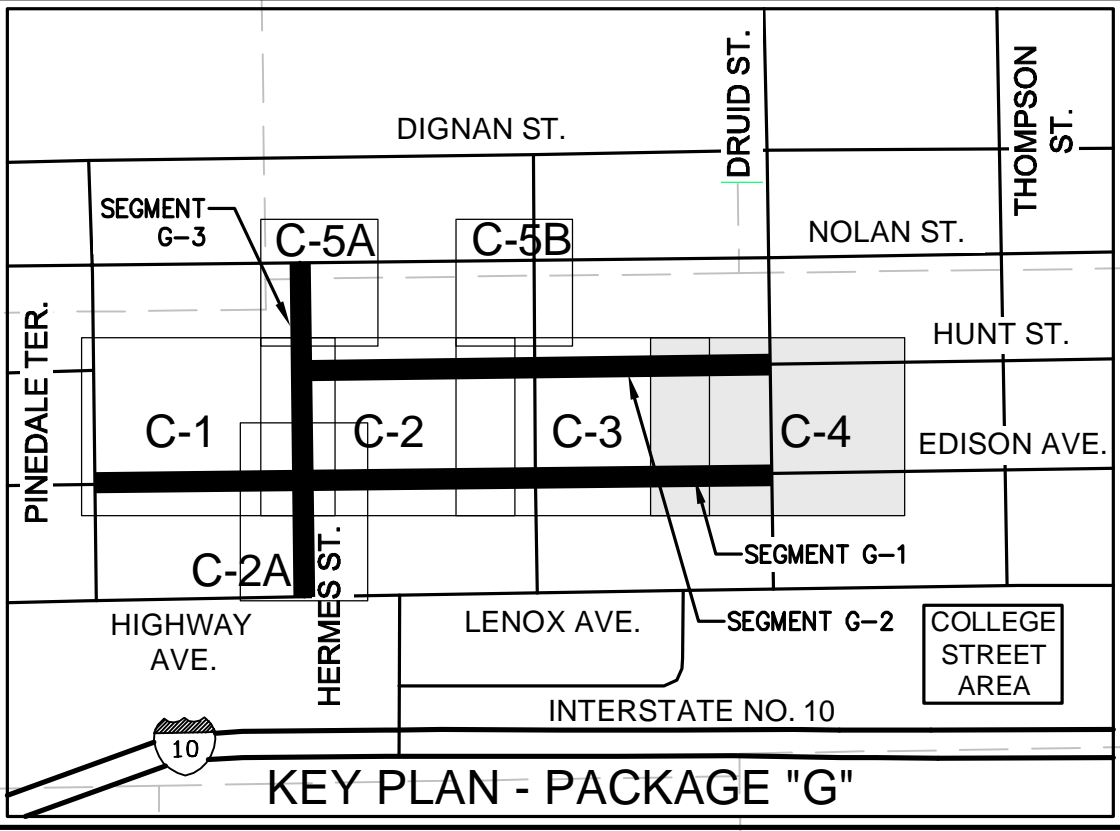
GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
WATER MAIN PLAN

NO. SHEETS	18-171	PROJ. NO.	18-171
SHEET NO.	44	DATE:	APRIL 23, 2021
DRAWING NO.	C-2A	SCALE:	AS NOTED



- WATER NOTES:**
1. REFER TO DRAWING NUMBER 2 FOR GENERAL NOTES AND LEGEND. CONTRACTOR SHALL CONNECT TO UTILITY STUBOUTS OR TAP INTO EXISTING WATER MAIN (UNDER CONSTRUCTION BY OTHERS) AS DIRECTED BY JEA. (CONNECTION MUST BE SCHEDULED WITH JEA 48 HOURS IN ADVANCE). CONTRACTOR SHALL REMOVE FLUSHING HYDRANTS AND PLUGS AS REQUIRED. NO CONNECTION SHALL BE MADE UNTIL UTILITY MAINS UNDER CONSTRUCTION BY OTHERS HAVE BEEN ACCEPTED BY JEA.
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 8. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH JEA STANDARDS AND SPECIFICATIONS LATEST EDITION.
 9. CONTRACTOR SHALL RESTRAIN REFER TO DRAWING GW-04 FOR RESTRAINING JOINT CHART.
 10. ALL WATER SERVICES SHALL BE 1" (SEE DRAWING GW-02).

- SURVEY NOTES:**
1. SURVEY INFORMATION BY ETM SURVEYORS, INC. DID NOT INCLUDE BOUNDARY SURVEY. ALL LOT LINES AND SECTION LINES DEPICTED HEREON ARE FOR GENERAL REPRESENTATION ONLY, AND ARE BASED ON GIS PARCEL DATA FROM THE CITY OF JACKSONVILLE, FLORIDA.
 2. UTILITY LOCATIONS DEPICTED HEREON ARE COMPILED OF AS-BUILT DATA, FIELD MARKED UTILITIES AS VERIFIED WITH PENETRATING RADAR/ ELECTROMAGNETIC CABLE LOCATOR AND UTILITY TEST HOLES (VWH).
 3. SURVEY INFORMATION WAS WITHOUT BENEFIT OF TITLE COMMITMENT; THEREFORE MATTERS OF RECORD AND / NON-RECORD MAY AFFECT PROPERTY DEPICTED HEREON OF WHICH THIS FIRM WAS NOT ADVISED.
 4. REFER TO SHEET 13 FOR VWH (VERIFICATION OF VERTICAL AND HORIZONTAL UTILITIES) INFORMATION AND DATA.



England-Thins & Miller, Inc.
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NO.		DATE		REVISIONS	
1	BY	DATE			
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3	BY	DATE			
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5	BY	DATE			
6	BY	DATE			

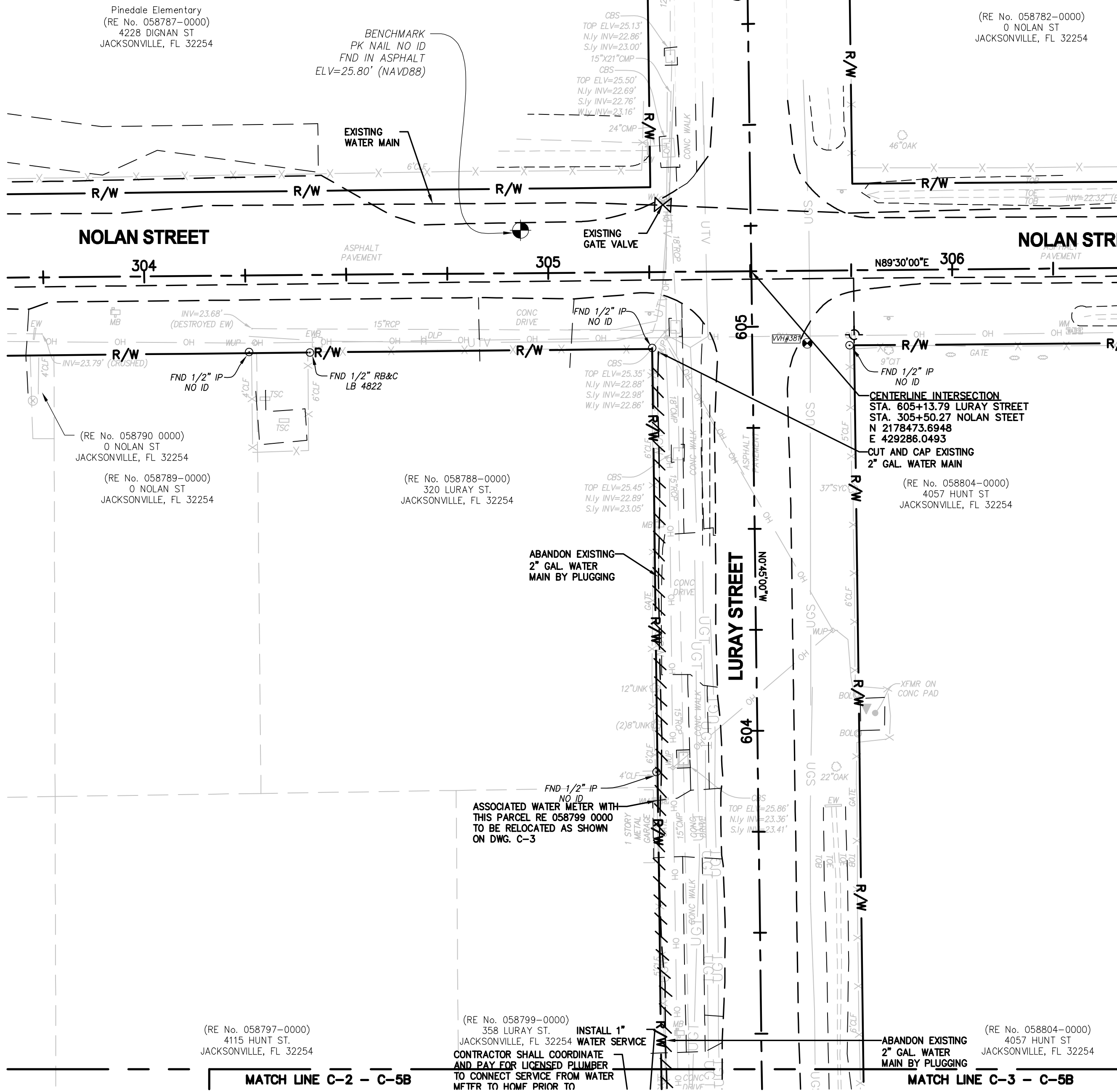
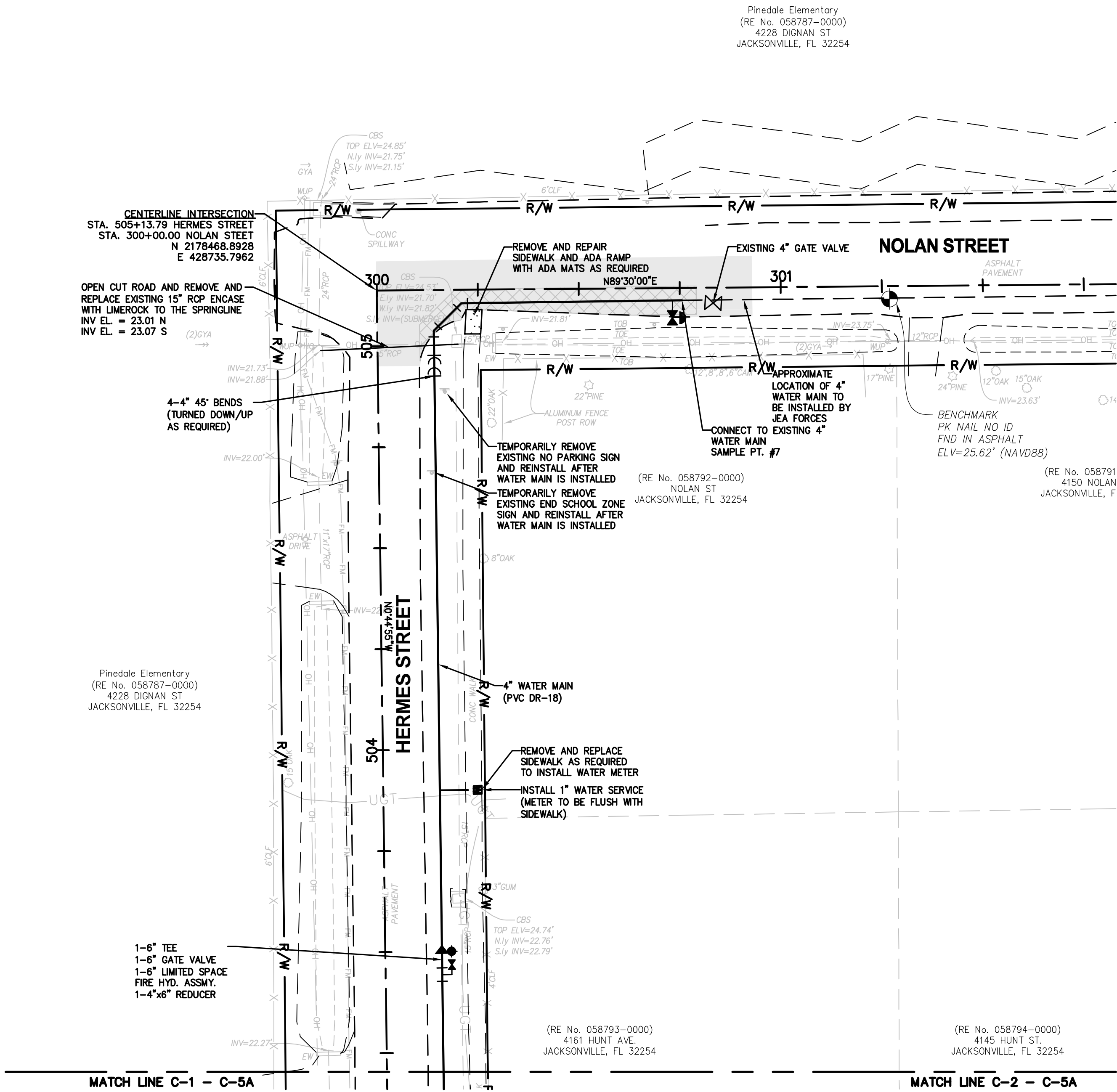
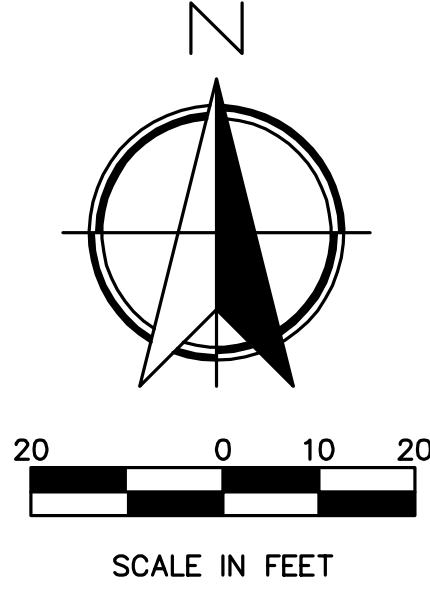
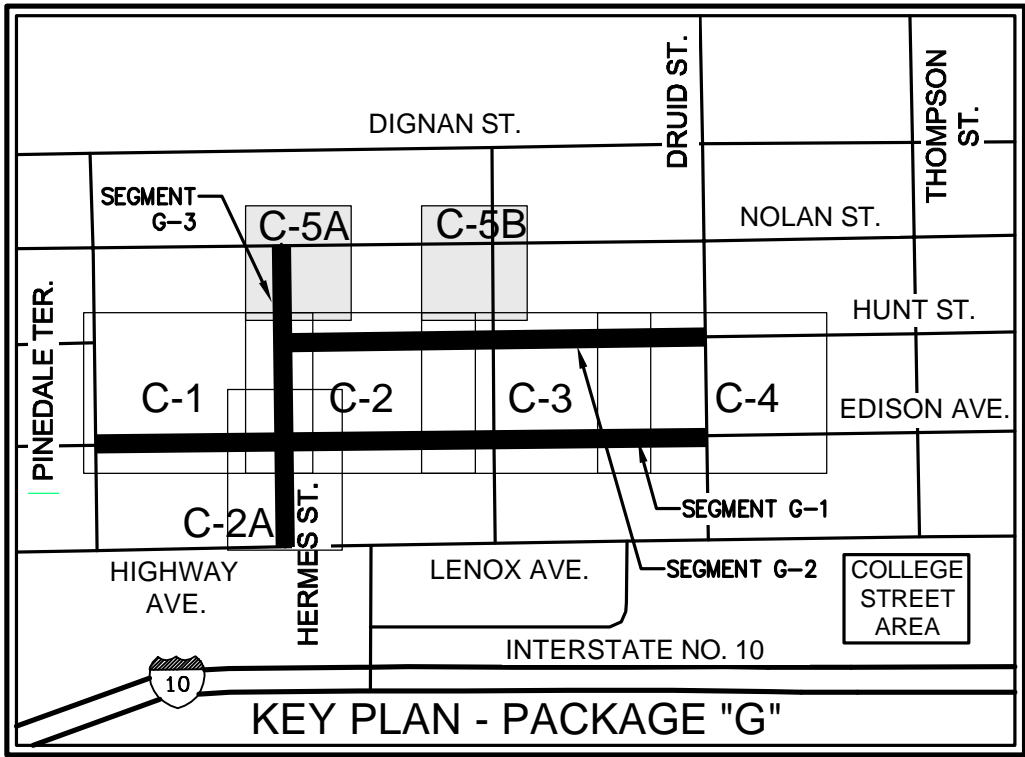
DESIGNER	N. BOLATETE	DESIGN ENGINEER	NICOLE BOLATETE
DRAWN BY	A. ANDERSON		
CHECKED BY	N. BOLATETE	FLORIDA REGISTRATION NO.	74921
DATE			

JEA
Building Community

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
WATER MAIN PLAN

PROJ. NO.	18-171
DATE:	APRIL 23, 2021
SCALE:	AS NOTED
NO. SHEETS	44
SHEET NO.	C-4
DRAWING NO.	C-4

- WATER NOTES:**
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ETM
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Jacksonville, FL 32254
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NO.	BY	DATE	REVISIONS	
			NO.	DESCRIPTION
1				
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DESIGNER:	N. BOLATETE	DESIGN ENGINEER:	NICOLE BOLATETE
DRAWN BY:	A. ANDERSON	FLORIDA REGISTRATION NO.:	74921
CHECKED BY:	N. BOLATETE		
DATE:			

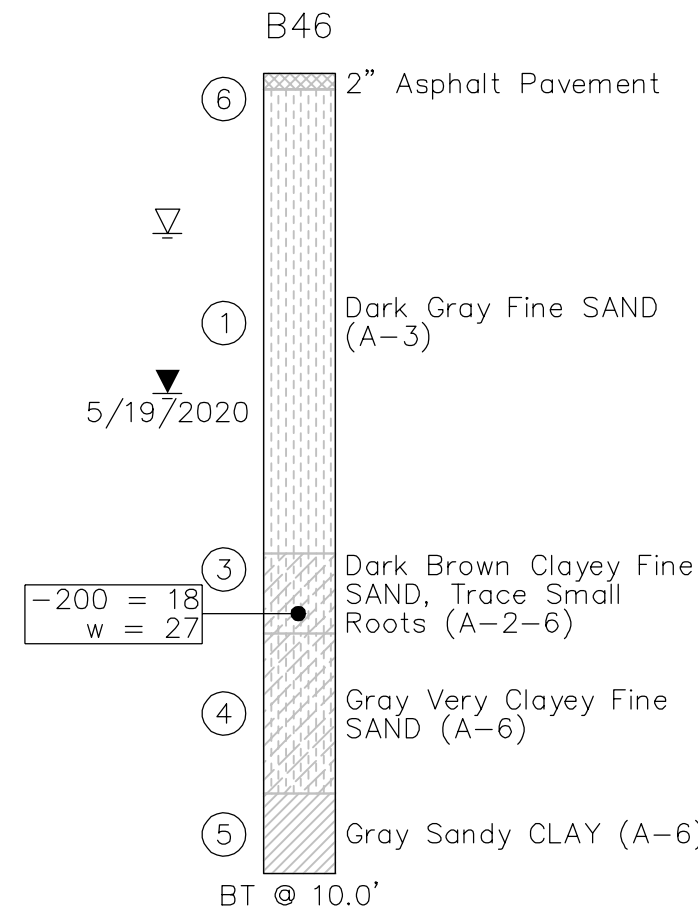
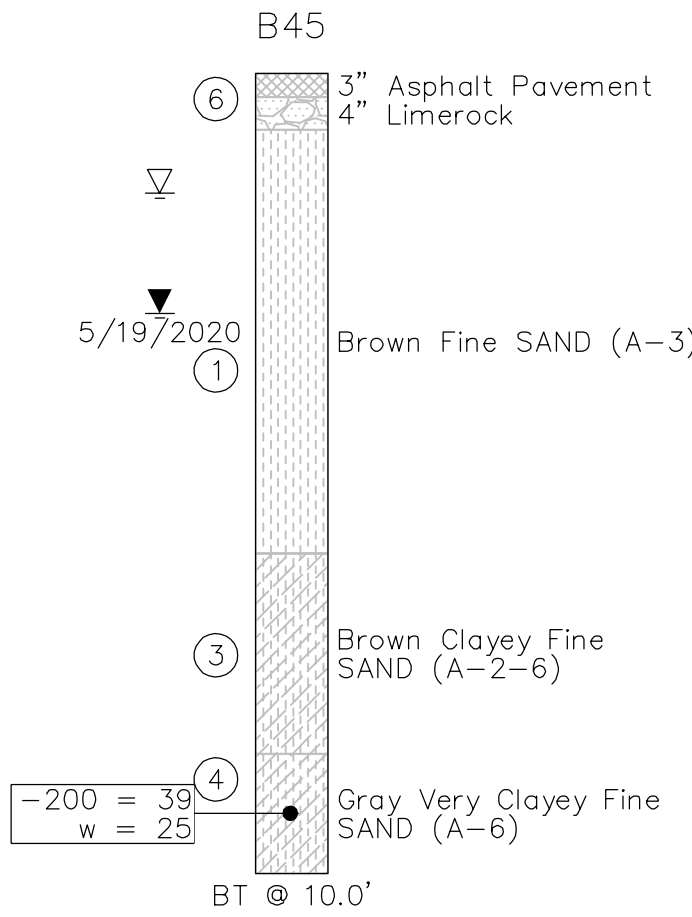
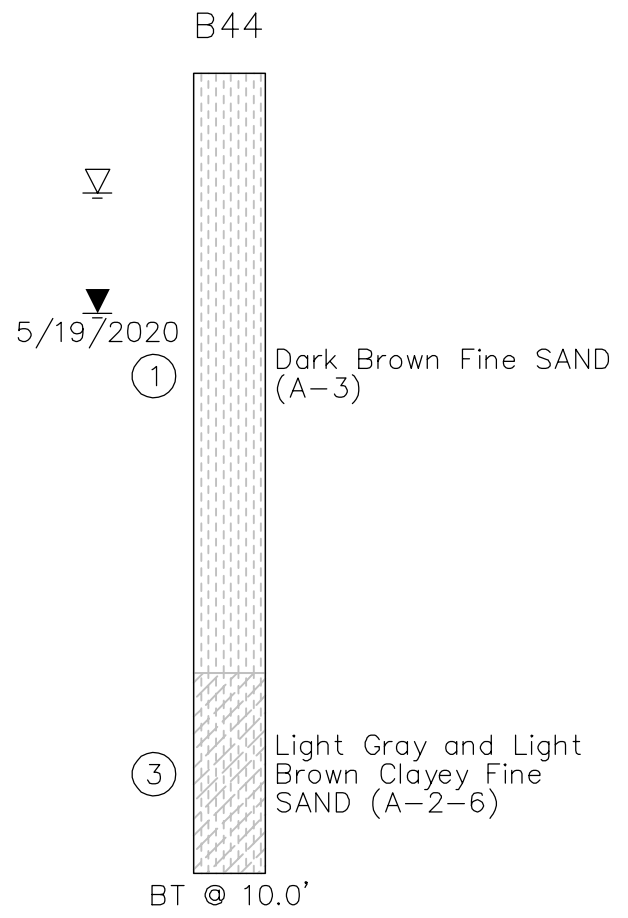
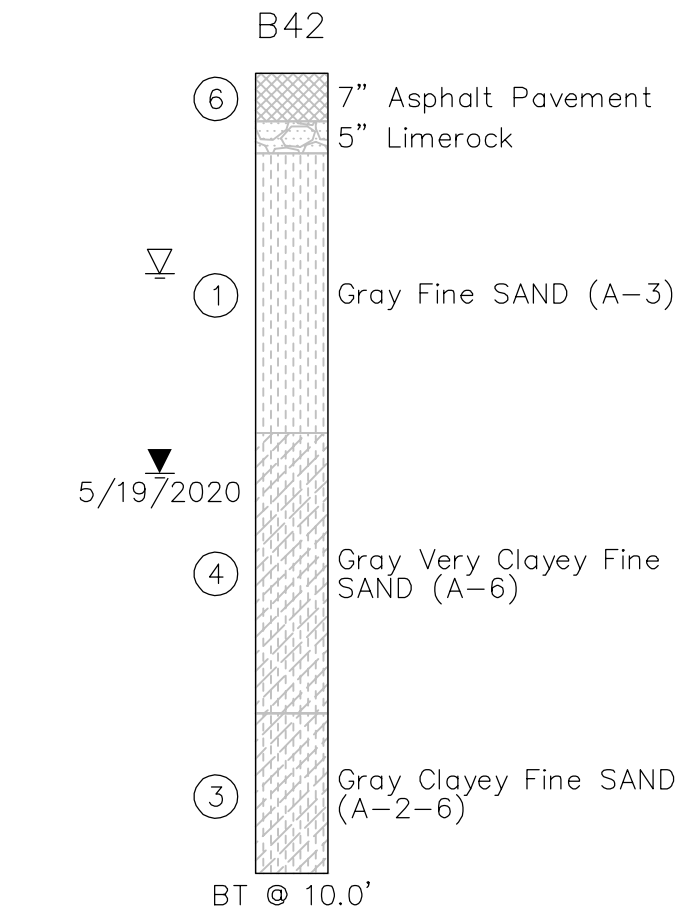
JEA
Building Community™

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
WATER MAIN PLAN

PROJ. NO.	18-171	DATE:	APRIL 23, 2021
SHEET NO.	2	SCALE:	AS NOTED
DRAWING NO.	C-5		

VVH #	Mat'l. Found	Top of Util. Depth (ft)	Ground Elev. (ft)	Top of Util. Elev. (ft)
1	2" G	1.56	25.98	24.42
2	2" G	2.24	25.1	22.86
5	2" G	1.98	25.79	23.81
6	2" G	1.69	25.35	23.66
313	4" PVC	2.76	25.79	23.03
324	2" GAL	1.34	24.76	23.42
325	0.75" DBC	2.54	24.28	21.74
326	1" GAL	2.05	25.79	23.74
376	8" PVC	2.74	25.3	22.56
378	4" PVC	2.81	25.87	23.06
379	4" PE	2.07	25.98	23.91
380	2" GAL	1.03	24.57	23.54
381	4" PVC	3.85	25.78	21.93
382	0.75" DBC	1.87	24.3	22.43
383	8" STL	3.54	24.16	20.62
384	2" GAL	1.93	25.91	23.98
385	4" CONC.	1.92	25.68	23.76
386	2" PE	2.47	25.84	23.37
390	8" PVC	3.46	25.77	22.31
391	2" DBC	2.56	25.75	23.19
392	2" DBC	2.81	25.74	22.93
393	6" PVC	1.72	25.31	23.59
394	12" VCP	4.01	26.42	22.41
395	See Note	2.14	23.96	21.82
396	See Note	2.03	26.15	24.12
397	2" GAL	2.42	26.12	23.7
398	6" PVC	2.93	26.03	23.1
399	2" PE	1.99	26.09	24.1
400	2" PVC	1.87	26.11	24.24
401	6" PVC	1.75	25.52	23.77
402	1" DBC	2.52	25.65	23.13
406	8" STL	3.56	24.98	21.42
407	4" PVC	2.5	25.23	22.73
423	8" STL	2.87	26.07	23.2
377A	4" PVC	3.06	25.83	22.77
377B	2" GAL	2.92	25.83	22.91
5A	DBC	2.32	25.75	23.43
5B	DBC	2.4	25.76	23.36
INV	1" CABLE	1.03	25.17	24.14
INV	2" GAL	1.44	24.79	23.35
INV	0.75" DBC	2.15	24.02	21.87

SURVEY NOTES:
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LEGEND			
6 Asphalt Pavement	1 Fine SAND, Fine SAND With Silt (A-3)	A-3 AASHTO Soil Classification System	
6 Limerock Base	2 Silty Fine SAND (A-2-4)	Groundwater Level at Time of Drilling	
3 Clayey Fine SAND (A-2-6)	5 CLAY (A-7-6)	Estimated Normal Seasonal High Groundwater Level	
4 Very Clayey Fine SAND, Sandy CLAY (A-6)	1 Stratum Number (See Roadway Soil Survey Sheet)	-200% Passing No. 200 U.S. Standard Sieve	
BT Boring Terminated at Depth Below Grade		w Natural Moisture Content (%)	

ETM
England-Thims & Miller, Inc.
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VISION • EXPERIENCE • RESULTS		REVISIONS	
NO.	BY	DATE	
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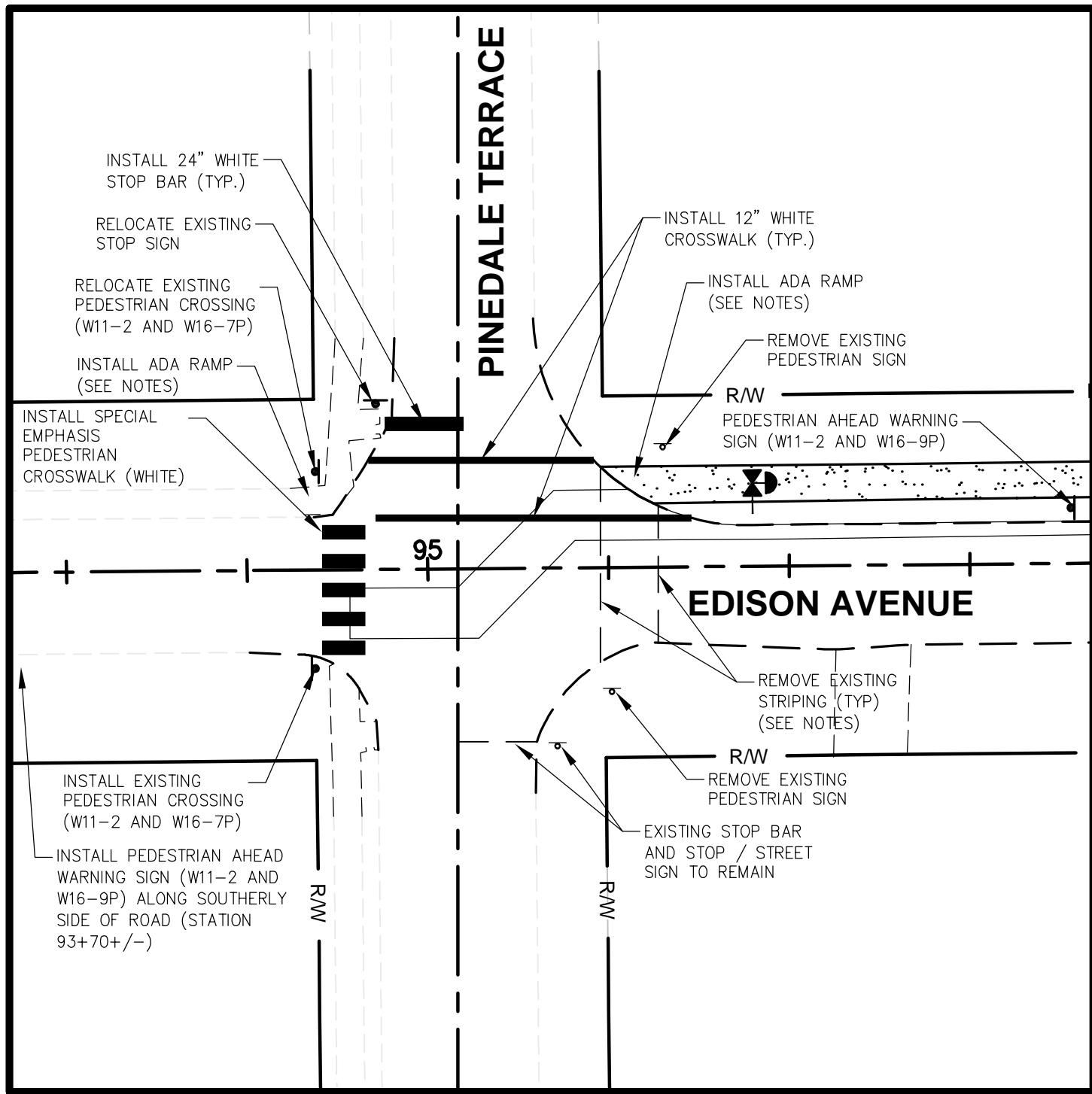
DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
CHECKED BY: N. BOLATETE
DATE: 7/4/2021

DESIGN ENGINEER: NICOLE BOLATETE
FLORIDA REGISTRATION NO.: 74921

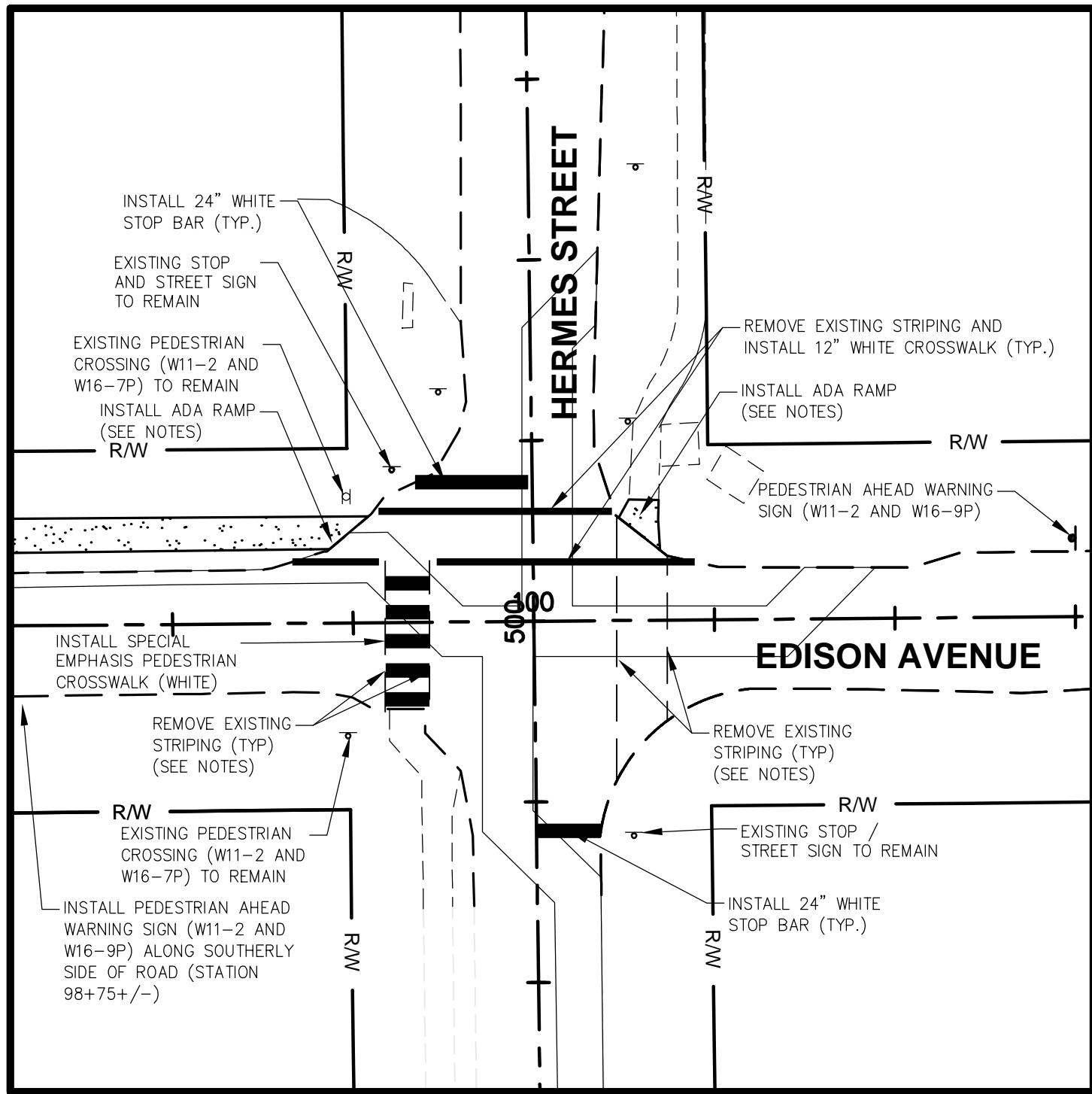
JEA
Building Community

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
VVH TABLE AND BORING DETAILS

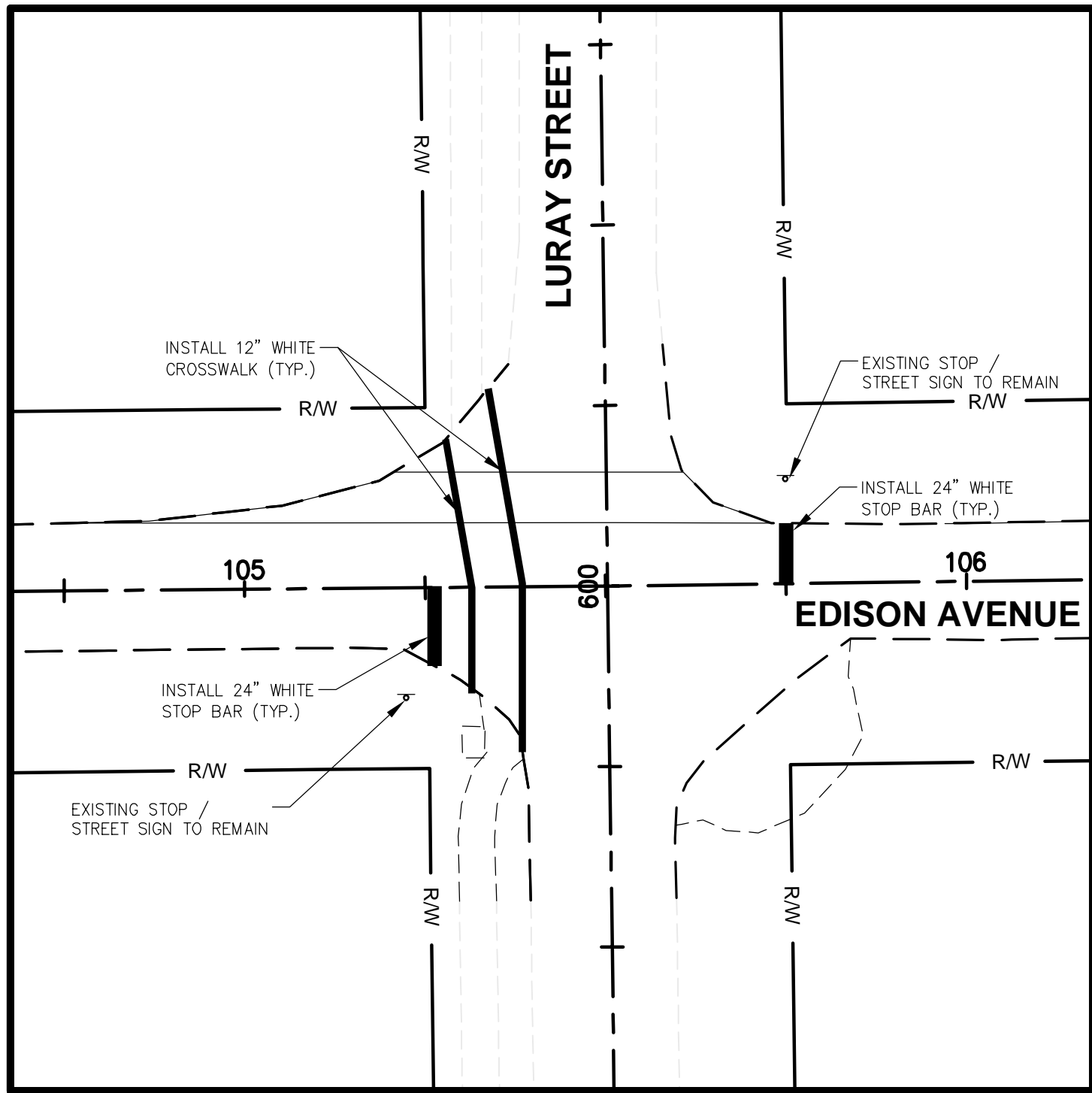
NO. SHEETS 44	PROJ. NO. 18-171	DATE: APRIL 23, 2021	SCALE: AS NOTED
SHEET NO. 3			
DRAWING NO. C-6			



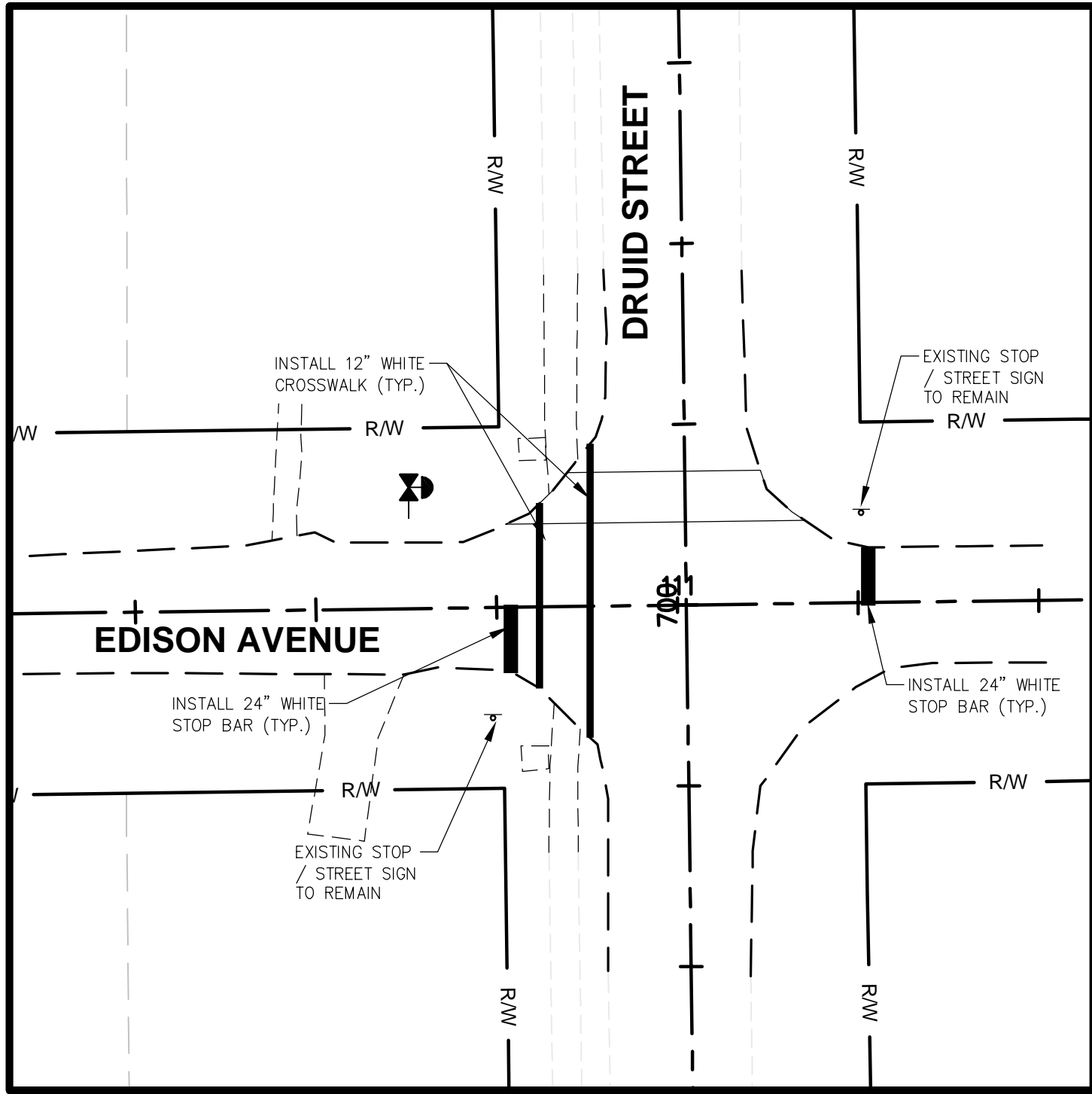
INTERSECTION DETAIL A



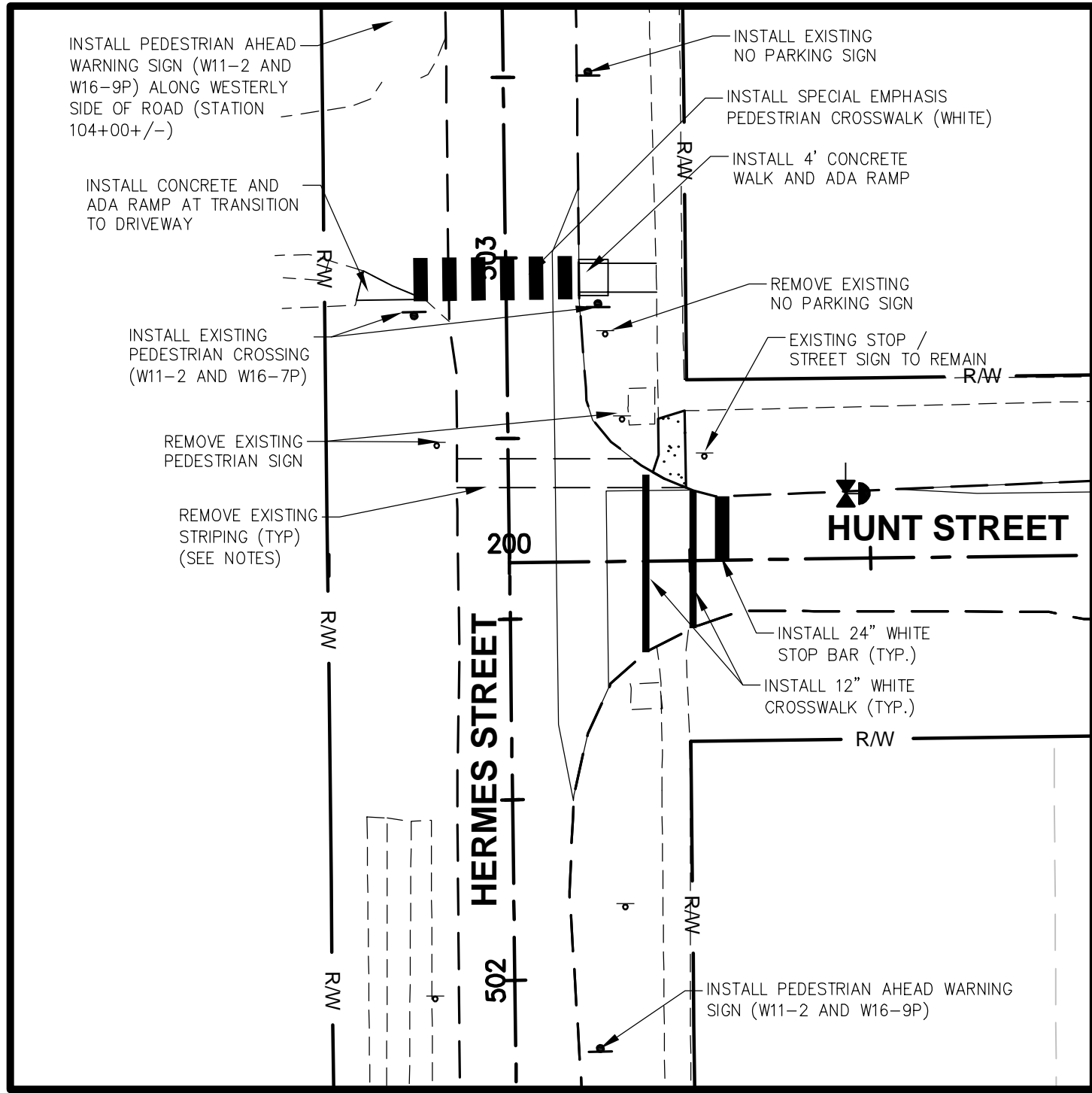
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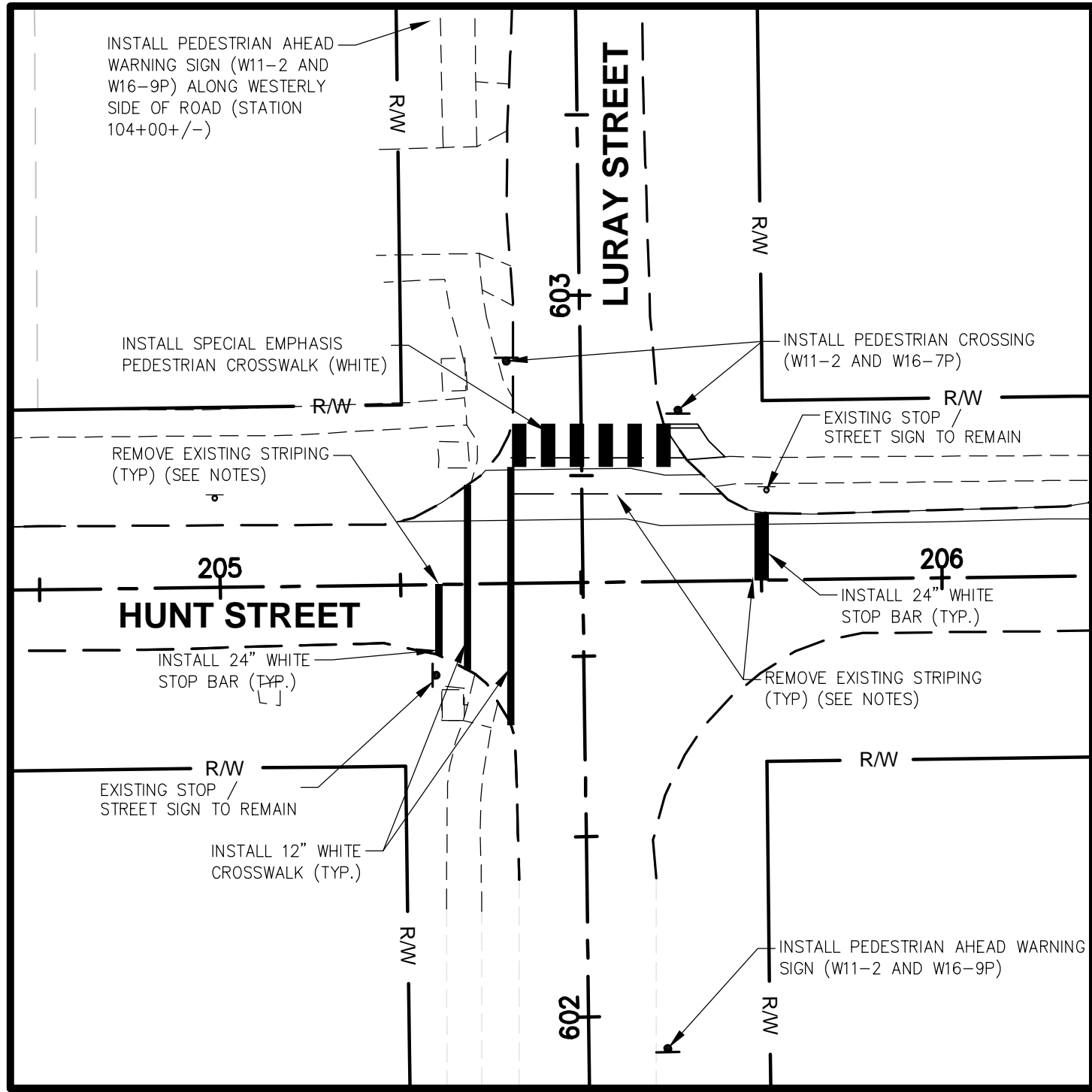
INTERSECTION DETAIL C



INTERSECTION DETAIL D

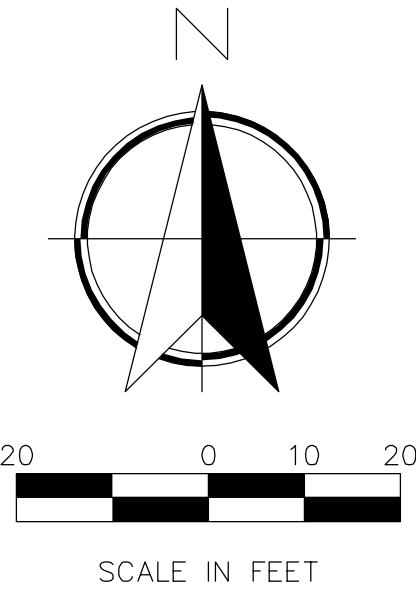


INTERSECTION DETAIL E



INTERSECTION DETAIL F

- NOTES:**
1. REFER TO DRAWING 2 FOR GENERAL NOTES AND LEGEND.
 2. ALL NEWLY INSTALLED SIGNAGE AND STRIPING SHALL BE PER FDOT STANDARDS AND SPECIFICATIONS. THESE ITEMS SHALL BE PAID FOR BY CONTRACTOR.
 3. SIDEWALK TO BE CONSTRUCTED WITH SLOPES COMPLYING TO WITH LATEST ADA CODE MAX. VERTICAL SLOPE OF 5.0% AND MAX. CROSS SLOPE OF 2.0%. CONTRACTOR SHALL INSTALL HANDICAP CURB RAMPS WITH DETECTABLE WARNINGS AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMPS SHALL COMPLY WITH LATEST ADA CODE PER FDOT INDEX 522. (SEE GENERAL NOTES SHEET 2 FOR ADA MATS).
 4. ALL SPECIAL EMPHASIS CROSSWALKS SHALL BE CONSTRUCTED TO FDOT STANDARD DETAIL INDEX NO. 711-001.



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VISION • EXPERIENCE • RESULTS

NO.	BY	DATE	REVISIONS	
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DESIGNER:	N. BOLATETE	DESIGN ENGINEER:	NICOLE BOLATETE
DRAWN BY:	A. ANDERSON		
DATE:		FLORIDA REGISTRATION NO.:	74921
CHECKED BY:	N. BOLATETE		
DATE:			



GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
INTERSECTION STRIPING DETAIL

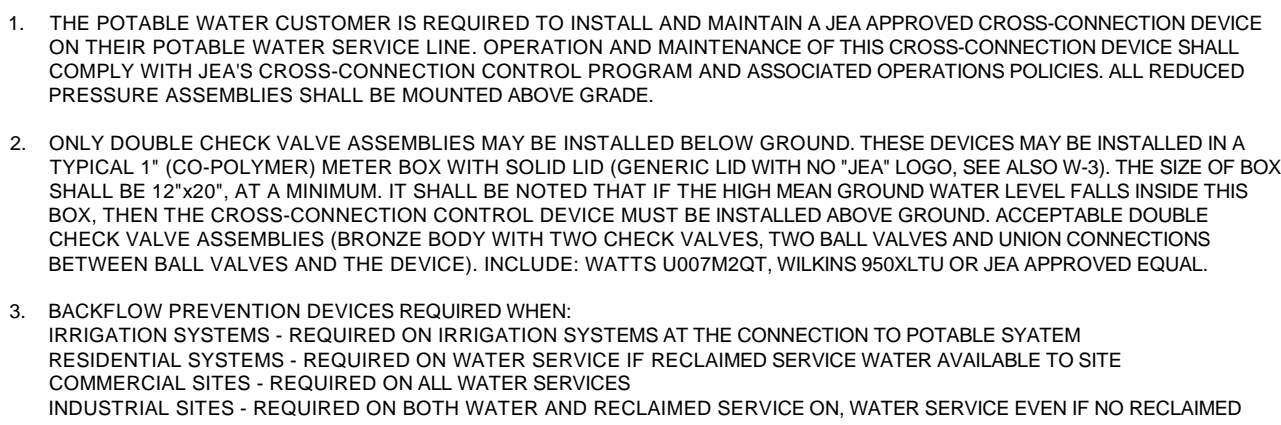
NO. SHEETS	18-171	PROJ. NO.	18-171
44		DATE:	APRIL 23, 2021
SHEET NO.		SCALE:	AS NOTED
DRAWING NO.	C-7		

PROPOSED UTILITY												
CONFLICTING UTILITY	POTABLE WATER			WASTEWATER GRAVITY AND FORCE MAIN			RECLAIMED WATER			VACUUM SEWERS		
	HORIZ.	VERT.	JOINT SPACING'	HORIZ.	VERT.	JOINT SPACING'	HORIZ.	VERT.	JOINT SPACING'	HORIZ.	VERT.	JOINT SPACING'
POTABLE WATER	3' NOTE 1	12"	3' NOTE 2	6' to 10'	12" NOTE 5	6' NOTE 2	3'	12"	6' NOTE 2	3' to 10'	12"	3' NOTE 2
RECLAIMED WATER	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2
WASTEWATER (GRAVITY AND FORCE MAIN)	6' to 10'	12"	6' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
VACUUM SEWERS	3' to 10'	12"	3' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
RIGHT OF WAYS	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
PERMANENT STRUCTURES (SIGNS, POLES, ETC.)	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
GAS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
TREES	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

1. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
2. THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
3. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
4. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
5. WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.
6. REFER TO POTABLE WATER PIPING- SECTION 350, III.4.11.

JANUARY 2020 PLATE W-10

1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS. CHAPTER 62-055, F.A.C. AND LATEST EDITIONS OF THE SEWER DESIGN MANUAL, CHAPTER 10, AND THE WATER MAIN DESIGN MANUAL, CHAPTER 11, BOTH INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER, FIRE HYDRANT LEADS, AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER. IN ADDITION, THE PHRASE "RECLAIMED WATER" REFERS TO THE WATER REGULATED UNDER PART II OF CHAPTER 62-016, F.A.C.
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER.
3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO TWO (2) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER (SPECIAL CASE).
4. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
5. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER, OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM ALL JOINTS IN EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER.
7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST TWO (2) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS, PRIOR TO CONSTRUCTION.

JANUARY 2020 PLATE W-11

JANUARY 2020 PLATE W-15



1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE LEAVING ENOUGH SPACE TO REACH A LOCATE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 300, LOCATE WIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK AND NOT WITHIN SIDEWALK AREAS. THE DISTANCE RANGE FROM EDGE OF ADJACENT PAVEMENT, BACK OF CURB AND FACE OF SIDEWALK SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA AND APPLICABLE PERMITTING AGENCIES. THE DISTANCE FROM THE CLOSEST PART OF THE FIRE HYDRANT, THE PUMPER NOZZLE, TO THE PAVEMENT, THE MAXIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT RULES AND AS APPROVED BY JEA. FOR OTHER LOCATION LIMITATIONS SEE PLATES W-10 AND W-11. IF PIPING BETWEEN TEE AND HYDRANT IS LESS THAN 60 FT, AN ANCHOR SHALL BE REQUIRED AT THE TEE. THE ANCHOR SHALL BE INSTALLED IN THE TEE, NOT AT ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BURNER MAIN WHICH IS WITHIN 15 FT OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES SUCH AS SPRING OR SPRING WASHERS) TO BE INSTALLED IN THE TEE. ANCHORS SHALL NOT BE INSTALLED AT ANY OTHER JOINTS ALONG THE HYDRANT BURNER MAIN OUTSIDE OF THE FIRST 15 FT SHALL INCLUDE JOINT RESTRAINTS.
3. OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL, OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTFLOW FLOW.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OLED, GREASED AND REPAINTED (RUS- KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL), PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
5. FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY" OR "TIE" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY TRUE FOR BRASS LINES WHICH TIE OFF AT A 12" OR LARGER WATER MAIN, UNLESS APPROVED OTHERWISE BY THE INSTALLATION OF (45°) BENDS IS NOT ACCEPTABLE WHEN UTILIZED TO CORRECT AN IMPROPERLY FURNISHED HYDRANT. THE USE OF HYDRANT EXTENSIONS SHOULD BE MINIMIZED.
6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE TRANSVERSE SECTION OF THE ROADWAY CENTERLINE.

JANUARY 2020 PLATE W-13

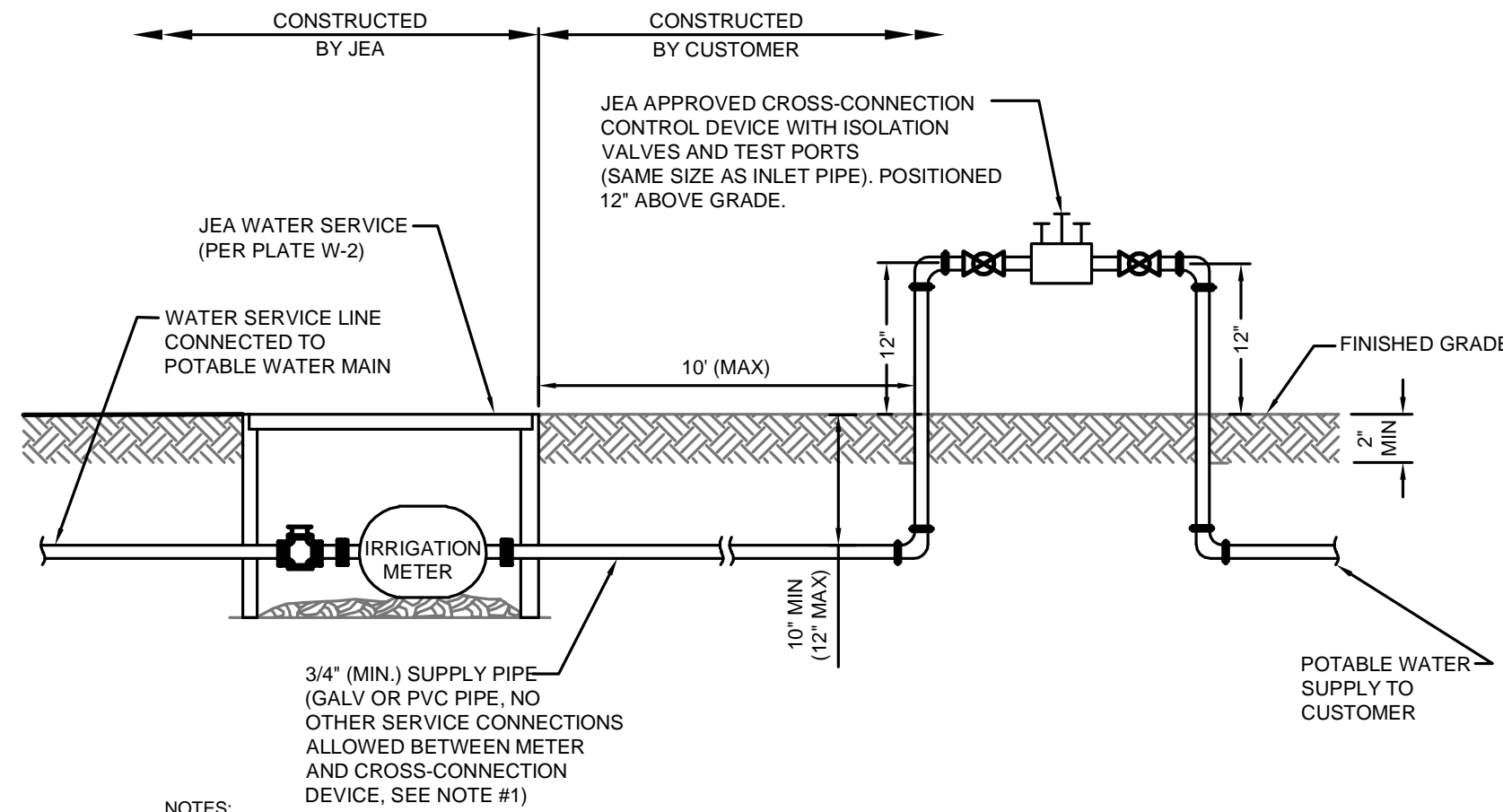


1. LOCATE FIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. LEAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 300, LOCATE FIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK. ALL HYDRANTS SHALL BE LOCATED NO LESS THAN THREE (3) FEET FROM THE EDGE OF PAVEMENT OR BACK OF CURB OF THE ADJACENT ROADWAY AND NO LESS THAN THREE (3) FEET FROM ANY PHYSICAL FEATURE WHICH MAY OBSTRUCT ACCESS OR VIEW OF ANY HYDRANT UNLESS OTHERWISE SPECIFIED BY THE JEA. THE MINIMUM DISTANCE (BACK OF CURB) SHALL BE IN COMPLIANCE WITH LOCAL COUNTY FIRE DEPARTMENT REQUIREMENTS. IF NOT APPLIED BY JEA, OR OTHER LOCATION LIMITATIONS SEE PLATES W-1 AND W-11.
3. PIPING BETWEEN THE HYDRANT AND HYDRANT IS LONGER THAN 50' IN, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT. IF THE HYDRANT IS LOCATED MORE THAN 150' FROM THE VALVE, A 150' GATE VALVE IS REQUIRED. IF THE HYDRANT IS LOCATED 15' LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING TWO 3/4" (4) (THREADED) STEEL RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED), A SPLIT SERRATED RING WITH RESTRAINT ERS (E884 15 P/06 or EQUAL) MAYBE USED. THE ASSEMBLY, ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15' SHALL INCLUDE JOINT RESTRAINTS.
3. OPERATION OF THE FIRE HYDRANT SHALL BE EITHER FULL OPEN POSITION OR TOTALLY CLOSED POSITION. THE HYDRANT SHALL NOT BE UTILIZED TO THROTTLE OUTFLOW FLUID.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUS- KIL ENAMEL-INTERNATIONAL YELLOW OR EQUAL). PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.
5. FIRE HYDRANTS SHALL BE ORDERED WITH PROPER "BURY DEPTH" TO MEET ACTUAL FIELD CONDITIONS. THIS IS ESPECIALLY TRUE FOR HYDRANTS WHICH TIE-OUT TO 6" OR LARGER WATER MAIN, UNLESS APPROVED OTHERWISE BY JEA. THE INSTALLATION OF 45° BENDS IS NOT ACCEPTABLE WHEN UTILIZED TO CORRECT AN IMPROPERLY FURNISHED HYDRANT. THE USE OF HYDRANT EXTENSIONS SHOULD BE MINIMIZED.
6. BLUE REFLECTIVE MARKERS SHALL BE INSTALLED IN SUCH A MANNER THAT THE REFLECTIVE FACE OF THE MARKER IS PERPENDICULAR TO A LINE PARALLEL TO THE ROADWAY CENTERLINE. THE BLUE REFLECTIVE MARKERS SHALL BE PLACED IN THE CENTER OF THE HYDRANT BRANCH MAIN.

JANUARY 2020 PLATE W-14

JEA STANDARD
WATER AND RECLAIM DETAILS
GALVANIZED PIPE REPLACEMENT PROGRAM

18-171 Galv Pipe\Design\College St\G_Package\LandDev\Design\Plots\18-171 Package-G-JEA-Water-Dets=Master-01-2020.dwg PLOTTED: Apr. 26, 21 - 3:48 PM, BY: Alex Anderson

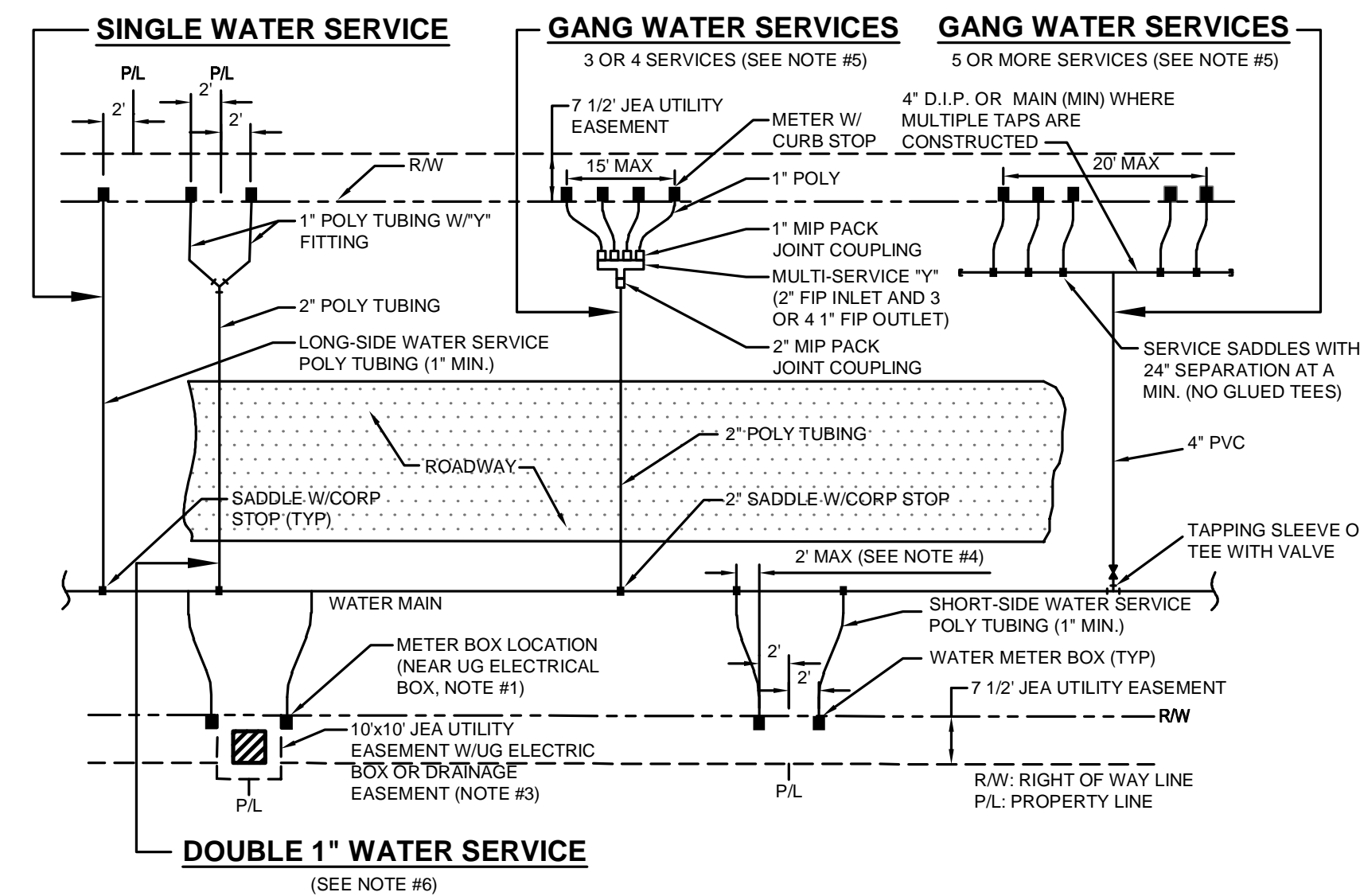


- NOTES:**
1. WATER SERVICE CONNECTIONS REQUIRE ABOVE GRADE REDUCED PRESSURE BACKFLOW PREVENTERS. (SEE PLATE W-15)
 2. BACKFLOW PREVENTION DEVICES REQUIRED WHEN:
IRRIGATION SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
RESIDENTIAL SYSTEMS - REQUIRED ON WATER SERVICE IF RECLAIMED SERVICE WATER AVAILABLE TO SITE
COMMERCIAL SITES - REQUIRED ON ALL WATER SERVICES
INDUSTRIAL SITES - REQUIRED ON BOTH WATER AND RECLAIMED SERVICE CONNECTIONS.
 3. RESIDENTIAL IRRIGATION SERVICES MAY UTILIZE AN ALTERNATE BACKFLOW PREVENTER LOCATION IF THE FOLLOWING CONDITIONS EXIST:
3.a. CUSTOMER HAS SUBMITTED A COMPLETED "CUSTOMER AFFIDAVIT" FORM AND
3.b. THERE ARE NO ADDITIONAL CONNECTIONS BETWEEN THE METER AND THE BACKFLOW PREVENTER, AND
3.c. THE ALTERNATE BACKFLOW LOCATION IS EASILY ACCESSIBLE TO JEA AND BACKFLOW TESTERS.

CROSS CONNECTION CONTROL DEVICE

JANUARY 2020 JEA IRRIGATION SERVICE CONNECTIONS PLATE W-15A

A LOCATE WIRE SHALL BE PLACED ON SERVICES 10 FT OR GREATER.

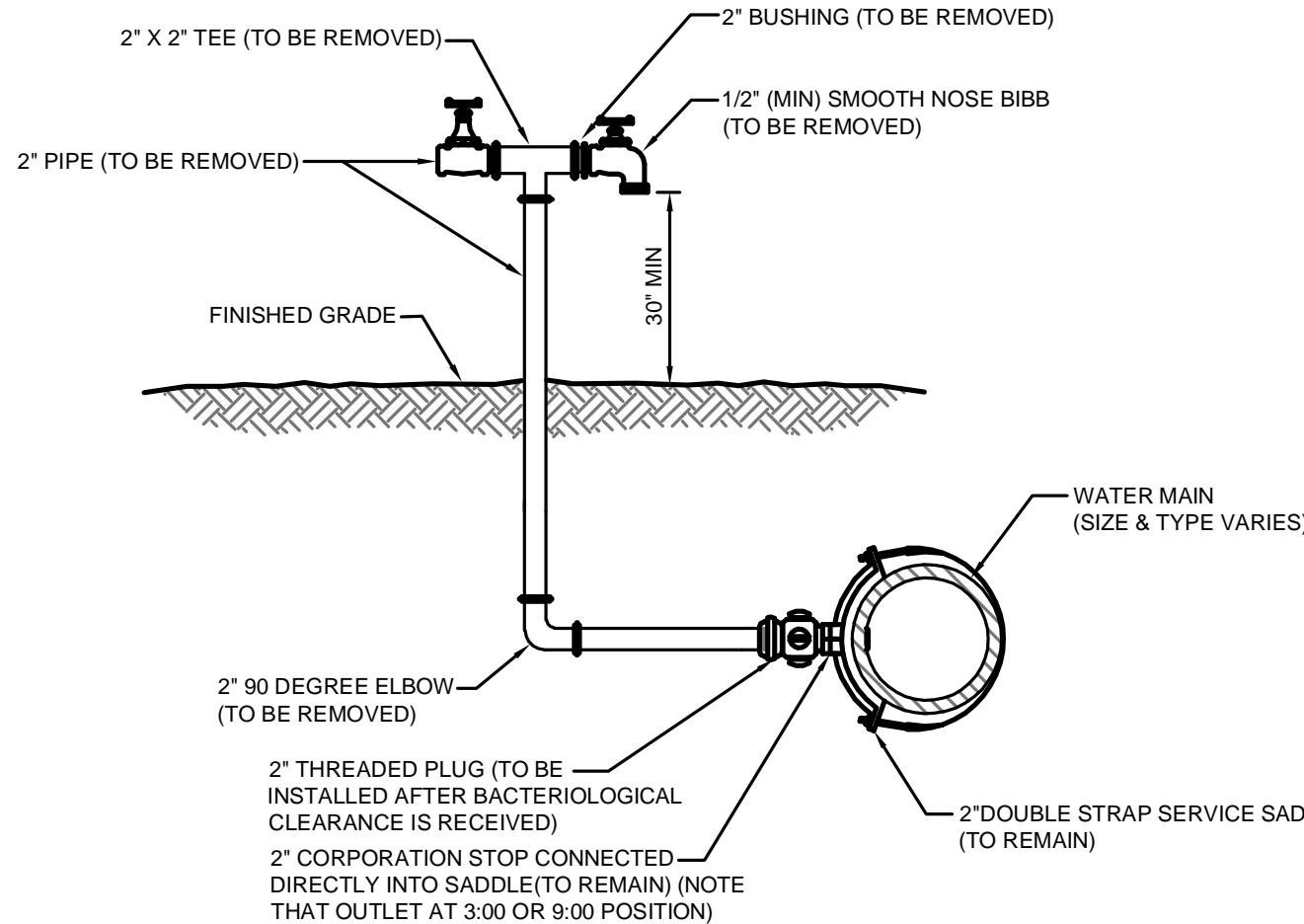


- NOTES:**
1. THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED AT THE R/W LINE BUT INSIDE THE 7 1/2" ELECTRIC EASEMENT.
 2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (NASSAU, CLAY OR ST. JOHNS COUNTY), THE METER BOX SHALL BE LOCATED IN THE JEA 7 1/2" UTILITY EASEMENT AND TWO FEET INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF TWO FEET), UNLESS APPROVED OTHERWISE BY JEA. THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF THE METER BOX IS APPROVED BY JEA TO BE LOCATED IN A DRIVEWAY OR SIDEWALK, THEN THE CONSTRUCTION SHALL MEET STANDARD DETAIL NUMBERS W-384, AT A MINIMUM (SEE W-3 AND W-4 FOR THE REQUIREMENTS OF SPECIAL ORDER POLYMER BOX AND TOP). SET TOP OF BOX AT FINISHED GRADE. IF AN UNAPPROVED METER BOX IS IDENTIFIED BY JEA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. JEA SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
 3. IF DRAINAGE OR OTHER EASEMENT LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
 4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICES SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 1" SERVICES, THE 2" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX (W/ PIG TAIL) TO THE MAIN (DEAD END SHALL BE TAPED WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPED OF INSULATION BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY JEA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
 5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CORP STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER-MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN PVC CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS UTILIZING 4" D.I.P. 4" PIPE, 4"x1" SADDLES AND 1" CORP STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE P.E. ENGINEER.
 6. DOUBLE 1" WATER SERVICES IS ALLOWED FOR SHORT SIDE OR LONG SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.
 7. A 1" IRRIGATION SERVICE MAY BE TAPPED INTO THE (1" MIN) DOMESTIC WATER SERVICE LINE (WHICH SERVES THE SAME CUSTOMER) UTILIZING A 1" BRONZE "Y" FITTING. (IN AREAS WHERE NO RECLAIMED WATER IS AVAILABLE).
 8. NO 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
 9. RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED, AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE, AND/OR BOX AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY JEA.
 10. SERVICE SIZE SHALL BE SAME AS THE METER SIZE.

WATER OR RECLAIM SERVICE INSTALLATIONS 2" AND SMALLER METER

JANUARY 2020

PLATE W-1

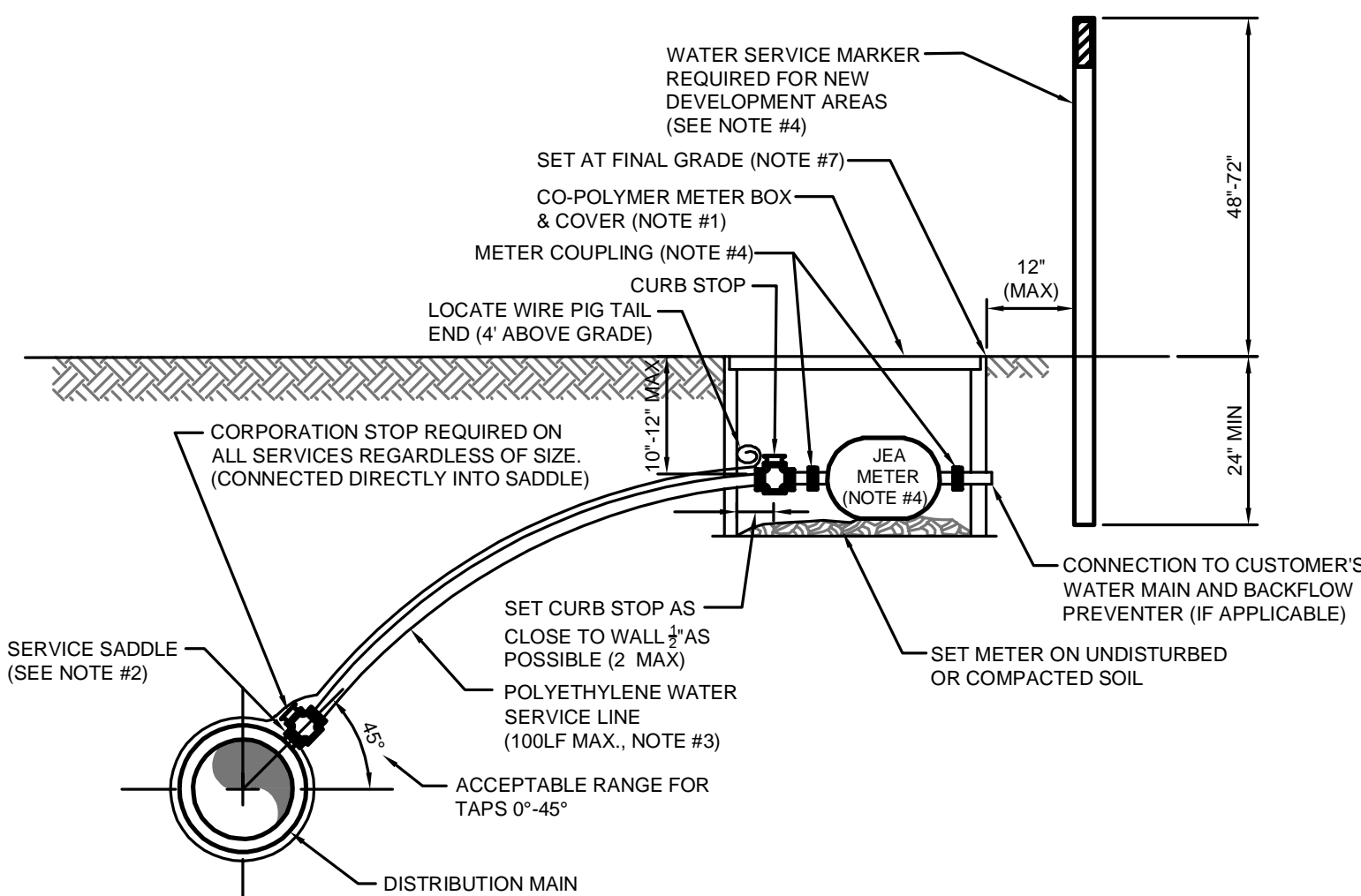


- NOTES:**
1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
 2. ALL PIPE & FITTING SHALL BE GALVANIZED MATERIAL OR PVC (S-40).
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTING (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED
 4. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

2" TEMPORARY SAMPLE TAP FOR STUB OUT

JANUARY 2020

PLATE W-26

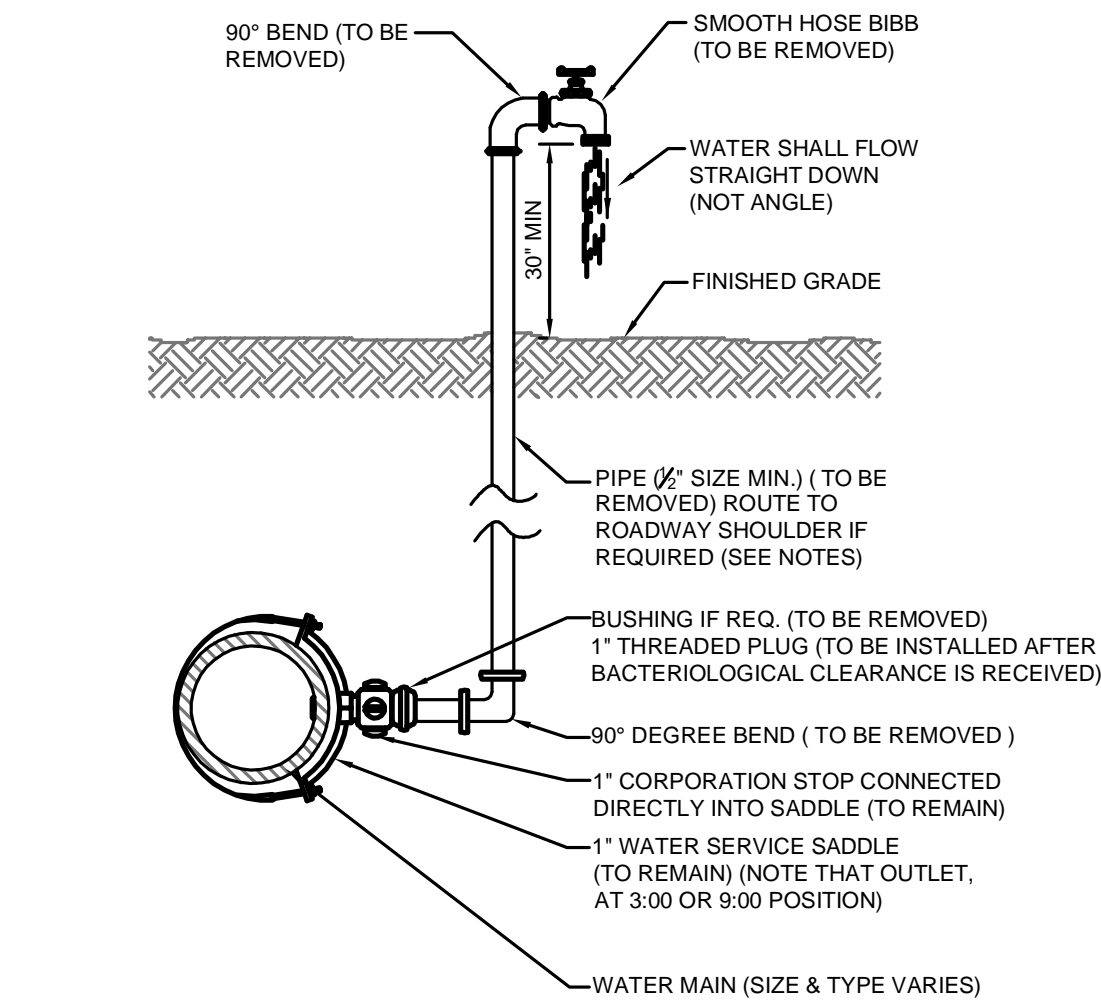


- NOTES:**
1. SEE PLATE W-1 FOR METER LOCATION REQUIREMENTS.
 2. SINGLE BAND SADDLES SHALL BE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED. BRASS SADDLES MAY BE UTILIZED ON NEW 1 INCH AND SMALLER WATER SERVICES WHICH ARE INSTALLED ON A DRY 10 INCH OR SMALLER PVC WATER MAIN.
 3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY JEA. A CONSTRUCT POLY LINE WITH 24" (MIN) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (1" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS APPROVED OTHERWISE BY JEA.
 4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). WATER SERVICES SERVING VACANT LOTS (SERVICE NOT IN USE) SHALL INCLUDE A "Y" CUT INTO THE CURB (CLOSEST TO THE METER BOX), AND PAINTED BLUE (PAINTED PURPLE FOR RECLAIMED WATER). IN ADDITION, FOR NEW DEVELOPMENT AREAS WHERE THE WATER SERVICE IS "NOT IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED BLUE OR PURPLE FOR RECLAIMED WATER). THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
 5. NO 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
 7. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (i.e. NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
 8. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. SEE PLATE W-44.

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2020

PLATE W-2

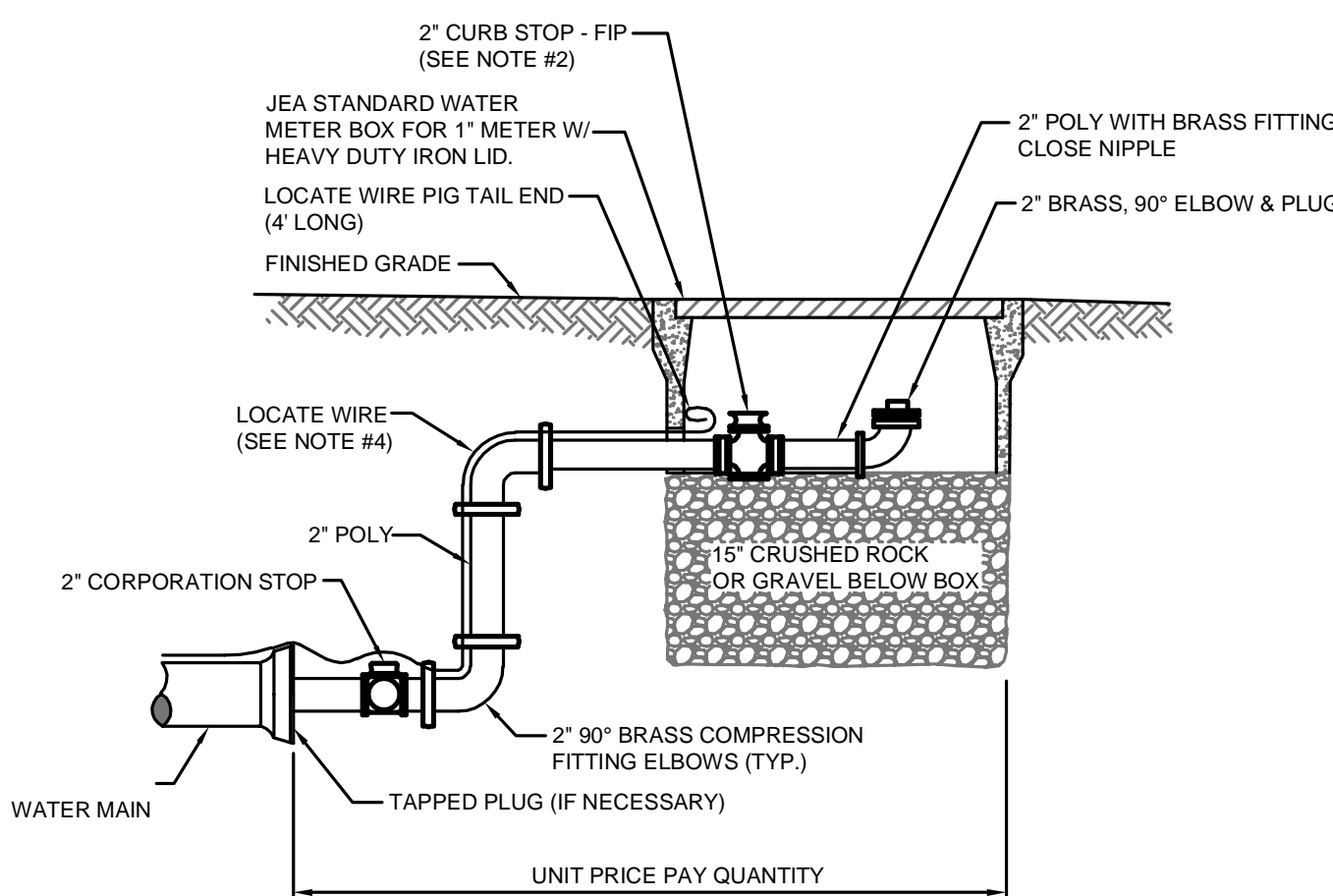


- NOTES:**
1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS).
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED), AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED.
 3. PIPE AND FITTINGS SHALL BE PVC (SCH. 40) OR GALV. MATERIAL.
 4. THE USE OF THE ABOVE CONSTRUCTION FOR A TEMPORARY SAMPLE POINT SHALL BE LIMITED TO AREAS WHERE A SAMPLE TAP BY ALTERNATIVE METHODS (SEE W-24) IS NOT FEASIBLE OR IF DIRECTED OTHERWISE BY JEA.
 5. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICES AS AS OUTLINED BY JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP

JANUARY 2020

PLATE W-25



- NOTES:**
1. PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
 2. THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
 3. ANY RECLAIMED WATER VALVE SHALL HAVE RECLAIMED EMBLEM.
 4. LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
 5. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
 6. PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE

JANUARY 2020

PLATE W-28

England-Thins & Miller, Inc.
14775 Old St. Augustine Road
Suite 100
Tel: (804) 642-8990
Fax: (804) 642-8945
CA - 000284 LC - 000516

ETM
VISION • EXPERIENCE • RESULTS

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE JEA. WE TAKE
NO EXCEPTION TO THE DESIGN

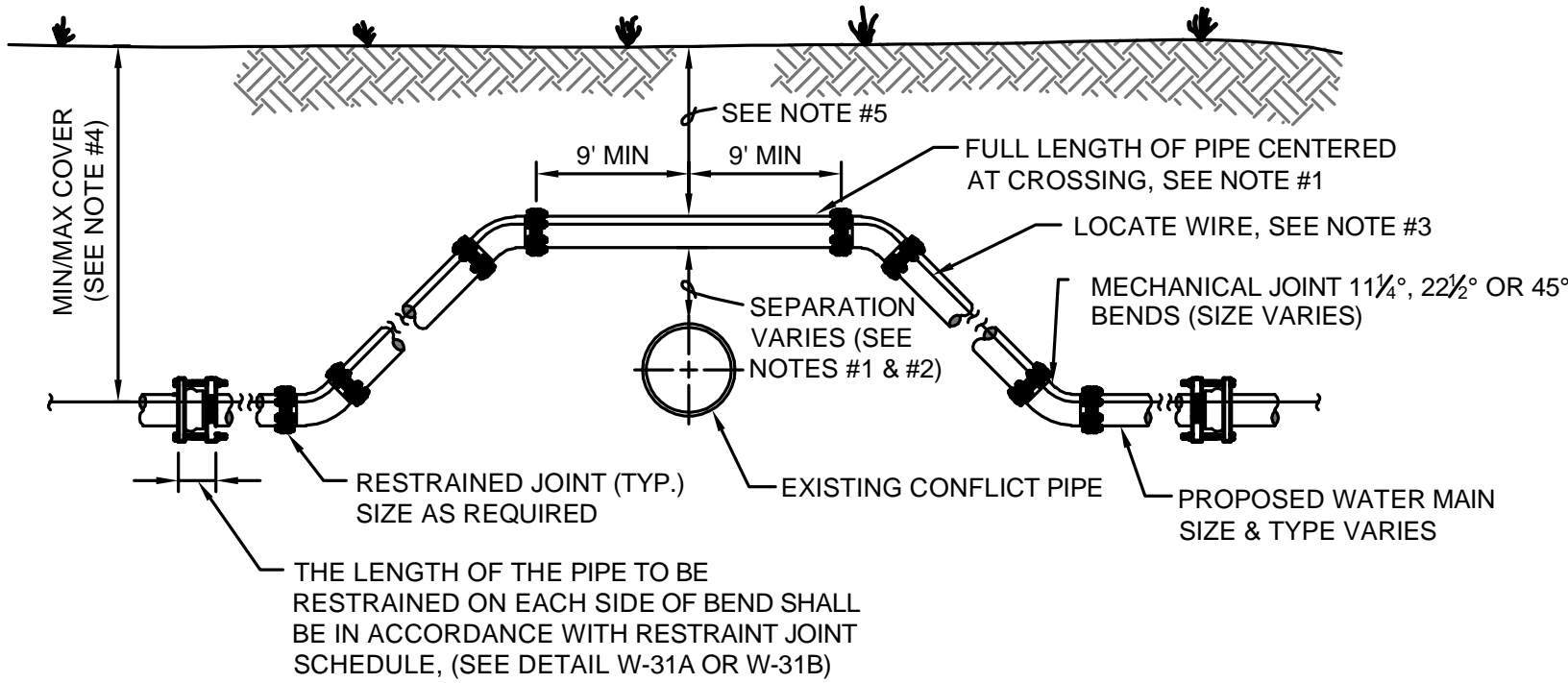
NO.	BY	DATE	REVISIONS	
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1			1	
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DESIGNER	DESIGN ENGINEER	FLORIDA REGISTRATION NO.
DRAWN BY:	NICOLE BOLATETE	74921
CHECKED BY:		
DATE:		

JEA
building Community

JEA STANDARD
WATER AND RECLAIM DETAILS
GALVANIZED PIPE REPLACEMENT PROGRAM

NO. SHEETS	PROJ. NO.	18-171
44	DATE:	JANUARY 2020
SHEET NO.	SCALE:	AS NOTED
6	DRAWING NO.	W-STD-2



CASE "A" CROSSING

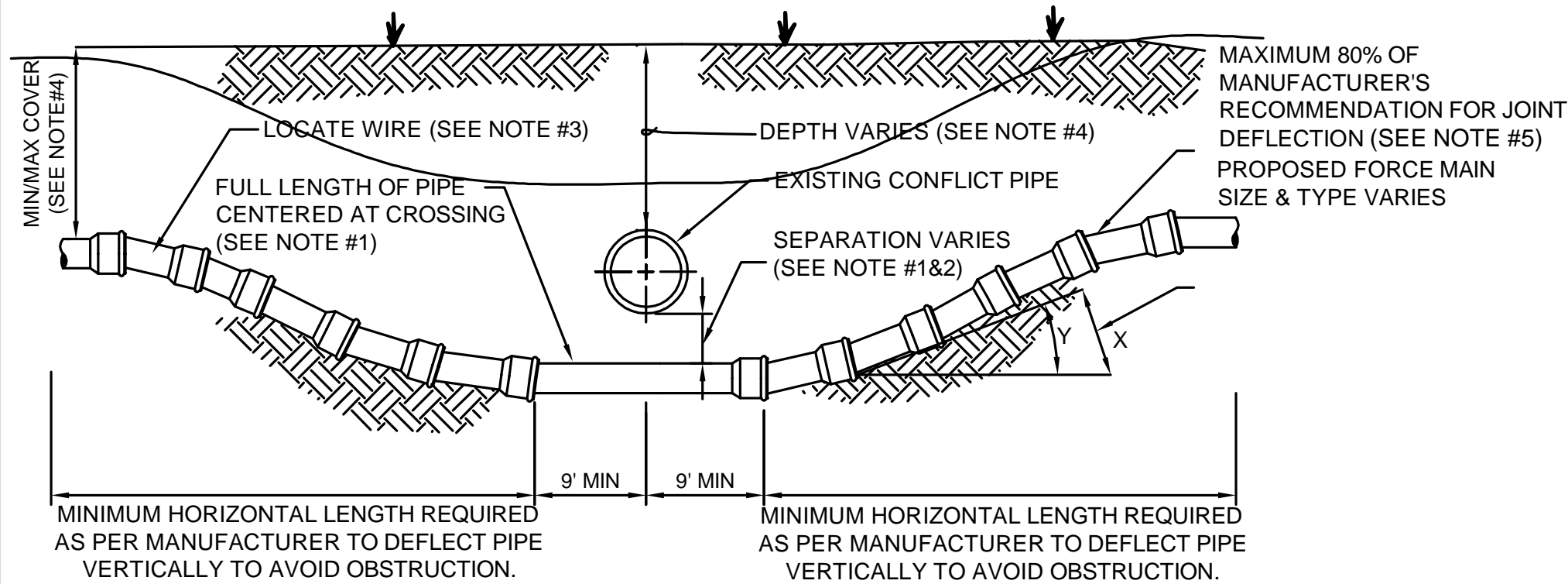
NOTES:

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAIL (W-10 AND W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND THE NEW PIPE IS D.I.P., THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2020

PLATE W-32



NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (W-10 & W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
5. JEA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED, UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

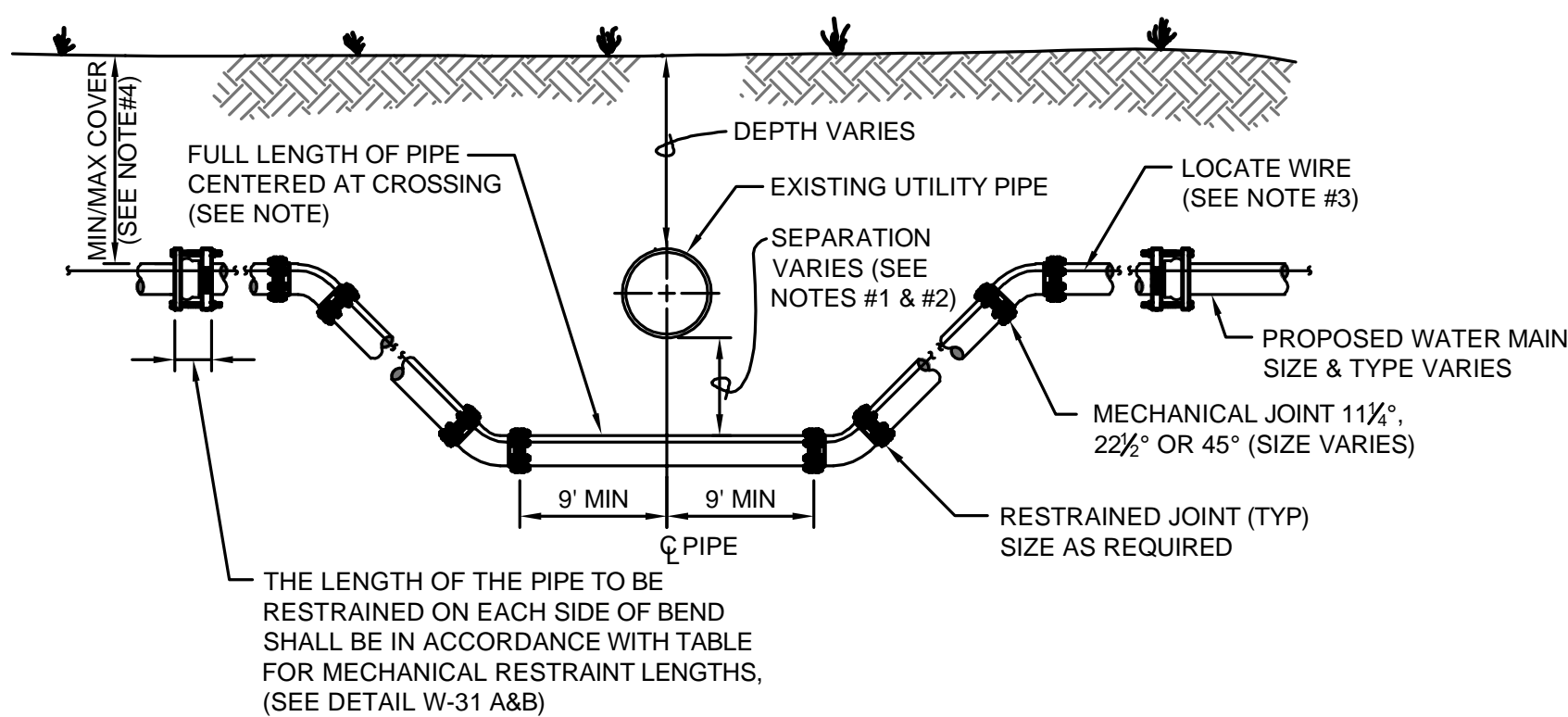
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT UNDER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2020

PLATE W-40



CASE "B" CROSSING

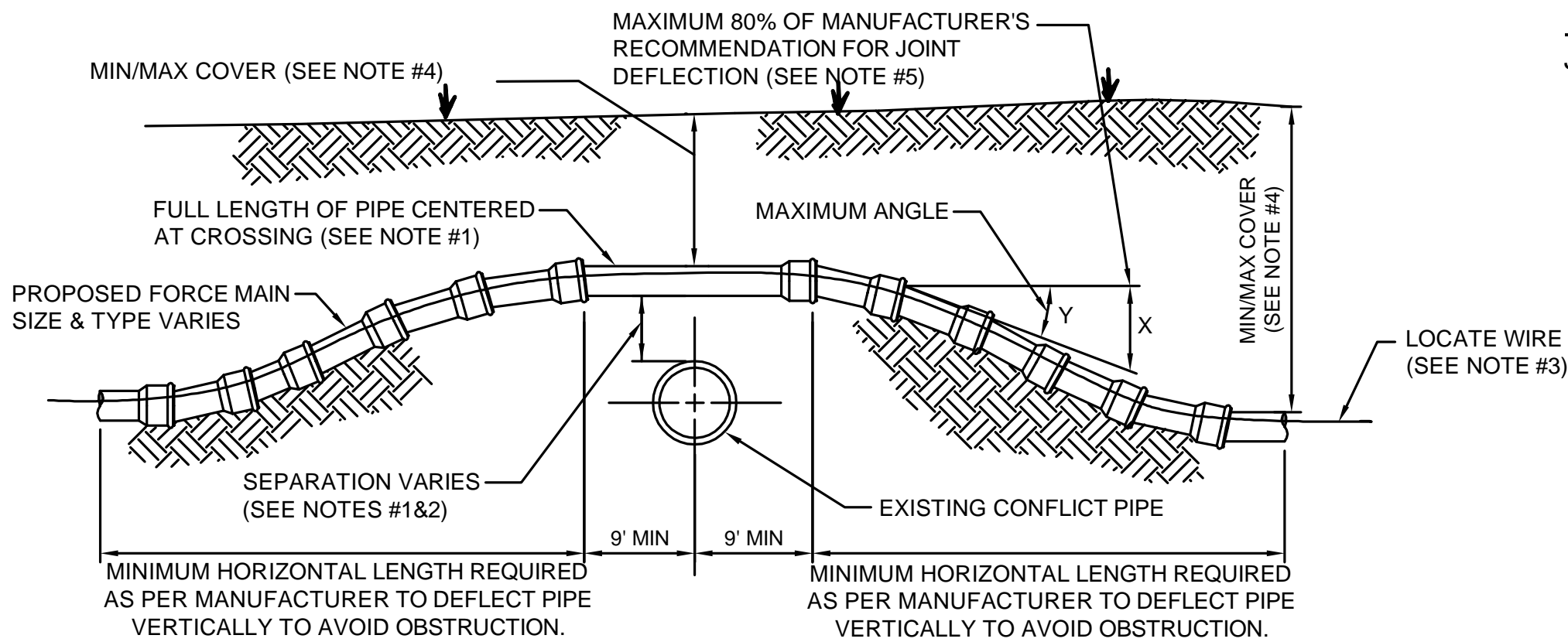
NOTES:

1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557
2. FOR MINIMUM VERTICAL SEPARATION REQUIREMENTS SEE DETAILS (W-10 AND W-11)
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREA, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.

ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2020

PLATE W-34



NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-10 & W-11).
3. LOCATING WIRE REQUIRED: SEE DETAIL W-44.
4. THE COVER OVER ALL PIPING LESS THAN 24" SIZE SHALL BE A MINIMUM OF 30" IN UNPAVED AREAS AND 36" IN PAVED AREAS WITH A MAXIMUM COVER OF 60" UNLESS APPROVED OTHERWISE BY JEA. COVER FOR PIPING 24" SIZE AND LARGER SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS APPROVED OTHERWISE BY JEA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
5. JEA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED, UNLESS OTHERWISE APPROVED BY JEA, THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20LF PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

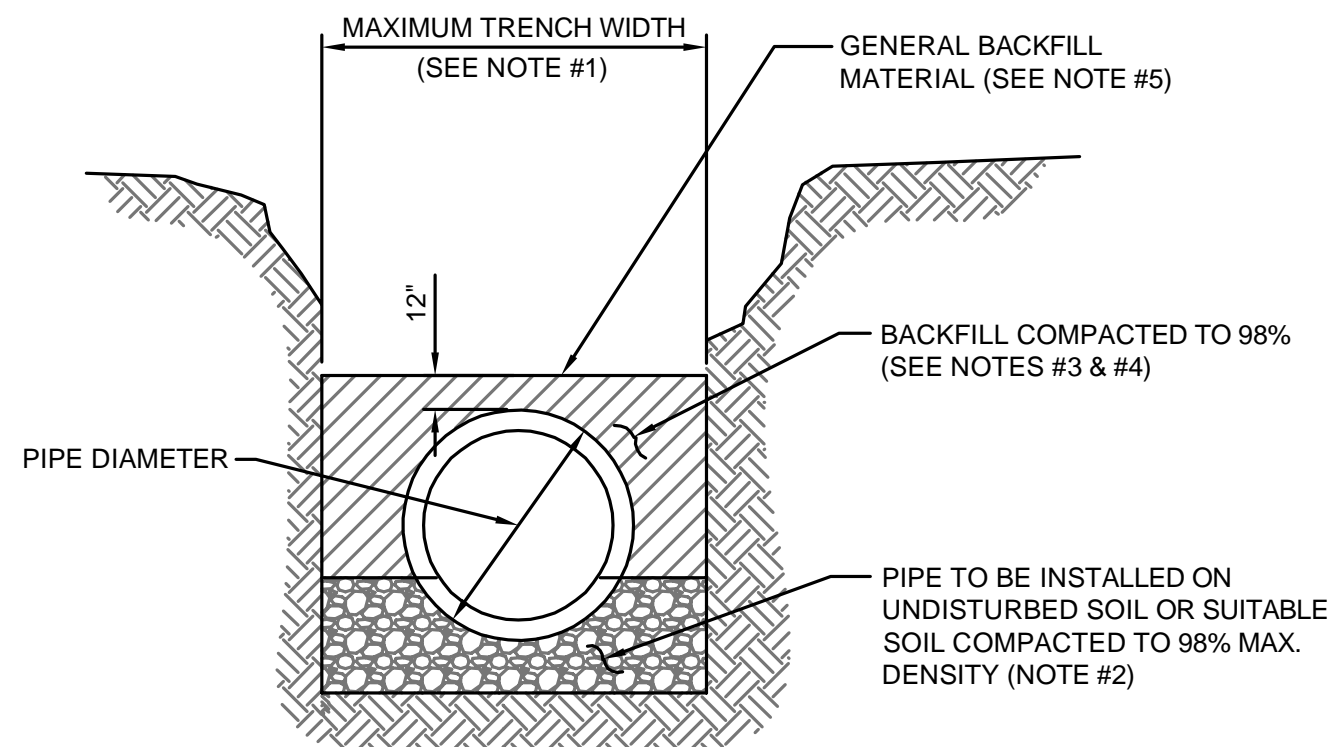
PVC PIPE			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	564 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

DUCTILE IRON PIPE (Mechanical Joint)			
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
-	-	-	-
4	27	6.5°	177 FT
6	24	5.7°	200 FT
8 - 12	17.5	4.2°	273 FT
14 - 16	12	2.9°	400 FT
18 - 20	10	2.4°	477 FT
24 - 30	8	1.9°	600 FT
36	7	1.7°	687 FT
42 - 48	6.7	1.6°	716 FT

ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION

JANUARY 2020

PLATE W-41



TYPICAL TRENCH

NOTES:

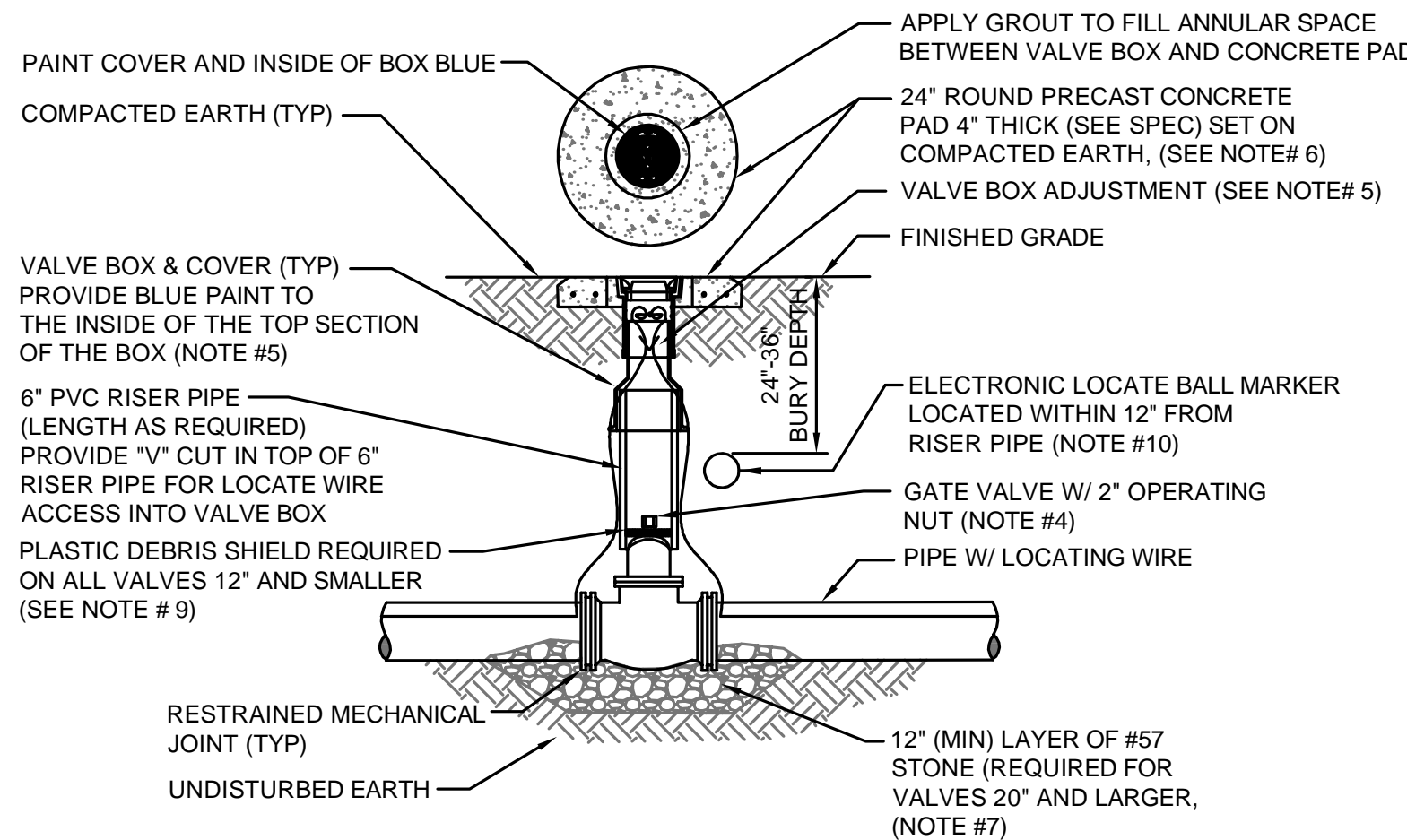
1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM PAYLINE WIDTHS.
2. BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT ABOVE THE TOP OF THE PIPE.
3. BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
4. BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF ITS MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557.
5. SEE "EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2020

IN CITY RIGHT OF WAY

PLATE W-42



NOTES:

1. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAILW-44).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT/(ASPHALT IF NO CURB) TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED BLUE WATER/PURPLE RECLAIMED.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "WATER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2 THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1403XR FOR WATER AND 1408XR FOR RECLAIMED WATER).

WATER VALVE INSTALLATION DETAIL

JANUARY 2020

PLATE W-18

England-Thins & Miller, Inc.
14775 Old St. Augustine Road
Tampa, FL 33613
TEL: (813) 842-8990
FAX: (813) 842-8945
CA - 0002284 LC - 0000516

ETM
VISION • EXPERIENCE • RESULTS

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE J.E.A. WE TAKE
NO EXCEPTION TO THE DESIGN

NO.	BY	DATE	REVISIONS
1.			
2.			
3.			
4.			
5.			

DESIGNER	DESIGN ENGINEER
DRAWN BY	NICOLE BOLATETE
CHECKED BY	FLORIDA REGISTRATION NO.
DATE	74921

JEA
building Community™

JEA STANDARD
WATER AND RECLAIM DETAILS
GALVANIZED PIPE REPLACEMENT PROGRAM

PROJ. NO.	18-171
DATE:	JANUARY 2020
AS NOTED	

SHEET NO.	44
DRAWING NO.	W-STD-3
SCALE:	

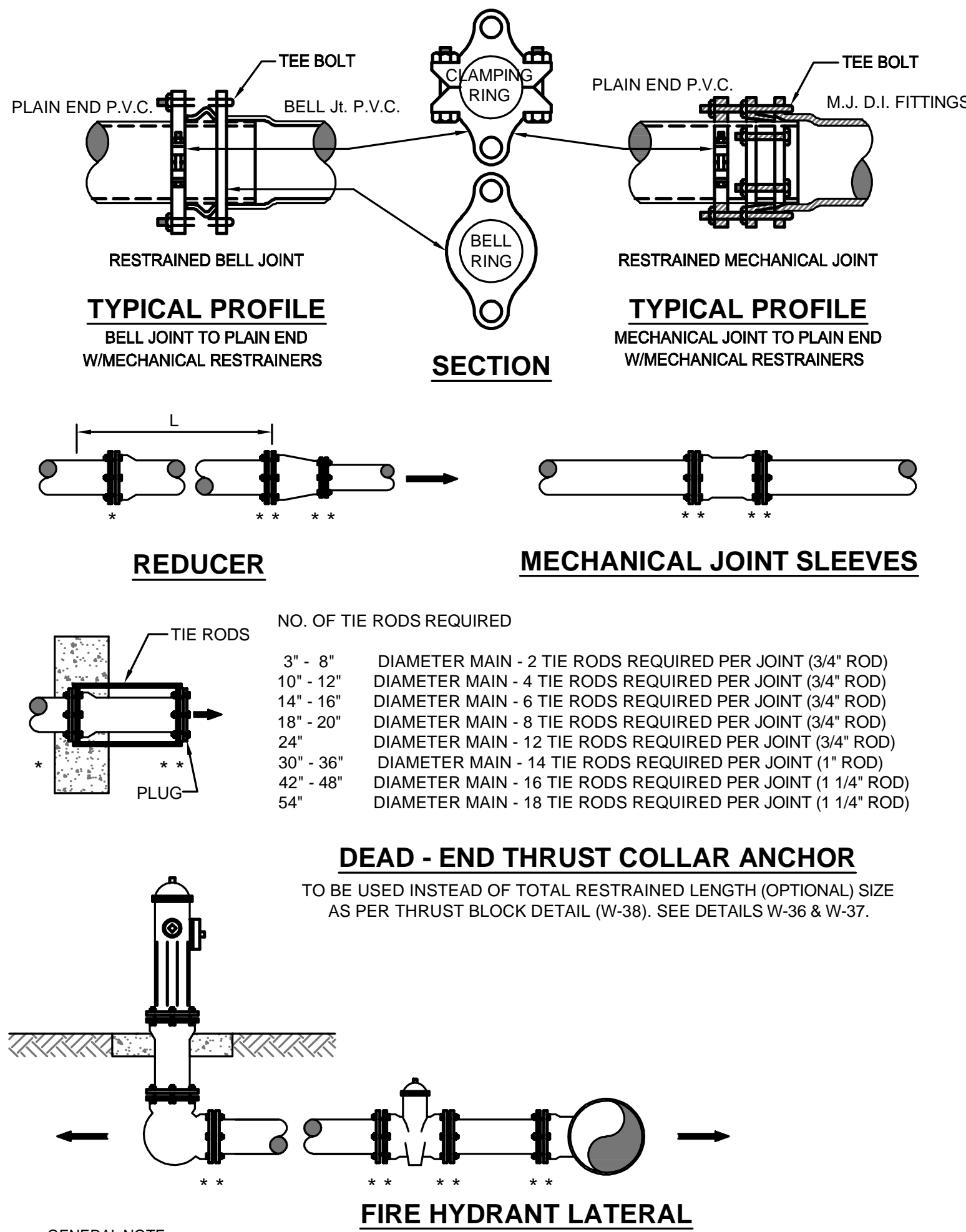
PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_u IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL, L_i IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2020

PLATE W-31A



GENERAL NOTE:

1. PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIC.
2. PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
3. → INDICATES DIRECTION OF THRUST FORCE.

MECHANICAL RESTRAINT DETAILS - I

JANUARY 2020

PLATE W-31C

LENGTH (L) TO BE RESTRAINED								(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)							
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS	REDUCERS	TEES SEE NOTE 5		RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)	F.O.	F.O.
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)									
4	21	9	5	3	17	3	47	6x4	34	4	4	6	10	F.O.	F.O.
6	30	13	6	3	23	4	66	8x6	36	4	4	6	10	F.O.	F.O.
8	38	16	8	4	30	6	86	8x8	62	8	8	29	6	F.O.	F.O.
10	45	19	9	5	36	7	103	10x8	35	8	8	29	6	F.O.	F.O.
12	53	22	11	6	43	8	121	10x6	63	10	10	45	8	F.O.	F.O.
14	61	26	13	6	50	9	140	12x10	36	12	12	62	10	F.O.	F.O.
16	66	28	14	7	55	10	154	12x8	64	12	12	62	10	F.O.	F.O.
18	73	30	15	8	60	11	170	16x12	66	16	16	94	12	F.O.	F.O.
20	79	33	16	8	66	12	186	20x18	35	20	20	125	16	F.O.	F.O.
24	79	33	16	8	77	15	185	20x16	66	24	24	124	20	F.O.	F.O.
30	93	39	19	10	97	17	222	20x12	117	30	30	159	24	F.O.	F.O.
36	106	39	21	11	107	20	257	24x20	56	36	36	159	30	F.O.	F.O.
42	117	49	24	12	120	24	289	24x18	80	42	42	223	36	F.O.	F.O.
48	144	53	26	13	133	26	321	30x24	78	48	48	253	42	F.O.	F.O.

F.O. = FITTING ONLY

DUCTILE IRON PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
2. ASSUMPTIONS: DUCTILE IRON PIPE (WITHOUT POLY WRAP), SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL=GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE. FOR D.I.P. W/POLY WRAP, USE RESTRAINT JOINT SCHEDULE FOR PVC PIPE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L_u IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL, L_i IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HDPE TO D.I.P. TRANSITIONS: THE D.I.P. PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

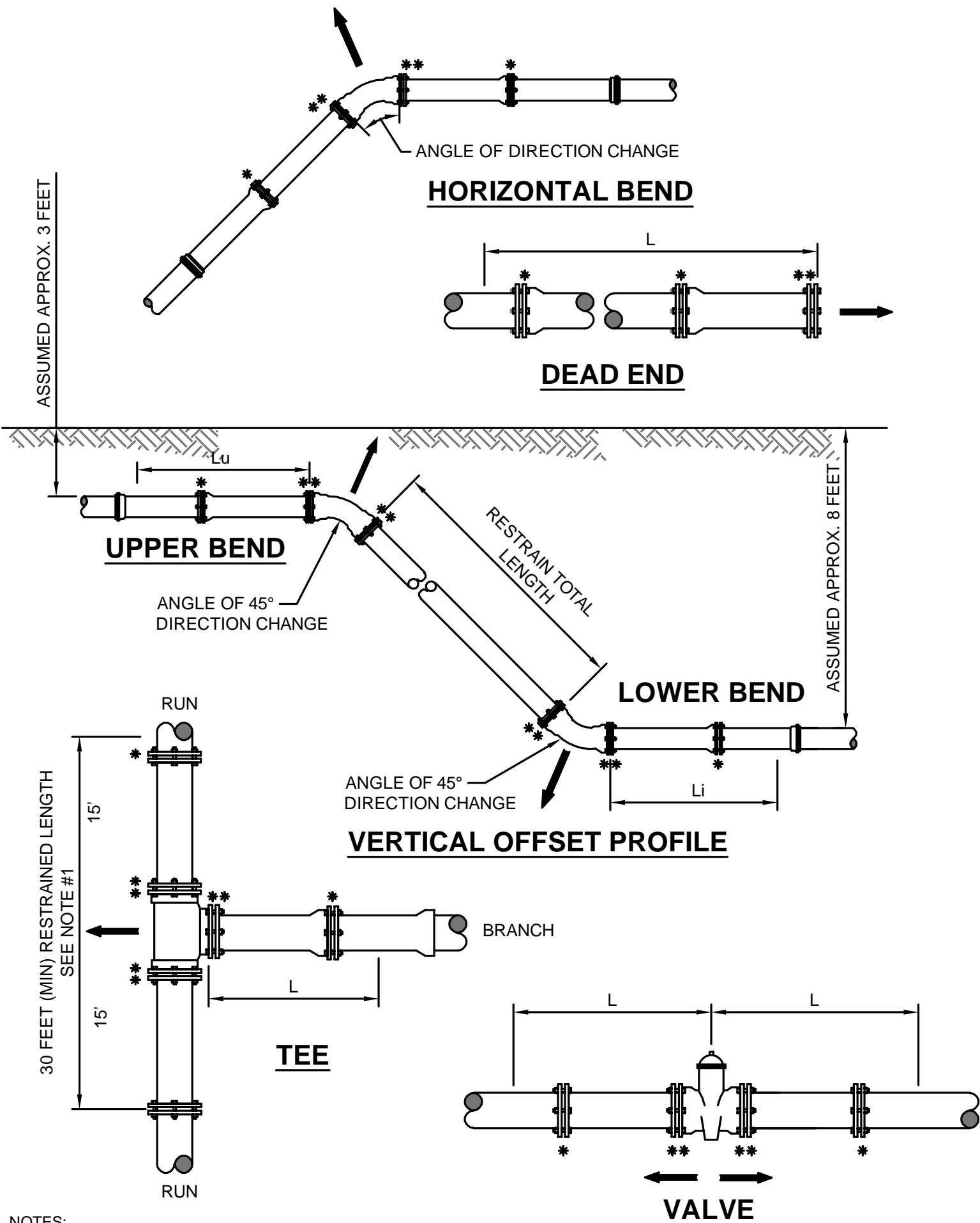
DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2020

PLATE W-31B

LENGTH (L) TO BE RESTRAINED								(SEE PLATE Nos. 38C & 38D FOR ADDITIONAL DETAILS)							
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS 45° BENDS (SEE NOTE 4)		VALVES OR DEAD ENDS	REDUCERS	TEES SEE NOTE 5		RUN SIZE (IN.)	BRANCH SIZE (IN.)	L (FT.)	F.O.	F.O.
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	UPPER L (FT.)	LOWER L (FT.)									
4	17	7	4	2	11	3	30	6x4	22	4	4	6	10	F.O.	F.O.
6	24	15	5	3	15	4	42	8x6	23	4	4	6	10	F.O.	F.O.
8	31	13	6	3	20	5	55	8x4	39	8	8	19	6	F.O.	F.O.
10	36	15	8	4	23	6	65	10x8	22	10	10	29	8	F.O.	F.O.
12	42	18	9	5	27	7	77	10x6	40	12	12	40	10	F.O.	F.O.
14	48	20	10	5	31	7	87	12x10	23	12	12	40	10	F.O.	F.O.
16	53	22	11	6	35	8	97	12x8	41	16	16	60	12	F.O.	F.O.
18	58	24	12	6	39	9	107	16x12	42	18	18	60	12	F.O.	F.O.
20	63	27	13	6	42	10	118	20x18	22	20	20	79	16	F.O.	F.O.
24	63	27	13	7	49	12	118	20x16	42	24	24	79	16	F.O.	F.O.
30	75	31	15	8	59	14	141	24x20	36	30	30	101	20	F.O.	F.O.
36	86	36	17	9	68	17	163	24x18	51	36	36	103	24	F.O.	F.O.
42	95	40	19	10	76	19	183	30x24	50	42	42	113	24	F.O.	F.O.
48	117	43	21	11	84	21	203	30x20	77	48	48	160	24	F.O.	F.O.

F.O. = FITTING ONLY



NOTES:

1. TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN).
2. PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIC.
3. PAY ITEM " " " " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

MECHANICAL RESTRAINT DETAILS - II

JANUARY 2020

PLATE W-31D

English-Thins & Miller, Inc.
14775 Old St. Augustine Road
St. Augustine, FL 32085
TEL: (904) 842-8890
FAX: (904) 842-9445
CA - 000284 LC - 000516

VISION - EXPERIENCE - RESULTS

THESE DETAILS AS SHOWN ON THIS
DRAWING ARE BY THE J.E.A. WE TAKE
NO EXCEPTION TO THE DESIGN

DESIGNER: J.E.A. STANDARD
DRAWN BY: J.E.A. STANDARD
DATE: JANUARY 2020
CHECKED BY: J.E.A. STANDARD
DATE: JANUARY 2020

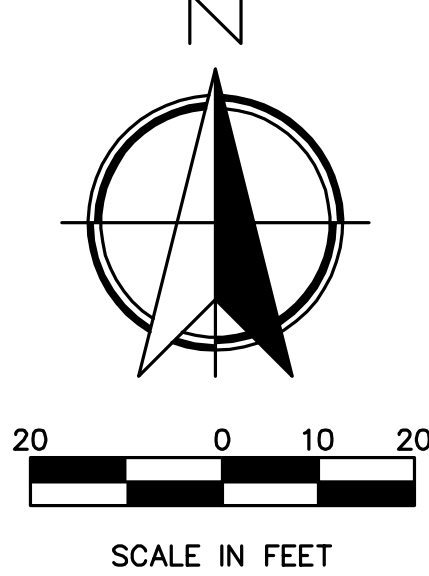
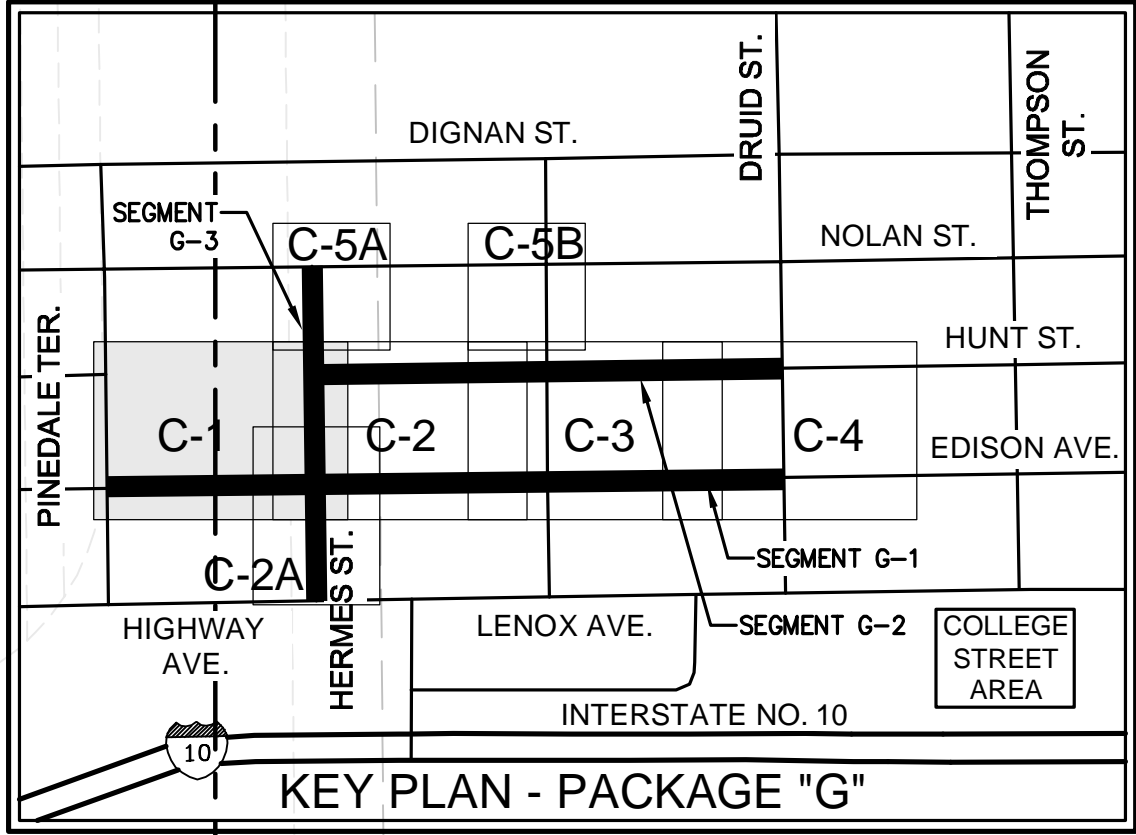
DESIGN ENGINEER: NICOLE BOLATETE
FLORIDA REGISTRATION NO.: 74821

NO. SHEETS: 44
SHEET NO.: 8
DRAWING NO.: W-STD-4

PROJ. NO.: 18-171
DATE: JANUARY 2020
SCALE: AS NOTED



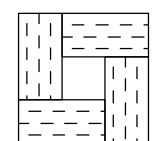
JEA STANDARD
WATER AND RECLAIM DETAILS
GALVANIZED PIPE REPLACEMENT PROGRAM



NOTES

1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.
2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.
3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.
5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.
6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.
7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

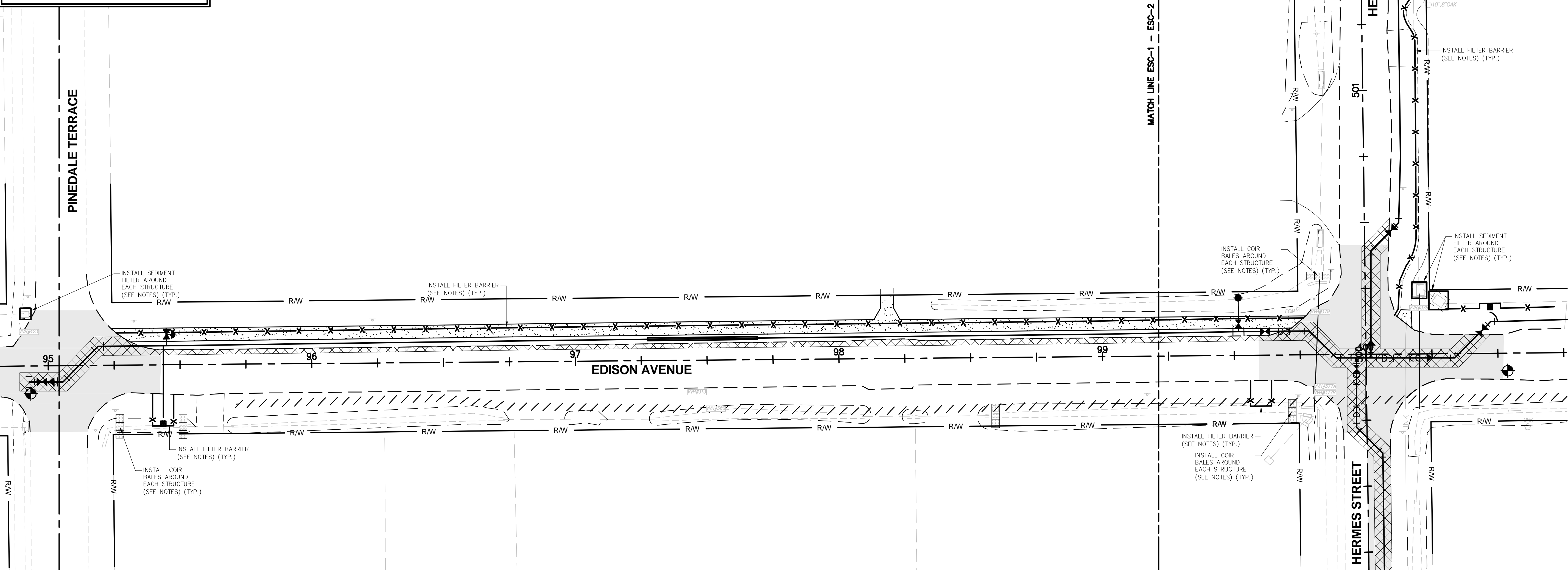
LEGEND



COIR BALE

SINGLE ROW WIRE BACKED SILT FENCE

DOUBLE ROW WIRE BACKED SILT FENCE



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REG. 00002584 LG 0000516

England-Thins & Miller, Inc.
14775 Old St. Augustine Road
Suite 100
Orlando, FL 32835
TEL: (804) 842-8890
FAX: (804) 648-9485

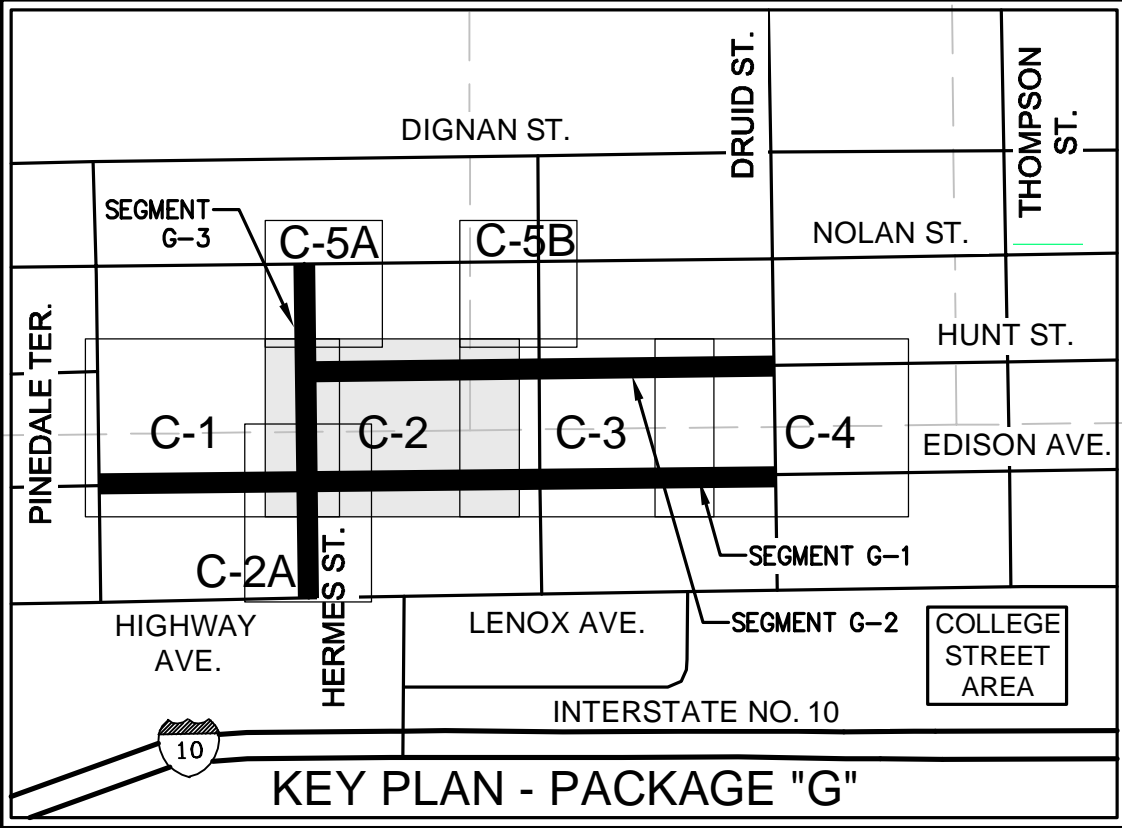
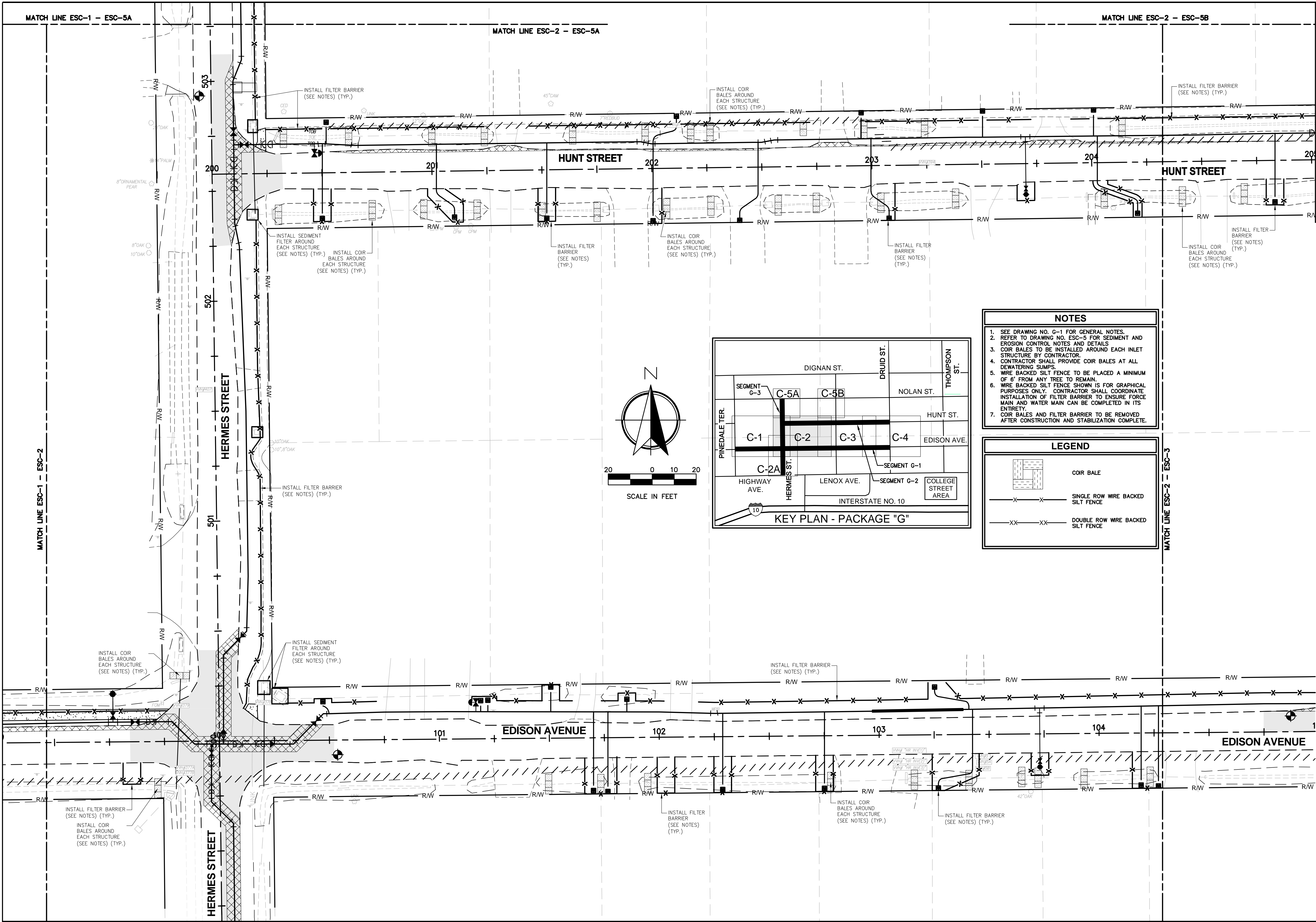
NO.	BY	DATE	REVISIONS
1			
2			
3			
4			
5			
6			

DESIGNER:	N. BOLATETE	DESIGN ENGINEER:	NICOLE BOLATETE
DRAWN BY:	A. ANDERSON	FLORIDA REGISTRATION NO.:	74921
CHECKED BY:	N. BOLATETE		
DATE:			

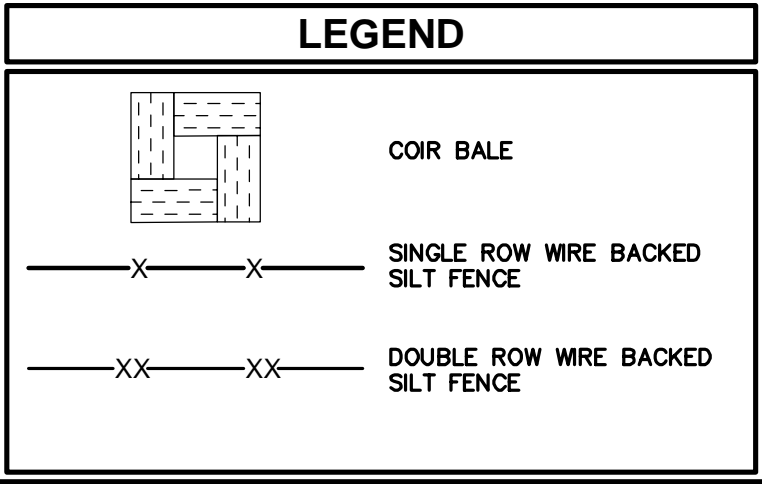
JEA
Building Communitysm

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL PLAN

NO. SHEETS	PROJ. NO.	18-171
44	DATE:	APRIL 23, 2021
SHEET NO.	SCALE:	AS NOTED
20		
DRAWING NO.		
ESC-1		



- NOTES**
1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.
 2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
 3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.
 4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.
 5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6' FROM ANY TREE TO REMAIN.
 6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.
 7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.



England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Suite 100
Orlando, FL 32835
TEL: (804) 842-8890
FAX: (804) 648-9485
REC-0000284 LC-0000516

VISION - EXPERIENCE - RESULTS

DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE: 10/23/2021
CHECKED BY: N. BOLATETE
DATE: 10/23/2021

JEA
Building Communitysm

**GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL PLAN**

PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

NO. SHEETS 44
SHEET NO. 17
DRAWING NO. ESC-2

REVISIONS

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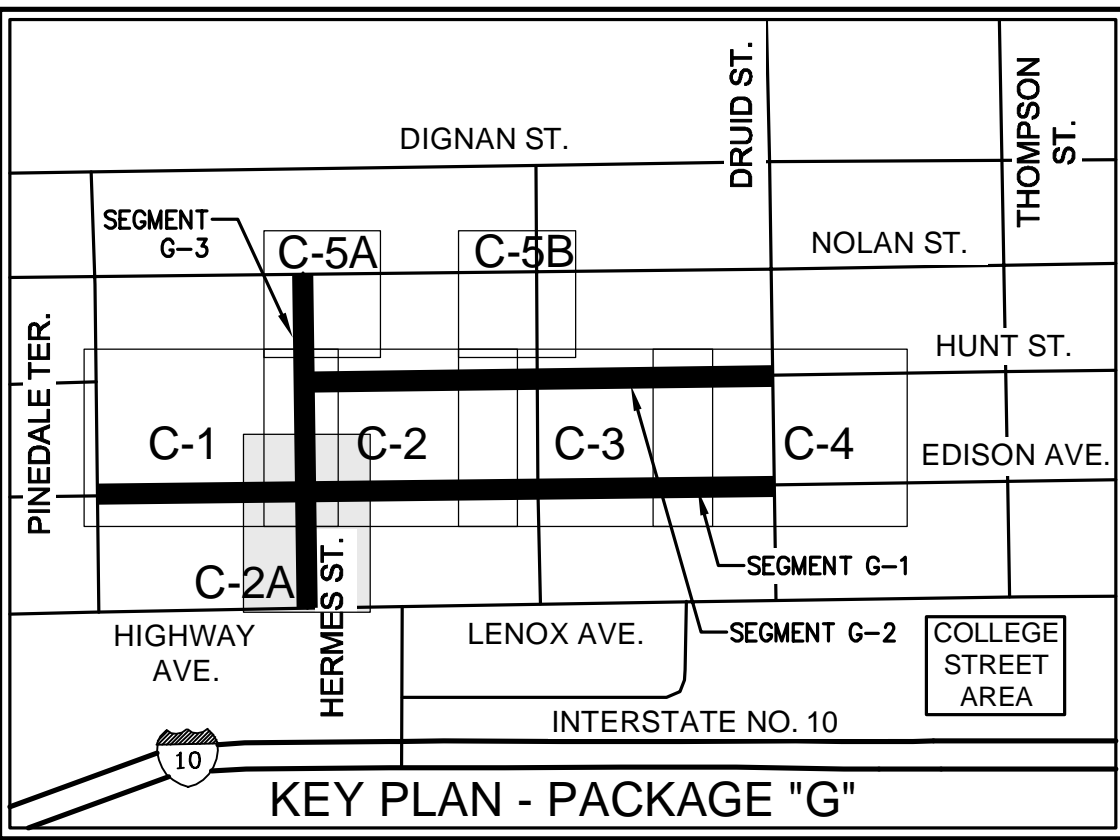
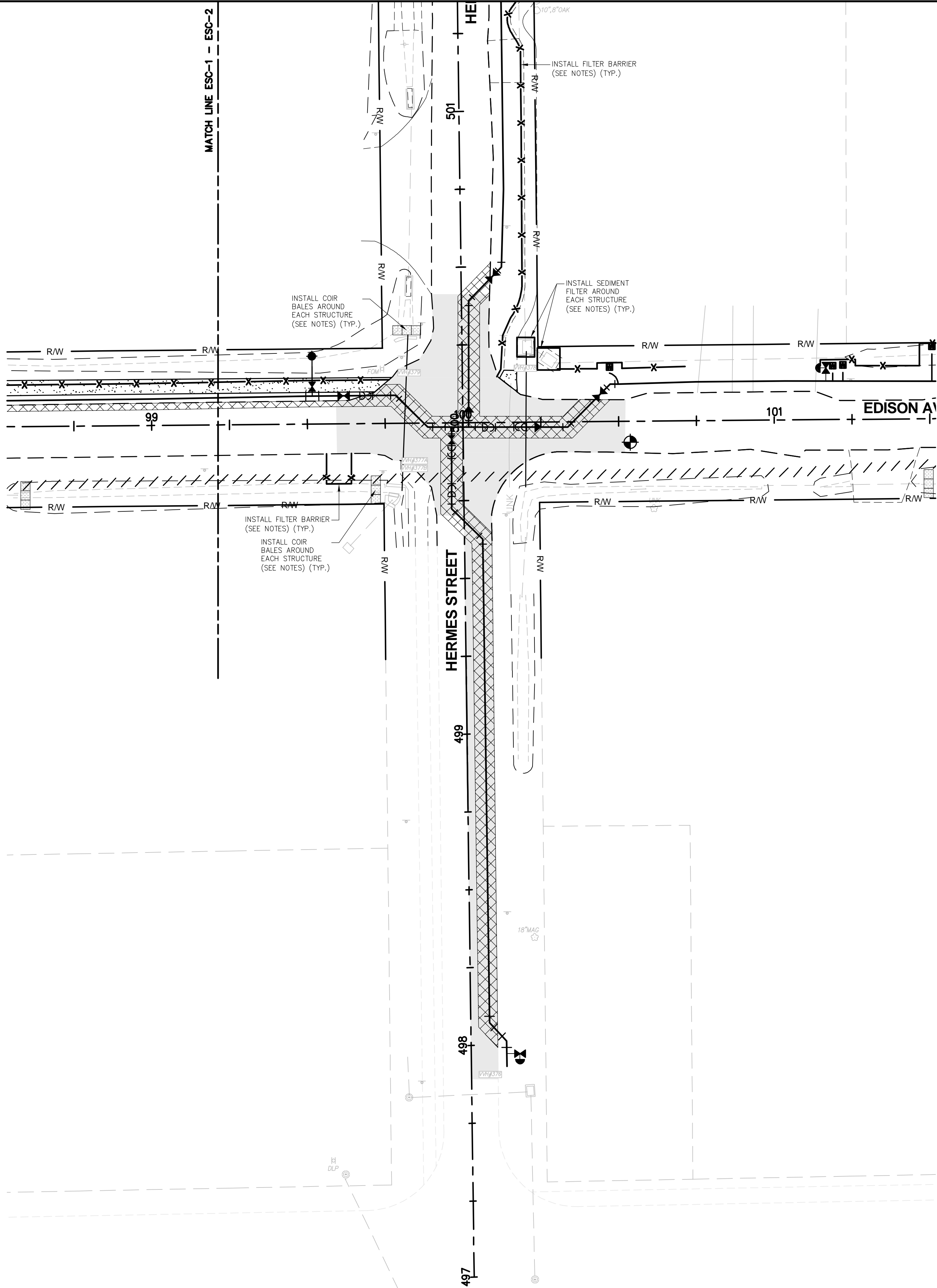
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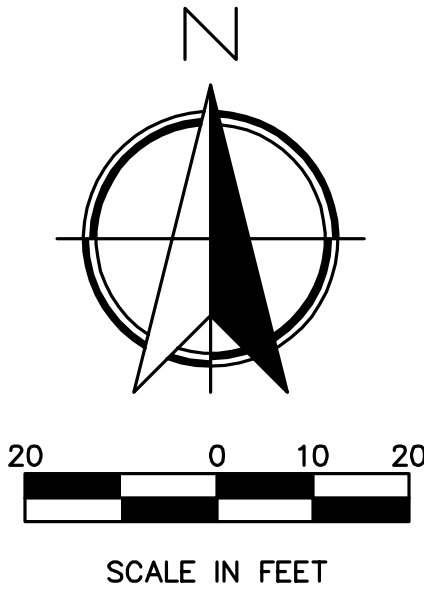
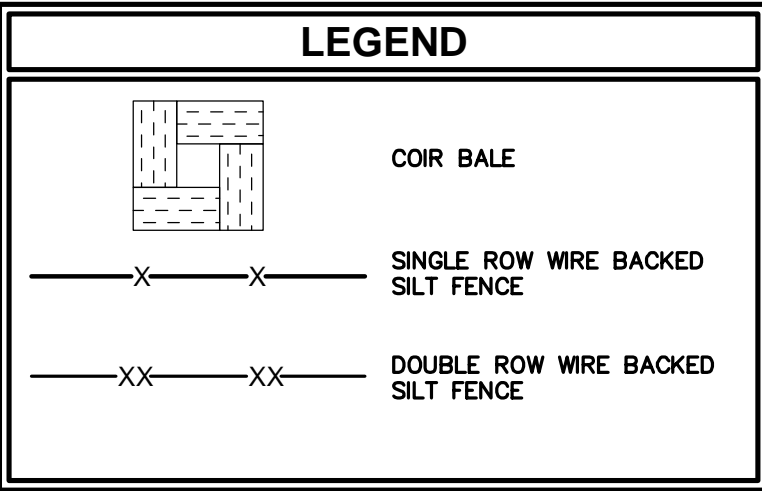
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- NOTES**
1. SEE DRAWING NO. G-1 FOR GENERAL NOTES.
 2. REFER TO DRAWING NO. ESC-5 FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.
 3. COIR BALES TO BE INSTALLED AROUND EACH INLET STRUCTURE BY CONTRACTOR.
 4. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.
 5. WIRE BACKED SILT FENCE TO BE PLACED A MINIMUM OF 6" FROM ANY TREE TO REMAIN.
 6. WIRE BACKED SILT FENCE SHOWN IS FOR GRAPHICAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION OF FILTER BARRIER TO ENSURE FORCE MAIN AND WATER MAIN CAN BE COMPLETED IN ITS ENTIRETY.
 7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.



England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Apopka, FL 32703
TEL: (804) 842-8890
FAX: (804) 842-8445
REG. 00002584 LC 0000516

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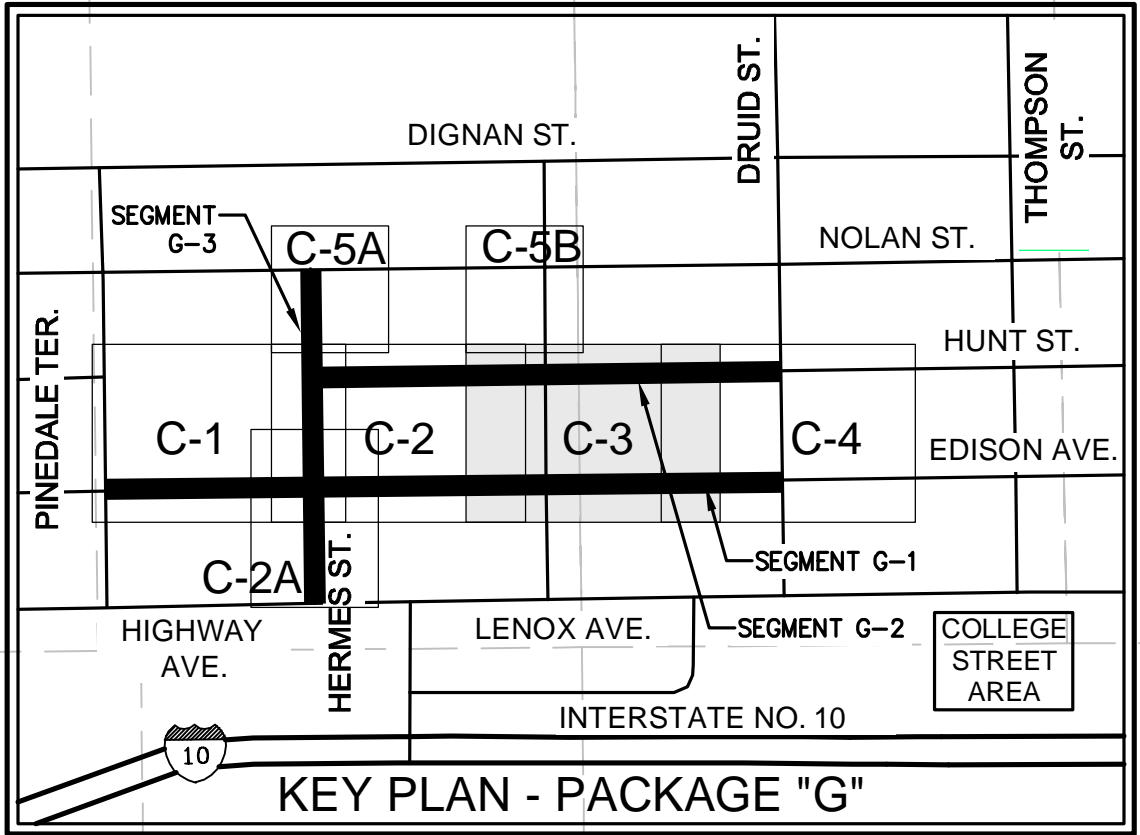
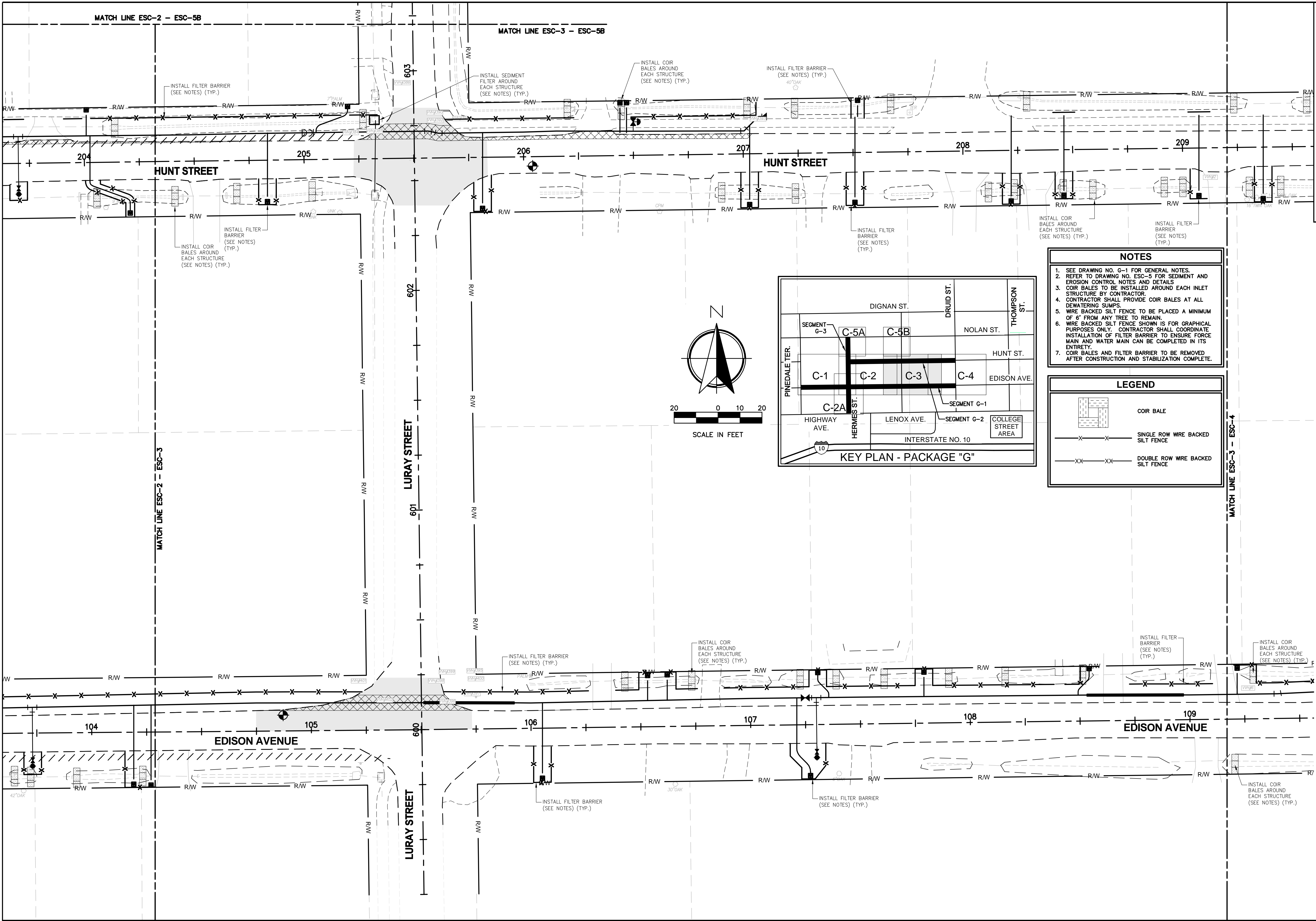
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DESIGNER:	N. BOLATETE	DESIGN ENGINEER:	NCOLE BOLATETE
DRAWN BY:	A. ANDERSON	FLORIDA REGISTRATION NO.:	74921
CHECKED BY:	N. BOLATETE		
DATE:			

JEA
Building Communitysm

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL PLAN

NO. SHEETS	PROJ. NO.	18-171
44	DATE:	APRIL 23, 2021
SHEET NO.	SCALE:	AS NOTED
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- NOTES**
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 7. COIR BALES AND FILTER BARRIER TO BE REMOVED AFTER CONSTRUCTION AND STABILIZATION COMPLETE.

- LEGEND**
- COIR BALE
 - SINGLE ROW WIRE BACKED SILT FENCE
 - DOUBLE ROW WIRE BACKED SILT FENCE

ETM
England-Thins & Miller, Inc.
14775 Old St. Augustine Road
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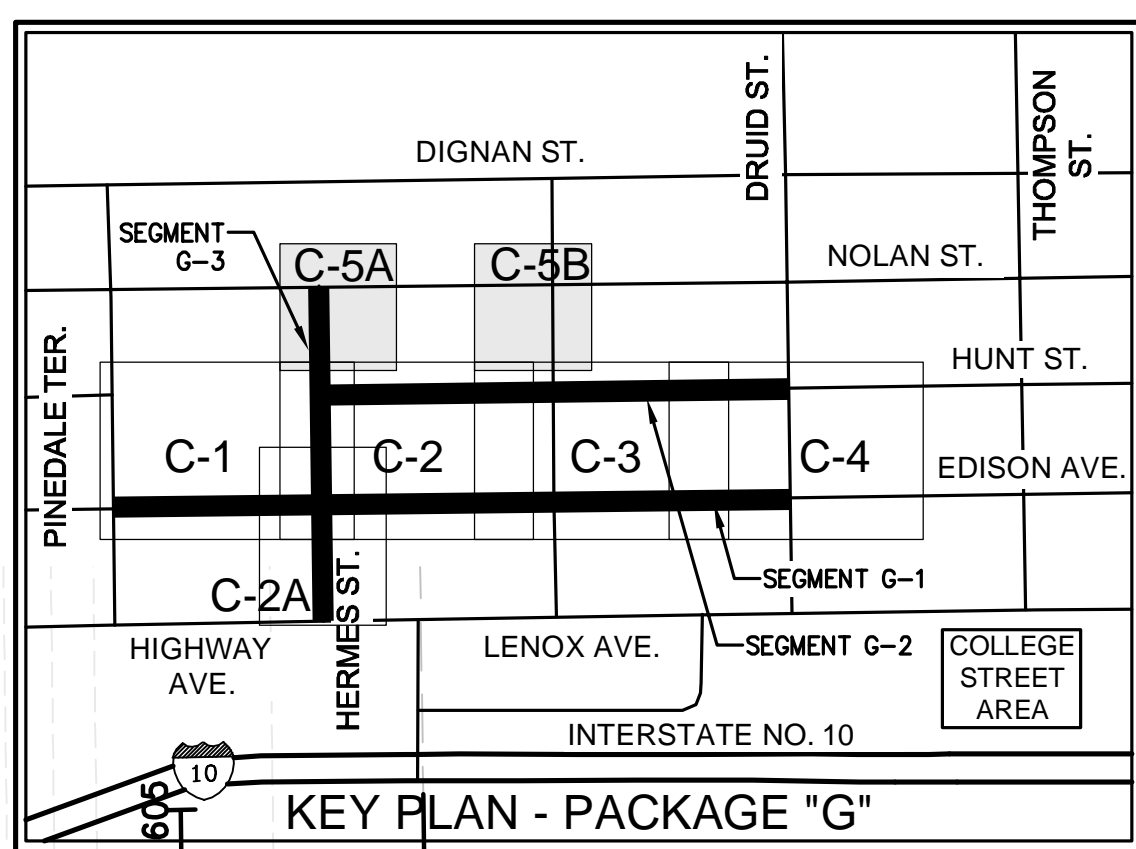
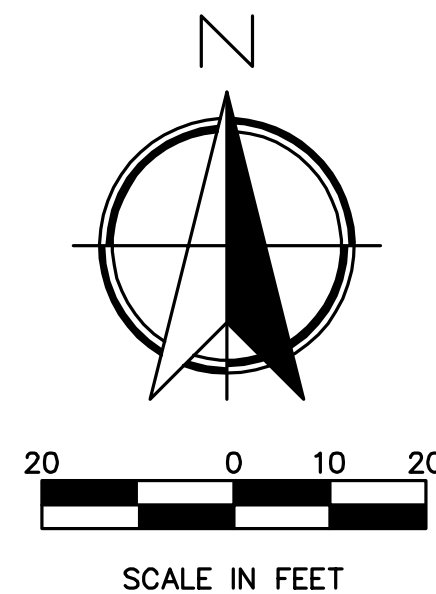
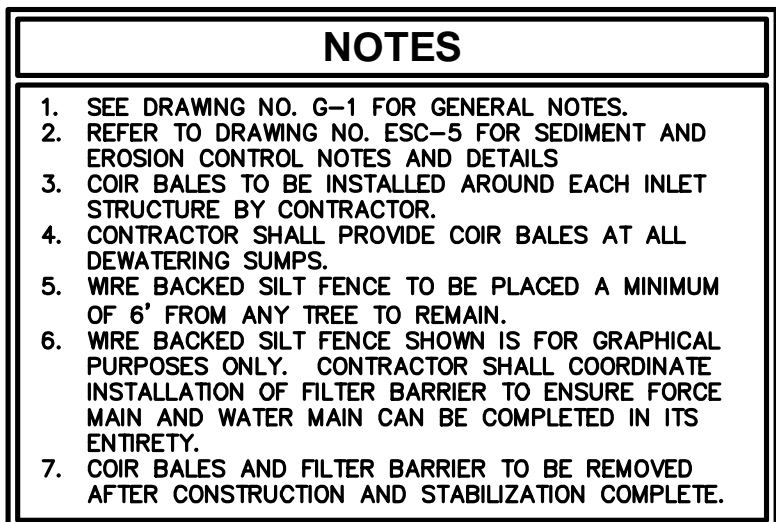
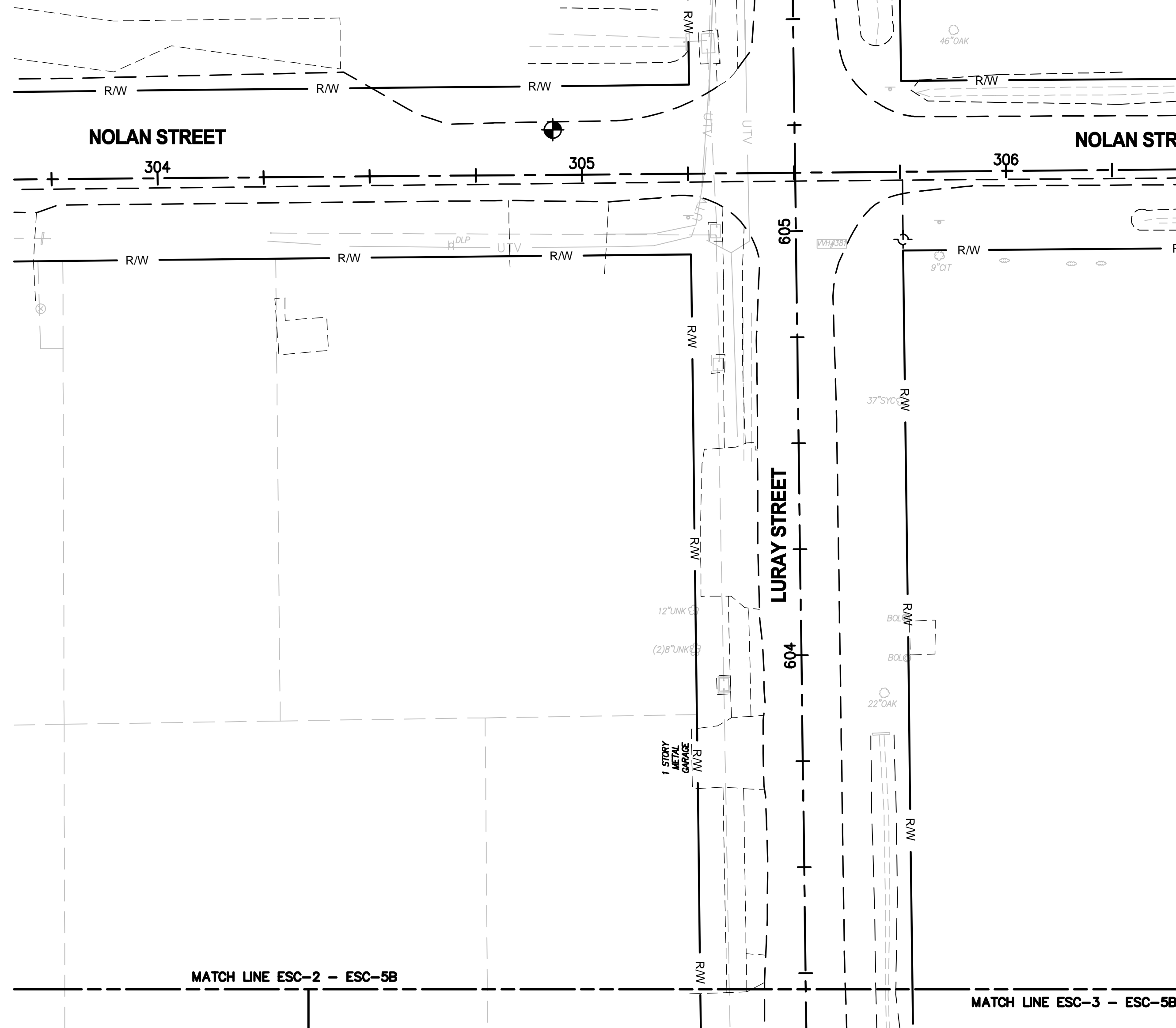
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DESIGNER	N. BOLATTE	DESIGN ENGINEER	NICOLE BOLATTE
DRAWN BY	A. ANDERSON		
CHECKED BY	N. BOLATTE	FLORIDA REGISTRATION NO.	74921
DATE			

JEA
Building Communitysm

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL PLAN

PROJ. NO.	18-171
DATE:	APRIL 23, 2021
SCALE:	AS NOTED
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DESIGNER:	N. BOLATETE	DESIGN ENGINEER
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Building Communitysm

ALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL PLAN

NO. SHEETS 44	PROJ. NO. 18-171
SHEET NO. 25	DATE: APRIL 23, 2021
DRAWING NO. ESC-5	SCALE: AS NOTED

STP
England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32218

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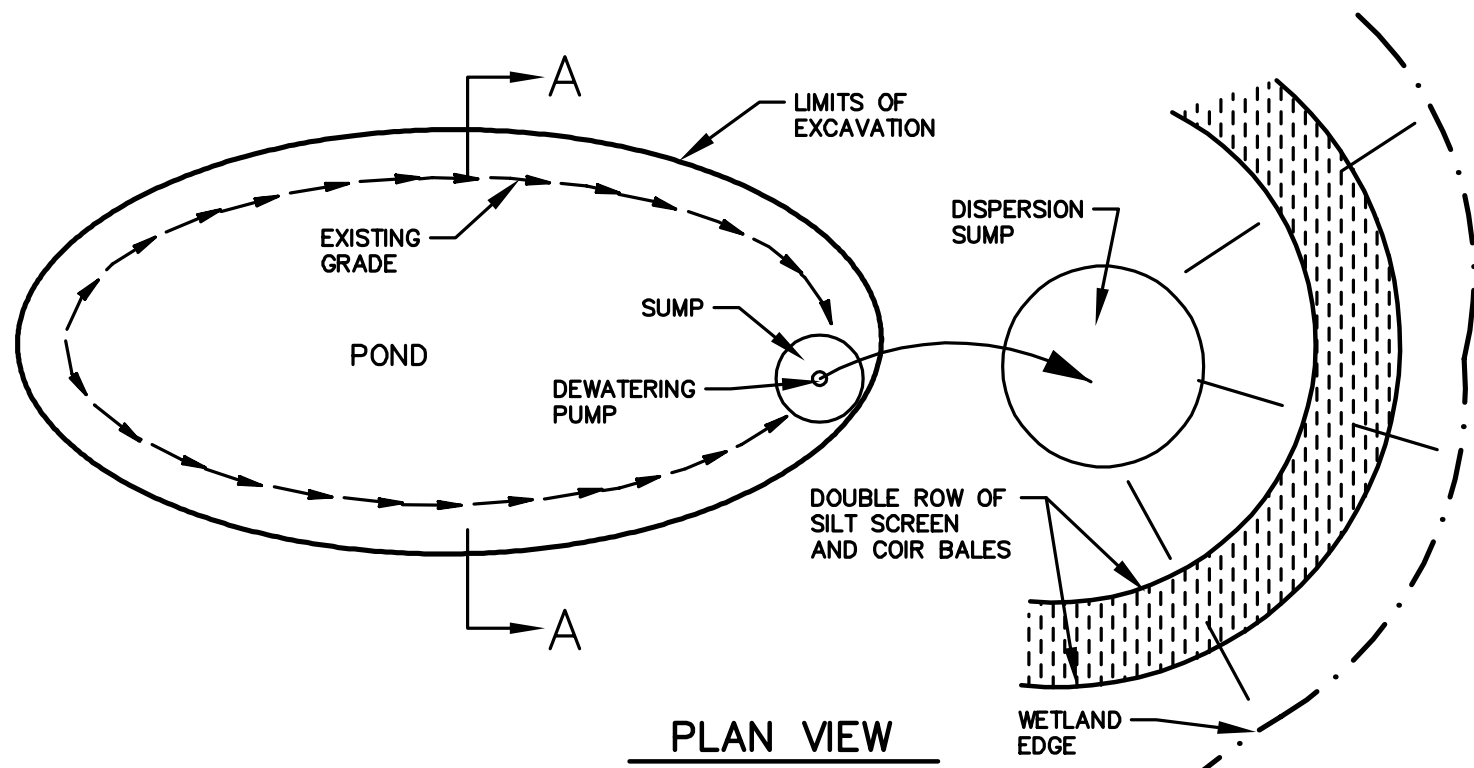
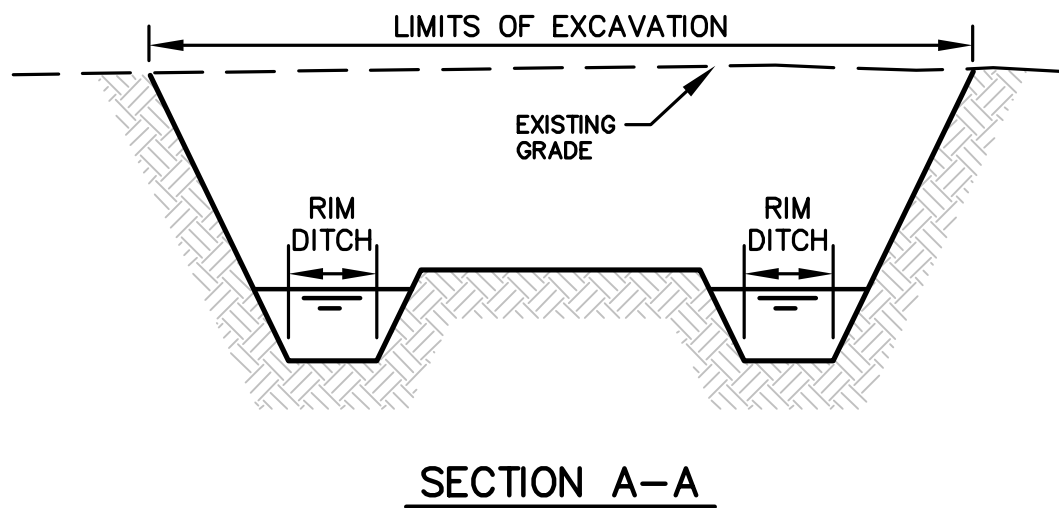
G:\18-171 Galv Pipe\Design\College St\G_Package\LandDev\Design\Plots\18-171 Package-G-Sec.dwg PLOTTED: Apr. 26, 21 - 3:49 PM, BY: Alex Anderson

SEDIMENT AND EROSION CONTROL NOTES

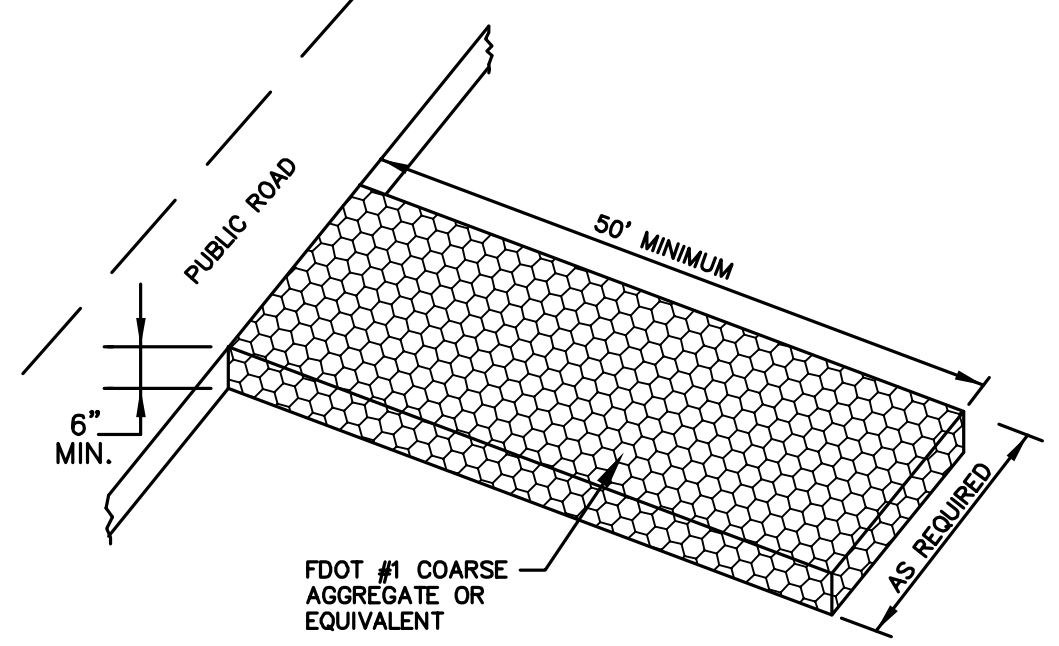
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION – ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS REQUIRED, THE STRIPS SHALL BE OVERLAPPED.
6. FOOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE COIR SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. COIR BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE GIVEN TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. IT MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE COIR BALE OR FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
20. STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS REQUIRED.
21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT RULES AND REGULATIONS.
23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.P.) CHAPTER 6.
24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
25. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
26. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
27. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
28. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED AND MULCHED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR SHALL USE ADDITIONAL MEASURES TO STABILIZE DISTURBED AREAS THROUGH COMPACTION, SILT SCREENS, COIR BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
29. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
30. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
31. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SURFMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
32. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER THE CONTRACT DOCUMENTS AND MEETING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, CITY OF JACKSONVILLE AND NPDES FINAL STABILIZATION REQUIREMENTS.
34. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO

SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.

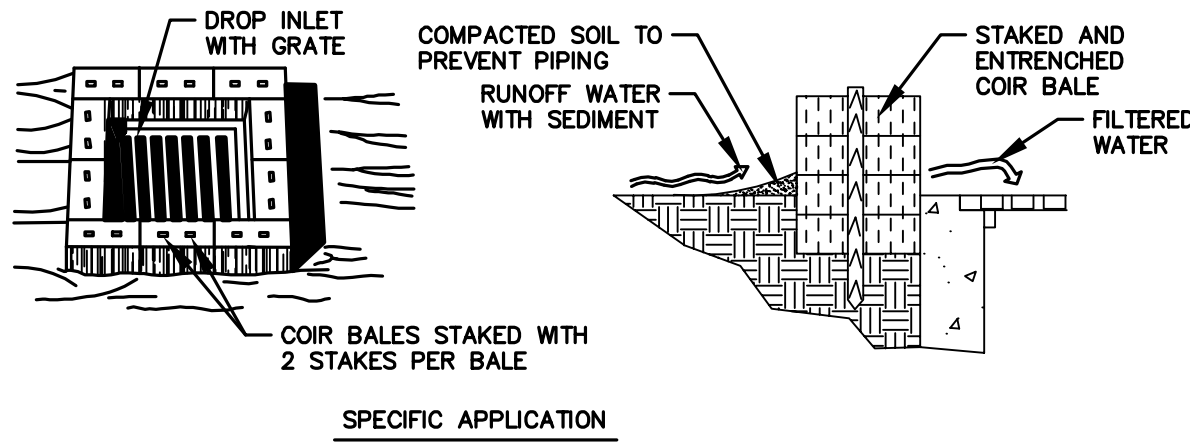
35. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)



TEMPORARY DEWATERING DETAIL
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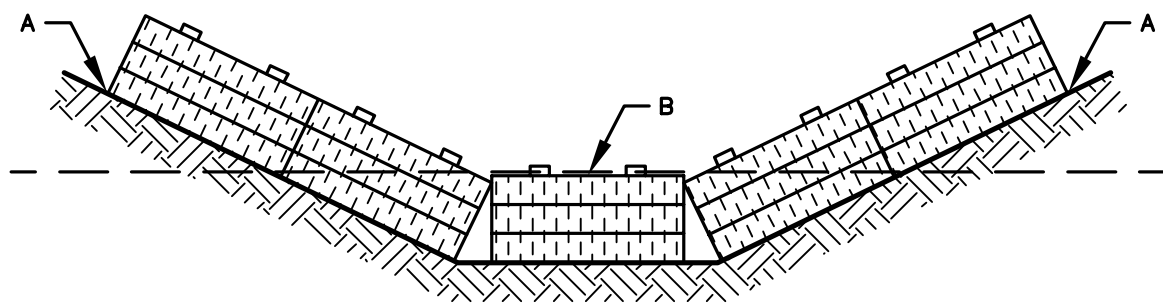


STABILIZED CONSTRUCTION ENTRANCE
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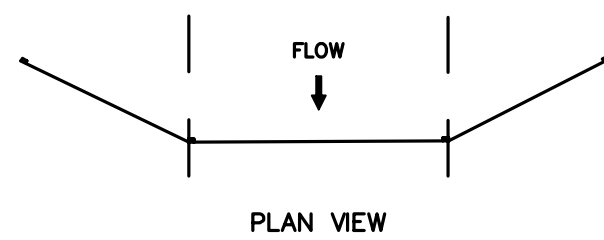


THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

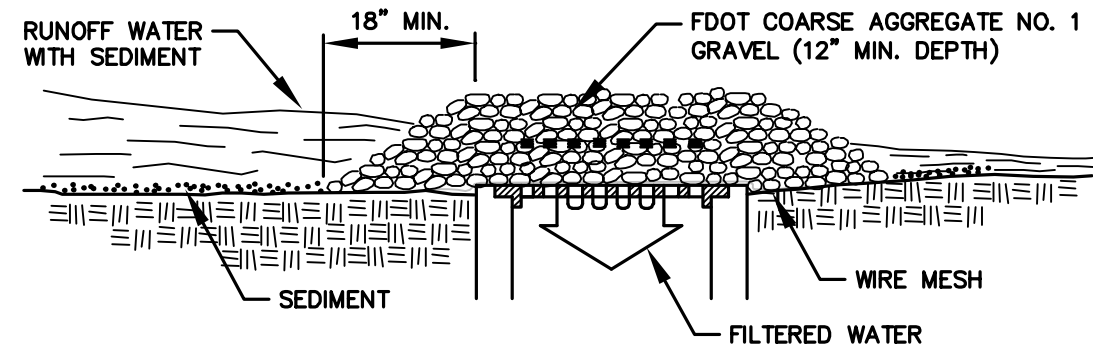
COIR BALE DROP INLET SEDIMENT FILTER
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PROPER PLACEMENT OF COIR BALE
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N.T.S.

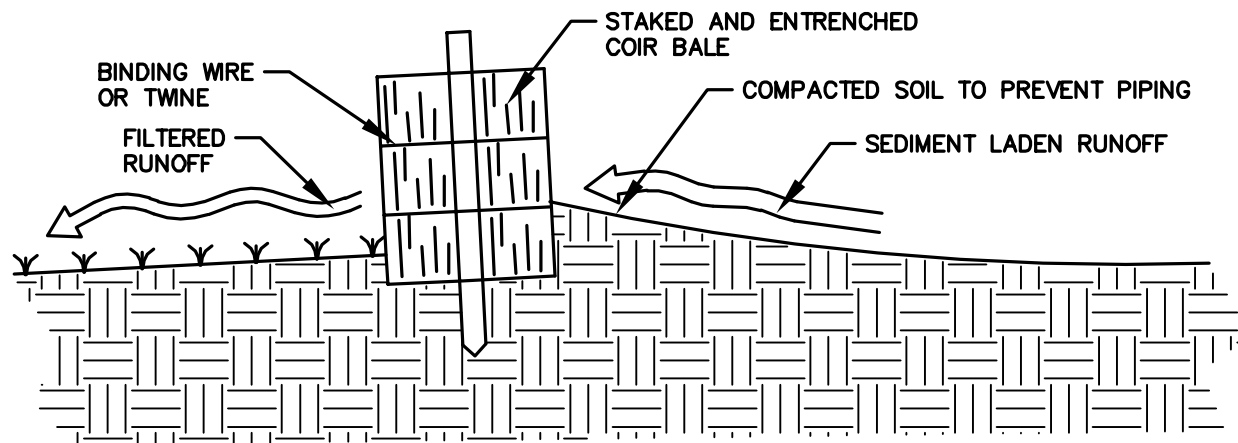


PROPER PLACEMENT OF A
FILTER BARRIER IN DRAINAGE WAY
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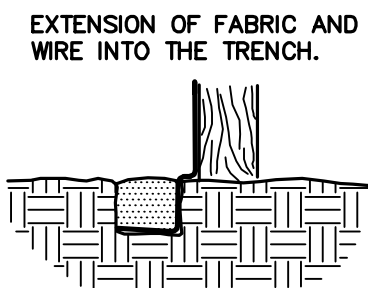
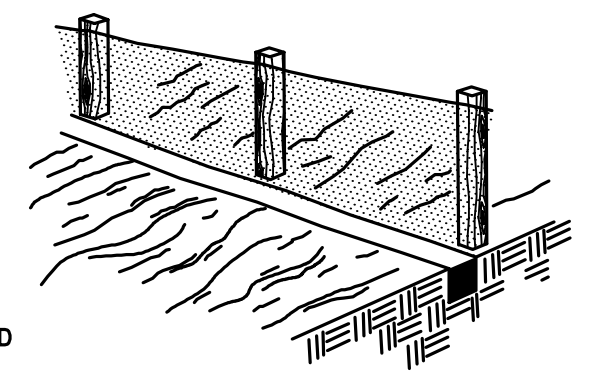
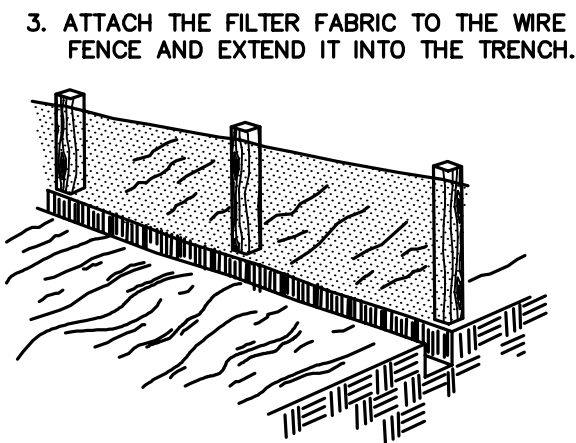
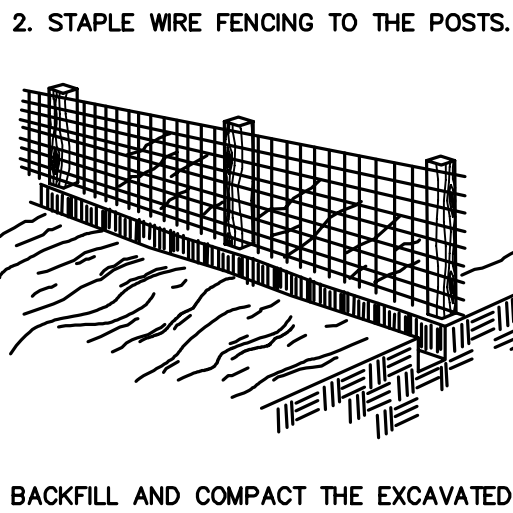
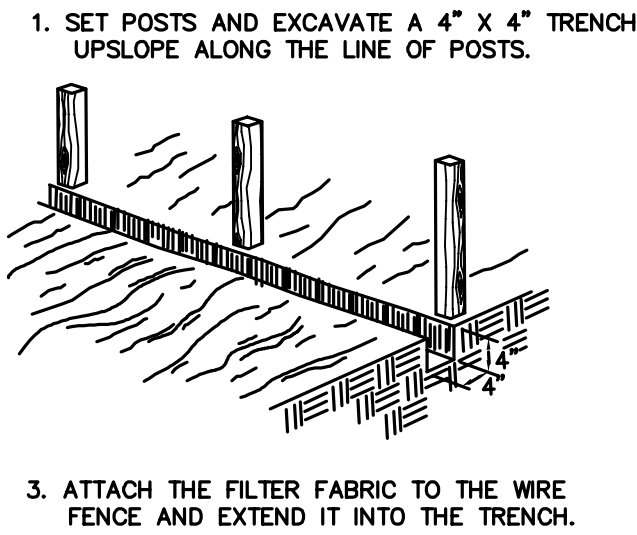


THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

GRAVEL AND WIRE MESH DROP INLET
SEDIMENT FILTER
N.T.S.



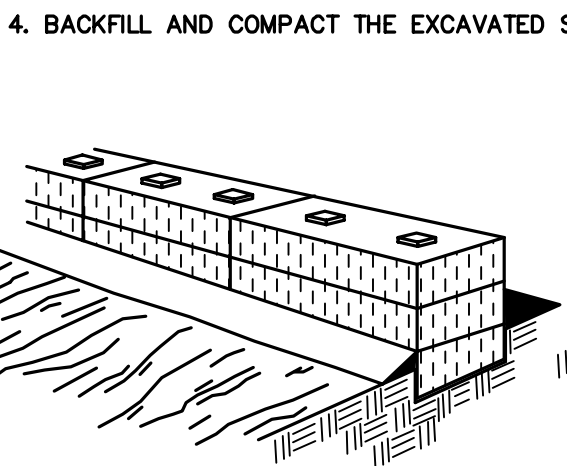
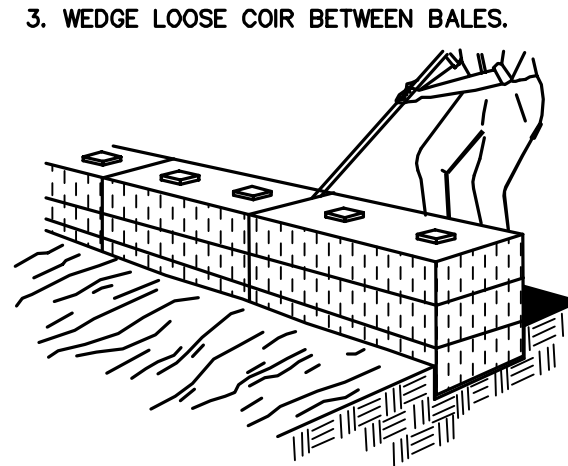
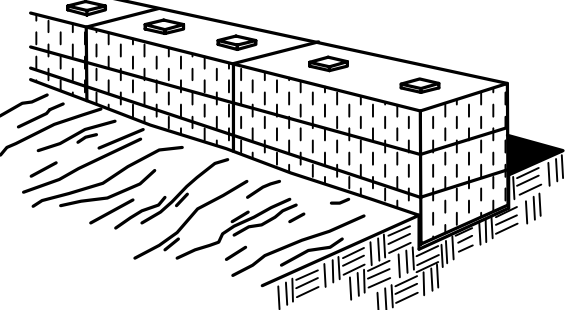
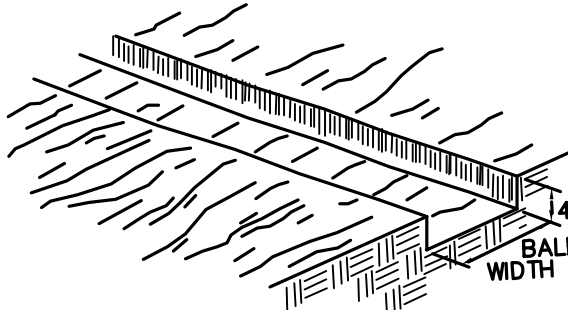
CROSS-SECTION OF A PROPERLY
INSTALLED COIR BALE
N.T.S.



CONSTRUCTION OF SILT FENCE
N.T.S.

1. EXCAVATE THE TRENCH

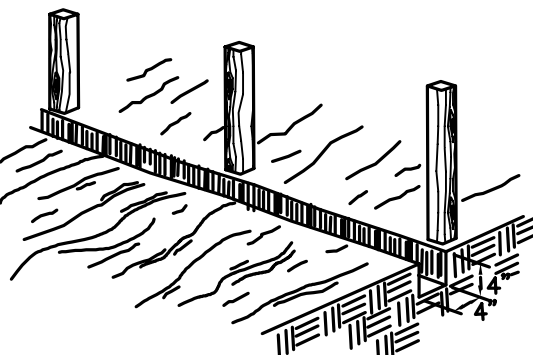
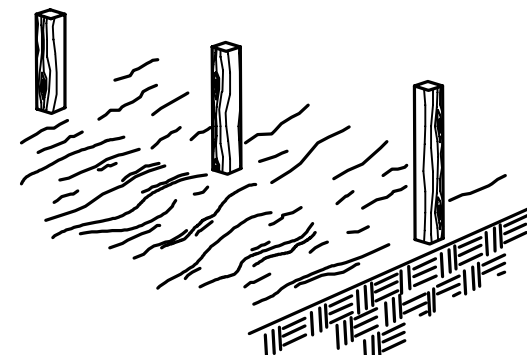
2. PLACE AND STAKE COIR BALES.



CONSTRUCTION OF A COIR BALE BARRIER
N.T.S.

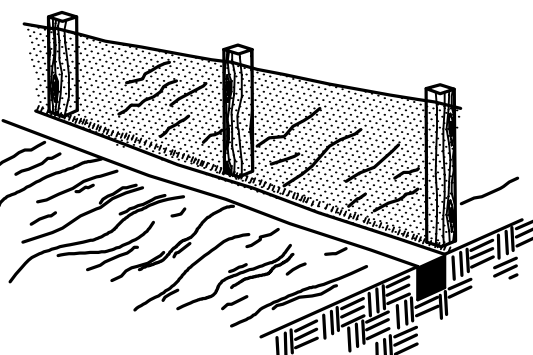
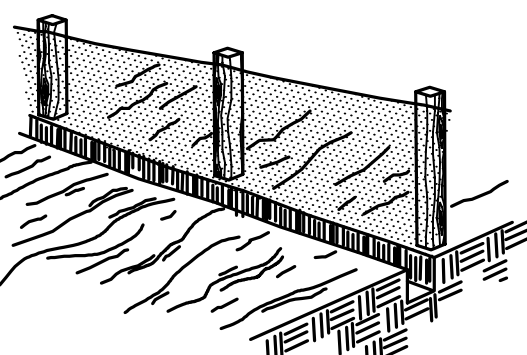
1. SET THE STAKES.

2. EXCAVATE A 4 inch by 4 inch TRENCH UPSLOPE ALONG THE LINE OF STAKES



3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.

4. BACKFILL AND COMPACT THE EXCAVATED SOIL



CONSTRUCTION OF A FILTER BARRIER
N.T.S.

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Jacksonville, FL 32218
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FAX: (904) 644-9485
REG: 0000264 LC: 0000116

VISION - EXPERIENCE - RESULTS

NO.	BY	DATE	REVISIONS	
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DESIGNER	N. BOLATTE	DESIGN ENGINEER	NICOLE BOLATTE
DRAWN BY	A. ANDERSON	FLORIDA REGISTRATION NO.	74921
CHECKED BY	N. BOLATTE		
DATE			

JEA
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GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
EROSION AND SEDIMENT CONTROL DETAILS

PROJ. NO.	18-171
DATE:	APRIL 23, 2021
SCALE:	AS NOTED
NO. SHEETS	44
SHEET NO.	26
DRAWING NO.	ESP-6

TEMPORARY TRAFFIC CONTROL NOTES

1. FOR TEMPORARY TRAFFIC CONTROL, THE CONTRACTOR SHALL:

1.1. REFERENCE FDOT INDEX 102-600 FOR GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES.

1.2. REFERENCE FDOT INDEX 102-602 FOR ALL SEGMENTS WHERE WORK WILL BE ACCOMPLISHED ON THE SHOULDER AND NO TRAVEL LANE IS EXPECTED TO BE CLOSED OR IMPACTED.

1.3. REFERENCE FDOT INDEX 102-603 FOR ALL SEGMENTS WHERE ONE TRAVEL LANE IS EXPECTED TO BE CLOSED OR IMPACTED.

1.4. REFERENCE FDOT INDEX 102-660 FOR ALL SEGMENTS WHERE A SIDEWALK IS EXPECTED TO BE CLOSED OR IMPACTED.

1.5. SEE SHEETS 33-36 FOR FDOT STANDARD INDEXES.
2. THE CONTRACTOR SHALL PROVIDE FOR ALL LANES OF TRAFFIC TO BE OPEN IN THE CASE OF AN EMERGENCY. THE CONTRACTOR SHALL RESPOND AND PROVIDE ADJUSTMENTS AS DIRECTED BY THE PROJECT ENGINEER WITHOUT DELAY UNDER THESE CONDITIONS. THE CONTRACTOR SHALL ALSO RESPOND WITHIN 30 MINUTES UPON NOTIFICATION BY THE PROJECT ENGINEER TO ANY REQUESTS FOR CORRECTION, IMPROVEMENT OR MODIFICATION TO THE TRAFFIC CONTROL PLAN AND/OR DEVICES.
3. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) 2009 EDITION" AND SERIES 102 OF THE STANDARD PLANS FY 2020-2021 EDITION AT ALL TIMES.
4. ALL TRAFFIC CONTROL DEVICES (TEMPORARY SIGNS, PAVEMENT MARKINGS, BARRIER WALLS, ETC.) REQUIRED DURING A CONSTRUCTION PHASE SHALL BE INSTALLED AND APPROVED BY THE PROJECT ENGINEER OR REPRESENTATIVE PRIOR TO THE DIVERSION OF TRAFFIC AND THE COMMENCEMENT OF CONSTRUCTION AND SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600. FDOT STANDARD PLANS INDEX 102-600 SHALL BE USED IN CONJUNCTION WITH ALL OTHER INDEXES SPECIFICALLY MENTIONED IN EACH TRAFFIC CONTROL PHASE.
5. ALL EXISTING SIGNS AND PAVEMENT MARKINGS, WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN DURING A CONSTRUCTION PHASE, SHALL BE REMOVED OR TEMPORARILY RELOCATED AS NECESSARY PRIOR TO THE DIVERSION OF TRAFFIC AND THE COMMENCEMENT OF CONSTRUCTION. THE REMOVAL OF EXISTING PAVEMENT MARKINGS CAN BE ACCOMPLISHED BY ANY METHOD APPROVED BY THE PROJECT ENGINEER. PAINTING OVER EXISTING MARKINGS IS NOT ACCEPTABLE.
6. MINIMUM TRAVEL LANE WIDTHS SHALL BE 10'.
7. ARROWS DENOTE DIRECTION OF TRAFFIC ONLY AND DO NOT REPRESENT PAVEMENT MARKINGS.
8. THE REMOVAL AND REPLACEMENT OF ANY TEMPORARY STRIPING OR R.P.M.'S SHALL BE DONE WITH THE CLOSURE OF THE AFFECTED LANE.
9. ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. CONSTRUCTION IN THE VICINITY OF DRIVEWAYS AND SIDESTREETS MAY REQUIRE FLAGGING OPERATIONS, LANE CLOSURES & INTERIM PAVEMENT REPAIRS NOT DETAILED IN THE PLANS. PAVEMENT REPAIRS SHALL MATCH EXISTING PAVEMENT.
10. THE CONTRACTOR SHALL MAKE PROVISIONS FOR THE REMOVAL OF STORM WATER FROM THE ROADWAY DURING CONSTRUCTION. PROVISIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE USE.
11. THE CONTRACTOR SHALL MATCH EXISTING CONDITIONS AT PROJECT BEGINNING AND ENDING AS DIRECTED BY THE ENGINEER.
12. THE CONTRACTOR SHALL NOT MILL MORE THAN CAN BE RESURFACED IN THE SAME DAY'S/NIGHT'S OPERATION. THE FIRST LIFT OF ASPHALT SHALL BE PLACED BEFORE ROADWAY IS OPEN TO TRAFFIC FOLLOWING MILLING.
13. TEMPORARY STOP SIGNS FOR CROSS STREETS SHALL BE IN LINE WITH, OR BEHIND, CHANNELIZING DEVICES.
14. ALL COSTS TO MAINTAIN TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR MAINTENANCE OF TRAFFIC.
15. ANY DAMAGE TO EXISTING ROADWAYS SHALL BE REPAIRED BY THE CONTRACTOR AND RESTORED TO PRIOR CONDITION. DAMAGE SHALL BE MILLED AND RESURFACED NOT PATCHED.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR RIGHT OF WAY MAINTENANCE WITHIN THE CONSTRUCTION AREA AND AREAS MADE INACCESSIBLE DUE TO CONSTRUCTION THROUGHOUT THE TERM OF CONSTRUCTION.
17. THE CONTRACTOR SHALL MAINTAIN THE ACTUATED OPERATION OF THE SIGNALIZED INTERSECTIONS THROUGHOUT THE LIFE OF THE CONTRACT. PLANNED DETECTION DISRUPTIONS ARE NOT ALLOWED. ANY UNPLANNED DISRUPTION TO THE VEHICULAR DETECTION SYSTEM AT EXISTING SIGNALIZED INTERSECTIONS SHALL BE RE-ACTUATED WITHIN 24 HOURS (AT THE CONTRACTOR'S EXPENSE). THIS INCLUDES FURNISHING AND INSTALLING OVERHEAD OPTICAL DETECTION DEVICES AS REQUIRED TO MAINTAIN ALL EXISTING ACTUATED SIGNAL OPERATIONS.
18. RAISED PAVEMENT MARKERS SHALL BE PLACED ON ALL LANE LINES, EDGE LINES IN TRANSITION AND APPROACH AREAS AS SHOWN IN FDOT INDEX 706-001.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PEDESTRIAN TRAFFIC DURING CONSTRUCTION. ALL TEMPORARY PEDESTRIAN WALKWAYS SHALL MEET A.D.A. REQUIREMENTS, INCLUDING A MAXIMUM CROSS SLOPE OF 2% WHERE TEMPORARY PEDESTRIAN WALKWAYS CROSS SIDE STREET & DRIVEWAY CONNECTIONS. WHEN AN ALTERNATIVE PAVED PEDESTRIAN ROUTE IS NOT FEASABLE, THE CONTRACTOR SHALL MAINTAIN A 4' WIDE STABLE PEDESTRIAN PATHWAY IN ACCORDANCE WITH FDOT INDEX #102-660.
20. NOTIFY THE TRAFFIC ENGINEERING DIVISION (904-255-7533) A MINIMUM OF 5 WORKING DAYS PRIOR TO IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN.
21. IF SIGNS ARE DAMAGED DURING CONSTRUCTION ACTIVITY, THE CONTRACTOR IS REQUIRED TO REPLACE THEM IMMEDIATLY IN ACCORDANCE WITH THE CURRENT CITY STANDARD SPECIFICATIONS.
22. CONFLICTING OR MISLEADING PAVEMENT MARKINGS SHALL BE REMOVED BY HYDROBLASTING OR GRINDING. ALL EXISTING PAVEMENT MARKINGS OUTSIDE OF THE LIMITS OF CONSTRUCTION WHICH ARE ALTERED SHALL BE REPLACED UPON COMPLETION OF THE PROJECT.
23. ANY MODIFICATIONS OF THIS TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
24. THE ROADWAY SHALL BE RESTORED TO AT LEAST A LIMEROCK SURFACE BEFORE IT IS REOPENED TO TRAFFIC AND BEFORE THE CONTRACTOR MOVES TO THE NEXT CONSTRUCTION ZONE.
25. THE JACKSONVILLE FIRE AND RESCUE COMMUNICATIONS CENTER (FRCC) SHALL BE NOTIFIED OF ROAD CLOSURES/DETOURS.
26. TRAFFIC CONTROL PLANS WITHIN THE FDOT RIGHT-OF-WAY (1-10) ARE SUBJECT TO FDOT APPROVAL.

SEQUENCE OF CONSTRUCTION

AT THE BEGINNING OF EACH PHASE:
ERECT ADVANCE WARNING SIGNS, TEMPORARY PAVEMENT MARKINGS, BARRICADES & CHANNELING DEVICES AS SHOWN ON THE TRAFFIC CONTROL PLANS FOR EACH PHASE. ADJUST PER ACTUAL FIELD CONDITIONS TO ENSURE VISIBILITY OF ALL EXISTING SIGNS WHICH WILL NEED TO REMAIN DURING CONSTRUCTION.

PHASING NOTES:

PHASE G1
CONSTRUCT NEW 8" WATER MAIN PIPE ALONG NORTHERN SIDE OF EDISON AVENUE FROM PINEDALE TERRACE TO HERMES STREET UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G2
CONTINUE INSTALLATION OF 8" WATER MAIN EAST, REDUCING TO 6" WM THROUGH INTERSECTION OF EDISON AVENUE AND HERMES STREET TO STA 101+30. CONSTRUCT NEW 6" WATER MAIN ALONG EAST SIDE OF HERMES STREET FROM SOUTH OF HUNT STREET [STA 502+25] SOUTH THROUGH INTERSECTION OF EDISON AVENUE AND HERMES STREET UPSIZING TO 8" WM THROUGH INTERSECTION TO TIE-IN TO 8" STUB-OUT AT STA 497+90 UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G3
CONTINUE INSTALLATION OF 6" WATER MAIN ALONG NORTH SIDE OF EDISON AVENUE FROM STA 101+30 EAST THROUGH LURAY STREET INTERSECTION TO STA 106+30 UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G4
CONTINUE INSTALLATION OF 6" WATER MAIN ALONG NORTH SIDE OF EDISON AVENUE FROM STA 106+30 EAST THROUGH THE DRUID STREET INTERSECTION UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G5
CONSTRUCT NEW 6" WATER MAIN ALONG HUNT STREET FROM HERMES STREET EAST TO STA 204+25 UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G6
CONTINUE INSTALLATION OF 6" WATER MAIN ALONG HUNT STREET FROM STA 204+25 EAST THROUGH LURAY STREET INTERSECION TO STA 207+25 UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

PHASE G7
CONTINUE INSTALLATION OF 6" WATER MAIN ALONG EAST SIDE OF HERMES STREET FROM STA 502+25 NORTH TO STA 503+50 AND INSTALL 6 X 4" REDUCER. CONTINUE INSTALLATION OF 4" WM FROM STA 503+50 NORTH TO NOLAN STREET AND THEN EAST ALONG SOUTH SIDE OF NOLAN STREET TO STA 300+80 UTILIZING DETOURS AND ROAD CLOSURES AS SHOWN IN THE PLANS.

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VISION - EXPERIENCE - RESULTS

THESE DETAILS AS SHOWN ON THIS DRAWING ARE FROM F.D.O.T. STANDARD INDEXES. WE TAKE NO EXCEPTION TO THE DESIGN

DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE:
CHECKED BY: N. BOLATETE
DATE:

DESIGN ENGINEER
MATTHEW MAGGIORE
FLORIDA REGISTRATION NO.
55371

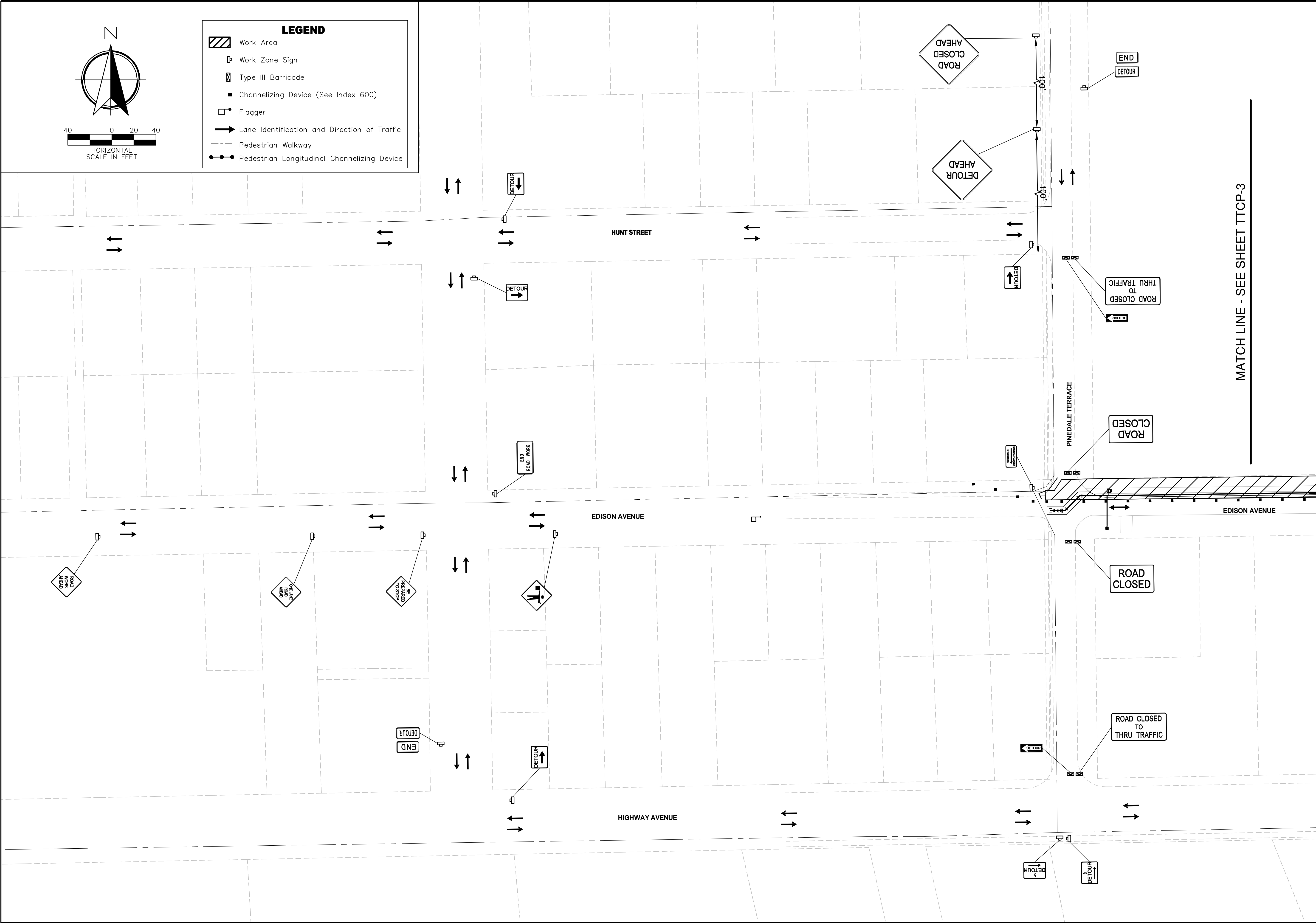
PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

NO. SHEETS 44
SHEET NO. 27
DRAWING NO. TTCP-1

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GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP GENERAL NOTES



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VISION • EXPERIENCE • RESULTS

REVISIONS

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DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE:
CHECKED BY: N. BOLATETE
DATE:
DESIGN ENGINEER: MATTHEW MAGGIORE
FLORIDA REGISTRATION NO. 55371

JEA

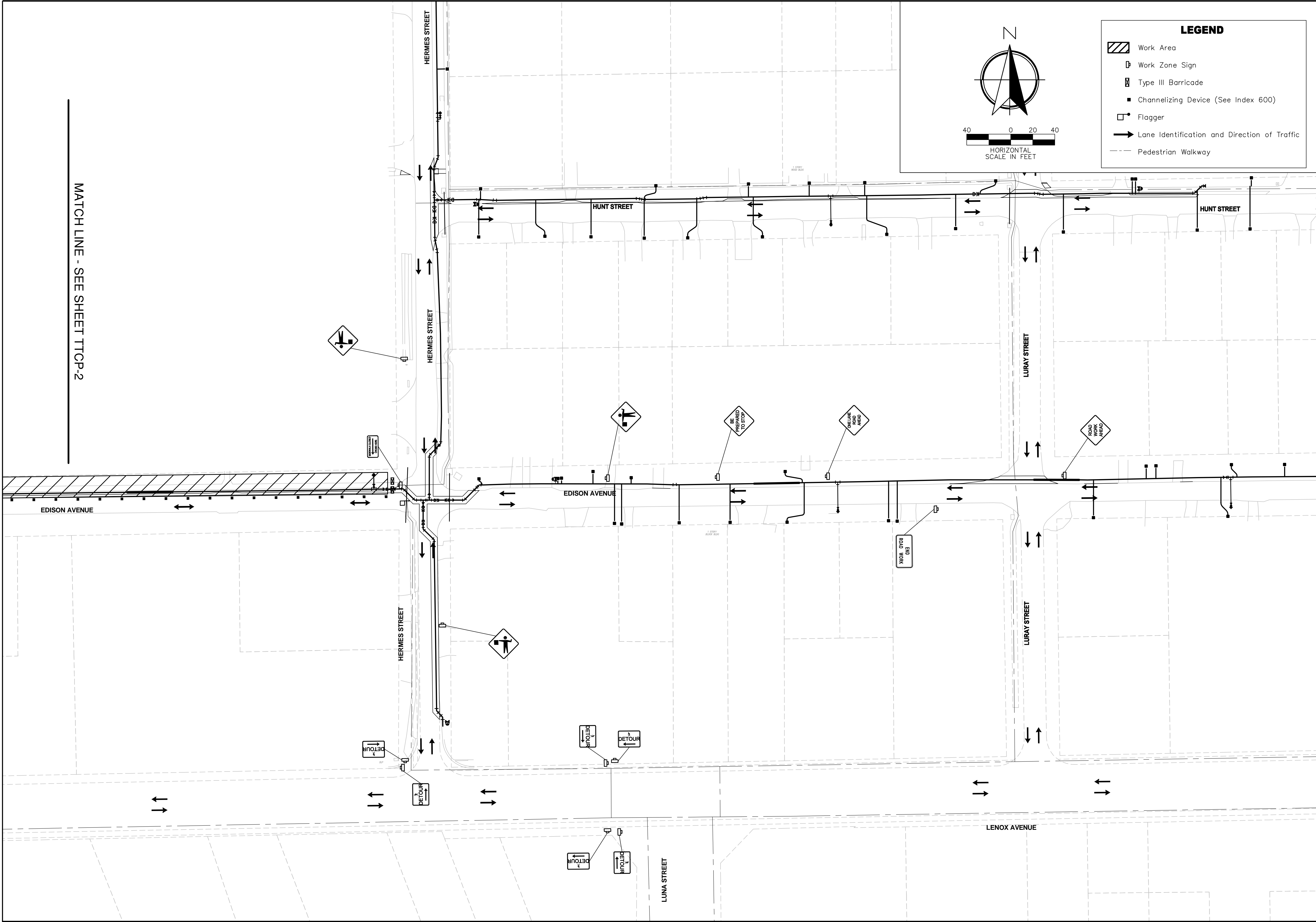
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GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 1

PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

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SHEET NO. 28
DRAWING NO. TTCP-2

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PROJ. NO. 18-171
SHEET NO. 44
DRAWING NO. TTCP-3

DATE: APRIL 23, 2021
SCALE: AS NOTED

PROJ. NO. 18-171
SHEET NO. 44
DRAWING NO. TTCP-3

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 1

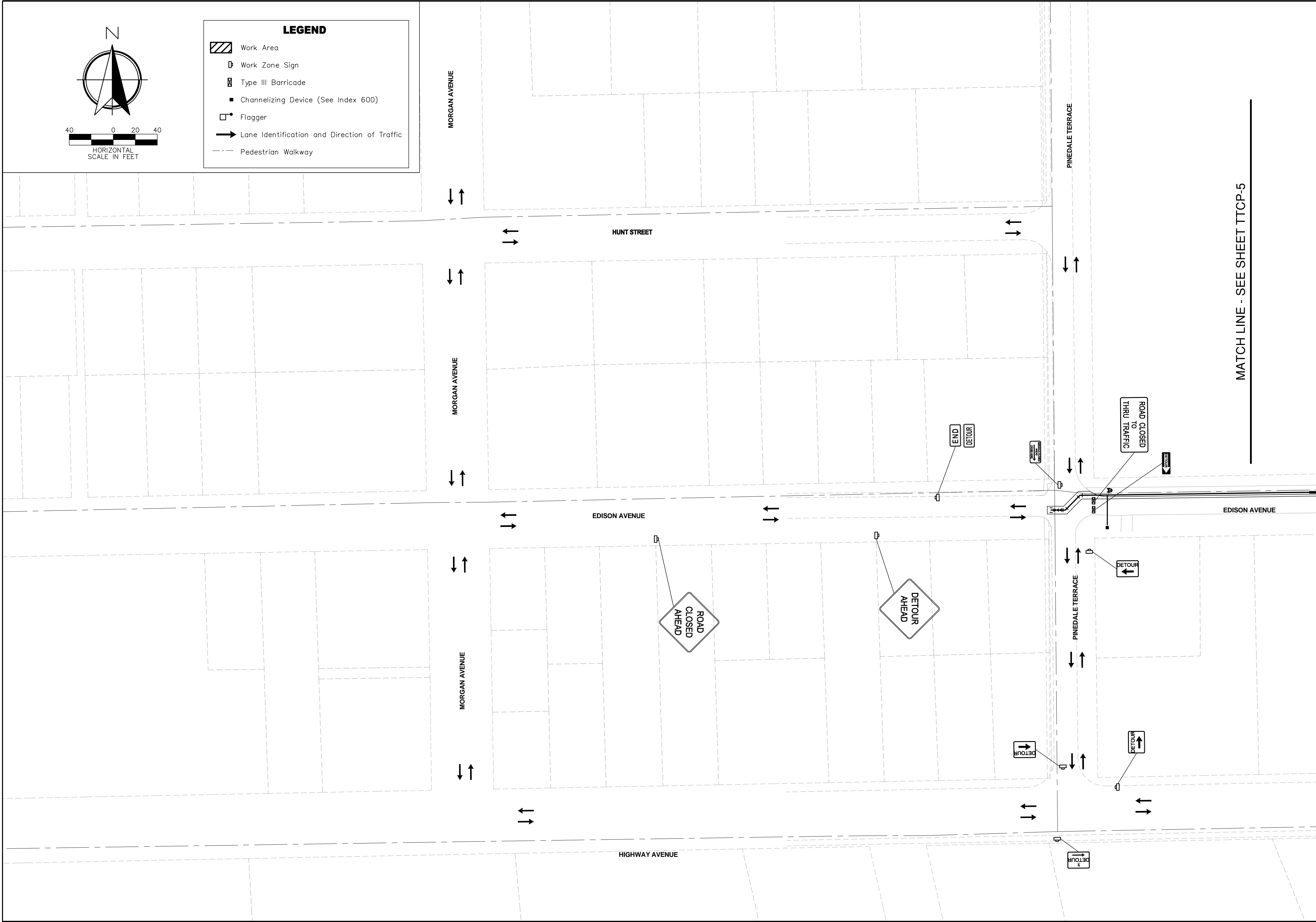
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DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE: _____
CHECKED BY: N. BOLATETE
DATE: _____

DESIGN ENGINEER: MATTHEW MAGGIORE
FLORIDA REGISTRATION NO. 55371

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DRAWING NO.
TTCP-4

PROJ. NO. 18-171

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SCALE: AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM

COLLEGE STREET AREA - PACKAGE G

TTCP - PHASE 2

DESIGNER: N. BOLATETE
DRAWN BY: A. ANDERSON
DATE:

CHECKED BY: N. BOLATETE
DATE:

DESIGN ENGINEER
MATTHEW MAGGIORE
FLORIDA REGISTRATION NO.
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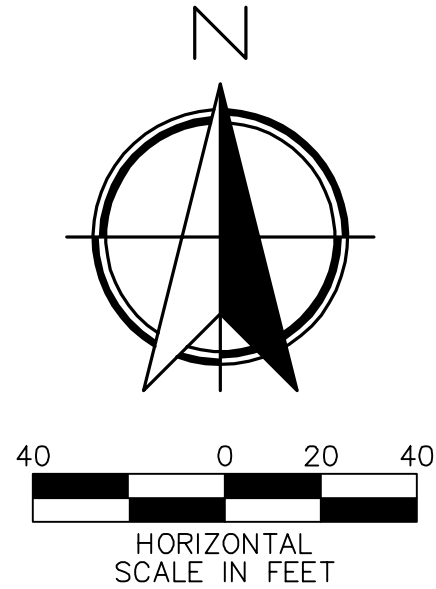
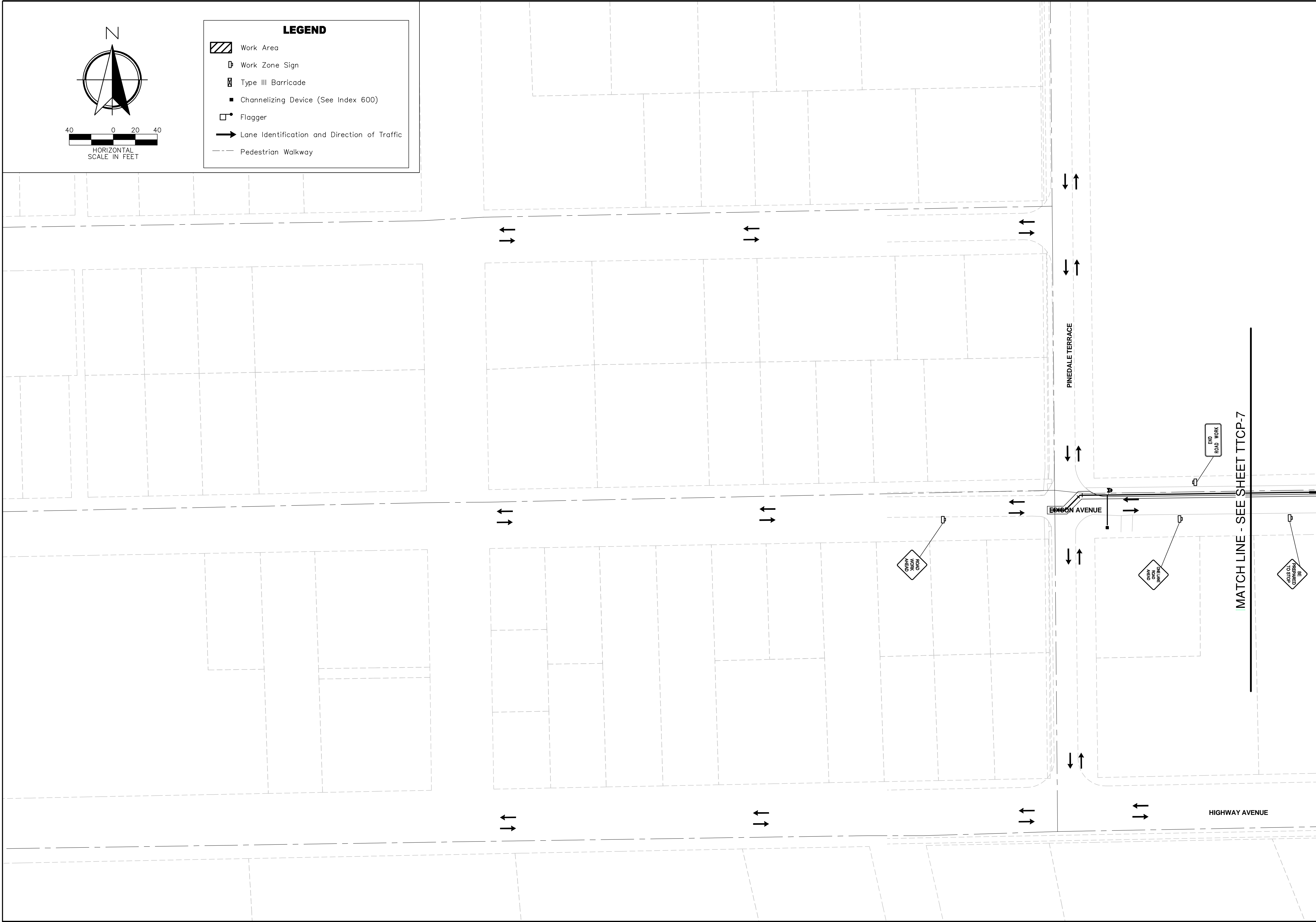
VISION • EXPERIENCE • RESULTS

England-Thins & Miller, Inc.

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REG. 0000284 LC - 0000516

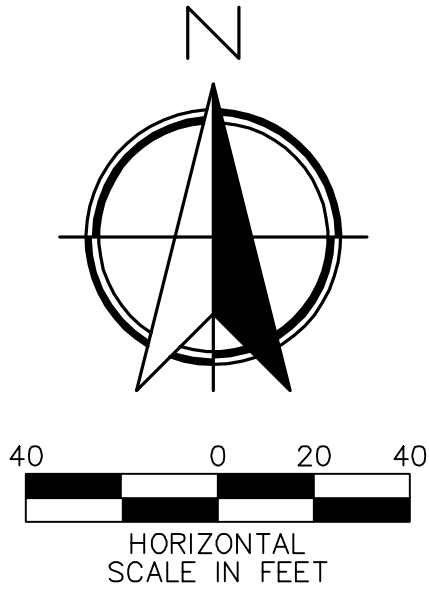
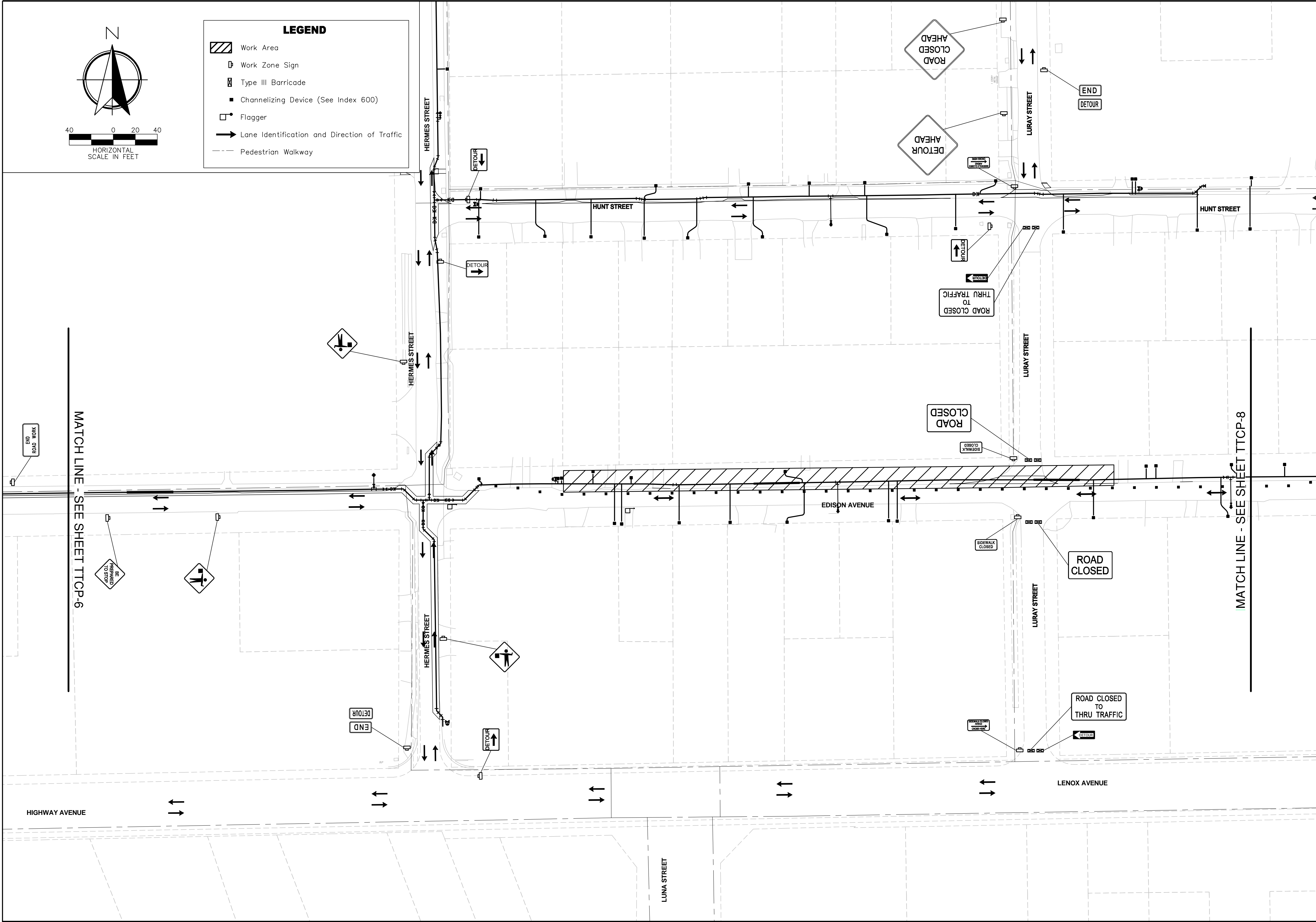
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LEGEND	
	Work Area
	Work Zone Sign
	Type III Barricade
	Channelizing Device (See Index 600)
	Flagger
	Lane Identification and Direction of Traffic
	Pedestrian Walkway

NO. SHEETS 44		PROJ. NO. 18-171		GALVANIZED PIPE REPLACEMENT PROGRAM COLLEGE STREET AREA - PACKAGE G TTCP - PHASE 3			DESIGNER: N. BOLATETE DRAWN BY: A. ANDERSON DATE: _____		DESIGN ENGINEER MATTHEW MAGGIORE FLORIDA REGISTRATION NO. 55371		ETM England-Thims & Miller, Inc. 14775 Old St. Augustine Road Augustine, FL 32080 TEL: (904) 842-8990 FAX: (904) 646-9465 REG. 0000284 LC - 0000516	
SHEET NO. 35		DATE: APRIL 23, 2021					CHECKED BY: N. BOLATETE				NO. BY DATE REVISIONS	
DRAWING NO. TTCP-6		SCALE: AS NOTED					DATE: _____				1. _____	



LEGEND	
	Work Area
	Work Zone Sign
	Type III Barricade
	Channelizing Device (See Index 600)
	Flagger
	Lane Identification and Direction of Traffic
	Pedestrian Walkway

NO. SHEETS
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SHEET NO.
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DRAWING NO.
TTCP-7

PROJ. NO.
18-171

DATE
APRIL 23, 2021

SCALE
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GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 3

DESIGNER
N. BOLATETE

DRAWN BY
A. ANDERSON

CHECKED BY
N. BOLATETE

DATE

DESIGN ENGINEER
MATTHEW MAGGIORE

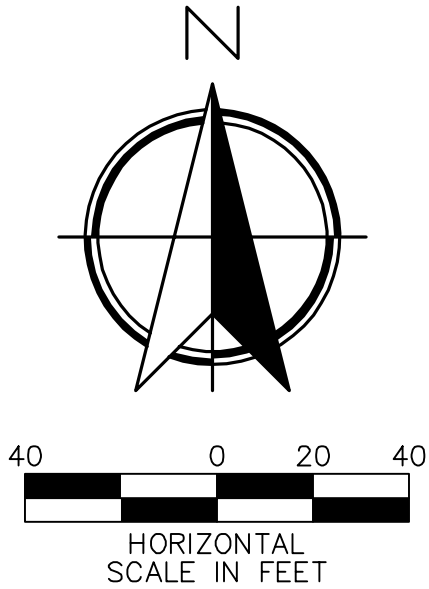
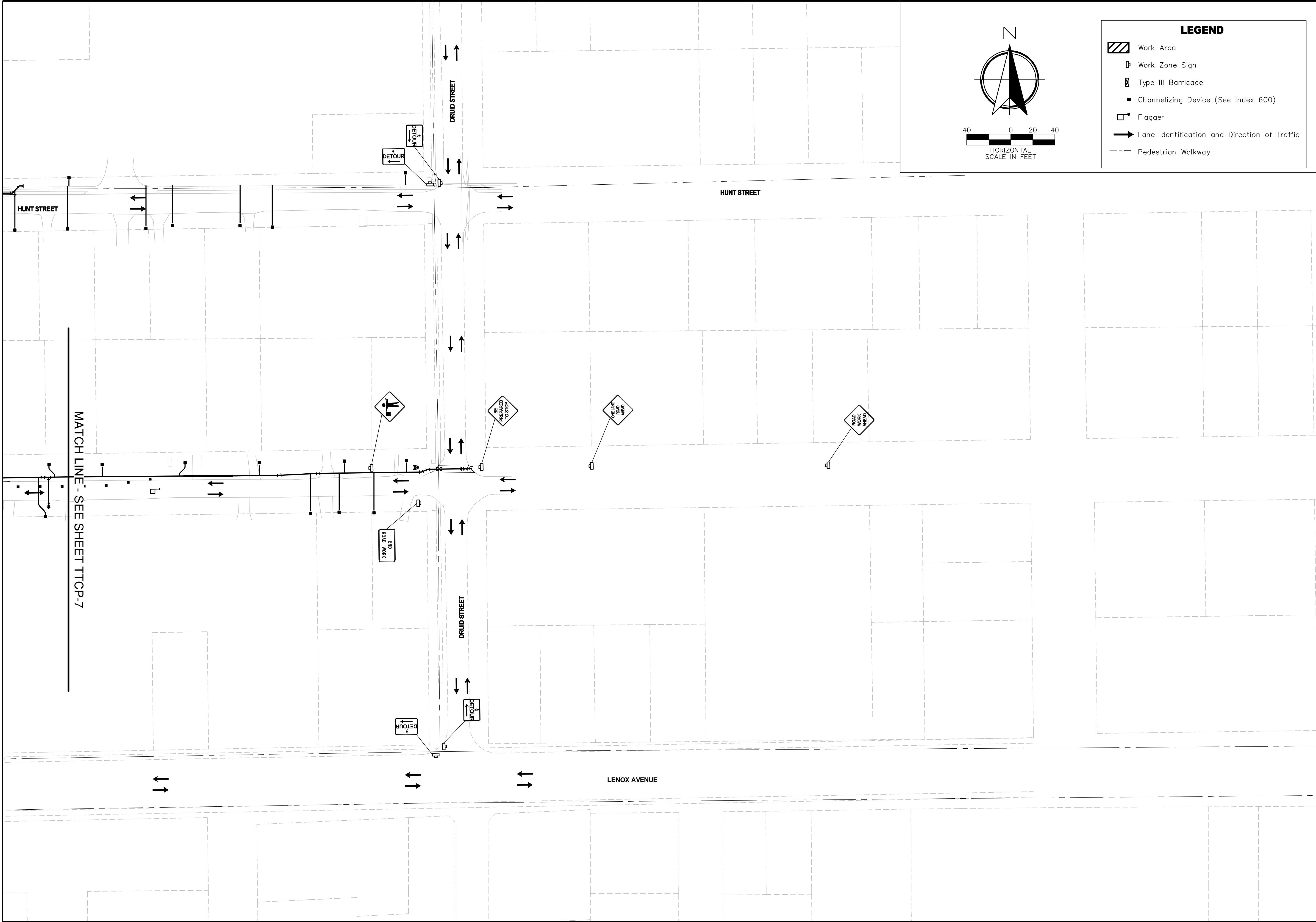
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LEGEND	
	Work Area
	Work Zone Sign
	Type III Barricade
	Channelizing Device (See Index 600)
	Flagger
	Lane Identification and Direction of Traffic
	Pedestrian Walkway

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DESIGNER: N. BOLATETE	DESIGN ENGINEER MATTHEW MAGGIORE
DRAWN BY: A. ANDERSON	FLORIDA REGISTRATION NO. 55371
CHECKED BY: N. BOLATETE	
DATE:	

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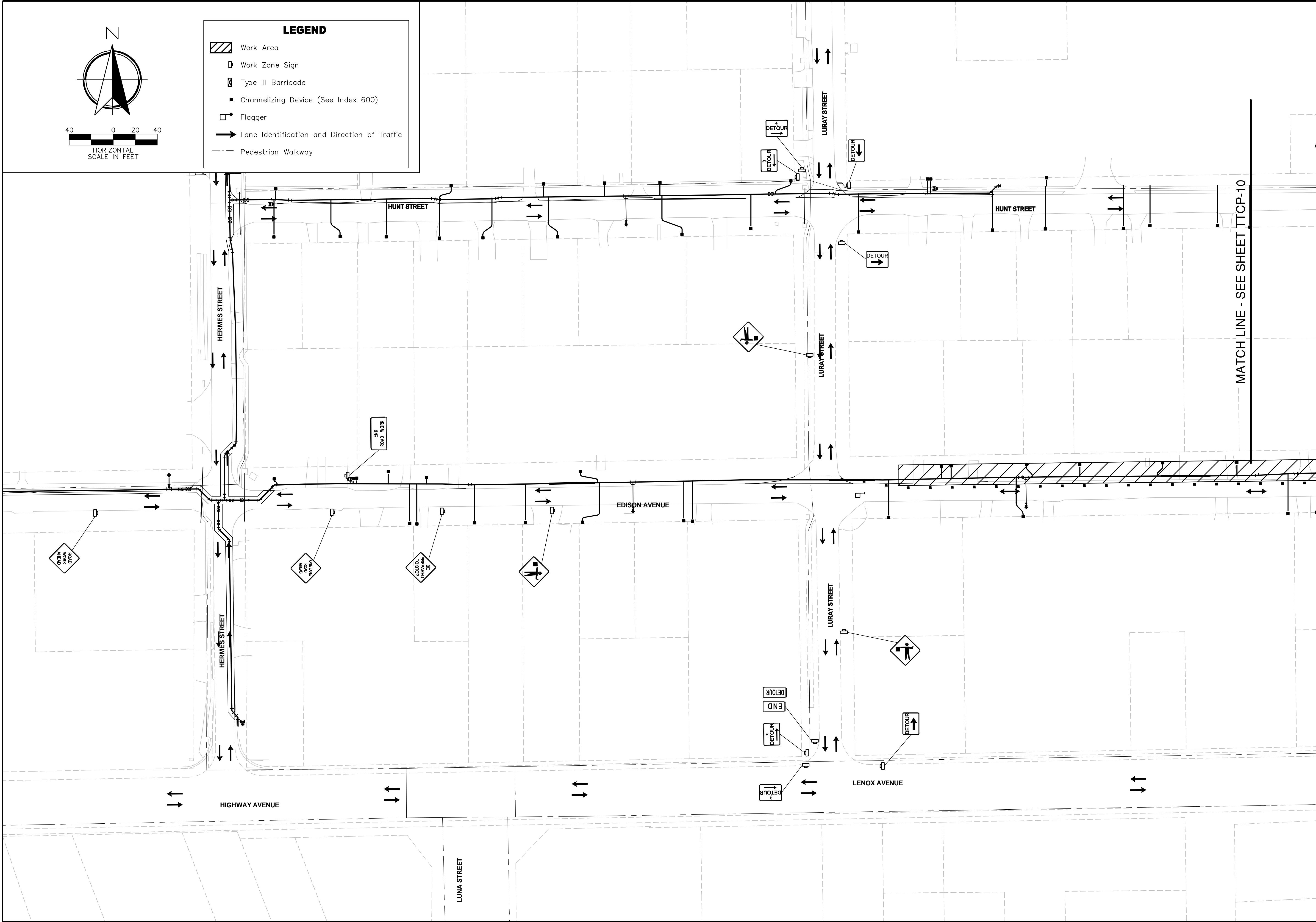
GALVANIZED PIPE REPLACEMENT PROGRAM

COLLEGE STREET AREA - PACKAGE G

TTCP - PHASE 3

PROJ. NO. 18-171	DATE: APRIL 23, 2021
SHEET NO. 44	SCALE: AS NOTED
DRAWING NO. TTCP-8	

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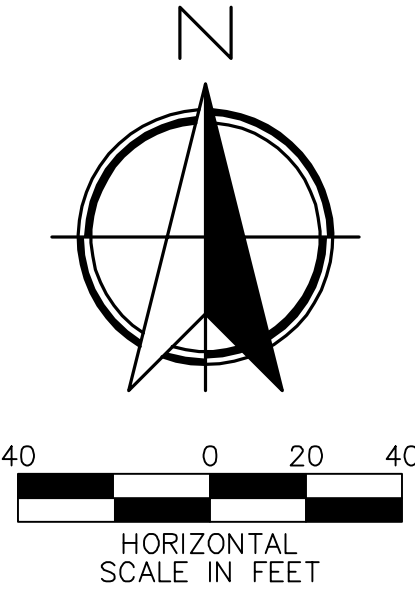
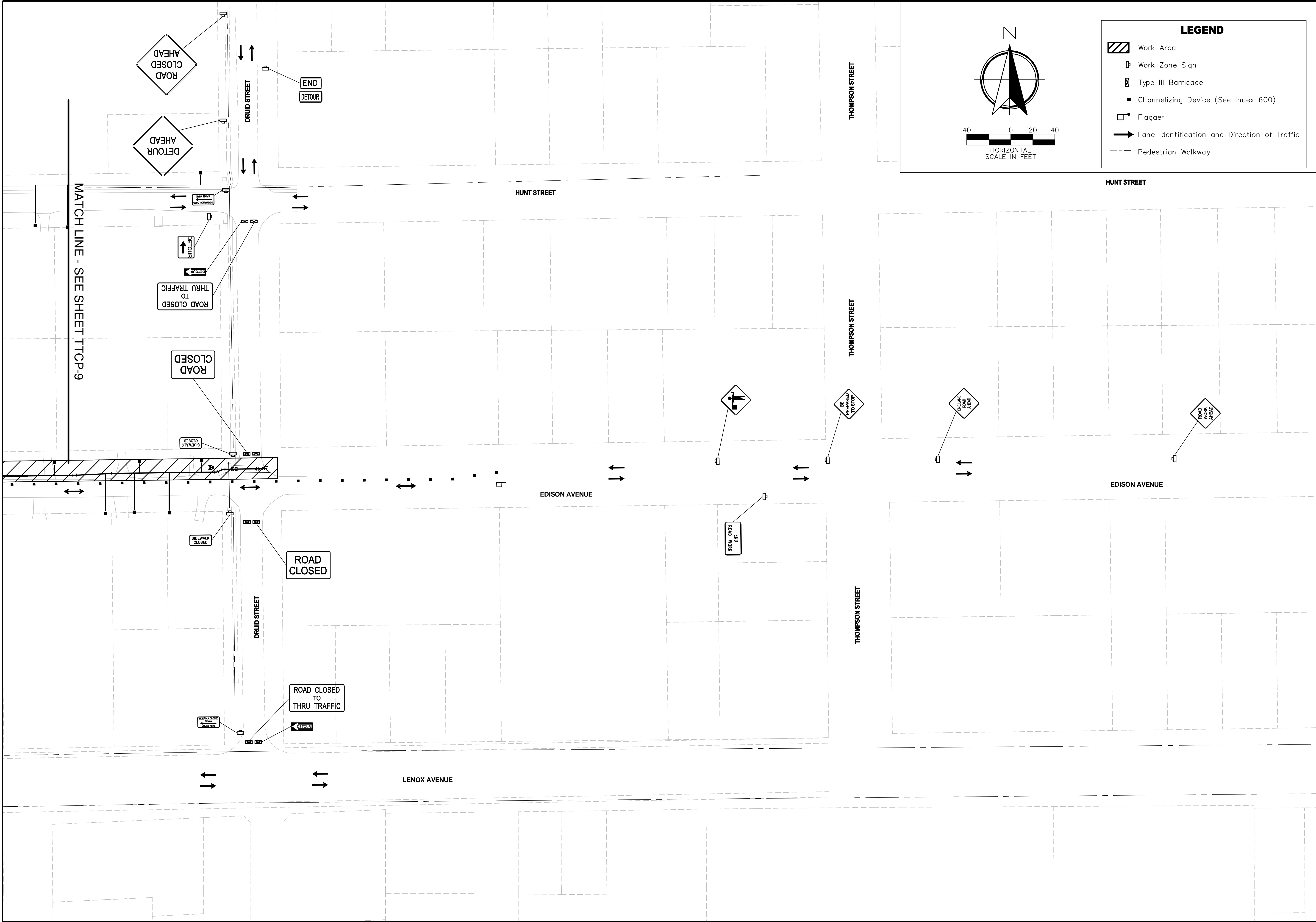
REG - 0000284 LC - 0000516

VISION • EXPERIENCE • RESULTS

NO. SHEETS	PROJ. NO.	DATE:	SCALE:	AS NOTED	DESIGNER	DESIGN ENGINEER	REVISIONS			
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44	18-171	APRIL 23, 2021			N. BOLATETE	A. ANDERSON	1			
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36	18-171	APRIL 23, 2021			N. BOLATETE	MATTHEW MAGGIORE	5			
							6			
							7			
							8			
TTCP-9	18-171	APRIL 23, 2021			N. BOLATETE	MATTHEW MAGGIORE	9			
							10			
							11			
							12			

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 4





LEGEND		
	Work Area	
	Work Zone Sign	
	Type III Barricade	
	Channelizing Device (See Index 600)	
	Flagger	
	Lane Identification and Direction of Traffic	
	Pedestrian Walkway	

ETM

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VISION - EXPERIENCE - RESULTS

NO. BY DATE

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REVISIONS

NO. BY DATE

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DESIGNER: N. BOLATETE

DRAWN BY: A. ANDERSON

DATE:

CHECKED BY: N. BOLATETE

DATE:

DESIGN ENGINEER

MATTHEW MAGGIORE

FLORIDA REGISTRATION NO.

55371

GALVANIZED PIPE REPLACEMENT PROGRAM

COLLEGE STREET AREA - PACKAGE G

TTCP - PHASE 4

PROJ. NO. 18-171

DATE: APRIL 23, 2021

SCALE: AS NOTED

NO. SHEETS 44

SHEET NO. 36

DRAWING NO. TTC-P-10

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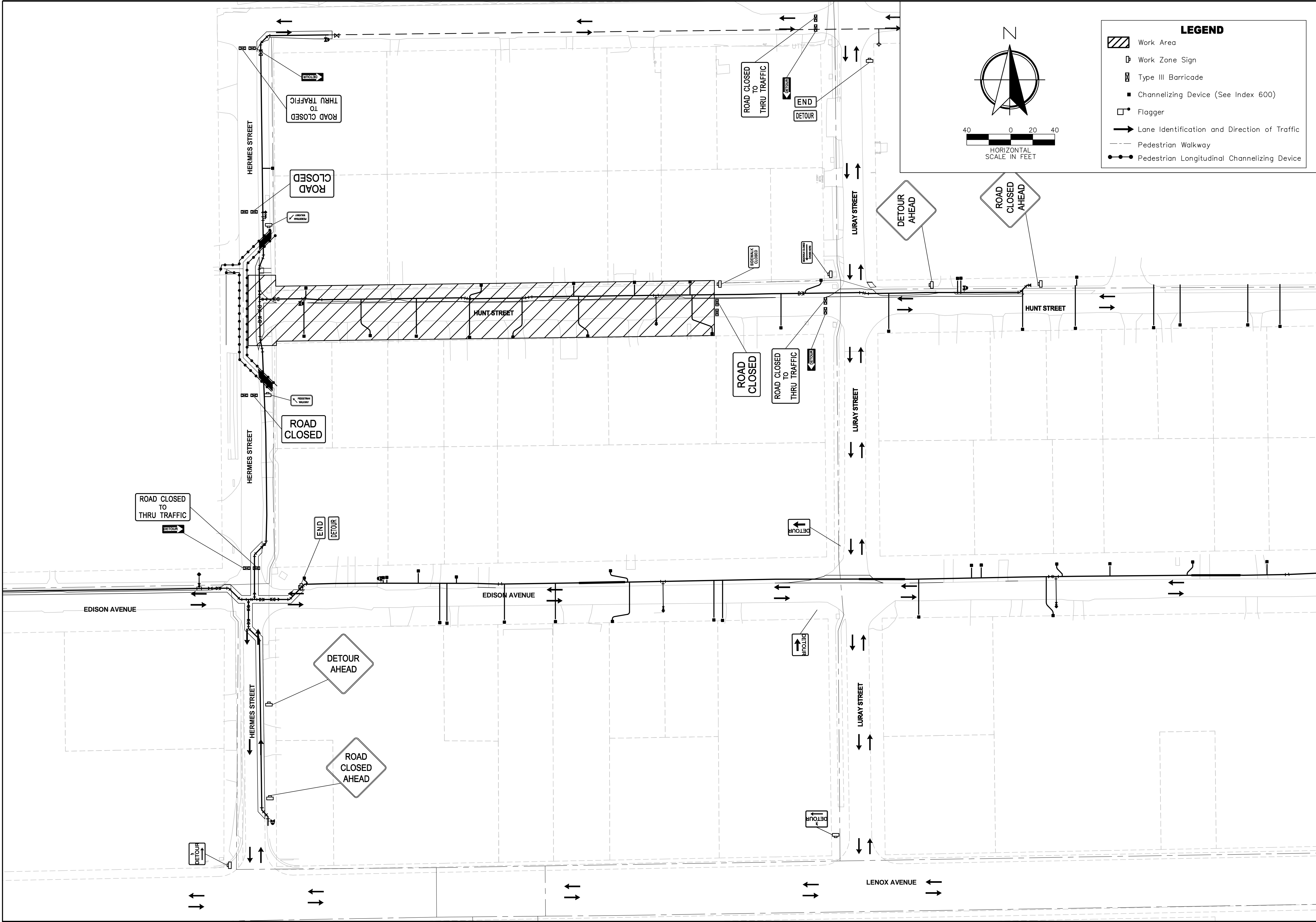
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Package G4.dwg

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BY: Alex Anderson



NO. SHEETS
44

SHEET NO.
38

DRAWING NO.
TTCP-11

PROJ. NO.
18-171

DATE:
APRIL 23, 2021

SCALE:
AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 5

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DRAWN BY:
A. ANDERSON

CHECKED BY:
N. BOLATETE

DESIGN ENGINEER
MATTHEW MAGGIORE

FLORIDA REGISTRATION NO.
55371

NO.

BY

DATE

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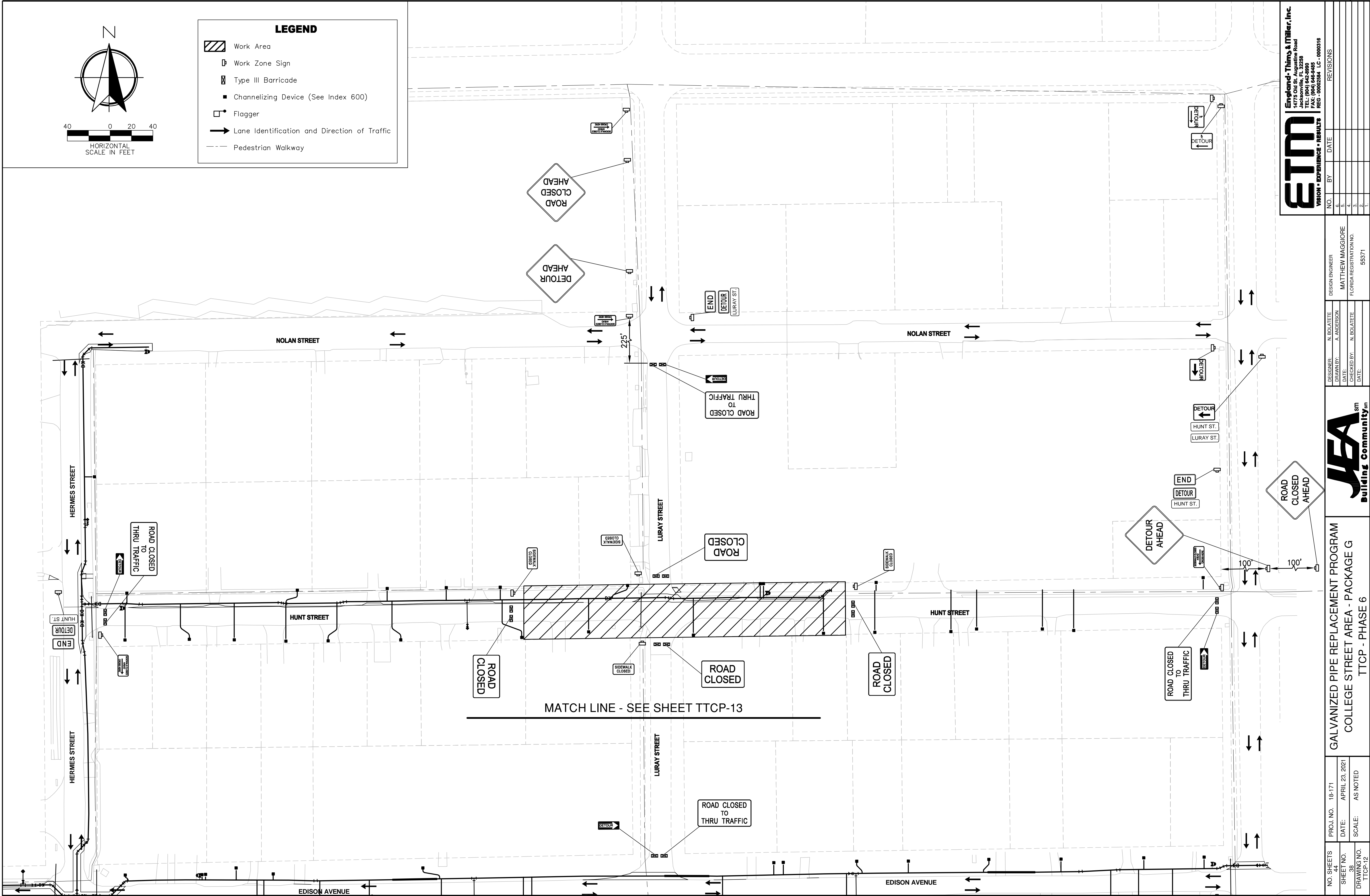
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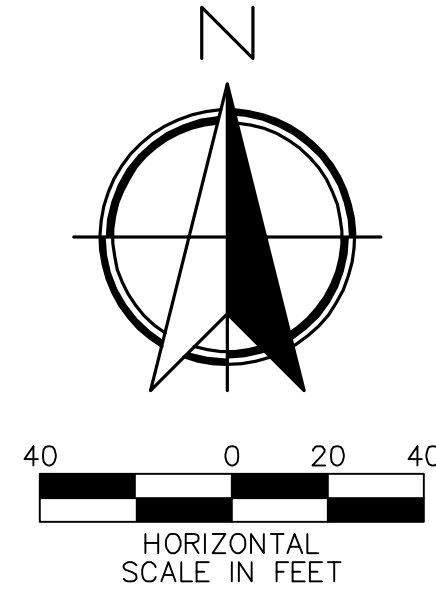
DESIGNER:	N. BOLATETE	DESIGN ENGINEER:	MATTHEW MAGGIORE
DRAWN BY:	A. ANDERSON	FLORIDA REGISTRATION NO.:	55371
CHECKED BY:	N. BOLATETE		
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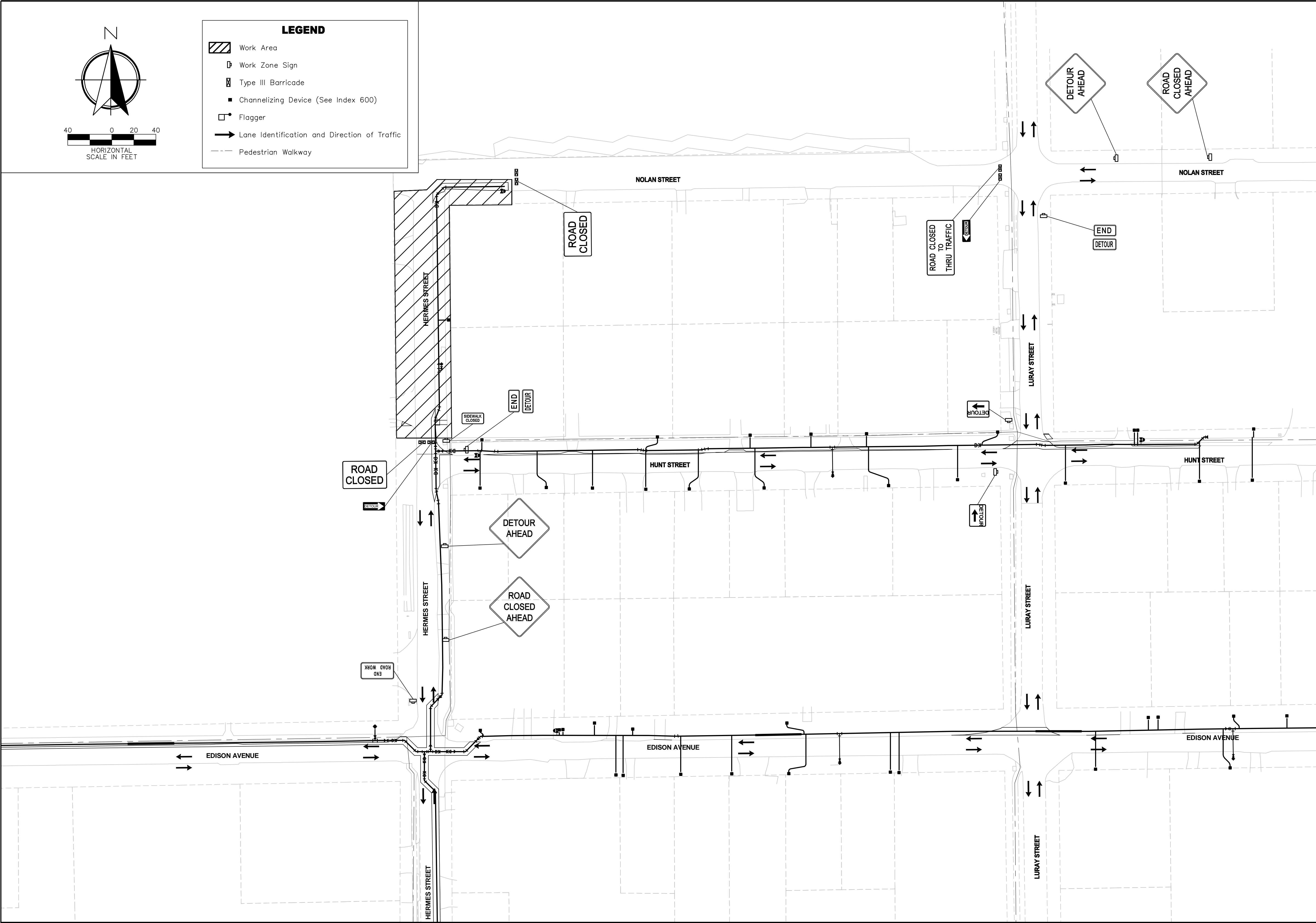
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GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP - PHASE 6

NO. SHEETS	44	PROJ. NO.	18-171
SHEET NO.	38	DATE:	APRIL 23, 2021
DRAWING NO.	TTCP-12	SCALE:	AS NOTED



LEGEND	
	Work Area
	Work Zone Sign
	Type III Barricade
	Channelizing Device (See Index 600)
	Flagger
	Lane Identification and Direction of Traffic
	Pedestrian Walkway



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DATE:

PROJ. NO. 18-171

DATE: APRIL 23, 2021

SCALE: AS NOTED

NO. SHEETS 44

SHEET NO. 10

DRAWING NO. TTCP-14

GALVANIZED PIPE REPLACEMENT PROGRAM

COLLEGE STREET AREA - PACKAGE G

TTCP - PHASE 7

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BY: Alex Anderson

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LAST REVISION 01/28/20	REVISION	DESCRIPTION:	 FY 2020-21 STANDARD PLANS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX <i>102-600</i>	SHEET <i>1 of 11</i>

SHEET	CONTENTS
1	General Notes
2	Definitions Temporary Traffic Control Devices Pedestrian and Bicyclist Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Length Of Lane Closures Overweight/Oversize Vehicles Lane Widths High-Visibility Safety Apparel Regulatory Speeds In Work Zones
4	Flagger Control Survey Work Zones Signs
5	Work Zone Sign Supports
6	Commonly Used Warning and Regulatory Signs In Work Zones
7	Manholes/Crosswalks/Joints Truck Mounted Attenuators Removing Pavement Markings Signals Channelizing Devices Channelizing Devices Consistency Portable Changeable (Variable) Message Signs (PCMS) Advanced Warning Arrow Boards
8	Drop-Offs In Work Zones
9	Business Entrance Temporary Asphalt Separator
10	Channelizing Devices Notes Temporary Barrier Notes
11	Pavement Markings

GENERAL NOTES:

1. All projects and works on highways, roads and streets shall have a traffic control plan. All work shall be executed under the established plan and Department-approved procedures. This Index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.
2. Indexes 102-601 through 102-670 are Department-specific typical applications of commonly encountered situations. Adjust device location or number thereof as recommended by the Worksite Traffic Supervisor and approved by the Engineer. Devices include, but are not limited to, Flaggers, portable temporary signals, signs, pavement markings, and channelizing devices. Comply with MUTCD or applicable Department criteria for any changes and document the reason for the change.
3. Except for emergencies, any road closure on State Highway System shall comply with Section 335.15, F.S.

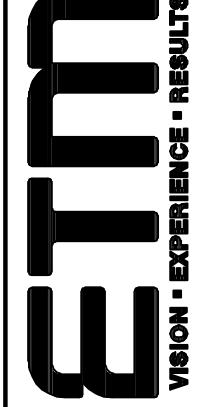
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SHEET NO.
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DRAWING NO.
TTCP-15

PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

**GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP FDOT INDEX - 1**



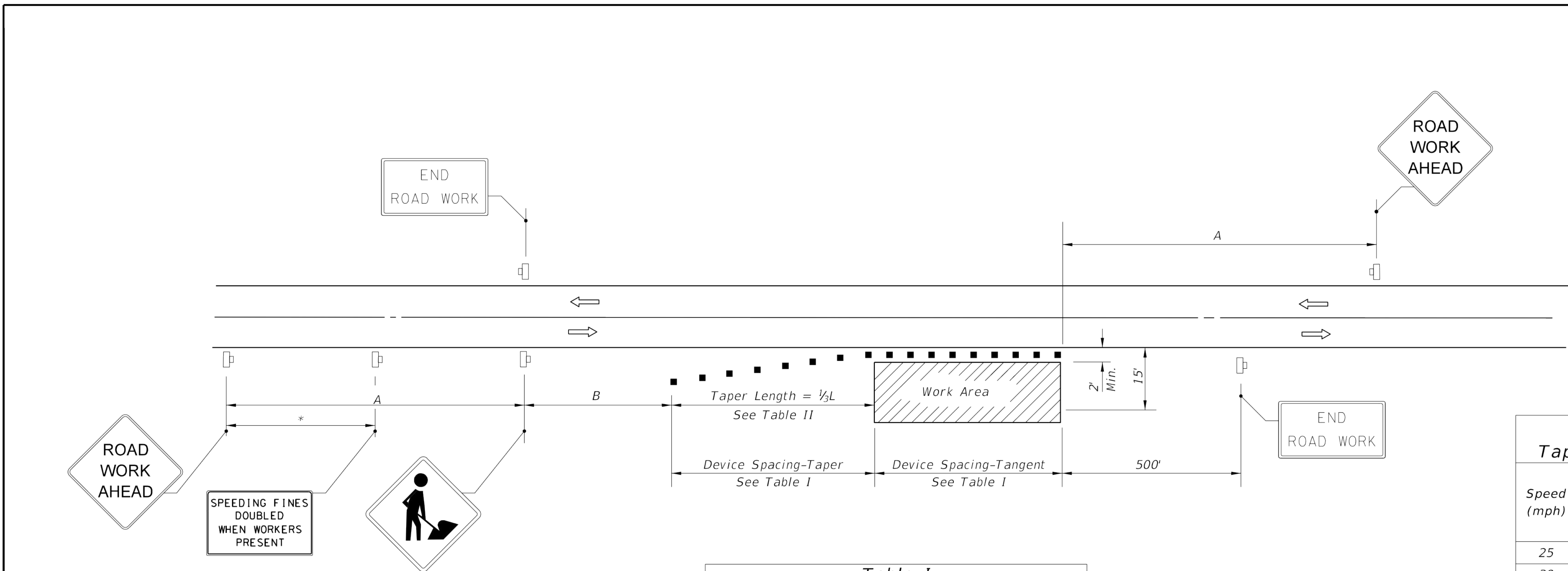
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DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*Midway between signs.

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

- When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index 102-603.
- SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- For general TCZ requirements and additional information, refer to Index 102-600.

DURATION NOTES

- Signs and channelizing devices may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

FY 2020-21
STANDARD PLANS

TWO-LANE, TWO-WAY, WORK ON SHOULDER

INDEX
102-602

SHEET
1 of 1

Table II Taper Length - Shoulder				
Speed (mph)	1/3 L (ft)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	$L = \frac{WS^2}{60}$
30	40	50	60	
35	55	68	82	
40	72	90	107	$L = WS$
45	120	150	180	
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

8' minimum shoulder width

1/3 L = Length of shoulder taper in feet

W = Width of total shoulder in feet
(combined paved and unpaved width)

S = Posted speed limit (mph)

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NO.	BY	DATE	REVISIONS
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DATE: 10/23/2021
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DRAWN BY: A. ANDERSON
DATE: 10/23/2021
CHECKED BY: N. BOLATETE
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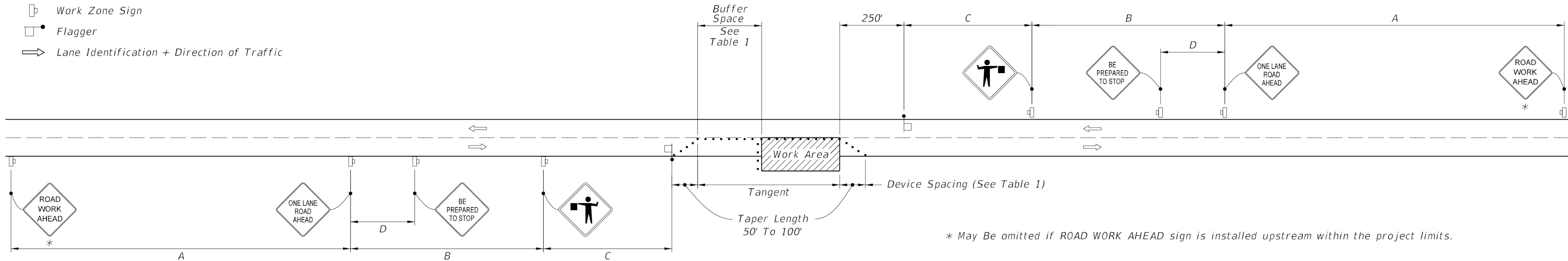
GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCF FDOT INDEX - 2

NO. SHEETS 44	PROJ. NO. 18-171
SHEET NO. 1	DATE: APRIL 23, 2021
DRAWING NO. TTCF-16	SCALE: AS NOTED

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SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



WITHOUT TEMPORARY RAISED RUMBLE STRIPS

GENERAL NOTES:

- Special Conditions may be required in accordance with these notes and the following sheets:
 - Railroad Crossings:
 - If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.
 - If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
 - If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
- Temporary Raised Rumble Strips:
 - Use when both of the following conditions are met concurrently:
 - Existing Posted Speed is 55 mph or greater;
 - Work duration is greater than 60 minutes.
 - Use a consistent Strip color throughout the work zone.
 - Place each Rumble Strip Set transversely across the lane at locations shown.
 - Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.
- Additional one-way control may be provided by the following means:
 - Flag-carrying vehicle;
 - Official vehicle;
 - Pilot vehicles;
 - Traffic signals.

When flaggers are the sole means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.

- When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.
- The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
- When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.
- ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Speed limit is 45 mph or less.
 - There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
 - Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - Volume and complexity of the roadway has been considered.
 - If a railroad crossing is present, vehicles will not queue across rail tracks.
 - AFADs are not in use.
- See Index 102-600 for general TCZ requirements and additional information.
- Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the APL vendor drawings.

TABLE 1									
Posted Speed	DEVICE SPACING				Distance Between Signs				Buffer Space
	Maximum Spacing of Cones or Tubular Markers		Maximum Spacing of Type I or Type II Barricades/Panels/Drums						
	On a Taper	On a Tangent	On a Taper	On a Tangent					
	25	20'	50'	20'	50'	200'	200'	200'	
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	20'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	730'

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.


LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2020-21 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX 102-603	SHEET 1 of 3
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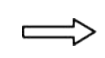
SYMBOLS

 Work Area

 Channelizing Device

 Work Zone Sign

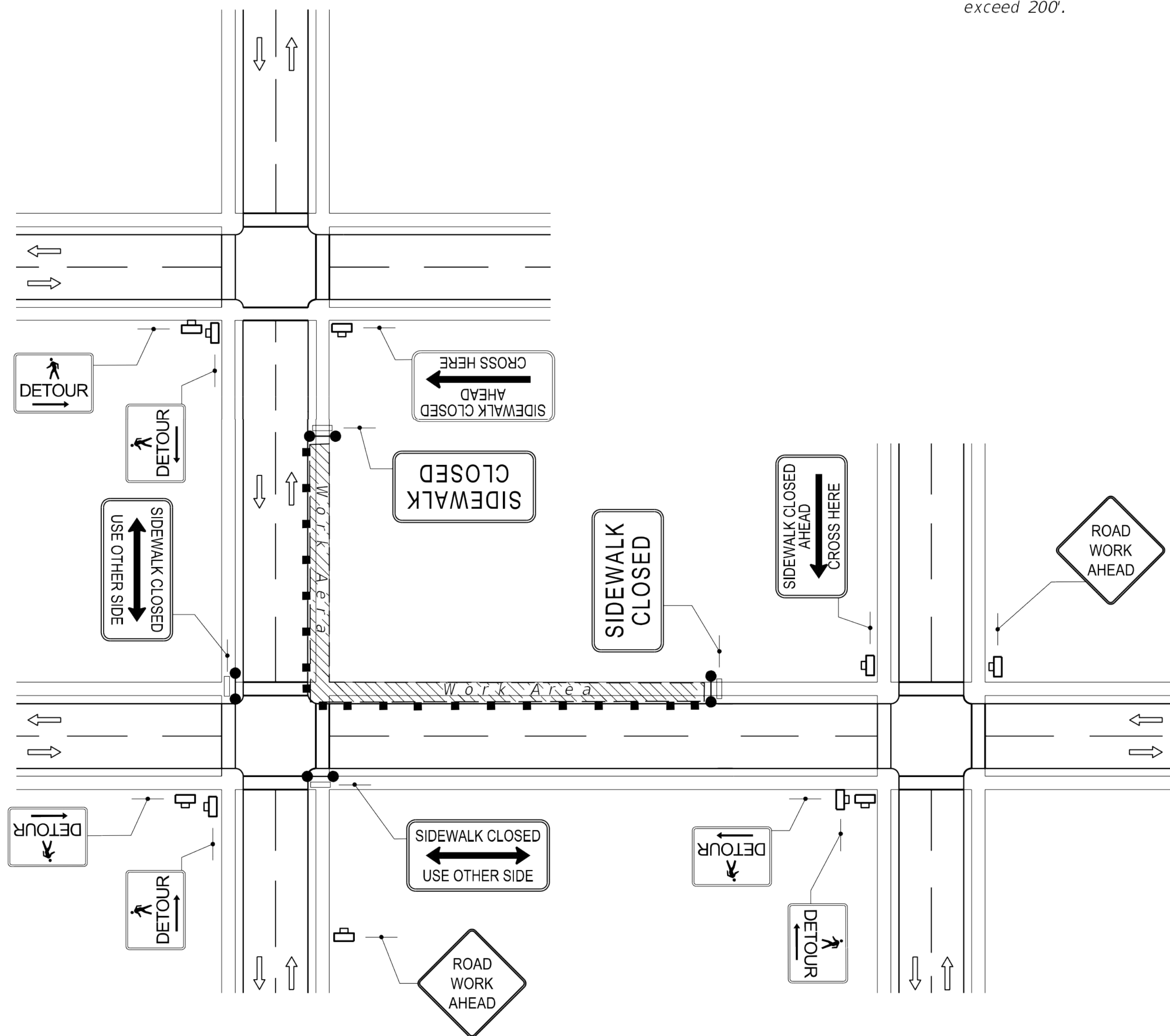
 Required Locations For Either Temporary Or Permanent Curb Ramps.

 Lane Identification + Direction of Traffic

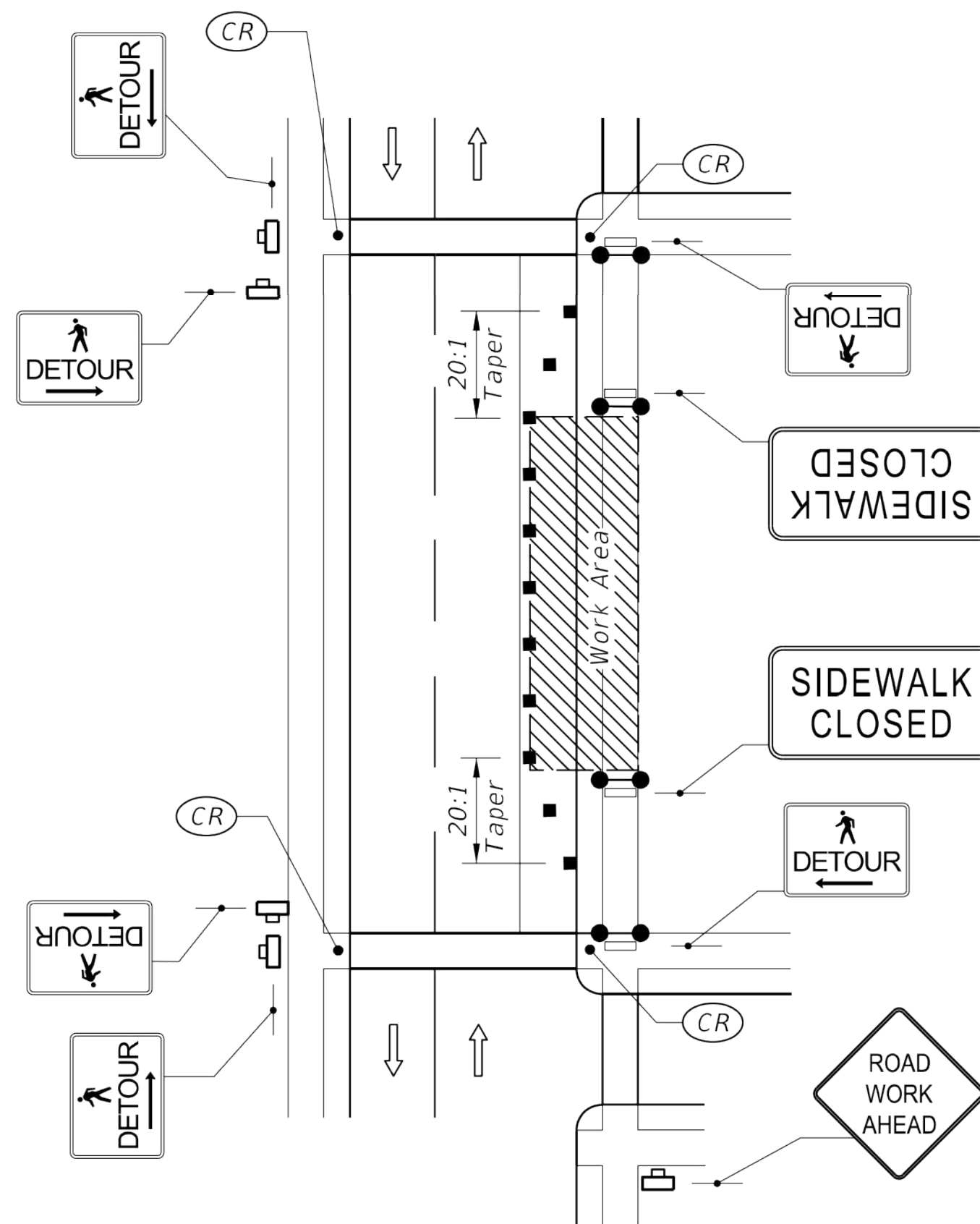
 Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign or separate Work Zone Sign

 Pedestrian Longitudinal Channelizing Device (LCD)

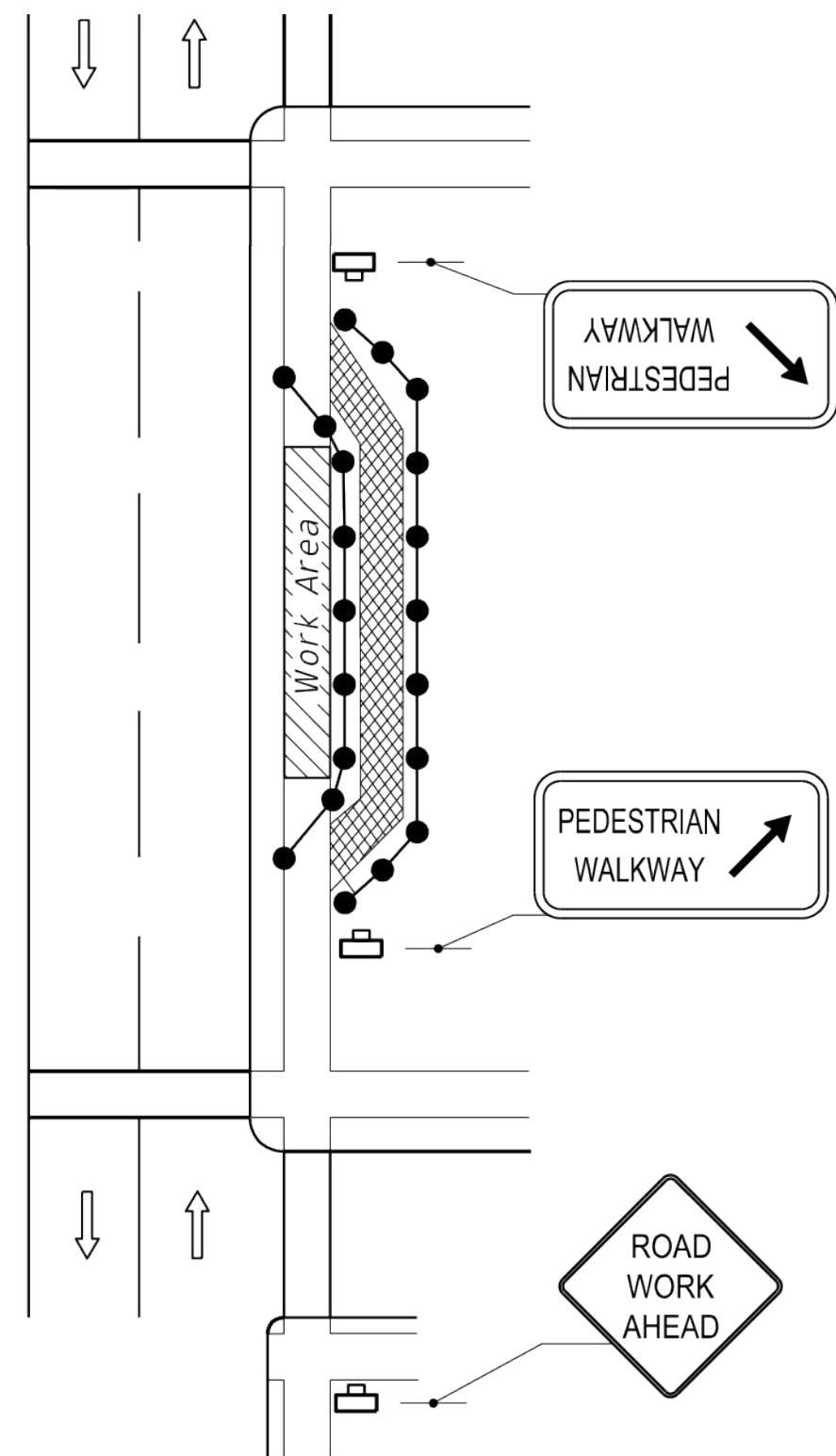
 Temporary Sidewalk



CROSSWALK CLOSURE AND
PEDESTRIAN DETOUR



SIDEWALK DETOUR



SIDEWALK DIVERSION

GENERAL NOTES:

- When encroaching work requires a sidewalk closure for 60 minutes or greater, provide an alternate pedestrian route.
- For spacing of vehicular Channelizing Devices, see applicable vehicular temporary traffic control Indexes.
- Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
- For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
- Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
- Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
- Maintain temporary walkway surfaces and ramps that are stable, firm, slip-resistant, and free of any obstructions or hazards such as holes, debris, mud, construction equipment, and stored material.
- Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
- Meet the requirements of Index 522-002 for temporary curb ramps.
- Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.
- For sidewalk diversions, ensure that there is sufficient R/W for placement of temporary sidewalk and pedestrian longitudinal channelizing devices.

LAST
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11/01/17

REVISION

DESCRIPTION:



FY 2020-21
STANDARD PLANS

PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS

INDEX
102-660

SHEET
1 of 1

NO. SHEETS
44
SHEET NO.
DRAWING NO.
TTCP-18

PROJ. NO. 18-171
DATE: APRIL 23, 2021
SCALE: AS NOTED

GALVANIZED PIPE REPLACEMENT PROGRAM
COLLEGE STREET AREA - PACKAGE G
TTCP FDOT INDEX - 4

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