CITY OF JACKSONVILLE NOTES

GENERAL

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).

UTILITY WORK

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

WORK WITHIN THE RIGHT-OF-WAY

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.

Adjacent State Roads: ______________________

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.

STORMWATER

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 the City Environmental Quality Division before beginning construction.

FIRE MARSHALL

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

Underground mains and hydrants shall be installed, completed, and in service prior to construction work.

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.

LANDSCAPE

A Site Work Permit is required for this project.

☐ Tree Fund payment is due __________ inches at $__________ = $__________

☐ Article 25 funds are due __________ inches at $__________ = $__________

TRAFFIC ENGINEERING

TRAFFIC SIGNS

Metro Name (each)	2	@ $62 = $124
Standard (each)	0	@ $62 = $0
Stop/Yield (each)	2	@ $61 = $122
Design (per plat)	1 per plat	@ $70 = $70
Installation (per hour)	1 per 2 signs (rounded up)	1 @ $62 = $62
		Total = $378

☒ 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.

PLAN APPROVAL IS SUBJECT TO THE FOLLOWING NOTES AND CONDITIONS:

WATER MAIN EXTENSION
FOR
CORNER LOT DEVELOPMENT GROUP

TROUT RIVER BOULEVARD

SECTION 18, TOWNSHIP 1 SOUTH, RANGE 26 EAST
DUVAL COUNTY, FLORIDA,

N
NORTH

LOCATION MAP
N.T.S.

INDEX OF DRAWINGS

DEG JOB No.2139.001 (WATER MAIN EXTENSION)

PROJECT OWNER AND CONSULTANTS

OWNER: CORNER LOT DEVELOPMENT GROUP
3721 DUPONT STATION COURT SOUTH
JACKSONVILLE, FL. 32217
CONTACT: GEORGE LEONE
TEL: (904) 333-5874

ENGINEER: DOMINION ENGINEERING GROUP, INC.
4348 SOUTHPOINT BLVD. SUITE 204
JACKSONVILLE, FLORIDA 32216
CONTACT: MIKE BOWLES
TEL: (904) 854-4500 FAX: (904) 854-4505

LANDSCAPE: PITTMAN LANDSCAPE ARCHITECTURE
4049 SAN SERVERA DRIVE NORTH
JACKSONVILLE, FLORIDA 32217
CONTACT: BUCK PITTMAN
TEL: (904) 327-7718 FAX: (904) 739-3068

SURVEYOR: ARC SURVEYING & MAPPING, INC.
5202 SAN JUAN AVENUE
JACKSONVILLE, FLORIDA 32210
CONTACT: BOB PITTMAN
TEL: (904) 384-8377

DEG
PLANNERS AND ENGINEERS
C.A. No. 26821

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! 811
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

PLAN APPROVAL

Date ______ Development Services Division (Chief)

Date ______ Review Group (Reviewer)

Plan approval is valid for five years after the initial approval date. Revisions made after the initial approval date do not extend this five-year time frame.

GENERAL PROJECT INFORMATION

GENERAL	
City Development Number	9530.0
Concurrency Application Number	95513.0
Property Appraiser Number (RE #)	021161 0000
Zoning Designation	PUD
Zoning Application(s) (if any)	N/A
PUD Ordinance Number	XXXX-XXX
FIRM – Community – Panel	12031C0186H
Flood Zones (Show in Plans)	X , AE
Base Flood Elev. (Show in Plans)	5
Vertical Datum Used for Project	NGVD 88
JEA Availability Number	2018-0027
SUBDIVISION	
PSD Number	N/A
City or Private Inspection	PRIVATE
Public or Private Roads	PUBLIC
Subdivision ("911") Disk Provided?	YES
NON-SUBDIVISION	
North American Industry Classification System (NAICS)	N/A
Impervious Area (Sq. Ft.)	N/A

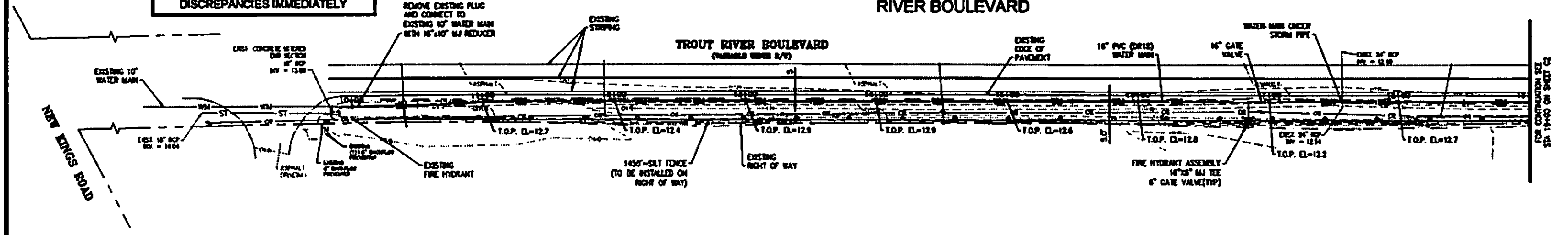
REVISIONS
JEA SUBMITTAL 1 04/25/18
DEP SUBMITTAL 06/07/18
FDOT SUBMITTAL 06/13/18
BID SET 07/19/18

WILLIAM E. SCHAEFER, II P.E.
FLA. REGISTERED ENGINEER # 40229

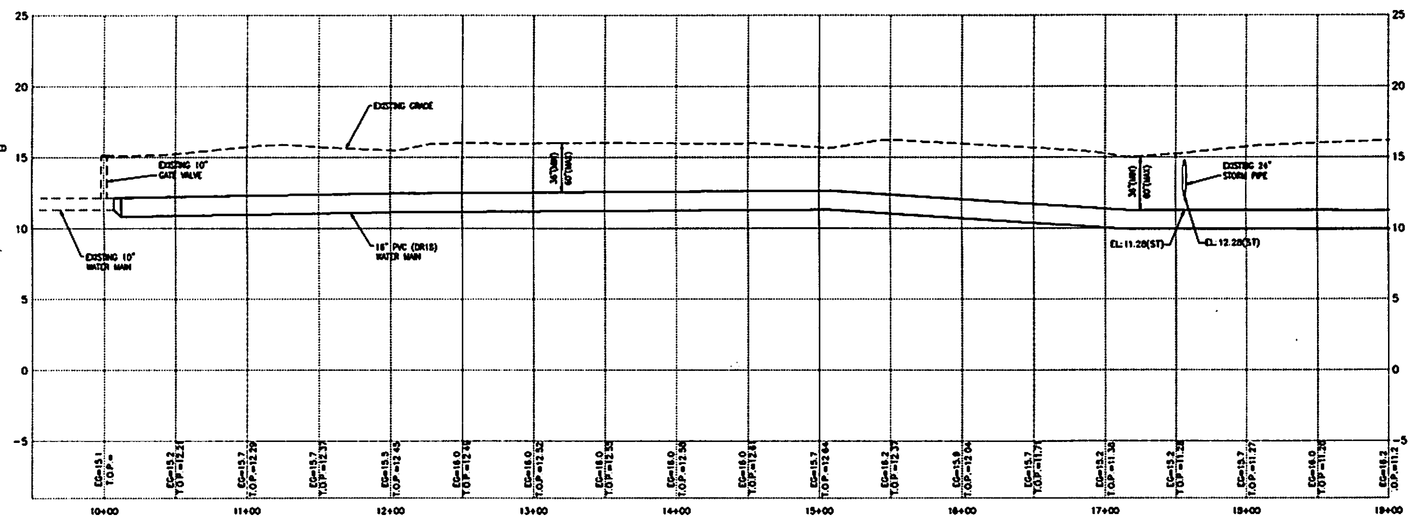
T-1

NOTE:
CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES AND VERIFY ELEVATIONS PRIOR TO ANY CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES IMMEDIATELY

SEE SHEET C9 FDOT INDEX 602 MAINTENANCE OF TRAFFIC FOR WORK ON SHOULDER TROUT RIVER BOULEVARD



OFFSITE WATER MAIN EXTENSION



LEGEND

SITE BOUNDARY	
PROPOSED WATER MAIN	
EXISTING WATER MAIN	
PROPOSED FORCE MAIN	
EXISTING OVERHEAD UTILITY	
TOP OF PIPE	T.O.P.

NOTES

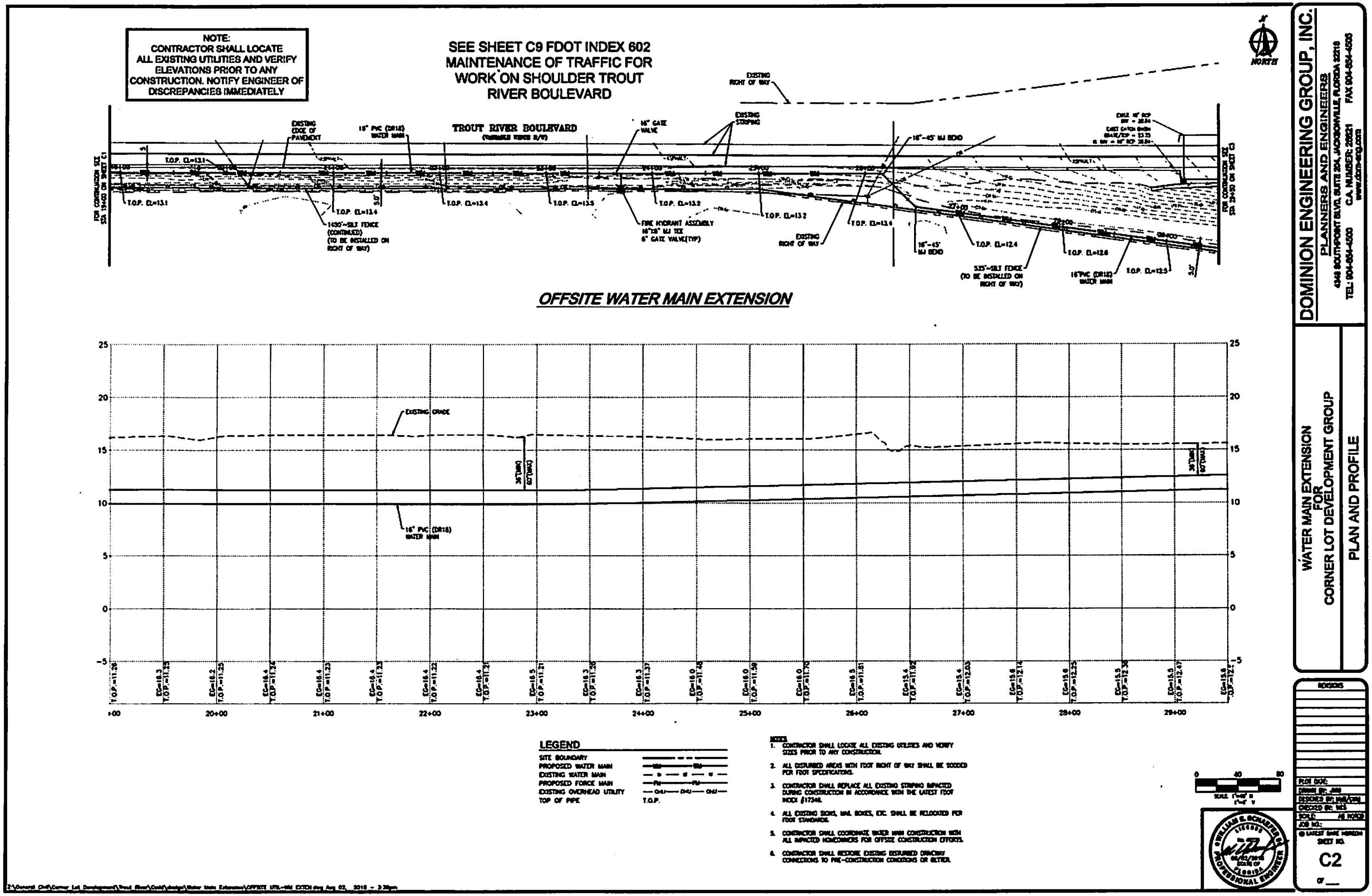
1. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES AND VERIFY SIZES PRIOR TO ANY CONSTRUCTION.
2. ALL DISTURBED AREAS WITH FDOT RIGHT OF WAY SHALL BE SODDED PER FDOT SPECIFICATIONS.
3. CONTRACTOR SHALL REPLACE ALL EXISTING STRIPING IMPACTED DURING CONSTRUCTION IN ACCORDANCE WITH THE LATEST FDOT INDEX #17346.
4. ALL EXISTING SIGNS, MAIL BOXES, ETC. SHALL BE RELOCATED PER FDOT STANDARDS.
5. CONTRACTOR SHALL COORDINATE WATER MAIN CONSTRUCTION WITH ALL IMPACTED HOMEOWNERS FOR OFFSITE CONSTRUCTION EFFORTS.
6. CONTRACTOR SHALL RESTORE EXISTING DISTURBED DRIVEWAY CONNECTIONS TO PRE-CONSTRUCTION CONDITIONS OR BETTER.

DOMINION ENGINEERING GROUP, INC.
PLANNERS AND ENGINEERS
4348 SOUTHPOINT BLVD, SUITE 204, JACKSONVILLE, FLORIDA 32216
TEL: 904-854-4500 C.A. NUMBER: 28521 FAX 904-854-4505
www.dom-eng.com

WATER MAIN EXTENSION FOR CORNER LOT DEVELOPMENT GROUP

PLAN AND PROFILE

SHEET NO. C1



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SEE SHEET C9 FDOT INDEX 602 MAINTENANCE OF TRAFFIC FOR WORK ON SHOULDER TROUT RIVER BOULEVARD
TROUT RIVER BOULEVARD
EXISTING RIGHT OF WAY
EXISTING STRIPING
OFFSITE WATER MAIN EXTENSION
EXISTING GRADE
16" PVC (DR18) WATER MAIN
20+00
21+00
22+00
23+00
24+00
25+00
26+00
27+00
28+00
29+00
LEGEND
SITE BOUNDARY
PROPOSED WATER MAIN
EXISTING WATER MAIN
PROPOSED FORCE MAIN
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NORTH
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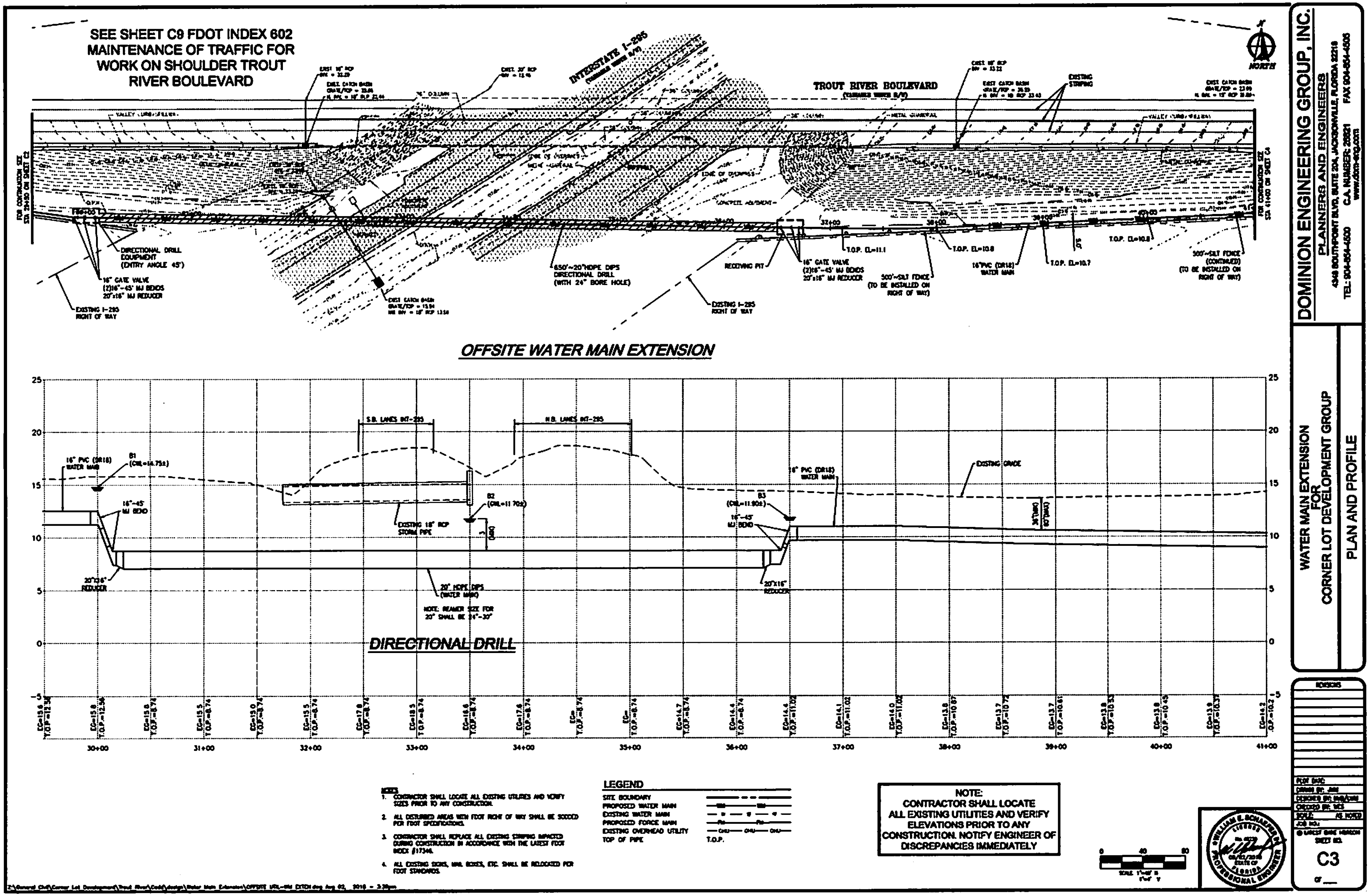
WATER MAIN EXTENSION FOR CORNER LOT DEVELOPMENT GROUP
PLAN AND PROFILE
REVISIONS
SHEET NO.
C2


SEE SHEET C9 FDOT INDEX 602
MAINTENANCE OF TRAFFIC FOR
WORK ON SHOULDER TROUT
RIVER BOULEVARD
INTERSTATE I-295
TROUT RIVER BOULEVARD
NORTH
DIRECTIONAL DRILL EQUIPMENT (ENTRY ANGLE 45°)
16" GATE VALVE
(2)16"-45° MJ BENDS
20"x16" MJ REDUCER
EXISTING I-295 RIGHT OF WAY
650'-20"HDPE DIPS DIRECTIONAL DRILL (WITH 24" BORE HOLE)
RECEIVING PIT
500'-SILT FENCE (TO BE INSTALLED ON RIGHT OF WAY)
16"PVC (DR18) WATER MAIN
OFFSITE WATER MAIN EXTENSION
S.B. LANES INT-295
N.B. LANES INT-295
EXISTING GRADE
EXISTING 18" RCP STORM PIPE
20" HDPE DIPS (WATER MAIN)
NOTE: REAMER SIZE FOR 20" SHALL BE 24"-30"
20"X16" REDUCER
16"-45° MJ BEND
DIRECTIONAL DRILL
30+00
31+00
32+00
33+00
34+00
35+00
36+00
37+00
38+00
39+00
40+00
41+00
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LEGEND
SITE BOUNDARY
PROPOSED WATER MAIN
EXISTING WATER MAIN
PROPOSED FORCE MAIN
EXISTING OVERHEAD UTILITY
TOP OF PIPE T.O.P.
NOTE:
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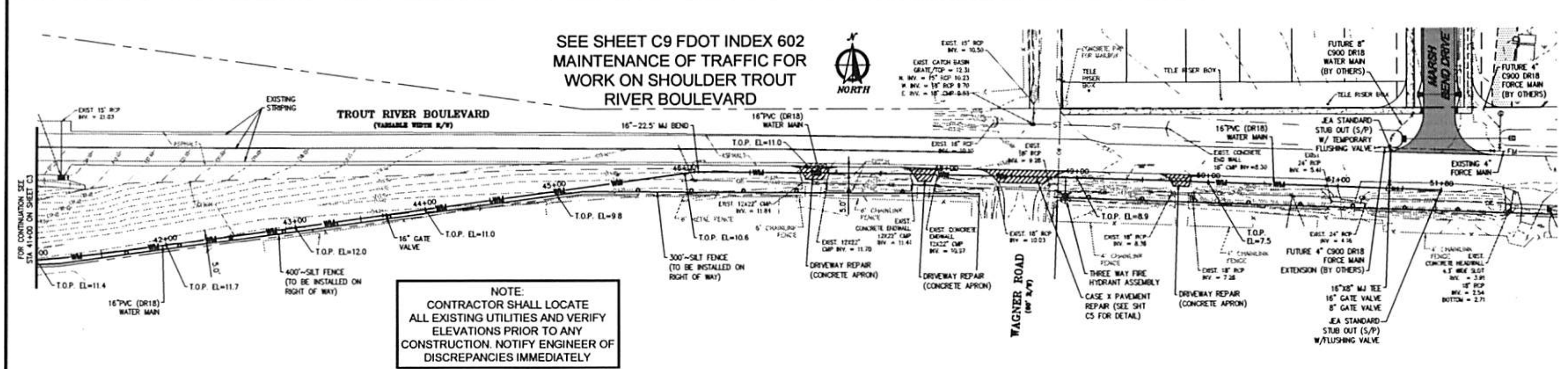
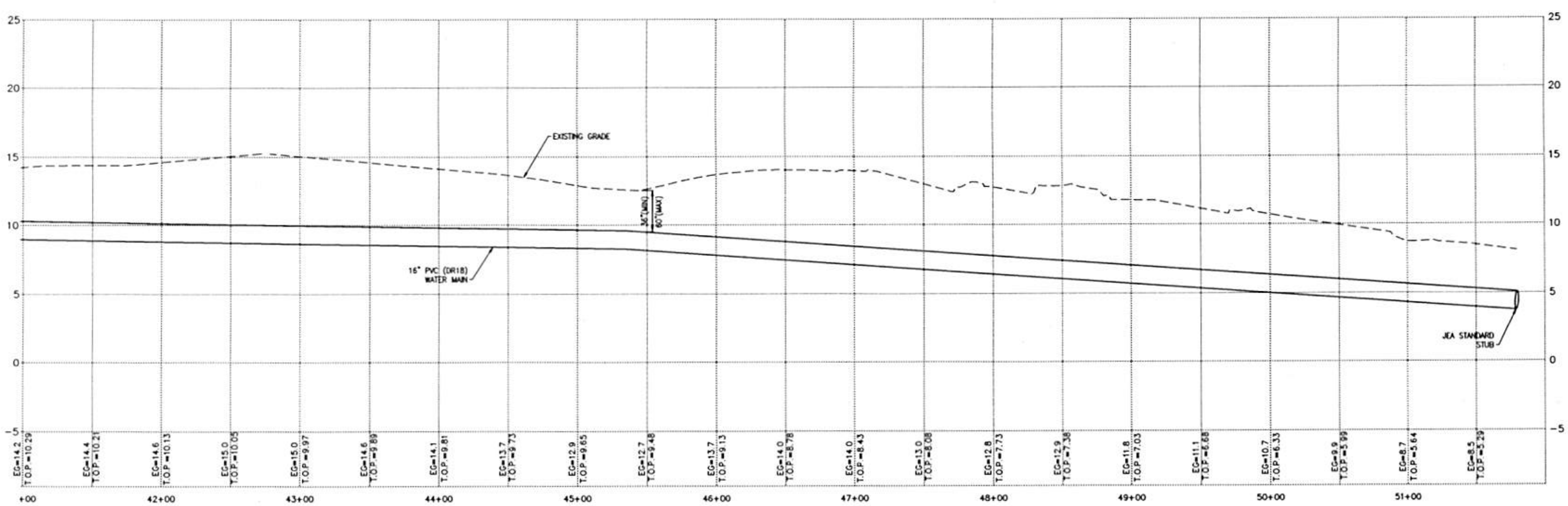
WATER MAIN EXTENSION FOR CORNER LOT DEVELOPMENT GROUP
PLAN AND PROFILE
REVISIONS
C3



OFFSITE WATER MAIN EXTENSION



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LEGEND

SITE BOUNDARY	—— – – ——
PROPOSED WATER MAIN	—WM——WM—
EXISTING WATER MAIN	— W — W — W —
PROPOSED FORCE MAIN	—FM——FM—
EXISTING OVERHEAD UTILITY	--- OHU --- OHU --- OHU ---
TOP OF PIPE	T.O.P.

0 40 80
SCALE 1"=40' H 1"=4' V

Z:\General Civil\Corner Lot Development\Trout River\Cadd\design\Water Main Extension\OFFSITE UTIL-WM EXTEN.dwg Aug 02, 2018 - 3:39pm

WILLIAM E. SCHAEFER, LICENSE, STATE OF FLORIDA, PROFESSIONAL ENGINEER, 08/02/2018

DOMINION ENGINEERING GROUP, INC.
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www.dom-eng.com

WATER MAIN EXTENSION
FOR
CORNER LOT DEVELOPMENT GROUP

PLAN AND PROFILE

REVISIONS

PLOT DATE:
DRAWN BY: JMM
DESIGNED BY: MnB/SMM
CHECKED BY: WES
SCALE: AS NOTED
JOB NO.:
© LATEST DATE HEREON
SHEET NO.
C4
OF ___

GENERAL NOTES:

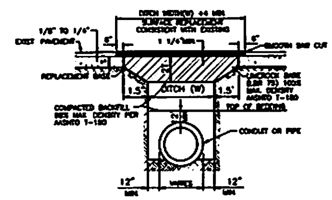
1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF CITY & JEA STANDARDS, (LATEST REVISION) AND ALL CURRENT CITY & JEA STANDARD DETAILS AS WELL AS ALL APPLICABLE STATE AND LOCAL REGULATIONS. THE WORK SHALL ALSO BE PERFORMED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORT PROVIDED BY ECS FLORIDA, LLC (REPORT #33-20635). IF MORE STRINGENT THAN CITY REQUIREMENTS.
2. 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 HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH O.S.H.A. REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUBSURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS ALSO URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THE PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.
4. 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.
5. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER AND/OR THE CITY FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER AND THE CITY.
6. ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD) UNITED STATES COASTAL AND GEODETIC SURVEY (U.S.C. & G.S.), AS DETERMINED BY ARC SURVEYING AND MAPPING INC.
7. FOR BOUNDARY, ROADWAY AND LOT GEOMETRY INFORMATION SEE PLAT.
8. THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH CITY AND/OR JEA REQUIREMENTS. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND IN ALL UTILITY TRENCHES LOCATED IN PAVEMENT AREAS CONCRETE TESTING AND ALL OTHER MATERIAL TESTING. PRIOR TO LIMEROCK PLACEMENT, THE PROJECT GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATION FOR UNDERDRAIN PLACEMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING CITY RIGHT-OF-WAY PERMITS FOR WORK IN THE CITY RIGHT- OF-WAY OR EASEMENT.
10. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN CITY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION AND REPAIR.
11. ALL PUBLIC DRAINAGE EASEMENTS SHALL BE "UNOBSTRUCTED" EASEMENTS. ALL "UNOBSTRUCTED" EASEMENTS TO BE CLEAR AND DRIVEABLE.
12. "AS-BUILT" DRAWINGS - AS-BUILTS TO THE OWNER AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH CURRENT CITY & JEA STANDARDS AND SPECIFICATIONS AND SJRWMD REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROCESS THE "AS-BUILT" DRAWINGS FOR APPROVAL BY THE CITY AND OWNER
13. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
14. ALL CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, AND BERMS INCLUDED IN THIS PROJECT AND THE CLEARING AND GRUBBING OF ALL RIGHT-OF-WAY OR EASEMENTS SHALL BE CONSIDERED AS PART OF THE PROJECT.
15. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH COUNTY STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
16. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.
17. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE PROPERLY DISPOSED OF OFF-SITE BY CONTRACTOR.
18. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
19. ALL EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED.
20. BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH CITY FIRE MARSHAL.
21. ROADWAY UNDERDRAINS SHALL BE AS REQUIRED ON THE PLANS OR AS MAY BE DETERMINED NECESSARY BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF HIGH GROUND WATER CONDITIONS ARE PRESENT DURING THE PREPARATION OF THE ROADWAY SUB-BASE.
22. CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AT 10' INTERVALS AND EXPANSION JOINTS SHALL BE CONSTRUCTED AT 30' INTERVALS AND AT ALL RADIUS POINTS ON ALL CURBING.
23. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS AT 18' INTERVALS AND CONTRACTION JOINTS SHALL BE SPACED AT 6' INTERVALS BETWEEN EXPANSION JOINTS.
24. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEXES 11860, 17346, AND 17322 LATEST EDITION
25. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED ROADWAY/SITE DEVELOPMENT SHALL BE REMOVED BY THE CONTRACTOR UTILIZING THE HYDRO-BLASTING METHOD.
26. ALL AREAS DISTURBED IN THE CITY RIGHT OF WAY SHALL BE SODDED.
27. ANY CONCERNS OR CONFLICTS WITH ADA GRADING OR ANY OTHER GRADING ON SITE THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY BEFORE CONSTRUCTED

UTILITY NOTES:

1. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY 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 AREAS 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 VERIFY ALL GRADES, INVERTS AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH HE SHALL CONNECT.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL MATERIALS, IF REQUIRED, TO THE ENGINEER FOR REVIEW AND APPROVAL, PRIOR TO SUBMITTAL TO THE CITY & JEA, AND PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY PIPE OR STRUCTURE.
3. ALL PIPE LENGTHS ARE SCALED DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH CITY REQUIREMENTS AND SHALL BE CONSTRUCTED TO CONFORM WITH CURBING, PROPERTY LINES AND LOW POINTS AS SHOWN ON THE PLANS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
5. ALL DRAINAGE STRUCTURES TO HAVE TRAFFIC BEARING GRATES UNLESS OTHERWISE NOTED.
6. ALL DRAINAGE PIPE JOINTS IN CITY DRAINAGE EASEMENTS, DRAINAGE EASEMENTS BETWEEN PRIVATE LOTS, DRAINAGE RIGHT-OF-WAYS AND UNDER PAVED ROADS ARE TO BE FILTER-WRAPPED.
7. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRE CAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR READI-MIX CONCRETE WITH #57 STONE.
8. UNSUITABLE MATERIALS UNDER WATER, SEWER PIPE, STORM PIPE OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED.
9. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUB GRADE FOR PAVEMENT.
10. ALL WATER AND SEWER CONSTRUCTION WITHIN THE COUNTY SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES.
11. CONTRACTOR SHALL PROVIDE, TO THE ENGINEER, A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY MANHOLES & DRAINAGE STRUCTURES PRIOR TO THE PLACEMENT OF THE LIMEROCK BASE COURSE. THIS SCHEDULE TO BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS BUILT" DRAWINGS FOR THIS PROJECT.
12. ALL SEWER MAINS SHALL BE PVC (ASTM-3034) SDR-26 FOR DEPTHS TO 12 FEET, SDR26 FOR DEPTHS 12' OR DEEPER, OR IN EASEMENTS UNLESS OTHERWISE NOTED. FORCE MAINS TO BE PVC - DR18 PIPE UNLESS OTHERWISE NOTED AND SHALL HAVE A MINIMUM COVER OF 36" FROM FINISHED GRADE.
13. SANITARY SEWER SERVICES SHALL BE 6" PVC WITH A MINIMUM SLOPE OF 0.006 FEET PER FOOT AND SHALL BE TERMINATED AT THE RIGHT-OF-WAY LINE WITH A DEPTH OF 46" UNLESS OTHERWISE DETAILED OR RESTRICTED DUE TO DEPTH OF SEWER MAIN.
14. ALL WATER MAINS SHALL BE FLUSHED IN ACCORDANCE WITH AWWA C651 DISINFECTION STANDARDS AND/OR JEA APPLICABLE STANDARDS AND SPECIFICATIONS.
15. ALL WATER LINES 4" OR LESS SHALL BE NATIONAL SANITARY FOUNDATION POTABLE WATER (N.S.F.P.W.) RATED
16. WATER AND SEWER LINES ARE DESIGNATED TO FINISHED GRADES AND SHALL BE PROTECTED UNTIL FINISHED WORK IS COMPLETE.
17. HORIZONTAL SEPARATION BETWEEN WATER MAINS, VALVES, FITTINGS AND SANITARY OR STORM SEWER SHALL IN ACCORDANCE WITH THE F.D.E.P. REGULATIONS AND JEA STANDARD DETAILS.
18. ALL WATER LINE CROSSINGS SHALL HAVE A FULL LENGTH OF PIPE CENTERED OVER THE EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING AT CROSSINGS. WATER MAINS CROSSING SANITARY AND STORM SEWER LINES, AS WELL AS VALVES AND FITTINGS, MUST HAVE A MINIMUM 18" VERTICAL SEPARATION. IF THIS SEPARATION CANNOT BE OBTAINED, THE WATER MAIN MUST BE CONSTRUCTED OF DUCTILE IRON PIPE FOR A DISTANCE OF 10' EITHER SIDE OF THE SANITARY OR STORM SEWER MAIN, OR INSTALL WATER MAIN IN D.I. SLEEVE MIN. LENGTH 20' CENTERED. ENDS OF SLEEVE TO BE GROUT FILLED. IN EITHER CASE, MINIMUM OF 6" OF VERTICAL SEPARATION SHALL BE MAINTAINED.
19. MECHANICAL RESTRAINING DEVICES ARE REQUIRED IN ACCORDANCE WITH JEA STANDARDS WHERE WATER MAINS ARE TERMINATED AND AT ALL BENDS AND TEES.
20. UNLESS OTHERWISE NOTED, ALL OFF-SITE WATER MAIN TO BE PVC DR18, C-900 AND ALL ON-SITE WATER MAIN 4" AND GREATER SHALL BE DR25, C-900. ALL ON-SITE WATER MAIN 3" OR SMALLER SHALL BE SCHEDULE 40 PVC AND N.F.S.P.W. RATED.
21. ALL GATE VALVES SHALL BE UTILITY COMPANY STANDARD. VALVES SHALL BE MECHANICAL JOINT, CAST IRON, BRONZE FITTED WITH RESILIENT SEAT. ALL VALVES SHALL OPEN BY TURNING TO THE LEFT. VALVES SHALL BE RATED AT 200 PSI WORKING PRESSURE AND 400 PSI TEST PRESSURE.
22. FIRE HYDRANTS SHALL BE J.E.A. STANDARD. HYDRANTS SHALL BE PAINTED AS PER J.E.A. STANDARDS.
23. ALL ELECTRIC CONDUIT WORK SHALL BE COMPLETED PRIOR TO THE PRESSURE TESTING OF WATER AND SEWAGE FORCE MAINS.
24. ALL WATER MAINS SHALL BE BACTERIOLOGICAL AND PRESSURE TESTED AT 150 PSI FOR 2 HOURS IN ACCORDANCE WITH AWWA C-600 STANDARDS. NO CONNECTION TO EXISTING POTABLE WATER SYSTEM SHALL BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE. THE ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO PERFORMING THE PRESSURE TEST AND MUST BE PRESENT.
25. A UTILITY COMPANY PRE CONSTRUCTION CONFERENCE MUST BE HELD PRIOR TO COMMENCEMENT OF WATER OR SEWER WORK. THE CONTRACTOR SHALL CONTACT UTILITY COMPANY TO SCHEDULE THIS CONFERENCE.
26. TELEVISION INSPECTION SHALL BE REQUIRED ON ALL GRAVITY SEWER MAINS. THIS SERVICE SHALL BE PROVIDED BY THE CONTRACTOR AS PART OF THE SANITARY SEWER CONTRACT. A FULL WRITTEN REPORT AS TO THE CONDITION OF THE PIPE WITH PERTINENT DATA SUCH AS DISTANCE BETWEEN MANHOLES, LOCATION OF SERVICES, ETC. SHALL BE SUBMITTED TO THE OWNER AND ENGINEER PRIOR TO ACCEPTANCE, AND ONE COPY OF THE VIDEO TAPE SHALL BE SUBMITTED TO THE COUNTY. ALL DEFECTIVE AREAS AND ITEMS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL ACCEPTANCE. ALL REPAIRED SECTIONS MUST BE REINSPECTED PRIOR TO ACCEPTANCE.
27. THE CONTRACTOR SHALL AVOID SERVICE INTERRUPTIONS AND MAINTAIN ANY EXISTING WATER AND SEWER SERVICE TO MEET THE SYSTEM DEMANDS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF AFFECTED CUSTOMERS OF THE UTILITY A MINIMUM OF 48 HOURS IN ADVANCE OF ANY INTERRUPTION OF SERVICE.
28. ALL NEW AND/OR RELOCATED WATER MAIN PIPES AND FITTINGS SHALL NOT CONTAIN MORE THAN EIGHT PERCENT LEAD AND ALL PACKING AND JOINT MATERIALS USED IN THE JOINTS SHALL CONFORM WITH ALL APPLICABLE AWWA STANDARDS. ALL NEW AND/OR RELOCATED WATER SERVICES AND PLUMBING SHALL CONTAIN NO MORE THAN EIGHT PERCENT LEAD AND ALL SOLDERS AND FLUX SHALL CONTAIN NO MORE THAN 0.2 PERCENT LEAD.
29. ALL WATER AND SEWER CONSTRUCTION MATERIALS TO BE CONSTRUCTED IN CITY RIGHT-OF-WAY OR CITY EASEMENT MUST BE IN CONFORMANCE WITH THE J.E.A. APPROVED MATERIALS MANUAL.
30. A PRECONSTRUCTION CONFERENCE IS REQUIRED AND SHALL BE SCHEDULED WITH JEA. CONTACT CHRIS BARRINGTON 904-665-4081
31. CONTRACTOR SHALL INSTALL WARNING TAPE AND LOCATE WIRE ON ALL WATER MAINS AND FORCE MAINS IN ACCORDANCE WITH J.E.A. STANDARDS.
32. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE 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.
33. ALL SERVICE TAPS AND METERS 3" AND ABOVE TO EXISTING MAINS SHALL REQUIRE A SPECIAL ESTIMATE. THE SPECIAL ESTIMATE IS TO BE APPLIED FOR THROUGH J.E.A.
34. ALL SEWER FORCE MAIN(S) SHALL BE TESTED @ 150 PSI FOR 2 HOURS AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600-87 AND/OR JEA APPLICABLE STANDARDS AND SPECIFICATIONS. THE ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO PERFORMING THE PRESSURE TEST AND MUST BE PRESENT.
35. METER MUST BE APPLIED FOR & PAID FOR BY LICENSED MASTER PLUMBER OR UTILITY CONTRACTOR. APPLICATION IS TO BE MADE AT 515 NORTH LAURA STREET IN THE CUSTOMER SERVICE CENTER 1ST FLOOR.
36. ALL FIRE LINE TAPS OR FIRE HYDRANT TO BE CONSTRUCTED IN CITY R/W MUST BE PERFORMED BY JEA CONTRACTOR. TAP MUST BE SCHEDULED THROUGH JEA INSPECTOR. CONSTRUCTION SHALL BE PERFORMED UPON APPLICATION AND PAYMENT BY CONTRACTOR OR LICENSED MASTER PLUMBER @ 515 N. LAURA STREET 1ST FLOOR, CUSTOMER SERVICE BUILDING. IN ADDITION, ANY APPLICATION D.E.P./JEA PERMITS SHALL BE SECURED BY THE ENGINEER OF RECORD SHALL BE SECURED BY THE ENGINEER OF RECORD PRIOR TO TAP APPLICATION AND INSTALLATIONS.
37. AUTOMATIC SPRINKLER/FIRE MAIN SERVICES. A METERED DETECTOR CHECK BACKFLOW PREVENTER IS REQUIRED ON ALL A.S. SERVICES AND FIRE MAIN CONNECTIONS INSTALLED FOR ON SITE FIRE PROTECTION, AT THE TIME OF OR PRIOR TO FINAL PLAN APPROVAL A DETECTOR CHECK AFFIDAVIT SHALL BE ON FILE WITH JEA WATER AND SEWER INCLUDE AN ASSIGNED BUILDING AND ZONING STREET ADDRESS FOR THIS SITE. RESUBMITTAL SHALL BE REQUIRED IN THE EVENT THAT FIRE MARSHAL REVIEW OF BUILDING PLANS REQUIRES A SPRINKLER SYSTEM WHICH WAS NOT INDICATED ON THE CIVIL DESIGN PLANS.
38. CONNECTION CONTINGENT UPON CONSTRUCTION, DEDICATION AND FINAL ACCEPTANCE OF THE OFFSITE WATER TRANSMISSION SYSTEM AND SEWER COLLECTION SYSTEM WITHIN THE LIMITS OF THIS PROJECT.
39. WATER AND SEWER CAPACITY CITY FEES SHALL BE REQUIRED AT TIME OF METER APPLICATION. FEES WILL BE BASED ON TOTAL NUMBER OF PLUMBING FIXTURES UNITS SHOWN OR LISTED ON BUILDING PLANS.
40. NOTICE OF BACKFLOW PREVENTOR LOCATION: APPROVED BACKFLOW PREVENTORS SHALL BE LOCATED ADJACENT TO RIGHT-OF-WAY LINE ON PRIVATE PROPERTY UNLESS APPROVED BY THE COMMERCIAL & NETWORK SERVICE FULFILLMENT.
41. BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED FOLLOWING INSTALLATION BY A LICENSED TESTER. SUBMIT BACKFLOW ASSEMBLY TEST TO JEA ATTN: BILL POUND, 21 W. CHURCH STREET T-8 JACKSONVILLE, FL 32202. BACKFLOW PREVENTION ASSEMBLIES SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF JEA'S CROSS-CONNECTION CONTROL POLICY MANUAL; CONTACT BILL POUND AT 904-665-6787
42. ALL PIPING, JOINTS AND VALVES SHALL CONFORM WITH THE APPROPRIATE AWWA STANDARDS AND SPECIFICATIONS.
43. ALL PIPING AND ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST JEA STANDARDS, DETAILS AND MATERIALS MANUAL LATEST REVISIONS.
44. WATER MAIN SHALL BE A MINIMUM OF 3' HORIZONTAL DISTANCE FROM THE O.D. OF WATER MAIN TO O.D. OF STORM DRAIN PIPE OR STORM STRUCTURE(S).
45. A $30.00 TAP APPLICATION FEE IS REQUIRED AND SHALL BE PAID @ 515 NORTH LAURA STREET, 1ST FLOOR CUSTOMER SERVICE BUILDING. THIS MUST BE ACCOMPLISHED PRIOR TO CONNECTION TO THE JEA'S SEWER COLLECTION SYSTEM. IN ADDITION, SEWER CAPACITY FEES MUST BE PAID AT TIME OF OR PRIOR TO THE TAP FEE AND WILL BE BASED ON THE TOTAL NUMBER OF SEWER FIXTURE UNITS CURRENTLY SERVING THIS SITE AND DISCHARGING TO THE JEA SYSTEM FOR TREATMENT.

EROSION & SEDIMENT CONTROL NOTES:

1. THESE PLANS 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. THE 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.
2. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS AND SPECIFICATIONS AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
3. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER CITY STANDARDS AND MEETING THE N.P.D.E.S. FINAL STABILIZATION REQUIREMENTS.
5. IF DEWATERING CAPACITIES REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION AND EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL PERFORM GROUNDWATER TESTING IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY FEDERAL REGISTER, PAGE 42730, PART 1A.3, TO DETERMINE PETROLEUM CONTAMINATION LEVELS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING N.P.D.E.S. PERMIT, IF REQUIRED, IN ORDER TO DISCHARGE ANY GROUNDWATER ENCOUNTERED DURING CONSTRUCTION AND DEWATERING OPERATIONS.
7. 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.



NOTE: 1. METHOD AND MATERIALS OF REPAIR SUBJECT TO CITY OF JACKSONVILLE CONSTRUCTION REQUIREMENTS FOR NEW PAVT. TYPE OF ASPHALT CONC. SHALL BE THE SAME AS EXIST. ROAD

2. IN SOME CASES PORTLAND CEMENT CONCRETE MAY BE CONSIDERED OR REQUIRED BY CITY ENGINEER FOR SURFACE REPLACEMENT.

CASE X PAVEMENT REPAIR

N.T.S.

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www.dom-eng.com

WATER MAIN EXTENSION FOR CORNER LOT DEVELOPMENT GROUP

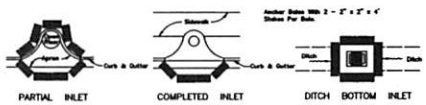
GENERAL NOTES AND DETAILS

REVISIONS

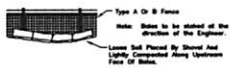
PLOT DATE:
DRAWN BY: AM
DESIGNED BY: [illegible]
CHECKED BY: WES
SCALE: AS NOTED
JOB NO.:
© LATEST DATE VERSION
SHEET NO.
C5
OF ___

WILLIAM E. SCHAEFER LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER

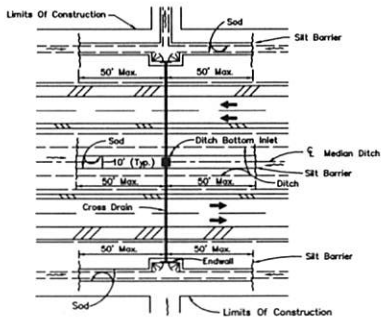
Z:\General Civil\Corner Lot Development\Trout River\Cadd\design\Water Main Extension\CEN NOTES & DETAILS-MW DITCH.dwg Aug 02, 2018 - 3:33pm



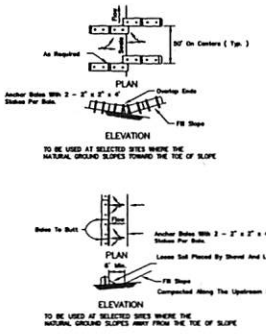
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



BALES BACKED BY FENCE



DITCH INSTALLATIONS AT DRAINAGE STRUCTURES



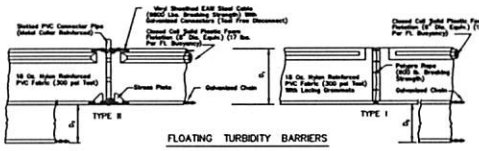
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE

TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

BARRIERS FOR FILL SLOPES

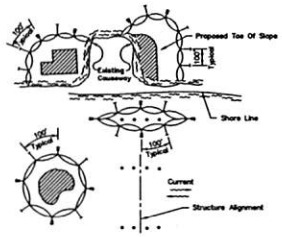
HAY BALE LOCATION

(D-901)
N.T.S.



FLOATING TURBIDITY BARRIERS

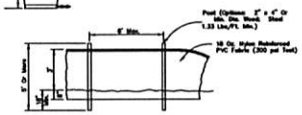
NOTICE:
COMPONENTS OF TYPES I & TYPE II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



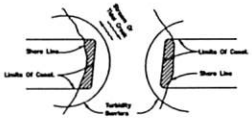
LEGEND
- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action

NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the FDOT Standard Specifications.

TURBIDITY BARRIER APPLICATIONS

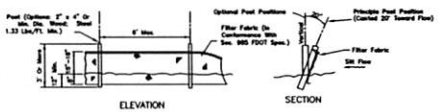


STAKED TURBIDITY BARRIER

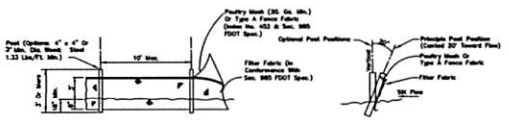


TURBIDITY BARRIERS

(D-907)
N.T.S.

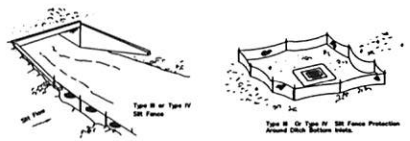


TYPE III SILT FENCE



Note: Silt Fence to be paid for under the contract lump sum price for Erosion and Sediment Control.

TYPE IV SILT FENCE



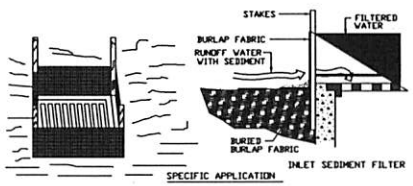
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

Note: Spacing for Type III & TYPE IV Fence to be in accordance with Chart 1, Sheet 1 of 3, FDOT Index No. 102 and ditch installations at drainage structures Sheet 2 of 3, FDOT Index No. 102.

SILT FENCE APPLICATIONS

SILT FENCE TYPE III & IV

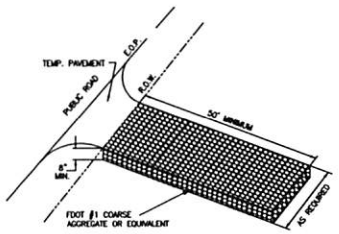
(D-908)



SPECIFIC APPLICATION

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.

DROP INLET SEDIMENT FILTER



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

NOTE:
WHERE FDOT SPECS AND INDEX ARE REFERENCED, PLEASE REFER TO THE FDOT ROADWAY & TRAFFIC DESIGN STANDARDS, AND FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION LATEST EDITION.

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TEL: 904-854-4500 C.A. NUMBER: 28821 FAX 904-854-4505
www.dom-eng.com

WATER MAIN EXTENSION
FOR
CORNER LOT DEVELOPMENT GROUP

EROSION AND SEDIMENT CONTROL DETAILS

REVISIONS

PLOT DATE:
DRAWN BY: JMH
DESIGNED BY: WMS/GRM
CHECKED BY: WES
SCALE: AS NOTED
JOB NO.:
© LATEST DATE HEREON
SHEET NO.
C6
OF ___

WILLIAM E. SCHAEFER LICENSE No. 46728 STATE OF FLORIDA PROFESSIONAL ENGINEER 08/02/2018

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STORM WATER POLLUTION PREVENTION PLAN

REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION: [illegible]

DESCRIPTION

UTILITY INSTALLATION

[illegible]

SITE AREA
1. TOTAL AREA OF SITE = N/A
2. TOTAL AREA TO BE DISTURBED = 1.00 Ac. +/-

NAME OF RECEIVING WATERS: EXISTING WETLAND

CONTROLS

[illegible]

STORM WATER MANAGEMENT

[illegible]

TIMING OF CONTROLS/MEASURES

[illegible]

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

[illegible]

POLLUTION PREVENTION PLAN CERTIFICATION

[illegible]

SIGNED: ______________________

DATED: ______________________

CONTRACTOR'S REQUIREMENTS

GENERAL

[illegible]

SEQUENCE OF MAJOR ACTIVITIES

[illegible]

TIMING OF CONTROLS/MEASURES

[illegible]

CONTROLS

[illegible]

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

[illegible]

STRUCTURAL PRACTICES

[illegible]

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS

[illegible]

HAZARDOUS WASTE

[illegible]

SANITARY WASTE

[illegible]

OFFSITE VEHICLE TRACKING

[illegible]

INVENTORY FOR POLLUTION PREVENTION PLAN

[illegible]

- [x] Concrete
- [x] Asphalt
- [x] Tar
- [ ] Detergents
- [ ] ________
- [x] Fertilizers
- [x] Petroleum Based Products
- [x] Cleaning Solvents
- [x] Paints
- [ ] ________
- [x] Wood
- [x] Masonry Blocks
- [x] Roofing Materials
- [ ] Metal Studs
- [ ] ________

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

[illegible]

GOOD HOUSEKEEPING

[illegible]

HAZARDOUS PRODUCTS

[illegible]

PRODUCT SPECIFIC PRACTICES

PETROLEUM PRODUCTS

[illegible]

FERTILIZERS

[illegible]

PAINTS

[illegible]

CONCRETE TRUCKS

[illegible]

SPILL CONTROL PRACTICES

[illegible]

MAINTENANCE/INSPECTION PROCEDURES

[illegible]

NON-STORM WATER DISCHARGES

[illegible]

CONTRACTOR'S CERTIFICATION

[illegible]

RESPONSIBLE PARTIES	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS	SIGNATURE
GENERAL CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		
SUB-CONTRACTOR		

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WILLIAM E. SCHAEFER, P.E. LICENSE No. [illegible] 08/02/2018 STATE OF FLORIDA PROFESSIONAL ENGINEER

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WATER MAIN EXTENSION
FOR
CORNER LOT DEVELOPMENT GROUP

SWPPP-CONTRACTOR'S REQUIREMENTS

REVISIONS

PLOT DATE:
DRAWN BY: JAN
DESIGNED BY: [illegible]
CHECKED BY: WES
SCALE: AS NOTED
JOB NO.:
LATEST DATE REVISION
SHEET NO.
C7
OF ___

PROJECT: ______

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM
TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.50 INCHES OR MORE

INSPECTOR: ______ DATE: ______

INSPECTOR'S QUALIFICATIONS: ______

DAYS SINCE LAST RAINFALL: ______ AMOUNT OF LAST RAINFALL ______ INCHES

STABILIZATION MEASURES

INSPECTION AREA (DESCRIPTION OF LOCATION)	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED ? (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED: ______

TO BE PERFORMED BY: ______ ON OR BEFORE: ______

PAGE 1 OF 4

PROJECT: ______

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM
STRUCTURAL CONTROLS

DATE: ______

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE: ______

TO BE PERFORMED BY: ______ ON OR BEFORE: ______

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS: ______

TO BE PERFORMED BY: ______ ON OR BEFORE: ______

PAGE 2 OF 4

PROJECT: ______

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM
SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN: ______

TO BE PERFORMED BY: ______ ON OR BEFORE: ______

OTHER CONTROLS
STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE: ______

TO BE PERFORMED BY: ______ ON OR BEFORE: ______

PAGE 3 OF 4

PROJECT: ______

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN: ______

REASONS FOR CHANGES: ______

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: ______

DATE: ______

PAGE 4 OF 4

NOTE TO CONTRACTOR:

THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OVER 1 ACRES. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OVER 0.50 INCHES. IT IS SUGGESTED THAT THIS SHEET BE REMOVED FROM THE PLAN SET AND DUPLICATED AS NEEDED BY THE CONTRACTOR.

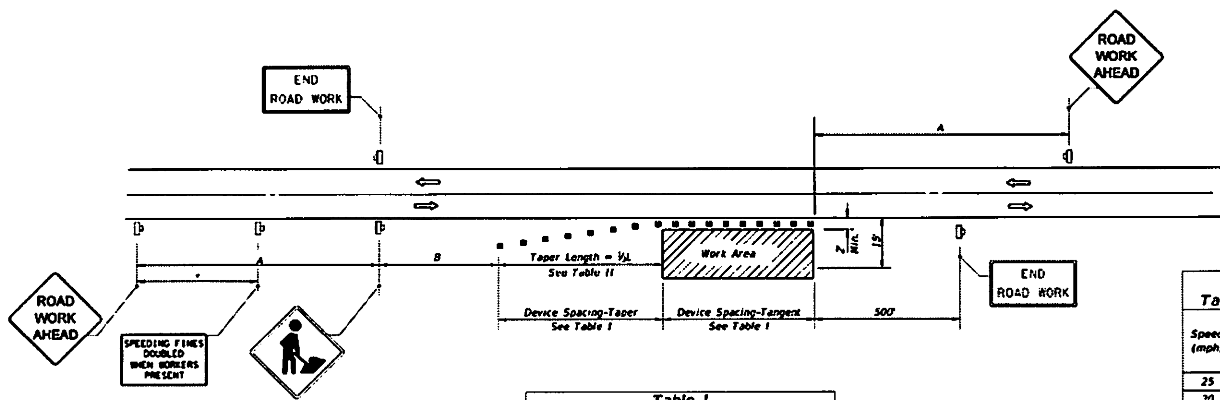
WATER MAIN EXTENSION
FOR
CORNER LOT DEVELOPMENT GROUP

SWPPP-CONTRACTOR'S CERTIFICATION

DOMINION ENGINEERING GROUP, INC.
PLANNERS AND ENGINEERS
4348 SOUTHPOINT BLVD, SUITE 204, JACKSONVILLE, FLORIDA 32216
TEL: 904-854-4500 C.A. NUMBER: 26821 FAX 904-854-4505
www.dom-eng.com

REVISIONS

PLOT DATE:
DRAWN BY: JAM
DESIGNED BY: WES/JAM
CHECKED BY: WES
SCALE: AS NOTED
JOB NO.:
© LATEST DATE HEREON
SHEET NO.
C8
OF ___



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.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II Taper Length - Shoulder				
Speed (mph)	L/3 (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	
45	120	150	180	L=WS
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

8' minimum shoulder width

L/3 = Length of shoulder taper in feet

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

S = Posted speed limit (mph)

SYMBOLS

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

GENERAL NOTES

1. 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.
2. 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.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index 102-600.

DURATION NOTES

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

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEERING DIVISION, THE MAIN OFFICE (255-7533) A MINIMUM OF FIVE(5) DAYS PRIOR TO IMPLEMENTATION OF THE MOT.
2. NO LANE CLOSURES ARE ALLOWED FROM 7:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM, MONDAY THROUGH FRIDAY.
3. THE PROJECT WORK HOURS SHALL BE BETWEEN 7:00 AM AND 7:00 PM ON RESIDENTIAL STREETS AND 9:00 AM AND 4:00 PM ON COLLECTOR AND ARTERIAL STREETS. TROUT RIVER BOULEVARD IS A COLLECTOR.
4. ACCESS TO SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

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.

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2018-19 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK ON SHOULDER	INDEX	SHEET
11/01/17						102-602	1 of 1

DOMINION ENGINEERING GROUP, INC.
PLANNERS AND ENGINEERS
4348 SOUTHPOINT BLVD, SUITE 204, JACKSONVILLE, FLORIDA 32216
TEL: 904-854-4500 C.A. NUMBER: 26921 FAX 904-854-4505
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WATER MAIN EXTENSION FOR CORNER LOT DEVELOPMENT GROUP

MAINTENANCE OF TRAFFIC PLAN

REVISIONS

SHEET NO. C9

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

	PROPOSED UTILITY											
	POTABLE WATER			WASTEWATER GRAVITY AND FORCE MAIN			RECLAIMED WATER			VACUUM SEWERS		
CONFLICTING UTILITY	HORZ.	VERT.	JOINT SPACING*	HORZ.	VERT	JOINT SPACING*	HORZ.	VERT.	JOINT SPACING*	HORZ.	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

NOTES:

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 330, 61 4 11

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

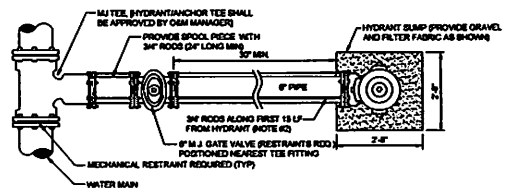
JANUARY 2018 — PLATE W-10

WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

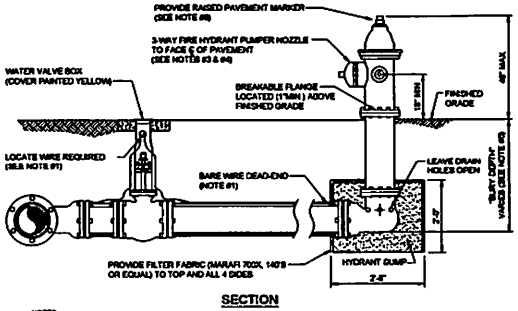
1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A BATHFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE JAWWA STANDARDS, CHAPTER 62-555, F.A.C. AND LATEST JEA WATER AND SEWER STANDARDS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, 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 III OF CHAPTER 62-610, 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, AND PREFERABLY TEN (10) 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 MAY BE REDUCED TO THREE (3) 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 PREFERABLE 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 A LEAST TWELVE (12) INCHES ABOVE OR 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 VACUUM-TYPE SANITARY SEWERS, STORM 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 SIX (6) 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.

NOTES ON UTILITY SEPARATION REQUIREMENTS

JANUARY 2018 — PLATE W-11



PLAN



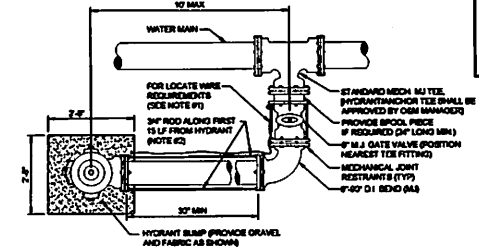
SECTION

NOTES:

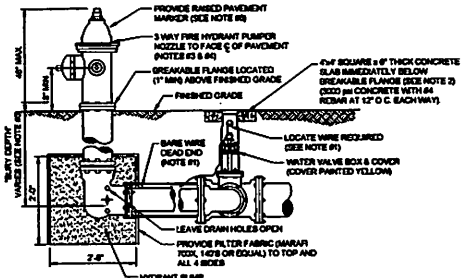
1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 330, LOCATE WIRE INSTALLATION PARAGRAPH.
2. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK AND NOT WITHIN SWALE/DITCH AREAS. THE 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. DISTANCE SHALL BE MEASURED TO THE CLOSEST PART OF THE FIRE HYDRANT (I.E. THE PUMPER NOZZLE). 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 LONGER THAN 60 LF, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT LOCATION (PROVIDE 30" SEPARATION). ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH MAIN WHICH IS WITHIN 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) ETDS, RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERRATED RING WITH RESTRAINT EARS (CSA 10 PF66 or EQUAL) MAY BE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15 LF 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 OUTLET FLOW.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUB. IOL CHAMEL-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 IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12" 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 TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION USING MECHANICAL JOINT TEE

JANUARY 2018 — PLATE W-13



PLAN



SECTION

NOTES:

1. LOCATE WIRE SHALL BE ROUTED FROM THE VALVE TO THE HYDRANT AS SHOWN ABOVE. THE END OF THE WIRE SHALL BE SECURED TO THE PIPE MAIN. SEE SECTION 330, LOCATE WIRE 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 APPROVED BY THE JEA. 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 LONGER THAN 60 LF, AN ADDITIONAL 6" GATE VALVE IS REQUIRED AT THE HYDRANT LOCATION (PROVIDE 30" SEPARATION). ALL PIPING, VALVES AND FITTINGS ALONG THE HYDRANT BRANCH MAIN WHICH IS WITHIN 15 LF OF THE HYDRANT SHALL BE RESTRAINED UTILIZING ONLY TWO 3/4" DIA (THREADED ENDS) ETDS, RODS AND EYE BOLTS (NO JOINT RESTRAINT DEVICES REQUIRED). A SPLIT SERRATED RING WITH RESTRAINT EARS (CSA 10 PF66 or EQUAL) MAY BE USED IN THIS ASSEMBLY. ALL OTHER JOINTS ALONG THE HYDRANT BRANCH MAIN OUTSIDE OF THE FIRST 15 LF 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 OUTLET FLOW.
4. PRIOR TO PROJECT FINAL INSPECTION, THE HYDRANT AND ALL ABOVE GROUND PIPING SHALL BE RE-OILED, GREASED AND REPAINTED (RUB. IOL CHAMEL-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 IMPORTANT FOR BRANCH LINES WHICH TEE-OFF A 12" 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 TRAVEL LANE, DIRECTLY ACROSS FROM AND ADJACENT TO EACH FIRE HYDRANT.

FIRE HYDRANT INSTALLATION LIMITED SPACE

JANUARY 2018 — PLATE W-14

DOMINION ENGINEERING GROUP, INC.
4348 SOUTHPOINT BLVD., SUITE 204
JACKSONVILLE, FLORIDA 32216
904-854-4500

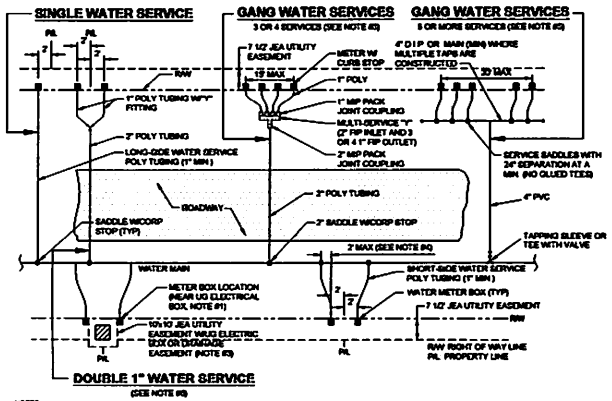
NO.	BY	DATE	REVISIONS
1			
2			
3			
4			

JEA — Building Communities

JEA STANDARD WATER MAIN DETAILS

NO. SHEETS	PROJ. NO.
SHEET NO.	DATE: JANUARY 2018
DRAWING NO.	SCALE: AS NOTED
CAD	

Exhibit 4
Page 11 of 16

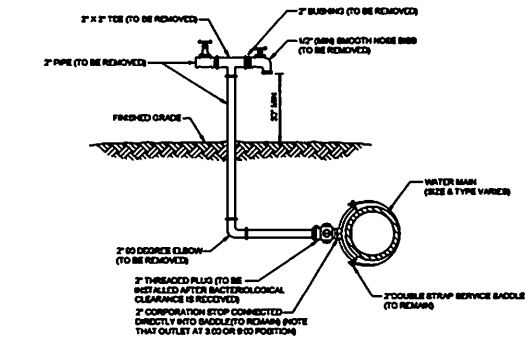


NOTES

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 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 ON LIEU OF TWO FEET). UNLESS APPROVED OTHERWISE BY JEA, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN ROADWAYS 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-3A4, AT A MINIMUM (SEE W-3 AND W-4 FOR THE REQUIREMENTS OF BRIDON, 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 14' 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/MAKE 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 3 FEET ON CENTER-MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 6" AT A MINIMUM. EXAMPLE: CONSTRUCT A 6" MAIN PVC CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 6" DIP, 6" PIPE, 4"X6" SADDLES AND 1" CORP STOPS (NO GLUED TEE FITTINGS). THE 6" 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 MAYBE TAPPED INTO THE (1" MIN) DOMESTIC WATER SERVICE LINE (WHICH SERVES THE SAME CUSTOMER) UTILIZING A 1" BRONZE "T" 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. ANCHOR 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 2018 — PLATE W-1

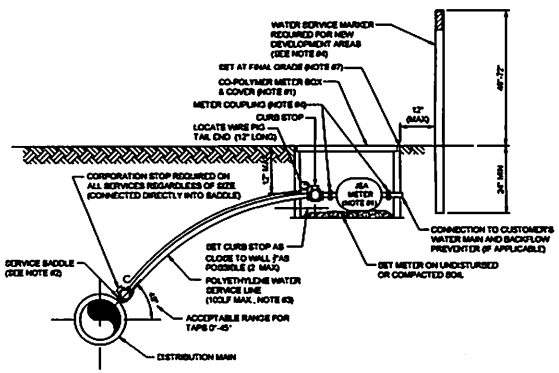


NOTES

1. LOCATION OF SAMPLE POINT 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 2018 — PLATE W-26

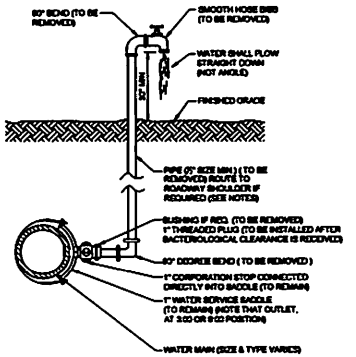


NOTES

1. SEE PLATE W-1 FOR METER LOCATION REQUIREMENTS
2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 16" 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 16 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 J.E.A. CONSTRUCT POLY LINE WITH 24" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE BARE SIZE AS THE METER (1" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 160LF UNLESS APPROVED OTHERWISE BY JEA.
4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" 6 IL. IF NO METER IS INSTALLED. WATER SERVICES SERVING VACANT LOTS (SERVICE NOT IN USE), SHALL INCLUDE A "V" 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 (NEX 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 & ID. NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
8. LOCATE WIRING REQUIRED ON ALL SERVICES 14' OR GREATER IN LENGTH. SEE PLATE W-44.

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2018 — PLATE W-2

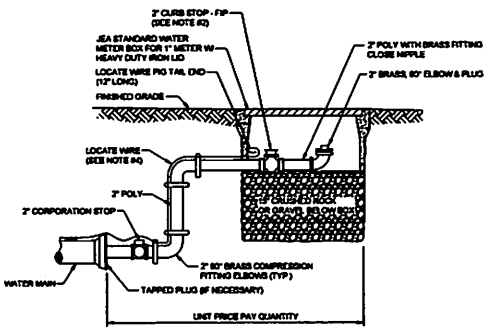


NOTES

1. LOCATION OF SAMPLE POINT 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 POLICIES AS AS OUTLINED BY JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS.

TEMPORARY SAMPLE TAP

JANUARY 2018 — 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 14' OR GREATER IN LENGTH.
5. CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
6. PLACE 3 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

FLUSHING VALVE BELOW GRADE

JANUARY 2018 — PLATE W-29

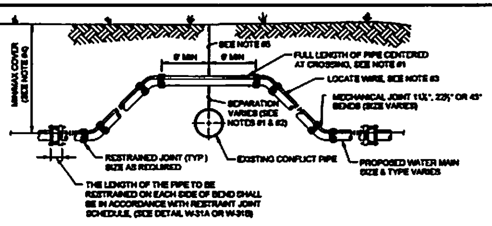
DOMINION ENGINEERING GROUP, INC. 4348 SOUTHSIDE BLVD. SUITE 204 JACKSONVILLE, FLORIDA 32216 904-854-4500

JEA building Community

JEA STANDARD WATER MAIN DETAILS

PROJ NO.
DATE: JANUARY 2018
SCALE: AS NOTED
NO. SHEETS: 6
SHEET NO.
DRAWING NO.: C11

Exhibit 4
Page 12 of 16



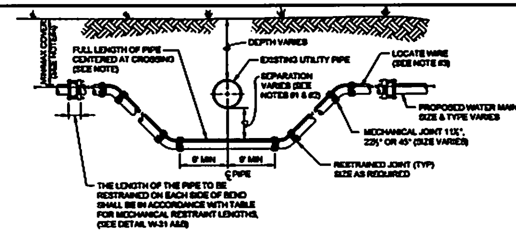
CASE "A" CROSSING

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 2018 PLATE W-32



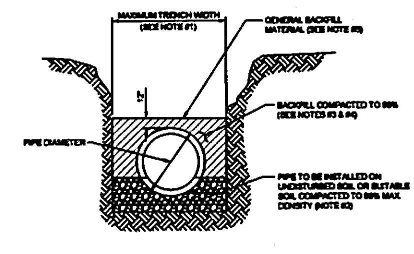
CASE "B" CROSSING

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 2018 PLATE W-34



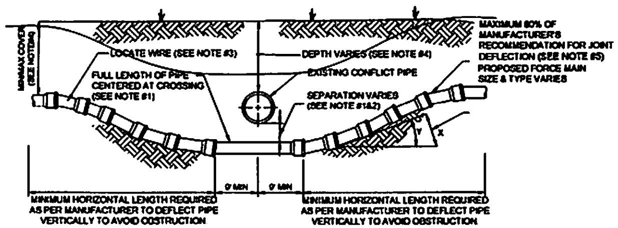
TYPICAL TRENCH

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 0001, PARAGRAPH 84) 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 IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D1557
5. SEE " EXCAVATION AND EARTHWORK", SECTION 400 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 2018 IN CITY RIGHT OF WAY PLATE W-42



CASE "B" CROSSING

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

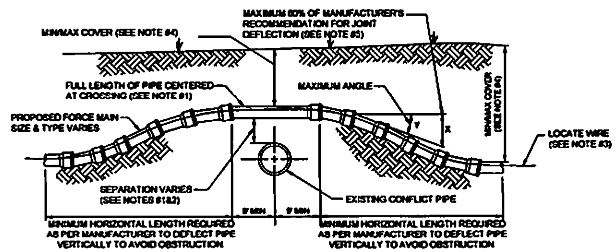
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	584 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

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 2018 PLATE W-40



CASE "A" CROSSING

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

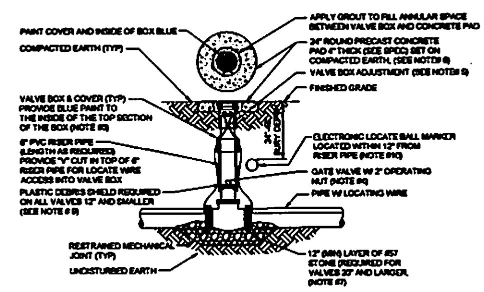
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS
2	30	7°	158 FT
4	10	2.4°	480 FT
6	10	2.4°	480 FT
8	10	2.4°	480 FT
10	10	2.4°	480 FT
12	8.5	2°	584 FT
14 - 24	5	1.2°	960 FT
30 - 48	3.25	0.8°	1477 FT

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 2018 PLATE W-41



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 DETAIL W-44).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
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 12" 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 ⅛" 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 ½ 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 APC, 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 2018 PLATE W-18

DOMINION ENGINEERING GROUP, INC.
4348 SOUTHPOINT BLVD, SUITE 204
JACKSONVILLE, FLORIDA 32216
904-834-4500

JEA Building Community

JEA STANDARD
WATER MAIN DETAILS

PROJ. NO. | DATE: JANUARY 2014 | SCALE: AS NOTED

NO. SHEETS | SHEET NO. | DRAWING NO. C12

Z:\General Civil\Corner Lot Development\Trout River\Civil\design\Water Main Extension\JEA_Water_and_Reclaimed_Details_January_2018.dwg Current Layout Tab = C12 Thu Aug 02, 2018 - 15:33

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=36 INCHES FOR 20" AND SMALLER PIPE SIZE OR 38 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. Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Ll 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 30 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.

LENGTH (L) TO BE RESTRAINED

(SEE PLATE Nos. 31C & 31D FOR ADDITIONAL DETAILS)

NOMINAL PIPE SIZE (IN)	HORIZONTAL BENDS 90° BENDS L (FT)	45° BENDS L (FT)	22.5° BENDS L (FT)	11.25° BENDS L (FT)	VERTICAL OFFSETS 45° BENDS (SEE NOTE 4) UPPER L (FT)	LOWER L (FT)	VALVES OR DEAD ENDS L (FT)
4	21	9	5	3	17	3	47
6	30	13	6	3	23	4	66
8	38	16	8	4	30	6	86
10	46	19	9	5	36	7	103
12	53	22	11	6	43	8	121
14	61	25	13	6	50	9	140
16	68	28	14	7	55	10	154
18	73	30	15	8	60	11	170
20	79	33	16	8	66	12	186
24	79	33	16	8	77	15	185
30	93	38	19	10	87	17	222
36	108	38	21	11	107	20	237
42	117	48	24	12	120	24	280
48	144	53	28	13	133	26	321

REDUCERS SIZE (IN)	L (FT)
6x4	34
8x6	36
8x4	62
10x8	35
10x6	63
12x10	38
12x8	64
16x12	66
16x10	87
20x16	35
20x10	66
20x12	117
24x20	38
24x16	80
24x10	101
30x24	76
30x20	121
36x30	78
36x24	141
42x36	75
42x30	140
48x42	75
48x36	139

TEES (SEE NOTE 5) RUN SIZE (IN)	BRANCH SIZE (IN)	L (FT)
4	4	F.O.
6	6 4 < LESS	10 F.O.
8	8 6 < LESS	20 F.O.
10	10 8 6 < LESS	45 13 F.O.
12	12 10 8 < LESS	62 32 F.O.
16	16 12 10 10 < LESS	84 38 8 F.O.
20	20 16 12 10 < LESS	125 76 14 F.O.
24	24 20 16 12 < LESS	134 84 36 F.O.
30	30 24 20 16 16 < LESS	158 104 60 5 F.O.
36	36 30 24 20 16 < LESS	182 142 83 23 F.O.
42	42 36 30 24 20 16 < LESS	225 173 134 80 5 F.O.
48	48 42 36 30 24 20 < LESS	253 209 162 104 34 F.O.

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2018 PLATE W-31A

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=36 INCHES FOR 20" AND SMALLER PIPE SIZE OR 38 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. Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Ll 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 30 FT (MIN).

LENGTH (L) TO BE RESTRAINED

(SEE PLATE Nos. 31C & 31D FOR ADDITIONAL DETAILS)

NOMINAL PIPE SIZE (IN)	HORIZONTAL BENDS 90° BENDS L (FT)	45° BENDS L (FT)	22.5° BENDS L (FT)	11.25° BENDS L (FT)	VERTICAL OFFSETS 45° BENDS (SEE NOTE 4) UPPER L (FT)	LOWER L (FT)	VALVES OR DEAD ENDS L (FT)
4	17	7	4	2	11	3	30
6	24	10	5	3	15	4	42
8	31	13	6	3	20	5	56
10	38	16	8	4	23	6	66
12	42	18	9	5	27	7	77
14	48	20	10	5	31	7	87
16	53	22	11	6	35	8	97
18	59	24	12	6	39	8	107
20	63	27	13	6	42	10	116
24	63	27	13	7	48	12	118
30	75	31	15	8	60	14	141
36	86	36	17	8	65	17	163
42	98	40	19	10	78	19	183
48	117	43	21	11	84	21	203

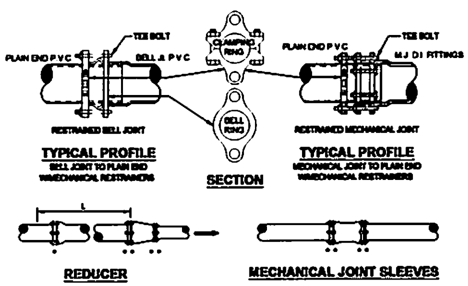
REDUCERS SIZE (IN)	L (FT)
6x4	22
8x6	23
8x4	39
10x8	22
10x6	40
12x10	23
12x8	41
16x12	42
16x10	66
20x16	22
20x16	42
20x12	74
24x20	36
24x16	61
24x16	84
30x24	60
30x20	77
36x30	60
36x24	80
42x36	40
42x30	80
48x42	40
48x36	84

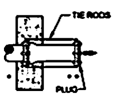
TEE (SEE NOTE 5) RUN SIZE (IN)	BRANCH SIZE (IN)	L (FT)
4	4	F.O.
6	6 4 < LESS	8 F.O.
8	8 6 < LESS	18 F.O.
10	10 8 6 < LESS	30 9 F.O.
12	12 10 8 < LESS	40 21 F.O.
16	16 12 10 8 < LESS	60 35 3 F.O.
20	20 16 12 10 < LESS	79 46 9 F.O.
24	24 20 16 12 < LESS	78 64 23 F.O.
30	30 24 20 16 12 < LESS	101 60 39 4 F.O.
36	36 30 24 20 16 12 < LESS	122 80 63 21 1 F.O.
42	42 36 30 24 20 16 12 < LESS	141 113 79 38 3 1 F.O.
48	48 42 36 30 24 20 < LESS	160 133 103 69 33 F.O.

F.O. = FITTING ONLY

DUCTILE IRON PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2018 PLATE W-31B



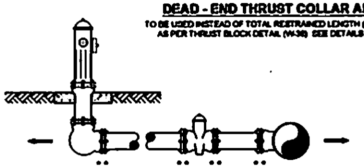


NO. OF TIE RODS REQUIRED

- 3" - 8" DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
- 10" - 12" DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
- 14" - 16" DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
- 18" - 20" DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
- 24" DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
- 30" - 36" DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
- 42" - 48" DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
- 54" DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

DEAD - END THRUST COLLAR ANCHOR

TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL (W-36) SEE DETAILS W-36 & W-37



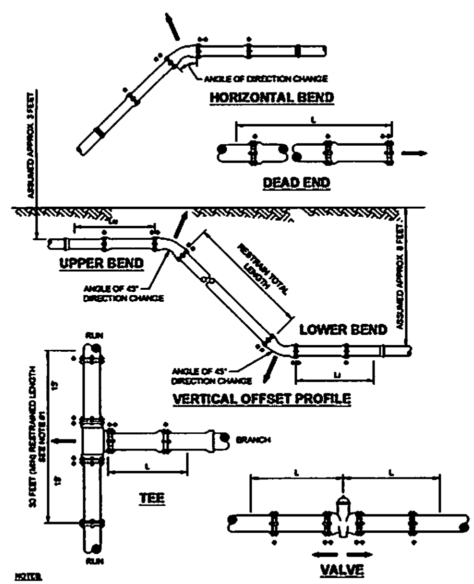
FIRE HYDRANT LATERAL

GENERAL NOTE

1. PAY ITEM "*" DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS
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 2018 PLATE W-31C



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 BASIS.
3. PAY ITEM "**" DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.

MECHANICAL RESTRAINT DETAILS - II

JANUARY 2018 PLATE W-31D

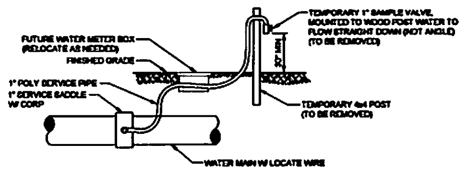
DOMINION ENGINEERING GROUP, INC.
4340 SOUTHPOINT BLVD, SUITE 204
JACKSONVILLE, FLORIDA 32216
904-254-4300

REVISIONS | NO. | BY | DATE

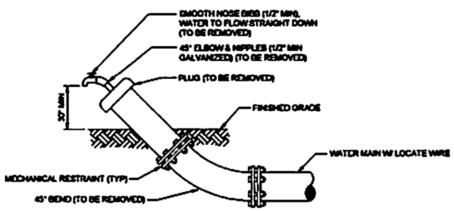
JEA Building Community

JEA STANDARD
WATER MAIN DETAILS

PROJ NO.
DATE: JANUARY 2018
SCALE: AS NOTED
NO. SHEETS 6
SHEET NO. 4
DRAWING NO. C13



TEMPORARY SAMPLE TAP UTILIZING A NEW 1" WATER SERVICE



TEMPORARY SAMPLE TAP UTILIZING PLUG AT FLUSHING LOCATION

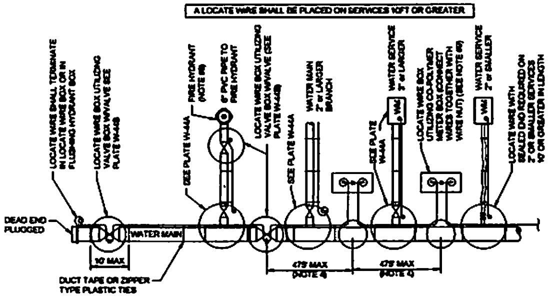
NOTES:

1. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROAD SHOULDERS
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY PIPING & FITTINGS (AS NOTED) AFTER BACTERIOLOGICAL CLEARANCE IS RECEIVED
3. THE CONTRACTOR SHALL UTILIZE THE ABOVE ALTERNATIVE METHODS FOR CONSTRUCTION OF TEMPORARY SAMPLE POINTS IN ALL AREAS, WHERE POSSIBLE.
4. THE CONTRACTOR SHALL COMPLY WITH ALL JEA RULES AND POLICIES AS OUTLINED BY THE JEA'S ENVIRONMENTAL RESPONSE COORDINATOR (ERC) AND OTHER ASSOCIATED JEA STANDARDS

TEMPORARY SAMPLE TAP ALTERNATIVE METHODS

JANUARY 2018 PLATE W-24

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



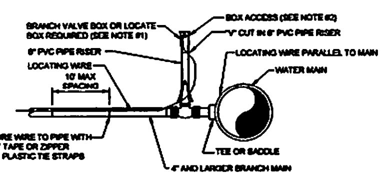
LOCATE WIRE SYSTEM

NOTES:

1. LOCATING WIRE TO BE INSTALLED IN EITHER THE ONE OR ELEVEN O'CLOCK POSITION ON ALL DUCTILE IRON OR PVC (PRESSURE MAINS). LOCATE WIRE SHALL ALSO BE INSTALLED ON ALL (HDPE) POLY MAIN PIPING (1:00 OR 11:00 POSITION, IF POSSIBLE).
2. SECURE LOCATING WIRE TO PVC & D.I.P. WATER MAIN BY USE OF DUCT TAPE OR ZIPPER TYPE PLASTIC TIE STRAPS SPACED AT A MAXIMUM DISTANCE OF TEN (10') AND AT EACH SIDE OF BELL JOINT OR FITTING.
3. THE ENTIRE LOCATING SYSTEM SHALL BE SUBJECTED TO TESTING TO DETERMINE ITS RELIABILITY. WHERE INSTALLED UNDER PAVEMENT AREAS, TESTING SHALL BE DONE PRIOR TO THE PLACEMENT OF PAVEMENT, UNLESS APPROVED OTHERWISE BY JEA.
4. LOCATING WIRE SHALL TERMINATE WITHIN AN ACTIVE VALVE BOX (WITH A VALVE) OR A METER BOX (IF NO VALVE) AT 475' INTERVALS. SEE DETAIL PLATE W-44B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
5. REFER TO SECTION 330 FOR LOCATE WIRE SPECIFICATIONS.
6. "⌗" INDICATES THAT THE WIRES ARE CONNECTED TOGETHER
7. "@" INDICATES A WIRE PIG-TAIL (24" LONG)
8. FOR FIRE HYDRANT LOCATE WIRE REQUIREMENTS AND EXCLUSIONS, SEE PLATES W-12,13 AND 14.
9. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.

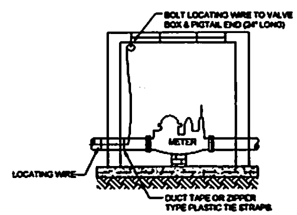
LOCATE WIRE CONSTRUCTION FOR WATER MAINS

JANUARY 2018 PLATE W-44



BRANCH FORCE MAIN

(2" AND LARGER WATER MAIN OR 3" AND LARGER WATER SERVICE PIPE)



CONNECTION AT LARGE METER BOX

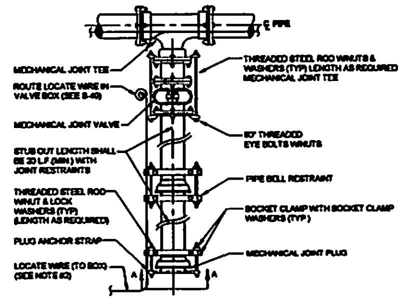
(3" OR LARGER SERVICE)

NOTES:

1. NOTE THAT THE BRANCH WIRE IS NOT CONNECTED TO THE MAIN WIRE.
2. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE SECTION (SEE W-18).
3. LOCATE WIRE SHALL HAVE 2' OF SLACK INSIDES VALVE AND LOCATE POINTS.

LOCATE WIRE FOR BRANCH MAIN

JANUARY 2018 PLATE W-44A



PLAN

SECTION "A-A"

NOTES:

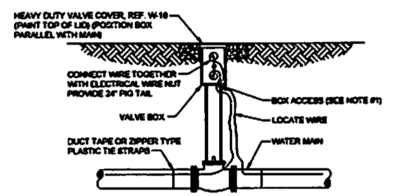
1. IN LIEU OF BELLROD RESTRAINTS, MECHANICAL JOINT RESTRAINTS MAY BE USED
2. LOCATING WIRE REQUIRED, UTILIZING A LOCATE WIRE BOX INSTALLED AT PLUG LOCATION
3. NUMBER OF TIE RODS REQUIRED IS AS FOLLOWS

3" - 8"	DIAMETER MAIN - 2 TIE RODS REQUIRED PER JOINT (3/4" ROD)
10" - 12"	DIAMETER MAIN - 4 TIE RODS REQUIRED PER JOINT (3/4" ROD)
14" - 16"	DIAMETER MAIN - 6 TIE RODS REQUIRED PER JOINT (3/4" ROD)
18" - 20"	DIAMETER MAIN - 8 TIE RODS REQUIRED PER JOINT (3/4" ROD)
24"	DIAMETER MAIN - 12 TIE RODS REQUIRED PER JOINT (3/4" ROD)
30" - 36"	DIAMETER MAIN - 14 TIE RODS REQUIRED PER JOINT (1" ROD)
42" - 48"	DIAMETER MAIN - 16 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)
54"	DIAMETER MAIN - 18 TIE RODS REQUIRED PER JOINT (1 1/4" ROD)

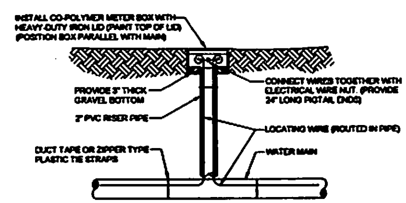
4. THE LOCATION OF THE DEAD END PLUG SHALL NOT BE UNDER PAVEMENT, IF POSSIBLE. THE STUB OUT SHALL EXTEND BEYOND THE INTERSECTION AREAS OR ROAD CROSSING BY 10 FEET (MIN.) WHERE POSSIBLE.

PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2018 PLATE W-37



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

NOTES:

1. LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE (SEE W-18).
2. LOCATE WIRE SHALL HAVE 2' OF SLACK INSIDES VALVE AND LOCATE POINTS.

LOCATE WIRE BOX

JANUARY 2018 PLATE W-44B

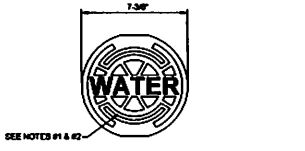
JEA STANDARD WATER MAIN DETAILS

JEA Building Community

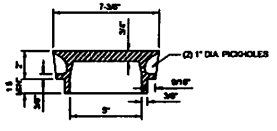
DOMINION ENGINEERING GROUP, INC.
JACKSONVILLE, FLORIDA

DATE: JANUARY 2018
SCALE: AS NOTED
DRAWING NO. C14

Exhibit 4



HEAVY DUTY RATING

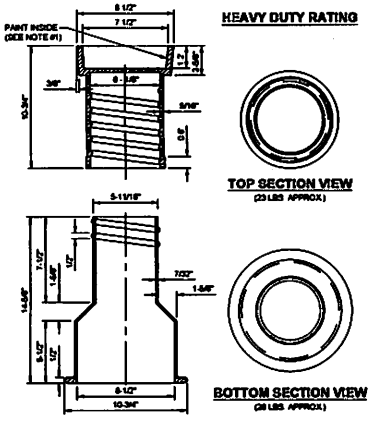


NOTES:

1. PAINT TOP OF THE COVER WITH ENAMEL PAINT (BLUE COLOR) FOR WATER.
2. FOR "REUSE" PAINT TOP PANTONE PURPLE.
3. LID WEIGHT APPROX. 12 LBS.

WATER SYSTEM VALVE BOX COVER

JANUARY 2018 PLATE W-16



HEAVY DUTY RATING

TOP SECTION VIEW
(23 LBS APPROX.)

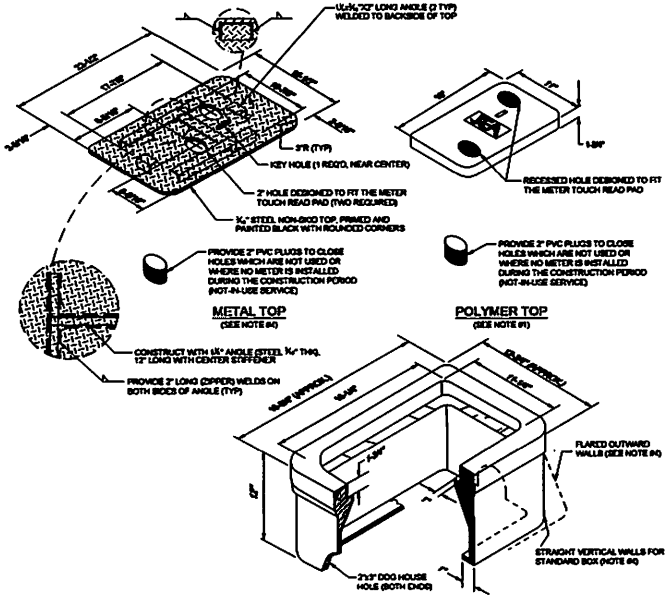
BOTTOM SECTION VIEW
(28 LBS. APPROX.)

NOTES:

1. PAINT THE INSIDE OF THE TOP SECTION OF THE BOX WITH APPLICABLE COLOR (BLUE OR PURPLE)
2. HEAVY DUTY RATING (TOTAL WEIGHT APPROX. 59 LBS.)
3. REFERENCE SECTION 351, PARAGRAPH X.2.

WATER SYSTEM VALVE BOX

JANUARY 2018 PLATE W-17



POLYMER BOX

NOTES:

1. THE STANDARD BOX (A-5 (ASTM C857) LOAD RATING WITH STRAIGHT VERTICAL WALLS & TOP (A-5 (ASTM C857) RATING WITH 2 HOLES) SHALL BE MADE OF POLYMER CONCRETE. (SIMILAR TO OLD BROOKS SERIES 37 BOX). BOX WALLS SHALL BE FIBERGLASS. THE INSIDE LIP OF THE BOX SHALL BE RATED SAME AS THE BOX. THE ONE HOLE LIDS ARE FOR SPECIAL ORDERS ONLY AND REQUIRE JEA'S APPROVAL PRIOR TO USE.
2. ALL SIZES SHOWN ARE IN INCHES AND ARE APPROXIMATE SIZES.
3. POLYMER BOX APPROXIMATE WEIGHT 25lbs. POLYMER TOP APPROXIMATE WEIGHT 20lbs. SEE CONSTRUCTION DETAILS W-3A (TWO HOLE) AND W-3B (ONE HOLE) FOR MANUFACTURING DETAILS FOR COVERS.
4. UNLESS APPROVED OTHERWISE IN WRITING BY JEA, ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN THE ROADWAY, DRIVEWAYS OR SIDEWALKS). IF AN EXCEPTION TO THIS RULE IS APPROVED BY JEA, THEN THE FOLLOWING SHALL BE PROVIDED:
   A) UNDER NO CIRCUMSTANCE SHALL A METER BOX BE LOCATED IN A COMMERCIAL TRAFFIC AREA.
   B) IF AN EXCEPTION IS APPROVED IN WRITING THE METER BOX LOCATED IN A SIDEWALK OR RESIDENTIAL DRIVEWAY SHALL INCLUDE A POLYMER BOX WITH FLARED OUTWARD WALLS (NOT STRAIGHT WALLS) AND A POLYMER TOP. BOX AND TOP SHALL COMPLY WITH A-5 (ASTM C857) LOAD RATING.
   C) METAL TOPS MAY BE UTILIZED IF SPECIFICALLY APPROVED BY JEA MANAGER OR JEA METER O&M STAFF.

WATER METER BOX & COVER FOR 1" AND SMALLER METERS

JANUARY 2018 PLATE W-3

DOBSON ENGINEERING GROUP, INC.
3440 SOUTHPORT BLVD., SUITE 204
JACKSONVILLE, FLORIDA 32216
904-854-4300

NO.	BY	DATE	REVISIONS

JEA Building Community

JEA STANDARD
WATER MAIN DETAILS

NO. SHEETS	9
SHEET NO.	
PROJ NO.	
DATE:	JANUARY 2018
SCALE:	AS NOTED
DRAWING NO.	D18

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Xref Attached