





SURVEY AND LOCATE DATA:

- ☐ ☒ 1. ALL ELEVATIONS ARE BASED ON U.S.C.&G.S. DATUM AND SHOWN IN FEET.
- ☐ ☒ 2. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- ☐ ☒ 3. LOCATION OF EXISTING UTILITIES OBTAINED BY SOFT DIG LOCATES WHERE SHOWN ON PLANS, OR INCLUDED WITH BID SPECS.
- ☐ ☒ 4. EXISTING WATER AND SEWER LINES ARE SHOWN AS PER FIELD LOCATES AND SUBDIVISION AS-BUILT PLANS.
- ☐ ☒ 5. UNDERGROUND UTILITIES WERE LOCATED UTILIZING GROUND PENETRATING RADAR (GPR) AND A DIGITAL LOCATOR. CONTRACTOR SHALL BE AWARE THAT IN SOME CASES UTILITIES HAVE BEEN LOCATED, AND SURVEY HAS BEEN COMPLETED ONLY ON ONE SIDE OF THE ROAD.
- ☐ ☒ 6. ALL PIPE LENGTHS SHOWN ON PLAN AND PROFILES ARE FROM CENTER TO CENTER OF MANHOLES, CATCH BASINS, INLETS ETC. OR ALONG THE CENTER LINE OF FORCE MAINS AND WATER MAINS.
- ☐ ☒ 7. INVERT ELEVATIONS SHOWN ON DRAWINGS REFER TO THE CENTERLINE OF MANHOLES, UNLESS OTHERWISE INDICATED.
- ☒ ☐ 8. THE LOCATION OF ALL EXISTING SEWER AND WATER SERVICE LINES MAY NOT BE INDICATED ON THESE PLANS. THE LOCATION OF NEW SERVICES SHALL BE VERIFIED IN THE FIELD.
- ☐ ☒ 9. BENCHMARK DATA: PRIMARY B.M. BENCH MARK DISK SET IN CONCRETE MONUMENT. PID BC0245, STAMPED W 142 1954. DISK IS 46.5' WEST OF THE MAIN TRACK OF CSX RAILROAD AND 30' NORTH OF THE ENTRANCE DRIVEWAY TO NUTI TURF (11650 N MAIN ST.). ELEVATION IS 18.73 NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

PERMIT REQUIREMENTS (NOT ALL INCLUSIVE):

- |                          |                                     |     |   |
|--------------------------|-------------------------------------|-----|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1.  | CONTRACTOR TO OBTAIN ALL REQUIRED RIGHT-OF-WAY PERMITS.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2.  | CONTRACTOR SHALL NOT OPEN CUT STREETS IN THE PROJECT AREA UNLESS SPECIFICALLY SHOWN ON PLANS  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3.  | THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CONSUMPTIVE USE PERMIT (C.U.P.) THROUGH THE ST. JOHNS WATER MANAGEMENT DISTRICT SHOULD DEWATERING ACTIVITIES BE REQUIRED.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4.  | THE DEPARTMENT OF TRANSPORTATION, RAILROAD COMPANIES AND ST. JOHNS COUNTY ARE TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION PER THEIR RESPECTIVE PERMIT CONDITIONS.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5.  | ALL WORK SHALL BE IN ACCORDANCE WITH BID DOCUMENTS, JEA WATER AND SEWER STANDARDS, DETAILS AND MATERIALS MANUAL, REV. 01/15, AND ST. JOHN COUNTY STANDARD SPECIFICATIONS AND DETAILS AND ALL APPLICABLE STATE AND LOCAL REGULATIONS.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6.  | IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL OF THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOD. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7.  | THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY CONTACT PERSONNEL NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF FACILITIES IN THEIR RESPECTIVE AREAS.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8.  | TREE PROTECTION SHALL BE IN ACCORDANCE WITH ST. JOHNS COUNTY APPLICABLE ORDINANCE CODES AND/OR AS DETAILED ON SPECIFIC PLAN SHEETS. NO TRIMMING OF OVERHANGING TREE LIMBS WILL BE ALLOWED. USE SMALLER EQUIPMENT IF NECESSARY.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9.  | THE CONTRACTOR SHALL LOCATE THE DRAINAGE INLET STRUCTURES IN THE PROJECT AREA AND ERECT SEDIMENTATION CONTROL DEVICES AS NECESSARY PER THE ST. JOHN COUNTY STORMWATER POLLUTION PREVENTION PLAN.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. | CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITIES DURING CONSTRUCTION.   |

EXISTING UTILITY PROTECTION:

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

ABBREVIATIONS:

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

### RESTORATION NOTES:

1. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LANDMARKS WHICH MAY BE DISTURBED BY CONSTRUCTION, KNOWN CORNER LOCATIONS ARE AVAILABLE FROM THE ST. JOHN COUNTY ENGINEERING DIVISION.
2. THE CONTRACTOR SHALL RESTORE/REPLACE ALL CULVERTS, HEADWALLS AND STORM DRAIN INLETS REMOVED OR DISTURBED BY THE CONSTRUCTION OPERATION.
3. TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH ST. JOHN COUNTY/FDOT STANDARD SPECIFICATIONS.
4. SIDEWALKS, DRIVEWAYS AND CURBING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH ST. JOHNS COUNTY STANDARD SPECIFICATIONS. SIDEWALKS REMOVED AND REPLACED IN CURB AND GUTTER AREAS AT INTERSECTIONS SHALL HAVE HANDICAP RAMPS INSTALLED. DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT ALONG THE RIGHT-OF-WAY LINE OR NEAREST JOINT AND REMOVED AND REPLACED TO THE EDGE OF STREET.
5. GRASS SOD SHALL BE FURNISHED AND PLACED IN THE AREAS DISTURBED OR DAMAGED BY THE CONSTRUCTION OPERATION. MATCH EXISTING SOD. CONTRACTOR TO WATER UNTIL ESTABLISHED. NO SEEDING ALLOWED.
6. ALL PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH THE ST. JOHN COUNTY/FDOT STANDARD DETAILS AND SPECIFICATIONS LATEST EDITION.
7. UNLESS OTHERWISE NOTED, REMOVE AND REPLACE EXISTING PAVEMENT AS PER S.J.C. DETAIL 201 FOR OPEN ROAD CUTS.
8. CONTRACTOR MUST MAINTAIN AND PRESERVE NEWLY GRADED AREAS AND REPAIR AREAS WHERE SETTLING AND EROSION HAVE OCCURRED.

## GENERAL LEGEND

PROPOSED

● = FOUND 1/2" IRON PIPE NO ID  
UNLESS OTHERWISE NOTED

○ = SET 1/2" IRON PIPE LB 7944

■ = FOUND 4"x4" CONCRETE MONUMENT NO ID  
UNLESS OTHERWISE NOTED

□ = SET 4"x4" CONCRETE MONUMENT LB 7944

⊙ = FOUND PK NAIL NO ID  
UNLESS OTHERWISE NOTED

⊗ = SET PK NAIL LB 7944

Δ = DELTA

R = RADIUS

L = ARC LENGTH

CB = CHORD BEARING

CD = CHORD LENGTH

PC = POINT OF CURVATURE

PT = POINT OF TANGENT

D.B. = DEED BOOK

O.R. = OFFICIAL RECORD BOOK

PG. = PAGE

    ID = IDENTIFICATION

    LB = LICENSED BUSINESS

(M) = FIELD MEASURED

(C) = CALCULATED

(P) = PLAT

NO. = NUMBER

W.O. = WORK ORDER

A.C. = AIR CONDITIONING UNIT

⦶ = POWER POLE WOOD




⦶-□ = POWER POLE CONCRETE


📶 = SATELLITE DISH




⌋ = GUY ANCHOR



— = INFORMATION SIGN

○ = CHAIN LINK FENCE  
 —X— = WIRE FENCE  
 —□— = WOOD FENCE  
 —C— = CABLE FENCE  
 —TEL— = UNDERGROUND TELEPHONE LINE  
 —ELEC— = UNDERGROUND ELECTRIC LINE  
 —WTR— = UNDERGROUND WATER LINE  
 —FOC— = UNDERGROUND FIBER OPTIC LINE  
 —SAN— = UNDERGROUND SANITARY SEWER LINE  
 —CATV— = UNDERGROUND TELEPHONE LINE  
 —UK— = UNKNOWN UNDERGROUND LINE  
 —OH— = OVERHEAD UTILITY LINE

 = WATER METER  
 = FIRE HYDRANT  
 = WATER VALVE

 = MAIL BOX

 = 5" POST  
 = 5" SQUARE POST  
 = WIRE PULL BOX

 = SEWER MANHOLE  
 = SEWER VALVE

CMP = CORRUGATED METAL PIPE  
 CCP = REINFORCED CONCRETE PIPE  
 RCP = CORRUGATED PLASTIC PIPE  
 PVC = POLYVINYL CHLORIDE PLASTIC PIPE  
 TC = TERRACOTTA  
 00.00 = HARD ELEVATION  
 00.0 = SOFT ELEVATION  
 TH = TEST HOLE  
 A = ASPHALT  
 G = GUTTER  
 C = CURB  
 ELEV. = ELEVATION  
 (0.00) = HARD ELEVATION  
 (00.0) = SOFT ELEVATION  
 INV. = INVERT  
 B.M. = BENCH MARK

## INSTALLATION NOTES:

- | NO.                                 |                                     | APP. |  | NOTES |   |
|-------------------------------------|-------------------------------------|------|--|-------|---|
| <input type="checkbox"/>            | <input type="checkbox"/>            |      |  | 1.    | CONTRACTOR TO REHABILITATE ALL MANHOLES ON PIPE BURST SEWERS VIA COATING/LINING PER JEA SPECIFICATION 446-2, UNLESS OTHERWISE NOTED ON THE PLANS.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |      |  | 2.    | CONTRACTOR TO RENEW, REHABILITATE, REPLACE OR REINSTALL AS APPLICABLE ALL SERVICE LATERALS TO R.O.W. LINE.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |      |  | 3.    | CONTRACTOR TO INSTALL SEWER SERVICE PIPING A MINIMUM OF 60 INCHES BELOW GRADE. WHERE NEW SANITARY SEWER MAIN IS LESS THAN 5 FEET DEEP, THE SEWER SERVICE PIPE SHALL BE INSTALLED AS DEEP AS POSSIBLE.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 4.    | WHEN THE DISTANCE BETWEEN A POWER POLE AND THE TRENCH IS LESS THAN THE TRENCH DEPTH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH JEA ELECTRICAL PERSONNEL TO SECURE POWER POLES. THE CONTACTS FOR JEA ARE AS FOLLOWS:<br>NORTHSIDE-EAST OF US-1 MIKE CORBITT @ 665-7991 (mobile 662-0635)<br>NORTHSIDE-WEST OF US-1 ANDY YEAGER @ 665-7998 (mobile 662-0622)<br>NORTHSIDE-BACKUP ALAN AINSLEY @ 665-7303 (mobile 662-6557)<br>SOUTHSIDE-SOUTH OF BEACH BLVD. TOM KERNS @ 665-6847 (mobile 860-1687)<br>SOUTHSIDE-NORTH OF BEACH BLVD. DERYL BASFORD @ 665-6855 (mobile 662-0616)<br>SOUTHSIDE-BACKUP EDDIE GALES @ 665-6855 (mobile 662-0616)<br>A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED FOR AN OUTSIDE MEETING WITH JEA ELECTRICAL TO DISCUSS THE REQUIRED WORK. ADDITIONAL TIME WILL BE REQUIRED BY JEA ELECTRICAL FOR ANY REQUIRED WORK TO BE ACCOMPLISHED. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |      |  | 5.    | ALL NEW STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 6.    | THE DESIGN FOR THE PROJECT IS BASED UPON THE "OPEN-CUT" METHOD OF CONSTRUCTION. IF USING ALTERNATIVE MEANS OR METHODS, THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS FOR THAT MEANS OR METHOD.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 7.    | THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS AT SERVICE CONNECTIONS. THE MEANS AND METHODS SHALL BE LEFT TO THE DISCRETION OF THE CONTRACTOR, SUBJECT TO THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. NO EXISTING ACTIVE SERVICE SHALL BE LEFT INTERRUPTED AT THE END OF THE WORK DAY.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |      |  | 8.    | CONTRACTOR SHALL PROVIDE ADDITIONAL CORPORATION STOPS FOR FILLING AND DRAINING PURPOSES DURING CONSTRUCTION AS NEEDED. CORPORATION STOPS ARE TO BE PLUGGED AND LEFT IN PLACE. INDICATE CORPORATION STOP LOCATIONS ON RECORD DRAWINGS (AS-BUILTS).   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 9.    | WATER AND SEWER SERVICES SHALL BE TRANSFERRED TO THE NEW MAIN UPON COMPLETION AND F.D.E.P./J.E.A. CERTIFICATION, AND PRIOR TO THE EXISTING MAINS BEING ABANDONED.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 10.   | IF EXISTING VALVES ARE IN UNPAVED AREAS AND ARE TO BE TAKEN OUT OF SERVICE, THEY SHALL BE CLOSED AND THE VALVE BOX AND COVER SHALL BE REMOVED. IF THE VALVES ARE UNDER PAVED AREAS, THEY SHALL BE CLOSED, THE VALVE BOX GROUT FILLED AND THE COVER REMOVED.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            |      |  | 11.   | CONTRACTOR SHALL REPLACE EXISTING WATER METER BOXES WHEN DEEMED NECESSARY BY THE JEA INSPECTOR.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 12.   | CONTRACTOR TO PROVIDE ADDITIONAL DEPTH OF BURY VIA PIPE JOINT DEFLECTION TO ACCOMMODATE VALVE SELECTION PER JEA STANDARDS.  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 13.   | WATER METERS MAY REQUIRE RELOCATION FOR CONSTRUCTION, CONTRACTOR SHALL CONTACT JEA METER DEPARTMENT AND RELOCATE WATER METERS AS NECESSARY.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 14.   | PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL OBTAIN ALL GEOTECHNICAL AND TOPOGRAPHIC SURVEY DATA AND LOCATIONS OF ABOVE GROUND AND UNDERGROUND UTILITIES. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS OR OMISSIONS IN THE SURVEY DATA, HE SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED.  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 15.   | SHEET PILING WILL BE REQUIRED ON ALL EXCAVATIONS DEEPER THAN 16 FEET.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 16.   | CONTRACTOR SHALL FOLLOW JEA STANDARDS AND ALL APPLICABLE REGULATORY AGENCY REQUIREMENTS IF ANY ASBESTOS CEMENT IS IMPACTED DURING CONSTRUCTION. SEE JEA WATER & WASTEWATER STANDARDS SECTION 407 IV.1.3 FOR MORE DETAILS.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 17.   | THE CONTRACTOR SHALL RESTRAIN ALL JOINTS ON ANY EXISTING PRESSURE MAINS THAT ARE EXPOSED DURING CONSTRUCTION ACTIVITIES.  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 18.   | CONTRACTOR IS RESPONSIBLE FOR SUPPORTING/HOLDING ELECTRICAL DISTRIBUTION POLES ADJACENT TO ANY OPEN EXCAVATIONS. POLE SUPPORT/HOLDING ACTIVITY CAN BE PERFORMED BY JEA FORCES IF AVAILABLE OR A PRE-APPROVED JEA DISTRIBUTION ELECTRICAL CONTRACTOR. COST ASSOCIATED WITH THIS WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> |      |  | 19.   | <u>DRIVEWAY PROTECTION:</u><br><u>OPEN CUT:</u><br>CONTRACTOR SHALL PROTECT ALL DRIVEWAYS, FENCES AND MAILBOXES DURING INSTALLATION OF BOTH THE WATER AND FORCE MAINS.<br><u>PIPE BURST:</u><br>DRIVEWAY RESTORATION WILL BE AT CONTRACTORS COST. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL DRIVEWAYS, FENCES AND MAILBOXES DURING INSTALLATION OF FORCE MAIN BY PIPE BURSTING METHOD.   |

### UTILITY CONTACTS:

A. AT&T - GENERAL NUMBER	904-519-2529
B. AT&T - ADAM DUGAN - NORTH DISTRICT	904-781-0741
C. AT&T - BILL LAKE - SOUTH DISTRICT	904-303-8754
D. ST. JOHNS COUNTY - PUBLIC WORKS DEPT.	904-255-8762
E. ST. JOHNS COUNTY - TRAFFIC OPERATIONS	904-387-8861
F. FLORIDA DEPT. OF TRANSPORTATION	904-366-5203
G. JEA - GENERAL INFORMATION	904-665-6000
H. JEA - PROJECT OUTREACH	904-665-7500
I. JEA - POWER OUTAGES	904-665-6000
J. JEA - SEWER PROBLEMS	904-665-4802
K. JEA - WATER PROBLEMS	904-665-4801
L. JEA - WATER & SEWER LOCATES	904-665-8410
M. NASSAU COUNTY - PUBLIC WORKS - CHARLES HOUSTON	904-491-7334
N. ST. JOHNS COUNTY - RIGHT-OF-WAY PERMITTING - RICK MAULDIN	904-209-0134
O. ST. JOHNS COUNTY - TRAFFIC SIGNALS - HANK MEIN	904-209-0173
P. COMCAST - EMERGENCY HOTLINE	904-380-6274
Q. TECO/PEOPLES GAS - BEN MOBLEY	904-545-8958
R. SUNSHINE ONE CALL	811

ALL ELEVATIONS SHOWN HEREON ARE BASED ON  
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

**PRIMARY B.M.**  
B.M. = BENCH MARK DISK SET IN CONCRETE MONUMENT. PID  
BC0245, STAMPED W 142 1954. DISK IS 46.5' WEST OF THE  
MAIN TRACK OF CSX RAILROAD AND 30' NORTH OF THE  
ENTRANCE DRIVEWAY TO NUTI TURF (11650 N MAIN ST.).  
ELEVATION IS 18.73 NORTH AMERICAN VERTICAL DATUM OF  
1988. (NAVD 88)

PLATS OF SAN MATEO SECTION 4 & 6 RECORDED IN PLAT BOOKS 28, PAGE 91 AND PLAT BOOK 29, PAGE 44 RESERVE A 5' EASEMENT FOR DRAINAGE AND UTILITIES ON THE SIDE AND REAR OF EACH LOT.

STANDARD DRAWINGS ARE APPLICABLE FOR ALL PROJECTS, INCORPORATED BY REFERENCE AND ARE AVAILABLE AT JEA.COM	
DRAWING	
NUMBER	SHEET TITLE
REFERENCE DRAWINGS	
<input type="checkbox"/> NOT APPLICABLE	W-STD-1 WATER MAIN DETAILS
<input checked="" type="checkbox"/>	W-STD-2 WATER MAIN DETAILS
<input checked="" type="checkbox"/>	W-STD-3 WATER MAIN DETAILS
<input checked="" type="checkbox"/>	W-STD-4 WATER MAIN DETAILS
<input type="checkbox"/>	W-STD-5 WATER MAIN DETAILS
<input type="checkbox"/>	S-STD-1 SANITARY SEWER DETAILS
<input type="checkbox"/>	S-STD-2 SANITARY SEWER DETAILS
<input type="checkbox"/>	S-STD-3 SANITARY SEWER DETAILS
<input type="checkbox"/>	S-STD-4 SANITARY SEWER DETAILS
<input type="checkbox"/>	S-STD-5 SANITARY SEWER DETAILS
<input checked="" type="checkbox"/>	PUMP STATION CONSTRUCTION DETAILS
<input type="checkbox"/>	PS-STD-1 MISCELLANEOUS DETAILS
<input checked="" type="checkbox"/>	PUMP STATION ELECTRIC DETAILS
<input checked="" type="checkbox"/>	PS-STD-2 ELECTRIC DETAILS
<input type="checkbox"/>	PS-STD-3 DEMARCATION BOX & POWER DISTRIBUTION PANEL
<input checked="" type="checkbox"/>	SC-STD-4 SCADA INSTALLATION
<input checked="" type="checkbox"/>	SC-STD-5 SCADA INSTALLATION
<input checked="" type="checkbox"/>	PS-STD-6 GROUNDING PLAN
<input checked="" type="checkbox"/>	PS-STD-7 GROUNDING DETAILS
<input checked="" type="checkbox"/>	PS-STD-8 ELECTRIC SINGLE LINE DIAGRAM



**ALMOND**  
ENGINEERING  
CONSULTING CIVIL ENGINEERS  
6277 DUFOUR STATION COURT, E.,  
JACKSONVILLE, FL 32217  
(904) 306-0162 PHONE

**EASTPORT ROAD FORCE  
MAIN EXTENSION**  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

JEA NOTES—LEGEND—INDEX

**C-2**

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JCK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020

Date	Revision

9/30/2020

HILLARY L. ALMOND, P.E.  
FL# 59247



GENERAL SITE NOTES – CITY OF JACKSONVILLE

GENERAL SITE NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF "CITY STANDARD SPECIFICATIONS FOR CITY OF JACKSONVILLE, FLORIDA", (LATEST REVISION) AND ALL CURRENT CITY STANDARD DETAILS. THE WORK SHALL ALSO BE PERFORMED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL INVESTIGATION REPORT BY: MAE-MESKEL & ASSOCIATES ENGINEERING, 904-519-6990 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 OSHA 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 SUB-SURFACE, 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 AT CONTRACTOR'S SOLE COST AND EXPENSE. 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. OWNER SHALL BE NOTIFIED IF THE CONTRACTOR ENCOUNTERS UNSUITABLE MATERIALS. ANY FIELD EXPLORATION AND/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 WILL BE AT THE OWNERS EXPENSE.
5. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. IF THE WORK IS IN CITY RIGHT-OF-WAY OR EASEMENT, THE CONTRACTOR'S ONE YEAR WARRANTY SHALL ALSO EXTEND TO THE CITY OF JACKSONVILLE.
6. ELEVATIONS ARE BASED ON NAVD 88
7. SURVEY INFORMATION TAKEN BY:Johnson Surveying and Mapping, Inc. Jacksonville, Fl. 32221
8. TREE SURVEY INFORMATION TAKEN FROM FIELD VISITS AND EXISTING PLANS AND ARE RELATIVE.
9. FOR BOUNDARY, ROADWAY AND BUILDING GEOMETRY INFORMATION SEE ENGINEERING SITE PLAN. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THE BUILDING DIMENSIONS SHOWN ON THE ENGINEERING PLAN AGREE WITH THE DIMENSIONS SHOWN ON THE ARCHITECTURAL PLAN. IF ANY DIMENSIONS DO NOT AGREE, THE ARCHITECT, ENGINEER AND OWNER SHALL BE NOTIFIED AND THE DIMENSIONS ADJUSTED PRIOR TO COMMENCING WITH CONSTRUCTION.
10. THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH CITY REQUIREMENT AND THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL INVESTIGATION REPORT. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND BUILDING PADS 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.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING CITY OF JACKSONVILLE RIGHT-OF-WAY PERMITS FOR WORK IN THE CITY RIGHT-OF-WAY OR EASEMENT.
12. 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; OTHERWISE, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS INCURRED.
13. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS 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. PRIOR TO ANY SUCH NOTIFICATION, THIS DISCREPANCY SHALL BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN 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 UTILITIES AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH HE SHALL CONNECT.

PAVEMENT MARKING STANDARDS

1. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN ON THE PLANS AND DETAIL SHEETS.
2. ANY REQUIRED TEMPORARY MARKINGS MUST BE IN PLACE BEFORE OPENING LANES OF TRAFFIC. PAY ITEMS FOR TEMPORARY PAVEMENT MARKINGS ARE TO BE INCLUDED IN THE TABULATION OF QUANTITIES.
3. THE REMOVAL OF EXISTING PAVEMENT MARKINGS WILL BE CONSIDERED AN INCIDENTAL ITEM WITH NO ADDITIONAL COMPENSATION PROVIDED.
4. ALL PERMANENT PAVEMENT MARKINGS WILL BE CONSIDERED AN INCIDENTAL ITEM WITH NO ADDITIONAL COMPENSATION PROVIDED.
5. THERMOPLASTIC PAVEMENT MARKINGS ARE TO BE PLACED NO SOONER THAN 30 CALENDAR DAYS AFTER THE COMPLETION OF THE FINAL PAVEMENT LAYER.
6. A BITUMINOUS REFLECTIVE PAVEMENT MARKER (RPM) ADHESIVE MEETING CURRENT CITY OF JACKSONVILLE AND/OR FDOT SPECIFICATIONS SHALL BE USED ON ASPHALT ROADWAYS.
7. THE CONTRACTOR SHALL USE CLASS-B REFLECTIVE PAVEMENT MARKERS (RPM'S) INSTALLED TO MEET CURRENT CITY OF JACKSONVILLE SPECIFICATIONS AND/OR FDOT STANDARD SPECIFICATIONS.
8. REFLECTIVE PAVEMENT MARKERS THAT DO NOT CONFLICT WITH PERMANENT (THERMOPLASTIC) MARKINGS SHALL BE PLACED ON ALL FINAL ASPHALTIC CONCRETE SURFACES IMMEDIATELY AFTER THE TEMPORARY PERMANENT STRIPING IS IN PLACE.
9. PAVEMENT MARKINGS REMOVAL:
  - (a) PAINT BACKLIFT METHOD OF PAVEMENT MARKINGS REMOVAL IS NOT ACCEPTED.
  - (b) GRINDING OR HYDRO BLAST METHODS SHALL BE USED ON WEATHERED ASPHALT SURFACES.
  - (c) REMOVAL ON NEW ASPHALT SURFACES SHALL BE BY HYDRO BLAST METHOD ONLY.
10. THE CONTRACTOR SHALL CONTACT THE PAVEMENT MARKING INSPECTOR (904) 255-7550 48 HOURS PRIOR TO INSTALLING ANY PAVEMENT MARKINGS ON ANY CITY OF JACKSONVILLE ROADWAY OR STREET.
11. IN THE EVENT OF A CONFLICT BETWEEN THE SPECIFICATIONS OF THE CITY OF JACKSONVILLE AND THE SPECIFICATIONS OF THE FDOT, THE CITY OF JACKSONVILLE WILL PREVAIL.

PAVING AND DRAINAGE NOTES:

1. "AS-BUILT" DRAWINGS – DRAINAGE AS-BUILTS PROVIDED TO CITY OF JACKSONVILLE 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 OF JACKSONVILLE STANDARDS AND SPECIFICATIONS AND SURVMD REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE AND SUBMIT AS-BUILT DRAWINGS TO THE ENGINEER FOR INTERNAL APPROVAL AND THEN CITY OF JACKSONVILLE. IN ADDITION TO THE DRAINAGE SYSTEM THE "AS-BUILTS" SHALL SHOW THE ELEVATIONS AND LOCATION OF THE TOP OF BANK, WATER LEVEL, TOE OF SLOPE AND POND BOTTOM AT 200' MAXIMUM INTERVALS ALONG POND BANK FOR ALL POND CONSTRUCTION.
2. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH CITY STANDARDS AND GEOTECHNICAL REPORT, AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION REPORT.
3. 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.
4. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR.
5. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTORS UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
6. ALL EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED.
7. BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH CITY OF JACKSONVILLE FIRE MARSHAL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER CITY OF JACKSONVILLE STANDARDS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
9. FOR SEDIMENT AND EROSION CONTROL PLANS, DETAILS AND NOTES REFER TO SHEETS C-19 AND C-20
10. UNSUITABLE MATERIALS UNDER WATER, SEWER PIPE, STORM PIPE OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED.
11. 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 & REPAIR AT CONTRACTOR'S SOLE COST AND EXPENSE.
12. ALL CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, BERMS AND BUILDINGS INCLUDED IN THIS PROJECT AND THE CLEARING AND GRUBBING OF ALL RIGHT-OF-WAY OR EASEMENTS SHALL BE CONSIDERED AS PART OF THIS PROJECT.
13. PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO, WETLANDS, SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62-621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.
14. ALL SITEWORK NEAR EXISTING TREES MUST BE REVIEWED WITH ON-SITE CONTRACTOR AND OWNER'S ARBORIST PRIOR TO COMMENCEMENT (I.E., PRE-CONSTRUCTION MEETING).
15. FOR SPECIAL PAVING AND DRAINAGE DETAILS SEE DRAWING NO. 3 THRU 5, FOR ALL STANDARD DETAILS SEE CITY OF JACKSONVILLE JEA STANDARD SPECIFICATIONS AND DETAILS, LATEST REVISION.

PAVING AND DRAINAGE NOTES:

16. 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.
17. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
18. ALL DRAINAGE STRUCTURES TO HAVE TRAFFIC BEARING GRATES.
19. ALL DRAINAGE PIPE JOINTS IN CITY DRAINAGE EASEMENTS AND DRAINAGE RIGHT-OF-WAYS ARE TO BE FILTER-WRAPPED.
20. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRECAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR REDDI-MIX CONCRETE WITH #57 STONE.
21. THE CONTRACTOR SHALL PROVIDE HANDICAP RAMPS AT ALL SIDEWALK AND CURB CONNECTIONS. HANDICAP RAMPS SHALL MEET ALL APPLICABLE ADA REQUIREMENTS.
22. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
23. IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT. THRESHOLD IS 1 MILLION GALLONS PER DAY.

WATER AND SEWER NOTES:

1. PRIOR TO THE PLACEMENT OF THE LIMEROCK BASE COURSE, THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY MANHOLES. THIS SCHEDULE SHALL BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS-BUILT" DRAWINGS FOR THIS PROJECT.
2. ALL GRAVITY SEWER MAINS SHALL BE PVC SDR-26 FOR ALL DEPTHS. FORCE MAINS TO BE PVC DR 18 PIPE UNLESS OTHERWISE NOTED. 15 FEET MAX. DEPTH FOR MAINS WITHOUT SERVICES, 12 FEET MAX. W/SERVICES.
3. SANITARY SEWER SERVICES SHALL BE 6" PVC WITH A MINIMUM SLOPE OF 0.01 FEET PER FOOT AND SHALL BE TERMINATED AT THE RIGHT-OF-WAY LINE WITH A DEPTH OF 30" UNLESS OTHERWISE DETAILED OR RESTRICTED DUE TO DEPTH OF SEWER MAIN.
4. WATER LINES SHALL HAVE A MINIMUM OF 30" COVER UNDER UNPAVED AREAS AND 36" MINIMUM COVER FROM FINISHED GRADE UNDER PAVED AREAS UNLESS OTHERWISE SHOWN. ALL WATER MAINS SHALL BE FLUSHED IN ACCORDANCE WITH, AND UNDER THE DIRECTION OF JEA.
5. WATER AND SEWER LINES ARE DESIGNATED TO FINISHED GRADES AND SHALL BE PROTECTED UNTIL FINISHED WORK IS COMPLETE.
6. HORIZONTAL SEPARATION BETWEEN WATER MAINS, VALVES AND FITTINGS, STORM SEWERS AND SANITARY SEWERS SHALL BE A MINIMUM OF 10 FEET OR IN ACCORDANCE WITH THE JEA'S STANDARDS AND SPECIFICATIONS (LATEST EDITION).
7. ALL WATER LINES CROSSING SANITARY SEWER LINES OR STORM SEWER, AS WELL AS VALVES AND FITTINGS, MUST HAVE MINIMUM 18" VERTICAL SEPARATION. IF THIS CANNOT BE OBTAINED, THE WATER MAIN MUST BE CONSTRUCTED OF DUCTILE IRON PIPE FOR A DISTANCE OF 9' EITHER SIDE OF SEWER MAIN OR STORM SEWER. AS AN ALTERNATIVE, WATER MAIN SHALL BE CONSTRUCTED IN A D.I. SLEEVE FOR A DISTANCE OF 20' MIN. CENTERED AT CROSSING, WITH THE ENDS OF SLEEVE FILLED WITH GROUT. IN EITHER CASE, A MINIMUM OF 6" OF VERTICAL SEPARATION SHALL BE MAINTAINED. ALL DUCTILE IRON PIPE SHALL BE CLASS 50 OR HIGHER.
8. MECHANICAL RESTRAINING JOINTS ARE REQUIRED IN ACCORDANCE WITH JEA STANDARDS WHERE WATER MAINS ARE TERMINATED AND AT ALL BENDS AND TEES.
9. UNLESS OTHERWISE NOTED, ALL OFF-SITE WATER MAINS TO BE PVC DR18, C-900 AND ALL ON-SITE WATER MAINS 4" AND GREATER SHALL BE DR25, C-900 AND ALL WATER MAINS 3" OR SMALLER SHALL BE POLY AND N.F.S. P.W. RATED.

COJ STANDARD MAINTENANCE OF TRAFFIC NOTES:

- NOTIFY THE TRAFFIC ENGINEERING DIVISION (255-7533), A MINIMUM OF 5 WORKING DAYS PRIOR TO IMPLEMENTATION OF THE MOT.
- 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 OR ARTERIAL STREETS.
- NO LANE CLOSURES ARE ALLOWED FROM 7:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM MONDAY THROUGH FRIDAY.
- THE CONTRACTOR SHALL CONFIRM THAT EXISTING SIGNAGE WILL NOT POSE A CONFLICT FOR WORK ZONE TRAFFIC CONTROL. THE CONTRACTOR SHALL COVER OR REMOVE ALL SIGNAGE IN CONFLICT WITH THE TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS.
- ANY MODIFICATIONS OF THIS MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE CITY OF JACKSONVILLE TRAFFIC ENGINEERING DIVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
- ACCESS TO SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- THE CITY OF JACKSONVILLE PROHIBITS MID-BLOCK CROSSINGS OF PEDESTRIANS. WHEN AN ALTERNATE PAVED PEDESTRIAN ROUTE IS NOT FEASIBLE, THE CONTRACTOR SHALL MAINTAIN A 4 FT. WIDE STABLE PEDESTRIAN PATHWAY IN ACCORDANCE WITH FDOT INDEX 102-660.
- THE ROADWAY SHALL BE RESTORED TO AT LEAST A LIMEROCK SURFACE BEFORE IT IS REOPENED TO TRAFFIC AND BEFORE THE CONTRACTOR MOVES TO THE NEXT CONSTRUCTION ZONE
- MAINTENANCE OF TRAFFIC PLANS WITHIN FDOT RIGHT-OF-WAY (NONE) ARE SUBJECT TO FDOT APPROVAL
- IF SIGNS ARE DAMAGED DURING CONSTRUCTION ACTIVITY,THE CONTRACTOR IS REQUIRED TO REPLACE THEM IMMEDIATELY IN ACCORDANCE WITH CURRENT CITY STANDARD SPECIFICATIONS.

WATER AND SEWER NOTES:

10. ALL GATE VALVES SHALL BE JEA 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.
11. ALL FIRE HYDRANTS SHALL BE JEA STANDARD. FIRE HYDRANTS LOCATED WITHIN CITY OF JACKSONVILLE RIGHT OF WAYS OR EASEMENTS SHALL BE PAINTED YELLOW. ALL OTHER FIRE HYDRANTS SHALL BE PAINTED RED.
12. ALL JEA CONDUIT WORK SHALL BE COMPLETED PRIOR TO THE PRESSURE TESTING OF WATER AND SEWAGE FORCE MAINS.
13. ALL WATER MAINS SHALL BE DISINFECTED, AND SATISFACTORY BACTERIOLOGICAL RESULTS SHALL BE PROVIDED TO THE ENGINEER. ADDITIONALLY, ALL WATER MAINS SHALL BE PRESSURE TESTED AT 150 PSI FOR 2 HOURS IN ACCORDANCE WITH AWWA STANDARDS AND JEA STANDARD REQUIREMENTS. 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. DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA-6-651.
14. 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 SOLDER AND FLUX SHALL CONTAIN NO MORE THAN 0.2 PERCENT LEAD.
15. IF SOLVENT CONTAMINATION IS FOUND IN THE PIPE TRENCH, WORK SHALL BE STOPPED AND THE PROPER AUTHORITIES NOTIFIED. WITH APPROVAL, THE PERMITTING AGENCY, DUCTILE IRON PIPE, FITTINGS AND SOLVENT RESISTANT GASKET MATERIAL SUCH AS FLUOROCARBON SHALL BE USED IN THE CONTAMINATED AREA. THE DUCTILE PIPE SHALL EXTEND AT LEAST 100 FEET BEYOND ANY SOLVENT NOTED. ANY CONTAMINATED SOIL THAT IS EXCAVATED SHALL BE PLACED ON AN IMPERMEABLE MAT AND COVERED WITH A WATERPROOF COVERING. THE PROPER AUTHORITIES WILL NOTIFIED AND THE CONTAMINATED SOIL HELD FOR PROPER DISPOSAL.
16. TELEVISION INSPECTION SHALL BE REQUIRED ON ALL GRAVITY SEWER MAINS. GRAVITY SEWER LINE SHALL BE VIDEO TAPED. ALL LINES TO BE CLEANED AND FLUSHED PRIOR TO BEING VIDEO TAPED. 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 JEA. ALL DEFECTIVE AREAS AND ITEMS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL ACCEPTANCE. ALL REPAIRED SECTIONS MUST BE REINSPECTED PRIOR TO ACCEPTANCE. THE MAXIMUM DEFLECTION SHALL NOT EXCEED 7.5% OF NOMINAL DIAMETER IN ACCORDANCE WITH JEA STANDARDS. INFILTRATION AND EXFILTRATION TESTING OF GRAVITY SEWERS SHALL BE IN ACCORDANCE WITH UTILITY COMPANY SPECIFICATIONS. THE MAXIMUM ACCOUNTABLE RATE WILL BE 50 GALLONS PER INCH DIAMETER PER MILE PER DAY.
17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER (AND JEA IF REQUIRED) ON ALL STRUCTURES AND MATERIALS, FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OR FABRICATION OF ANY UTILITY PIPE OR STRUCTURE.
18. ALL NEW FIRE HYDRANT INSTALLATIONS, PUBLIC AND PRIVATE, SHALL HAVE A BLUE F.D.O.T. TYPE REFLECTIVE PAVEMENT MARKER INSTALLED IN THE CENTER OF THE TRAFFIC LANE NEAREST THE NEW FIRE HYDRANT.
19. ALL FIRE HYDRANTS THAT ARE SUPPLIED BY A FIRE PUMP AND SUBJECT TO HIGH PRESSURE (IN EXCESS OF 60 P.S.I.) SHALL BE PAINTED GREEN WITH RED LETTERS "H.P." APPROXIMATELY 2" HIGH. THESE LETTERS SHALL BE STENCILED ON THE HYDRANT IN A CONSPICUOUS/ VISIBLE AREA.
20. ALL WATER, SANITARY SEWER AND STORM SEWER CONSTRUCTION SHALL BE ACCOMPANIED BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP A COPY OF HIS OR HER CURRENT LICENSE AND QUALIFIERS ON FILE WITH THE DESIGN ENGINEER PRIOR TO START OF AND THROUGHOUT CONSTRUCTION.
21. CONTRACTOR SHALL OBTAIN A COPY OF THE D.E.P. WATER AND SEWER PERMITS FROM THE ENGINEER PRIOR TO START OF CONSTRUCTION AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH SUCH PERMIT.
22. 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.

JEA – UTILITY CONSTRUCTION NOTES:

1. ALL WATER, RECLAIMED WATER, AND SANITARY WASTEWATER WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL, ALL APPLICABLE LOCAL AND STATE REGULATORY RULES & REGULATIONS AND OTHER APPLICABLE JEA RULES.
2. ALL WATER, RECLAIMED WATER, AND WASTEWATER CONSTRUCTION SHALL BE PROVIDED BY A CONTRACTOR QUALIFIED, AS REQUIRED UNDER THE CURRENT FLORIDA STATUTE, OR BY AN UNDERGROUND UTILITY CONTRACTOR, LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FS.
3. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING CITY OR COUNTY RIGHT-OF-WAY PERMITS FOR WORK IN THE CITY R/W, COUNTY R/W, OR A FDOT PERMIT FOR WORK IN THE FDOT R/W.
4. THE APPLICANT SHALL CONTACT THE JEA, AND SCHEDULE A PRE-CONSTRUCTION MEETING, TO BE HELD PRIOR TO INITIATING THE JEA WATER AND WASTEWATER UTILITY WORK, INCLUDING ALL UTILITY MAIN TAPS BY THE CONTRACTOR.
5. JEA WATER AND WASTEWATER TAP FEES, JEA WATER AND SEWER CAPACITY FEES, AND JEA METER FEES SHALL BE PAID PRIOR TO THE WATER METER INSTALLATION. WATER METERS WILL NOT BE INSTALLED PRIOR TO THE ISSUANCE OF OWNERSHIP/TRANSFER OF OWNERSHIP DOCUMENTS, WHICH MAY INCLUDE THE ISSUANCE OF A REGULATORY CLEARANCE LETTER (COC) FOR THE WATER AND WASTEWATER IMPROVEMENTS, COMPLETION, AND APPROVAL OF FINAL INSPECTION AND APPROVED AS-BUILT DRAWINGS.
6. FINAL CONNECTION TO THE JEA SYSTEM MAY BE CONTINGENT UPON THE CONSTRUCTION, DEDICATION, AND FINAL ACCEPTANCE (TRANSFER OF OWNERSHIP/MAINTENANCE) OF THE JEA OFF-SITE UTILITIES.
7. THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR THE WATER, RECLAIMED WATER, AND WASTEWATER IMPROVEMENTS SHALL CONFORM TO THE LATEST JEA AND FDEP RULES. THE MINIMUM HORIZONTAL SEPARATION REQUIREMENTS BETWEEN PROPOSED WATER AND WASTEWATER UTILITIES AND PONDS OR STRUCTURES SHALL CONFORM TO THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.
8. WATER AND WASTEWATER PIPES LESS THAN 24-INCHES IN DIAMETER SHALL BE CONSTRUCTED WITH A MINIMUM 30-INCHES COVER IN UNPAVED OR SIDEWALK AREAS AND A MINIMUM COVER OF 36-INCHES COVER FOR UTILITIES, BOTH OPEN CUT AND UTILIZING HORIZONTAL DIRECTIONAL DRILL METHODS. SHALL COMPLY WITH THE LATEST JEA WATER AND WASTEWATER STANDARDS MANUAL.
9. WATER AND WASTEWATER PRESSURE MAINS AND SERVICES SHALL PASS A JEA PRESSURE AND LEAKAGE TEST AT 150-PSI MINIMUM, OR TWO TIMES OPERATING PRESSURE, FOR 2-HOURS. IN ADDITION, WATER MAINS SHALL BE DISINFECTED AND PASS A BACTERIOLOGICAL ANALYSIS. ALL TEST SHALL CONFORM TO JEA AND FDEP RULES, REGULATIONS, AND AWWA C-651. THE JEA INSPECTOR SHALL BE NOTIFIED 72-HOURS (MIN) PRIOR TO PERFORMING THESE TESTS. NO FINAL CONNECTION(S) TO EXISTING POTABLE WATER MAINS SHALL BE MADE UNTIL THE NEW MAIN IS PRESSURE TESTED, DISINFECTED, AND CLEARED FOR SERVICE.
10. IN THE AREAS WHERE SOLVENT CONTAMINATION IS FOUND IN THE TRENCH, WORK SHALL BE STOPPED AND THE PROPER REGULATORY AUTHORITIES NOTIFIED. A REVERSED CONSTRUCTION PLAN SHALL BE APPROVED BY JEA AND FDEP THAT COMPLIES WITH ALL REGULATORY RULES. THE REVERSED CONSTRUCTION PLAN FOR THE JEA WATER MAIN SYSTEM, INCLUDING WATER SERVICE LINES, MAY INVOLVE GALVANIZED OR DUCTILE IRON PIPE WITH SPECIAL SOLVENT RESISTANT (FLUOROCARBON TYPE) GASKETS THAT EXTEND 100-FEET BEYOND THE CONTAMINATED AREAS.
11. THE CONTRACTOR SHALL MINIMIZE SERVICE INTERRUPTIONS TO EXISTING JEA WATER AND WASTEWATER CUSTOMERS. IF JEA APPROVES A SERVICE INTERRUPTION, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING THE AFFECTED CUSTOMERS IN ACCORDANCE WITH THE LATEST JEA RULES.
12. RESIDENTIAL SERVICES USING RECLAIMED WATER FOR IRRIGATION MUST HAVE A JEA APPROVED BACKFLOW PREVENTER INSTALLED ON EACH POTABLE WATER SERVICE PRIOR TO THE INSTALLATION OF A JEA RECLAIMED WATER METER. THE INSTALLATION OF A BACKFLOW PREVENTER SHALL BE IN ACCORDANCE WITH THE JEA RULES AND REGULATIONS FOR WATER, SEWER, AND RECLAIMED WATER SERVICES, APPENDIX B, CROSS CONNECTION CONTROL POLICY.
13. FOR DEVELOPMENTS UTILIZING RECLAIMED WATER, A JEA APPROVED RECLAIMED WATER SIGNAGE PLAN SHALL BE IMPLEMENTED PRIOR TO THE INSTALLATION OF THE RECLAIMED WATER METERS.
14. ALL BACKFLOW PREVENTERS SHALL BE IN ACCORDANCE WITH JEA CROSS CONNECTION PROGRAM. BACKFLOW PREVENTERS MUST BE TESTED AFTER INSTALLATION BY A CERTIFIED TESTER AND ANNUALLY THEREAFTER. JEA CONTACT: PERMITTING 904-665-7988.
15. BACKFLOW PREVENTERS ON FIRE LINES OR COMBINATION FIRE/POTABLE MAINS SHALL HAVE FREEZE PROTECTION.

WATER AND SEWER NOTES:

23. A JEA WATER AND SEWER BUSINESS UNIT PRE CONSTRUCTION CONFERENCE MUST BE HELD PRIOR TO COMMENCEMENT OF WATER OR SEWER WORK. THE CONTRACTOR SHALL CONTACT CHRIS BARRINGTON AT 665-4081 TO SCHEDULE THIS CONFERENCE.
24. UNSUITABLE MATERIALS UNDER WATER, SEWER PIPE, STORM PIPE OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED.
25. ALL SANITARY SEWER FORCE MAINS SHALL HAVE A MINIMUM OF 30" COVER FROM FINISHED GRADE UNDER UNPAVED AREAS AND 36" MINIMUM COVER FROM FINISHED GRADE UNDER PAVED AREAS UNLESS OTHERWISE NOTED
26. THE CONTRACTOR SHALL INSTALL ANY ADDITIONAL AIR RELEASE VALVES AT CHANGES IN ELEVATION OF 2 FT. DUE TO ACTUAL FIELD CONDITIONS OR CONFLICTS NOT IDENTIFIED ON THESE DESIGN PLANS.
27. CONTRACTOR SHALL FURNISH AND INSTALL LOCATE WRING ON ALL PVC WATER MAINS, FORCE MAINS, POLYETHYLENE AND PVC WATER SERVICES. INSTALLATION SHALL BE IN ACCORDANCE WITH JEA WATER & WASTEWATER STANDARDS MANUAL DATED JANUARY 1, 2020 SECTION 350 PARAGRAPH II.6 LOCATE WIRE AND SECTION 429 PARAGRAPH II.6 LOCATE WIRE.
28. ALL POINT OF CONNECTIONS FOR WATER AND SEWER MUST BE PER THE WATER AND SEWER AVAILABILITY RESPONSE FROM JEA WATER AND SEWER BUSINESS UNIT.
29. D.E.P. PERMITS SUBMITTED THROUGH THE DEPARTMENT FOR PROCESSING SHALL BE IN CONFORMANCE WITH BOTH THE DESIGN PLANS AND THE WATER AND SEWER AVAILABILITY RESPONSE. ANY MINOR OR MAJOR DEVIATIONS BETWEEN THE PRELIMINARY DESIGN AND FINAL DESIGN SUBMITTAL SHALL REQUIRE REVISED D.E.P. PERMITS REFLECTING THESE CHANGES.
30. D.E.P. PERMITS REQUIRING REVISIONS SHALL NOT BE PROCESSED UNTIL FINAL PLANS HAVE BEEN APPROVED.
31. CONTRACTOR SHALL PREPARE AND PROVIDE WATER AND SEWER AS-BUILTS TO THE ENGINEER.
32. THESE PLANS WERE REVIEWED FOR DESIGN ONLY. ALL PIPING AND ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST JEA STANDARDS, DETAILS AND MATERIALS MANUAL. CURRENT REVISION EFFECTIVE DATE IS JANUARY 2020
33. ALL PIPES CONFORM TO THE APPROPRIATE AWWA STANDARDS AND SPECIFICATIONS.
34. ALL SEWER FORCE MAIN(S) PRESSURE AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600-87 AND/OR JEA'S APPLICABLE STANDARDS AND SPECIFICATIONS.
35. ALL WATER MAIN(S) PRESSURE AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600-87 AND/OR JEA'S APPLICABLE STANDARDS AND SPECIFICATIONS.
36. ALL WATER MAIN(S) DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA C651 AND/OR JEA'S APPLICABLE STANDARDS AND SPECIFICATIONS.
37. BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED FOLLOWING INSTALLATION BY A LICENSED TESTER. SUBMIT BACKFLOW ASSEMBLY TEST REPORTS TO JEA ATTN: ZACK WALDRUP, 21 WEST CHURCH STREET, T-8, JACKSONVILLE, FLORIDA 32202. BACKFLOW PREVENTION ASSEMBLIES SHALL BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF JEA'S CROSS-CONNECTION CONTROL POLICY MANUAL. CONTACT ZACK WALDRUP AT WALDZW@JEA.COM
38. CONNECTION CONTINGENT UPON CONSTRUCTION, DEDICATION AND FINAL ACCEPTANCE OF THE OFFSITE WATER TRANSMISSION SYSTEM AND SEWER COLLECTION SYSTEM WITHIN THE LIMITS OF THE PROJECTS.
39. WATER AND SEWER CAPACITY FEES SHALL BE REQUIRED AT THE TIME OF METER APPLICATION. FEES WILL BE BASED ON TOTAL NUMBER OF PLUMBING FIXTURES UNITS SHOWN OR LISTED ON BUILDING PLANS.
40. A \$20.00 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 JEA'S SEWER COLLECTION SYSTEM. IN ADDITION, SEWER CAPACITY FEES MUST BE PAID AT THE 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 JEA'S SYSTEM FOR TREATMENT.
41. METER MUST BE APPLIED FOR AND 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.
42. AUTOMATIC SPRINKLER/FIRE MAIN SERVICES:  
A RETERED BACKFLOW PREVENTER IS REQUIRED ON ALL A.S. SERVICES AND FIREMAIN 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 THE SITE. RESUBMITTAL SHALL BE REQUIRED IN THE EVENT THAT FIRE MARSHALL REVIEW OF BUILDING PLANS REQUIRES A SPRINKLER SYSTEM WHICH WAS NOT INDICATED ON THE CIVIL DESIGN PLANS.

CDN: 4161,328

RCV: 10/22/2020 15:52

Date

Revision

AE JOB NO.: 20-43

DESIGN: H.L.A.

DRAWN: JGK

CHECKED: H.L.A.

PLOT DATE:9-30-2020

GENERAL NOTES

EASTPORT ROAD FORCE

MAIN EXTENSION

JEA PROJECT NO. 8005937

JEA AVAILABILITY 2020-3228

ALMOND ENGINEERING

CONSULTING CIVIL ENGINEERS

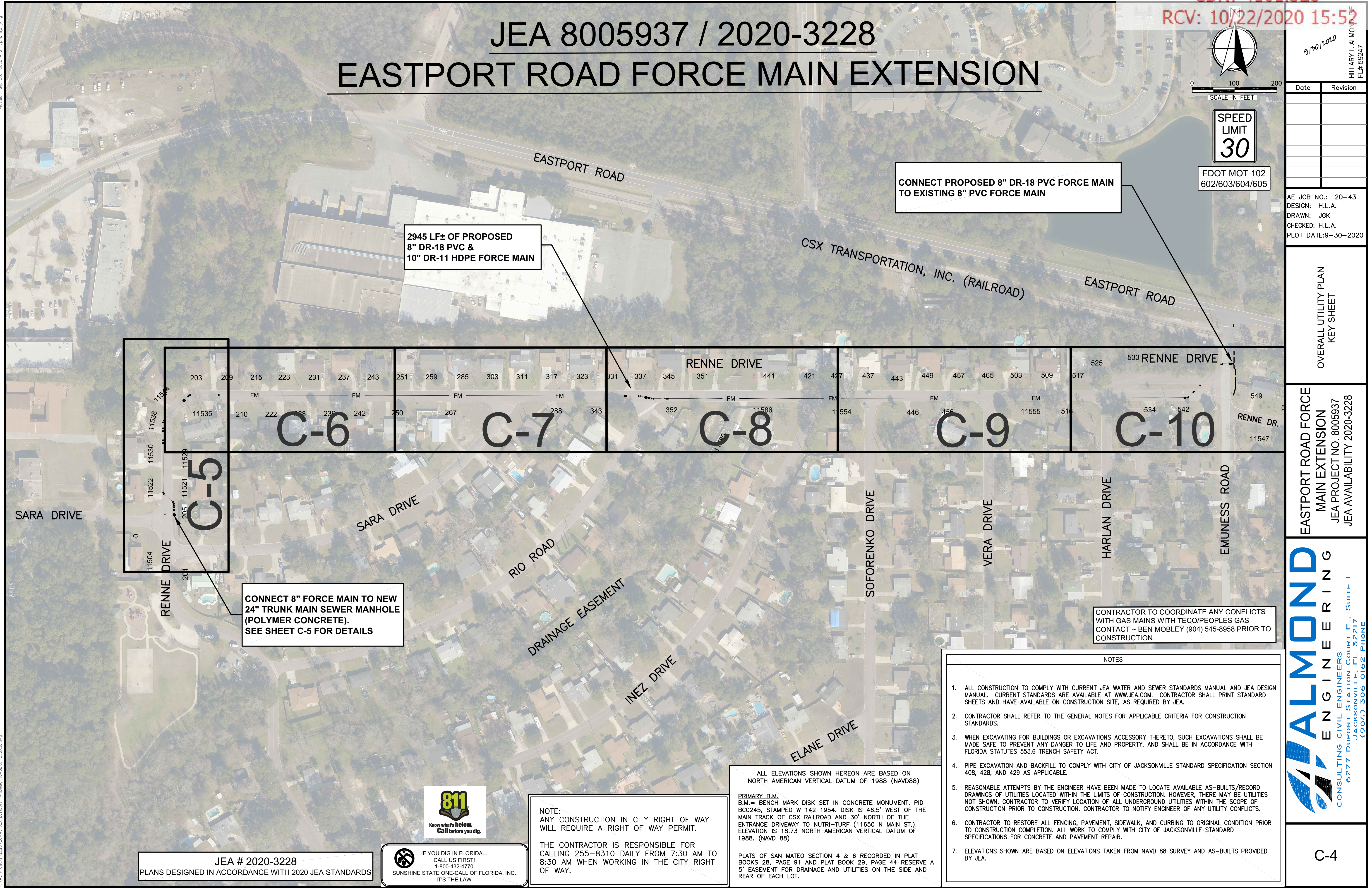
6277 DUPONT STATION COURT E., SUITE 1 JACKSONVILLE, FL 32217 (904) 368-0162 PHONE

C-3



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SCALE IN FEET

SPEED  
LIMIT  
30

FDOT MOT 102  
602/603/604/605

Date	Revision

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JCK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020

OVERALL UTILITY PLAN  
KEY SHEET

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

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NOTE:  
ANY CONSTRUCTION IN CITY RIGHT OF WAY  
WILL REQUIRE A RIGHT OF WAY PERMIT.

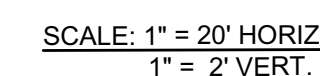
THE CONTRACTOR IS RESPONSIBLE FOR  
CALLING 255-8310 DAILY FROM 7:30 AM TO  
8:30 AM WHEN WORKING IN THE CITY RIGHT  
OF WAY.

ALL ELEVATIONS SHOWN HEREON ARE BASED ON  
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
**PRIMARY B.M.**  
B.M.= BENCH MARK DISK SET IN CONCRETE MONUMENT. PID  
BC0245, STAMPED W 142 1954. DISK IS 46.5' WEST OF THE  
MAIN TRACK OF CSX RAILROAD AND 30' NORTH OF THE  
ENTRANCE DRIVEWAY TO NUTRI-TURF (11650 N MAIN ST.).  
ELEVATION IS 18.73 NORTH AMERICAN VERTICAL DATUM OF  
1988. (NAVD 88)  
PLATS OF SAN MATEO SECTION 4 & 6 RECORDED IN PLAT  
BOOKS 28, PAGE 91 AND PLAT BOOK 29, PAGE 44 RESERVE A  
5' EASEMENT FOR DRAINAGE AND UTILITIES ON THE SIDE AND  
REAR OF EACH LOT.

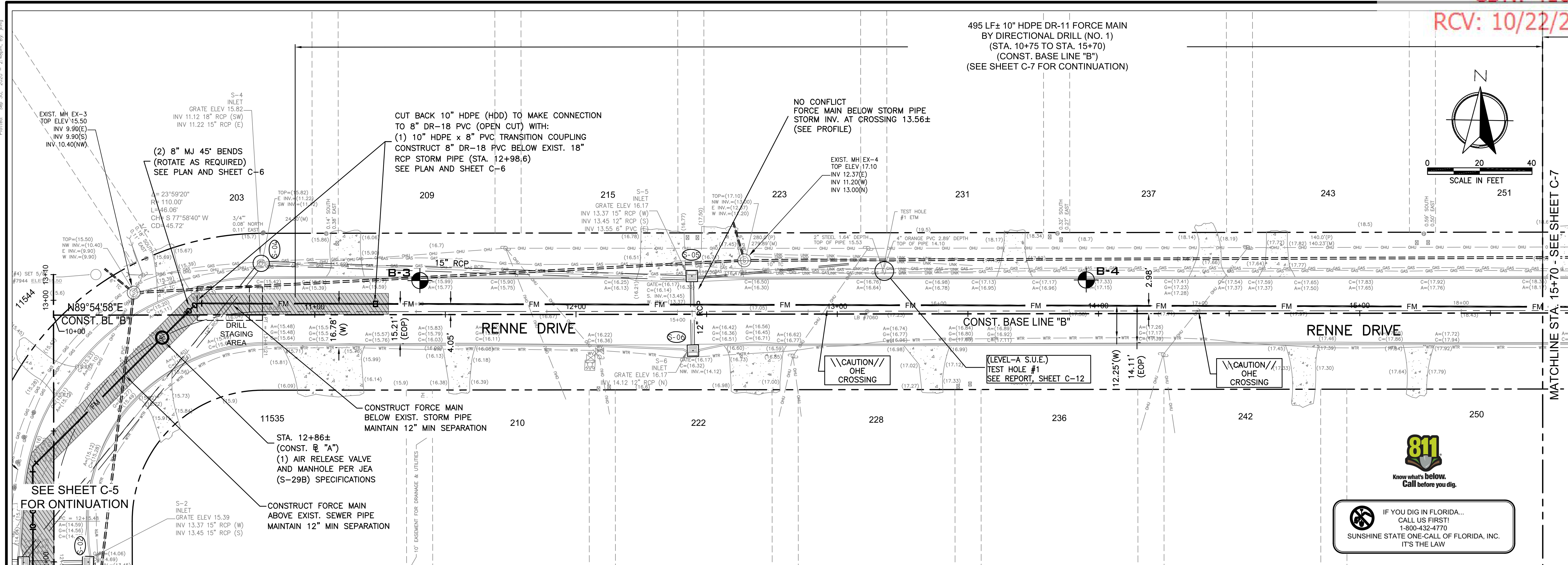
NOTES

1. ALL CONSTRUCTION TO COMPLY WITH CURRENT JEA WATER AND SEWER STANDARDS MANUAL AND JEA DESIGN MANUAL. CURRENT STANDARDS ARE AVAILABLE AT WWW.JEA.COM. CONTRACTOR SHALL PRINT STANDARD SHEETS AND HAVE AVAILABLE ON CONSTRUCTION SITE, AS REQUIRED BY JEA.
2. CONTRACTOR SHALL REFER TO THE GENERAL NOTES FOR APPLICABLE CRITERIA FOR CONSTRUCTION STANDARDS.
3. WHEN EXCAVATING FOR BUILDINGS OR EXCAVATIONS ACCESSORY THERETO, SUCH EXCAVATIONS SHALL BE MADE SAFE TO PREVENT ANY DANGER TO LIFE AND PROPERTY, AND SHALL BE IN ACCORDANCE WITH FLORIDA STATUTES 553.6 TRENCH SAFETY ACT.
4. PIPE EXCAVATION AND BACKFILL TO COMPLY WITH CITY OF JACKSONVILLE STANDARD SPECIFICATION SECTION 408, 428, AND 429 AS APPLICABLE.
5. REASONABLE ATTEMPTS BY THE ENGINEER HAVE BEEN MADE TO LOCATE AVAILABLE AS-BUILTS/RECORD DRAWINGS OF UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION. HOWEVER, THERE MAY BE UTILITIES NOT SHOWN. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE SCOPE OF CONSTRUCTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY UTILITY CONFLICTS.
6. CONTRACTOR TO RESTORE ALL FENCING, PAVEMENT, SIDEWALK, AND CURBING TO ORIGINAL CONDITION PRIOR TO CONSTRUCTION COMPLETION. ALL WORK TO COMPLY WITH CITY OF JACKSONVILLE STANDARD SPECIFICATIONS FOR CONCRETE AND PAVEMENT REPAIR.
7. ELEVATIONS SHOWN ARE BASED ON ELEVATIONS TAKEN FROM NAVD 88 SURVEY AND AS-BUILTS PROVIDED BY JEA.

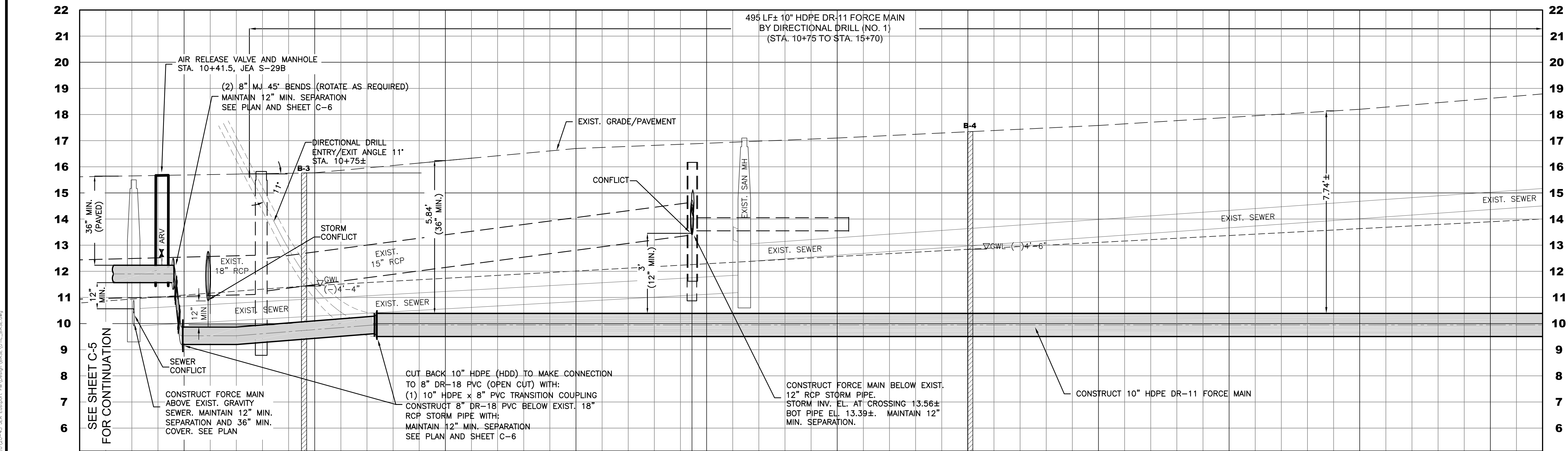








PLAN RENNE DRIVE - STA. 10+20 TO STA. 15+70 (CONST. BL "B")



PROFILE RENNE DRIVE - STA. 10+20 TO STA. 15+70 (CONST. BL "B")

SCALE: 1" = 20' HORIZ.  
1" = 2' VERT.

JEA #2020-3228  
PLANS DESIGNED IN ACCORDANCE WITH 2020 JEA STANDARDS

3/20/2020

HILLARY L. ALMOND, P.E.  
FL# 59247

Date	Revision

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JCK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020

ROADWAY & SEWER  
PROFILES

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

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C-6



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0 20 40  
SCALE IN FEET

3/20/2020  
HILLARY L. ALMOND, P.E.  
FL # 59247

Date	Revision

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ROADWAY & SEWER  
PROFILES

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

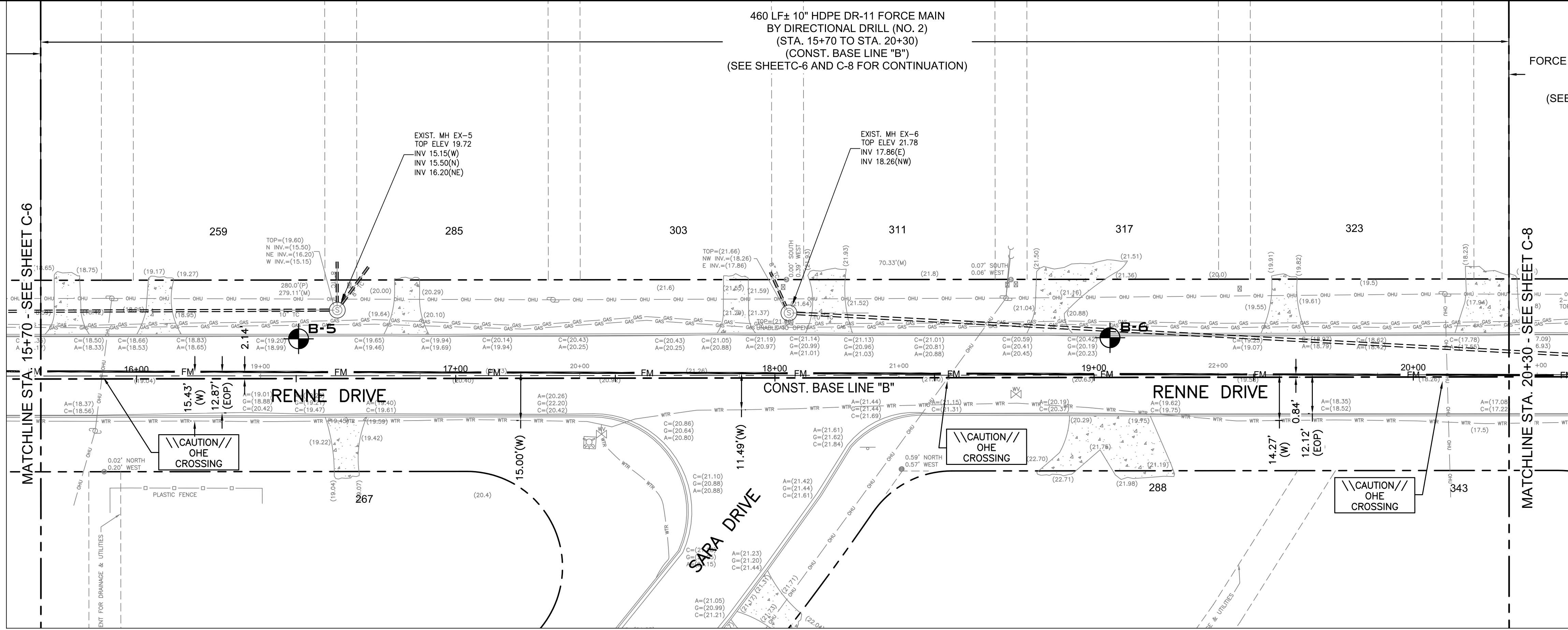
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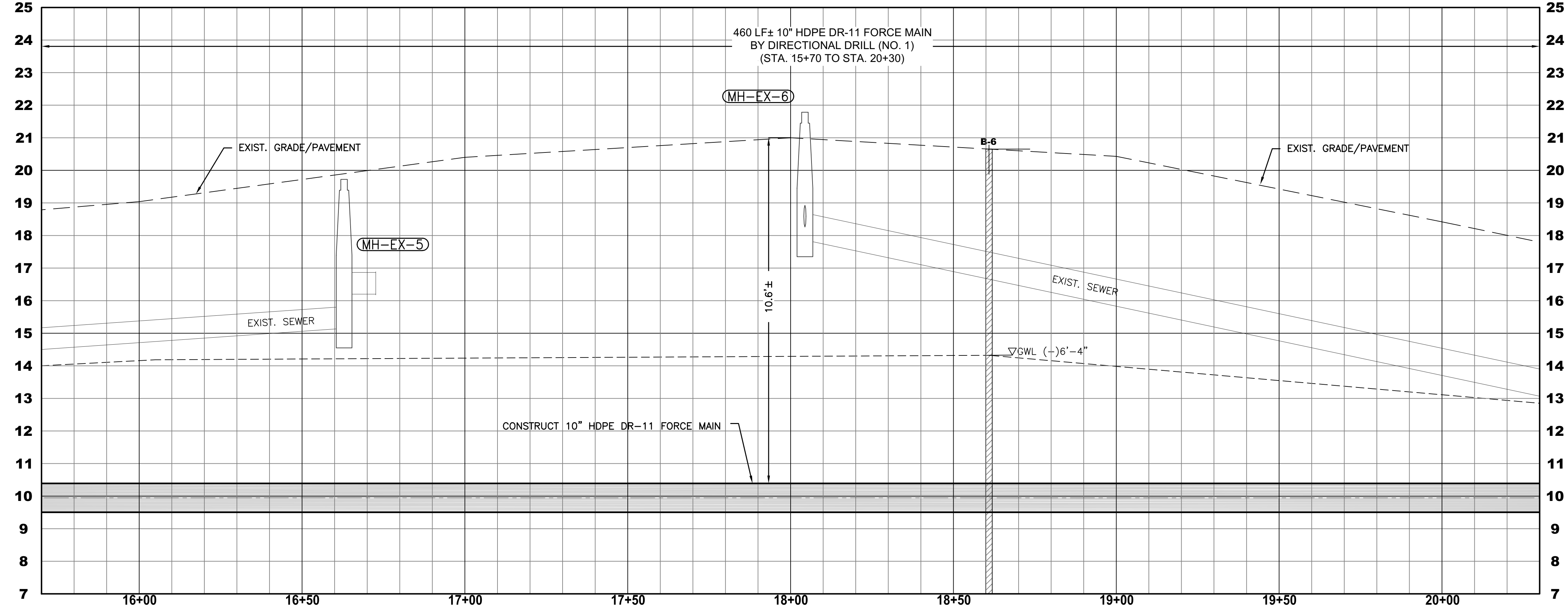
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JEA #2020-3228  
PLANS DESIGNED IN ACCORDANCE WITH 2020 JEA STANDARDS

C-7



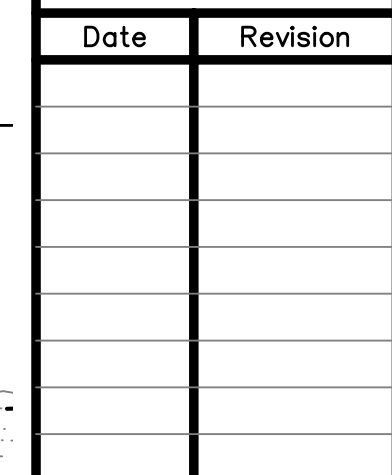
PLAN RENNE DRIVE - STA. 15+70 TO STA. 20+30



PROFILE RENNE DRIVE - STA. 15+70 TO STA. 20+30

SCALE: 1" = 20' HORIZ.  
1" = 2' VERT.





## ROADWAY & SEWER PROFILES

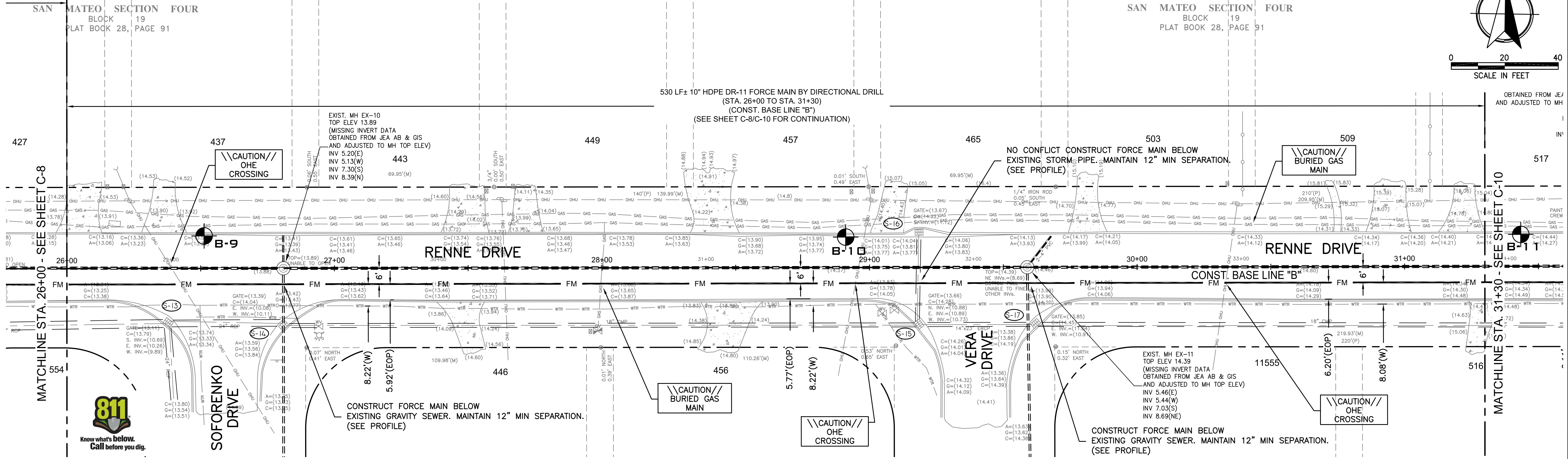
**EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228**

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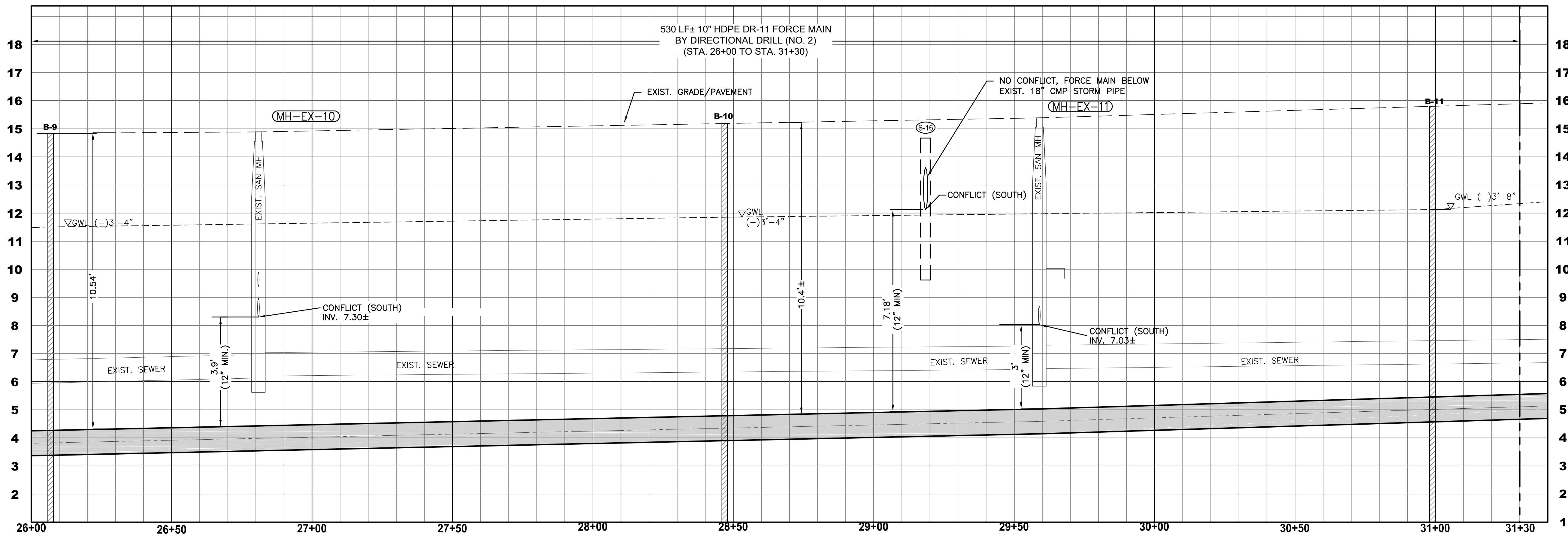
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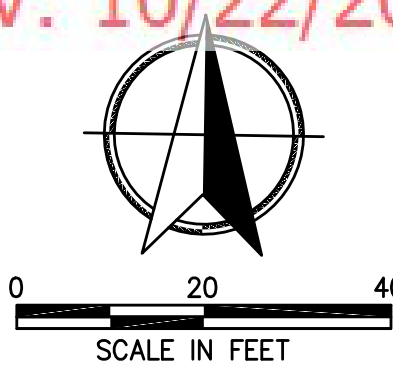


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PLANS DESIGNED IN ACCORDANCE WITH 2020 JEA STANDARDS



PLAN RENNE DRIVE - STA. 26+00 TO STA. 31+30  
PROFILE RENNE DRIVE - STA. 26+00 TO STA. 31+30  
SCALE: 1" = 20' HORIZ.  
1" = 2' VERT.



Date	Revision

AE JOB NO.: 20-43  
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ROADWAY & SEWER  
PROFILES

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

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C-9



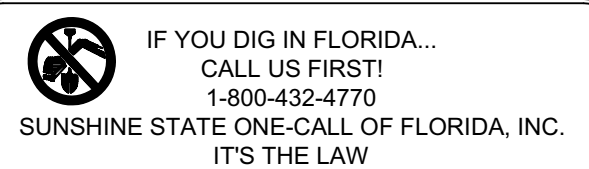
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DRAWN: JGK  
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EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

C-10



JEA #2020-3228  
PLANS DESIGNED IN ACCORDANCE WITH 2020 JEA STANDARDS









ETM

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VISION • EXPERIENCE • RESULTS

VERIFY VERTICAL AND HORIZONTAL REPORT (VVH)

TEST HOLE NO.: #1

ETM WORK ORDER NO.: SUNSHINE-811 TICKET: 133007056

REPORT BY: P. Herold

ASSISTED BY: P. Chsteen

PROJECT NAME: Eastport FM - Almond Eng.

LOCATION: 231 Renne Dr

VVH REQUESTED BY: Almond Engineering

NO. HOLES: 1

DATE: 5/27/2020

TIME:

REQUESTED UTILITY: GAS MAIN

UTILITY OWNER: TECO

LOCATED UTILITY: GAS / UKN

PAVEMENT TYPE: Soft

MATERIAL AS FOUND: PVC / Steel

COLOR: Orange/Gray

PAVEMENT CONDITION: N/A

SIZE AS EXPECTED: 4"

SIZE AS FOUND: 4" / 2"

SOIL CONDITIONS: ☒ SOFT ☐ DRY ☐ CLAY ☐ DIRT

UTILITY CONDITION: Fair

PROPOSED: Locate Utility

PAINT FLAGGED: Yellow / Pink

INSTALLED: ~~IRON ROD & CAP LB3624~~ or ~~A/CROWN, EDGE, OTHER~~

ELEV. ROD

COVER (TOP) 4" PVC - 2.89' 2" Steel - 1.64' ELEV. (TOP)

COVER (BOTTOM)

ELEV. (BOTTOM)

WIDTH 4" / 2"

UTILITY DIRECTION E - W

JOB MEASUREMENT TYPE: Tenths - Feet

NOTES: FND 4" Orange PVC Pipe @ 2.89' FND 2" Steel Ukn Pipe @ 1.64' See photos 136-4026 / 136-4027

EASTING/X: 455,531.9

NORTHING/Y: 2,222,853.0

0901-FLORIDA EAST (US SURVEY FEET)

FIELD SKETCH: (NOT TO SCALE - UNLESS OTHERWISE NOTED)

223

231

INDICATE NORTH

PP# 227

10.01 ft

28.20 ft

Edge of Pavement

RENNE DR

Edge of Pavement

Page 1 of 2  
FORM REVISED: 2020-03-05

TEST HOLE #1  
SEE SHEET C-6

ETM

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VERIFY VERTICAL AND HORIZONTAL REPORT (VVH)

05/27/2020 13:48

05/27/2020 14:01

PICTURE DESCRIPTION:

PICTURE DESCRIPTION:

Page 2 of 2

ETM

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VERIFY VERTICAL AND HORIZONTAL REPORT (VVH)

TEST HOLE NO.: #2

ETM WORK ORDER NO.: SUNSHINE-811 TICKET: 133007056

REPORT BY: P. Herold

ASSISTED BY: P. Chsteen

PROJECT NAME: Eastport FM - Almond Eng.

LOCATION: Emuness Rd 80' N of CL Renne Dr N

VVH REQUESTED BY: Almond Engineering

NO. HOLES: 1

DATE: 5/28/2020

TIME:

REQUESTED UTILITY: 8" PVC FM

UTILITY OWNER: JEA

LOCATED UTILITY: 8" PVC FM

PAVEMENT TYPE: Soft

MATERIAL AS FOUND: 2 - PVC

COLOR: GREEN

PAVEMENT CONDITION: N/A

SIZE AS EXPECTED: 8"

SIZE AS FOUND: 8" & 4"

SOIL CONDITIONS: ☒ SOFT ☐ DRY ☐ CLAY ☐ DIRT

UTILITY CONDITION: Fair

PROPOSED: Locate Utility

PAINT FLAGGED: GREEN

INSTALLED: ~~IRON ROD & CAP LB3624~~ or ~~A/CROWN, EDGE, OTHER~~

ELEV. ROD

COVER (TOP) 8" PVC - 4.37' 4" PVC - 3.48' ELEV. (TOP)

COVER (BOTTOM)

ELEV. (BOTTOM)

WIDTH 10" / 4"

UTILITY DIRECTION N - S

JOB MEASUREMENT TYPE: Tenths - Feet

NOTES: FND 8" Green PVC Pipe @ 4.37' FND 4" Green PVC Pipe @ 3.48' See photos 136-4030 / 136-4032

EASTING/X: 457,735.4

NORTHING/Y: 2,222,872.0

0901-FLORIDA EAST (US SURVEY FEET)

FIELD SKETCH: (NOT TO SCALE - UNLESS OTHERWISE NOTED)

EMUNESS RD

RENNE DR

Edge of Pavement

Water Main

Com Line

Water Valve

2" Galv WM @ 2.16'

4" Green PVC @ 3.48'

8" PVC FM @ 4.37'

Sewer Manhole

School Crossing Sign

Page 1 of 2  
FORM REVISED: 2020-03-05

TEST HOLE #2  
SEE SHEET C-10

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VERIFY VERTICAL AND HORIZONTAL REPORT (VVH)

05/28/2020 06:59

05/28/2020 07:47

05/28/2020 08:12

05/28/2020 08:34

PICTURE DESCRIPTION:

(Left) Abandoned 2" Galvanized Water Main 6.4' from edge of pavement @ 2.16'.  
(Right) 4" Green PVC (unknown use) @ 3.48' and 8" Green PVC FM - JEA Connection Point @ 4.37'.

PICTURE DESCRIPTION:

(Left) VVH location picture.  
(Right) Identified Water main and Communication line crossing Renne Dr.

Page 2 of 2

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S.U.E. REPORTS

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

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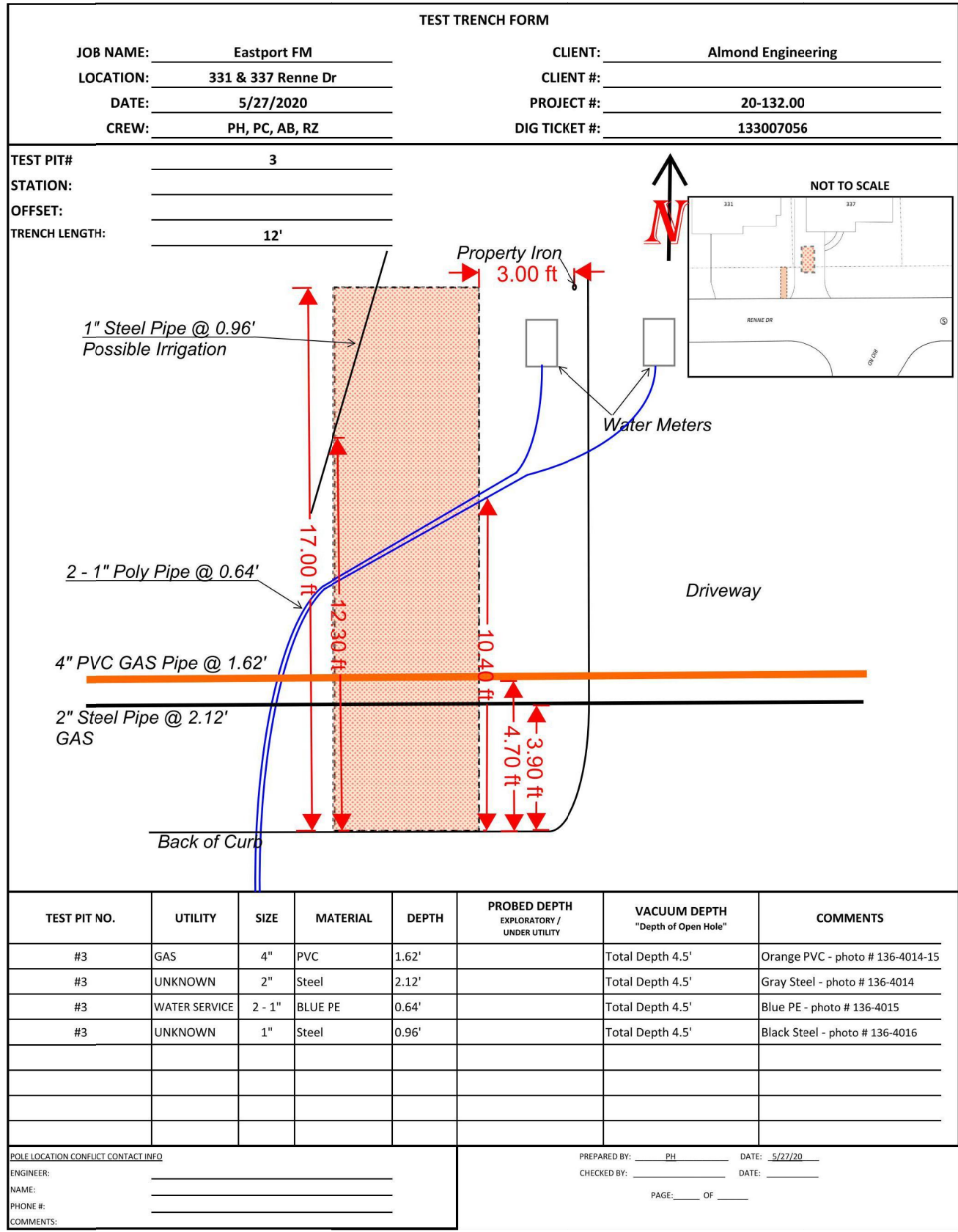


TEST PIT #1, SEE SHEET C-5

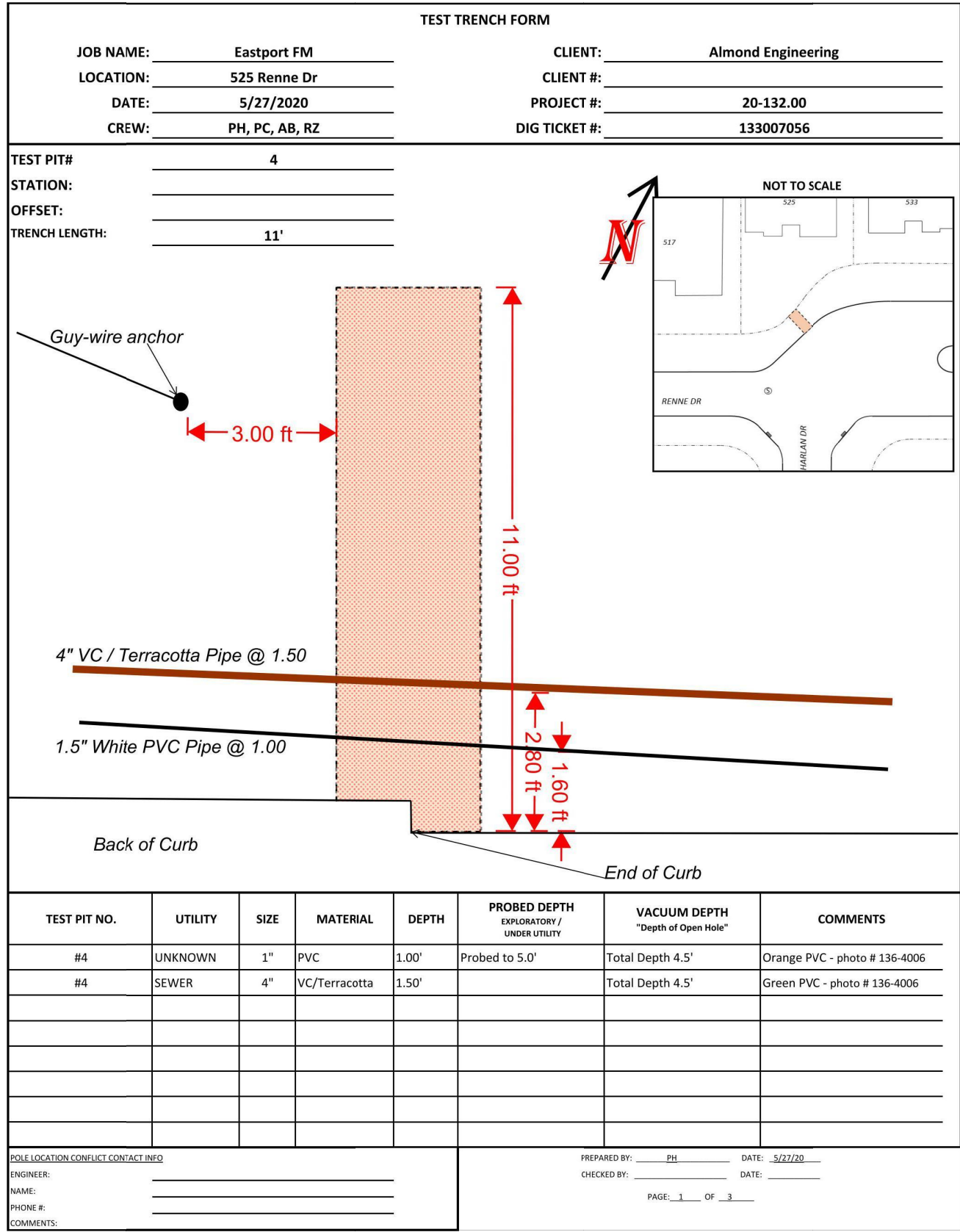
TEST PIT #2, SEE SHEET C-5

Page 2 of 3Page 2 of 3Page 3 of 3Page 3 of 3

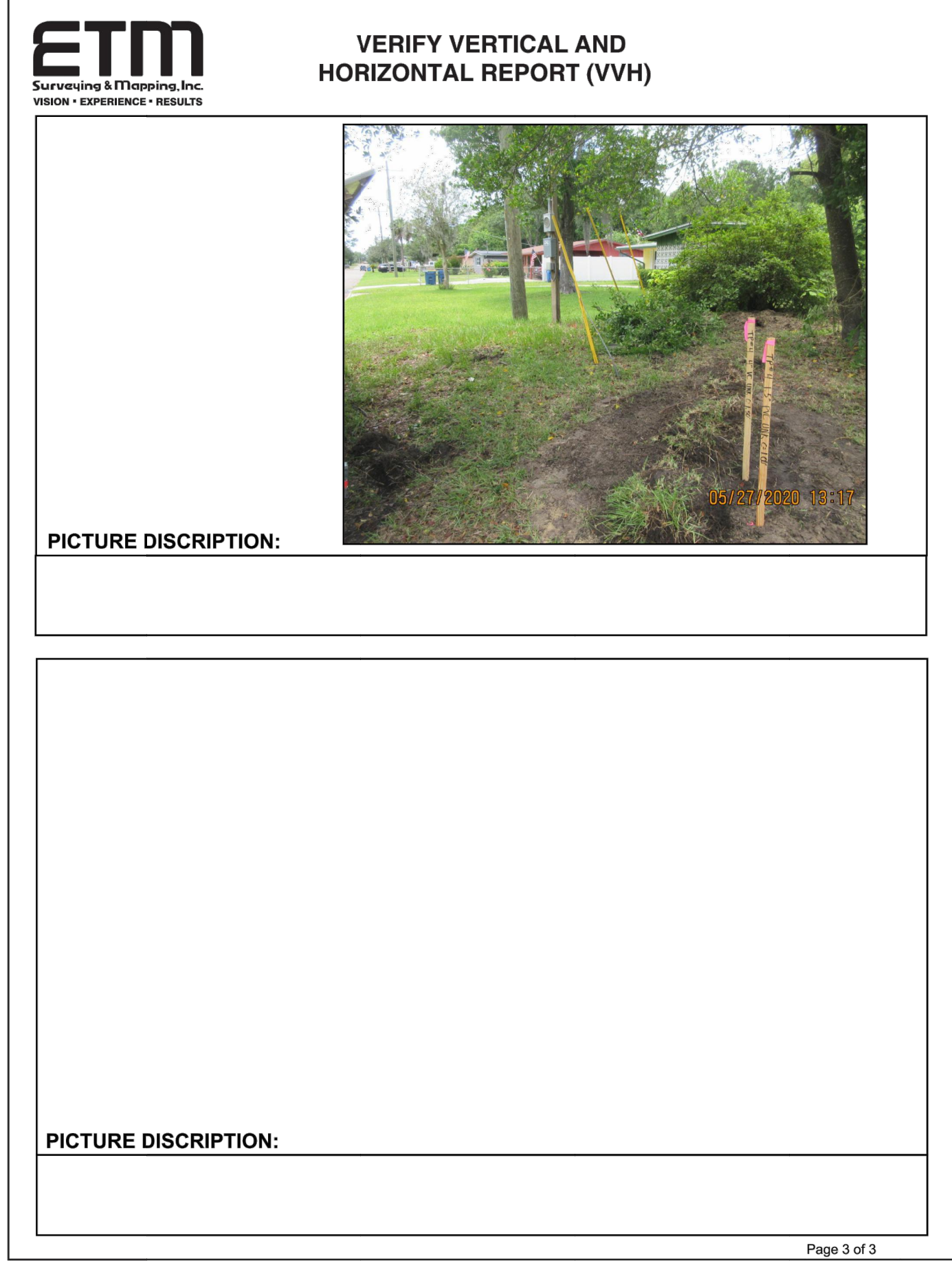




TEST PIT #3, SEE SHEET C-8



TEST PIT #4, SEE SHEET C-10



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3/30/2020  
HILLARY L. ALMOND  
FL # 59247

Date	Revision

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JGK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020

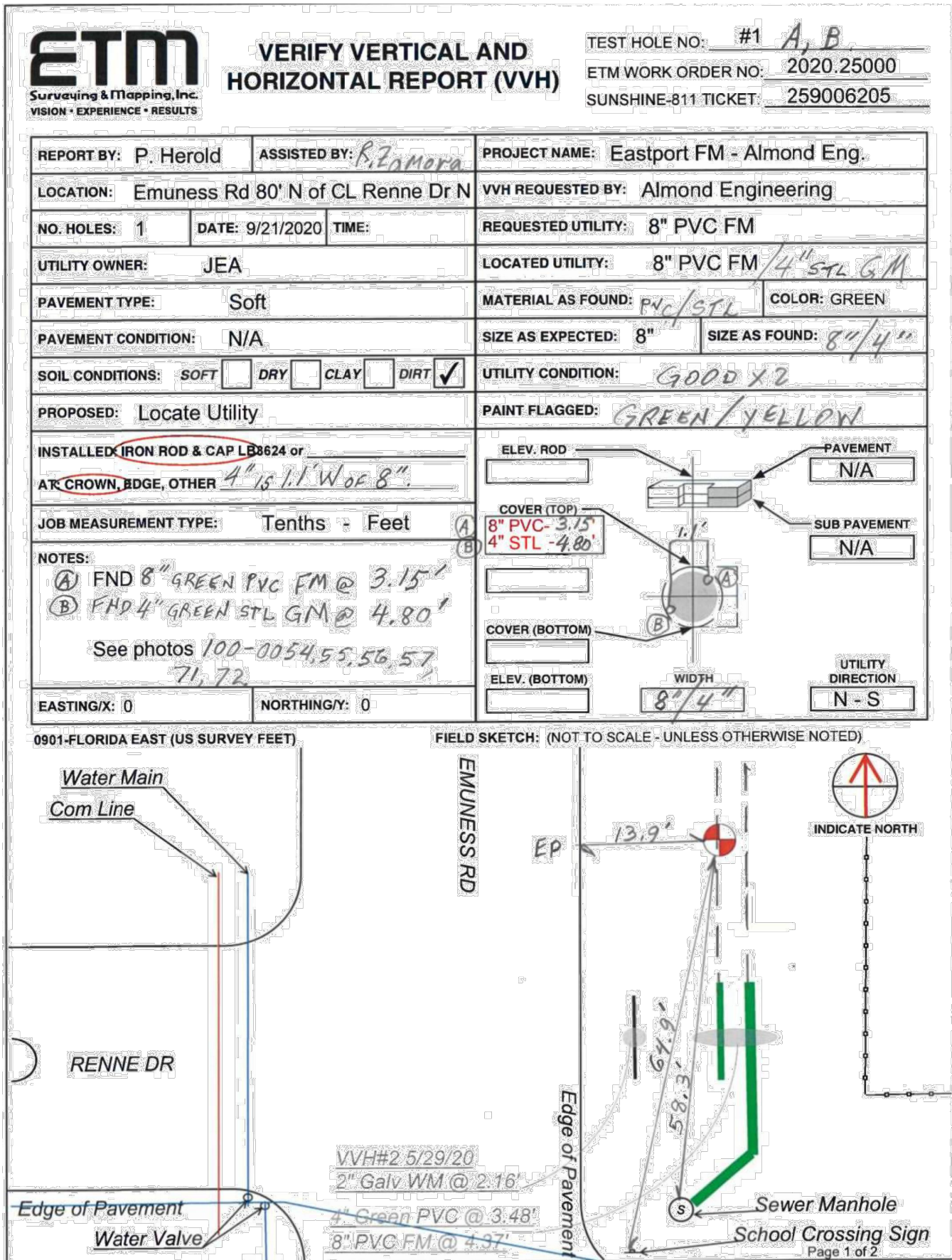
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EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

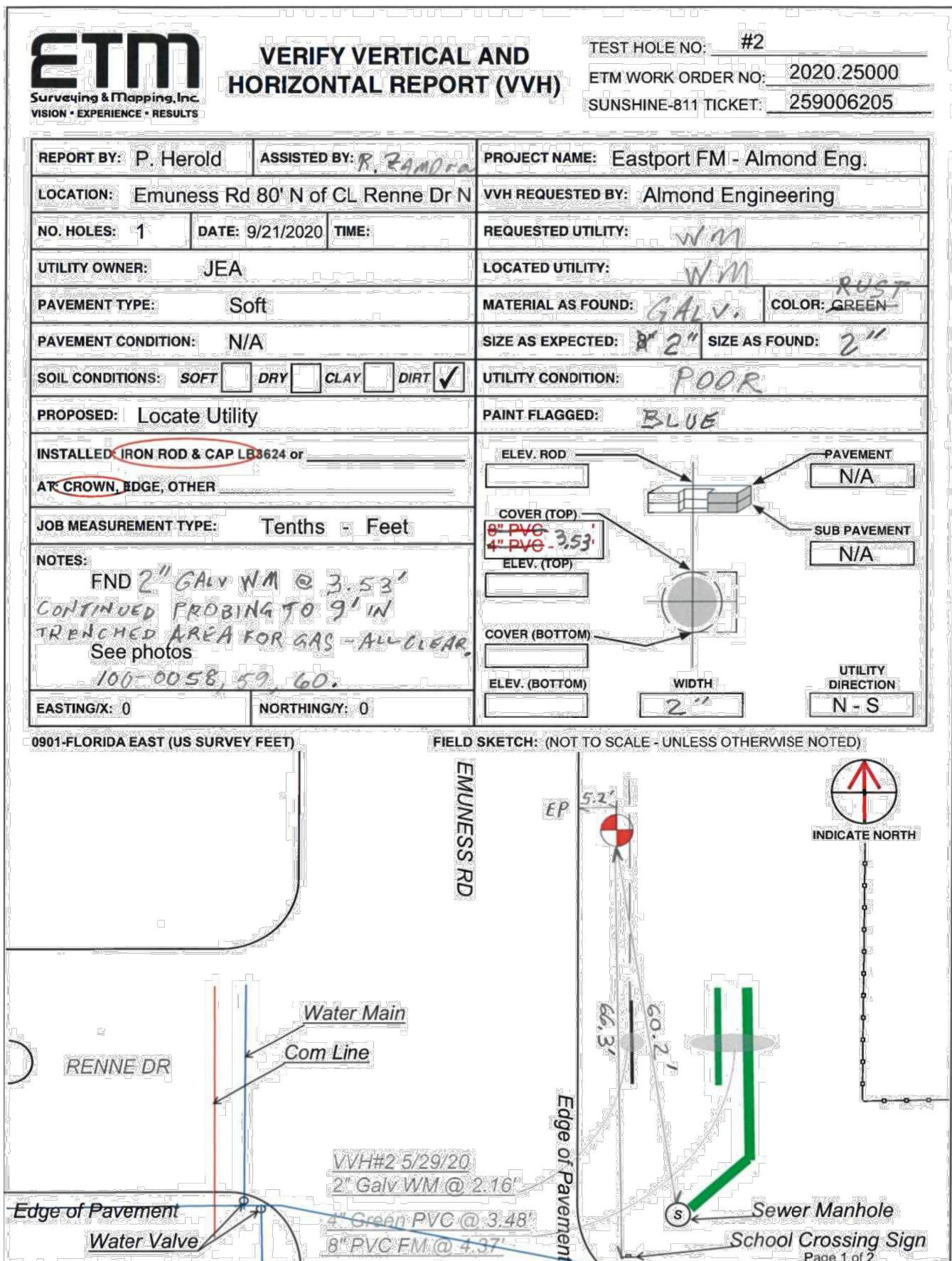
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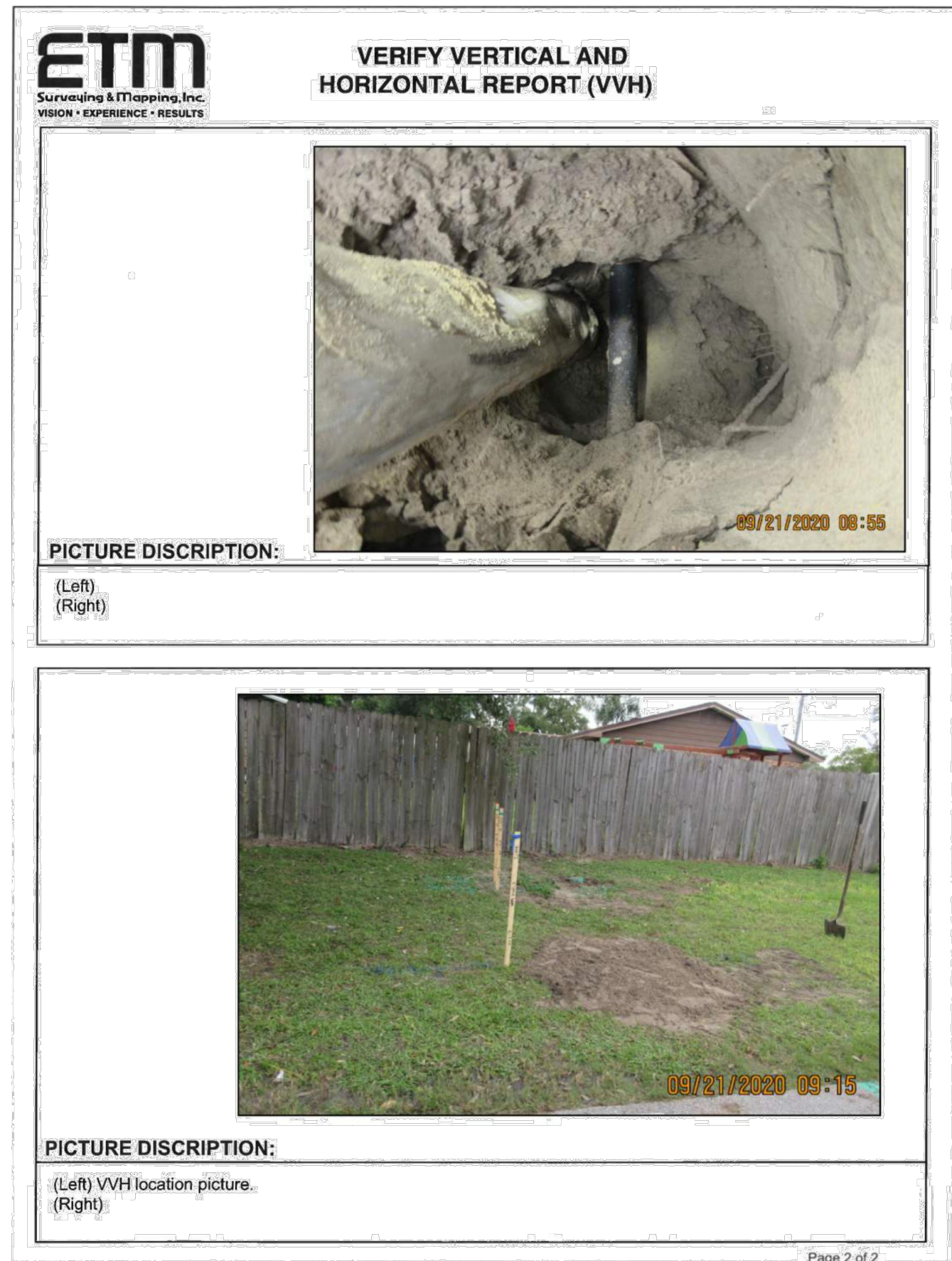




TEST PIT #1A/B, SEE SHEET C-10



TEST PIT #2A/B, SEE SHEET C-10



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S.U.E. REPORTS

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
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TEST HOLE #3A/B, SEE SHEET C-10

Page 2 of 2

TEST HOLE #4A/B, SEE SHEET C-10

Page 2 of 2

TEST HOLE #5A/B, SEE SHEET C-10

Page 2 of 2

## S.U.E. REPORTS

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

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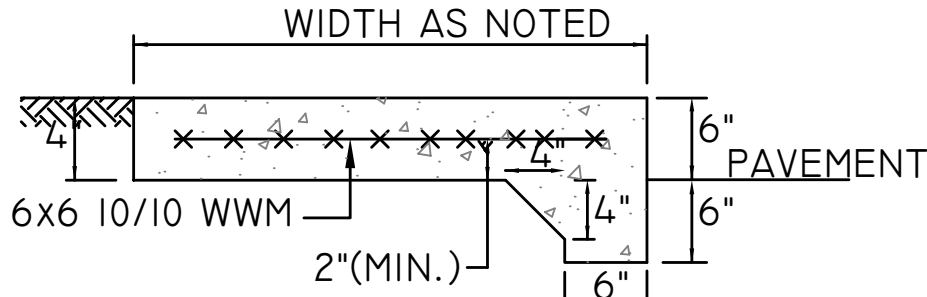
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Plotted: Sep 30, 2020 - 2:49pm, By: jking

CDN: 4161.328

RCV: 10/22/2020 15:52



- NOTES:
1. CONCRETE SHALL BE 3000 PSI, MIN. SLUMP 5".
  2. SAW CUT CONTROL JOINTS AT SPACING EQUAL TO WIDTH OF SIDEWALK.
  3. INSTALL EXPANSION JOINT AT EVERY FOURTH CONTROL JOINT (25' MAX.).



SIDEWALK WITH TURNDOWN SECTION

3/20/2020	
Date	Revision
AE JOB NO.: 20-43 DESIGN: H.L.A. DRAWN: JGK CHECKED: H.L.A. PLOT DATE: 9-30-2020	

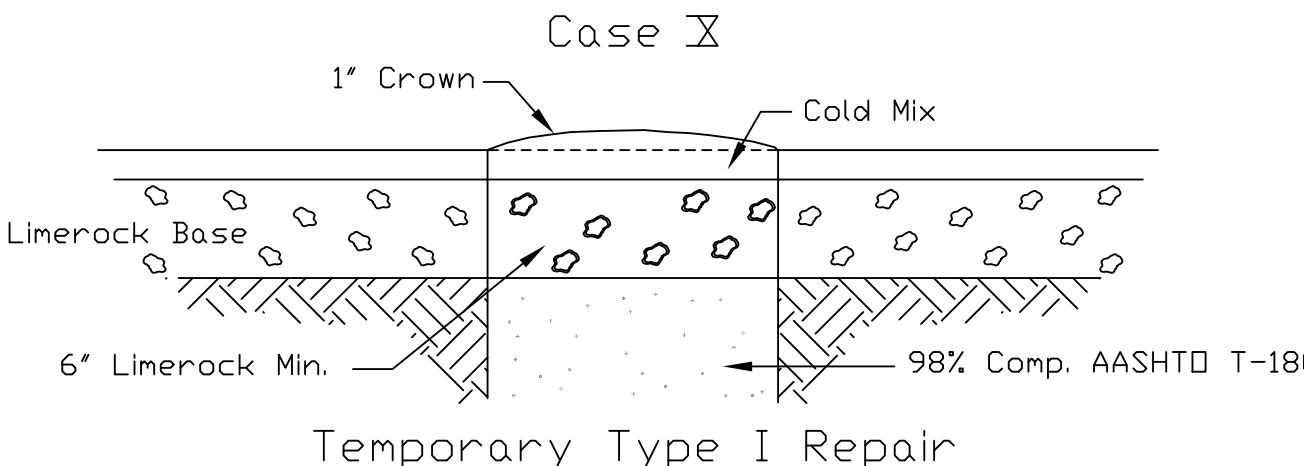
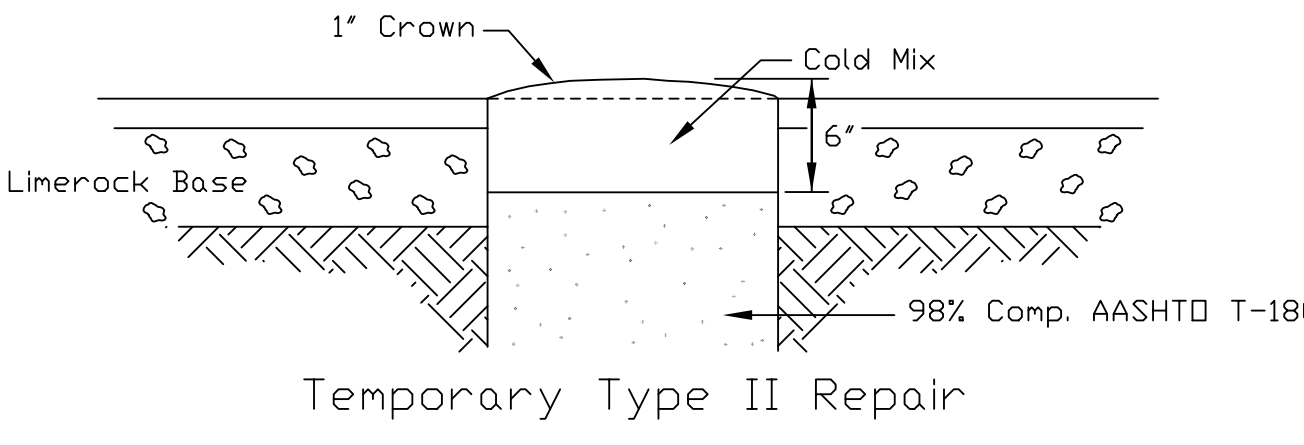
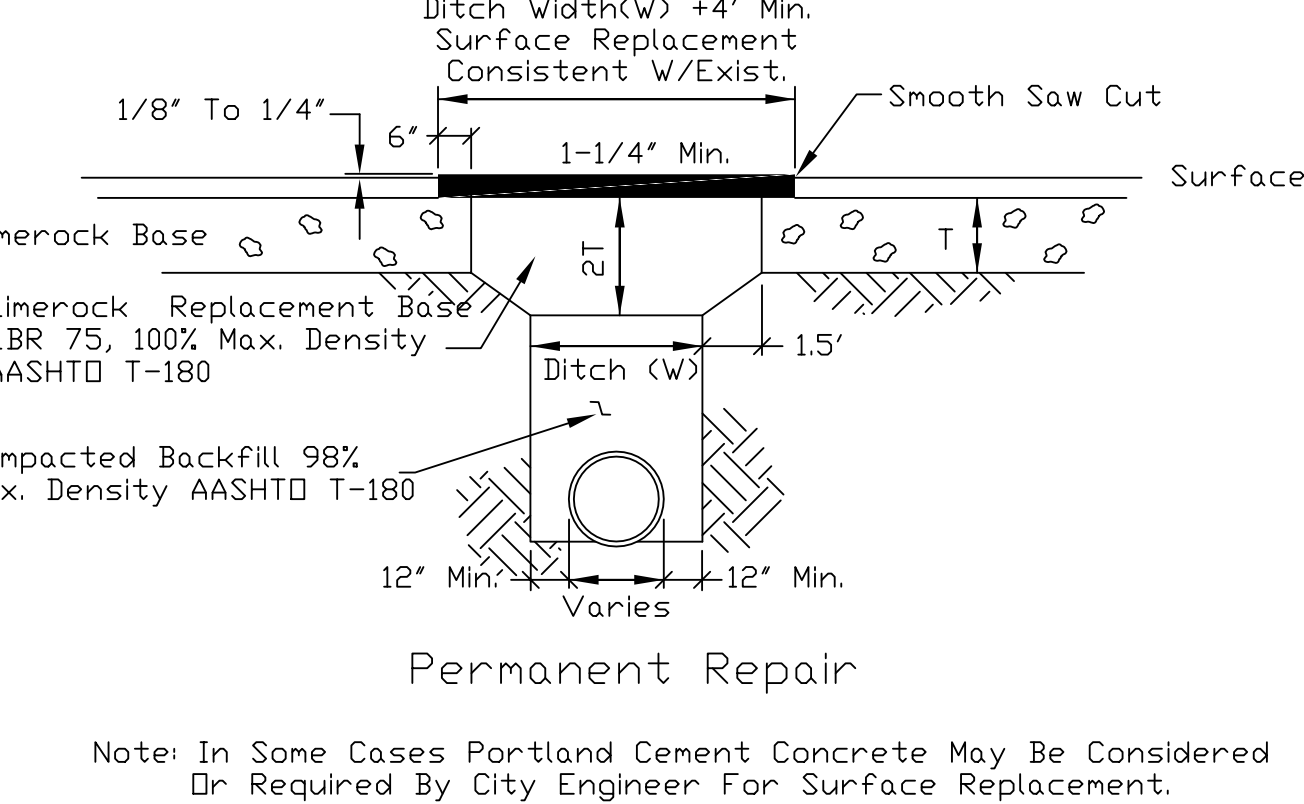
HILLARY L. ALMOND  
FL # 59247

GENERAL DETAILS

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEAX PROJECT NO. 8005937  
JEAX AVAILABILITY 2020-3228

**ALMOND**  
ENGINEERING  
CONSULTING CIVIL ENGINEERS  
6277 DUPONT STATION COURT E., SUITE 1  
JACKSONVILLE, FL 32217  
(904) 308-0162 PHONE

C-17

			
			
			
Note: In Some Cases Portland Cement Concrete May Be Considered Or Required By City Engineer For Surface Replacement.			
STANDARD PAVING REPAIR DETAILS	CITY OF JACKSONVILLE STANDARD	SCALE	PLATE P-409
		DATE DRAWN	7-6-73
		REVISED DATE	9-18-96
COJ - CASE X PAVEMENT REPAIR	N.T.S.		

2	SIDEWALK SECTION	N.T.S.								
	PAVING, GRADING, AND DRAINAGE									
<div><div></div><div><p>CITY STANDARD</p></div><div></div><div><p>MEDIAN CURB</p></div><div></div><div><p>DROP CURB</p></div><div></div><div><p>MIAMI CURB</p></div></div> <div><p>CONCRETE QUANTITIES</p><table><tr><td>CITY STANDARD CURB</td><td>.0388889 CU. YD./LIN. FT.</td></tr><tr><td>STANDARD DROP CURB</td><td>.0322222 CU. YD./LIN. FT.</td></tr><tr><td>MEDIAN CURB</td><td>.0411111 CU. YD./LIN. FT.</td></tr><tr><td>MIAMI CURB</td><td>.0325926 CU. YD./LIN. FT.</td></tr></table></div>			CITY STANDARD CURB	.0388889 CU. YD./LIN. FT.	STANDARD DROP CURB	.0322222 CU. YD./LIN. FT.	MEDIAN CURB	.0411111 CU. YD./LIN. FT.	MIAMI CURB	.0325926 CU. YD./LIN. FT.
CITY STANDARD CURB	.0388889 CU. YD./LIN. FT.									
STANDARD DROP CURB	.0322222 CU. YD./LIN. FT.									
MEDIAN CURB	.0411111 CU. YD./LIN. FT.									
MIAMI CURB	.0325926 CU. YD./LIN. FT.									
3	CITY STANDARD CURB TEMPLATES	N.T.S.								
	PAVING, GRADING, AND DRAINAGE									
<div></div> <div><p>FACE OF CURB</p></div> <div><p>2" ASPHALTIC CONCRETE TYPE SP-9.5 COURSE TYPE 1800 LB. HUBBARD FIELD TO BE INSTALLED IN <b>TWO LIFTS</b> (1st LIFT 1") (2nd LIFT 1", WILL BE INSTALLED ONLY AFTER 80% OF THE SUBDIVISION IS BUILT OUT)</p></div> <div><p>6" COMPACTED LIMEROCK BASE MIN. LBR 75 100% MAX. DENSITY AASHTO T-180</p></div> <div><p>PRIME COAT</p></div> <div><p>12" COMPACTED SUBGRADE MINIMUM L.B.R. 40, MAXIMUM PLASTIC INDEX OF 6 THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. COMPACTED TO 98% MAX. DENSITY A.A.S.H.T.O. T-180</p></div> <div><p>6" CITY STANDARD CURB AND GUTTER.</p></div> <div><p>NOTE: SOIL ANALYSIS MAY INDICATE THE NEED FOR A THICKER BASE COURSE. THE PAVEMENT THICKNESS MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITY OF VARIOUS SUBGRADES.</p></div>										
4	TYPICAL ASPHALT PAVEMENT	N.T.S.								
	PAVING, GRADING, AND DRAINAGE									



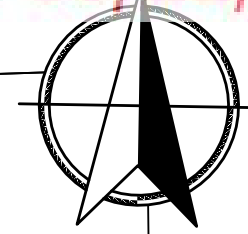




Revised: Sep 30, 2020 - 2.dwg, B.Y. JING

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RCV: 10/22/2020 15:52



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SCALE IN FEET

9/20/2020

HILLARY L. ALMOND, P.E.  
FL# 59247

Date	Revision

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JGK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020

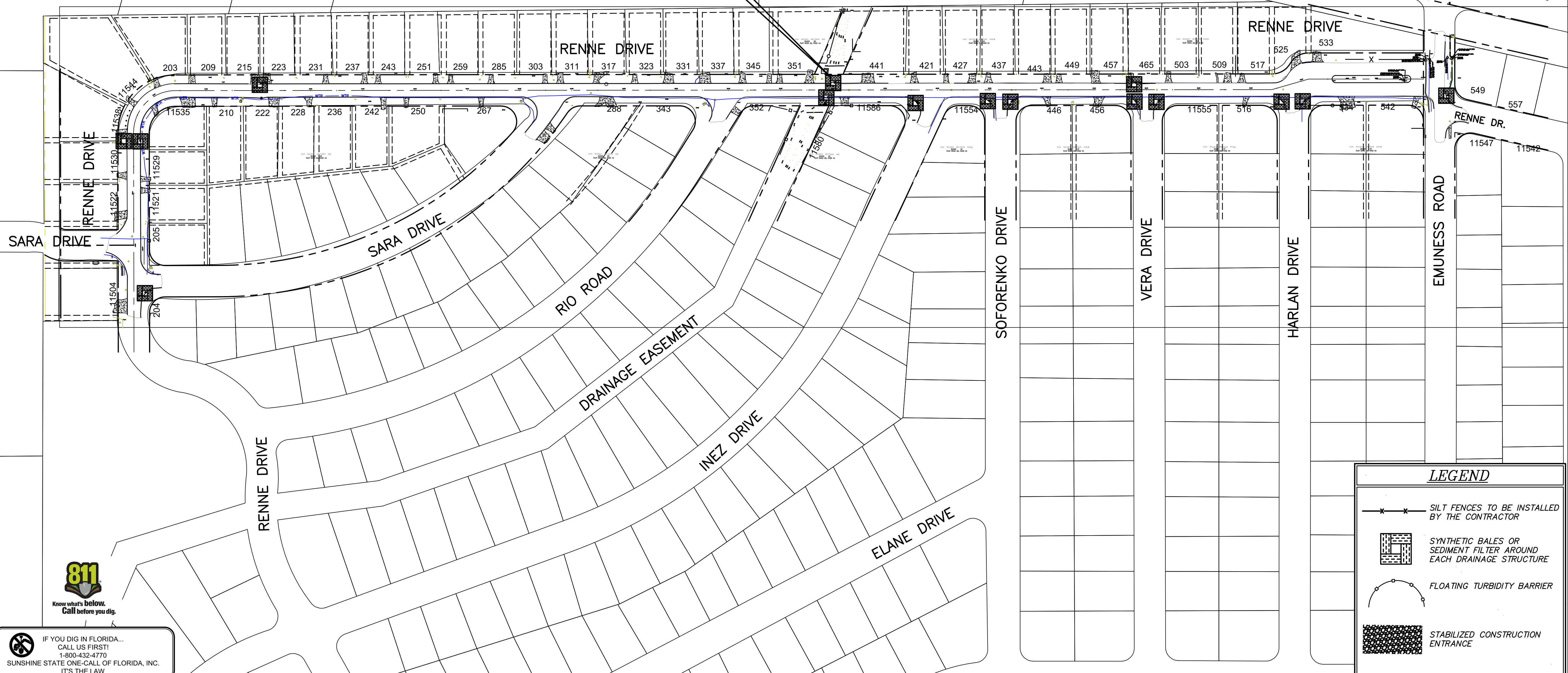
SEDIMENT & EROSION  
CONTROL PLAN

EASTPORT ROAD FORCE  
MAIN EXTENSION  
JEA PROJECT NO. 8005937  
JEA AVAILABILITY 2020-3228

**ALMOND**  
ENGINEERING  
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6277 DUPONT STATION COURT, E., SUITE 1  
JACKSONVILLE, FL 32217  
(904) 306-0162 PHONE

C-19

PROVIDE SEDIMENT FILTER FOR  
ALL STORM INLETS ALONG  
PROPOSED FORCE MAIN PATH OF  
CONSTRUCTION



**LEGEND**

- SILT FENCES TO BE INSTALLED BY THE CONTRACTOR
- SYNTHETIC BALES OR SEDIMENT FILTER AROUND EACH DRAINAGE STRUCTURE
- FLOATING TURBIDITY BARRIER
- STABILIZED CONSTRUCTION ENTRANCE



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SUNSHINE STATE ONE-CALL OF FLORIDA, INC.  
IT'S THE LAW

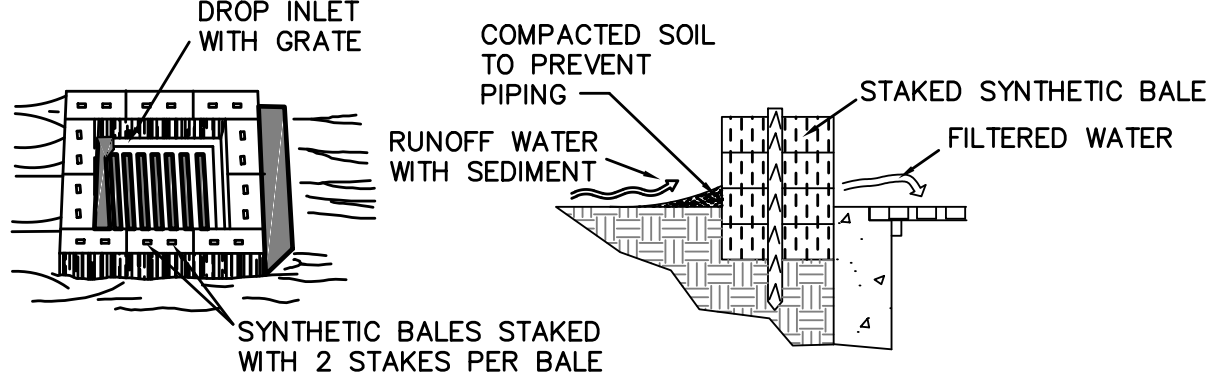


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SEDIMENT AND EROSION CONTROL NOTES

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

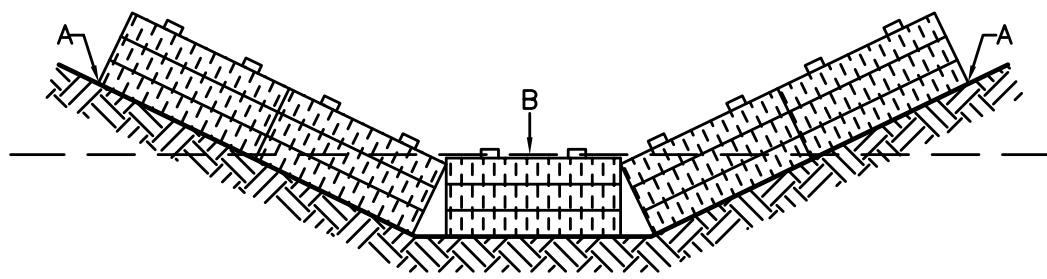
- THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.
- 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)



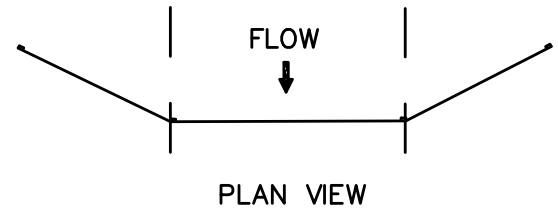
SPECIFIC APPLICATION

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.

SYNTHETIC BALE DROP INLET SEDIMENT FILTER  
N.T.S.



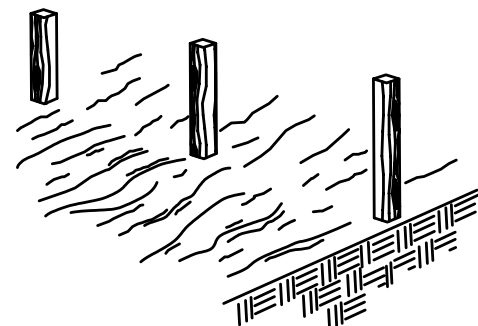
PROPER PLACEMENT OF SYNTHETIC BALE  
IN A DRAINAGE WAY  
N.T.S.



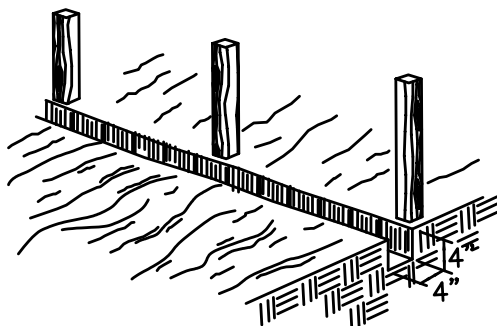
SECTION VIEW  
POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF A  
FILTER BARRIER IN DRAINAGE WAY  
N.T.S.

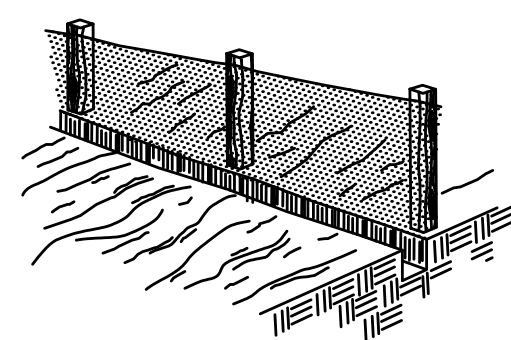
1. SET THE STAKES.



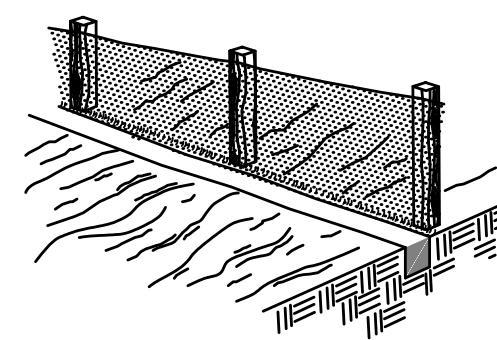
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.



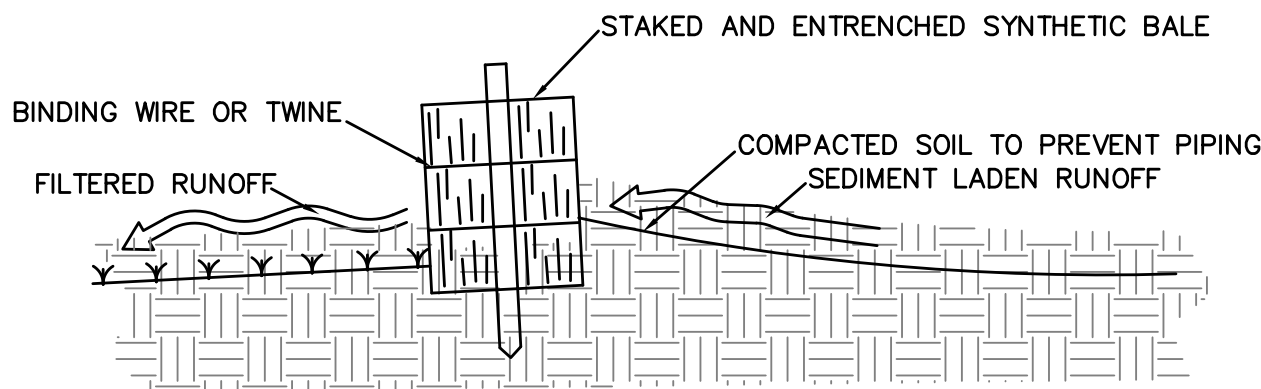
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

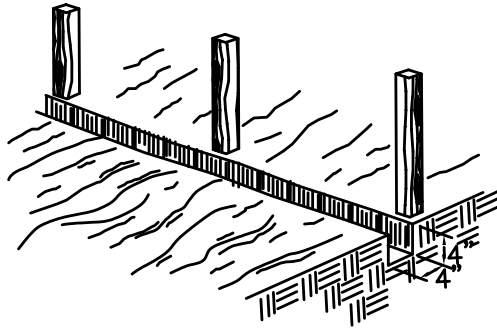


CONSTRUCTION OF A FILTER BARRIER

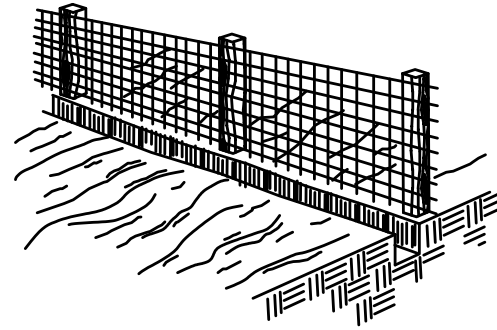


CROSS-SECTION OF A PROPERLY  
INSTALLED SYNTHETIC BALE  
N.T.S.

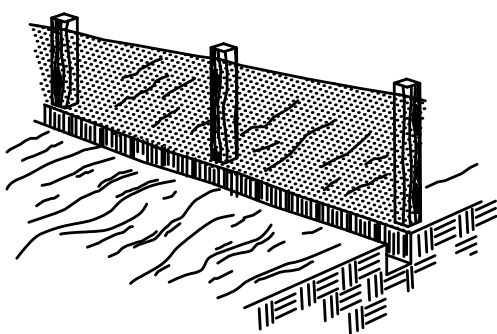
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



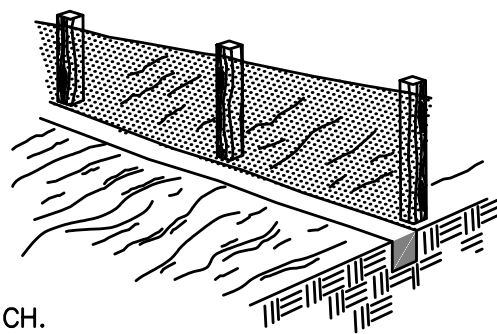
2. STAPLE WIRE FENCING TO THE POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



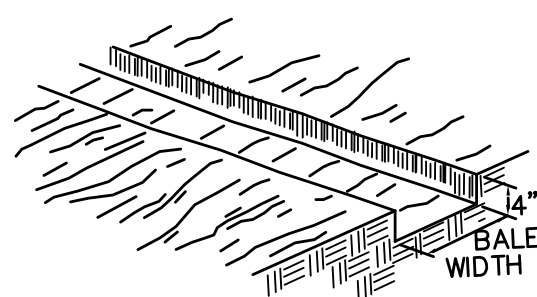
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



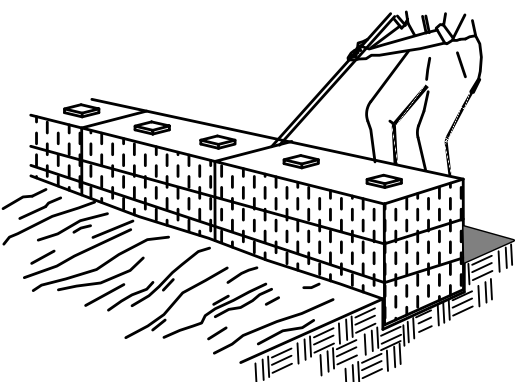
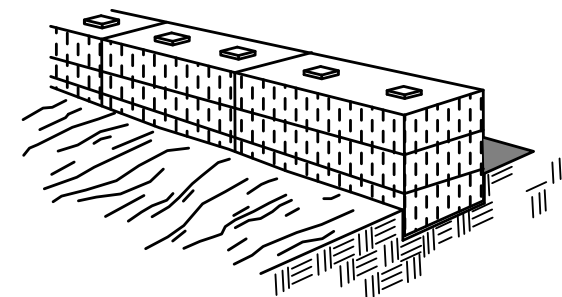
EXTENSION OF FABRIC  
AND WIRE INTO THE TRENCH.

CONSTRUCTION OF SILT FENCE  
N.T.S.

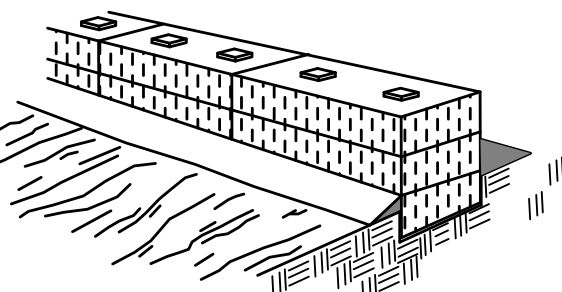
1. EXCAVATE THE TRENCH.



2. PLACE AND STAKE SYNTHETIC BALES.

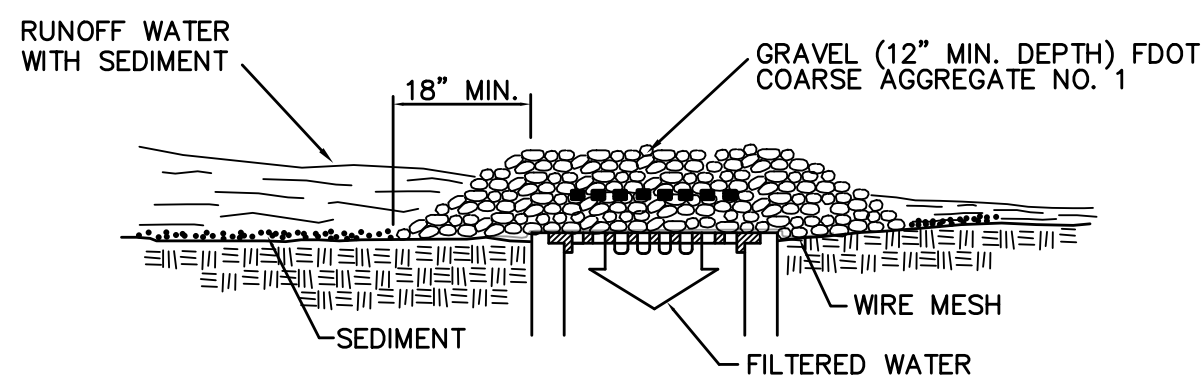


3. WEDGE LOOSE SYNTHETIC BETWEEN BALES.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

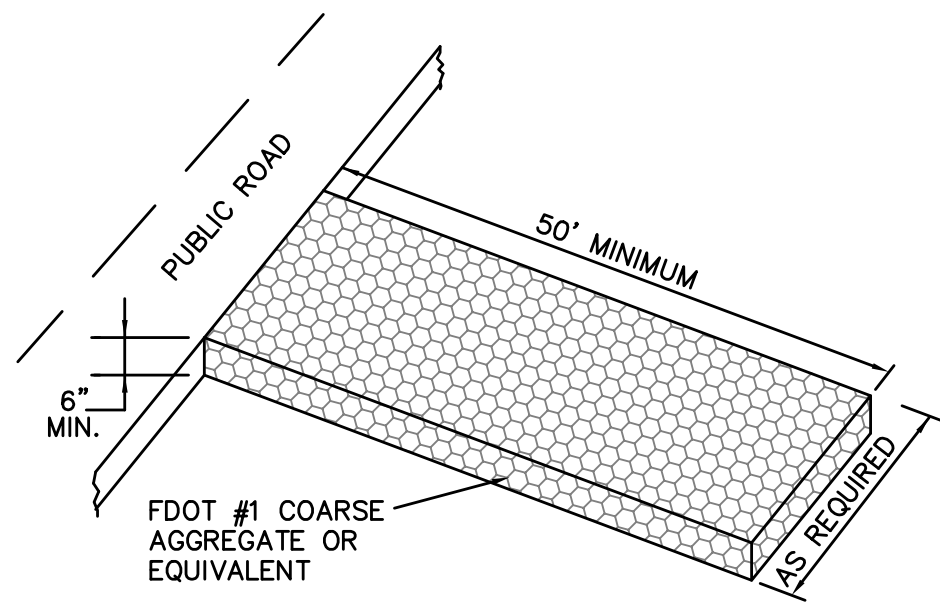
CONSTRUCTION OF A SYNTHETIC BALE BARRIER  
N.T.S.



SPECIFIC APPLICATION

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

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



STABILIZED CONSTRUCTION ENTRANCE  
N.T.S.

SEDIMENT & EROSION  
CONTROL DETAILS

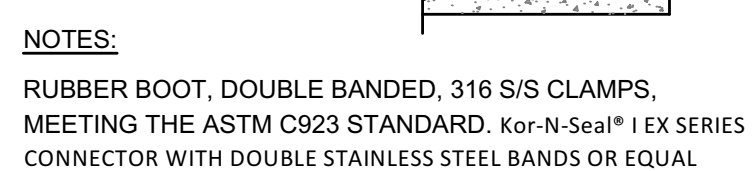
EASTPORT ROAD FORCE  
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JACKSONVILLE, FL 32217  
(904) 306-0162 PHONE

Date	Revision

AE JOB NO.: 20-43  
DESIGN: H.L.A.  
DRAWN: JGK  
CHECKED: H.L.A.  
PLOT DATE: 9-30-2020





(FOR NEW M/H CONSTRUCTION ONLY, MAXIMUM DEPTH 15FT)



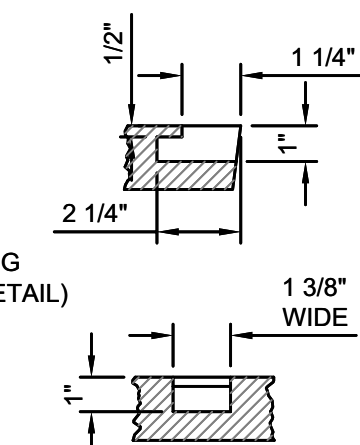
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PLATE S-15

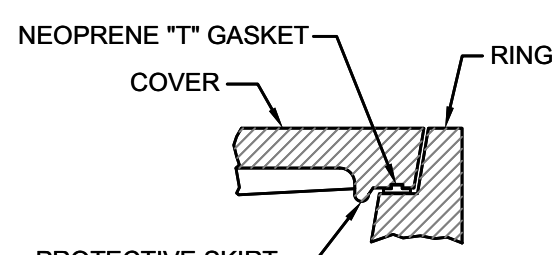


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PLATE S-17



PICKHOLE DETAIL



NOTES:

1. MATERIAL: ASTM A-48 CLASS 35B GRAY IRON. PROTECTIVE SKIRT 

2. RING WEIGHT 230 LBS APPROX. GROOVE & GASKET DETAIL

3. COVER WEIGHT 230 LBS. APPROX.

4. ALL DIMENSIONS ARE SHOWN IN INCHES.

5. FOR MANHOLES WHICH WILL BE MAINTAINED BY JEA (INCLUDING UTILITY DEDICATION PROJECTS), THE COVER SHALL INCLUDE THE "JEA" LOGO AND A NEOPRENE GASKET.

6. FOR MANHOLES WHICH WILL BE MAINTAINED BY PARTIES OTHER THAN JEA (SUCH AS PRIVATE SEWER COLLECTION SYSTEMS, PRIVATE (FORCE MAIN) PUMP OUT BOX AND SYSTEMS NOT MAINTAINED BY JEA), THE COVER SHALL INCLUDE "SANITARY SEWER" GENERIC LETTERING (NO "JEA" LOGO OR NEOPRENE GASKET).

---

PLATE S-1



NOTES:

1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478/M WITH 4000 LB. CONC. TYPE I CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
2. THE INTERIOR AND EXTERIOR OF MANHOLE AND INTERIOR OF ADJUSTMENT RINGS SHALL BE GIVEN TWO COAT OF BITUMINOUS WATERPROOFING MATERIAL.
3. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS M, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH ASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 24" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

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PLATE S-6





REVISIONS		NO.	BY	DATE
1		6		
2		5		
3		4		
4		3		
5		2		

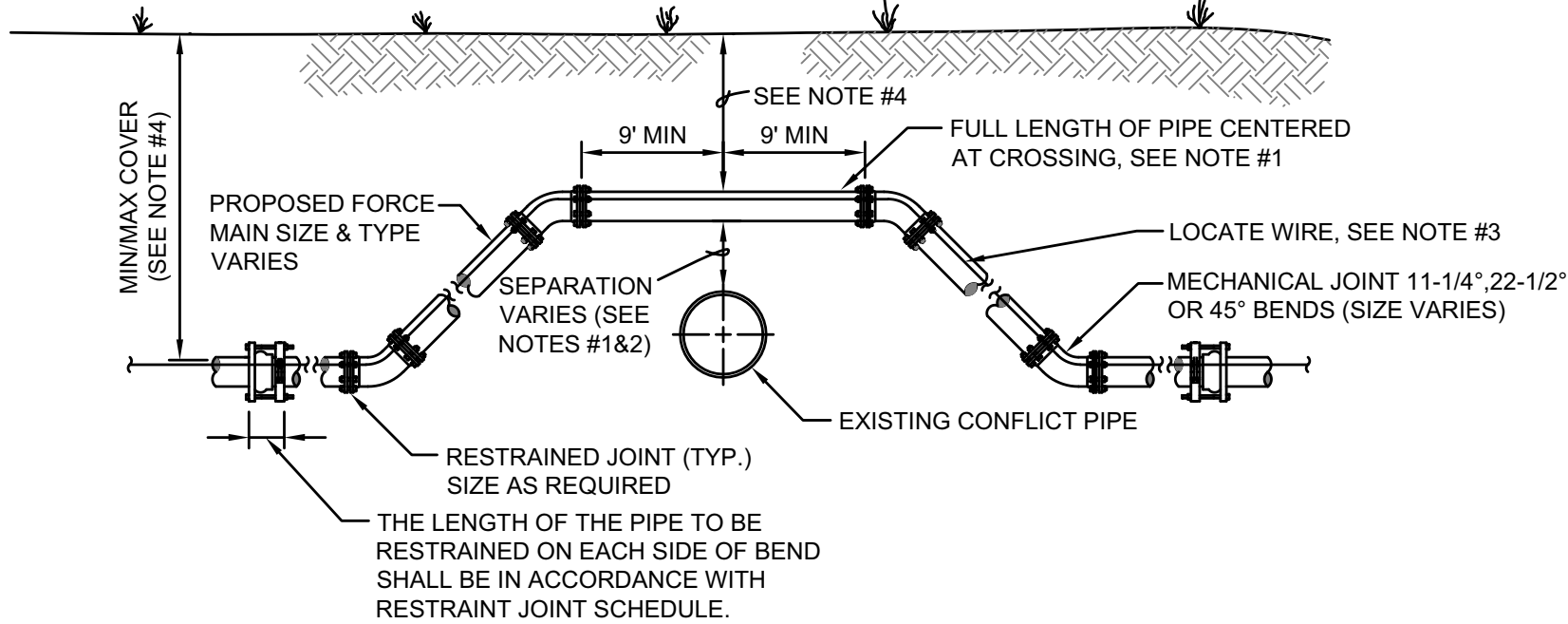
DESIGN ENGINEER	FLORIDA REGISTRATION NO.
DESIGNER	DATE
DRAWN BY	CHECKED BY
DATE	DATE



JEA STANDARD  
SANITARY SEWER DETAILS

PROJ. NO.	20-43
DATE	JANUARY 2019
SCALE	AS NOTED

S-2



CASE "A" CROSSING

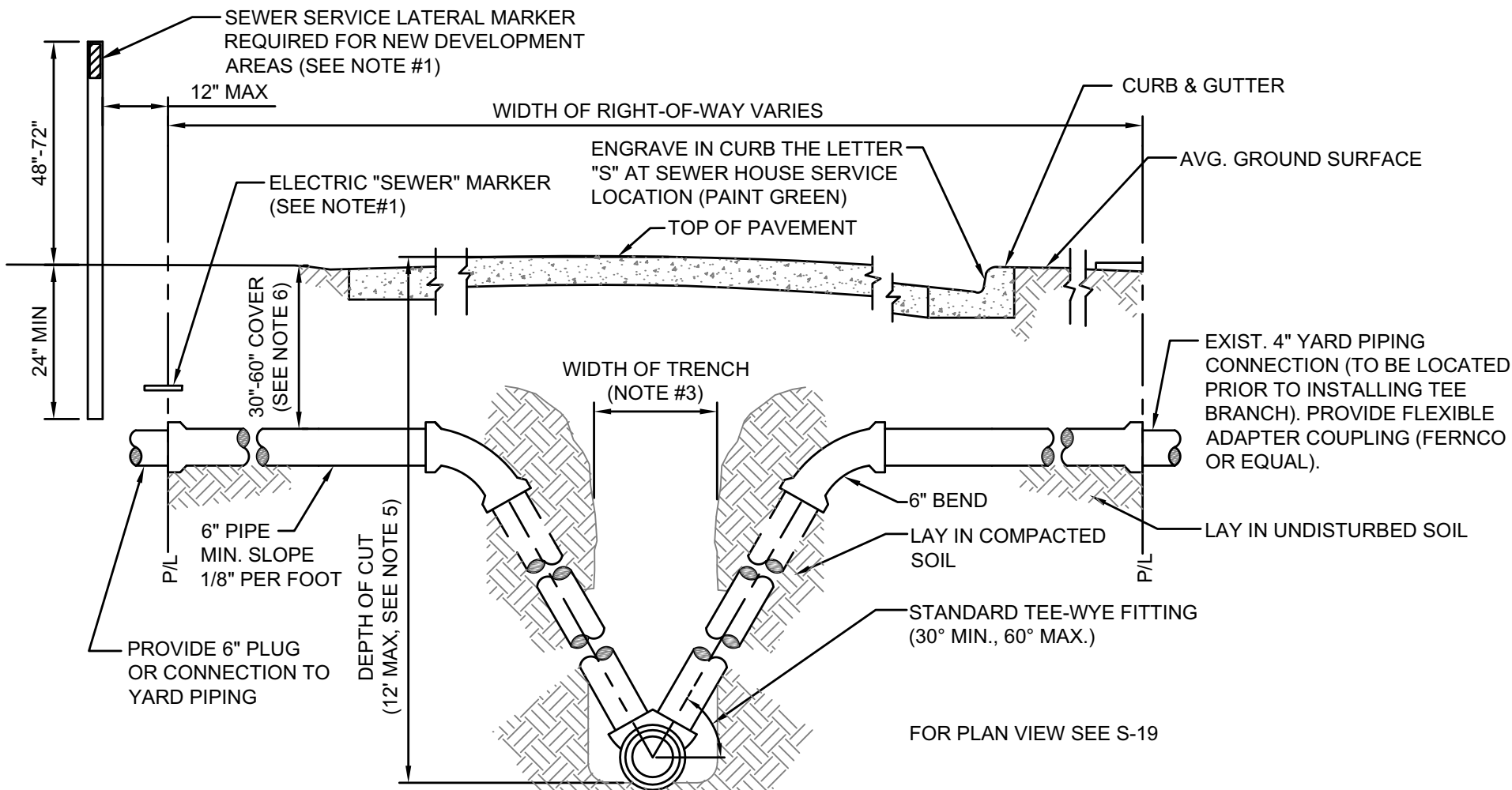
NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED 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 CROSSINGS.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
- LOCATING WIRE REQUIRED: SEE DETAIL S-49.
- 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 PRE-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.
- THE SOILS BETWEEN THE 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.

ADJUSTMENT OVER EXISTING UTILITIES  
MECHANICAL RESTRAINTS

JANUARY 2020

PLATE S-39



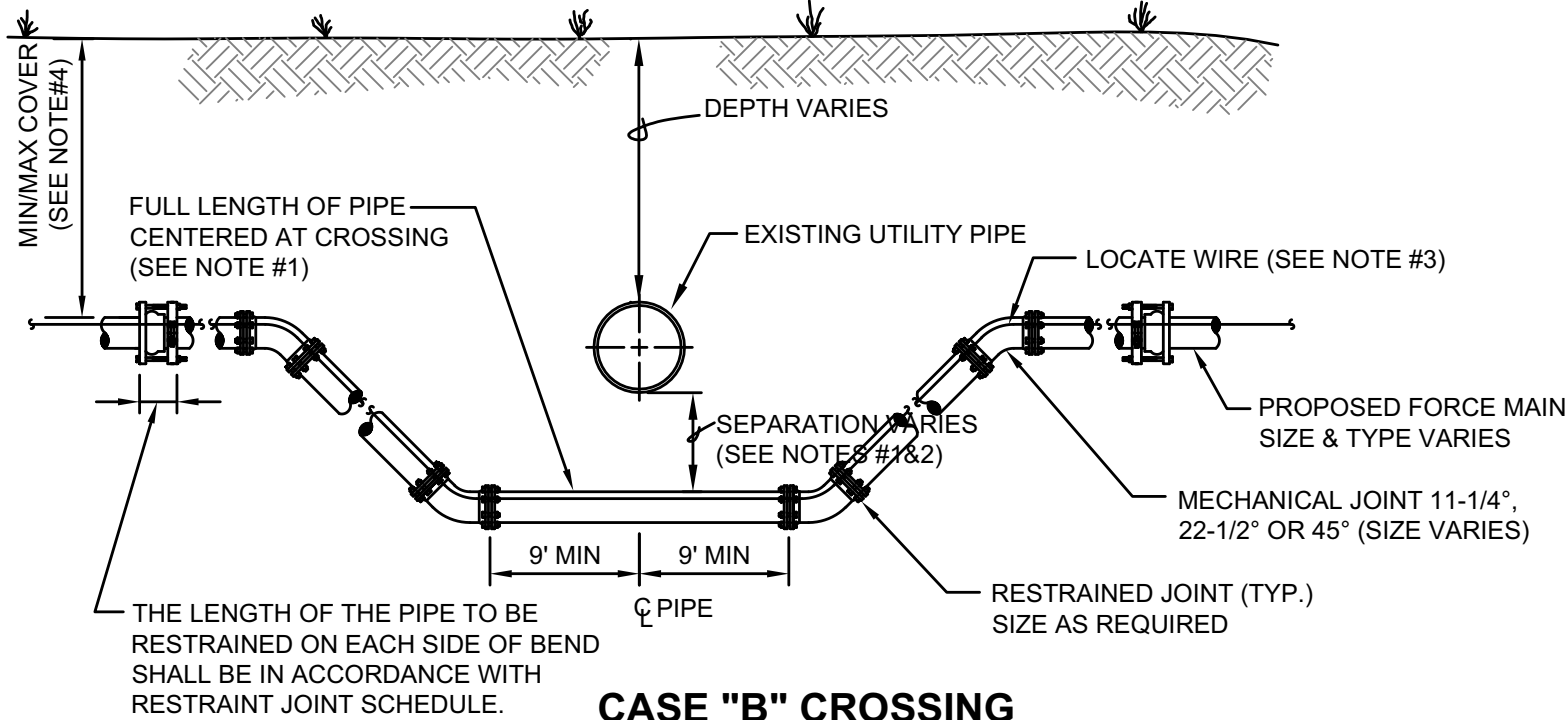
NOTES:

- TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE. FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT" IN USE, A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
- THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
- SEE MEASUREMENT AND PAYMENT SECTION FOR MAXIMUM PAYMENT WIDTHS.
- ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.
- UNLESS APPROVED OTHERWISE BY A JEA O&M MANAGER, NO GRAVITY SEWER MAIN WITH SEWER SERVICE LATERALS SHALL BE CONSTRUCTED WITH A "DEPTH OF CUT" GREATER THAN 12 FEET.
- SEWER SERVICE LATERALS ASSOCIATED WITH GRAVITY SEWER MAINS WHICH ARE DEEPER THAN 12 FEET, MUST BE ROUTED TO A GRAVITY SEWER HIGH-LINE, A MANHOLE OR OTHER JEA APPROVED METHOD.
- THE SEWER SERVICE LATERAL SHALL BE CONSTRUCTED AT A DEPTH TO ALLOW A GRAVITY CONNECTION BY THE CUSTOMER. WHERE POSSIBLE (CONTINGENT UPON MEETING THE CUSTOMER'S ON-SITE CONDITIONS AND LOCAL CONSTRUCTION STANDARDS), A LATERAL REQUIRING MORE THAN 60" OF COVER MUST BE APPROVED, PRIOR TO CONSTRUCTION, BY JEA.

HOUSE LATERAL - SECTION VIEW

JANUARY 2020

PLATE S-20



CASE "B" CROSSING

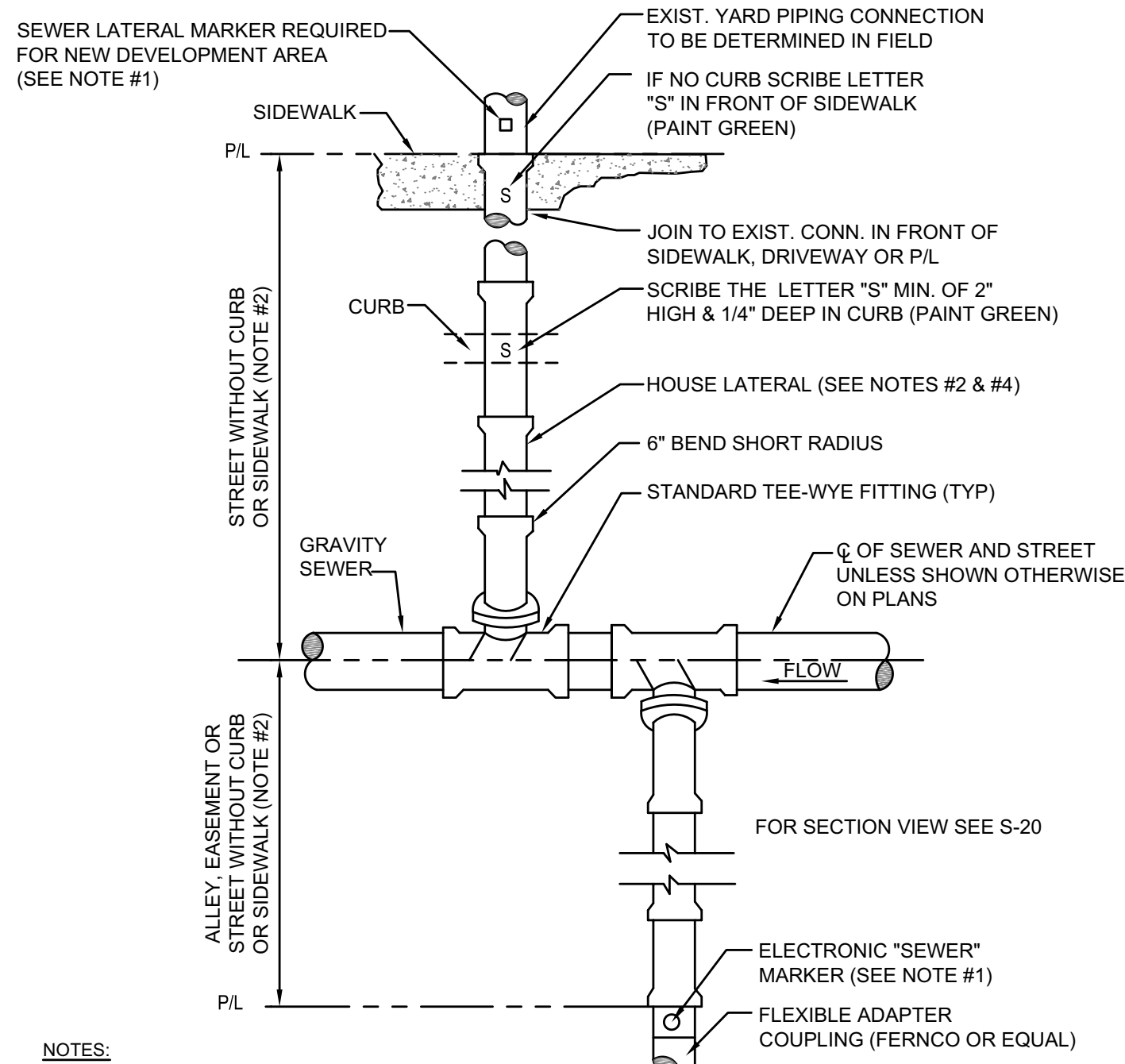
NOTES:

- IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED 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 CROSSINGS.
- FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
- LOCATING WIRE REQUIRED: SEE DETAIL S-49.
- 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 PRE-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.
- THE SOILS BETWEEN THE 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.

ADJUSTMENT UNDER EXISTING UTILITIES  
MECHANICAL RESTRAINTS

JANUARY 2020

PLATE S-41



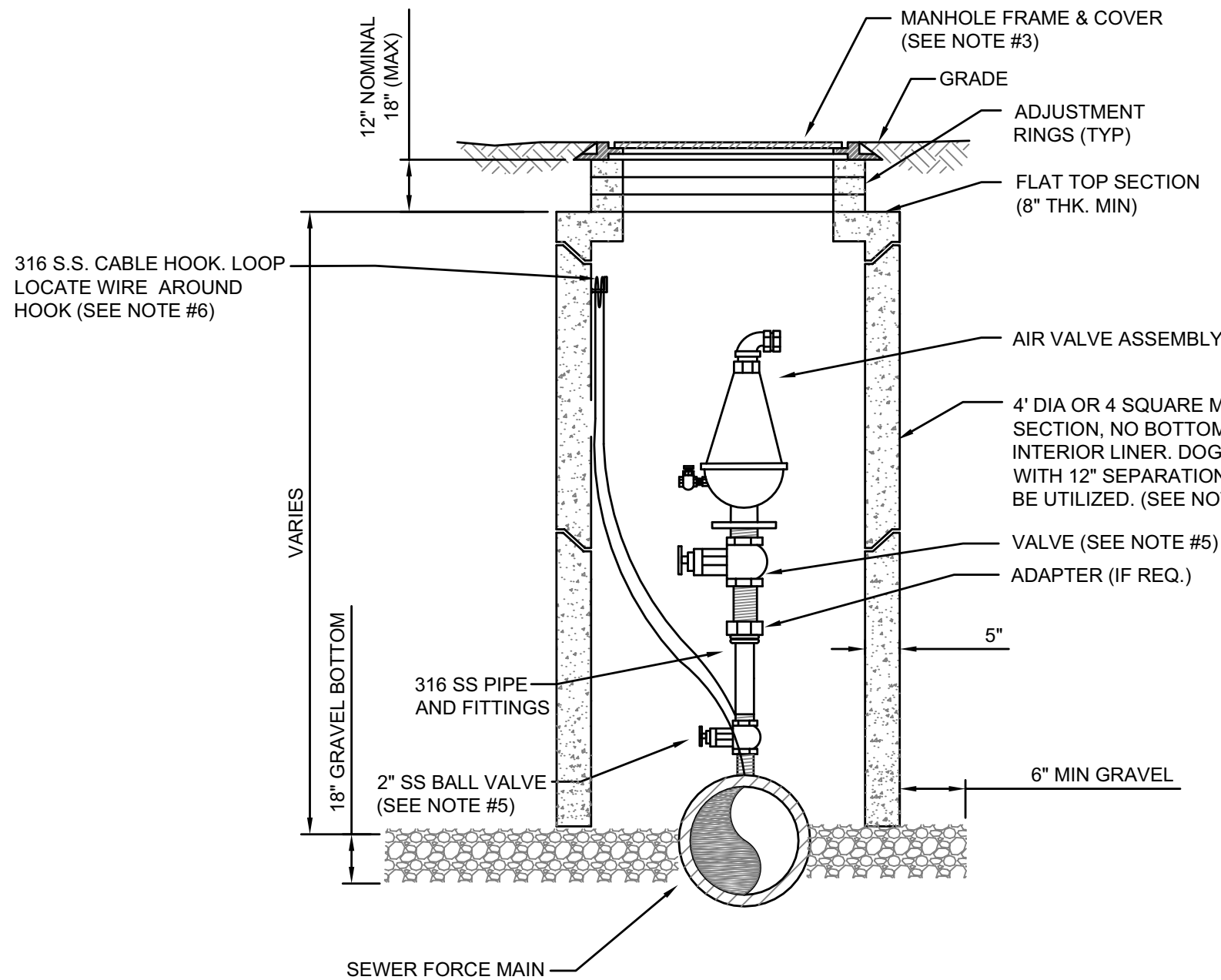
NOTES:

- TO MARK THE LOCATION OF THE 6" PLUG FOR NEW SERVICE: FOR PROJECTS WHERE NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER IS REQUIRED FOR ALL LATERALS WHICH ARE "NOT" IN USE. FOR NEW DEVELOPMENT AREAS WHERE THE SEWER LATERAL IS "NOT" IN USE, A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED GREEN) SHALL BE INSTALLED. WHERE REQUIRED BY JEA OR NO CONCRETE CURB EXIST, AN ELECTRONIC "SEWER" MARKER SHALL BE INSTALLED TO MARKER SHALL ALSO BE INSTALLED.
- THE MINIMUM SIZE OF ALL HOUSE LATERALS SHALL BE 6 INCHES. THE MAXIMUM LENGTH OF A HOUSE LATERAL SHALL BE 60 FEET (LENGTH BETWEEN SEWER MAIN OR MANHOLE TO CUSTOMERS PROPERTY LINE).
- NO SEWER SERVICE CONNECTIONS PERMITTED ON GRAVITY SEWER PIPE WHICH ARE 16" AND LARGER.
- ALL GRAVITY SEWER MAINS AND ASSOCIATED SEWER LATERAL PIPE AND FITTINGS (INCLUDING THE TEE-WYE FITTING) SHALL BE PVC SDR-26.

HOUSE LATERAL - PLAN VIEW

JANUARY 2020

PLATE S-19



NOTES:

- THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA (I.E. LOCATED IN NON-TRAFFIC AREAS).
- THE CONCRETE MANHOLE SHALL INCLUDE A POLYURETHANE SPECIALTY LINER (PER SPEC SECTION 446) TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.
- FRAME AND COVER SHALL BE JEA STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDER SIDE OF STANDARD JEA COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).
- FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN). FOR PIPE SIZES 4 INCH AND LARGER, PROVIDE A FLANGE GATE VALVE (WHEEL OPERATOR) OR PLUG VALVE. (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
- FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- LOCATE WIRE SHALL HAVE ENOUGH SLACK TO REACH 4' ABOVE FINAL GRADE.

AIR VALVE ASSEMBLY INSIDE MANHOLE IN ROW

JANUARY 2020

PLATE S-29B



PVC PIPE RESTRAINT NOTES:

- 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.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR=1.5, TEST PRESSURE=150PSI, SOIL-GM OR SM, TRENCH TYPE 3, DEPTH OF COVER=30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L<sub>u</sub> IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. L<sub>i</sub> IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- 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.
- HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
- THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

PVC PIPE RESTRAINT JOINT SCHEDULE

JANUARY 2020

PLATE S-38A

LENGTH (L) TO BE RESTRAINED

NOMINAL PIPE SIZE (IN.)

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.)

REDUCERS

SIZE (IN.)

L (FT.)

TEES SEE NOTE 5

RUN SIZE (IN.)

BRANCH SIZE (IN.)

L (FT.)

4

21

9

5

3

17

3

47

6x4

34

4

4

F.O.

6

30

13

6

3

23

4

66

8x6

36

4

6

F.O.

8

38

16

8

4

30

6

86

8x4

62

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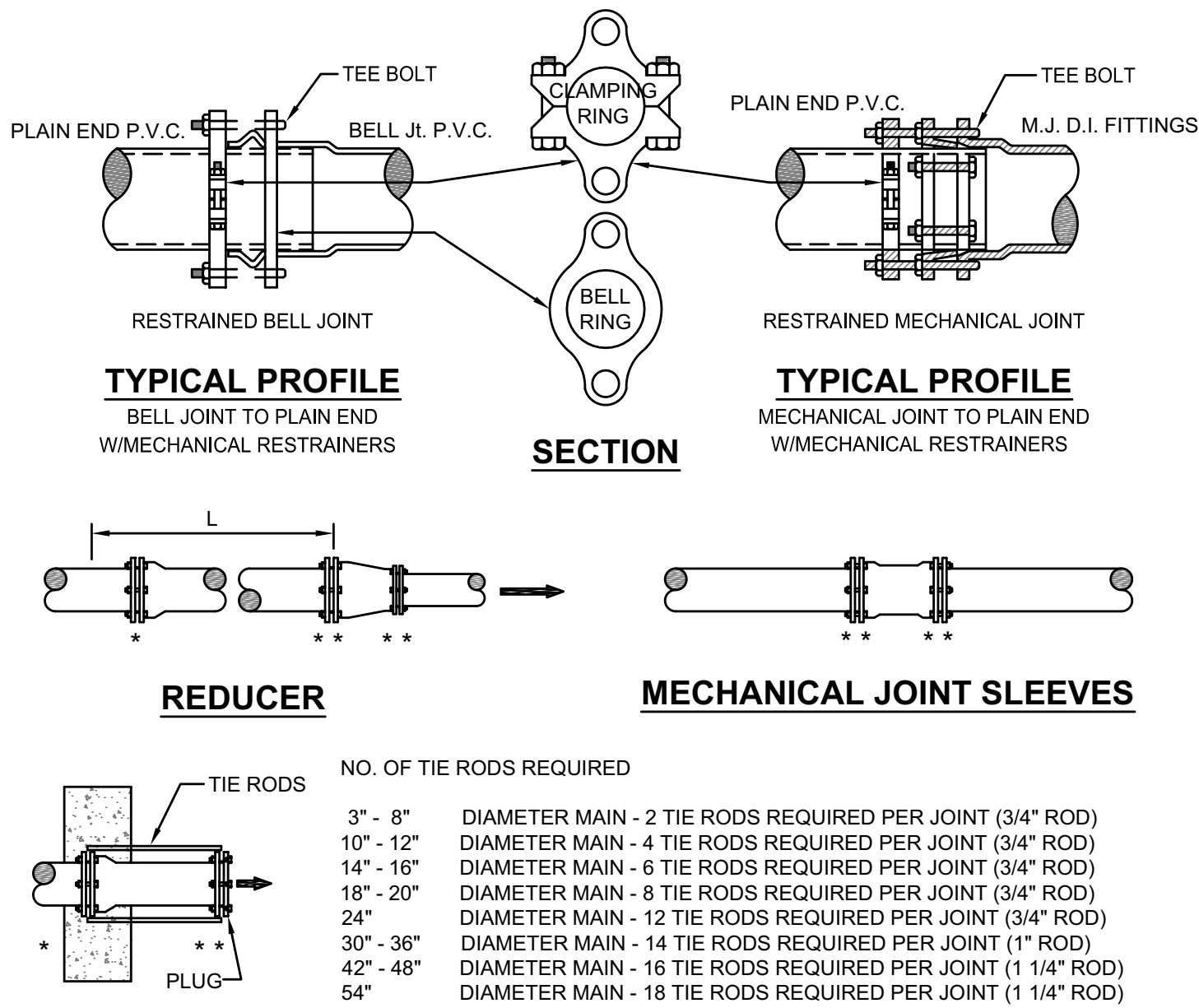
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F.O. = FITTING ONLY



DEAD - END THRUST COLLAR ANCHOR

TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL (W-38). SEE DETAILS W-36 & W-37.

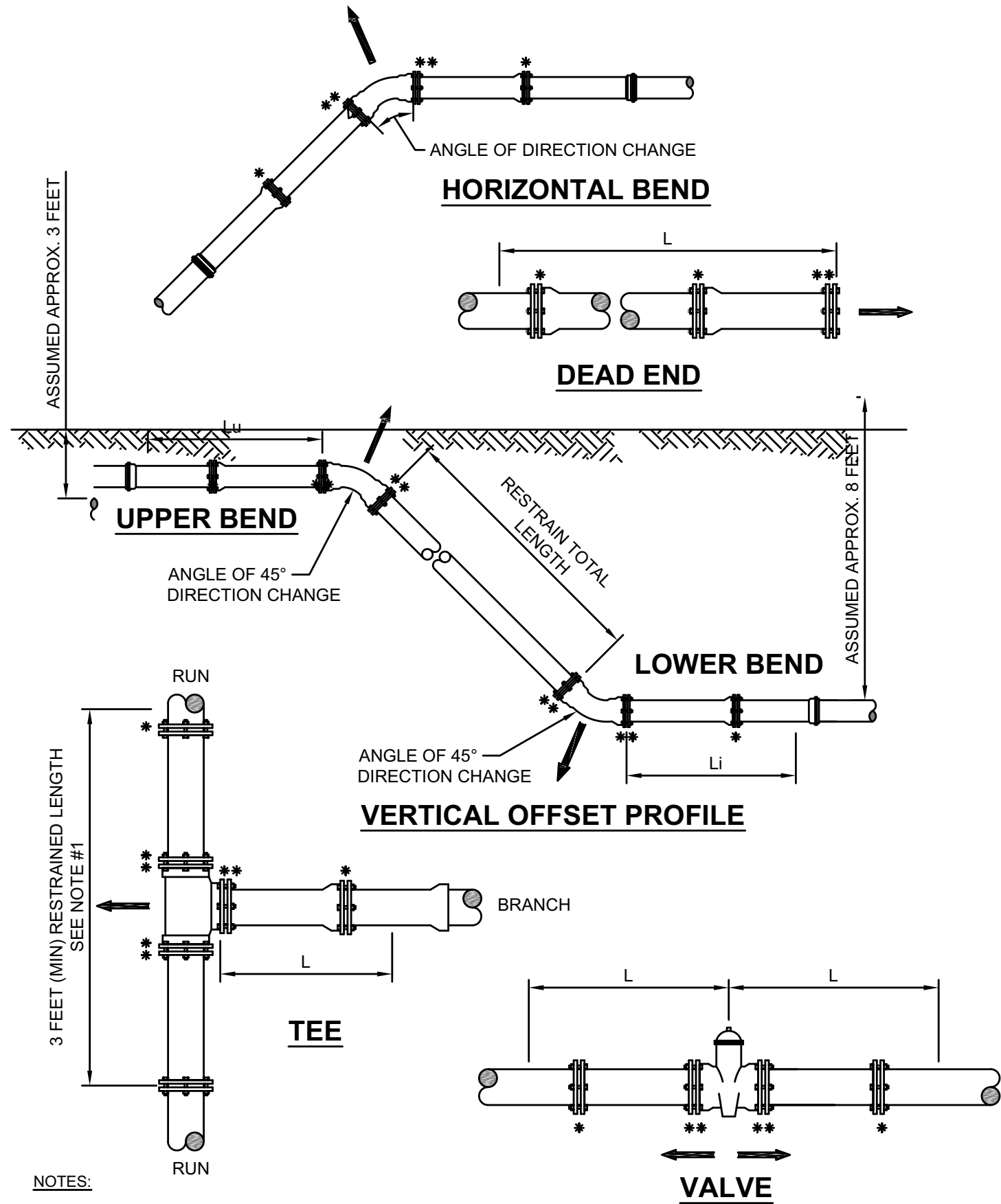
GENERAL NOTE:

- PAY ITEM " \* \* " DENOTES A RESTRAINT WHICH IS PAID FOR ON A PER EACH BASIS.
- PAY ITEM " \* \* " DENOTES A RESTRAINT WHICH IS INCLUDED IN THE UNIT PRICE BID FOR FITTING OR VALVE.
- ➡ INDICATES DIRECTION OF THRUST FORCE.

MECHANICAL RESTRAINT DETAILS - I

JANUARY 2020

PLATE S-38C



MECHANICAL RESTRAINT DETAILS - II

JANUARY 2020

PLATE S-38D



CONSULTING CIVIL ENGINEERS  
REGISTERED PROFESSIONAL ENGINEERS  
FLORIDA LICENSE NO. 12434

DESIGNER: [Blank]  
DRAWN BY: [Blank]  
CHECKED BY: [Blank]  
DATE: [Blank]

DESIGN ENGINEER

FLORIDA REGISTRATION NO.

DESIGNER

DRAWN BY

CHECKED BY

DATE

JEA STANDARD

SANITARY SEWER DETAILS

PROJ. NO. 20-43

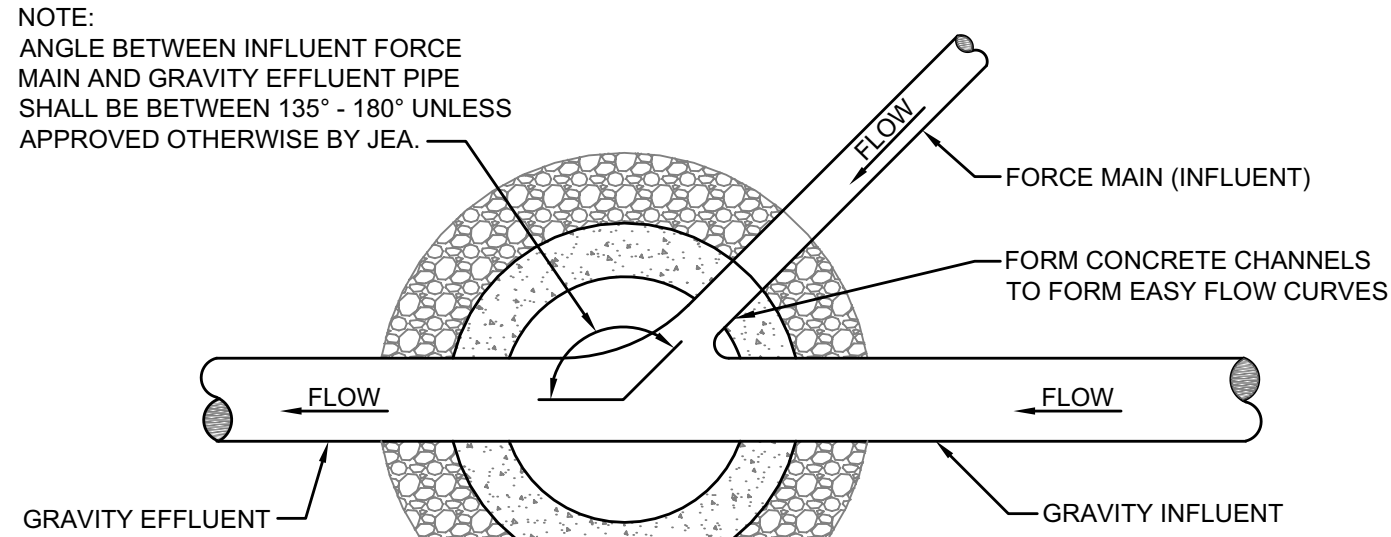
DATE: JANUARY 2019

SCALE: AS NOTED

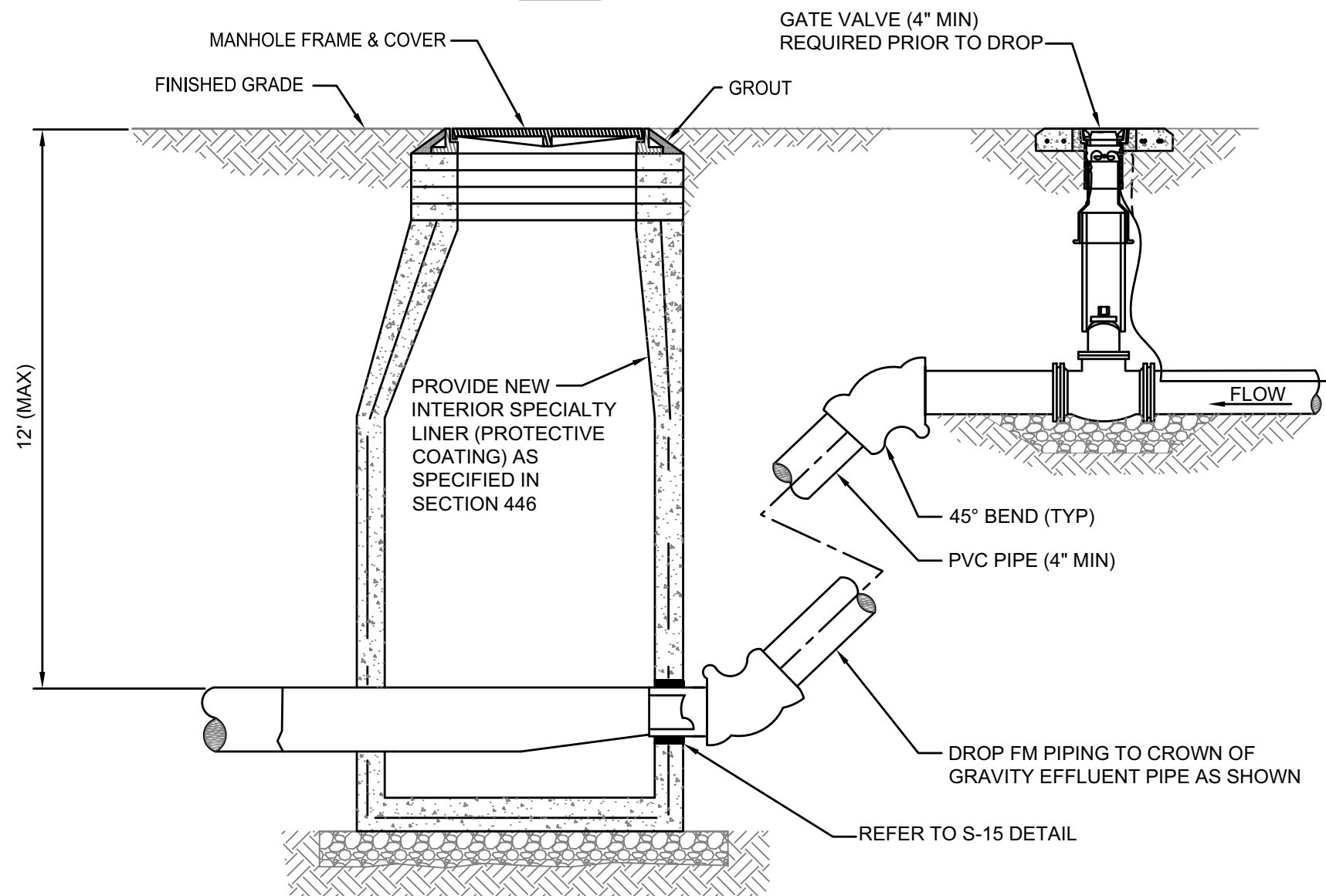
S-3



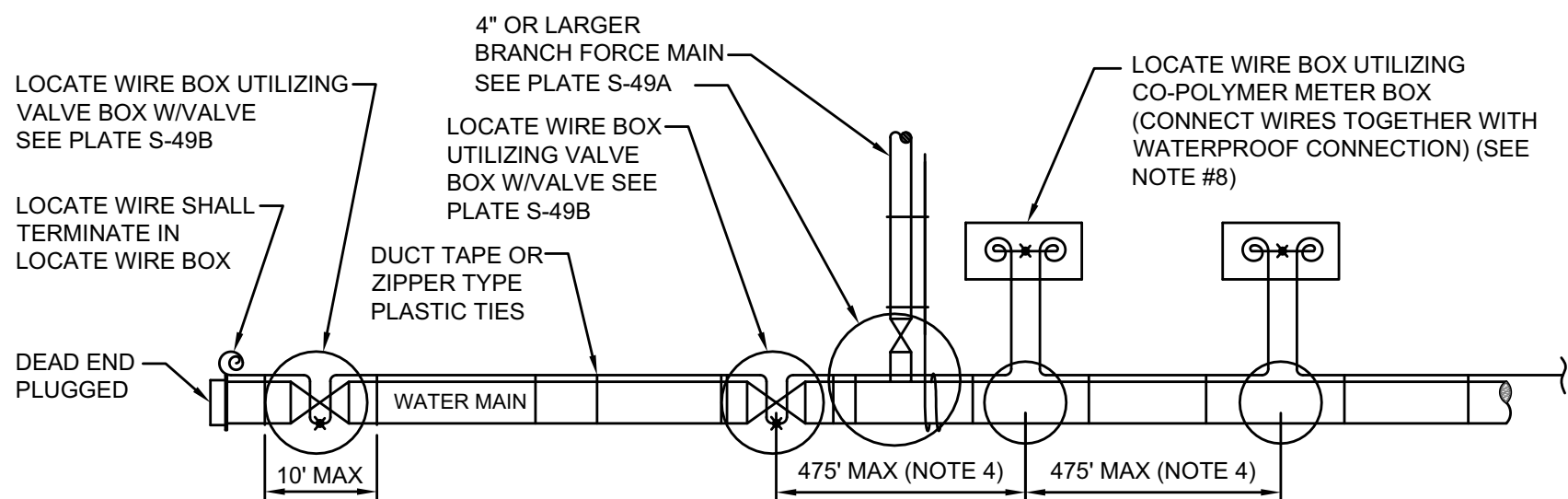
P:\AE Projects\2020\20-43 JEA Eastport FM Design\Plot\JEA Sewer Details.dwg      Current Layout Tab = S-4 JEA SANITARY SEWER DETAILS      Wed Sep 30, 2020 - 14:49



PLAN



SECTION



LOCATE WIRE SYSTEM

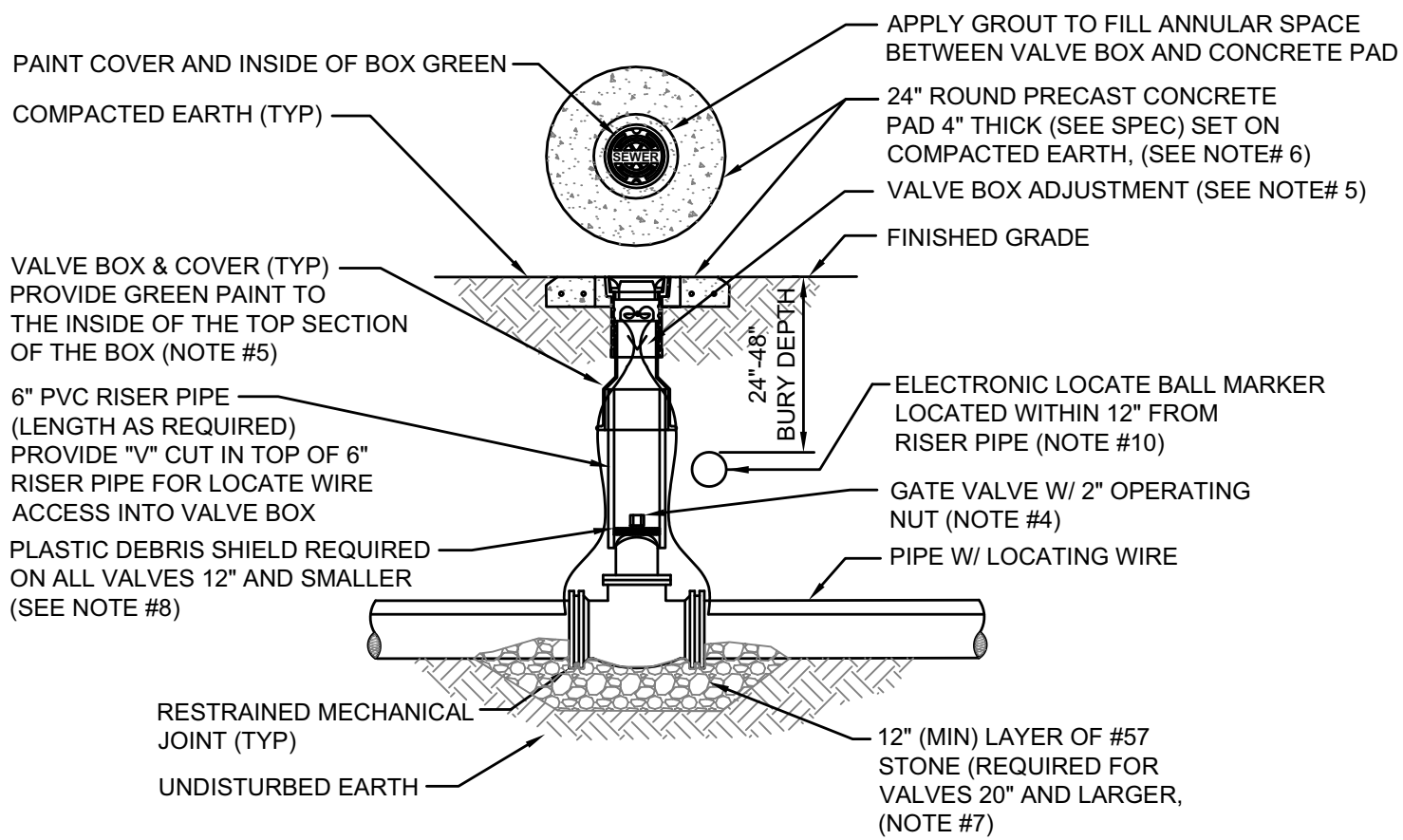
NOTES:

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 FORCE 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 S-49B. WIRE CONNECTIONS BELOW GROUND (OUTSIDE OF A BOX) SHALL BE AVOIDED.
5. LOCATING WIRE SHALL BE 12 GAUGE COPPER WIRE WITH .03 INCHES (MINIMUM) HDPE INSULATION THICKNESS, 0.141 INCHES (MINIMUM) O.D. RATED BREAK LOAD 250LBS., UF RATED (DIRECT BURIAL), GREEN COLOR. FOR HDD INSTALLATIONS, THE LOCATE WIRE SHALL BE COPPER CODED STEEL AS SPECIFIED IN SPEC. SECTION 750.
6. INDICATES THAT THE WIRES ARE CONNECTED TOGETHER WITH WATERPROOF CONNECTION. (SEE DETAIL W-49B)
7. INDICATES A WIRE PIG-TAIL (24" LONG)
8. AN "LW" CUT SHALL BE CARVED IN THE CONCRETE CURB AND PAINTED AT ALL LOCATE WIRE BOXES.
9. FOUR LANES OF TRAFFIC (HAVING TWO LANES OF TRAFFIC IN EACH DIRECTION) OR GREATER THE LOCATE WIRE AND VALVE BOX SHALL BE OFF-SET TO THE RIGHT-OF-WAY.

LOCATE WIRE CONSTRUCTION FOR FORCE MAINS

JANUARY 2020

PLATE S-49



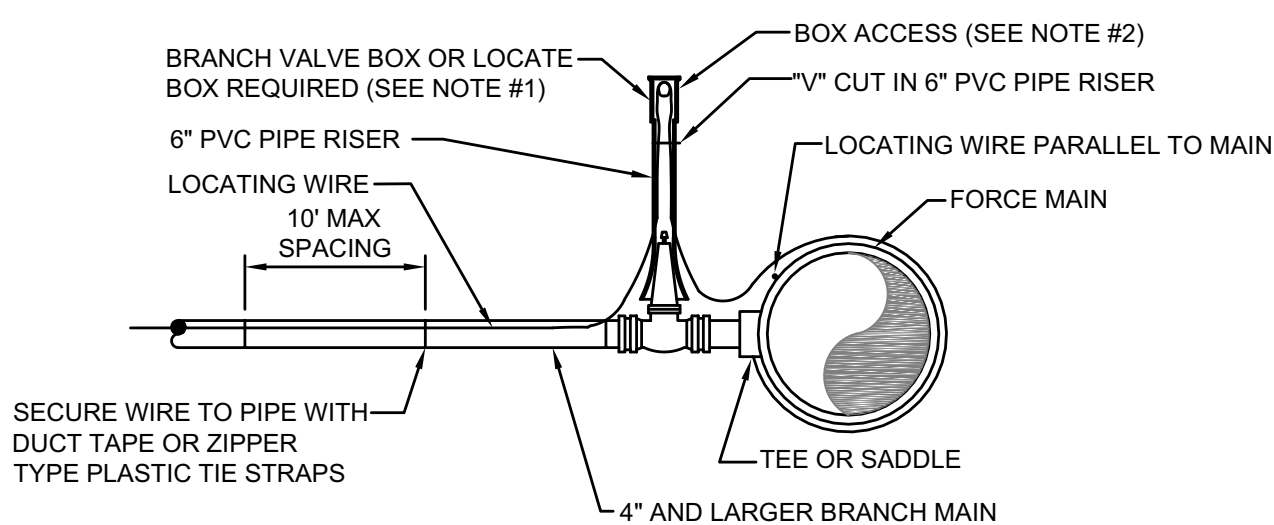
NOTES:

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 S-49).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/(ASPHALT IF NO CURB) 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 24" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "SEWER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/2" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2 THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1404XR FOR SEWER).

SEWER VALVE DETAIL

JANUARY 2020

PLATE S-30



BRANCH FORCE MAIN

(4" AND LARGER SEWER MAIN)

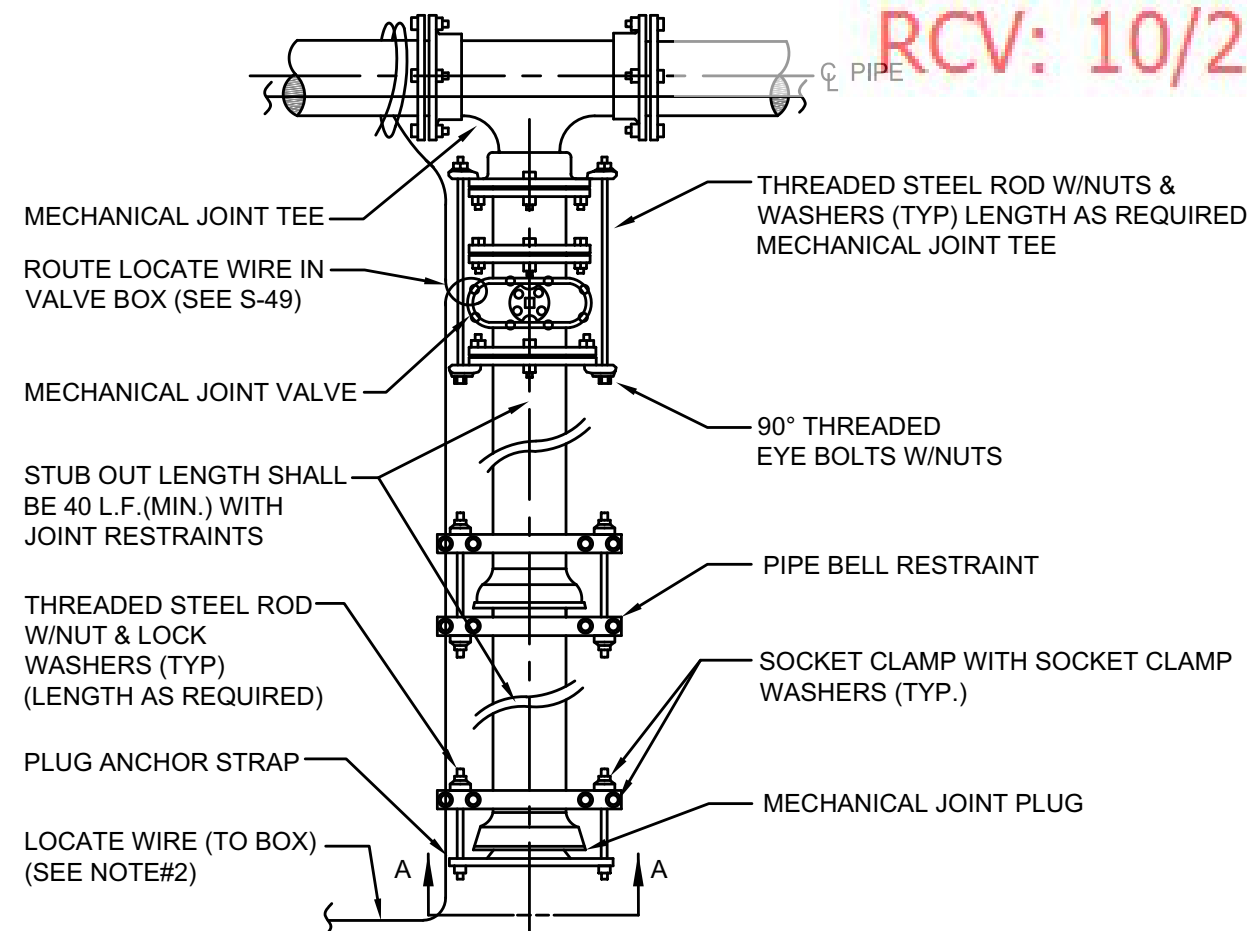
NOTE:

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 S-30).
3. LOCATE WIRE BOX SHALL BE INSTALLED OUTSIDE OF SIDEWALKS, DRIVEWAYS AND PAVEMENT.
4. INDICATES A WIRE PIG-TAIL (4' LONG)

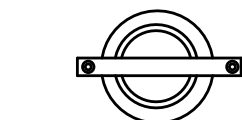
LOCATE WIRE FOR BRANCH MAIN

JANUARY 2020

PLATE S-49A



PLAN



SECTION "A-A"

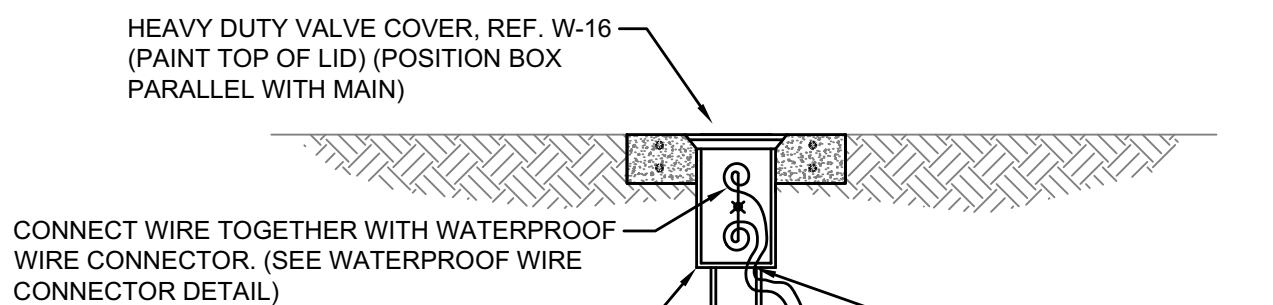
NOTES:

1. IN LIEU OF BELL/ROD 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.

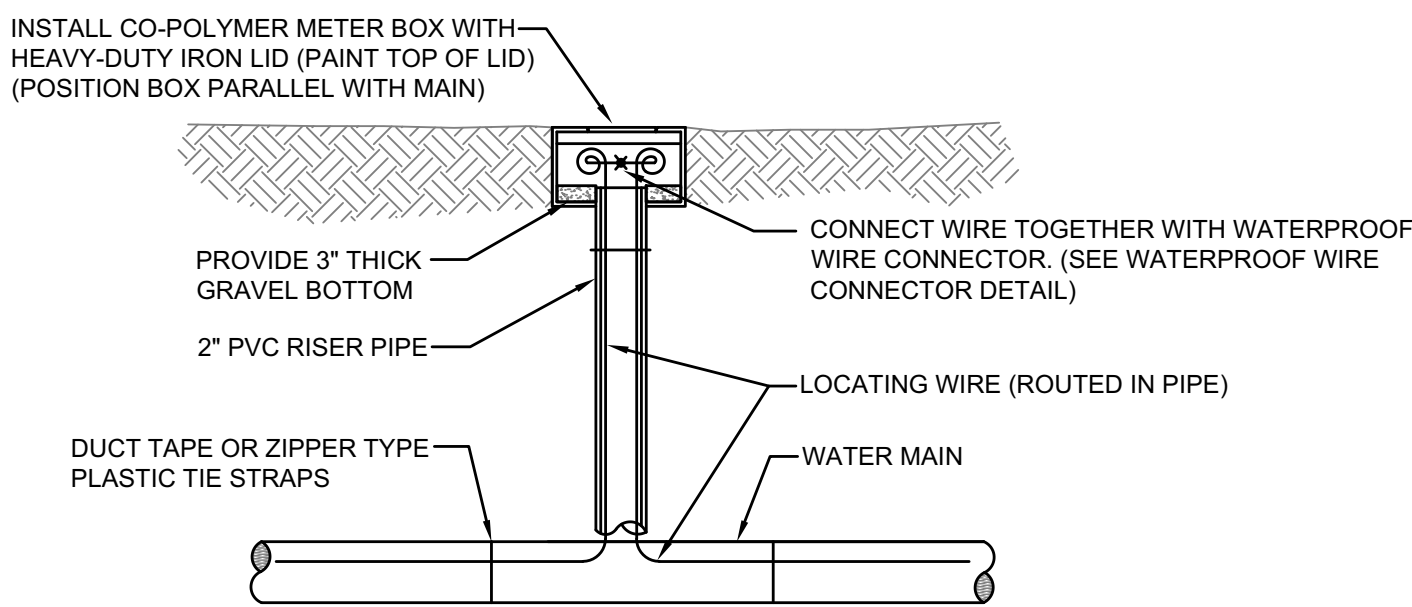
PLUGGED DEAD END USING MECHANICAL RESTRAINTS

JANUARY 2020

PLATE S-44



LOCATE WIRE BOX UTILIZING VALVE BOX



LOCATE WIRE BOX UTILIZING METER BOX

LOCATE WIRE BOX

JANUARY 2020

PLATE S-49B

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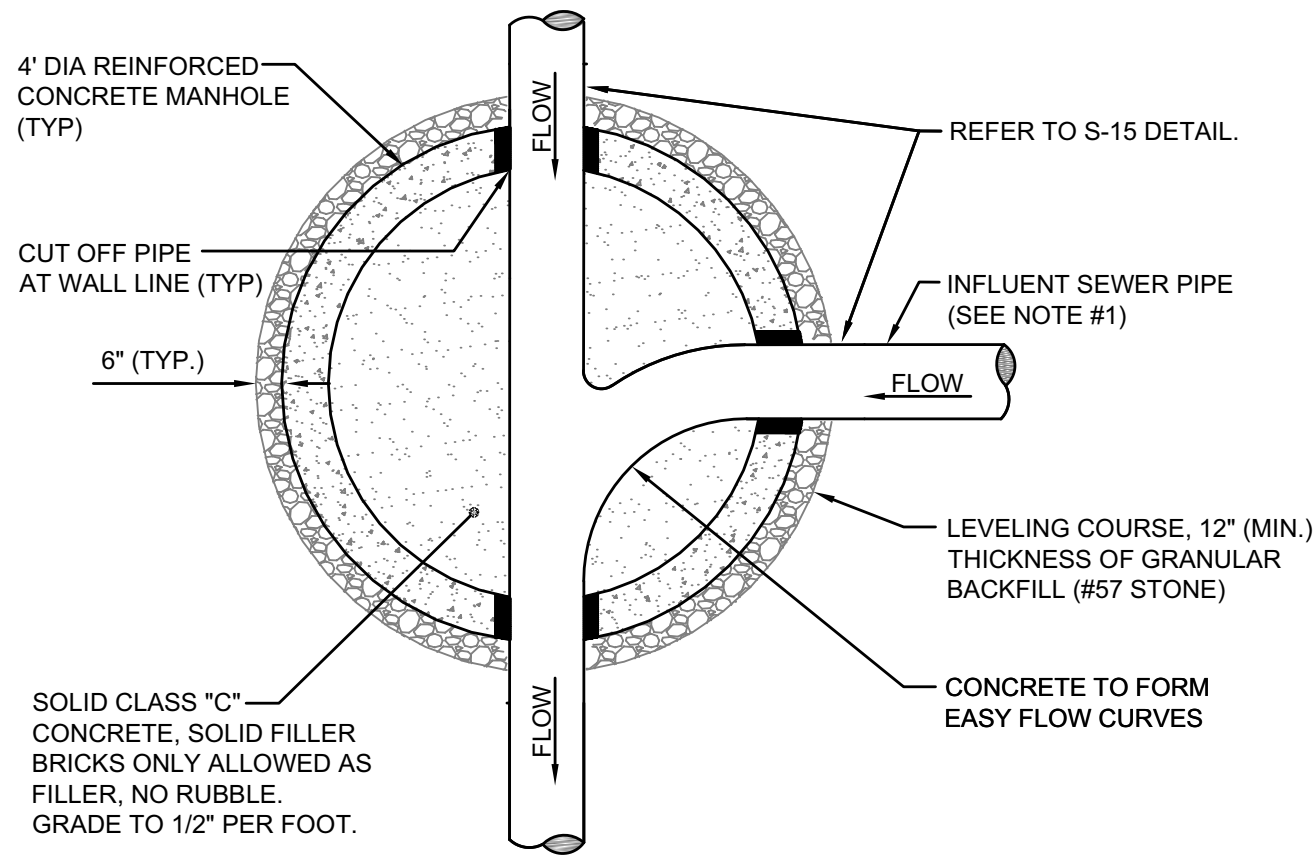
ALMOND  
ENGINEERING  
CONSULTING CIVIL ENGINEERS  
REGISTERED PROFESSIONAL ENGINEERS  
FLORIDA LICENSE NO. 12583  
FLORIDA LICENSE NO. 12584

REVISIONS		DESIGN ENGINEER		JEA STANDARD SANITARY SEWER DETAILS	
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PROJ. NO. 20-43  
DATE: JANUARY 2019  
SCALE: AS NOTED

**S-4**



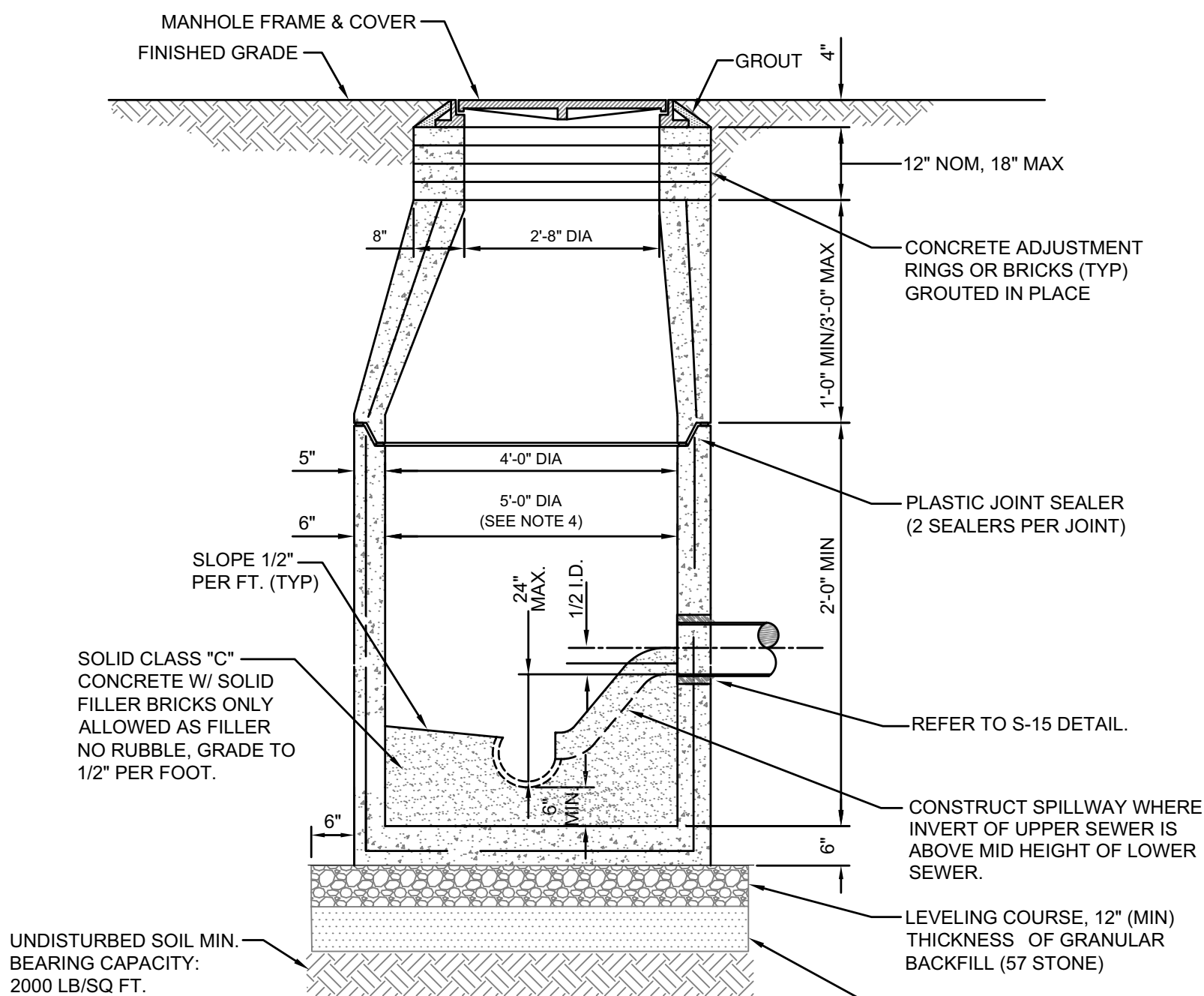


NOTES:

1. THE ANGLE BETWEEN ALL INFLUENT FLOW CHANNELS AND EFFLUENT PIPE SHALL BE 90° - 180° UNLESS OTHERWISE APPROVED BY JEA.

PLAN VIEW (S-3)

(FOR SECTION VIEW SEE S-2)



SECTION VIEW (S-2)

(FOR PLAN VIEW SEE S-3)

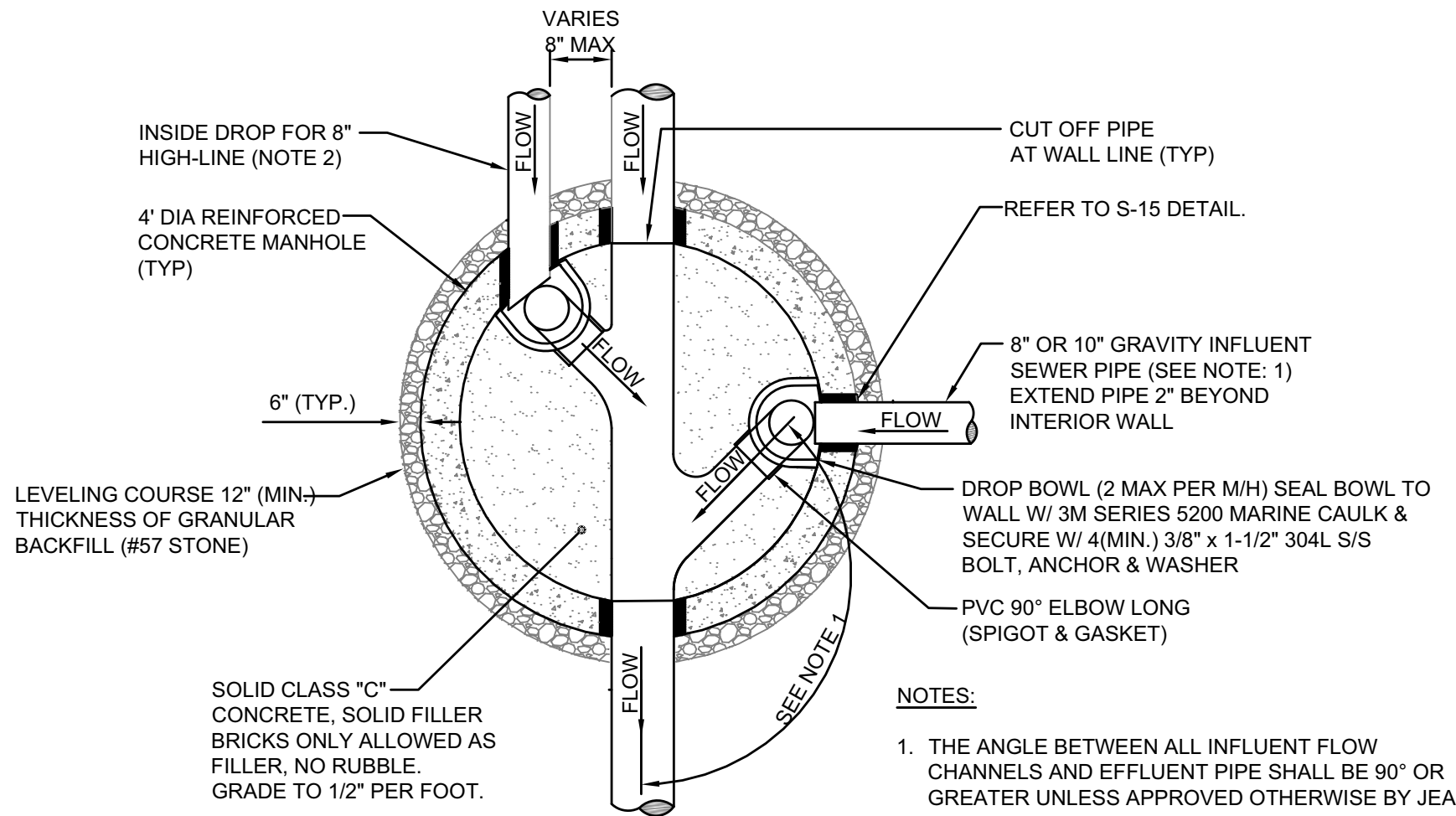
NOTES:

1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
2. THE INTERIOR AND EXTERIOR OF MANHOLE AND ADJUSTING RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
3. IF SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE, THE BITUMINOUS WATERPROOFING MATERIAL SHALL BE OMITTED ON THE INSIDE.
4. JUNCTION MANHOLE (CLOSEST TO WETWELL) SHALL BE 5' DIA WITH SPECIALTY LINER.
5. ALL MANHOLE JOINTS BELOW THE TOP COVER SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (WITH PRIMER). TAPE ON THE CONE SECTION IS OPTIONAL. SEE PLATE S-17.
6. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (#57 STONE).

SANITARY SEWER TYPE "A" MANHOLE  
8"-21" SEWERS

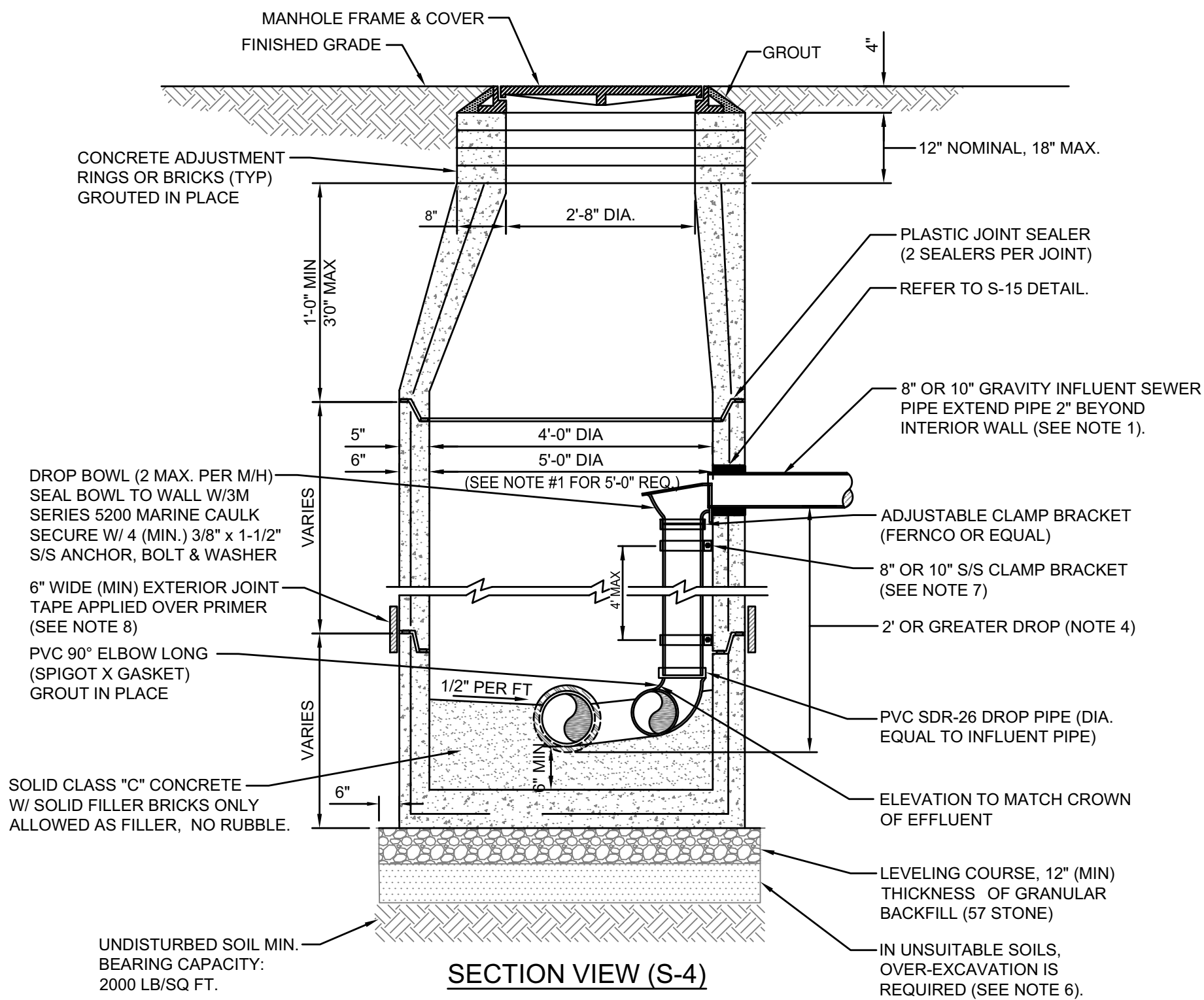
JANUARY 2020

PLATES S-2, S-3



PLAN VIEW (S-5)

(FOR SECTION VIEW SEE S-4)



SECTION VIEW (S-4)

(FOR PLAN VIEW SEE S-5)

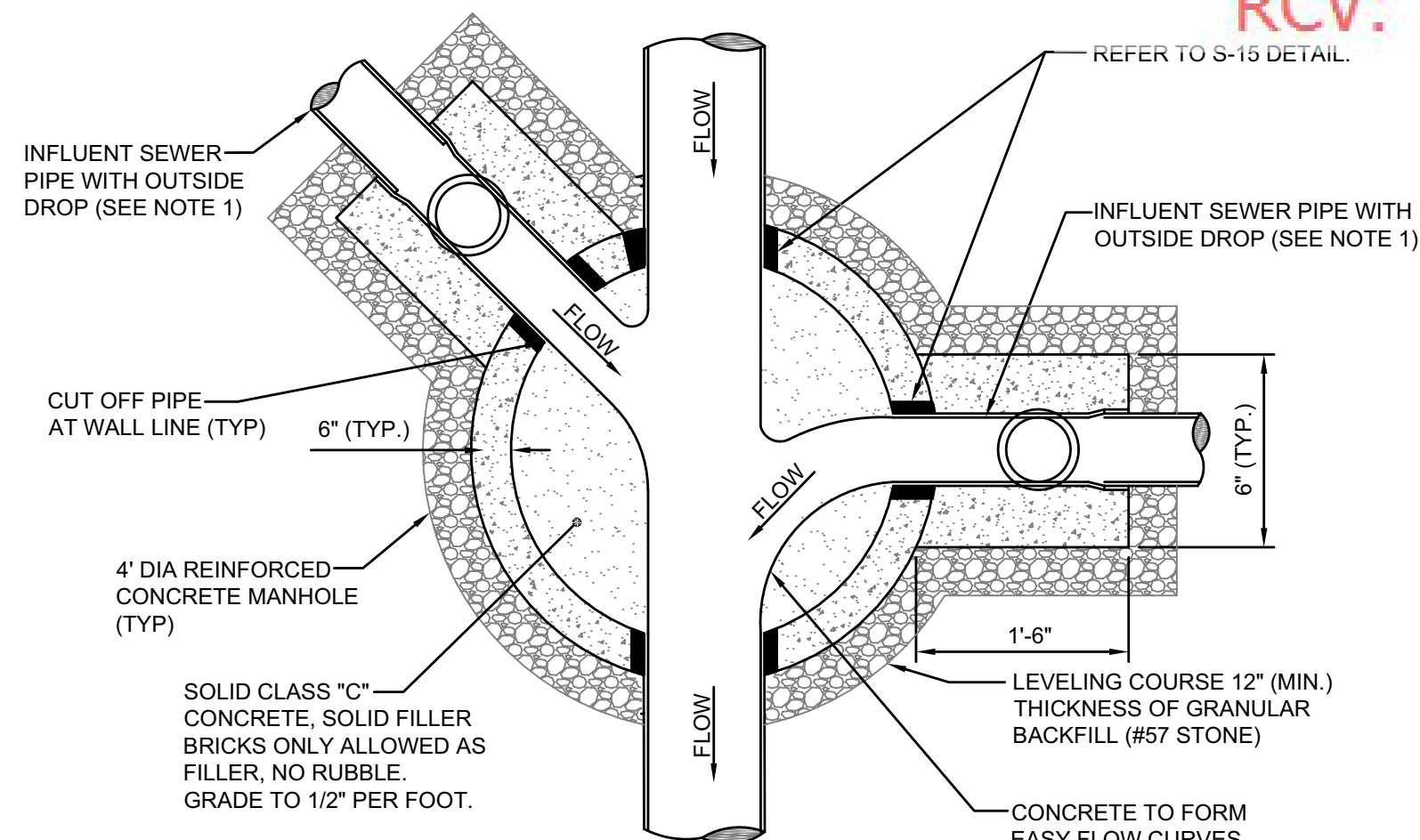
NOTES:

1. THIS ASSEMBLY IS FOR 8" OR 10" GRAVITY INFLUENT LINES ONLY. NO DROPS ALLOWED FOR FORCE MAINS. MAXIMUM OF 2 INSIDE DROP BOWLS PER MANHOLE. A 5'-0" DIA. MANHOLE (6" THICK WALLS) IS REQUIRED IF TWO INSIDE DROPS ARE CONSTRUCTED WITH ONE OR BOTH BEING 10" SIZE. DROP BOWL BY RELINER OR APPROVED EQUAL REQUIRED. THE INSIDE DROP FOR AN 8" HIGH-LINE SHALL BE CONSTRUCTED SIMILAR TO ABOVE (SEE PLATE S-5).
2. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
3. THE INTERIOR AND EXTERIOR OF MANHOLE AND THE INTERIOR OF ADJUSTING RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
4. TYPE "B" MANHOLE MUST BE USED FOR 2' OR GREATER INFLUENT PIPE DROPS.
5. THE DROP BOWL ASSEMBLY SHALL BE INSTALLED PRIOR TO APPLICATION OF SPECIALTY LINING MATERIAL.
6. A TYPE "D" MANHOLE SHALL BE UTILIZED WHEN THREE OR MORE (2' OR GREATER) DROPS ARE INVOLVED OR WHEN INFLUENT PIPES AREA LARGER THAN 10" IN SIZE.
7. ADJUSTABLE CLAMPING BRACKET (MIN. 2 PER DROP BOWL ASSY). 1-1/2" WIDE, 11 GA. W/ 3/8" DIA. 18-8 PINCH BOLTS AND NUTS. SECURE TO M/H WALL WITH (2) 3/8" X 1" BOLT, ANCHOR & WASHER PER BRACKET ASSY. ALL 304 OR 316 STAINLESS STEEL MATERIALS.
8. ALL M/H JOINTS BELOW THE TOP CONE SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (W/PRIMER). TAPE ON THE CONE SECTION IS OPTIONAL.
9. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (#57 STONE).

SANITARY SEWER TYPE "B" MANHOLE  
8"-10" SEWERS

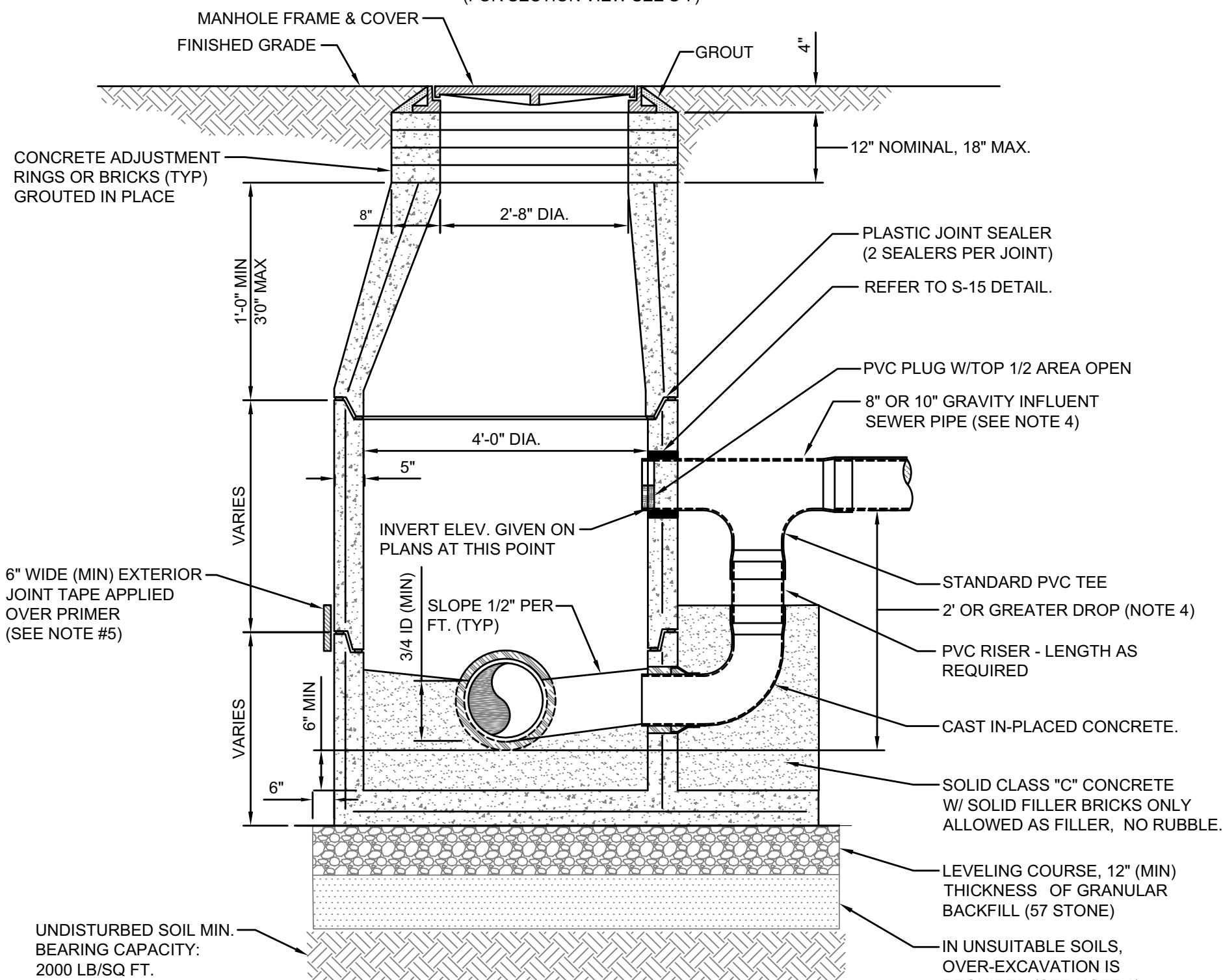
JANUARY 2020

PLATES S-4, S-5



PLAN VIEW (S-8)

(FOR SECTION VIEW SEE S-7)



SECTION VIEW (S-7)

(FOR PLAN VIEW SEE S-8)

NOTES:

1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
2. THE INTERIOR AND EXTERIOR OF MANHOLE AND THE INTERIOR OF THE ADJUSTING RINGS SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
3. IF SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE, THE BITUMINOUS WATERPROOFING SHALL BE, OMITTED ON INSIDE.
4. TYPE "D" MANHOLE SHALL BE USED FOR 12" OR LARGER INFLUENT PIPES W/ 2' OR GREATER INFLUENT DROP.
5. ALL M/H JOINTS BELOW THE TOP CONE SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (W/PRIMER). TAPE ON THE CONE SECTION IS OPTIONAL.
6. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (#57 STONE).

SANITARY SEWER TYPE "D" MANHOLE  
12"-21" SEWERS

JANUARY 2020

PLATES S-7, S-8

CDN: 4161.328

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ALMOND ENGINEERING CONSULTING CIVIL ENGINEERS 10000 W. 11TH AVE., SUITE 100 DENVER, CO 80233-1000 TEL: 303.751.1000 FAX: 303.751.1001	
REVISIONS	
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DESIGN ENGINEER

DRAWN BY

DATE

CHECKED BY

DATE

JEASm  
Building Community

JEAS STANDARD  
SANITARY SEWER DETAILS

PROJ. NO. 20-43

DATE: JANUARY 2019

SCALE: AS NOTED

S-5



HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

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

- 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 350, III.4.11.

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

JANUARY 2020

PLATE W-10

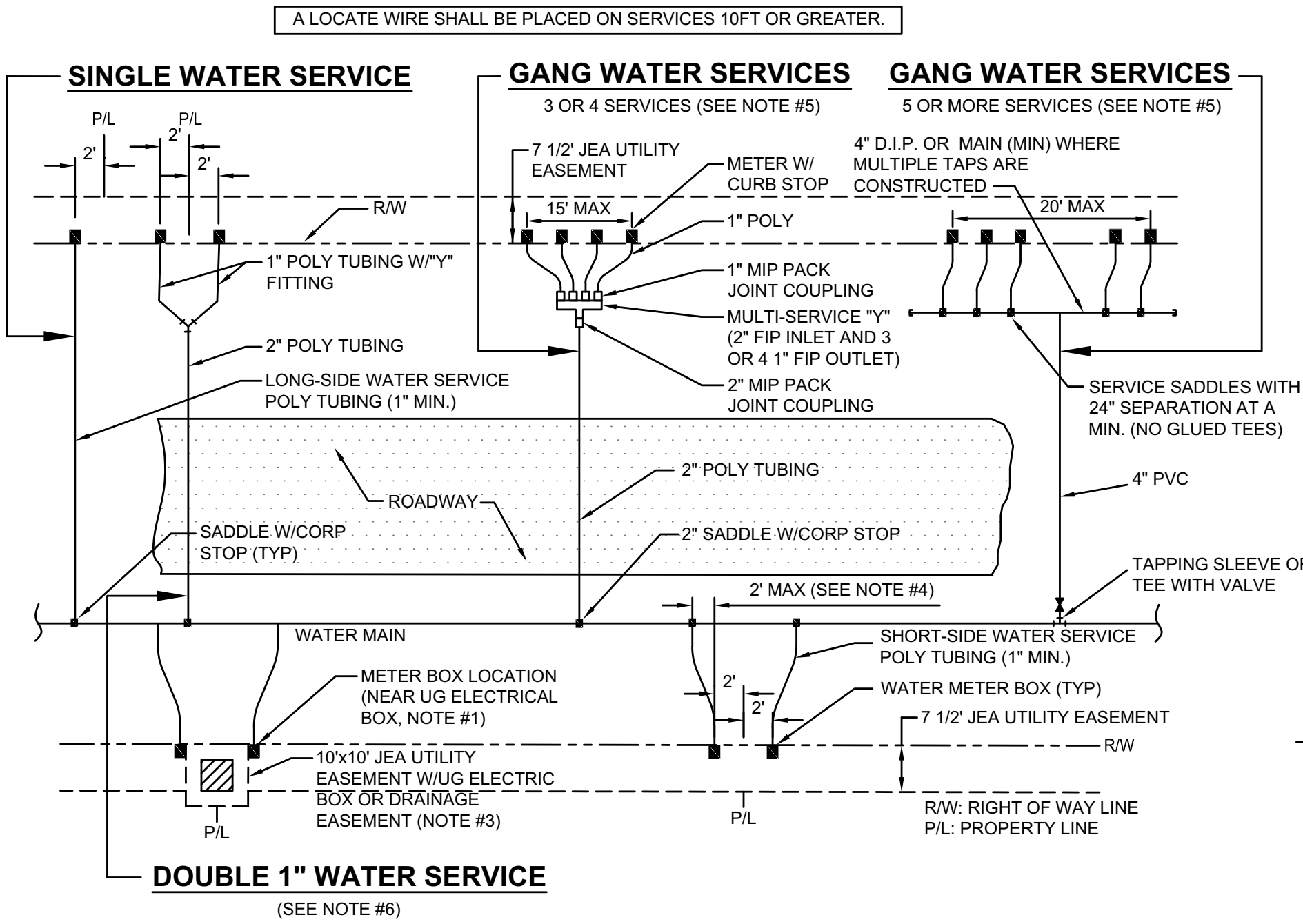
WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA 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 PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
5. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM ALL JOINTS IN 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 2020

PLATE W-11



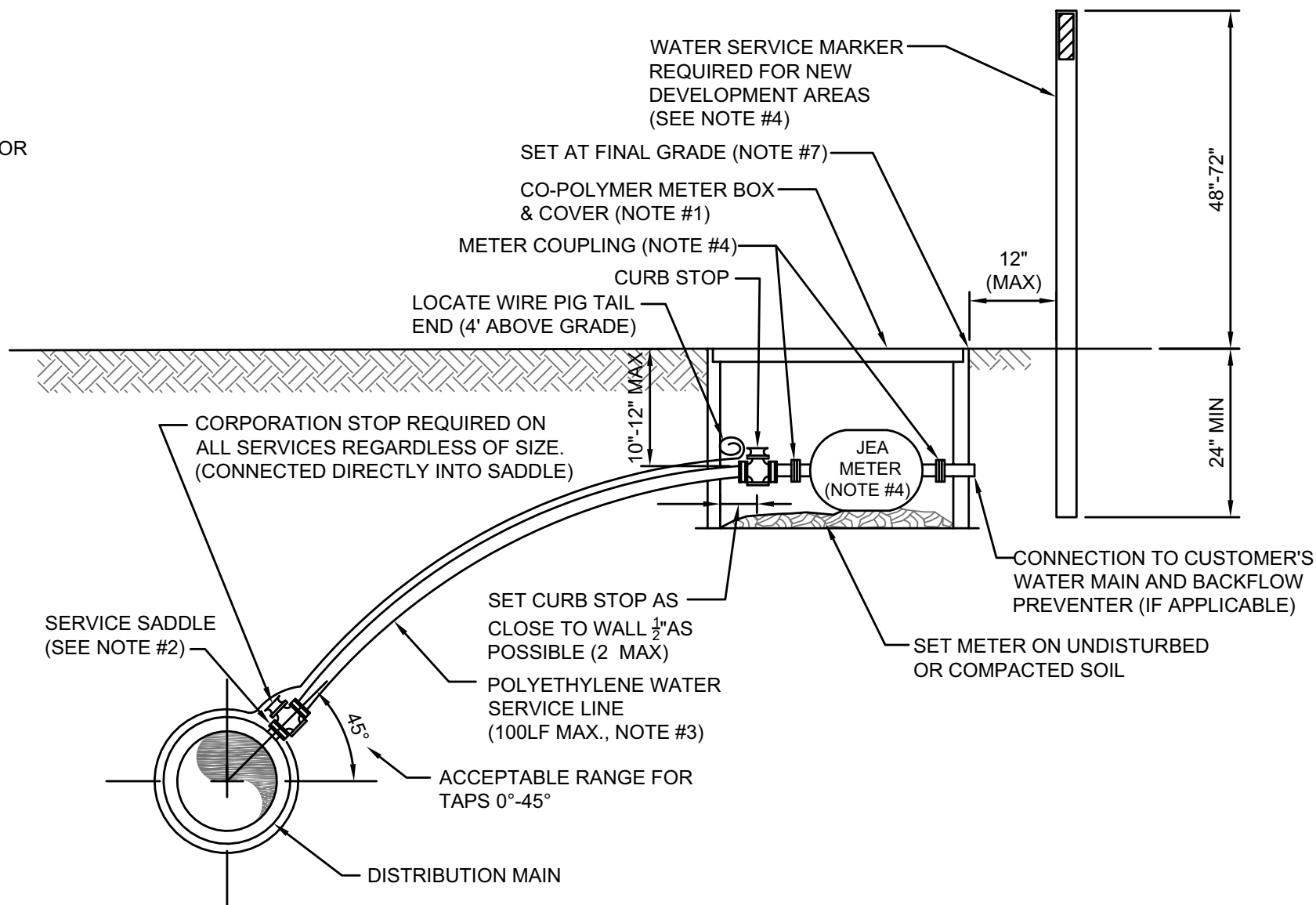
NOTES:

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

WATER OR RECLAIM SERVICE INSTALLATIONS 2" AND SMALLER METER

JANUARY 2020

PLATE W-1



NOTES:

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

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2020

PLATE W-2

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10000 W. 11TH AVE., SUITE 100  
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NO.	BY	DATE	REVISIONS
1			
2			
3			
4			
5			
6			

DESIGN ENGINEER	FLORIDA REGISTRATION NO.
DRAWN BY	
CHECKED BY	
DATE	

JEABuilding Community<sup>sm</sup>

JE A STANDARD  
WATER MAIN DETAILS

PROJ. NO.	20-43
DATE	JANUARY 2019
SCALE	AS NOTED

W-1