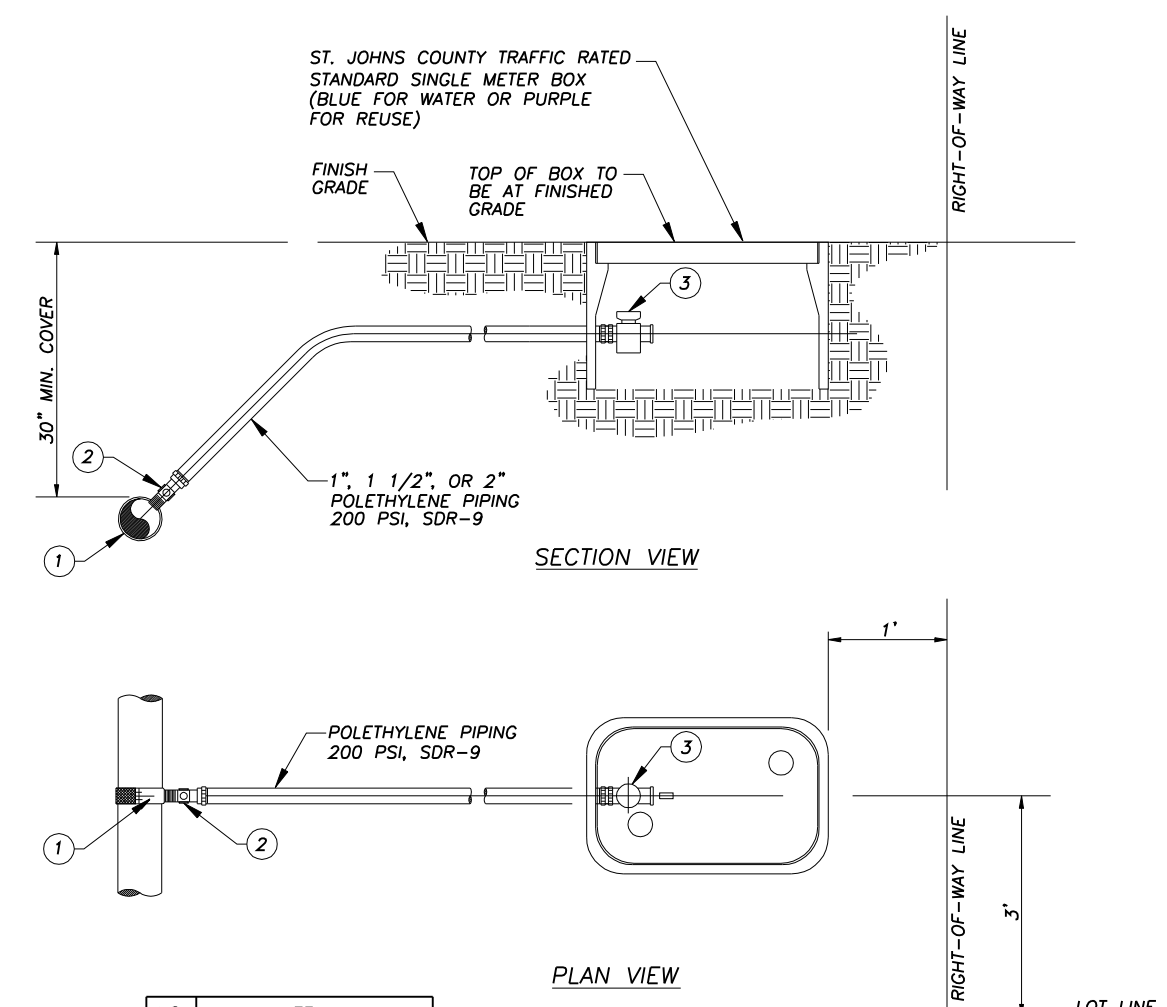
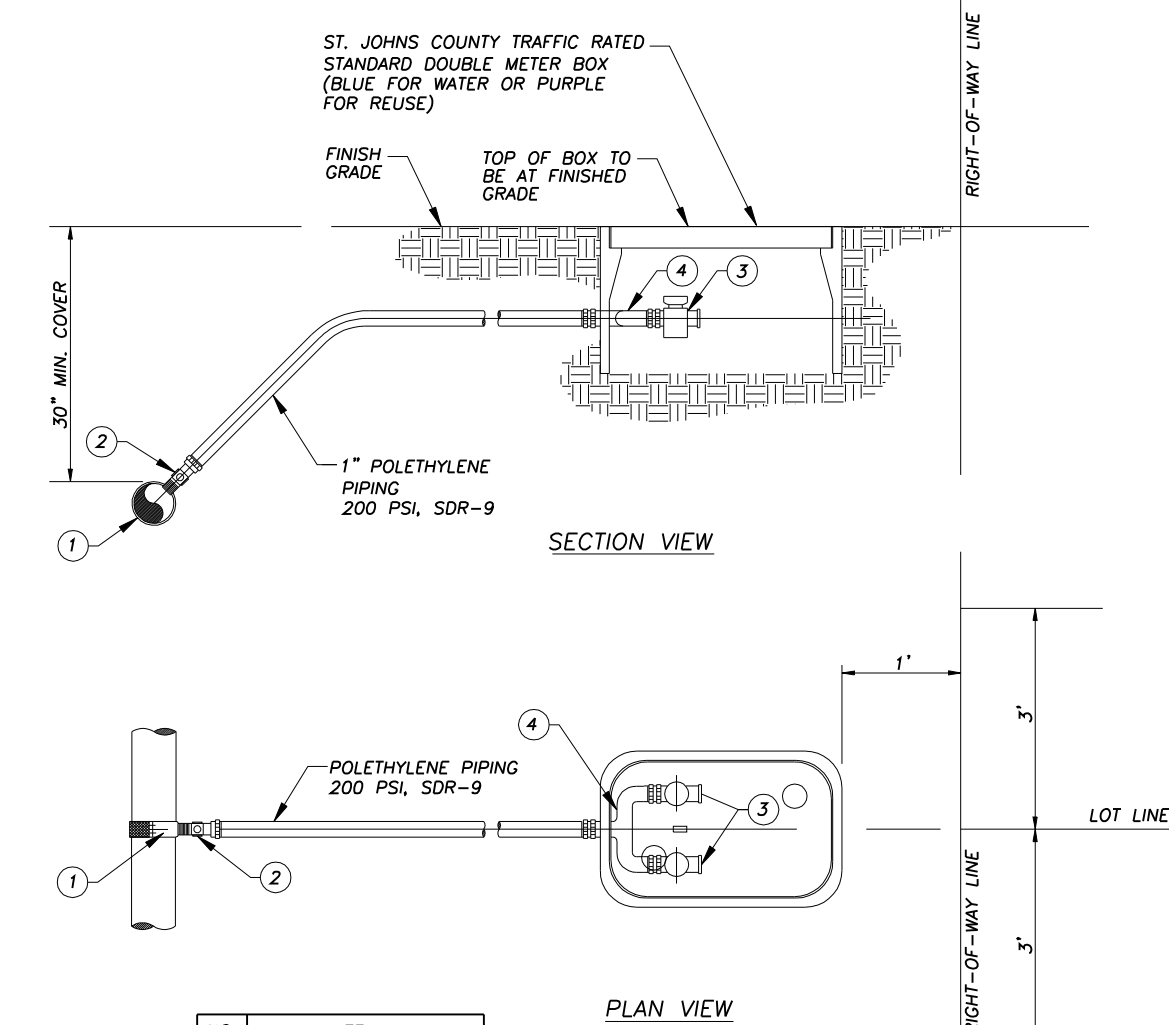


NOTES:  
1. LOCATION OF VALVE TO BE MARKED BY LETTER "T" SCRIBED A MINIMUM OF 4" HIGH AND 1/4" DEEP IN CURB AND CURB PAINTED BLUE FOR WATER, GREEN FOR SEWER, PAINTING PURPLE S220 FOR REUSE.  
2. SHOULD NOT BE INSTALLED IN DRIVEWAYS, SIDEWALKS, ROADS, ETC.  
3. LOCATE ON LOT LINE (+/-) 3' AND 2' BEYOND LAST WATER MAIN SERVICE CONNECTION.  
4. NOT TO BE USED IN AREAS SUBJECT TO FLOODING.



ITEM LIST: 1 SERVICE SADDLE, 2 CORPORATION STOP, 3 BALL YOKE VALVE

NOTES:  
1. TO BE USED FOR ODD NUMBER OF LOTS OR SPECIAL APPLICATIONS WHERE A DOUBLE SERVICE IS NOT APPROPRIATE.  
2. SEE SHEET W-10 FOR DOUBLE SERVICE.  
3. ALL SERVICE LOCATIONS TO BE MARKED BY ETCHING A 3" HIGH "W" IN THE CONCRETE CURB AND PAINTING IT BLUE FOR WATER OR PURPLE "R" FOR REUSE.  
4. IN CERTAIN CONDITIONS, THE WATER SERVICE MAY BE REQUIRED TO BE LARGER DUE TO SIZE OF HOME, DISTANCE TO HOME, ETC.  
5. DO NOT INSTALL IN DRIVEWAYS OR SIDEWALKS.  
6. FOR PHASED NON-RESIDENTIAL DEVELOPMENT, A MINIMUM 2" TAP MAY BE REQUIRED TO ACCOMMODATE FUTURE EXPANSION.  
7. ALL BRASS FITTINGS IN CONTACT WITH POTABLE WATER SHALL MEET NSF 61 REQUIREMENTS FOR NO LEAD.



ITEM LIST: 1 TAPPING SADDLE, 2 CORPORATION STOP, 3 BALL YOKE VALVE, 4 U-BRANCH

NOTES:  
1. SEE SHEET W-9 FOR SINGLE SERVICE.  
2. ALL SERVICE LOCATIONS TO BE MARKED BY ETCHING A 3" HIGH "W" IN THE CONCRETE CURB AND PAINTING IT BLUE FOR WATER OR PURPLE "R" FOR REUSE.  
3. IN CERTAIN CONDITIONS, THE WATER SERVICE MAY BE REQUIRED TO BE LARGER DUE TO SIZE OF HOME, DISTANCE TO HOME, ETC.  
4. DO NOT INSTALL IN DRIVEWAYS OR SIDEWALKS.  
5. ALL BRASS FITTINGS IN CONTACT WITH POTABLE WATER SHALL MEET NSF 61 REQUIREMENTS FOR NO LEAD.

RESTRAINT JOINT TABLE: MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTINGS (FEET). Columns: ELBOWS (DEG.), PLUG, VALVE, VERTICAL BENDS (DEG.). Rows: NOM. PIPE SIZE (IN.), 4, 6, 8, 10, 12, 14, 16, 18, 20.

RESTRAINT JOINT TABLE: MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTINGS (FEET). Columns: TEES (\*), REDUCERS (\*\*). Rows: NOM. PIPE SIZE (IN.), 4, 6, 8, 10, 12, 14, 16, 18, 20.

NOTES:

1. (\*) 25' MIN. EACH RUN SIDE OF TEES.  
2. (\*\*) LENGTH SHOWN IS FOR LARGE SIDE OF REDUCER, 25' MIN. ON SMALL SIDE.  
3. RESTRAINED LENGTHS DETERMINED USING EBAA IRON - RESTRAINT LENGTH CALCULATOR 6.3 WITH THE FOLLOWING CONSTANTS AS INPUT / ASSUMPTIONS:  
-PIPE MATERIAL = PVC  
-SAFETY FACTOR = 2:1  
-TRENCH TYPE = 3  
-DEPTH OF BURY = 3'  
-SOIL TYPE = ML  
4. IF THE ANY OF THE ASSUMPTIONS / INPUTS STATED IN NOTE 3 NEED TO BE REVISED TO FIT PROJECT CONDITIONS, THE ENGINEER OF RECORD SHALL SUBMIT A REVISED MECHANICAL JOINT TABLE TO BE USED ON THE PROJECT. HOWEVER, THE ENGINEER OF RECORD MUST SUBMIT SIGNED AND SEALED CALCULATIONS TO SJUCUD FOR REVIEW AND APPROVAL.

REVISIONS table with columns: Date, Comments, Revision number.

2" FLUSHING VALVE BELOW GRADE TYPE  
SCALE: N.T.S.  
PLATE: W-8

REVISIONS table with columns: Date, Comments, Revision number.

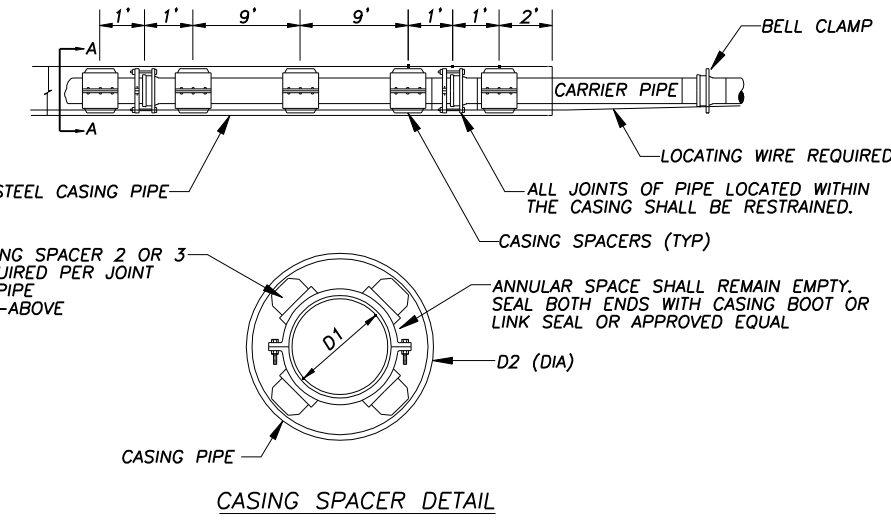
WATER SERVICES SINGLE SERVICE  
SCALE: N.T.S.  
PLATE: W-9

REVISIONS table with columns: Date, Comments, Revision number.

WATER SERVICES DOUBLE SERVICE  
SCALE: N.T.S.  
PLATE: W-10

REVISIONS table with columns: Date, Comments, Revision number.

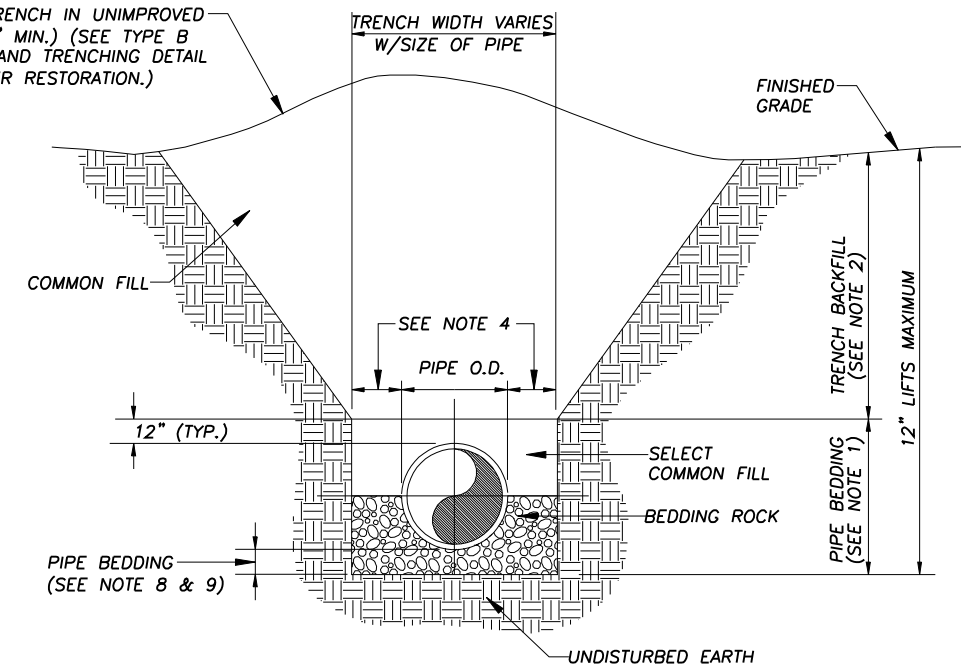
RESTRAINED JOINT TABLE  
SCALE: N.T.S.  
PLATE: W-11



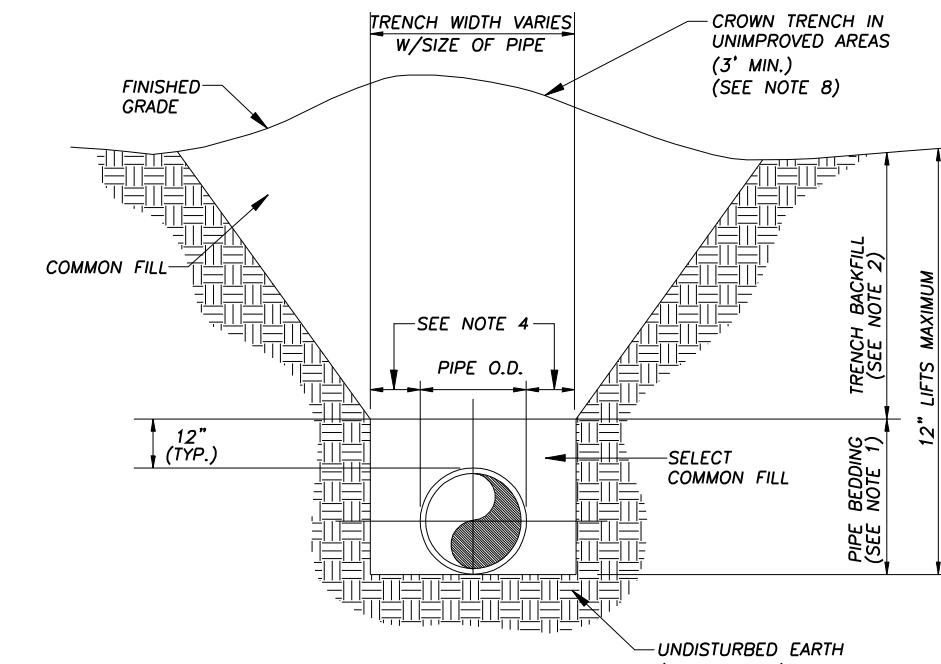
CARRIER PIPE AND CASING PIPE SIZES (MIN.) IN INCHES table with columns: CARRIER PIPE NOM. DIA. (D1), STEEL CASING PIPE NOM. DIA. (D2), WALL THICKNESS RAILROAD-(PEC), WALL THICKNESS RAILROAD-(CSX), WALL THICKNESS-900, PVC CASING C-900 DR25 (D2).

NOTES:

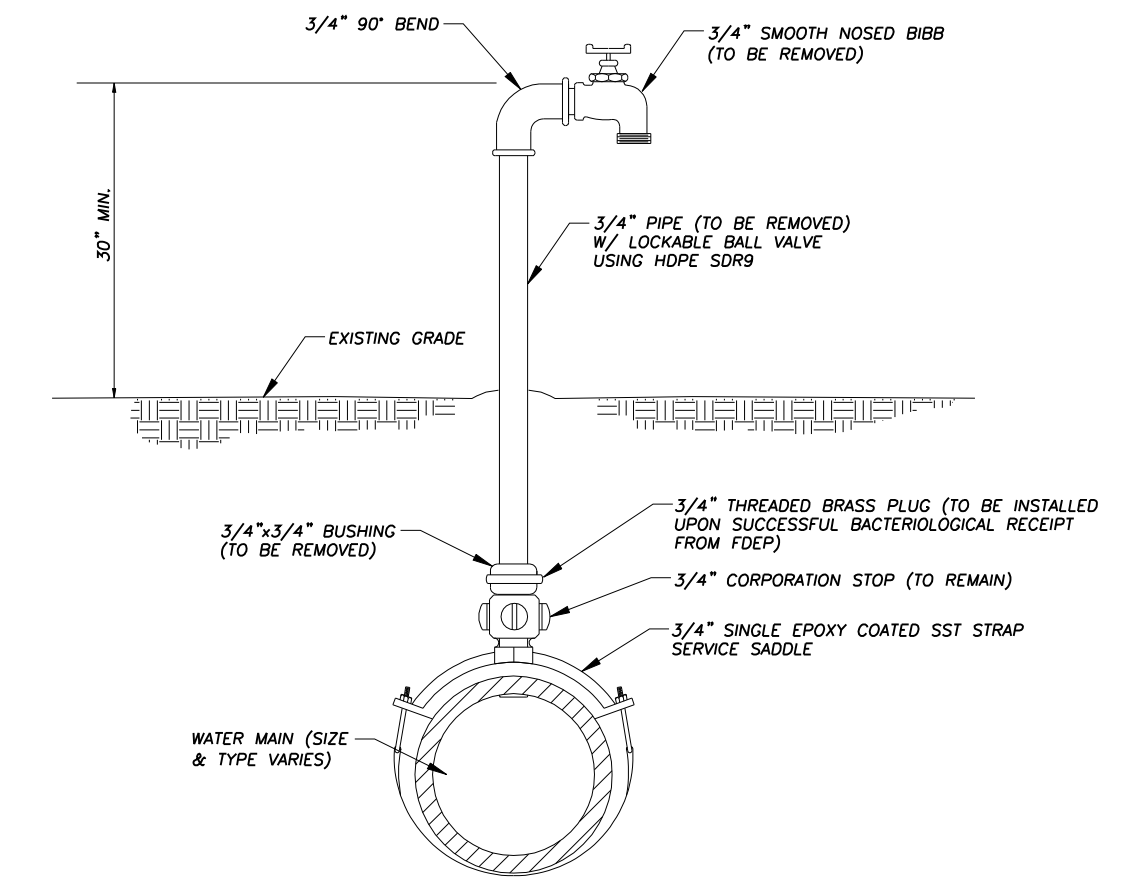
1. MIN. COVER TO TOP OF CASING; a) FDOT-3.0' b) RAILROAD-5.5' TO BASE OF RAIL, 4.5' FOR SECONDARY OR INDUSTRIAL TRACKS, EXCEPT FOR F.C.C. (SEE NOTE 3)  
2. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING. HOWEVER, A MINIMUM OF 6 INCHES IS REQUIRED FOR FLORIDA EAST COAST R.R. CROSSINGS.  
3. THE MINIMUM COVER FOR CASING UNDER FLORIDA EAST COAST RAILROAD SHALL BE 5.0 FEET BELOW THE BOTTOM OF TIES FOR ALL TRACKS.  
4. ALL CARRIER PIPE JOINTS SHALL BE MECHANICAL RESTRAINED.  
5. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, CONTRACTOR CAN USE STEEL OR PVC CASING UNLESS OTHERWISE INDICATED BY ENGINEER.  
6. JOINTS OF C-900 PVC CASING PIPE SHALL BE RESTRAINED.  
7. CASING SHALL EXTEND A MINIMUM OF 3' BEYOND EDGE OF PAVEMENT AND AN ADDITIONAL 1' LENGTH PER 1' OF DEPTH.  
8. FUSED HOPE OR FUSED PVC CAN BE USED FOR STREET CROSSINGS IN LIEU OF CASINGS.  
9. LEAK DETECTOR REQUIRED.



NOTE:  
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-190.  
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-190.  
3. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.  
4. 12" MINIMUM, 15" MAXIMUM FOR PIPE DIAMETER LESS THAN 24", AND 24" MAXIMUM FOR PIPE DIAMETER 24" AND LARGER.  
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.  
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.  
7. REFER TO SECTION 3.3 OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.  
8. GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING, IF REQUIRED BY THE COUNTY. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15", AND 6" MINIMUM DEPTH FOR PIPE DIAMETER 15" AND LARGER.  
9. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL COVER DEPTH OF BEDDING ROCK BELOW THE PIPE. COUNTY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.  
10. ALL TRENCHING SHALL BE IN ACCORDANCE WITH FLORIDA TRENCH SAFETY ACT.



NOTE:  
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-190.  
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-190.  
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE COUNTY.  
4. 12" MINIMUM, 15" MAXIMUM FOR PIPE DIAMETER LESS THAN 24", AND 24" MAXIMUM FOR PIPE DIAMETER 24" AND LARGER.  
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.  
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.  
7. REFER TO SECTION 3.3 OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.  
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES' SURFACE RESTORATION WITHIN COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.  
9. ALL TRENCHING SHALL BE IN ACCORDANCE WITH FLORIDA TRENCH SAFETY ACT.



NOTES:  
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL PIPING AND FITTINGS ABOVE CORPORATION STOP UPON RECEIPT OF SATISFACTORY BACTERIOLOGICAL CLEARANCE FROM FDOT.  
2. LOCATION OF ALL TAPS TO BE SHOWN ON AS-BUILTS.

REVISIONS table with columns: Date, Comments, Revision number.

CASING DETAIL  
SCALE: N.T.S.  
PLATE: W-12

REVISIONS table with columns: Date, Comments, Revision number.

TYPE A BEDDING & TRENCHING  
SCALE: N.T.S.  
PLATE: W-13

REVISIONS table with columns: Date, Comments, Revision number.

TYPE B BEDDING & TRENCHING  
SCALE: N.T.S.  
PLATE: W-14

REVISIONS table with columns: Date, Comments, Revision number.

3/4\"/>

NO. BY DATE SYMBOL REVISIONS DESIGNER: DRAWN BY: CHECKED BY: DATE: DESIGN ENGINEER: FLORIDA REGISTRATION NO. ST. JOHNS COUNTY UTILITY DEPARTMENT 1505 STATE ROAD 16 ST. AUGUSTINE, FLORIDA 32084-8646 Phone (904) 209-2700 Fax (904) 209-2702 GENERAL WATER DETAILS NO. SHEETS SHEET NO. GW-2 DRAWING NO. GW-02.dwg