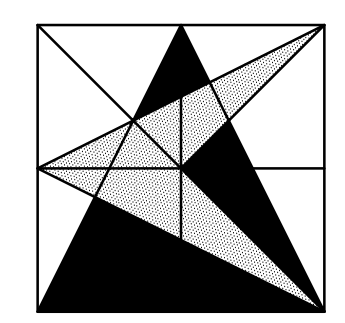
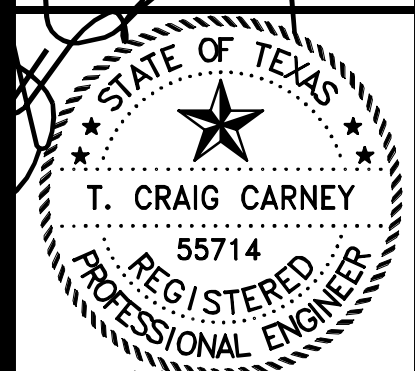


DUNKIN' DONUTS & RETAIL SPACE
 RIDGE ROAD & SUMMER LEE DR.
 ROCKWALL, TEXAS

DETAILS



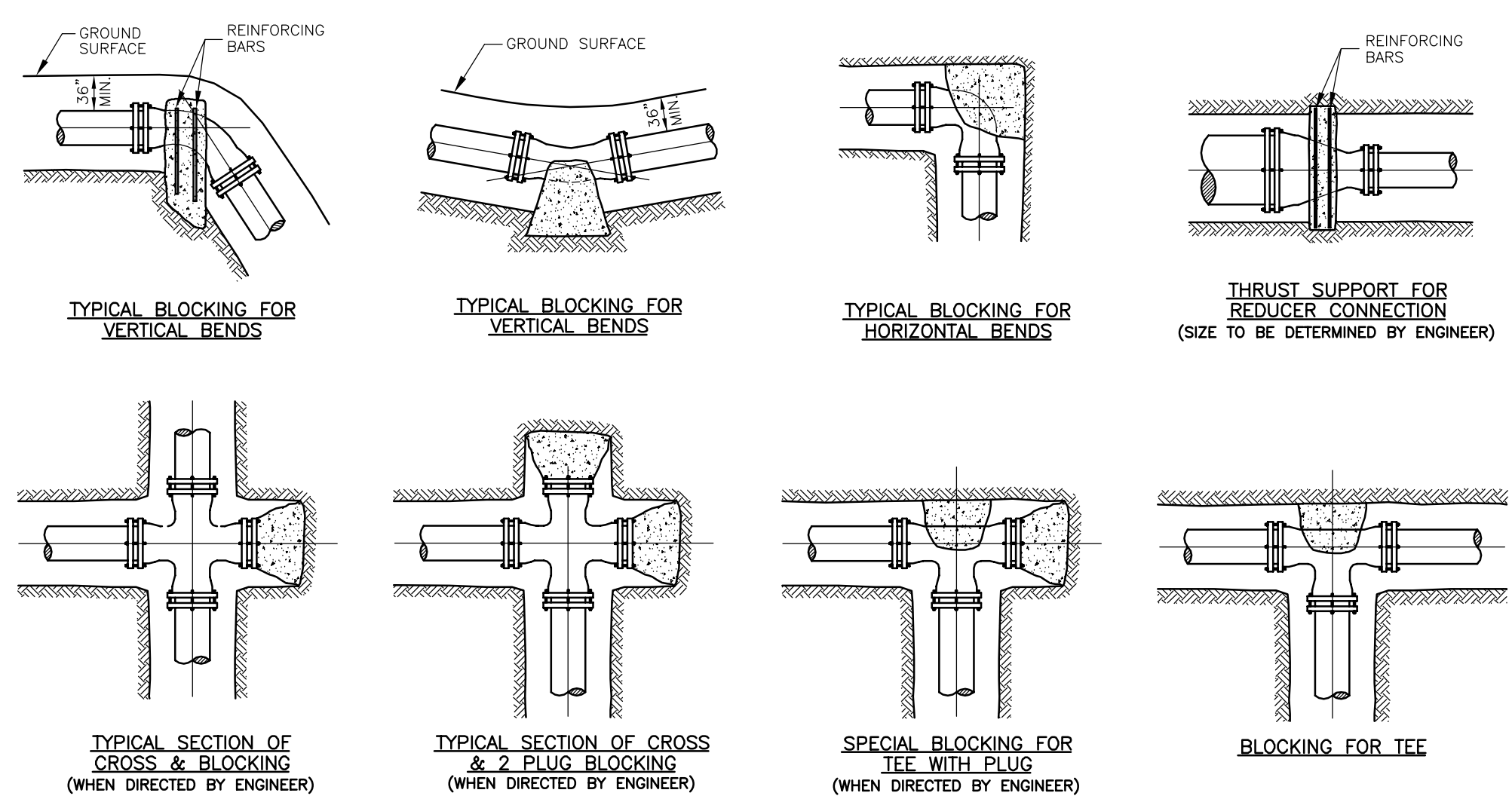
CARNEY ENGINEERING COMPANY
 4588 Hinton Dr.
 Plano, Texas 75024
 PH (469) 443-0861
 FAX (469) 443-0863



08/27/14
 T&E FIRM REGISTRATION NO: F-5033

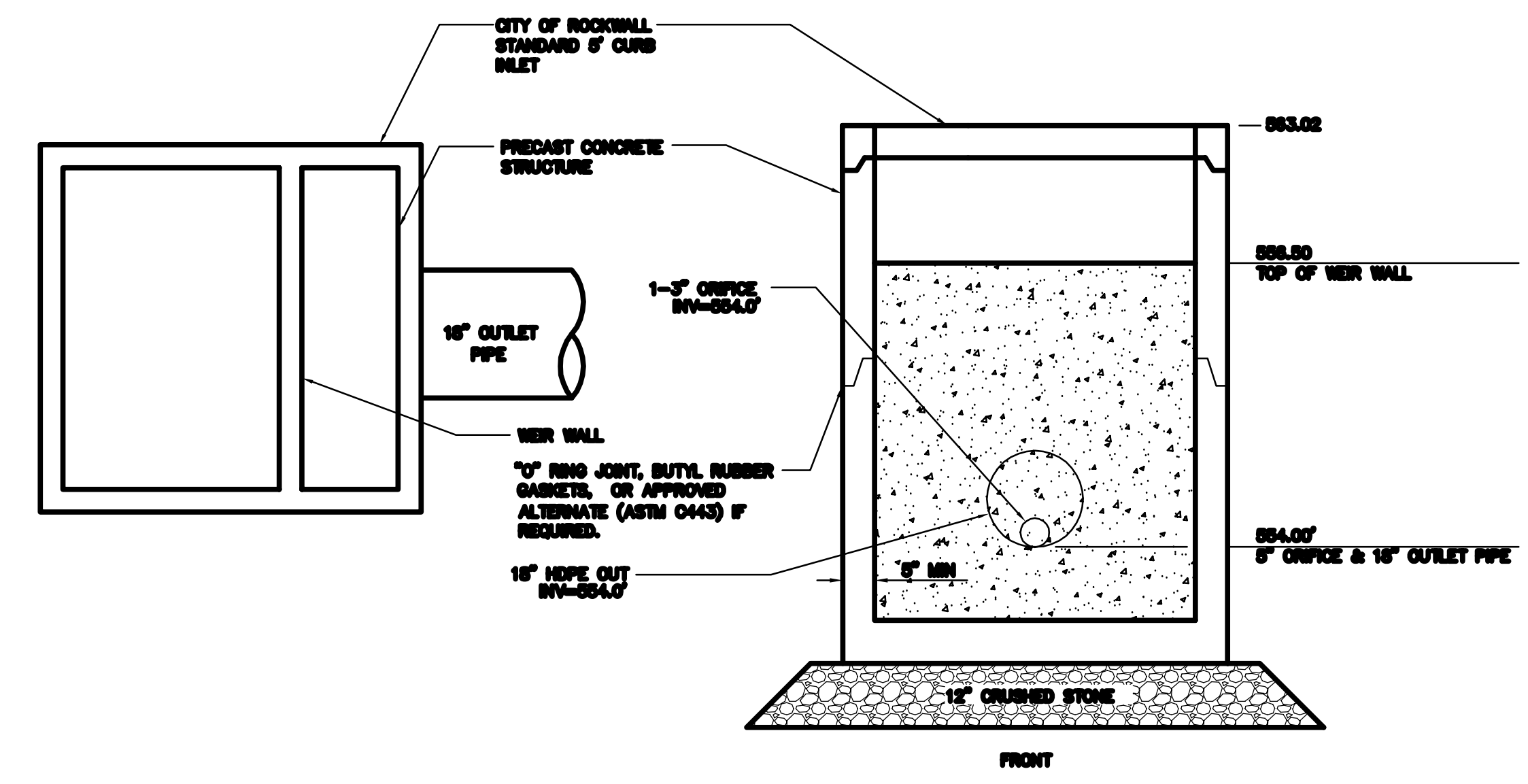
DRAWN BY: GWM
 CHECKED BY: T.C.C.
 START DATE: MAY 2013
 SCALE: AS SHOWN
 PROJECT NO: 24437-1015

SHEET
C-603



THRUST BLOCKING DETAILS
 (N.T.S.)

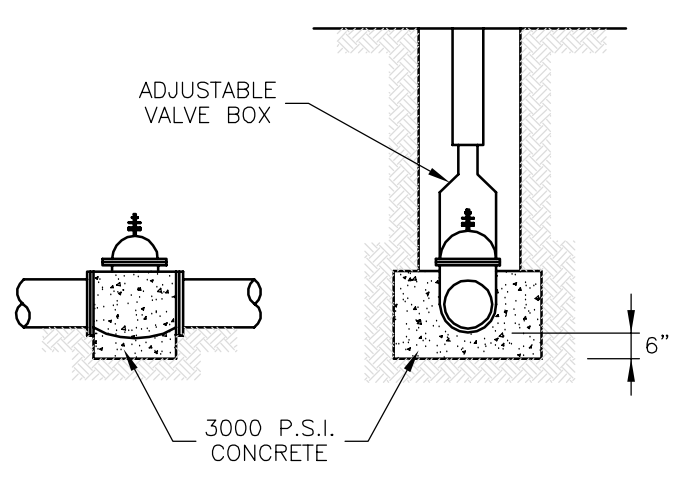
- NOTES ON THRUST BLOCKING**
1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED HAND DUG SOIL AND SHALL BE CONCRETE HAVING A MINIMUM 28 DAY STRENGTH OF 2000 LB. PER SQUARE INCH.
 2. THRUST CALCULATIONS TO BE BASED ON THRUST DUE TO WATER PRESSURE AT 100% OF TEST PRESSURE. $THRUST = 2 AP \sin \frac{1}{2} \theta$, WHERE A = AREA OF PIPE; P = WATER PRESSURE; θ = DEFLECTION ANGLE.
 3. VERTICAL UPLIFT BLOCKS SHALL BE DESIGNED ON THE BASIS OF 150 LBS. PER CU. FT. FOR CONCRETE AND SOIL AT 120 LBS. PER CU. FT. OVER THE AREA OF BLOCK.
 4. VERTICAL DOWN THRUST BLOCKS SHALL BE DESIGNED ON THE BASIS OF 2000 LB. PER SQ. FT. ALLOWABLE SOIL BEARING PRESSURE. DIMENSIONS MAY BE DECREASED WITH APPROVAL OF THE ENGINEER IF MEASURED SOIL CONDITIONS PERMIT. IN POOR SOIL CONDITIONS, BLOCK DIMENSIONS SHALL BE INCREASED IN PROPORTION TO ALLOWABLE BEARING VALUE.
 5. THRUST BLOCKS ON HORIZONTAL BENDS, TEES, CROSSES, AND REDUCERS SHALL BE SIZED BASED ON 2400 LBS. PER SQ. FT. OF BLOCKING SURFACE AREA IN CONTACT WITH UNDISTURBED SOIL. BLOCK DIMENSIONS MAY BE DECREASED WITH APPROVAL OF THE ENGINEER IF MEASURED SOIL CONDITIONS PERMIT. IN POOR SOIL CONDITIONS, BLOCK DIMENSIONS SHALL BE INCREASED IN PROPORTION TO THE ALLOWABLE BEARING VALUE.
 6. ALL BLOCKING SHALL HAVE A MINIMUM SOIL COVER OF 1 FT.
 7. ADDITIONAL REINFORCING MAY BE REQUIRED FOR HORIZONTAL BLOCKING TO HANDLE UNUSUAL SHEAR LOADING CONDITIONS.
 8. ANCHOR COLLARS SHALL BE REINFORCED IN ACCORDANCE WITH REINFORCING BAR SCHEDULE FOR REDUCED BLOCKS SHOWN ABOVE. STEEL ANCHOR RING IN ACCORDANCE WITH DIMENSIONS OF ANCHOR COLLAR.
 9. ALL THRUST BLOCKING TO HAVE "MEGA LUGS".



OUTLET STRUCTURE (CI-6)
 (N.T.S.)

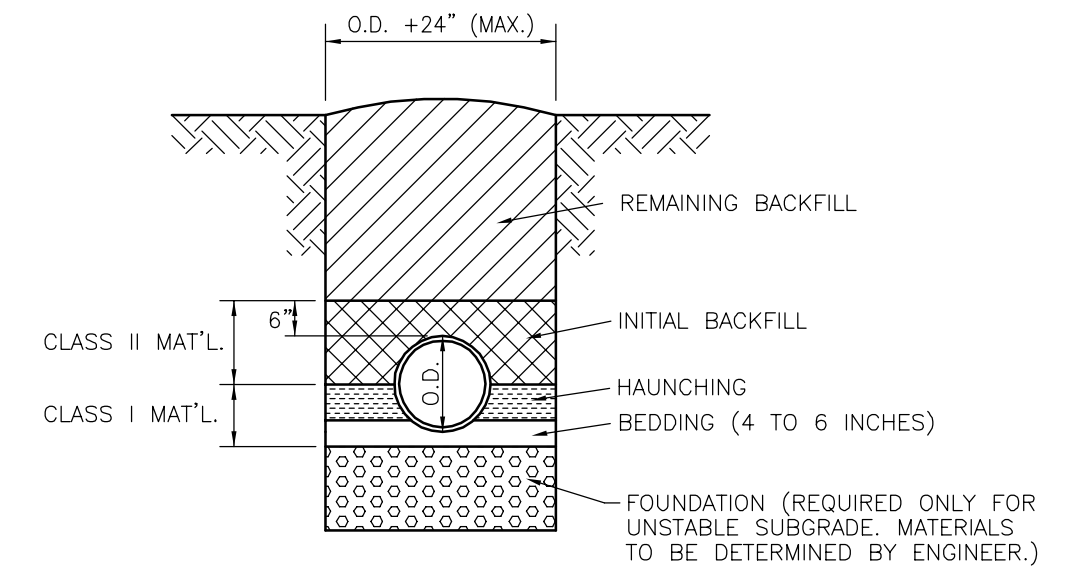
RECORD DRAWINGS
 AUGUST 27, 2014

TO THE BEST OF OUR KNOWLEDGE, CARNEY ENGINEERING, PLLC, HEREBY STATES THAT THESE PLANS ARE AS-BUILT. THIS INFORMATION IS BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.



VALVE BLOCKING DETAIL
 (N.T.S.)

NOTE:
 USE CITY OF ROCKWALL STANDARDS AND NCTCOG 3rd EDITION

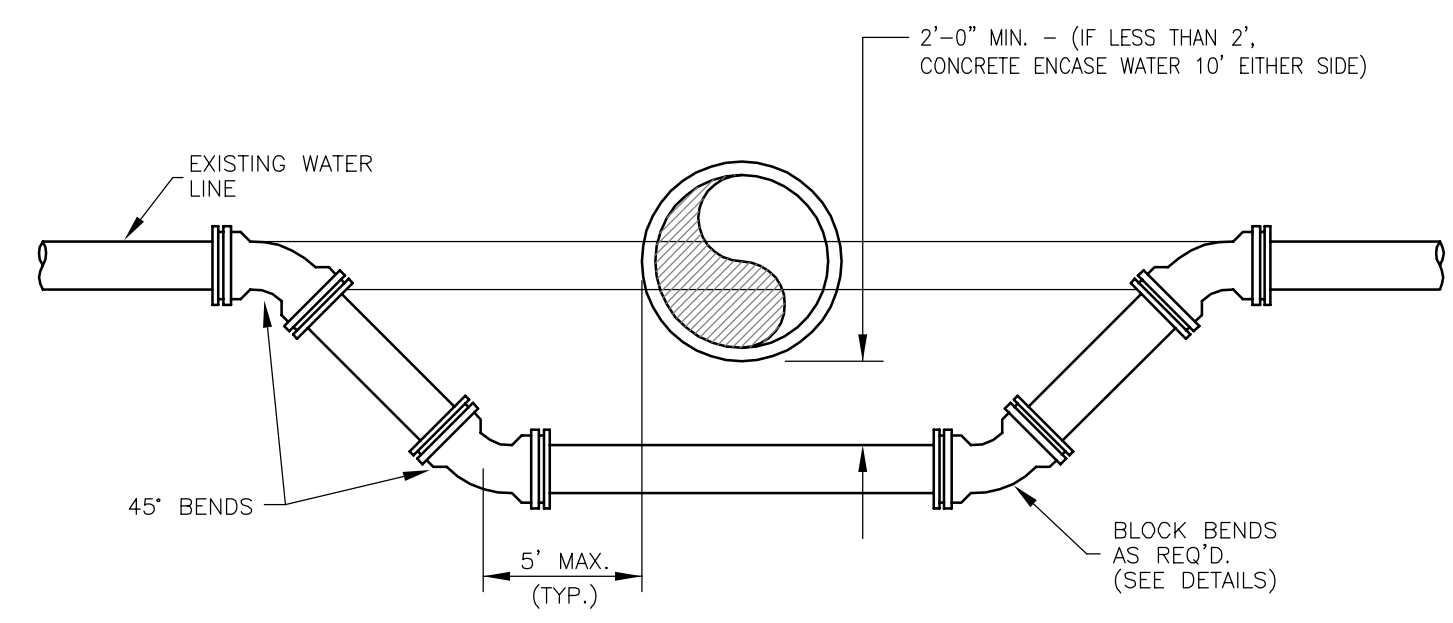


NON-PRESSURE "PRIVATE" PIPE EMBEDMENT
 (N.T.S.)
 (SANITARY SEWER)

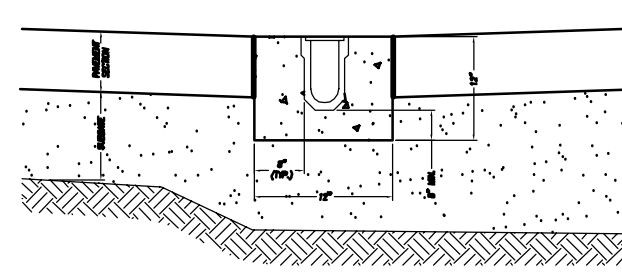
- NOTE:**
 ALL BACKFILL SHALL BE MECHANICALLY TAMPED TO 95% STANDARD PROCTOR DENSITY, +3% TO -1% OPTIMUM MOISTURE.
- CLASS I:**
 LOW PI GRANULAR MATERIAL (CLEAN SAND) UP TO 3/4"-1 1/2" GRADED STONE INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.
- CLASS II:**
 SUITABLE NATIVE MATERIAL INCLUDING FINE SANDS, SANDY CLAY MIXTURE AND GRAVEL CLAY MIXTURE.

NOTES:

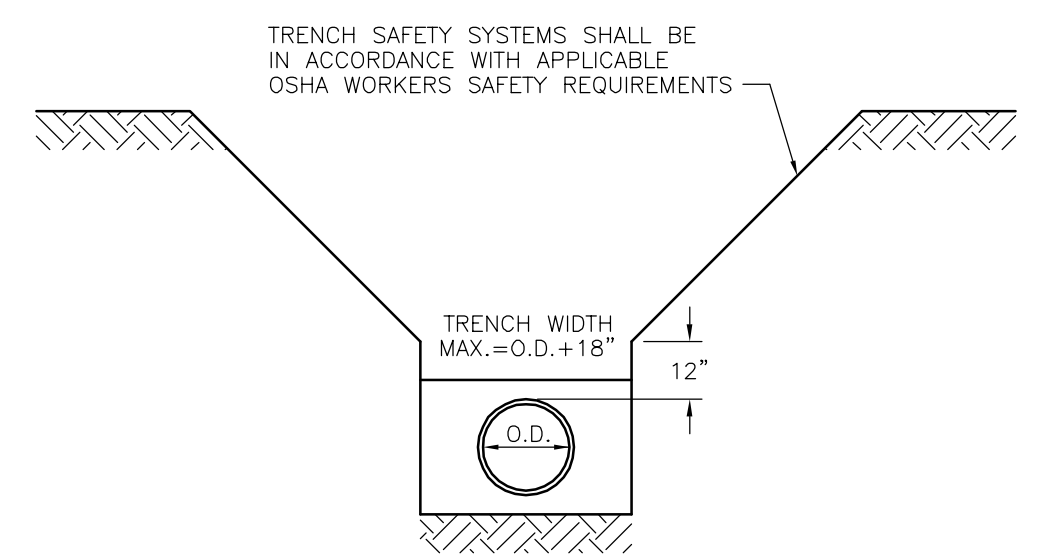
1. INSTALL FOUR 45° BENDS (UNLESS OTHERWISE DIRECTED BY ENGINEER) AND LENGTH OF PIPE NECESSARY TO ACHIEVE MINIMUM CLEARANCE.
2. PROVIDE POLYETHYLENE CORROSION PROTECTION WRAPPING AROUND PIPE AND FITTINGS PRIOR TO INSTALLING CONCRETE ENCASEMENT.
3. CLEARANCE MAY BE OBTAINED BY DEFLECTING WATER MAIN - CONTRACTOR'S OPTION. DEFLECTION SHALL NOT EXCEED PIPE MANUFACTURER'S.



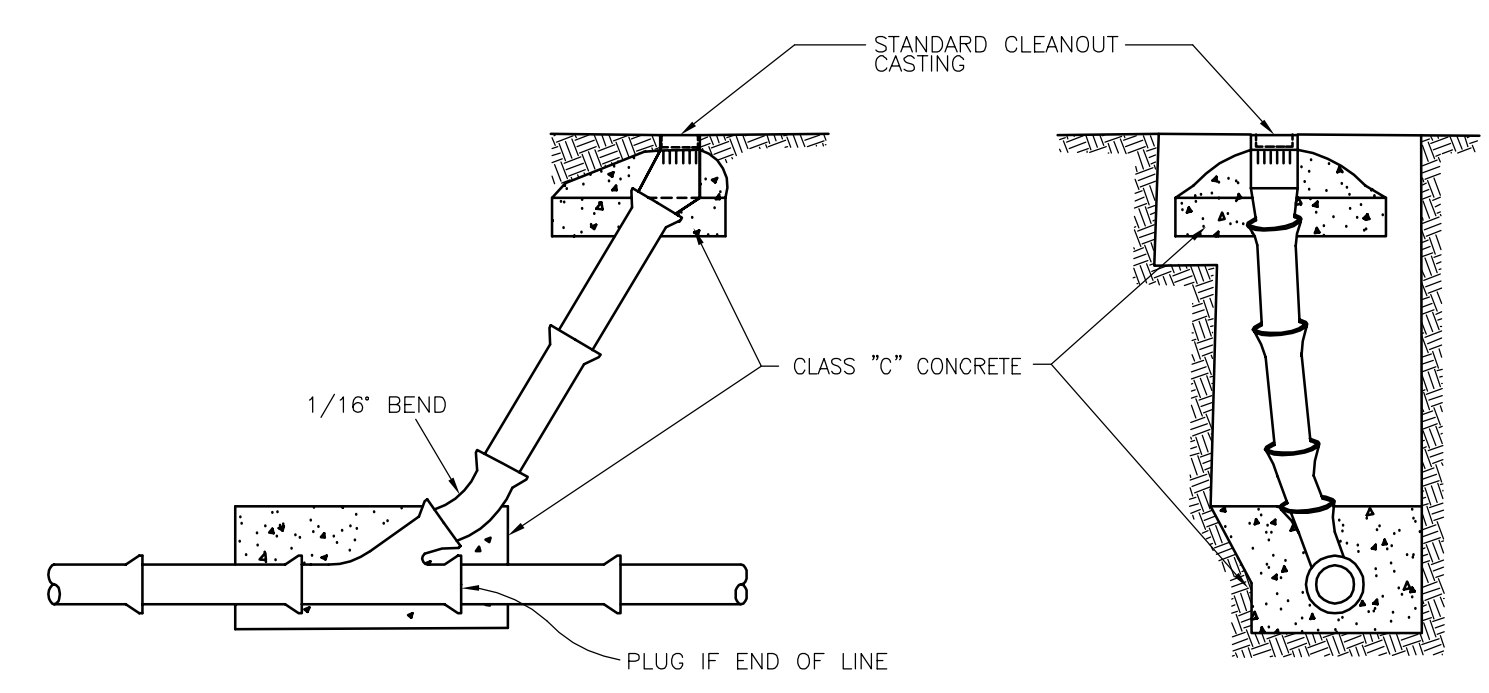
TYPICAL WATER MAIN CLEARANCE DETAIL
 (N.T.S.)



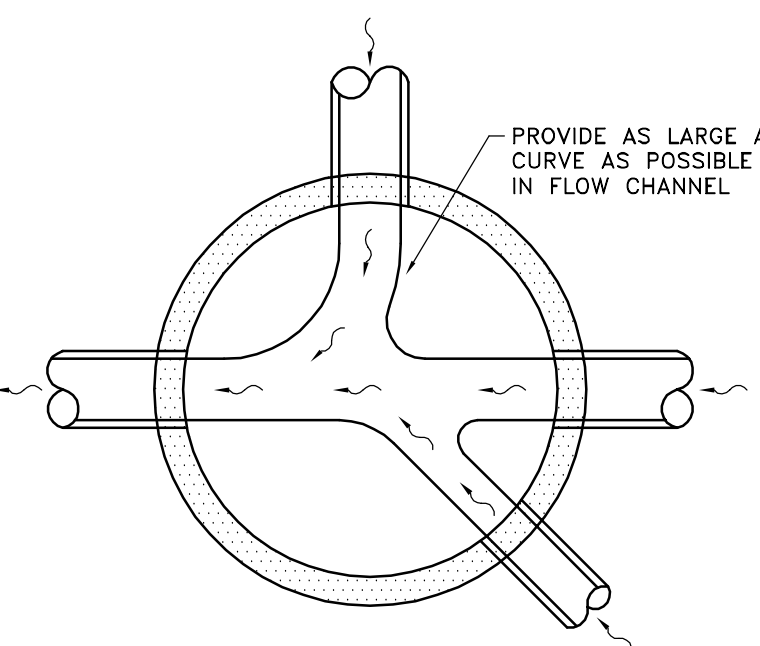
DUMPSTER TRENCH DRAIN SECTION
 (N.T.S.)



TYPICAL TRENCH SECTION
 (N.T.S.)



CLEANOUT DETAILS & TYPICAL SEWER SERVICE
 (N.T.S.)



MANHOLE BOTTOM DETAIL
 (N.T.S.)

- NOTES:**
1. CENTERLINE OF ALL PIPES ENTERING AND LEAVING MANHOLE SHALL PASS THROUGH CENTER OF MANHOLE.
 2. CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES MAINTAIN A CONSTANT GRADE THROUGHOUT EACH INVERT.