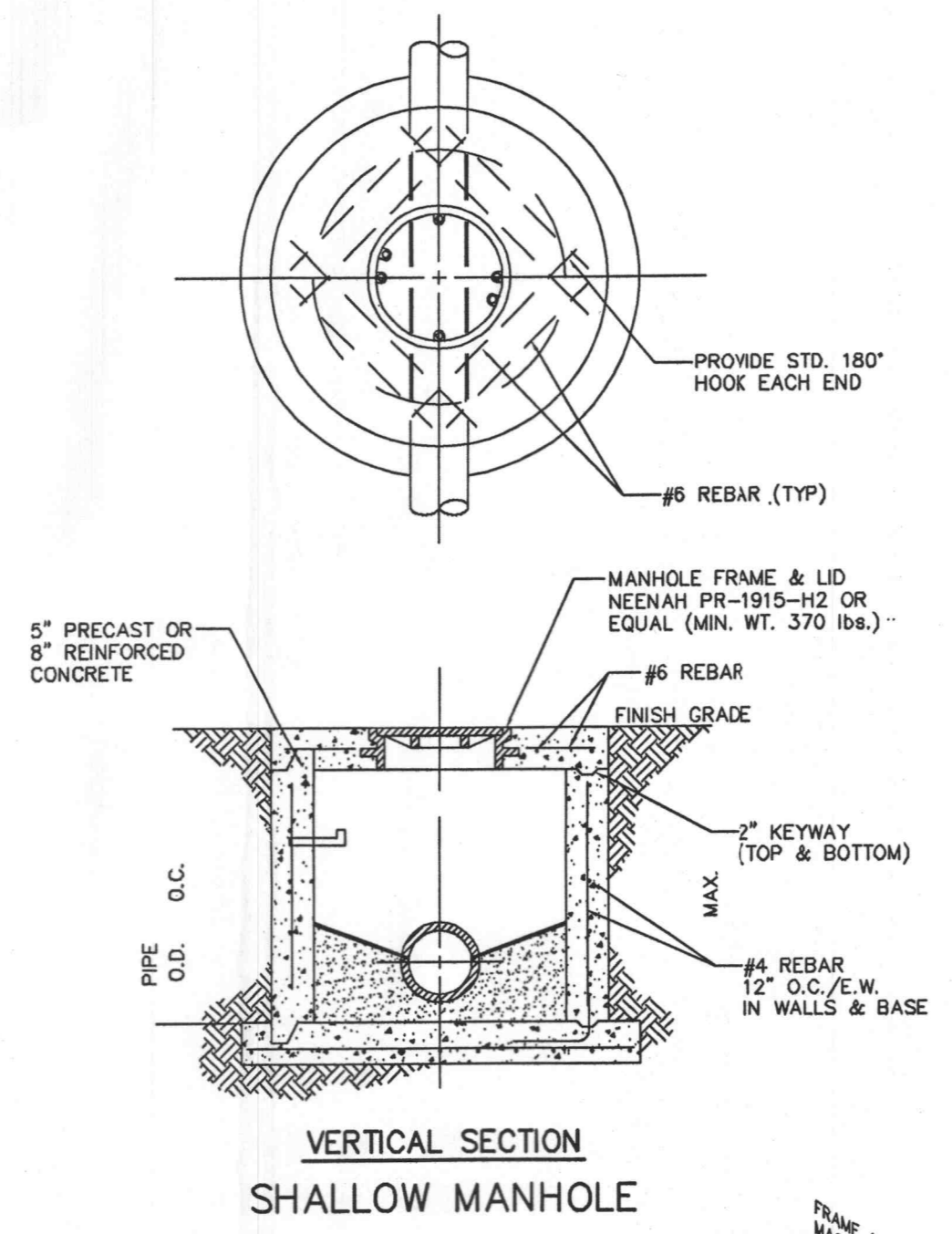
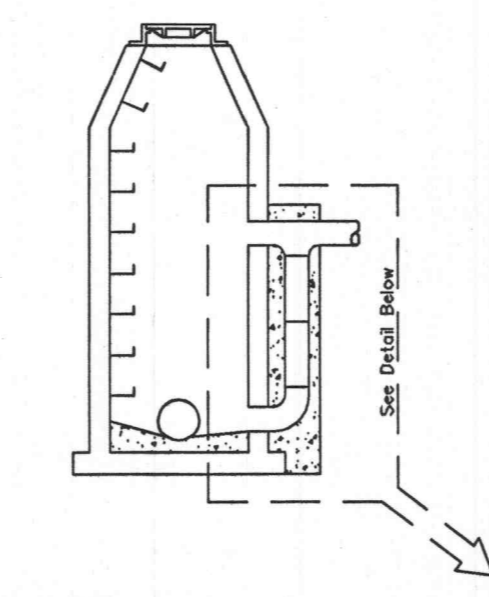


**STANDARD MANHOLE**

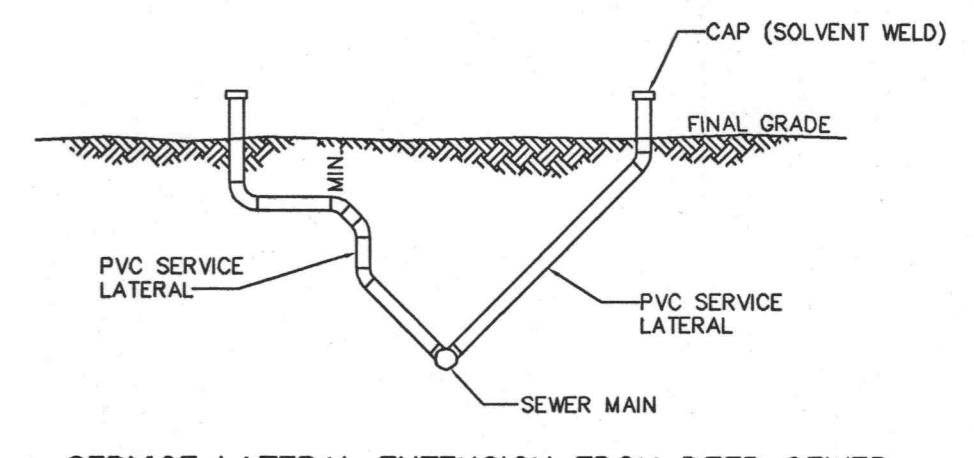
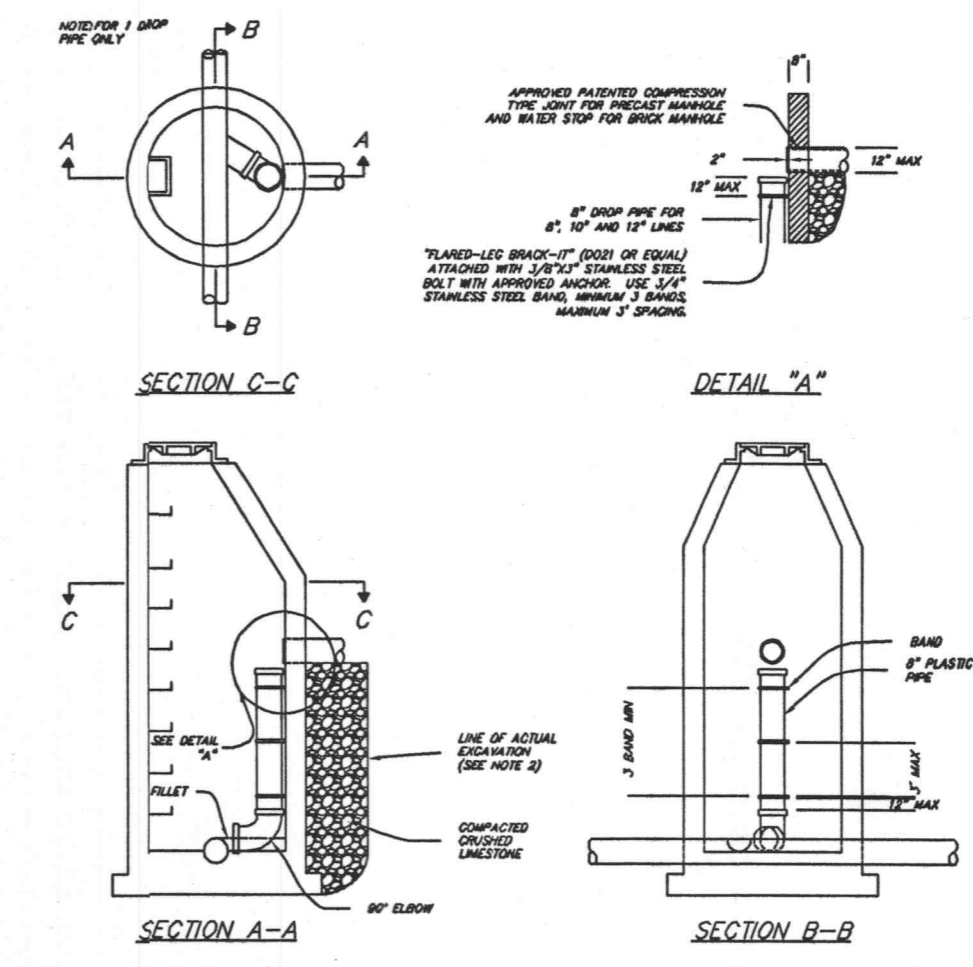
Note: All manholes to be dedicated to the City of O'Fallon must have a 31 mil. waterproofing



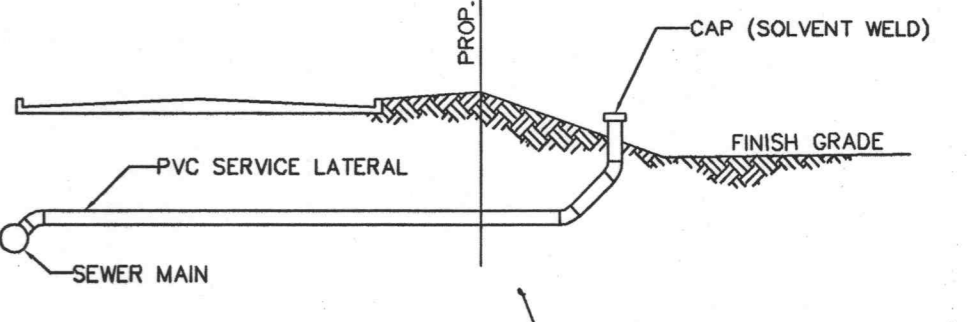
**VERTICAL HALF-SECTION SHALLOW MANHOLE**



**DROP MANHOLE**



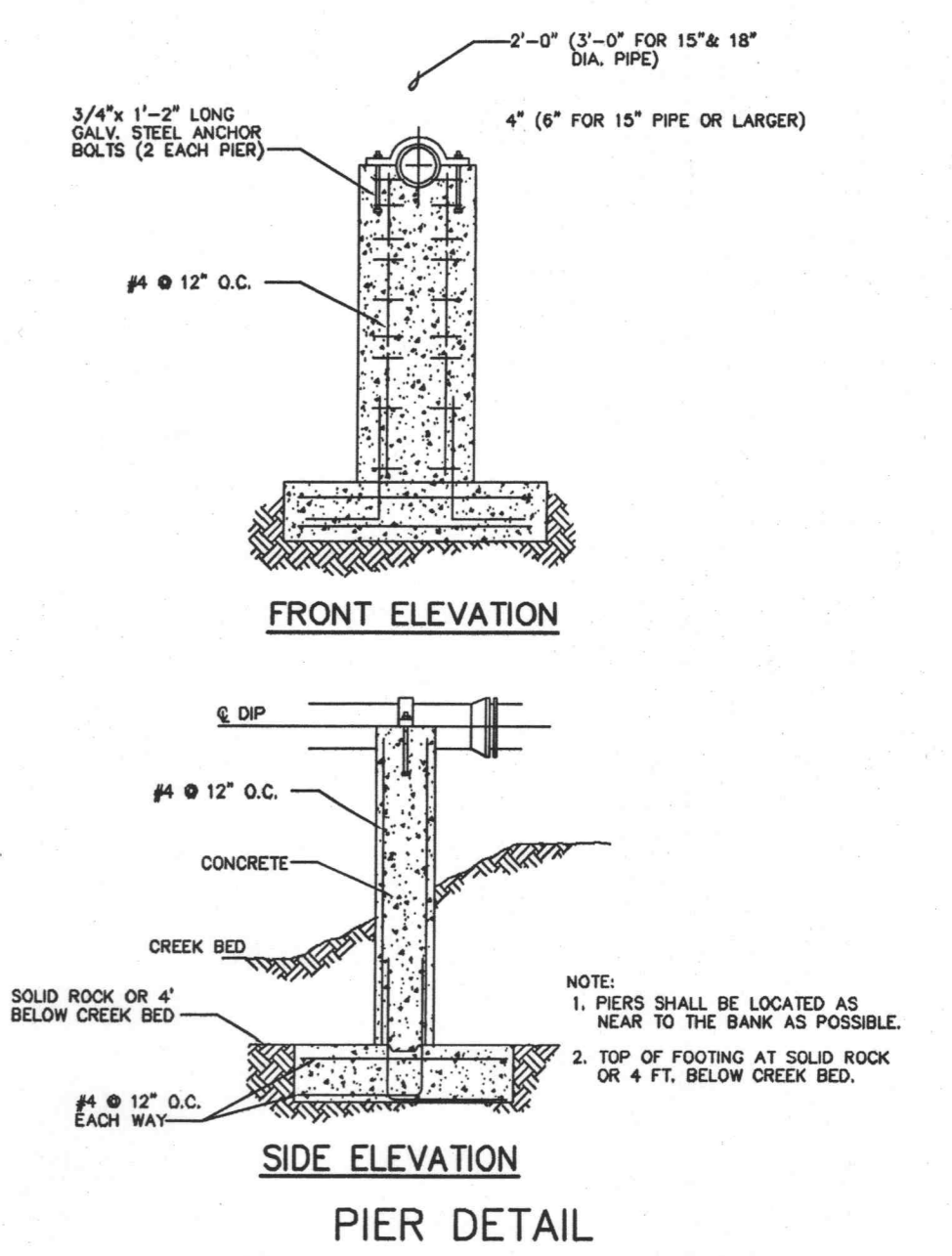
**SERVICE LATERAL EXTENSION FROM DEEP SEWER**



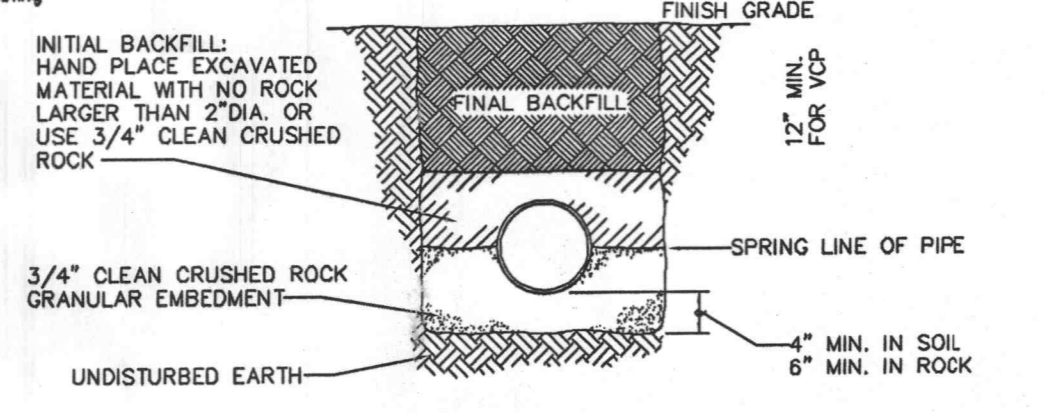
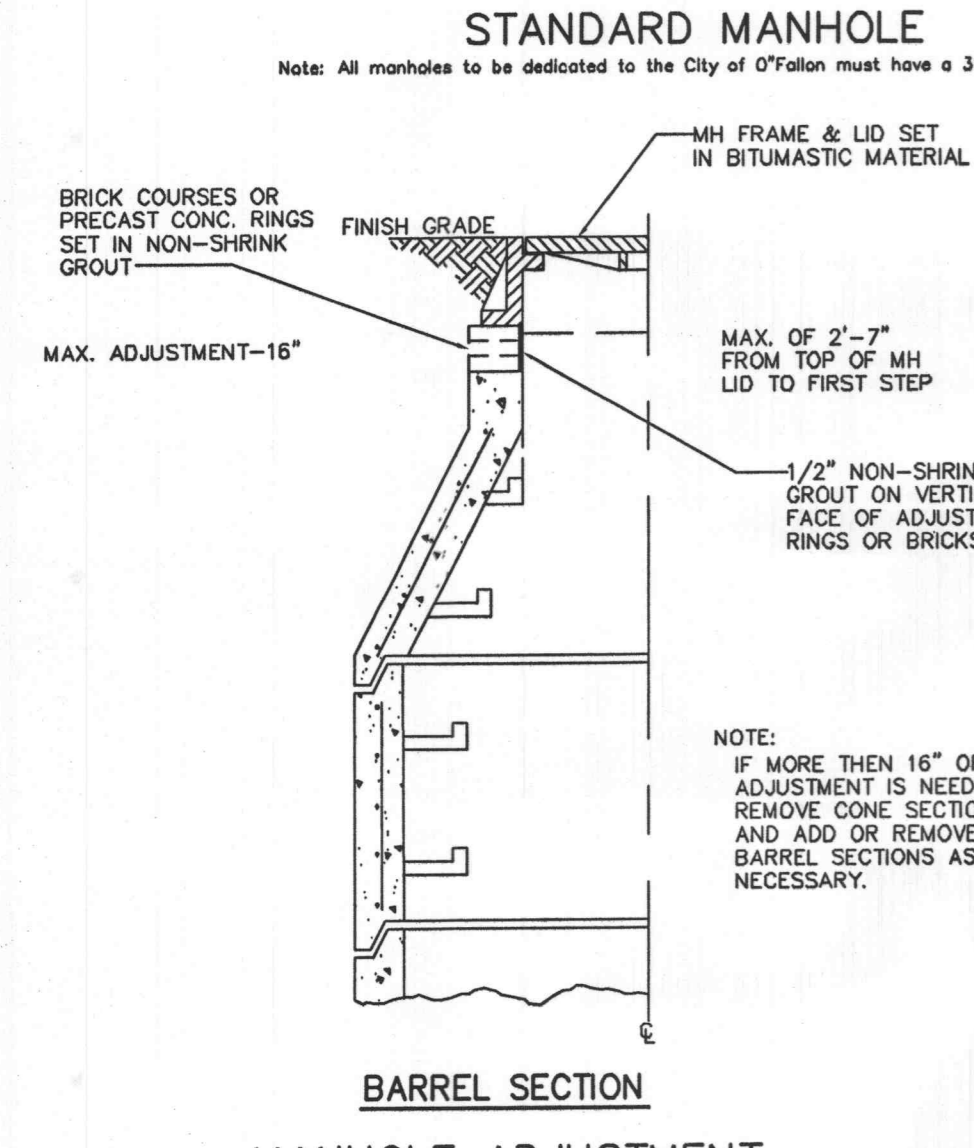
**SERVICE LATERAL EXTENSION UNDER FUTURE STREETS**

NOTE: THIS DETAIL IS FOR USE WHENEVER LATERALS ARE EXTENDED FROM THE SEWER MAIN DURING NEW CONSTRUCTION. IN ALL CASES WHEN SERVICE LATERALS ARE EXTENDED, THE PIPE SHALL EXTEND A MINIMUM OF TWO (2) FEET ABOVE THE PROPOSED FINAL GRADE AND SHALL BE FITTED WITH A CAP THAT IS SOLVENT WELDED IN PLACE.

**LATERAL EXTENSION NEW CONSTRUCTION**

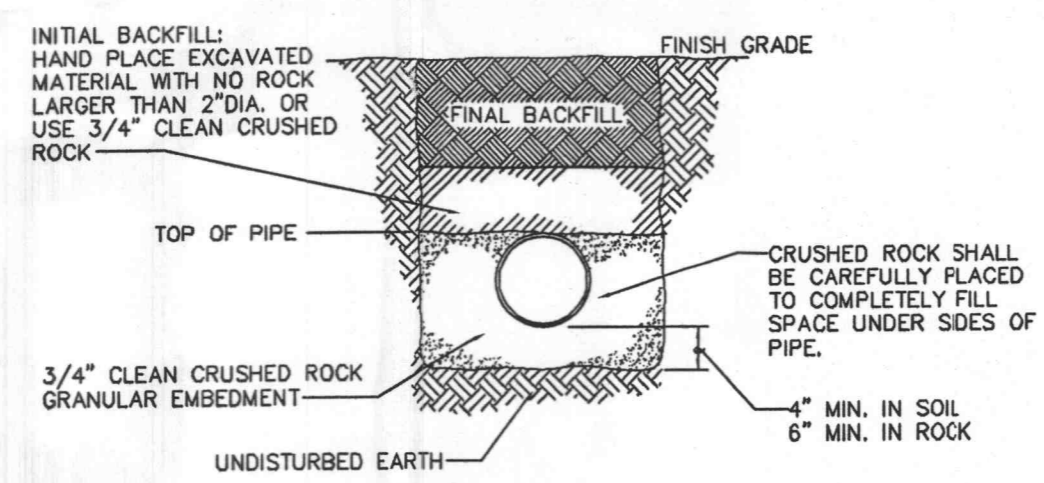


**PIER DETAIL**

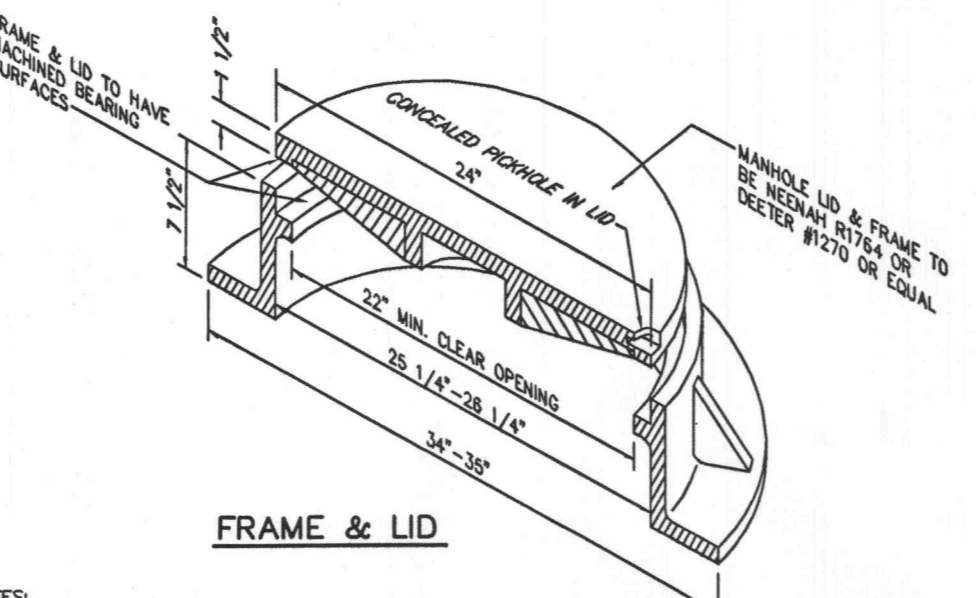


**DUCTILE IRON PIPE VITRIFIED CLAY PIPE EMBEDMENT OF PIPE**

PIPE DIA.	MIN. TRENCH WIDTH
8"-10"	PIPE DIA. + 10"
12"-36"	PIPE DIA. + 12"

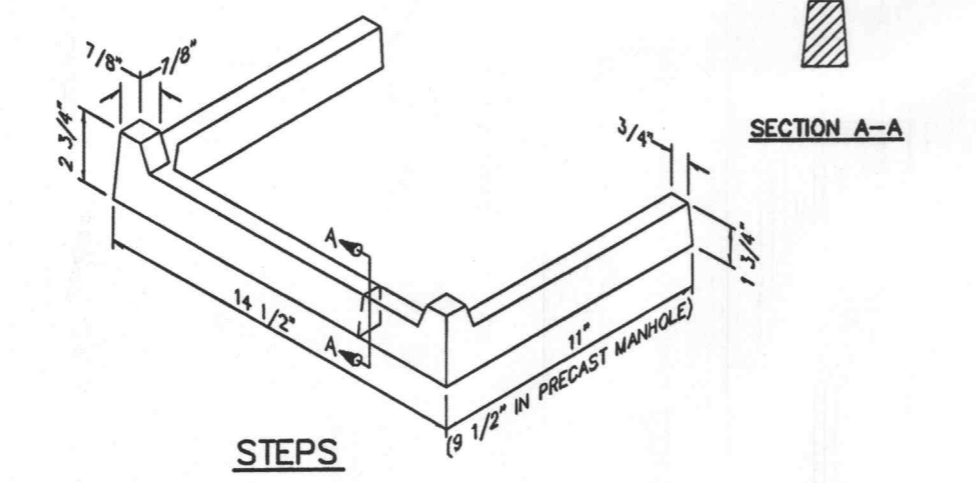


**PVC & ABS/PVC TRUSS EMBEDMENT OF PIPE**

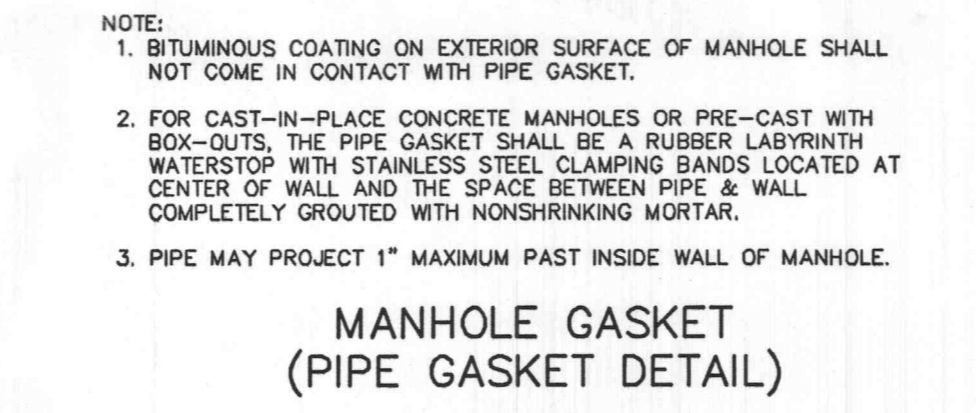


**FRAME & LID**

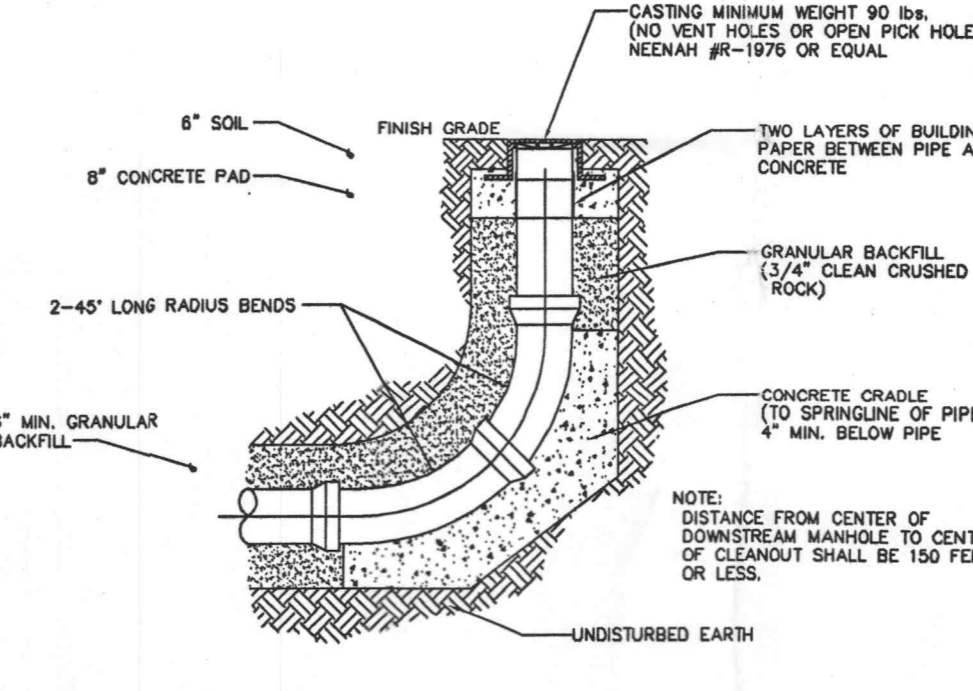
- NOTES:
- CASTINGS SHALL CONFORM TO A.S.T.M. A48 CLASS 350.
  - LID HEIGHT 135 lbs. MINIMUM. TOTAL MINIMUM HEIGHT OF 350 lbs.
  - FACTORY COAT WITH ASPHALT VARNISH.
  - FIELD COAT ALL CASTINGS WITH EQUAL PAINT.
  - WATERTIGHT LID AND FRAME TO BE NEENAH NO. R-1916-F WITH FOUR 3/4" ANCHOR BOLTS OR EQUAL.
  - NEENAH MANHOLE STEP R-1920 OR EQUAL.



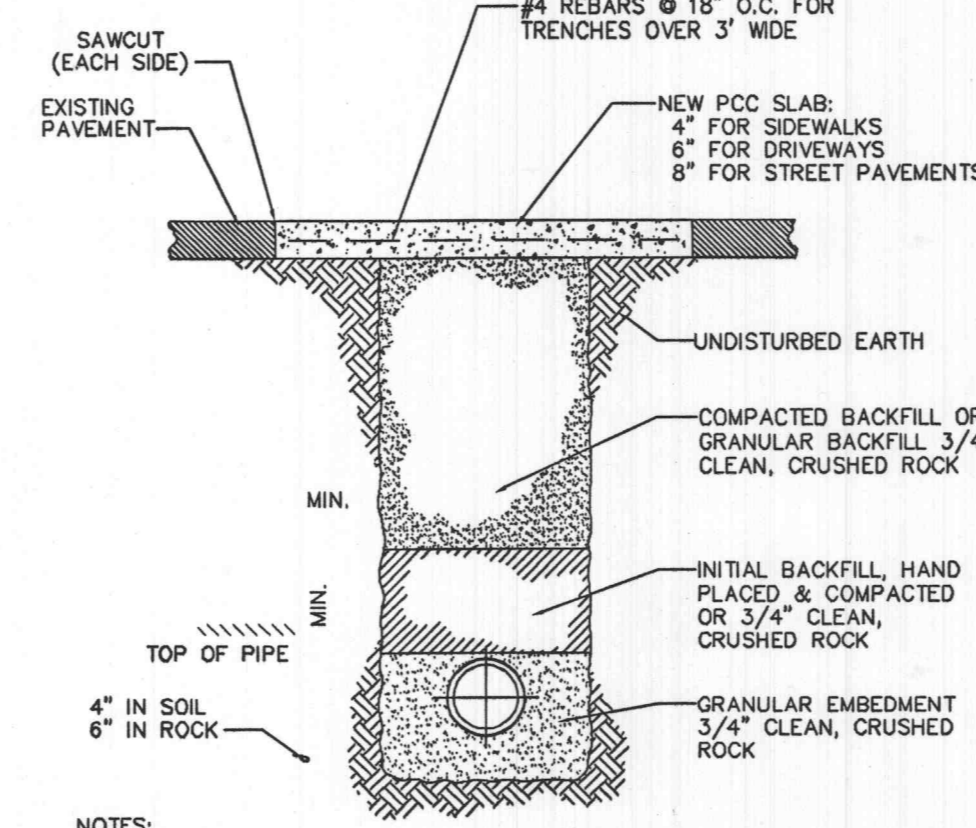
**MANHOLE CASTINGS (FRAME, LID, & STEPS)**



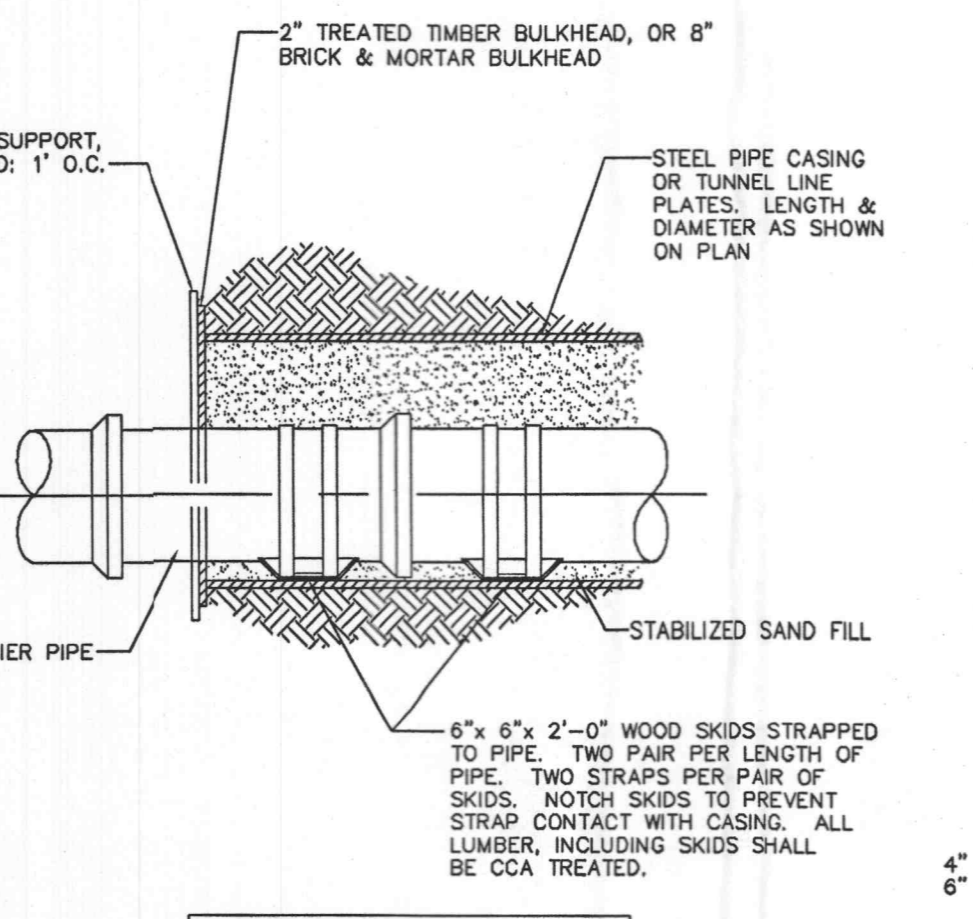
**MANHOLE GASKET (PIPE GASKET DETAIL)**



**CLEANOUT DETAIL**



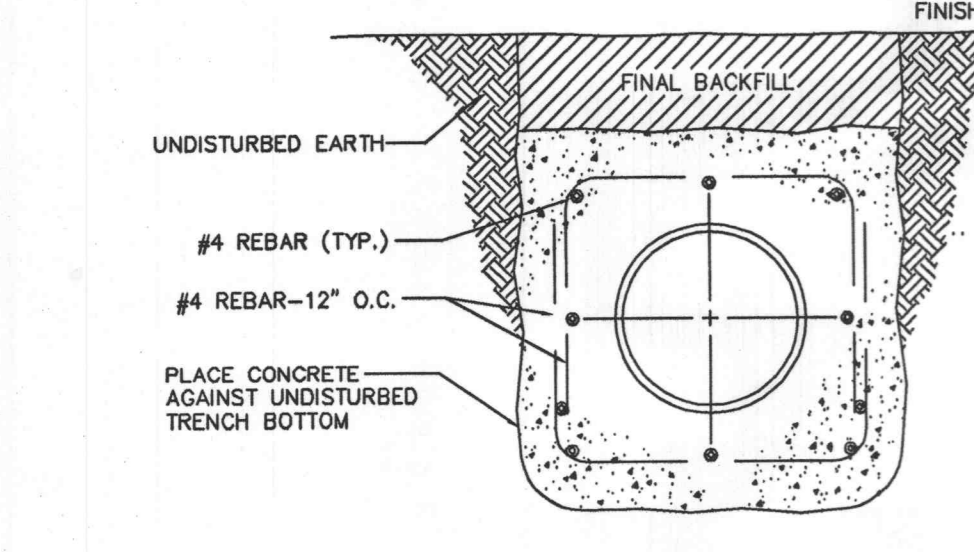
**PAVEMENT REPLACEMENT**



**STEEL PIPE CASING**

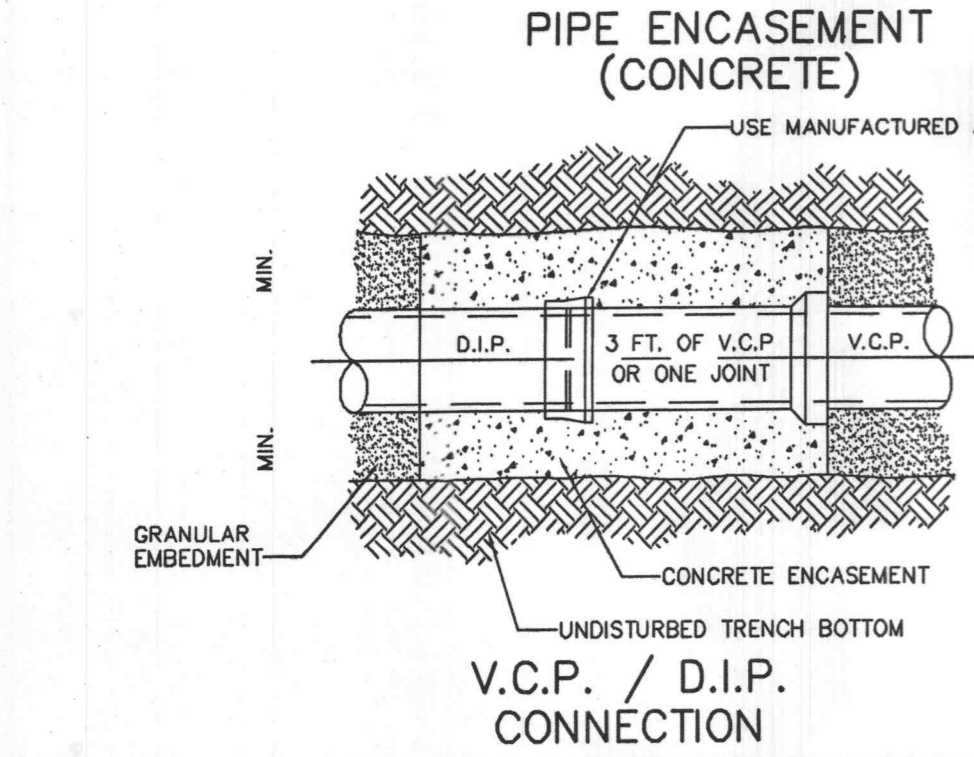
DIAMETER	MIN. WALL THICKNESS
16"	0.219
18"	0.250
24"	0.344
30"	0.406
36"	0.462

**PIPE ENCASEMENT (STEEL)**

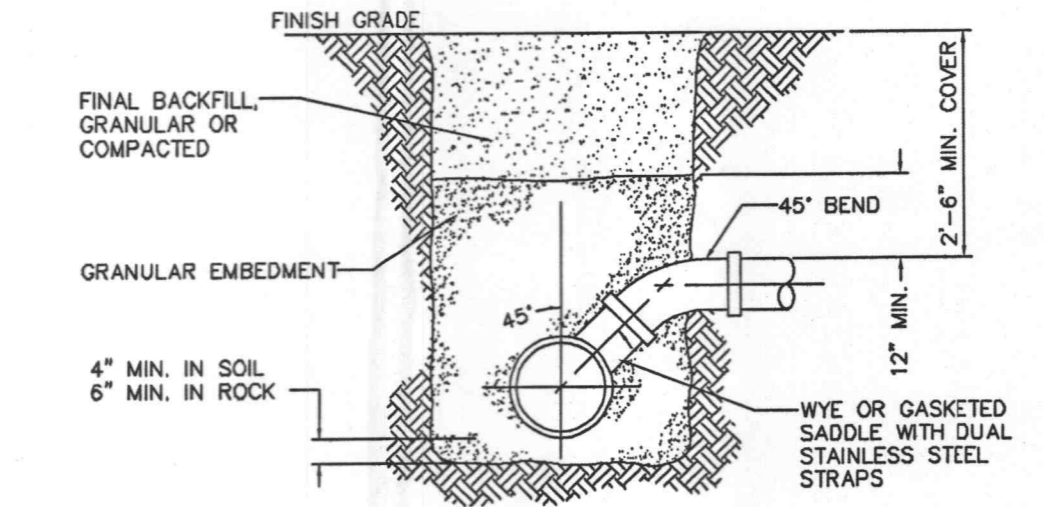


**PIPE ENCASEMENT (CONCRETE)**

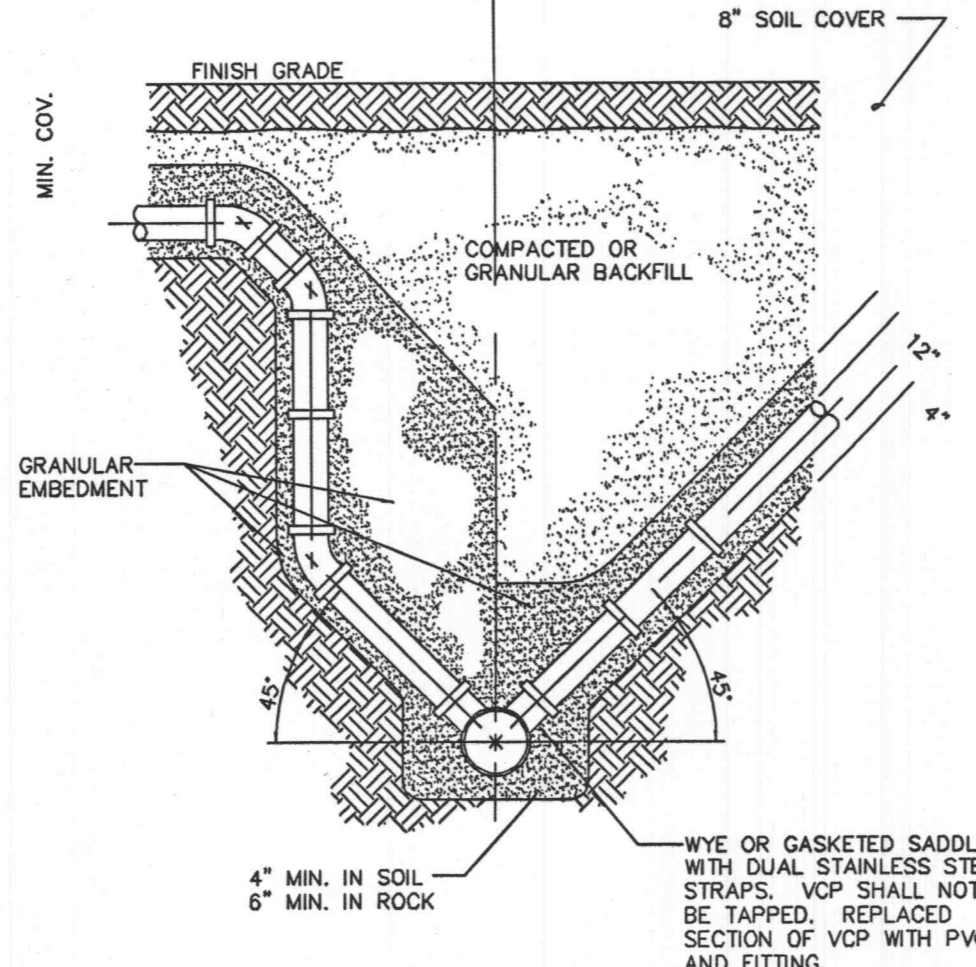
- NOTES:
- FOR PIPE LARGER THAN 12" DIAMETER THE MINIMUM CONCRETE COVER SHALL BE 8" WITH #5 REBAR @ 12" O.C. EACH WAY.
  - BRACE OR TIE PIPE TO PREVENT FLOTATION OR DEFLECTION, DURING CONCRETE PLACEMENT.
  - FOR ARCH ENCASEMENT OF PIPE, SUBSTITUTE GRANULAR EMBEDMENT MATERIAL FOR CONCRETE BELOW SPRINGLINE OF PIPE.



**V.C.P. / D.I.P. CONNECTION**



**STANDARD SERVICE CONNECTION**



**DEEP SERVICE CONNECTION**

NOTE: THESE DETAILS ARE STANDARD DETAILS FOR CONSTRUCTION. THE CITY OF O'FALLON HAS THE AUTHORITY TO SPECIFY PRODUCTS AND METHODS OF UTILITIES IN THEIR JURISDICTION.