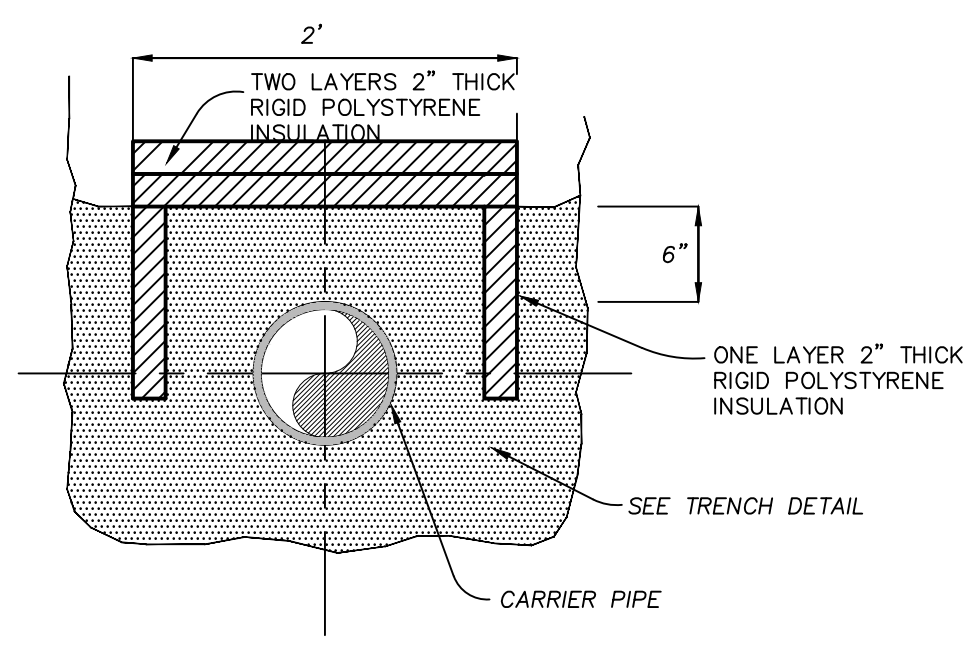
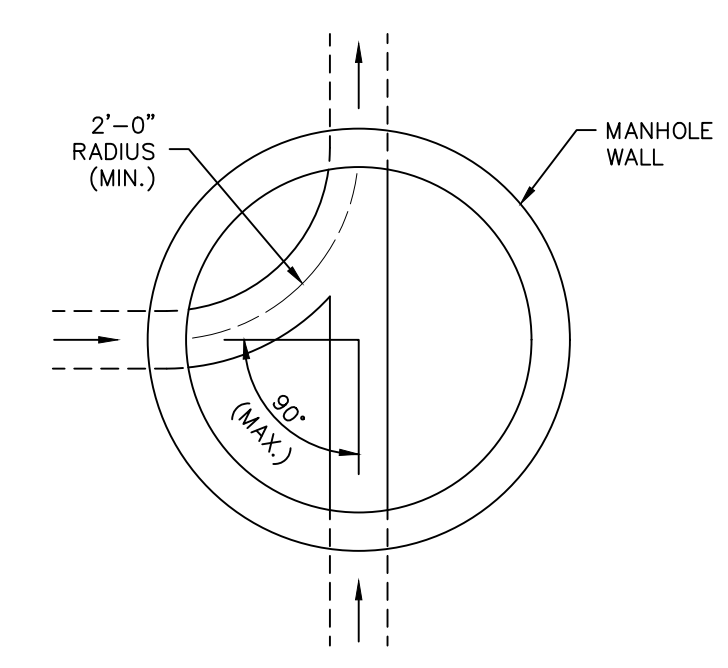


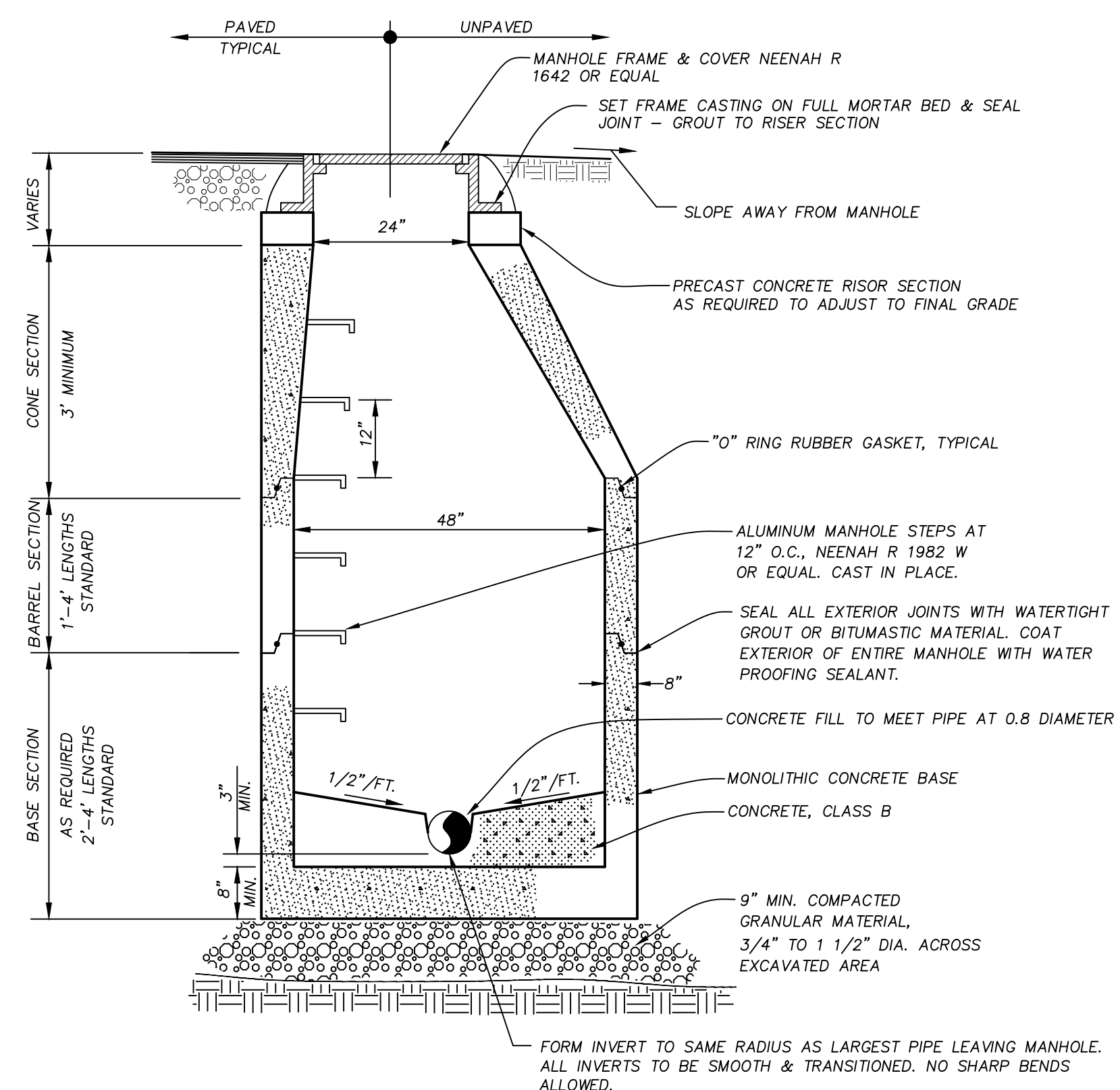
TYPICAL HYDRANT INSTALLATION
N.T.S.



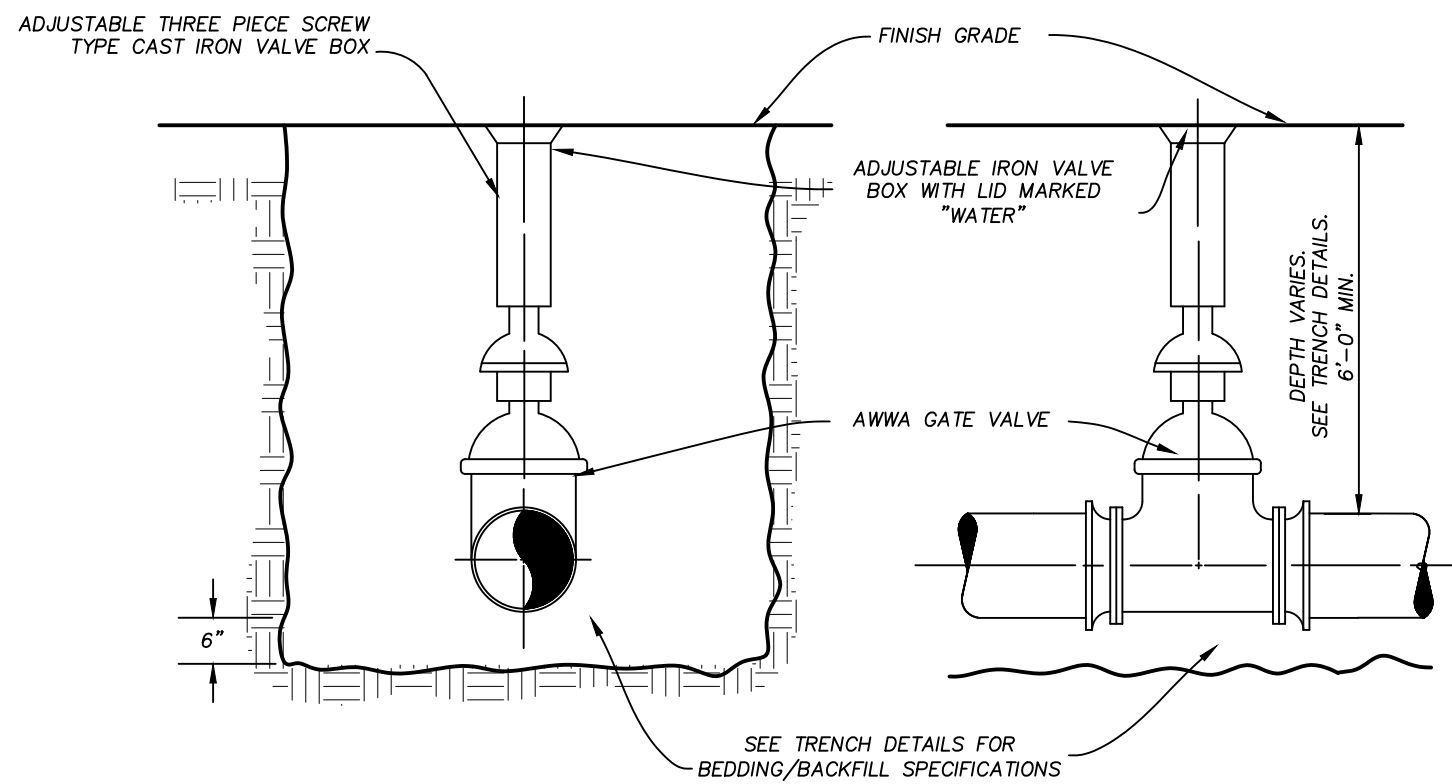
INSULATION DETAIL
N.T.S.



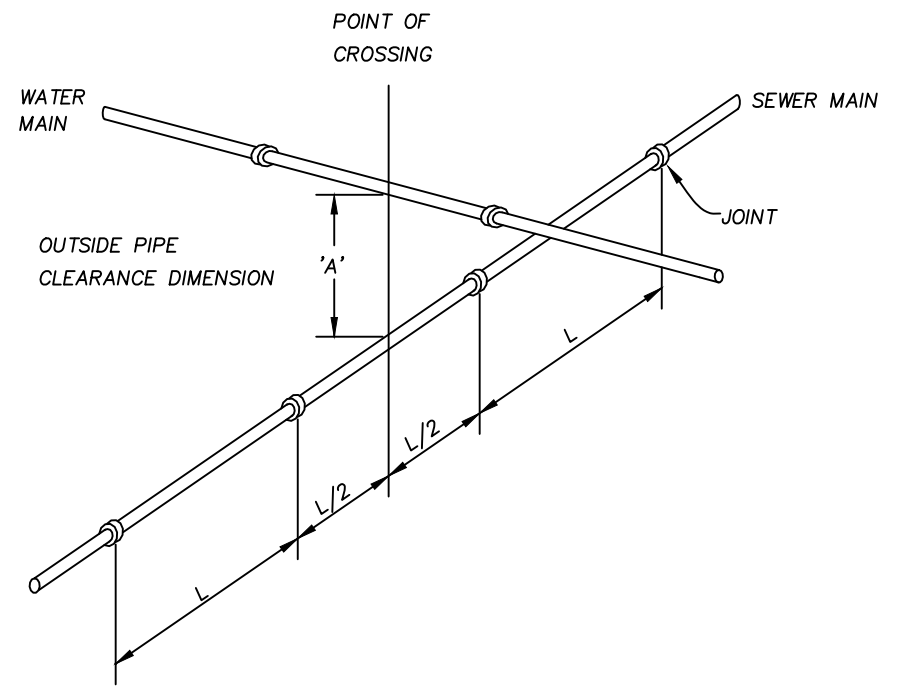
MANHOLE CHANNEL
N.T.S.



PRECAST CONCRETE MANHOLE
N.T.S.

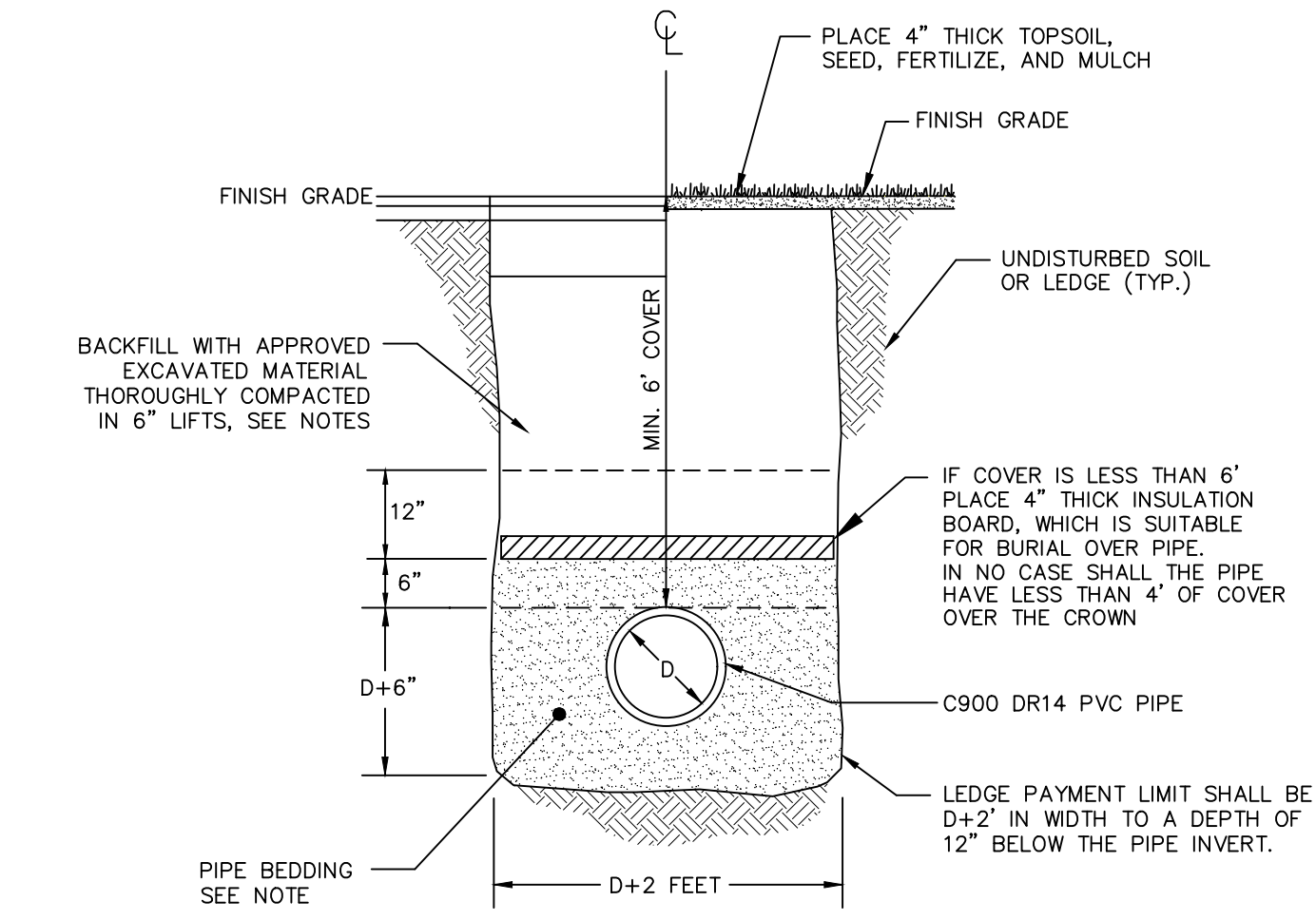


GATE VALVE DETAIL
N.T.S.



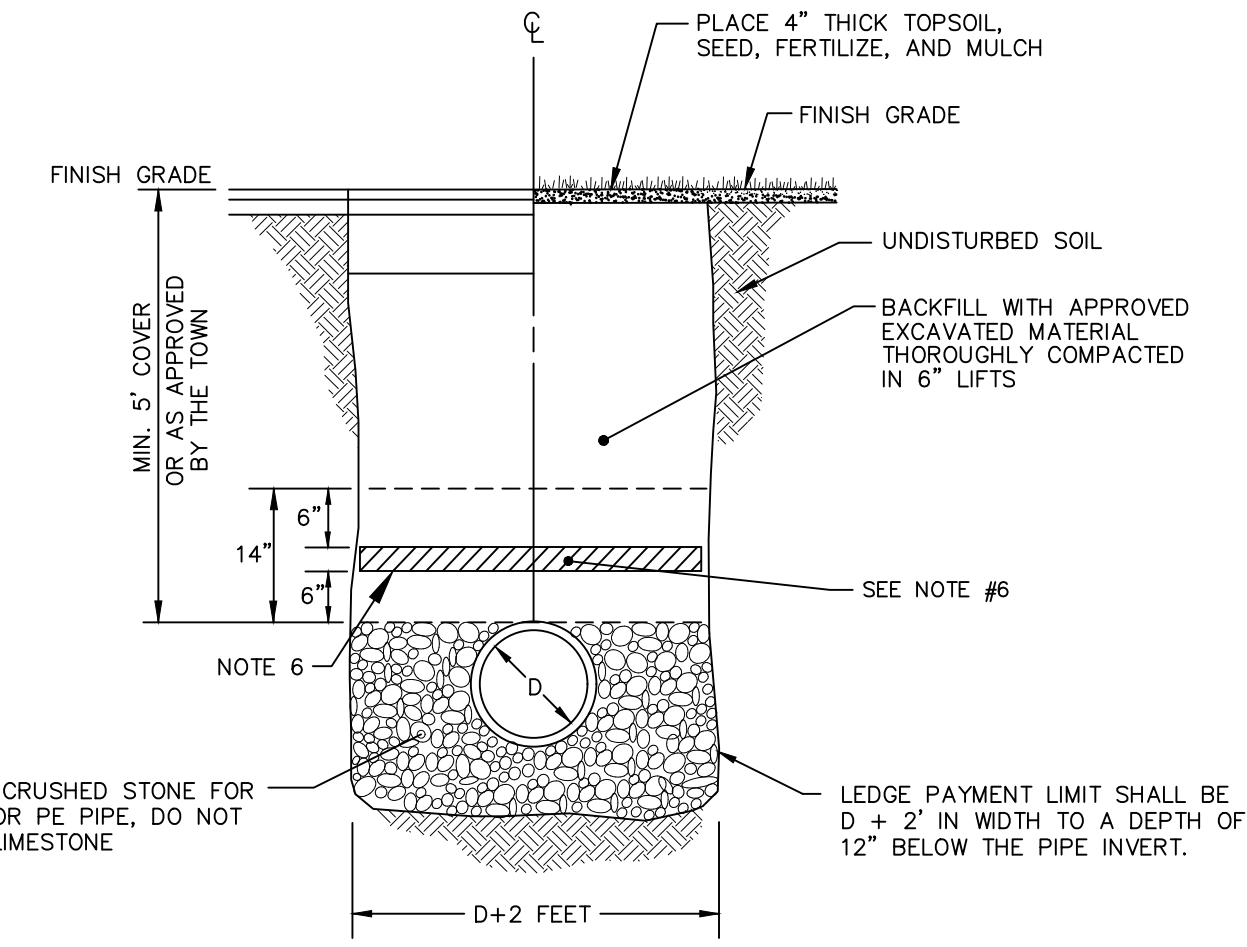
- CONSTRUCTION NOTES**
1. IN ALL NEW CONSTRUCTION, DIMENSION 'A' SHALL NEVER BE LESS THAN 18" INCHES.
 2. WITH ALL NEW CONSTRUCTION, THE CROSSING SHALL BE ARRANGED AS SHOWN IN THIS DIAGRAM, SO THAT THE JOINTS WILL BE EQUIDISTANT FROM THE POINT OF CROSSING.
 3. IF THE WATER MAIN MUST PASS BENEATH THE SEWER IN NEW CONSTRUCTION, OR IT IS IMPOSSIBLE TO MAINTAIN THE 18 INCH SEPARATION DUE TO EXISTING UTILITY (PREVIOUS CONSTRUCTION ONLY), THE SEWER MAIN MUST BE CONSTRUCTED TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 20 FEET EITHER SIDE OF THE CROSSING OR A TOTAL OF THREE PIPE LENGTHS, WHICHEVER IS GREATER AND THE SECTION CONSTRUCTED TO WATER MAIN STANDARDS MUST BE PRESSURE TESTED TO MAINTAIN 50 PSI FOR 15 MINUTES WITHOUT LEAKAGE PRIOR TO BACKFILLING BEYOND ONE FOOT ABOVE THE PIPE TO ASSURE WATER TIGHTNESS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.

WATER / SEWER CROSSING
N.T.S.



- NOTES :**
1. THE CONTRACTOR SHALL KEEP THE TRENCH ENTIRELY FREE OF WATER AT ALL TIMES UNTIL THE WORK IS COMPLETE AND READY FOR BACKFILLING.
 2. BACKFILL TRENCH IN 6" LIFTS AND COMPACT EACH LIFT TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR.
 3. BACKFILL SHALL HAVE NO STONES LARGER THAN 1.5-INCHES IN DIAMETER.
 4. ALL WORK SHALL CONFORM TO THESE SPECIFICATIONS AND PLANS UNLESS OTHERWISE SPECIFIED.
 5. THE PIPE BEDDING FOR DUCTILE IRON PIPE SHALL BE THOROUGHLY COMPACTED SAND OR GRAVEL. 3/4" STONE BEDDING SHALL BE USED AS PIPE BEDDING FOR PVC OR PE PIPE.

WATER TRENCH
N.T.S.



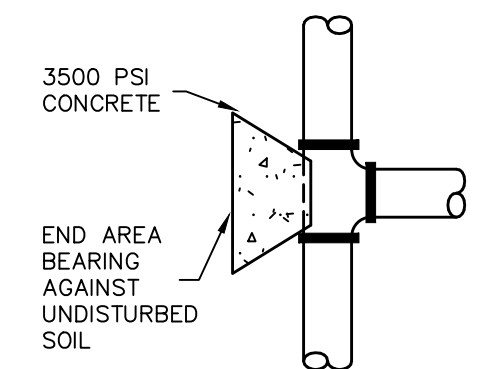
- NOTES :**
1. THE CONTRACTOR SHALL KEEP THE TRENCH ENTIRELY FREE OF WATER AT ALL TIMES UNTIL THE WORK IS COMPLETE AND READY FOR BACKFILLING.
 2. THE SIDES OF THE TRENCHES SHALL BE SHEETED OR SLOPED TO THE ANGLE OF REPOSE IF THE TRENCH IS 4' OR MORE IN DEPTH.
 3. BACKFILL TRENCH IN 6" LIFTS AND COMPACT EACH LIFT TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR.
 4. BACKFILL ABOVE THE CROWN OF THE PIPE SHALL BE COMMON FILL.
 5. ALL WORK SHALL CONFORM TO THE WRITTEN SPECIFICATIONS AND PLANS UNLESS OTHERWISE SPECIFIED.
 6. IF COVER OVER PIPE IS LESS THAN 5', PLACE 2" THICK INSULATION BOARD OVER PIPE FOR EVERY FOOT OF COVER LESS THAN 5'. IN NO CASE SHALL THERE BE LESS THAN 3.5' OF COVER OVER THE TOP OF PIPE.

SEWER TRENCH
N.T.S.

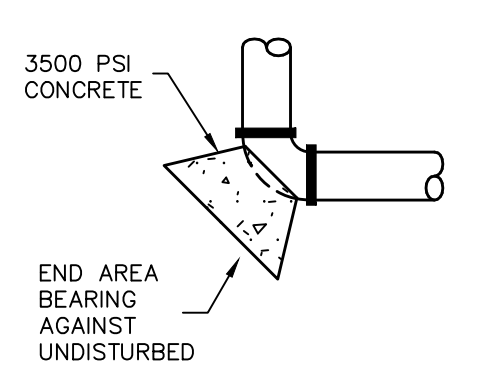
SOIL TYPE - SAND

SIZE	6"	8"	12"
1 1/4" & 2 1/2"	2	2	5
4 1/2"	2	4	9
9 1/2"	4	8	17
TEES OR END CAPS	3	6	12
VALVES	2	2	2

50 FT BEARING AREA
BASED ON 100 PSI WORKING PRESSURE PLUS 100 PSI SURGE ALLOWANCE AND BEARING CAPACITY OF 2000 LBS/SQ FT



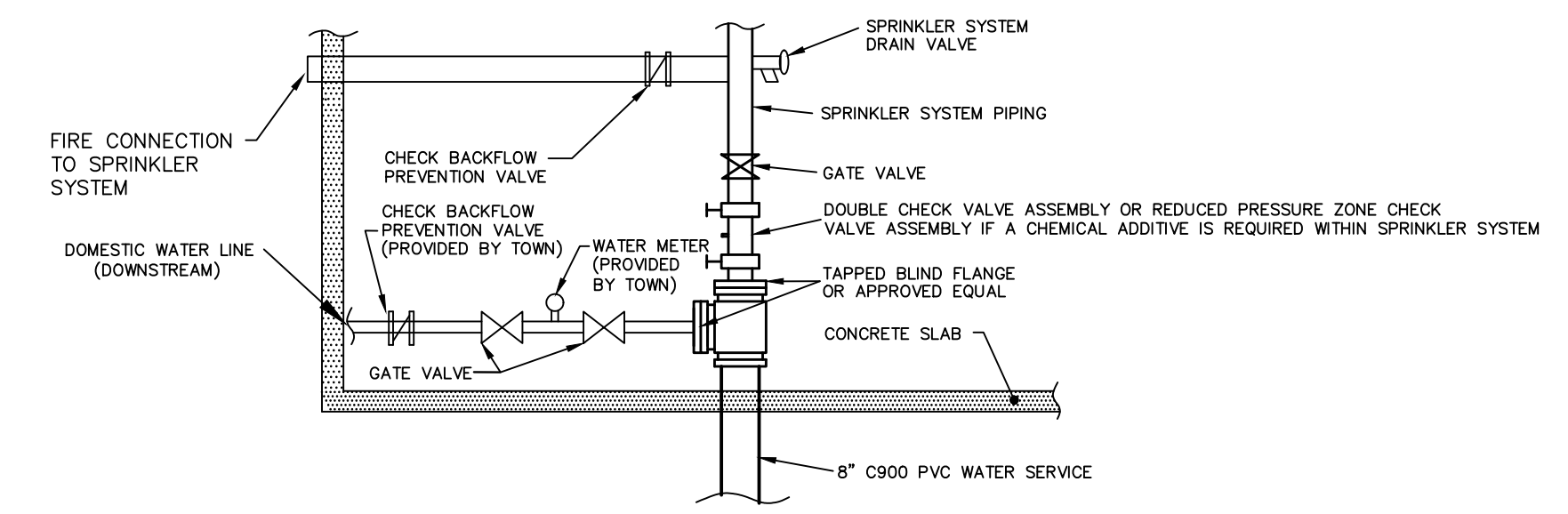
TYPICAL TEES-DEADENDS-CAPS



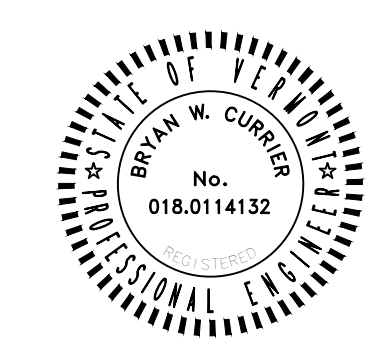
TYPICAL BENDS

NOTE: ALL THRUST BLOCKS SHAL PRECAST BLOCKS NO BAGS OF CONCRETE WILL BE ALLOWED

THRUST BLOCK
N.T.S.



WATER/SPINKLER CONNECTION
N.T.S.



DATE	REVISION	BY
SURVEY	OBCA	DATE 3-18-21
DESIGN	RECORD DRAWING	JOB# 2019-03
DRAWN	FINAL	FILE
CHECKED	SKETCH/CONCEPT	S13
SCALE		PLAN SHEET #

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E-MAIL: ocb@olearyburke.com

Richmond Market
Water & Sewer Details

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