

**NOTES**

- SANITARY SEWER NOTES**
1. ALL MANHOLES SHALL BE FOUR FOOT DIAMETER PRECAST CONCRETE WITH PAVED INVERTS AND BE EQUAL TO THOSE MANUFACTURED BY EGYPTIAN CONCRETE CO. OPENINGS IN ALL M.H.'S SHALL BE FOUR WAY.
  2. MANHOLE CASTINGS SHALL BE NEEDHAM R-1772 WITH GASKETED T.Y."C" LID.
  3. P.V.C. SOLID-WALL SEWER PIPE FOR SEWER MAINS AND LATERALS SHALL BE MADE OF COMPOUNDS CONFORMING TO ASTM D1784 IN ACCORDANCE WITH THE MATERIAL REQUIREMENTS OF ASTM D3034. P.V.C. SEWER PIPE MUST MEET ALL DIMENSIONAL, CHEMICAL AND PHYSICAL REQUIREMENTS AS OUTLINED IN ASTM D3034 AND ASTM F679. P.V.C. SEWER PIPE SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS OF ASTM D2321.
  4. ALL PIPE JOINTS SHALL BE OF THE BELL AND SPIGOT TYPE AND CONFORM TO REQUIREMENTS OF ASTM D3212. GASKET MATERIAL TO CONFORM TO ASTM F477.
  5. SEWER LATERALS TO BE 4" DIA. SDR 26, MEETING ASTM D-3034 SPEC. W/ASTM F-477 JOINT, UNLESS LATERALS CROSS ABOVE WATER LINES THEN ASTM D2241, SHALL BE USED.
  6. ALL MATERIAL AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
  7. IN ALL CONSTRUCTION, A MINIMUM OF 18" VERTICAL AND 10' HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN WATER AND SEWER MAINS AND LATERALS IN ACCORDANCE WITH SECT. 41-2.01B AND 41-2.01c.
  8. ALL FLEXIBLE GRAVITY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321-88. ALL BEDDING, HAUNCHING, AND INITIAL BACKFILL SHALL BE PLACED AT LEAST 6 INCHES OVER THE TOP OF THE PIPE USING CLASS III MATERIAL, CLASSIFIED IN ACCORDANCE WITH ASTM D2321-88, SECTION 9 AND TABLE 1.
  9. ALL TESTING TO BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
  10. THE CONTRACTOR SHALL BE PERMITTED TO USE INFILTRATION, EXFILTRATION, OR AIR TESTING IN ACCORDANCE WITH ARTICLE 31-1.11A OF THE STANDARD SPECIFICATIONS.
  11. DEFLECTION TESTING SHALL BE IN ACCORDANCE WITH ARTICLE 31-1.11B(4) OF THE STANDARD SPECIFICATIONS.
  12. ALL MANHOLES SHALL BE TESTED FOR WATERTIGHTNESS IN ACCORDANCE WITH ASTM C969-94 OR ASTM C1244-93.

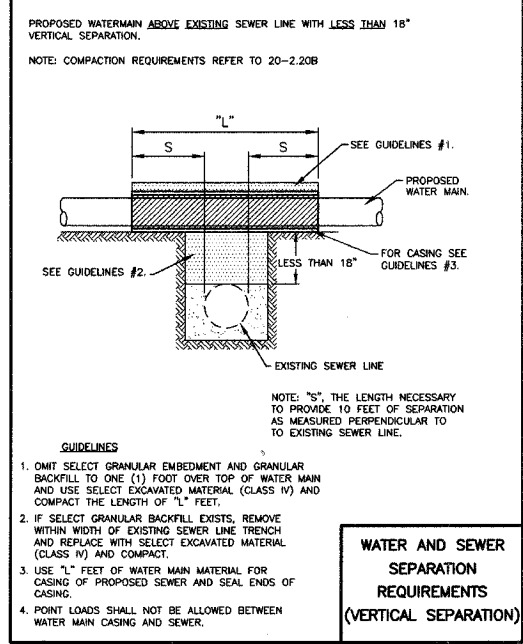
**GENERAL NOTES**

1. UNDERGROUND STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND, THEREFORE, THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. WATER AND SEWER CROSSINGS UNDER STREET AREAS AND DRIVEWAYS SHALL BE BACKFILLED WITH CA-6 GRANULAR MATERIAL AND COMPACTED TO 95% DENSITY.
3. CONTRACTOR SHALL CONTACT J.U.L.I.E. OPERATOR AT 1-800-892-0123 FOR MARKING OF EXISTING UNDERGROUND UTILITIES. J.U.L.I.E. SHOULD BE CONTACTED A MINIMUM OF 96 HOURS IN ADVANCE OF CONSTRUCTION. CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR CROSSINGS OF ANY EXISTING UTILITIES.

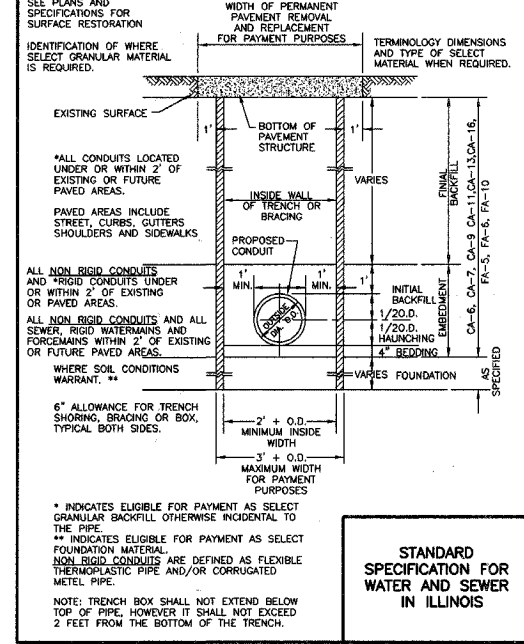
**WATER NOTES**

1. ALL P.V.C. PIPE SHALL BE SDR 26, AND BEAR THE SEAL OF APPROVAL AND CONFORM TO ASTM D-2241. ALL JOINTS SHALL MEET THE REQUIREMENTS OF ASTM F477 AND ASTM D-3139.
2. ALL DUCTILE IRON PIPE SHALL BE 250 P.S.I., CONFORMING TO ANSI/AWWA C151/A215.1. DUCTILE IRON FITTINGS SHALL COMPLY WITH ANSI/AWWA C110/A212.0.
3. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
4. DEPTH OF COVER SHALL BE A MINIMUM OF 36" UNLESS OTHERWISE NOTED.
5. FLUSH HYDRANTS SHALL HAVE TWO 2 1/2" HOSE NOZZLES AND SHALL MEET ALL APPLICABLE PARTS OF ANSI/AWWA C502 STANDARD. THE HYDRANTS SHALL BE MUELLER BRAND, SUPER CENTURION MODEL NO. A-422 OR APPROVED EQUAL FOR 6" WATER MAINS AND LARGER AND MODEL NO. A-420 OR APPROVED EQUAL FOR 4" WATER MAINS. ALL FLUSH HYDRANTS SHALL BE INSTALLED WITH A 4" AUXILIARY VALVE FOR 4" WATER MAINS AND A 6" AUXILIARY VALVE FOR 6" AND LARGER WATER MAINS.
6. UNDERGROUND LOCATION WIRE TO BE INSTALLED IN THE SAME TRENCH AS WATER LINE.
7. WATER MAINS SHALL BE SEPARATED FROM SEPTIC TANKS, DISPOSAL FIELDS, AND SEEPAGE BEDS A MINIMUM OF 25 FEET.
8. ALL PIPE FITTINGS SHALL BE DUCTILE IRON AND SHALL USE STAINLESS STEEL NUTS AND BOLTS. WHERE A CHANGE IN DIRECTION OF THE PIPE OCCURS, RESTRAINT DEVICES EQUAL TO EBAA IRON'S MEGA LUGS SHALL BE INSTALLED. THE RESTRAINT DEVICE SHALL BE THAT RECOMMENDED FOR THE PROPER P.V.C. CLASSIFICATION OF PIPE.

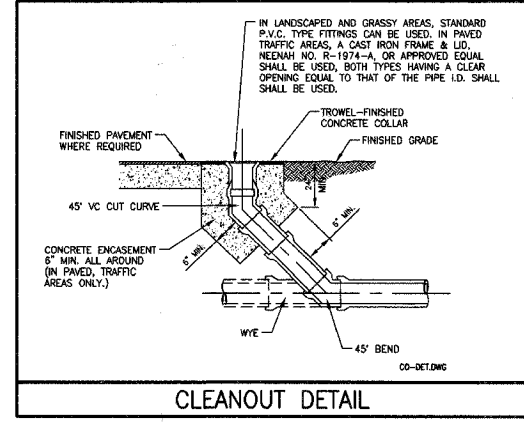
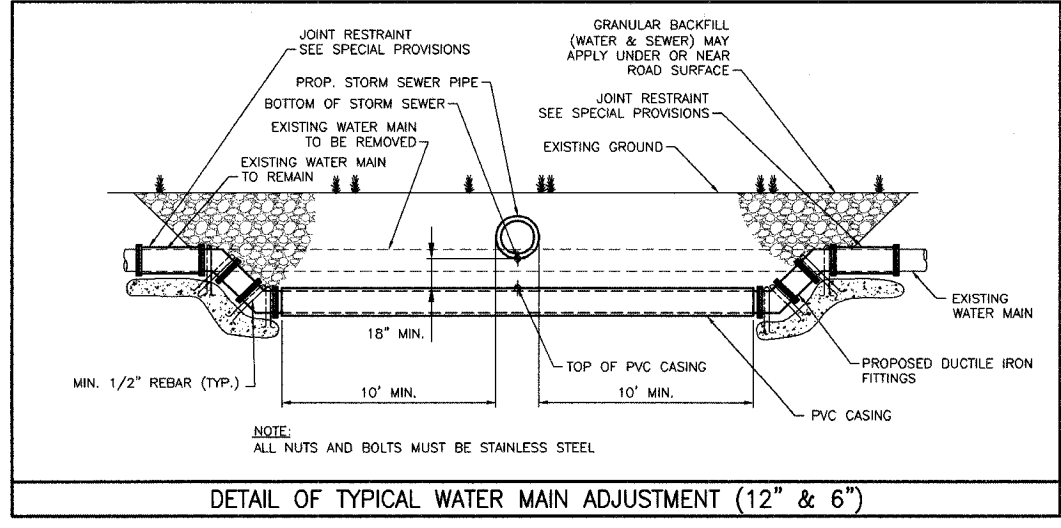
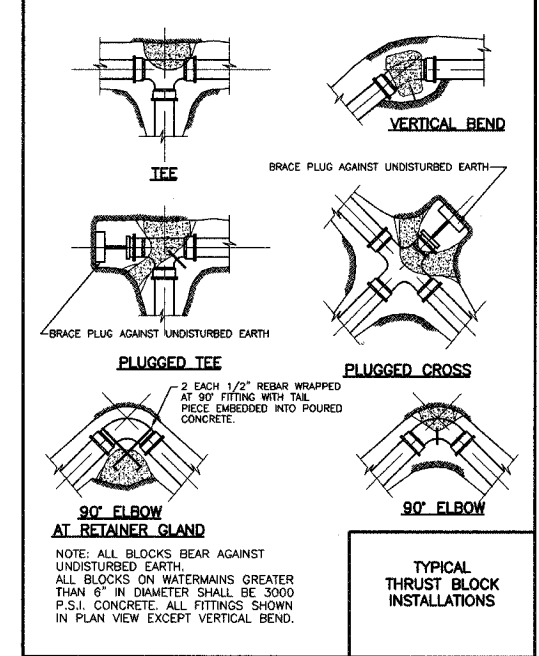
**WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)**



**STANDARD SPECIFICATION FOR WATER AND SEWER IN ILLINOIS**



**TYPICAL THRUST BLOCK INSTALLATIONS**



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**WATER AND SEWER DETAILS  
FAIR STREET WIDENING  
MARION, ILLINOIS**

REVISIONS	
DATE	NO.

Date 2/26/08 DR. By TDE CK'D By HGC

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