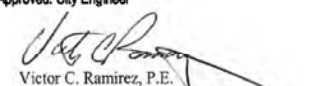



**WATER MAIN**

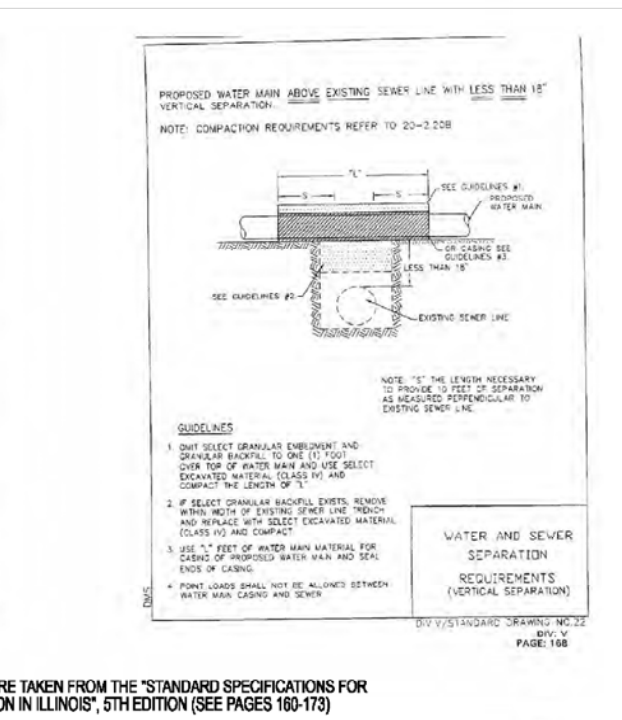
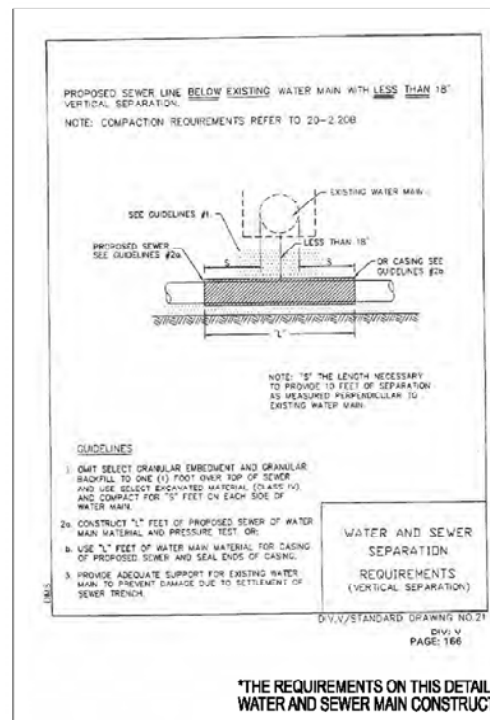
1. Thrust blocking shall be installed on water mains at all bends, tees, elbows, etc. except as noted below.
2. Thrust blocks not permitted with 45° vertical bends in water main □ these shall be restrained with (Mega-Lug) or equivalent.
3. Water main shall be ductile iron pipe, Class 52 conforming to A.N.S.I. A-21.51 or AWWA C-151.
4. Gaskets and cast iron fittings shall conform to A.N.S.I. A-21.11 or AWWA C-110 and C-111 water main shall be cement lined in conformance with A.N.S.I. A-21.4 or AWWA C-104.
5. Minimum cover from finished grade to top of water main shall be six (6) feet. Maximum cover shall be eight (8) feet.
6. Water Main Taps: an Illinois licensed plumber is required for any water main tap.
7. All water mains shall be subjected to a pressure test and a separate leakage test at system pressure for 24 hours by the Contractor. Hydrostatic pressure test and leakage shall be based on 125 psi for two (2) hours. Water mains shall be chlorinated in accordance with the Standard Specifications.
8. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawings. In the event that the pressure attributable to defective original workmanship and material, then the Contractor shall be entitled to additional payment for correcting the deficiencies.

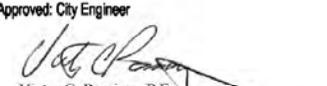
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Approved: City Engineer  
  
 Victor C. Ramirez, P.E.  
 Director of Engineering and Building


Drawing Name  
**STANDARD NOTES AND SPECIFICATIONS**

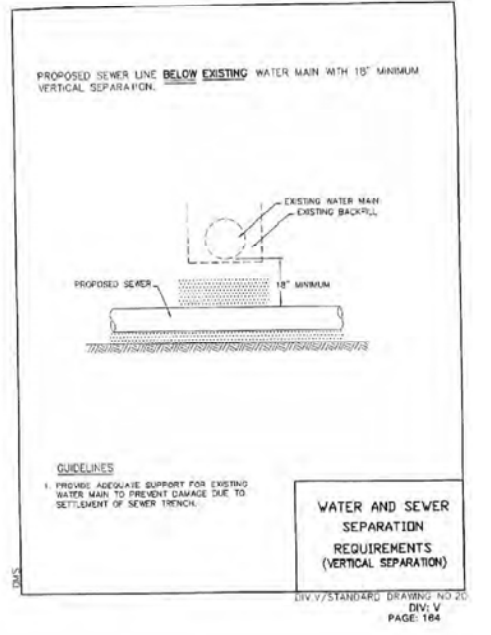
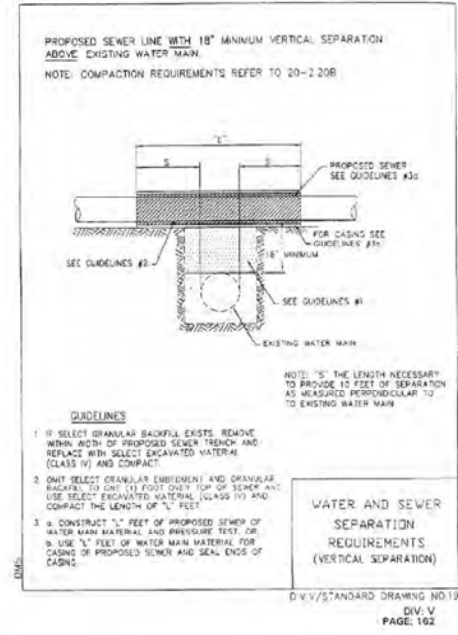
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 CRYSTAL LAKE ILLINOIS Engineering Division

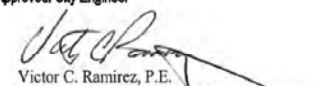


Approved: City Engineer  
  
 Victor C. Ramirez, P.E.  
 Director of Engineering and Building


Drawing Name  
**WATER AND SEWER SEPARATION REQUIREMENTS**

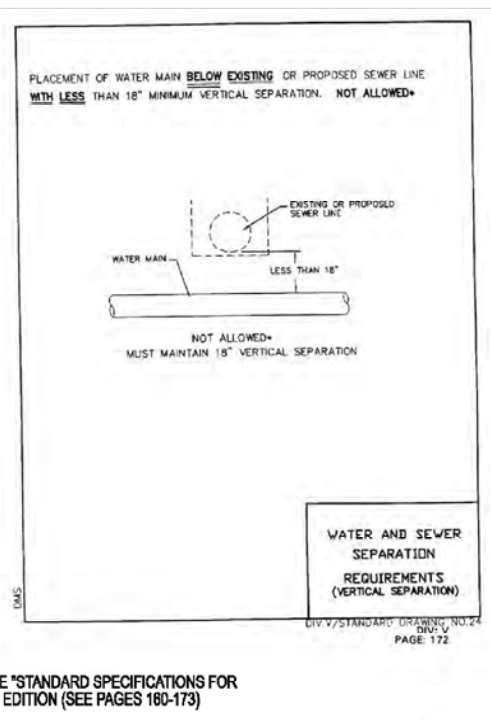
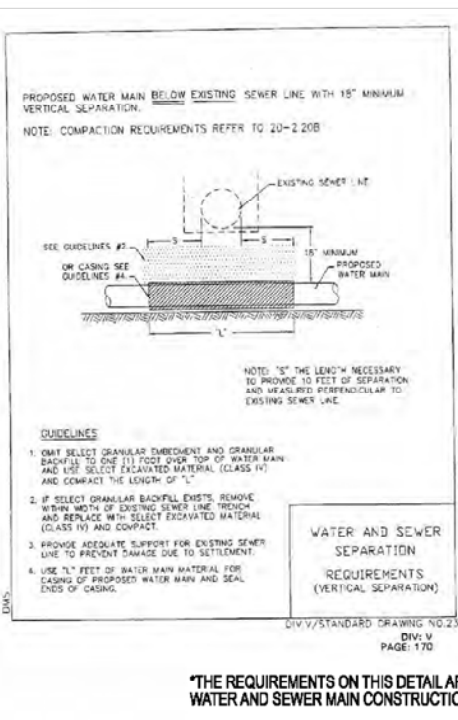
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 CRYSTAL LAKE ILLINOIS Engineering Division

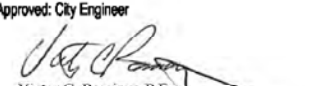


Approved: City Engineer  
  
 Victor C. Ramirez, P.E.  
 Director of Engineering and Building


Drawing Name  
**WATER AND SEWER SEPARATION REQUIREMENTS**

Drawing Number  
**UG-04a**  
 Date: 4/15/2007  
 Drawn: EM  
 Checked: LZ  
  
 CRYSTAL LAKE ILLINOIS Engineering Division



Approved: City Engineer  
  
 Victor C. Ramirez, P.E.  
 Director of Engineering and Building

Drawing Name  
**WATER AND SEWER SEPARATION REQUIREMENTS**

Drawing Number  
**UG-04c**  
 Date: 4/15/2007  
 Drawn: EM  
 Checked: LZ  
  
 CRYSTAL LAKE ILLINOIS Engineering Division

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WATER MAIN CONSTRUCTION DETAILS

UG-04a

UG-04b

UG-04c