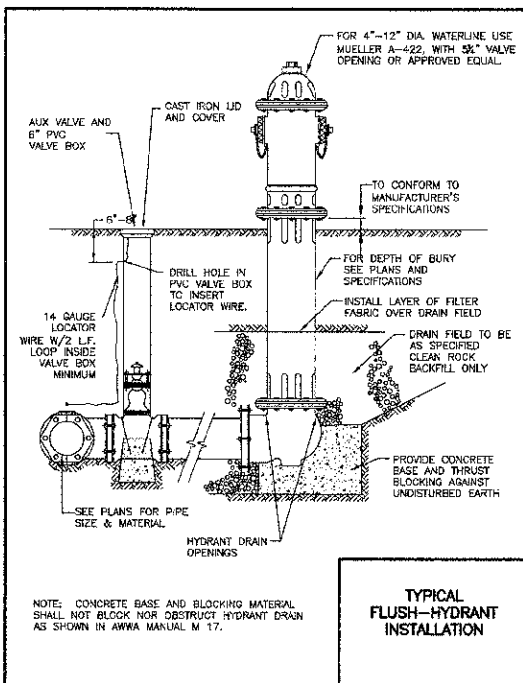
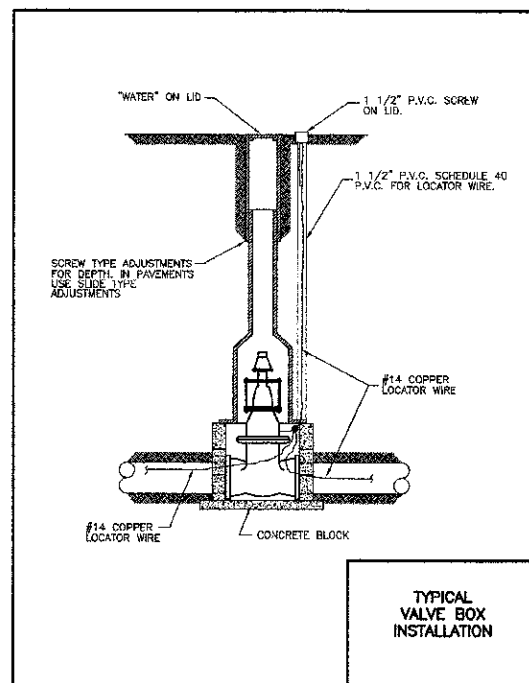


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 9718	08-00105-00-FP	WILLIAMSON	45	27
ILLINOIS			MORGAN ST.	

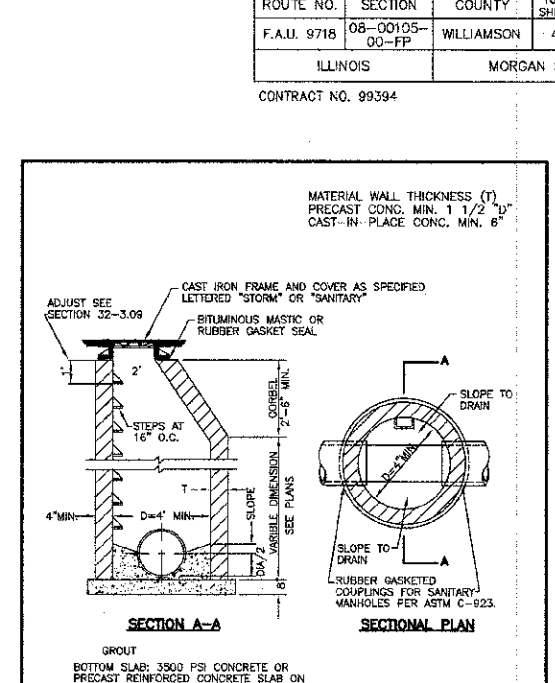
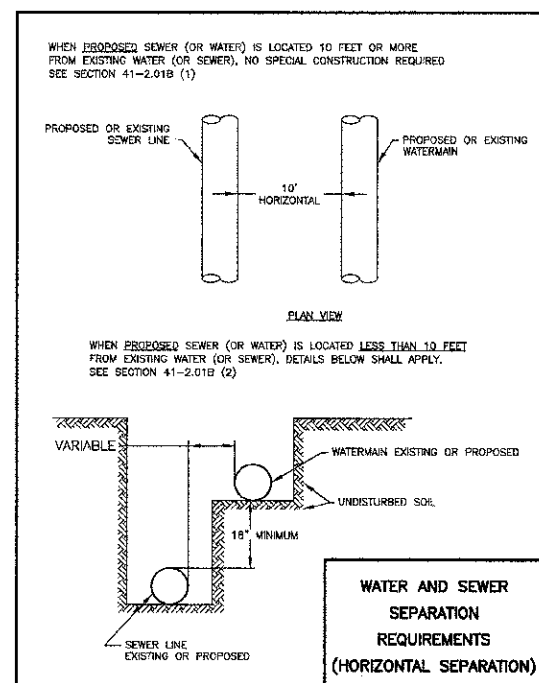
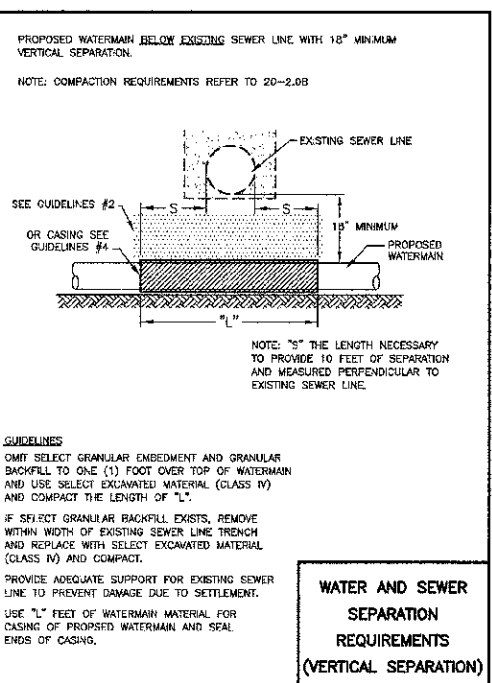
CONTRACT NO. 99394



TYPICAL FLUSH-HYDRANT INSTALLATION



TYPICAL VALVE BOX INSTALLATION



NOTES

SANITARY SEWER NOTES

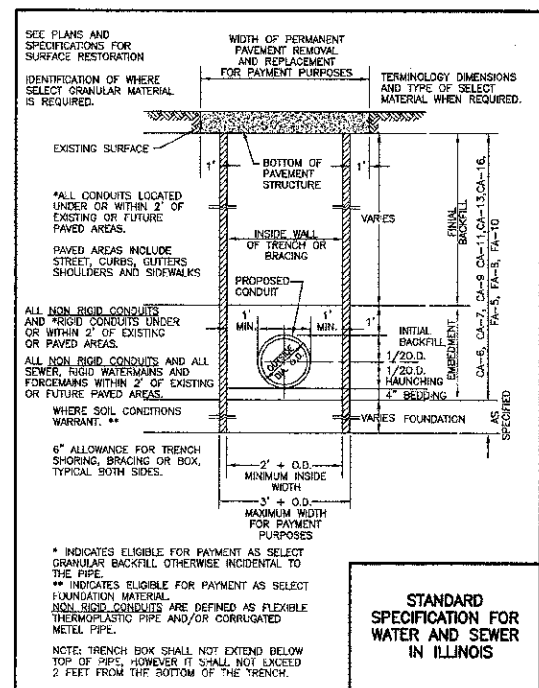
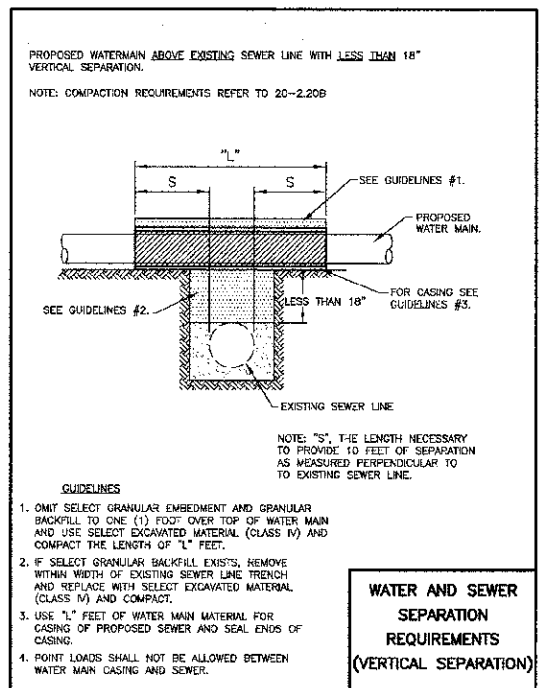
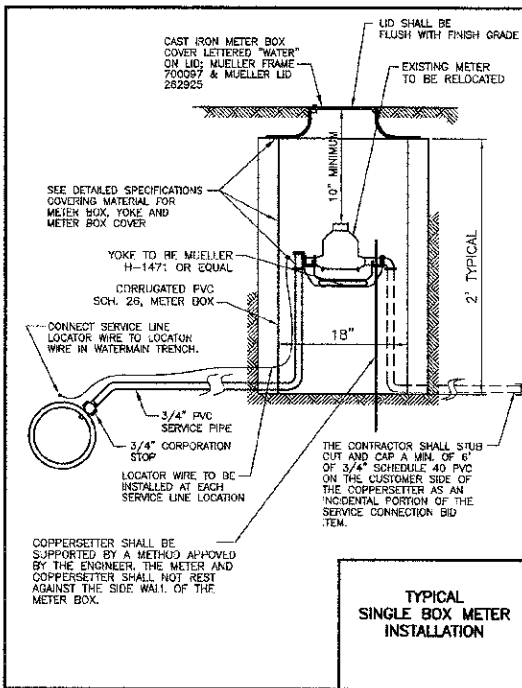
- ALL MANHOLES SHALL BE FOUR FOOT DIAMETER PRECAST CONCRETE WITH PAVED INVERTS AND BE EQUAL TO THOSE MANUFACTURED BY EGYPTIAN CONCRETE CO. OPENINGS ON ALL M.H.'S SHALL BE FOUR WAY.
- MANHOLE CASTINGS SHALL BE HENNAH R-1772 WITH GASKETED T.Y."O" LID.
- PVC SOLID-WALL SEWER PIPE FOR SEWER MAIN AND LATERALS SHALL BE MADE OF COMPOUNDS CONFORMING TO ASTM D1784 IN ACCORDANCE WITH THE MATERIAL REQUIREMENTS OF ASTM D2034. PVC SEWER PIPE MUST MEET THE REQUIREMENTS OF AWWA C-900. PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS MEETING THE REQUIREMENTS OF AWWA C-1111. PVC SEWER PIPE SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS OF ASTM D2321.
- ALL PIPE JOINTS SHALL BE OF THE BELL AND SPIGOT TYPE AND CONFORM TO REQUIREMENTS OF ASTM D3212. GASKET MATERIAL TO CONFORM TO ASTM F447.
- SEWER LATERALS TO BE 4" DIA. SDR 26, MEETING ASTM D-3034 SPEC. IF/ASTM F-477 JOINT, UNLESS LATERALS CROSS ABOVE WATER LINES THEN ASTM D2241, SHALL BE USED.
- ALL MATERIAL AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
- 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. 41-2.016 AND 41-2.017c.
- ALL FLEXIBLE GRAVITY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321-89. ALL BENDS, HAUNCHINGS AND INITIAL BACKFILL SHALL BE PLACED AT LEAST 8 INCHES OVER THE TOP OF THE PIPE USING CLASS B MATERIAL CLASSIFIED IN ACCORDANCE WITH ASTM D2321-89, SECTION 9 AND TABLE 1.
- ALL TESTING TO BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
- THE CONTRACTOR SHALL BE PERMITTED TO USE INFILTRATION, EXFILTRATION, OR AIR TESTING IN ACCORDANCE WITH ARTICLE 31-1.11A OF THE STANDARD SPECIFICATIONS.
- DEFLECTION TESTING SHALL BE IN ACCORDANCE WITH ARTICLE 31-1.11B(4) OF THE STANDARD SPECIFICATIONS.
- ALL MANHOLES SHALL BE TESTED FOR WATERTIGHTNESS IN ACCORDANCE WITH ASTM C988-94 OR ASTM C1244-93.

WATER NOTES

- ALL PVC PIPE SHALL BE SDR 21, 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.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION.
- DEPTH OF COVER SHALL BE A MINIMUM OF 36" UNLESS OTHERWISE NOTED.
- 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 5" AUXILIARY VALVE FOR 6" AND LARGER WATER MAINS.
- UNDERGROUND LOCATION WIRE TO BE INSTALLED IN THE SAME TRENCH AS WATER LINE.
- WATER MAINS SHALL BE SEPARATED FROM SEPTIC TANKS, DISPOSAL FIELDS, AND SEEPAGE BEDS A MINIMUM OF 25 FEET.
- ALL PIPE FITTINGS SHALL BE DUCTILE IRON, SHALL COMPLY WITH ANSI/AWWA C110/A21.20 AND SHALL USE STAINLESS STEEL NUTS AND BOLTS. WHERE A CHANGE IN DIRECTION OF THE PIPE OCCURS, RESTRAINT DEVICES EQUAL TO FEMA IRON'S MEGA LUGS SHALL BE INSTALLED. THE RESTRAINT DEVICE SHALL BE THAT RECOMMENDED FOR THE PROPER PVC CLASSIFICATION OF PIPE.
- WATER MAINS SHALL BE SEPARATED FROM SANITARY SEWER MAINS A MINIMUM OF 10' HORIZONTAL AND 18" VERTICAL AND SHALL BE INSTALLED AS DETAILED IN STANDARD DRAWINGS 18-24 IN THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS," 5TH EDITION. LOCATIONS AND ELEVATIONS OF SEWER LATERALS IS NOT PRESENTLY KNOWN. CONTRACTOR SHALL CHANGE LOCATION, ELEVATION, AND/OR CASE WATER MAIN PER THE STANDARD DRAWINGS WHEN LATERALS ARE ENCOUNTERED.
- INTERCONNECTIONS SHALL CONSIST OF MAKING A PRESSURE TAP ON THE EXISTING WATER MAIN WITH A TAPPING SLEEVE AND A TAPPING VALVE. TAPPING SLEEVE AND ALL BOLTS AND NUTS SHALL BE STAINLESS STEEL.
- GATE VALVES SHALL HAVE A NON-RISING STEM AND A 2 INCH SQUARE WRENCH NUT. VALVE BOXES SHALL BE TWO OR THREE PIECE AND HEIGHT ADJUSTABLE.
- FIRE HYDRANTS SHALL BE 3-WAY MUELLER "SUPER CENTURION" MODEL # A-423 OR APPROVED EQUAL WITH AUXILIARY VALVE AND A MINIMUM OF 3.5 FEET BURY. ALL FIRE HYDRANT LEADS SHALL BE A MINIMUM OF 6" IN DIAMETER FOR WATER MAINS 6" IN DIAMETER OR GREATER.
- ALL NUTS AND BOLTS FOR GATE VALVES & FIRE HYDRANTS SHALL BE STAINLESS STEEL.

GENERAL NOTES

- 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.
- WATER AND SEWER CROSSINGS UNDER STREET AREAS AND DRIVEWAYS SHALL BE BACKFILLED WITH TRENCH WATERMAIN, AND COMPACTED TO 90% DENSITY.
- CONTRACTOR SHALL CONTACT J.U.L.L.E. OPERATOR AT 1-800-802-0123 FOR MARKING OF EXISTING UNDERGROUND UTILITIES. J.U.L.L.E. SHOULD BE CONTACTED A MINIMUM OF 96 HOURS IN ADVANCE OF CONSTRUCTION. CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR CROSSING OF ANY EXISTING UTILITIES.



REVISIONS	
DATE	NO.

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WATER AND SEWER DETAILS
 MORGAN AVE. IMPROVEMENTS
 MARION, ILLINOIS