

### WATER MAIN AND SERVICES

ALL NEW CONSTRUCTION, CONNECTIONS TO, AND/OR ADJUSTMENTS OF EXISTING WATER MAINS SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, FIFTH EDITION, MAY, 1996" AND THE LATEST EDITION OF THE ILLINOIS PLUMBING CODE.

PROPOSED WATER MAIN SHALL HAVE A MINIMUM OF 48" COVER, EXCEPT AS NOTED OR ON ILLINOIS DEPARTMENT OF TRANSPORTATION (I.D.O.T.) RIGHT-OF-WAY WHERE IT SHALL BE 54" MIN.

POLYVINYL CHLORIDE (PVC) PIPE SHALL CONFORM TO THE LATEST AWWA STANDARDS FOR PVC, SDR-21 CLASS 200.

ALL FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT:

- ALL 2" FITTINGS SHALL BE GRAY OR DUCTILE IRON CLASS 250 MINIMUM, AND SHALL BE PRODUCED IN STRICT ACCORDANCE WITH ANSI / AWWA C110 /A21.10 AND ANSI/AWWA C111/A21.11.
- ALL 3" THROUGH 16" FITTINGS SHALL BE PRODUCED IN STRICT ACCORDANCE WITH ALL APPLICABLE TERMS AND PROVISIONS OF ANSI/AWWA C153/A21.53 AND ANSI/AWWA C111/A21.11. THE WORKING PRESSURE RATING SHALL BE 250 PSI.

ALL SADDLES SHALL BE DOUBLE STRAP OR WIDE BAND CLAMP MEETING ORDINANCE OF THE MUNICIPALITY.

TRACER - THE CONTRACTOR SHALL FURNISH AND INSTALL ALONG THE ENTIRE ROUTE OF THE WATER MAIN A #12, AWG, THW SINGLE CONDUCTOR COPPER LOCATOR WIRE. THE WIRE SHALL BE INSTALLED JUST ABOVE THE CROWN OF THE PIPE AND SHALL BE BROUGHT TO THE TOP OF EACH VALVE BOX AND TERMINATED THERE WITH ONE FOOT MIN. LENGTH OF WIRE OUTSIDE OF THE VALVE BOX. SPLICE SHALL BE MADE USING A DIRECT BURY SPLICE KIT, SUCH AS 3M PART No. 054007-09053, OR EQUAL. THE TRACER WIRE SHALL BE TESTED BY THE CONTRACTOR FOR CONTINUITY. THE COST OF THE LOCATOR WIRE AND ITS INSTALLATION SHALL BE INCIDENTAL THE COST OF THE WATER MAIN INSTALLATION.

ALL THRUST BLOCKS SHALL BE POURED PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SEC. 41-2.09 OF THE STANDARD SPECIFICATIONS. \* RETAINER GLANDS SHALL BE USED IN CONJUNCTION WITH THRUST BLOCKING.

WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SEC. 41-2.13 OF THE STANDARD SPECIFICATIONS.

DISINFECTION SHALL BE IN ACCORDANCE WITH SEC. 41-2.14 OF THE STANDARD SPECIFICATIONS.

CONTRACTOR SHALL VERIFY ALL EXISTING WATER MAIN AND SERVICES MATERIALS AND SIZES PRIOR TO ORDERING THE REQUIRED TAPPING SLEEVES AND/OR FITTINGS - NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING IF NEEDED, COST OF LABOR, MATERIALS, AND EQUIPMENT IS INCIDENTAL TO THE CONTRACT.

BACKFILL FOR WATER MAIN & WATER SERVICE LINES TO THE SUB-GRADE SHALL BE IN ACCORDANCE WITH SECTION 20-2.21B OF THE STANDARD SPECIFICATIONS AND SHALL BE FA-6 MATERIAL.

### SANITARY SEWER CONSTRUCTION NOTES

ALL NEW CONSTRUCTION, CONNECTIONS TO, AND/OR ADJUSTMENTS OF EXISTING SANITARY SEWER SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, FIFTH EDITION, MAY, 1996" AND THE LATEST EDITION OF THE ILLINOIS PLUMBING CODE.

CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN FLOW OF EXISTING SANITARY SEWER MAINS. MAINS ARE TO REMAIN OPERATIONAL DURING REPAIRS AND/OR REPLACEMENT. COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

P.V.C. GRAVITY SEWER PIPE SHALL CONFORM TO ASTM D-3034, STANDARD SPECIFICATION FOR TYPE PSM POLY(VINYL-CHLORIDE) (PVC) SEWER PIPE AND FITTINGS, AND SHALL BE SDR-26 WALL THICKNESS. ALL PIPE SHALL UTILIZE INTEGRAL GASKET JOINTS MEETING THE REQUIREMENTS OF ASTM D-3212. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F-477.

ALL SANITARY SEWER MANHOLES SHALL BE TYPE A, WITH TYPE 1 FRAME AND CLOSED LID IN ACCORDANCE WITH DIVISION V/ STANDARD DRAWING No. 3 OF THE STANDARD SPECIFICATIONS.

BACKFILL FROM 12" ABOVE TOP OF PIPE TO SUB-GRADE SHALL BE IN ACCORDANCE WITH SECTION 20-2.21B OF STANDARD SPECIFICATIONS AND SHALL BE CA-6 MATERIAL.

COMPACTION OF BACKFILL SHALL BE MADE BY RAMMING OR TAMPING TO MEET 95% STANDARD PROCTOR (ASTM D698).

BEDDING OF SEWER PIPE SHALL BE CA-7 MATERIAL AND SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, FIFTH EDITION, SECTION 20-2.20.

CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING, IF NEEDED. COST OF LABOR, MATERIALS, AND EQUIPMENT IS INCIDENTAL TO THE CONTRACT.

ALL SANITARY SEWER MAINS SHALL BE DEFLECTION TESTED IN ACCORDANCE WITH SEC. 31-1.11B (4) OF THE STANDARD SPECIFICATIONS.

ALL SANITARY SEWER MAINS SHALL BE AIR TESTED IN ACCORDANCE WITH SEC.31-1.11B (3) OF THE STANDARD SPECIFICATIONS.

MANHOLES SHALL BE LEAK TESTED IN ACCORDANCE WITH EPA TITLE 35, SECTION 370.330, e) 2) WHICH REFERS THAT LEAK TESTING SHALL BE IN ACCORDANCE WITH ASTM C1244-93 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE PRESSURE (VACJUM) TEST".

CONTRACTOR WILL BE PROVIDED HORIZONTAL & VERTICAL LOCATION OF ALL PROPOSED MANHOLES.

EXISTING SANITARY SEWER PIPES, MANHOLES, STORM SEWER INLETS AND ALL MATERIALS TO BE REMOVED, SHALL BE LAWFULLY DISPOSED OF OFF-SITE. CONTRACTOR SHALL DELIVER FRAME & LID OR GRATE TO CITY GARAGE, INCIDENTAL TO THE CONTRACT.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL MANHOLES BEFORE ORDERING.

CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO PAVEMENT SURFACES THAT ADJOIN THE CONSTRUCTION SITE BUT ARE NOT A PART THEREOF. COST OF LABOR, MATERIALS AND EQUIPMENT TO REPAIR THIS DAMAGE IS INCIDENTAL TO THE CONTRACT.

THE CONTRACTOR SHALL REMOVE AND REPLACE ALL STREET SIGNS AS NEEDED, OR AS DIRECTED BY THE ENGINEER, INCIDENTAL TO THE CONTRACT.

DRAWN BY <u>D.B.H.</u> CHECKED BY <u>M.G.M.</u> APPROVED BY <u>W.J.S.</u> DATE <u>JANUARY, 2005</u>	<b>WATER &amp; SANITARY SEWER DETAILS</b>																				
<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>3/7/05</td> <td>M.G.M.</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS		DATE	BY	3/7/05	M.G.M.															<b>MACOMB, ILLINOIS</b>   <b>BENTON &amp; ASSOCIATES INC.</b> Consulting Engineers / Land Surveyors 1970 West Lafayette Avenue Jacksonville, Illinois 62650 Phone : 217-245-4148 Fax : 217-245-4149 IL Design Firm Registration No. 184-000852
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