

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH 18" MINIMUM VERTICAL SEPARATION.

NOTE: COMPACTION REQUIREMENTS REFER TO 20-2.20B

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AND MEASURED PERPENDICULAR TO EXISTING SEWER LINE.

**GUIDELINES**

- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
- IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
- PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
- USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.

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

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PLACEMENT OF WATER MAIN BELOW EXISTING OR PROPOSED SEWER LINE WITH LESS THAN 18" MINIMUM VERTICAL SEPARATION. **NOT ALLOWED\***

**NOT ALLOWED\***  
MUST MAINTAIN 18" VERTICAL SEPARATION

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

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WHEN PROPOSED SEWER (OR WATER) IS LOCATED 10 FEET OR MORE FROM EXISTING WATER (OR SEWER), NO SPECIAL CONSTRUCTION REQUIRED. SEE SECTION 41-2.01B (1)

PLAN VIEW

WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10 FEET FROM EXISTING WATER (OR SEWER), DETAILS BELOW SHALL APPLY. SEE SECTION 41-2.01B (2)

**WATER AND SEWER SEPARATION REQUIREMENTS HORIZONTAL SEPARATION**

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PROPOSED SEWER LINE WITH 18" MINIMUM VERTICAL SEPARATION ABOVE EXISTING WATER MAIN.

NOTE: COMPACTION REQUIREMENTS REFER TO 20-2.20B

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO EXISTING WATER MAIN

**GUIDELINES**

- IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
- CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR:
  - USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.

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

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**SEPARATION GENERAL NOTES**

- WATER MAINS AND OR SERVICES MUST BE PROTECTED FROM SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, FORCE MAINS, HOUSE SEWER SERVICE CONNECTIONS, DRAINS AND SEPTIC FIELDS ACCORDING TO THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, FIFTH ADDITION, ADOPTED MAY, 1996 AND THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH PLUMBING CODE.
- ALL SANITARY SEWER SERVICES WHICH CROSS WATER MAINS AND OR SERVICES SHOULD USE "DUAL STAMPED" PVC SCHEDULE 40 PIPE (ASTM D1785 AND ASTM D2665)
- ALL WATER MAIN AND OR SERVICES MUST BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, COMBINED SEWER, OR SEWER SERVICE CONNECTION, UNLESS LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET.
- THE DISTANCE BETWEEN PIPES IS MEASURED EDGE TO EDGE FOR ALL SEPARATION REQUIREMENTS.
- CASING PIPES MAY BE USED ONLY WHEN VERTICAL SEPARATION REQUIREMENTS CAN NOT BE MET. CASING PIPES MAY NOT BE USED WHEN HORIZONTAL SEPARATION REQUIREMENTS CAN NOT BE MET. CASING PIPES MUST BE OF A MATERIAL THAT IS APPROVED FOR USE AS WATER MAIN.
- WATER MAINS MUST MAINTAIN A HORIZONTAL SEPARATION OF 10 FEET WITH FORCE MAINS. THERE SHALL BE AN 18 INCH VERTICAL SEPARATION AT CROSSINGS AND THE WATER MAIN IS TO BE LOCATED ABOVE THE FORCE MAIN.
- WHEN A WATER MAIN CROSSES BELOW A SEWER, THE SEWER MUST BE CONSTRUCTED WITH WATER MAIN EQUIVALENT PIPE OR ELSE EITHER PIPE MUST BE INSTALLED IN A CASING. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN IS AT LEAST TEN FEET. IN ADDITION, THE WATER MAIN MUST BE LOCATED AT LEAST 18 INCHES BELOW THE SEWER.
- WHEN THE INVERT OF THE WATER MAIN IS NOT 18 INCHES ABOVE THE CROWN OF THE SEWER WHEN THE PIPES CROSS, A CASING PIPE CAN BE INSTALLED AROUND EITHER THE WATER MAIN OR SEWER IN LIEU OF CONSTRUCTING THE SEWER WITH WATER MAIN EQUIVALENT PIPE. THE CASING PIPE MUST BE A MATERIAL THAT IS APPROVED FOR USE AS WATER MAIN. CONCRETE IS NOT AN ACCEPTABLE ENCASUREMENT. THE CASING MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN IS AT LEAST TEN FEET.
- AT STORM SEWER CROSSINGS WHEN THE INVERT OF THE WATER MAIN IS NOT 18 INCHES ABOVE THE CROWN OF THE STORM SEWER, THE STORM SEWER CAN BE CONSTRUCTED WITH REINFORCED CONCRETE PIPE WITH A FLEXIBLE GASKET JOINT MEETING ASTM C361 OR ASTM C443 AS AN ALTERNATIVE TO CONSTRUCTING THE STORM SEWER WITH WATER MAIN EQUIVALENT PIPE OR PROVIDING A CASING PIPE AT LOCATIONS WHERE IT IS NOT POSSIBLE TO MEET THE VERTICAL SEPARATION REQUIREMENTS. THE USE OF FLEXIBLE GASKET JOINT CONCRETE PIPE DOES NOT MEET THE REQUIREMENTS IN PARALLEL SITUATIONS WHERE LOCAL CONDITIONS PREVENT A 10 FOOT SEPARATION.
- WATER MAINS MUST BE SEPARATED BY A MINIMUM OF 25 FEET FROM SEPTIC TANKS, DISPOSAL FIELDS AND SEEPAGE BEDS.
- WATER MAINS MUST BE SEPARATED BY A MINIMUM OF 25 FEET FROM SEWAGE LIFT STATIONS.
- HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS APPLY TO WATER SERVICE LINES THE SAME AS PER WATER MAINS.

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH 18" MINIMUM VERTICAL SEPARATION.

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO EXISTING WATER MAIN.

**GUIDELINES**

- PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

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

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PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" VERTICAL SEPARATION.

NOTE: COMPACTION REQUIREMENTS REFER TO 20-2.20B

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO EXISTING WATER MAIN.

**GUIDELINES**

- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT FOR "S" FEET ON EACH SIDE OF WATER MAIN.
- CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR:
  - USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
- PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

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

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PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH LESS THAN 18" VERTICAL SEPARATION.

NOTE: COMPACTION REQUIREMENTS REFER TO 20-2.20B

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO EXISTING SEWER LINE.

**GUIDELINES**

- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
- IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
- USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.
- POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN CASING AND SEWER.

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

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<b>MEC</b> MARTIN ENGINEERING COMPANY of Illinois			OF 66 SHEETS
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