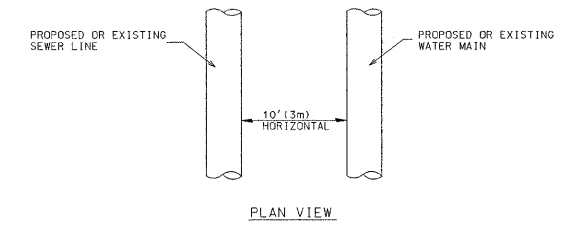


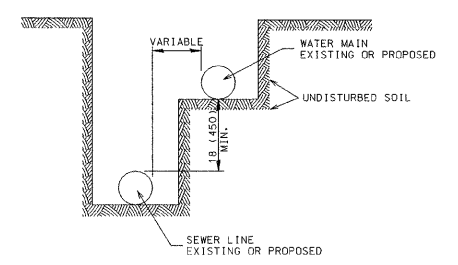
- NOTES:
- CASING PIPE SHALL CONFORM TO ASTM A139, GRADE B, WITH 60,000 PSI (414 MPa) MINIMUM TENSILE STRENGTH AND BE OF LEAK PROOF CONSTRUCTION.
 - THE BORE DIAMETER SHALL BE ESSENTIALLY THE SAME SIZE AS THE OUTSIDE DIAMETER OF THE CASING PIPE. IF VOIDS DEVELOP DURING INSTALLATION, REMEDIAL MEASURES AS APPROVED BY THE ENGINEER SHALL BE UNDERTAKEN. BORING OPERATIONS SHALL BE CONTINUOUS.

CASING PIPE DETAIL

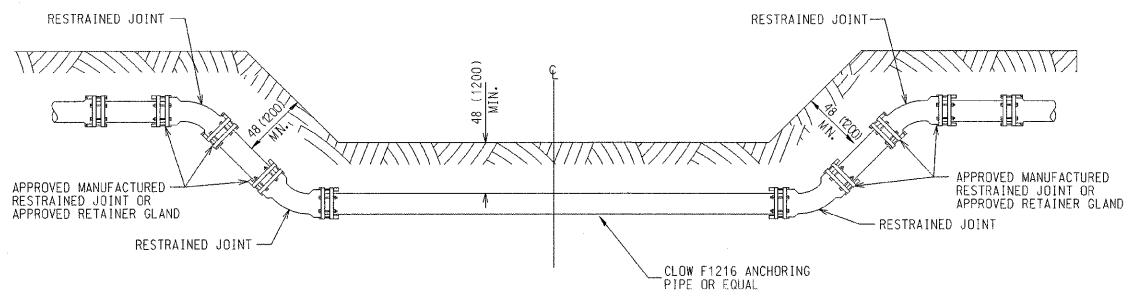
WHEN PROPOSED SEWER (OR WATER) IS LOCATED 10' (3m) OR MORE FROM EXISTING WATER (OR SEWER), NO SPECIAL CONSTRUCTION IS REQUIRED



WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10' (3m) FROM EXISTING WATER (OR SEWER), DETAILS BELOW SHALL APPLY.



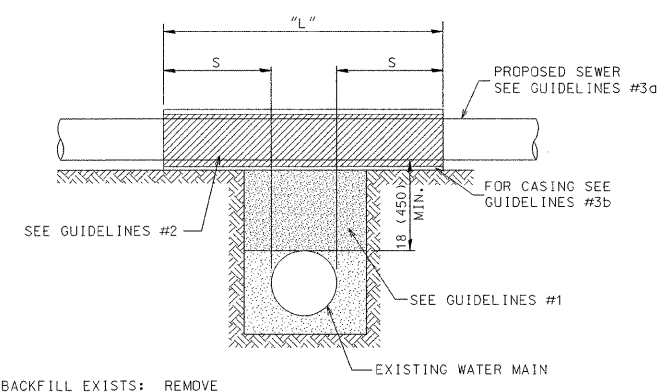
All dimensions are in inches (millimeters) unless otherwise shown.



CREEK CROSSING DETAIL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

PROPOSED SEWER LINE WITH 18 (450) MINIMUM VERTICAL SEPARATION ABOVE 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 CRADLE AND GRANULAR BACKFILL TO 12 (300) OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
- CONSTRUCT "L" OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR: USE "L" OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
- POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
- PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10' (3m) OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING WATER MAIN.

All dimensions are in inches (millimeters) unless otherwise shown.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL	
SCALE:	SHEET NO. 47 OF 52 SHEETS STA. TO STA.

WATER MAIN DETAILS	
VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN, COUNTY	

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	47
S.N. 057-7834		CONTRACT NO. 91416		
<small>FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT</small>				

TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT	
STANDARD 8.08F	
SHEET 1 OF 1	