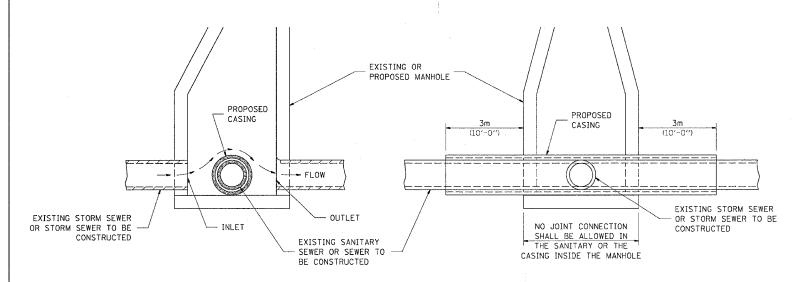
## SEWER AND WATER MAIN CROSSINGS



ELEVATION - ECCENTRIC

ELEVATION - CONCENTRIC

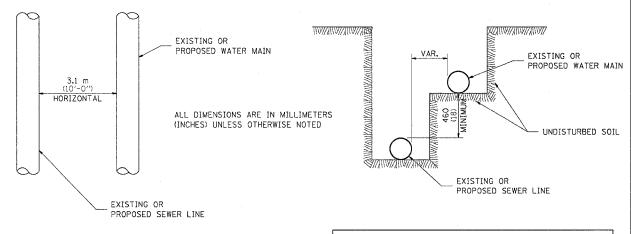
CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 50 (2) LARGER IN DIAMETER THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

AT GRADE CROSSING OF SANITARY AND STORM SEWER

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

THIS DETAIL IS FOR UNKNOWN UTILITIES UNLESS QUANTITIES ARE INCLUDED IN THE PLANS THE EXTRA WORK WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.

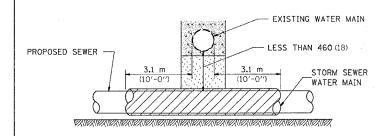
WHEN PROPOSED SEWER (OR WATER) IS LOCATED 3.1 m (10'-0'') OR MORE FROM EXISTING WATER (OR SEWER) NO SPECIAL CONSTRUCTION REQUIRED. WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 3.1 m (10'-0'') FROM EXISTING WATER (OR SEWER) DETAILS BELOW SHALL APPLY.



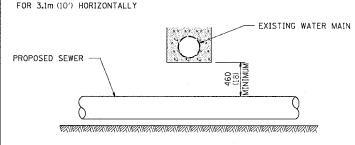
WATER AND SEWER HORIZONTAL SEPARATION REQUIREMENTS

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



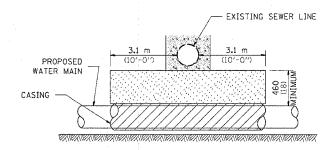
PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH MAINTAIN 460 (18) MINIMUM VERTICAL SEPARATION



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

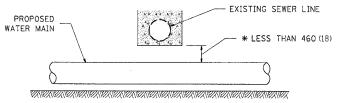
PROPOSED SEWER LINE BELOW EXISTING WATER MAIN PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT

PLACE TRENCH BACKFILL FOR 3.1 m (10') ON EITHER SIDE OF SEWER LINE



CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 50 (2) LARGER IN DIAMETER THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH MAINTAIN 460 (18) MINIMUM VERTICAL SEPARATION FOR 3.1 m (10') HORIZONTALLY

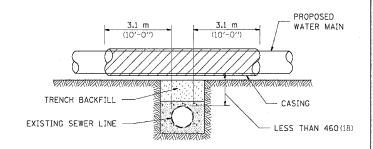


\* NOT ALLOWED
MUST MAINTAIN 460(18) VERTICAL SEPARATION

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE

POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN OR WATER MAIN CASING AND SEWER

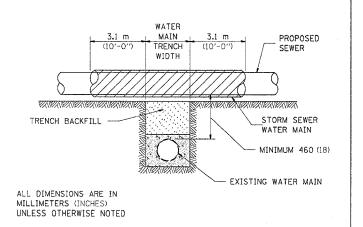


PLAN VIEW

CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 50 (2) LARGER IN DIAMETER THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE PROVIDE ADEQUATE SUPPORT FOR SEWER TO PREVENT SETTLING AND BREAKING THE WATER MAIN.



EXISTING WATER MAIN BELOW PROPOSED SEWER LINE WITH MINIMUM 460 (18) VERTICAL SEPARATION