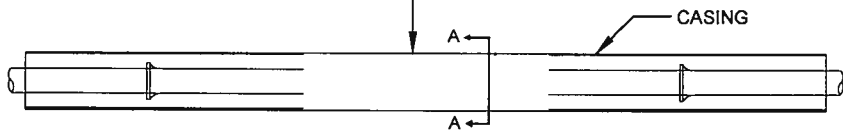
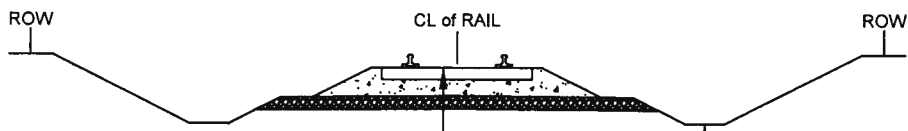


1.7m MIN TO BOTTOM OF RAIL  
OR BELOW FROST LINE



PLAN (THROUGH ROADWAY)

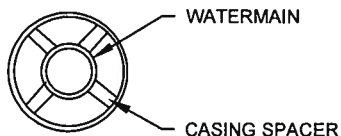


1.7m MIN TO BOTTOM OF RAIL  
OR BELOW FROST LINE

1.7m MIN OR BELOW  
FROST LINE



PLAN (OUTSIDE ROADWAY)



SECTION A-A

NOTES:

1. RAILWAY CROSSING DRAWINGS SHALL BE SUBMITTED TO DIRECTOR AND SHALL SHOW THE FOLLOWING INFORMATION:
  - DRAWINGS MUST BE TO SCALE AND HAVE ALL DIMENSIONS SHOWN
  - RAILWAY MILEAGE AND SUBDIVISION
  - INDICATED DIRECTION OF FLOW AND NEAREST SHUT-OFF VALVES
  - PROVIDE A PROFILE INDICATING DEPTH OF INSTALLATION
  - PROVIDE INFORMATION PER CHART BELOW
  - INCLUDE SECTION 'A-A', OR NOTE THAT CARRIER SHALL BE HELD CLEAR OF CASING BY PROPER SUPPORTS
  - NOTE WARNING MARKERS TO BE INSTALLED AT LIMITS OF RAIL ROW, AS APPLICABLE
  - NOTE PROPOSED METHOD OF INSTALLATION
  - NOTE LOCATION OF PROPOSED JACKING AND RECEIVING PITS RELATIVE TO GAUGE (INSIDE) SIDE OF NEAREST RAIL
  - INCLUDE THE CAPTION "CONSTRUCTION AND MAINTENANCE TO BE IN ACCORDANCE WITH THE CANADIAN TRANSPORTATION AGENCY GENERAL ORDER E-10"
2. ENSURE WALL THICKNESS OF CARRIER AND CASING PIPES CONFORM TO TRANSPORT CANADA REQUIREMENTS (COOPER E-90 LOADING).
3. NO EXTERNAL LOADS WILL BE TRANSMITTED TO THE CARRIER PIPE BY USE OF APPROVED PIPE LINE SPACERS.
4. DEPTH OF BURIAL FROM THE BASE OF RAIL TO BE A MINIMUM 1.70m OR BELOW THE FROST LINE.
5. CASING SHALL EXTEND THE FULL WIDTH OF THE RAILWAY ROW.
6. THE CASING SHALL BE INSTALLED SO AS TO PREVENT THE FORMATION OF A WATERWAY UNDER THE RAILWAY, WITH AN EVEN BEARING THROUGHOUT ITS LENGTH, AND SHALL SLOPE TO ONE END (EXCEPT FOR LONGITUDINAL OCCUPANCY).
7. THE CASING PIPE SHALL BE SO CONSTRUCTED AS TO PREVENT LEAKAGE OF ANY SUBSTANCE FROM THE CASING THROUGHOUT ITS LENGTH EXCEPT AT THE ENDS WHERE FREE FLOW MUST BE MAINTAINED.
8. GROUTING OF THE SPACE BETWEEN THE CARRIER AND CASING WILL NOT BE PERMITTED.
9. THE ENDS OF THE CASING PIPE SHALL NOT BE SEALED BY ANY LOAD TRANSFERRING MATERIAL.
10. SEE SPECIFICATION MATERIAL LIST FOR APPROVED LIST OF SPACERS AND END SEALS.
11. DESIGN SHOP DRAWING REQUIRED SEALED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO.
12. SITE SPECIFIC SHOP DRAWINGS REQUIRED AS PER CURRENT OCCUPATIONAL HEALTH AND SAFETY.

CASING PIPE SPECIFICATION

OUTSIDE DIA.: \_\_\_\_\_  
 INSIDE DIA.: \_\_\_\_\_  
 WALL THICKNESS: \_\_\_\_\_  
 PIPE SPECIFICATION: \_\_\_\_\_  
 LENGTH: \_\_\_\_\_  
 MATERIAL: \_\_\_\_\_  
 CATHODIC PROTECTION: \_\_\_\_\_

CARRIER PIPE SPECIFICATION

INSIDE DIA.: \_\_\_\_\_  
 WALL THICKNESS: \_\_\_\_\_  
 PIPE SPECIFICATION: \_\_\_\_\_  
 MATERIAL: \_\_\_\_\_  
 OPER./MAX. PRESSURE \_\_\_\_\_  
 CATHODIC PROTECTION: \_\_\_\_\_



WATERMAIN CROSSING DETAIL -  
RAIL

REV No. \_\_\_\_\_

1

DATE: FEB 2015

SCALE: N.T.S.

BSD-521

(PREVIOUSLY BSD-52)

APPROVED

DATE: 6 Feb 2015

*J.M. White*  
DIRECTOR OF ENGINEERING