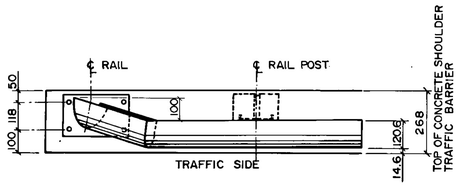
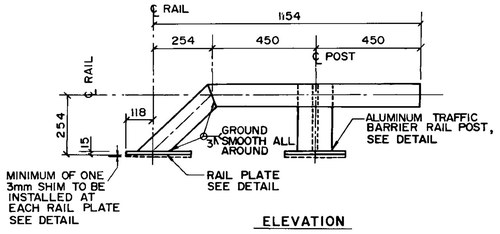
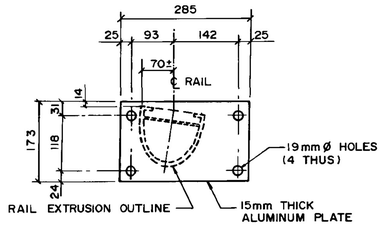
WO 101-84



PLAN



ELEVATION



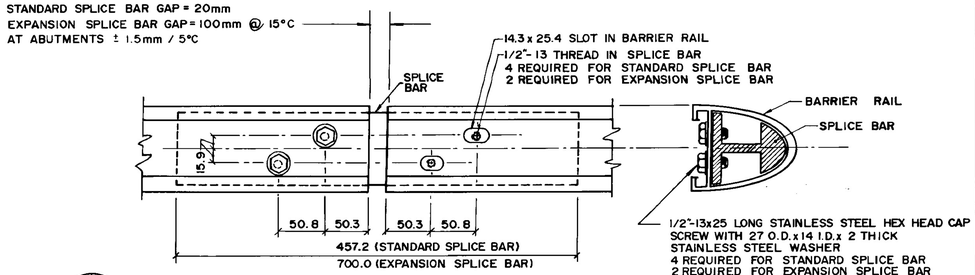
1 RAIL END SECTION DETAIL

4 REQUIRED - 2 LEFT HAND (AS SHOWN)
- 2 RIGHT HAND

1:10

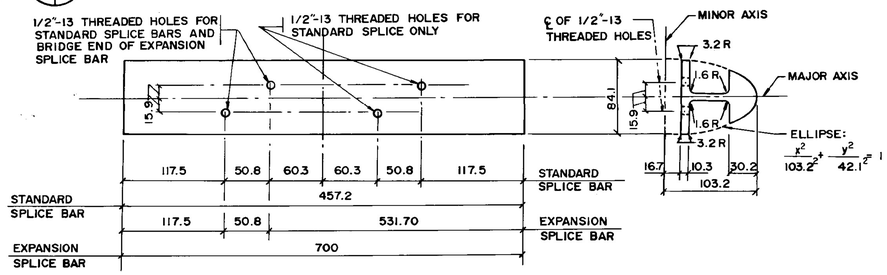
2 RAIL END PLATE DETAIL

1:5



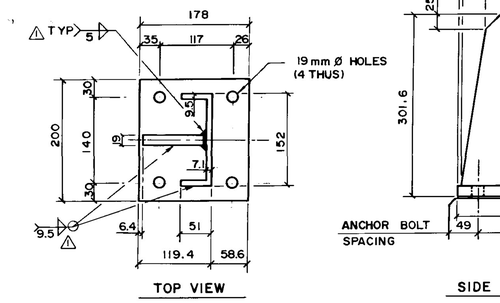
7 SPLICE BAR TO RAIL ASSEMBLY DETAIL

N.T.S.

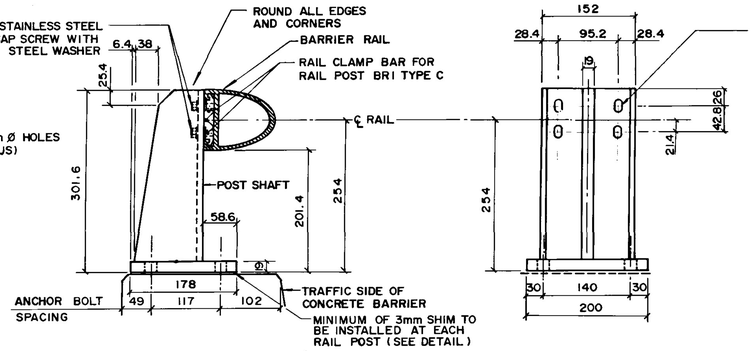


8 DETAIL OF SPLICE BARS

N.T.S.



TOP VIEW



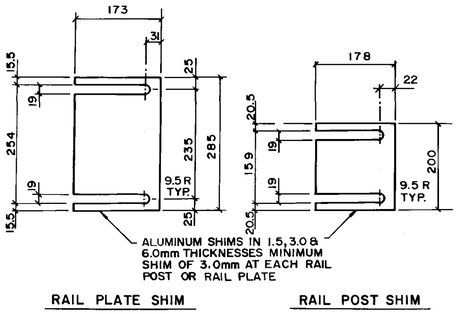
SIDE VIEW

REAR VIEW

3 WELDED ALUMINUM TRAFFIC BARRIER BRI RAIL POST DETAIL ⚠

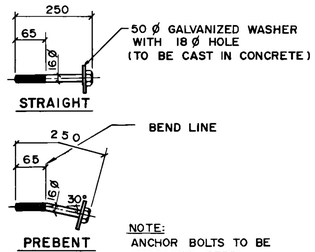
ALSO SHOWING RAIL TO POST ASSEMBLY DETAIL

1:5



RAIL PLATE SHIM

RAIL POST SHIM



NOTE: ANCHOR BOLTS TO BE STAINLESS STEEL.

CONCRETE TRAFFIC BARRIER ALUMINUM RAIL BILL OF MATERIALS	
ITEM	NO. REQUIRED
BRIDGE RAIL POST BRI TYPE 'C'	44
11430 RAIL	8
4700 RAIL	4
3783 RAIL	2
3483 RAIL	2
RAIL END SECTIONS	4 (2L, 2R)
457.2 STD. SPLICE BAR	14
700 EXPANSION SPLICE BAR	4
146 RAIL CLAMP BAR	88
CAP SCREWS	240
WASHERS	240
SHIMS	AS REQUIRED

NOTE : QUANTITIES SHOWN ARE TOTAL FOR BOTH SHOULDER BARRIERS.

4 SHIM DETAILS

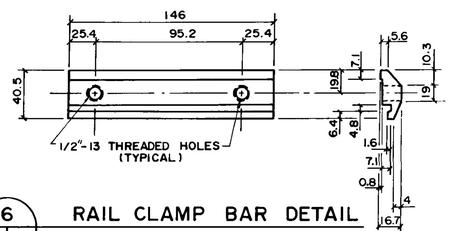
1:5

5 ANCHOR BOLTS DETAILS

14A | 18

FOR RAIL POSTS AND RAIL END PLATES

N.T.S.



6 RAIL CLAMP BAR DETAIL

N.T.S

9 BARRIER RAIL DETAIL

N.T.S.

NOTES:

1. The 19mm DIA. holes (4) in the base of the barrier rail posts and rail plates are designed to accommodate 16mm DIA. rail post anchor bolts as detailed. Supply with each anchor bolt: one stainless steel plain washer, one stainless steel lock washer, one stainless steel lock washer, one stainless hex nut, and one 50 mm galvanized plate washer.
2. A combination of 1.5, 3.0, and/or 6.0mm thick aluminum rail post or plate shims are to be used as required to set the barrier rail to the specified height. (Minimum 3.0mm shim required at each post or plate).
3. Remove all burrs and sharp edges in the shop. After the installation of the barrier has been completed, the top edges and corners of the barrier rail posts shall be rounded smooth to the satisfaction of the engineer.
4. ⊕ Denotes dimension at installation temperature of 15C see splice bar to rail assembly detail for dimension variation with temperature.
5. Bottom surface of shim (surface in contact with concrete) is to be painted with 2 coats of alkali resistant bituminous paint, each coat being 1mm in thickness.

SPECIFICATIONS:

1. Extruded aluminum shapes and plates shall conform to the requirements of A.S.T.M. B221, alloy 6061-T6 or alloy 6351-T5 (minimum elongation 10%).
2. The stainless steel hex head and socket head cap screws shall meet the requirements of A.S.T.M. A276, type 430, and the dimensional requirements of A.N.S.I. B18.3.
3. Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including it s appearance, and accepted manufacturing practices.
4. The post shaft shall be made from a single channel-shape extrusion welded to a plate shape. The post base and shaft shall then be welded together.
5. Welding shall conform to the requirements of CSA Standards S244-1969, Welded Aluminum Design and Workmanship and W47.2-1967, Aluminum Welding Qualification Code. Aluminum Filler Alloy shall be one of the following: ER4043, ER5183, ER5356, ER5554, ER5556 and ER5654.
6. The Contractor shall submit complete shop drawings consisting of three prints and one reproducible sepia to the Contract Administrator for approval prior to fabrication of aluminum traffic barrier components.
7. Anti-seize coating to be applied to all threaded components when being assembled. i.e. LPS-3- Manufactured by Holt-Lloyd (Canada) Ltd. Markham, Ont. L3R-2Z3.

B-5903-21

LOCATION APPROVED
UNDERGROUND STRUCTURES
N/A
SUPV. U/G STRUCTURES COMMITTEE — DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION

AS-BUILT
DATE 91.02.26 BY
CHECKED BY

B.M. ELEV.

NO	REVISIONS	DATE	BY
2	REVISED AS CONSTRUCTED	90-12-14	FPC
⚠	ADDENDUM	90-3-19	FPC

WARDROP ENGINEERING INC.

DESIGNED BY JC & FPC — CHECKED BY
DRAWN BY GI — APPROVED BY
HOR. SCALE AS NOTED
VERTICAL
DATE JAN. 15, 1990
AUTHORIZED BY W. NALEWAY-STREET & BRIDGES ENGINEER — DATE 90 12 23
ACCEPTED BY R.B. SMITH / BRIDGE ENGINEER — DATE 90.12.23

ENGINEER: PROVINCE OF MANITOBA C. D. STEWART 90/12/20 REGISTERED ENGINEER

CONSULTANT DRAWING NO. 890007-02-00

THE CITY OF WINNIPEG
WORKS AND OPERATIONS DIVISION
STREETS AND TRANSPORTATION DEPARTMENT

EMPRESS STREET OVERPASS
STRUCTURE REHABILITATION, STRENGTHENING AND RELATED WORKS

ALUMINUM TRAFFIC BARRIER RAIL STANDARD DETAILS

CITY DRAWING NUMBER B100-90-18 (RI)