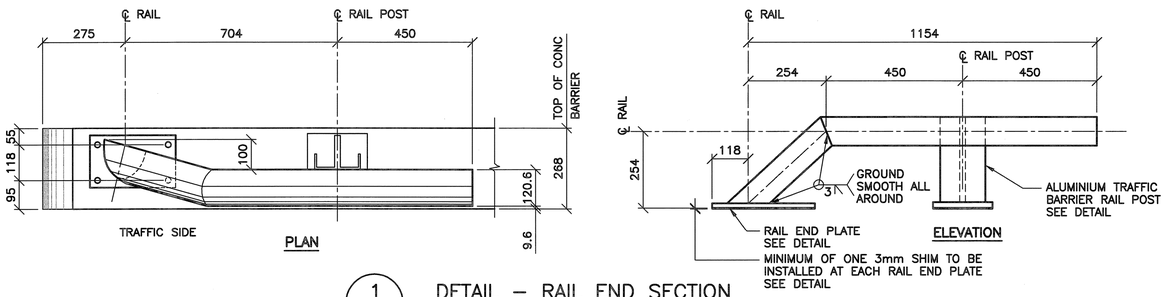
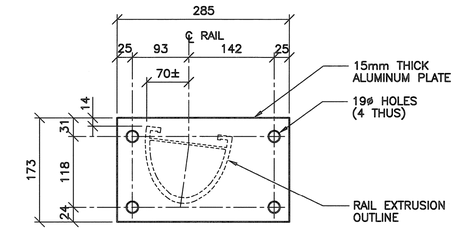


1 / – – DETAIL – RAIL END SECTION
1 : 10



6 / – – DETAIL – RAIL END PLATE
1 : 5

NOTES:

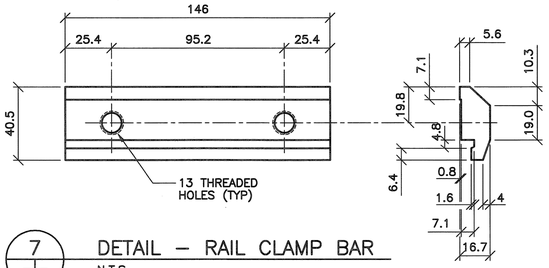
1. THE 19ø HOLES (4) IN THE BASE OF THE BARRIER RAIL POSTS AND RAIL PLATES ARE DESIGNED TO ACCOMMODATE 16ø RAIL POST ANCHOR BOLTS AS DETAILED. SUPPLY WITH EACH ANCHOR BOLT: ONE STAINLESS STEEL PLAIN WASHER, ONE STAINLESS STEEL LOCK WASHER, ONE STAINLESS HEX NUT AND ONE 50ø GALVANIZED PLATE WASHER.
2. 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. ALL EDGES AND CORNERS OF THE BARRIER POST PLATES AND EXTRUSIONS SHALL BE ROUNDED IN THE SHOP, TO A SMOOTH 2mm RADIUS TO THE SATISFACTION OF THE ENGINEER.
4. 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:

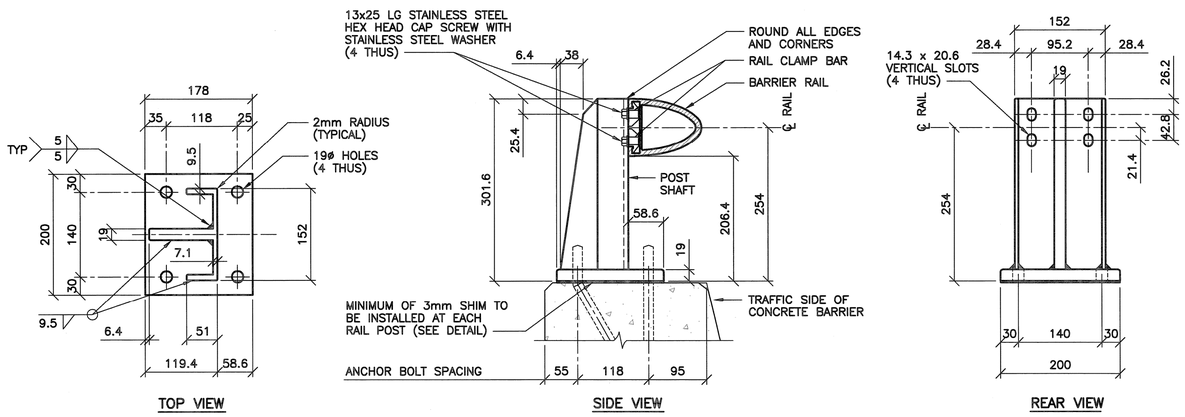
1. EXTRUDED ALUMINUM SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. B221, ALLOY 6061–T6 OR ALLOY 6351–T5 (MINIMUM ELONGATION 10%)
2. THE STAINLESS STEEL HEX. HEAD AND SOCKET HEAD CAP SCREWS SHALL MEET THE REQUIREMENTS OF A.S.T.M. A276 TYPE 430 AND THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.3.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS 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 S224–1969, WELDED ALUMINUM DESIGN AND WORKMANSHIP AND W47.2–1987, ALUMINUM WELDING QUALIFICATION CODE. ALUMINUM FILLER ALLOY SHALL BE ONE OF THE FOLLOWING: ER4043, ER5183, ER5356, ER5554, ER5556 AND ER5654.

DELETE NOTE 6 — 01

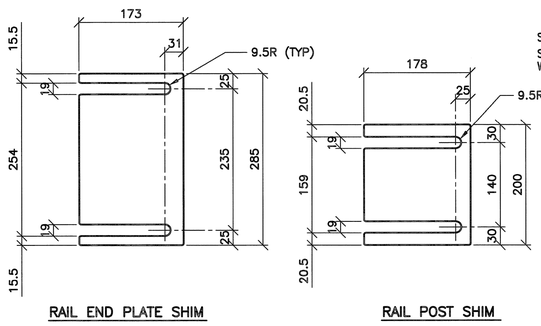
7. ANTI–SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED. i.e. LPS–3 MANUFACTURED BY HOLT–LLOYD (CANADA) LTD. MARKHAM, ONTARIO L3R 2Z3.

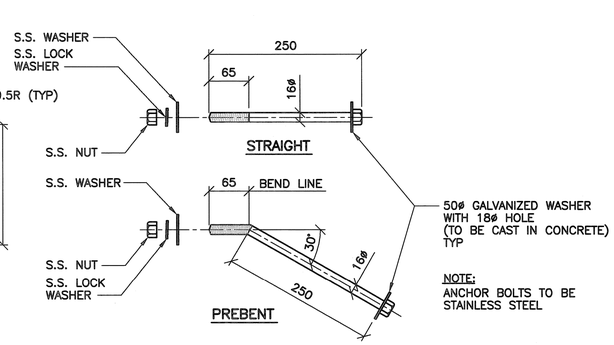


7 / – – DETAIL – RAIL CLAMP BAR
N.T.S.
– EXISTING CLAMP BAR TO BE USED (SHOWN FOR REFERENCE ONLY)



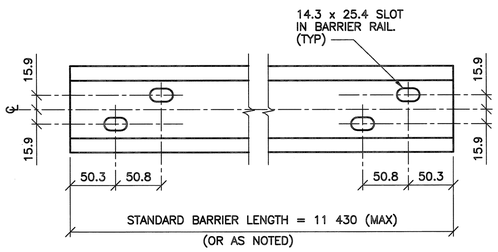
2 / – – DETAIL – BRIDGE RAIL POST BR1 TYPE "C" (WELDED ALUMINUM)
1 : 5
– ALSO SHOWING RAIL TO POST ASSEMBLY DETAIL

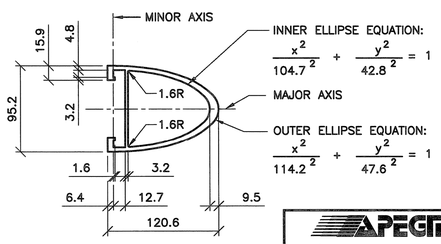




3 / – – DETAIL – ALUMINUM SHIM
1 : 5
– ALUMINUM SHIMS IN 1.5, 3.0 & 6.0mm THICKNESSES. MIN SHIM OF 3.0mm AT EACH RAIL POST OR RAIL END PLATE

4 / – – DETAIL – ANCHOR BOLT
1 : 5
– FOR RAIL POST AND RAIL END PLATES

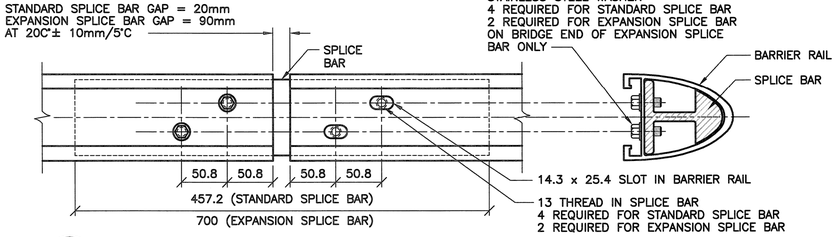




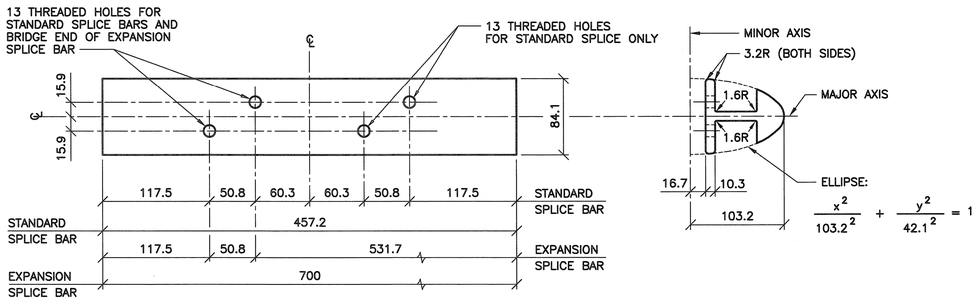
5 / – – DETAIL – BARRIER RAIL
N.T.S.

STANDARD SPLICE BAR GAP = 20mm
EXPANSION SPLICE BAR GAP = 90mm
AT 20C° ± 10mm/5°C

13x25 LG STAINLESS STEEL HEX HEAD CAP SCREW WITH 27 O.D. x 14 I.D. x 2 THICK STAINLESS STEEL WASHER
4 REQUIRED FOR STANDARD SPLICE BAR
2 REQUIRED FOR EXPANSION SPLICE BAR
ON BRIDGE END OF EXPANSION SPLICE BAR ONLY



8 / – – SPLICE BAR TO RAIL ASSEMBLY DETAIL
N.T.S.



9 / – – DETAIL – SPLICE BAR
N.T.S.

APEGM
Certificate of Authorization
Wardrop Engineering Inc.
No. 165 Date: April 30, 2008

NO.	REVISIONS	DATE	BY
01	ISSUED FOR ADDENDUM #2	08.03.05	
00	ISSUED FOR TENDER	08.02.05	E.F.S.

B.M. ELEV. F.B.

WARDROP | Engineering Inc.

DESIGNED BY E.F.S. | CHECKED BY
DRAWN BY P.S. | APPROVED BY
HOR. SCALE: AS NOTED | ACCEPTED BY DATE
VERTICAL:
DATE 08.02.05
RANDY FINGAS P.ENG BRIDGES PROJECTS ENGINEER

ORIGINAL DRAWING REVISION '00' SEALED BY E.F. SHEHATA 08.02.05

CONSULTANT DRAWING NO.
0600070700–DWG–S1134–00

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
TRANSPORTATION ENGINEERING DIVISION

FORT GARRY TWIN BRIDGES
WESTBOUND STRUCTURE REHABILITATION AND ASSOCIATED ROADWORKS

CITY DRAWING NUMBER B173–08–034W
SHEET 34 OF 54

ALUMINUM TRAFFIC BARRIER SECTIONS AND DETAILS

34