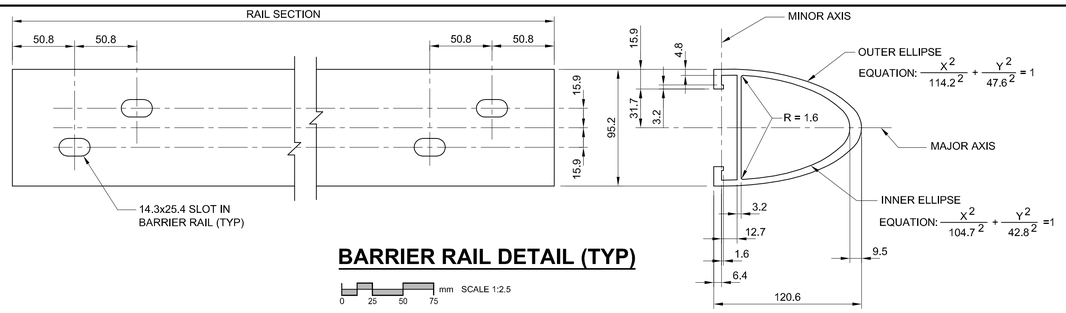
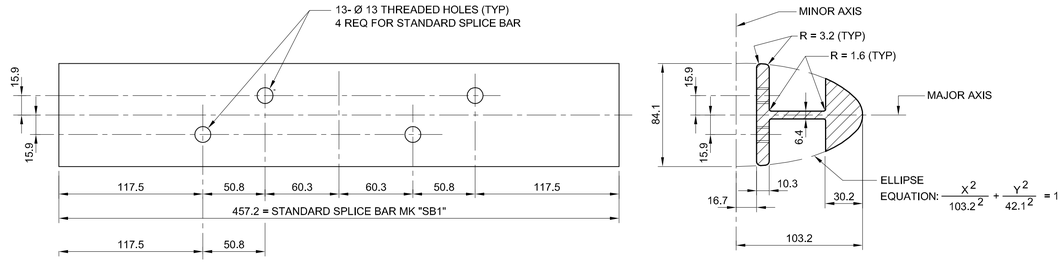


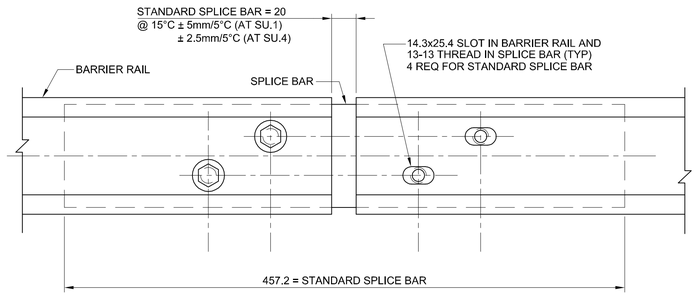
BARRIER RAIL DETAIL (TYP)

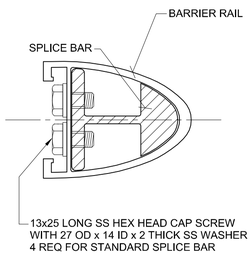
mm SCALE 1:2.5

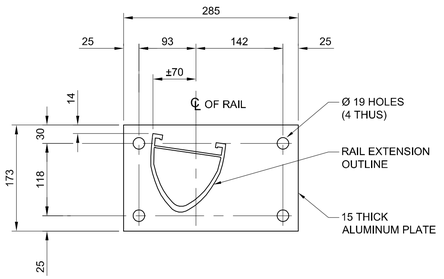


SPLICE BAR MK "SB1"

mm SCALE 1:2.5







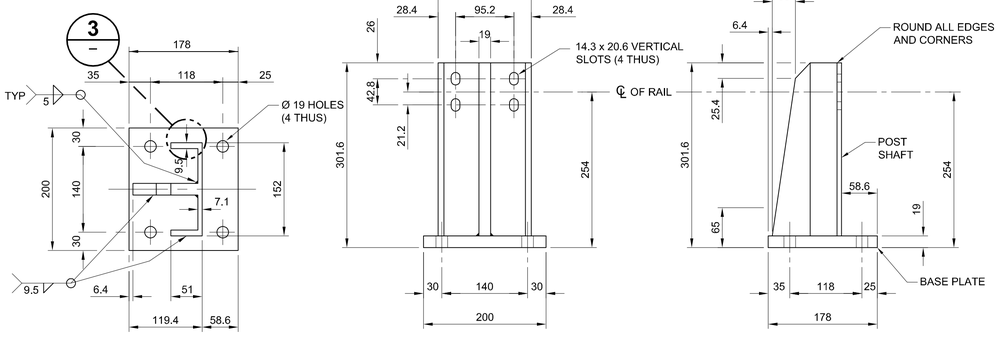
RAIL END PLATE PLATE DETAIL

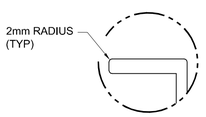
mm SCALE 1:5

FOR MK. "B9"

SPLICE BAR TO RAIL ASSEMBLY DETAIL

mm SCALE 1:2.5



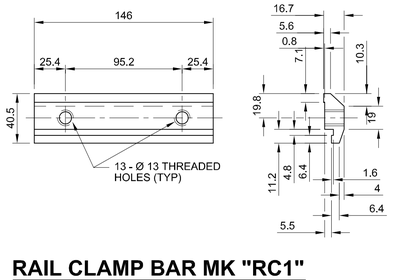


DETAIL 3 –

SCALE: N.T.S.

RAIL POST MK "RP1"

mm SCALE 1:5



RAIL CLAMP BAR MK "RC1"

mm SCALE 1:2.5

BILL OF MISCELLANEOUS ALUMINUM

FOR ALUMINUM TRAFFIC BARRIER RAILS ON NORTH & SOUTH BARRIERS

MARK	NORTH QTY	SOUTH QTY	DESCRIPTION	SIZE	COMPONENT MASS	TOTAL MASS
RP1	21	19	RAILPOST - ALUMINUM			167.43
			EACH UNIT TO BE FABRICATED FROM:			
			1 POST	282.6 LONG, AS DETAILED	2.620	
			1 BASE PLATE	PL 19 THICK, AS DETAILED	1.786	
				TOTAL	4.406	
X2	46	42	SS ANCHOR BOLT	16Ø x 250 LONG, C/W 50 OD PLATE WASHER, HEX NUT,	0.960	80.64
				PLAIN WASHER AND LOCK WASHER, AS DETAILED		
X3	46	42	SS ANCHOR BOLT	16Ø x 250 LONG, C/W 50 OD PLATE WASHER, HEX NUT,	0.960	80.64
				PLAIN WASHER AND LOCK WASHER, AS DETAILED		
W1	21	19	SHIM PLATE - ALUMINUM	PL 1.5 THICK, AS DETAILED	0.141	5.36
W2	21	19	'DO'	PL 3 THICK, 'DO'	0.282	10.72
W3	21	19	'DO'	PL 6 THICK, 'DO'	0.564	21.43
W4	2	2	'DO'	PL 1.5 THICK, 'DO'	0.195	0.78
W5	2	2	'DO'	PL 3 THICK, 'DO'	0.390	1.56
W6	2	2	'DO'	PL 6 THICK, 'DO'	0.781	3.12
BR1	5	4	RAIL - ALUMINUM	11430 LONG, AS DETAILED	60.101	540.91
BR2	1	0	'DO'	3930 LONG, 'DO'	20.665	20.67
BR3	1	0	'DO'	7810 LONG, 'DO'	41.066	41.07
BR4	0	1	'DO'	10230 LONG, 'DO'	53.790	53.79
BR5	0	1	'DO'	6580 LONG, 'DO'	34.599	35.60
BR14	1 RH & 1 LH	0	END RAIL - ALUMINUM			18.31
			EACH UNIT TO BE FABRICATED FROM:			
			1 RAIL - ALUMINUM	AS DETAILED	4.838	
			1 RAIL - ALUMINUM	AS DETAILED	2.367	
			1 BASE PLATE	PL 15 THICK, AS DETAILED	1.952	
				TOTAL	9.157	
BR15	0	1 RH & 1 LH	END RAIL - ALUMINUM			15.64
			EACH UNIT TO BE FABRICATED FROM:			
			1 RAIL - ALUMINUM	AS DETAILED	3.502	
			1 RAIL - ALUMINUM	AS DETAILED	2.367	
			1 BASE PLATE	PL 15 THICK, AS DETAILED	1.952	
				TOTAL	7.821	
RC1	42	38	RAIL CLAMP BAR - ALUMINUM	146 LONG, AS DETAILED	0.193	15.44
SB1	8	7	STANDARD SPLICE BAR - ALUMINUM	457.2 LONG, AS DETAILED	2.856	42.84
	84	76	SS HEX HEAD CAP SCREW	13Ø x 25 LONG, C/W SS WASHER	0.055	8.80
	32	28	SS HEX HEAD CAP SCREW	13Ø x 25 LONG, C/W SS 27 OD PLATE WASHER, AS DETAILED	0.041	2.46
					TOTAL MASS	1167.21 kg

NOTES

1. THE 19mm DIAMETER HOLES (4) IN THE BASE OF THE BARRIER RAIL POSTS AND RAIL PLATES ARE DESIGNED TO ACCOMMODATE 16mm DIAMETER RAIL POST ANCHOR BOLTS AS DETAILED.
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.
4. AFTER INSTALLATION OF THE BARRIER HAS BEEN COMPLETED, THE TOP EDGES AND CORNERS OF THE BARRIER RAIL POST SHALL BE ROUNDED SMOOTH TO A 2mm RADIUS TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
5. BOTTOM SURFACE OF SHIM (SURFACE IN CONTACT WITH CONCRETE) IS TO BE PAINTED WITH TWO COATS OF ALKALI RESISTANT BITUMINOUS PAINT, EACH COAT BEING 1mm IN THICKNESS.
6. EXTRUDED ALUMINUM SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T6. (MINIMUM ELONGATION 10%).
7. THE STAINLESS STEEL HEX HEAD AND SOCKET HEAD CAP SCREWS SHALL MEET THE REQUIREMENTS OF ASTM A276, TYPE 430, AND THE DIMENSIONAL REQUIREMENTS OF ANSI B18.3.
8. 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.
9. 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.
10. WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARDS S244-1969, WELDED ALUMINUM DESIGN AND WORKMANSHIP AND W47.2-1967, ALUMINUM WELDING QUALIFICATION CODES. ALUMINUM FILLER ALLOY SHALL BE ONE OF THE FOLLOWING: ER4043, ER5183, ER5356, ER5554, ER5556 AND ER5654.
11. 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.
12. ANTI-SEIZE COATING TO BE APPLIED TO ALL THREADED COMPONENTS WHEN BEING ASSEMBLED. I.E. LPS-3 - MANUFACTURED BY HOLT-LLOYD (CANADA) LTD. MARKHAM, ON. L3R 2Z3.
13. READ WITH DRAWING SHEET No. 13.

BID OPPORTUNITY NO. 133-2010

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

PEGM Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2010/03/24
Original dated on:

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR, 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.

BM 00-000
ELEV 200.000m

NO.	REVISIONS	YY/MM/DD	BY
0	ISSUED FOR CONSTRUCTION	10/03/24	CPK
B	ISSUED FOR 100% REVIEW	10/03/08	DJH
A	ISSUED FOR 30% REVIEW	10/01/28	DJH

DESIGNED BY	AP	CHECKED BY	SBB / CGC
DRAWN BY	DJH	APPROVED BY	
HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
VERT. SCALE	AS NOTED		
DATE	YY/MM/DD	DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA — ORIGINAL SIGNED — A. POCHANART — Member 30017 — MARCH 24/2010 — REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
0265-412-00_01-S-0564_RX.dwg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

JUBILEE AVENUE OVERPASS REHABILITATION

ALUMINUM TRAFFIC BARRIER RAIL DETAILS II

CITY DRAWING NUMBER	B124-10-14
SHEET	14 OF 51
DRAWING No.	14
REV	0