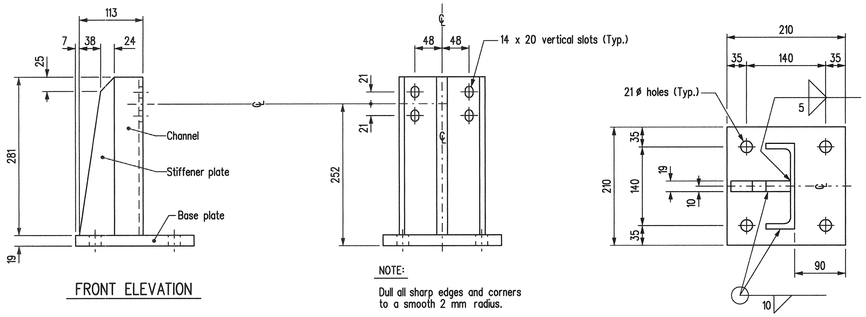


FRONT ELEVATION

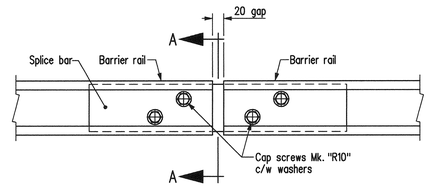
NOTE:
Dull all sharp edges and corners to a smooth 2 mm radius.

REAR ELEVATION

PLAN

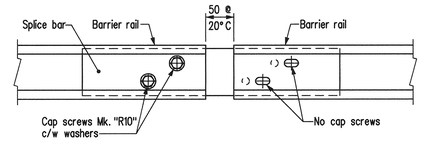
RAILPOST Mk. "P1"

Scale 1:5



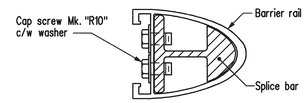
STANDARD RAIL SPLICE

Scale 1:5



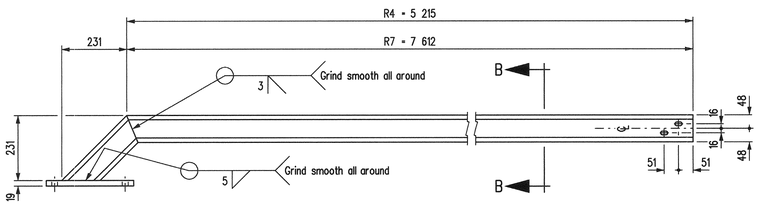
RAIL SPLICE AT EXPANSION GAP

Scale 1:5

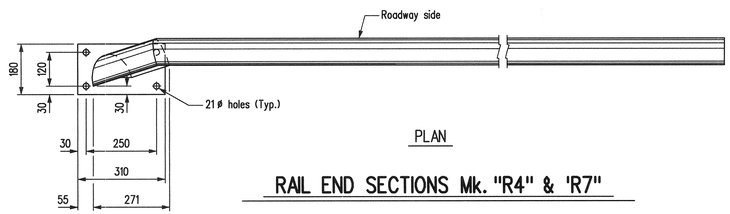


SECTION A-A

Scale 1:3

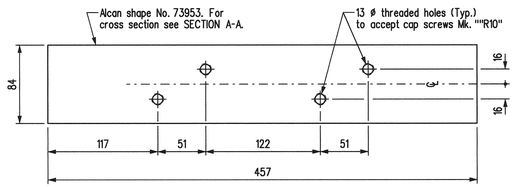


ELEVATION



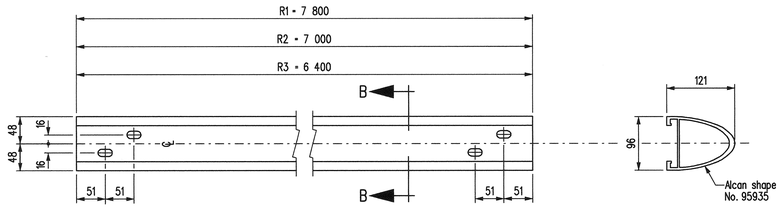
PLAN

RAIL END SECTIONS Mk. "R4" & 'R7"



SPLICE BAR

Scale 1:3

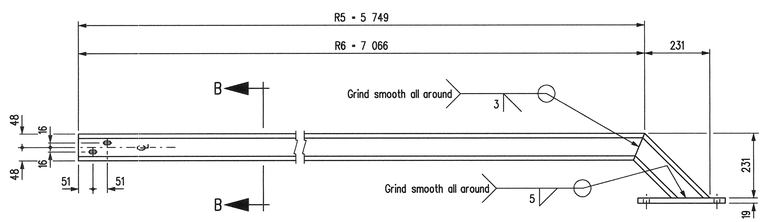


BARRIER RAILS Mk. "R1", "R2" & "R3"

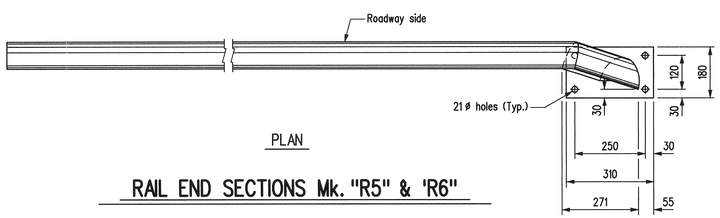
Scale 1:5

SECTION B-B

Scale 1:3

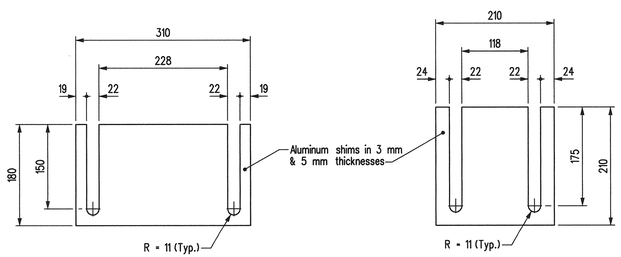


ELEVATION



PLAN

RAIL END SECTIONS Mk. "R5" & 'R6"

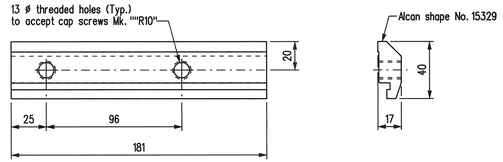


RAIL END PLATE SHIM

Scale 1:5

RAILPOST SHIM

Scale 1:5



RAIL CLAMP BAR

Scale 1:2

BILL OF MISCELLANEOUS ALUMINUM
FOR BARRIER RAIL

Site No. 2924-00

MARK	No.		SIZE	COMPONENT MASS	MASS PER UNIT	TOTAL MASS
P1	85	Railposts - Each unit to be fabricated from (as detailed)			5.011	425.94
		Channel	1 Alcan shape No. 23020, 281 long	1.478		
		Stiffener plate	1 aluminum plate 281 x 106, 19 thick	1.258		
		Base plate	1 aluminum plate 210 x 210, 19 thick	2.275		
				5.011		
R1	32	Barrier rail section	Alcan shape No. 95935, 7 800 long		42.175	1 349.60
R2	3	Barrier rail section	Alcan shape No. 95935, 7 000 long		37.849	113.55
R3	2	Barrier rail section	Alcan shape No. 95935, 6 400 long		34.605	69.21
R4	1	Rail end section (as detailed). Each unit to be fabricated from:			32.880	32.88
		Railing	1 Alcan shape No. 95935, 5 545 long	29.982		
		End plate	1 aluminum plate 310 x 180, 19 thick	2.898		
				32.880		
R5	1	Rail end section (as detailed). Each unit to be fabricated from:			35.773	35.77
		Railing	1 Alcan shape No. 95935, 6 080 long	32.875		
		End plate	1 aluminum plate 310 x 180, 19 thick	2.898		
				35.773		
R6	1	Rail end section (as detailed). Each unit to be fabricated from:			42.883	42.88
		Railing	1 Alcan shape No. 95935, 7 395 long	39.985		
		End plate	1 aluminum plate 310 x 180, 19 thick	2.898		
				42.883		
R7	1	Rail end section (as detailed). Each unit to be fabricated from:			45.830	45.83
		Railing	1 Alcan shape No. 95935, 7 940 long	42.932		
		End plate	1 aluminum plate 310 x 180, 19 thick	2.898		
				45.830		
	40	Standard splice bar	Alcan shape No. 73953, (as detailed)		2.954	118.16
	170	Rail clamp bar	Alcan shape No. 15329, (as detailed)		0.195	33.15
	85	Railpost shim	Plate 210 x 210, 3 thick (as detailed)		0.303	25.76
	85	Railpost shim	Plate 210 x 210, 5 thick (as detailed)		0.505	42.93
	4	Rail end plate shim	Plate 310 x 180, 3 thick (as detailed)		0.410	0.82
	4	Rail end plate shim	Plate 310 x 180, 5 thick (as detailed)		0.684	1.37
					Total mass -	2 337.85 kg

NOTES:

1. Aluminum extrusions shall conform to ASTM B221, Alloy 6061 - T6 or Alloy 6351 - T6 (minimum elongation 10%).
2. Aluminum plates shall conform to ASTM B221, Alloy 5083.
3. All stainless steel cap screws shall meet the ASTM A276, Type 304 requirements.
4. The M.I.G. welding process shall be used.
5. S/S denotes stainless steel.
6. Anti seize coating to be supplied by General Contractor & applied to all threaded components when being assembled, i.e. LPS-3 - manufactured by HOLT - Lloyd (Canada) Ltd. Markham, Ontario.
7. Round all sharp edges and corners on rails and railposts to a smooth 2 mm radius.

REVISIONS		
DATE	BY	DESCRIPTION

PROVINCE OF MANITOBA
March 15/10
S.S. RIHAL
REGISTERED PROFESSIONAL ENGINEER

ALUMINUM BARRIER RAIL DETAILS

RECONSTRUCTION AND STRENGTHENING OF EXISTING BRIDGE
OVER ASSINIBOINE RIVER - CONTRACT THREE
ON P.T.H. No. 100 IN R.L.'S 72, 73 & 94
PARISH OF ST. CHARLES

CITY OF WINNIPEG

Manitoba
Infrastructure and Transportation
Water Control & Structures

RELEASED FOR CONSTRUCTION BY:
March 15/10
DIRECTOR & DATE
STRUCTURES DESIGN AND CONSTRUCTION BRANCH

DESIGN	BY: M.B.C.	SCALE: 1:10 or As Shown
	CHECKED: S.S.R.	SHEET No. 111
DETAILS	BY: D.P.W.	
	CHECKED: S.S.R./J.J.	SITE No. 2924-00

...\292400_shoulder_barrier.dgn 2010-03-12 3:27:06 PM