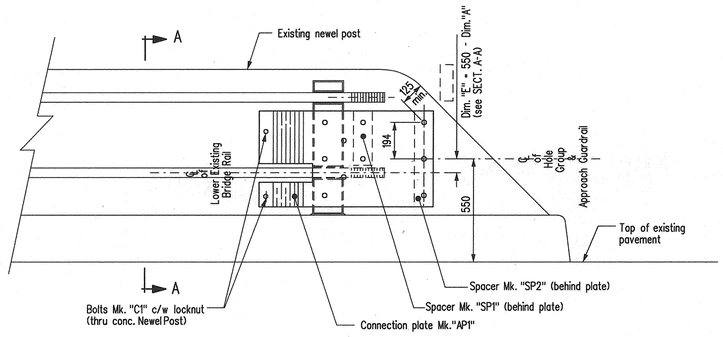
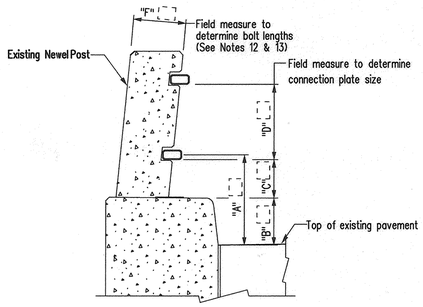


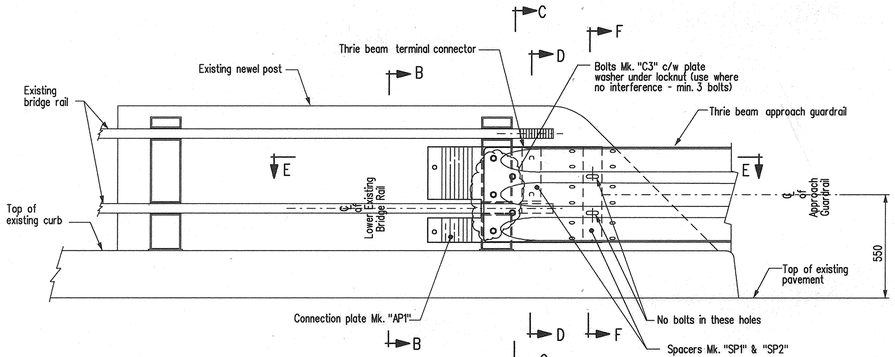
ELEVATION

Showing connection plate assembly

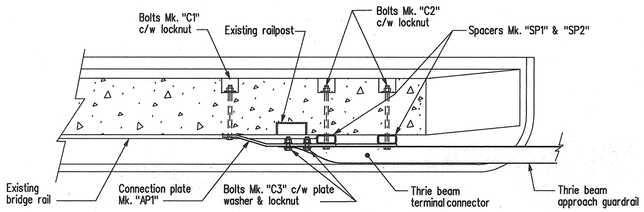


SECTION A-A

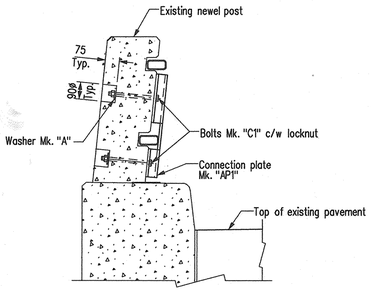
Field measurements



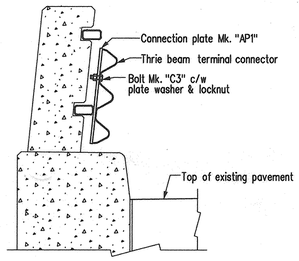
ELEVATION



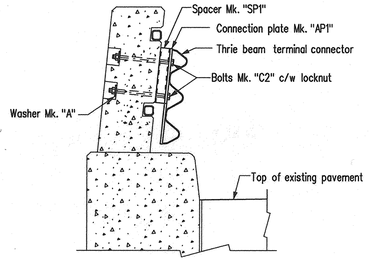
PART SECTION E - E



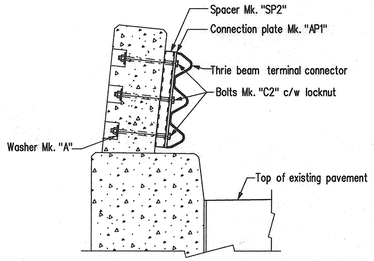
SECTION B-B



SECTION C-C



SECTION D-D

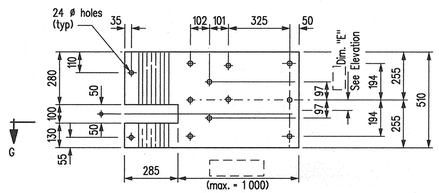


SECTION F-F

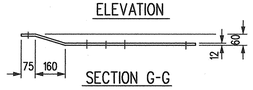
BILL OF MISCELLANEOUS METAL

Site No.

MARK	No.	DESCRIPTION	SIZE	MASS PER UNIT	TOTAL MASS
AP1		Connection plate	Plate, 12 thick As detailed		
AP2		Connection plate	Plate, 12 thick As detailed		
SP1		Spacer	HSS 101.6 x 50.8 x 4.78, 290 long As detailed	2.98	
SP2		Spacer	HSS 101.6 x 50.8 x 4.78, 500 long As detailed	5.15	
C1		Hex. Bolts	22 ø x 254 hex. bolt c/w all metal lock nut		N/A
C2		Hex. Bolts	22 ø x 312 hex. bolt c/w all metal lock nut		N/A
C3		Hex. Bolts	22 ø x 50 hex. bolt c/w all metal lock nut		N/A
A		Washer	Plate 6 thick, one per bolt Mk. C1 & C2	0.15	
			(see Detail below)		
		Plate washers	For 22 ø bolt Mk. C3, one per "C3"	0.05	
				Total mass	kg



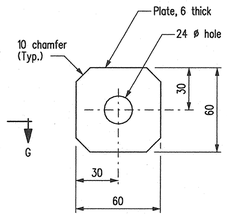
ELEVATION



SECTION G-G

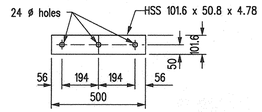
CONNECTION PLATE MK. "AP1"

Connection plate Mk. AP1 shown. AP2 opposite hand

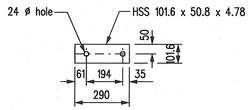


WASHER Mk. "A"

Not to Scale



SPACER Mk. "SP2"



SPACER Mk. "SP1"

NOTES:

1. The connection plate shall be used as a template to core holes through the newel post. Care shall be taken to ensure holes are cored accurately with minimal damage to newel post. Use of rotary hammer drills will not be allowed.
2. Holes for bolts Mk. "C1" & "C2" shall be cored through the newel post at 2 mm larger than the bolt diameter.
3. After erection has been completed, counterbored holes in the rear face of newel post shall be filled with a non-shrink non-metalic grout matched to the colour of the newel post concrete.
4. All steel plates shall conform to the requirements of CAN/CSA-40.21-M92 Grade 300W
5. All bolts shall conform to the requirements of ASTM A325 except where noted otherwise.
6. All material in the above Bill shall be galvanized after fabrication in accordance with CAN/CSA G164-M92
7. Welding shall meet the current requirements of the American Welding Society Structural Welding Code ANSI/AASHTO/AWS D.1.5.
8. Supply & installation of all required bolts & lock nuts considered incidental to connection plate.
9. Unit mass for connection plate = 7 850 kg/m³
10. Dimensions shown thus: [ ] to be filled in using field measurements.
11. Length of hex. bolts Mk. "C1" & "C2" to be filled in based on field measured thickness of newel post.
12. Attachment bolt Mk. "C1", length = "F" - 10
13. Attachment bolt Mk. "C2", length = "F" + 40

NOTE: Original drawing sealed by Al Nelson P.Eng., Dec. 24, 2002. It is filed in the Bridges and Structures Branch.

REVISIONS		
DATE	BY	DESCRIPTION

TSTB12

CONNECTION PLATE DETAILS

THRIE BEAM TO 2 RAIL NEWEL POST

Manitoba Transportation and Government Services

Bridges and Structures Branch

RELEASED FOR CONSTRUCTION BY:

Original signed by Ismail Elkoly Dec.24, 2002

DIRECTOR OF BRIDGES AND STRUCTURES — DATE

DESIGN	BY:	SCALE: 1:15	SHEET No. A-1
	CHECKED:		
DETAILS	BY: R.W.	or as shown	SITE No.
	CHECKED:		

\\app_connection\conv6.DGN 12/24/02 09:00:37 AM