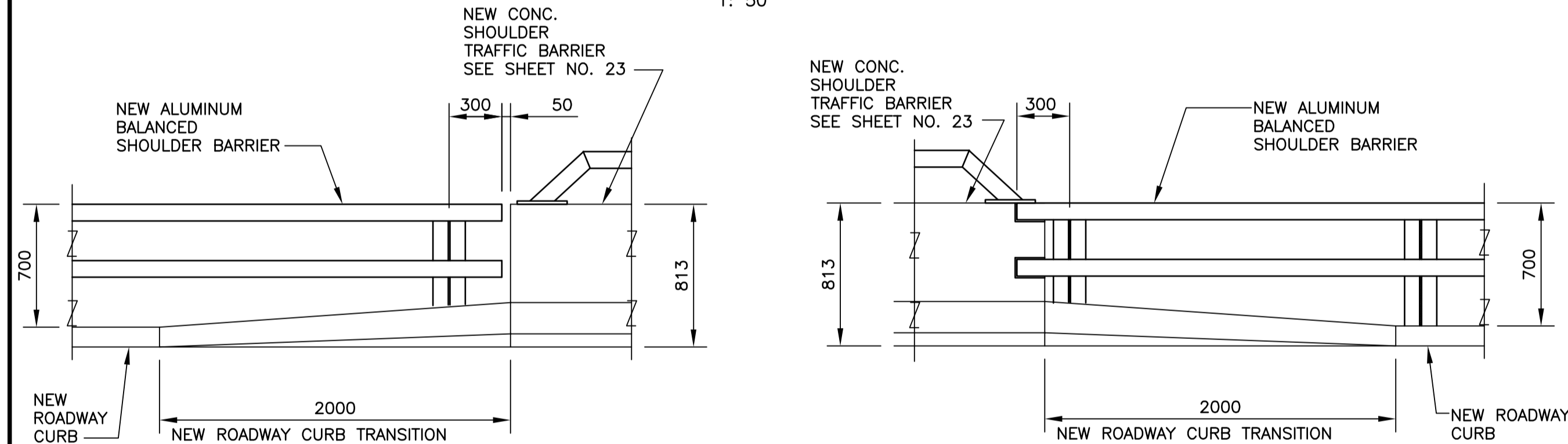


ALUMINUM BALANCED SHOULDER BARRIER LAYOUTS
1: 50

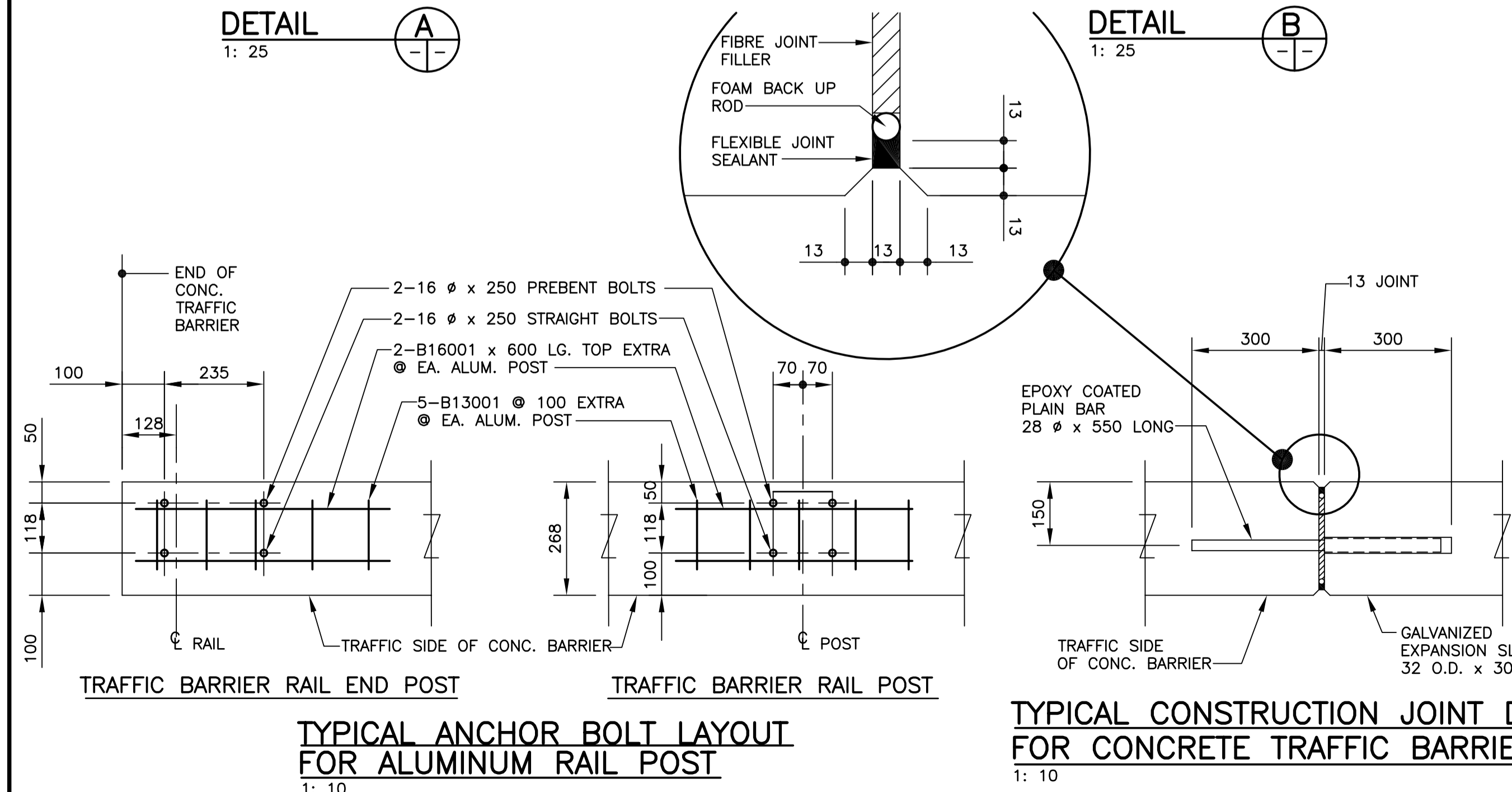


BILL OF MATERIAL
BALANCED ALUMINUM BARRIER

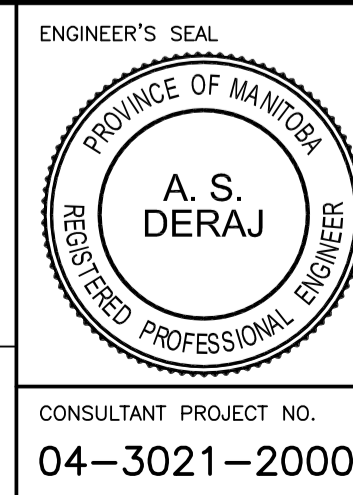
ITEM	NO. REQ'D.	FROM SALVAGE	CITY SUPPLIED	CONTRACTOR SUPPLIED	CONTRACTOR FABRICATED FROM CITY SUPPLIED COMPONENTS	CONTRACTOR FABRICATED FROM CONTRACTOR SUPPLIED COMPONENTS
13-13 x 25 mm LONG S/S HEX HEAD CAP SCREW	56					
27 O.D. 14 mm I.D. x 2 mm THICK S/S WASHER	56					
RAIL CLAMP BARS	28					
BARRIER POST 1600mm	7					
RAIL END CAPS	4					
BARRIER RAIL 8740	2					
*BARRIER RAIL 6900	1					
BARRIER RAIL 4900	1					
*BARRIER RAIL BASE PLATE	1					
*HILTI ANCHOR BOLTS C/W 1 NUT & 1 WASHER EA. BOLT	4					

BILL OF MATERIAL
ALUMINUM TRAFFIC BARRIER RAIL

ITEM	NO. REQ'D.	FROM SALVAGE	CITY SUPPLIED	CONTRACTOR SUPPLIED	CONTRACTOR FABRICATED FROM CITY SUPPLIED COMPONENTS	CONTRACTOR FABRICATED FROM CONTRACTOR SUPPLIED COMPONENTS
FOR CONCRETE MEDIAN TRAFFIC BARRIER						
TRAFFIC BARRIER RAIL POST (BR1)	44	42				
11430 RAIL	13	13				
7824 RAIL	1	1				
7380 RAIL	1	-				
457.2 STD. SPLICE BAR	13	13				
700 EXPANSION SPLICE BAR	2	2				
146 RAIL CLAMP BAR	88	84				
CAP SCREWS	232	220				
WASHERS	232	220				
SHIMS	AS REQ'D.					
FOR CONCRETE SHOULDER TRAFFIC BARRIER						
TRAFFIC BARRIER RAIL POST (BR1)	47					
11430 RAIL	13					
3620 RAIL	1					
4176 RAIL	1					
7455 RAIL	2					
2736 RAIL	1					
2450 RAIL	1					
RAIL END SECTIONS	2					
457.2 STD. SPLICE BAR	17					
700 EXPANSION SPLICE BAR	2					
146 RAIL CLAMP BAR	94					
CAP SCREWS	260					
WASHERS	260					
SHIMS	AS REQ'D.					



B.M. ELEV.	DESIGNED BY	A.S.D.
	DRAWN BY	N.B.G. / K.C.
	CHECKED BY	R.A.W.
	APPROVED BY	
2 ISSUED FOR TENDER	01/31/05	NBG
1 ISSUED FOR CITY REVIEW	12/17/04	RAW
NO. REVISIONS	DATE	BY
	HOR. SCALE	AS NOTED
	VERTICAL	
	DATE	DEC. 2004
	RELEASED FOR CONSTRUCTION	
	DATE	



ENGINEER'S SEAL

PROVINCE OF MANITOBA

A.S. DERAJ

REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

Winnipeg

MARYLAND TWIN BRIDGES
REHABILITATION PROJECT
WEST BRIDGE REHABILITATION

BALANCED SHOULDER BARRIER
LAYOUT & DETAILS
MISCELLANEOUS DETAILS

CITY DRAWING NUMBER
B108-05-24
SHEET 24 OF 33

CONSULTANT PROJECT NO.
04-3021-2000