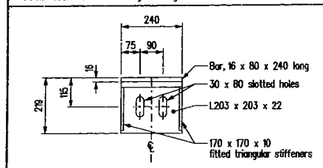
BILL OF MISCELLANEOUS METAL

Site No. 693-01

MARK	No.	DESCRIPTION	LOCATION	COMPONENT MASS	TOTAL MASS
R1	16	Retaining angles - L203 x 203 x 22, galvanized (as detailed)	SU.1, 2 & 4	28.69	459.04
S1	16	Steel plates - PL180 x 90 x 16 thick, galvanized (as detailed)	SU.1, 2 & 4	2.03	32.48
S3	4	Steel plates - PL12 thick, galvanized (as detailed)	SU.1	9.87	39.48
S4	8	Steel plates - PL12 thick, galvanized (as detailed)	SU.1	5.97	47.76
S5	12	Steel plates - PL12 thick, galvanized (as detailed)	SU.2 & 4	9.39	112.68
S6	24	Steel plates - PL12 thick, galvanized (as detailed)	SU.2 & 4	5.73	137.52
X3	32	Anchor rods, 25 ø x 700 long c/w hex. nut, plate & lock washers, galvanized, Grade 300 (as detailed)	SU.1, 2 & 4	3.02	96.64
X4	24	Anchor bolts, 38 ø x 620 long c/w hex. nut, plate & lock washers, galvanized, ASTM A193 Grade B7 (as detailed)	SU.3	7.04	168.96
	64	HILTI 13 ø HDI drop-in Anchors c/w hex. head, machine bolt 13 ø x 30 long, plate & lock washers, no nut, galvanized	SU.1, 2 & 4	———	———
F1	12	Top plate for fixed bearing - galvanized	SU.3	62.44	749.28

NOTE: Seal all welds before galvanizing.

Total mass (kg) = 1 956.64



PLAN

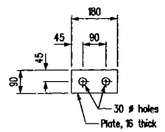
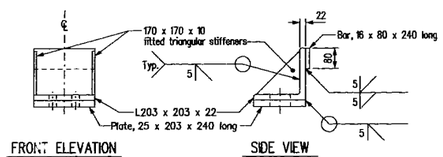


PLATE Mk. "S1"



RETAINING ANGLE Mk. "R1"

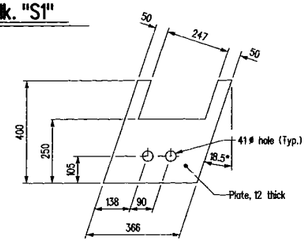
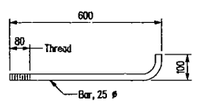


PLATE Mk. "S3"



ANCHOR ROD Mk. "X3"

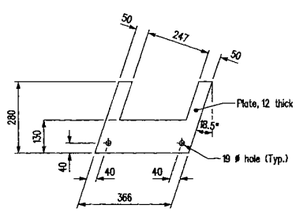


PLATE Mk. "S4"

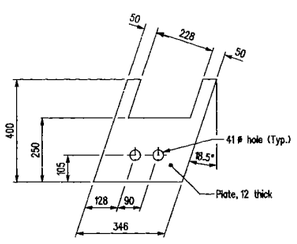
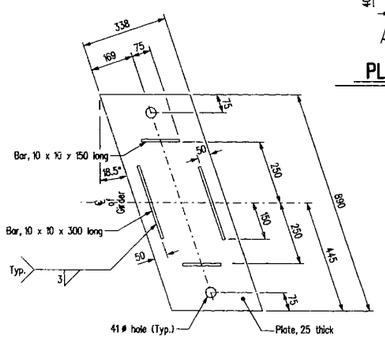


PLATE Mk. "S5"



TOP PLATE Mk. "F1"

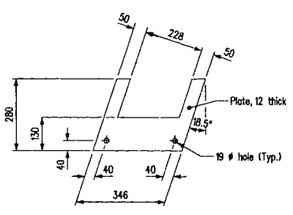


PLATE Mk. "S6"

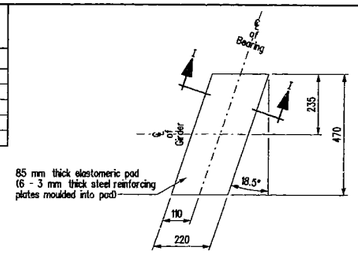
BILL OF BEARINGS

Site No. 693-01

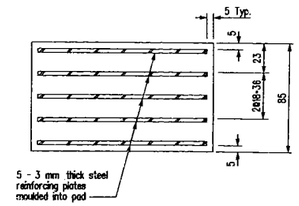
MARK	No.	DESCRIPTION	REMARKS
B1	12	Fixed bearing unit	As detailed
B2	6	Expansion bearing unit	As detailed
B3	18	Expansion bearing unit	As detailed

NOTES:

1. Top plate shall be CAN/CSA G40.21 Grade 300W.
2. Stainless steel mating surface shall conform to ASTM Standard A 240-00 and shall have a minimum thickness of 3 mm. The roughness of the contact surface, measured in accordance with CSA Standard B95, shall not be greater than 0.25 µm arithmetic average for plane surfaces and 0.50 µm arithmetic average for curved surfaces.
3. The stainless plate shall remain flat and in full contact with its backing plate at all times.
4. All exposed surfaces of the steel plate shall be zinc metallized. Surfaces to be metallized shall be blast cleaned in accordance with SSPC-SP5, "White Metal Blast Cleaning."
5. PTFE surface shall be unfilled flat sheets made from pure virgin PTFE resin satisfying the requirements of ASTM D1457.
6. Elastomer shall be neoprene or natural rubber. Elastomer shall be AASHTO low temperature Grade 4 or 5 with a minimum shear modulus G > 1.1 MPA and a 60 durometer Shore A hardness.
7. Internal steel reinforcing plates for laminated bearings shall be rolled mild steel with a minimum yield strength of 248 MPa as approved by the Engineer.

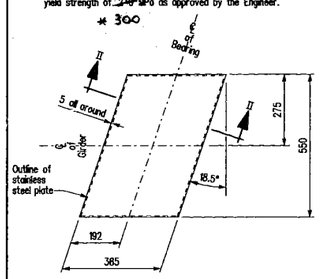


PLAN

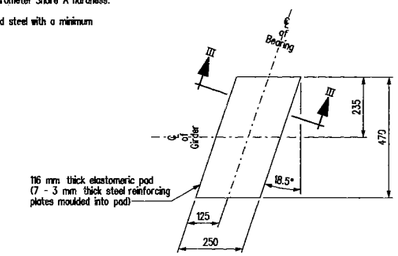


SECTION I-I
Scale 1:2

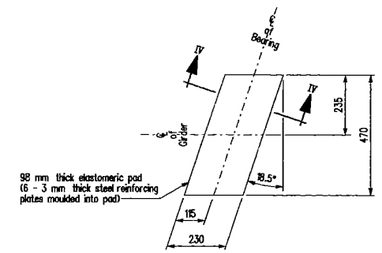
FIXED BEARING UNIT Mk. "B1"



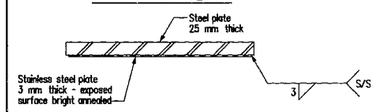
PLAN OF TOP PLATE



PLAN OF EXPANSION BEARING
Mk. "B2" BOTTOM PAD

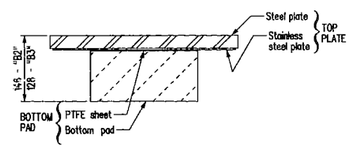


PLAN OF EXPANSION BEARING
Mk. "B3" BOTTOM PAD

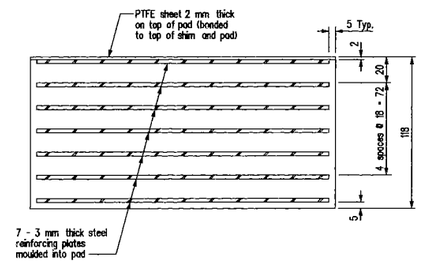


SECTION II-II
Scale 1:5

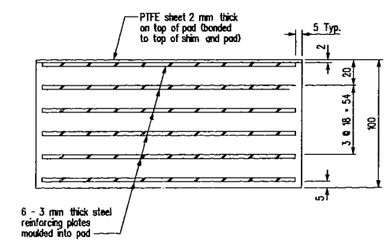
TOP PLATE DETAILS
Typical for expansion bearings Mk. "B2" & "B3"



EXPANSION BEARING ASSEMBLY DETAILS
Scale 1:5



SECTION III-III
Scale 1:2



SECTION IV-IV
Scale 1:2

EXPANSION BEARING UNITS Mk. "B2" & "B3"

DATE	BY	DESCRIPTION
OCT 31/07	R.A	AS BUILT
* Oct. 18/05	A.H.P.	Yield strength for bearing internal steel reinforcing plates changed to 300 MPa.

REVISIONS

PROVINCE OF MANITOBA — A. H. PANKRATZ — OCT 18, 2005 — REGISTERED PROFESSIONAL ENGINEER

BEARING DETAILS

FOR PROPOSED 69 714 LONG R.C. BRIDGE
OVER SEINE RIVER DIVERSION
ON P.T.H. No. 59 SOUTH BOUND LANES, 10 900 ROADWAY
IN SEC. 28-8-4E

R.M. OF RITCHOT

Manitoba Transportation and Government Services
Bridges and Structures Branch

RELEASED FOR CONSTRUCTION
BY:
DIRECTOR OF BRIDGES AND STRUCTURES — DATE

DESIGN	BY: A.H.P.	
	CHECKED: J.B.I.	
DETAILS	BY: D.P.W.	
	CHECKED: A.H.P.	

SCALE: 1:10 or As Shown
SHEET No. 32
SITE No. 693-02

.693X32\693X2bearings.dgn 10/12/2005 9:19:18 AM