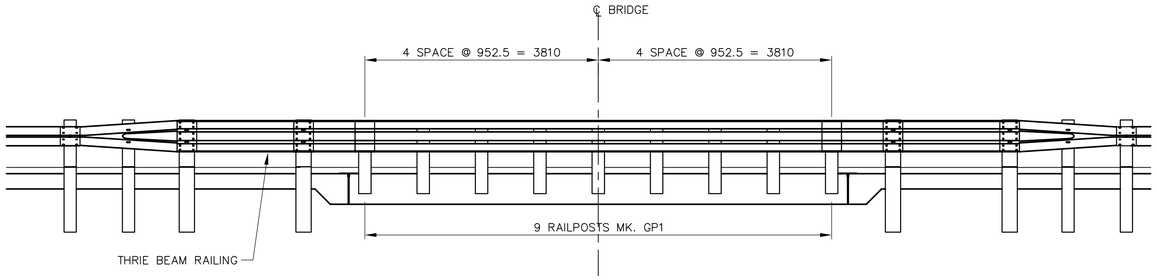
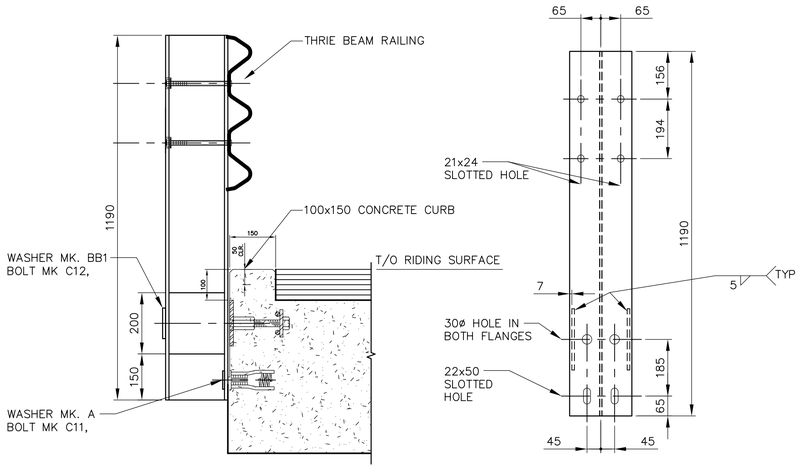
SHEET: COW-A1 (05/2005)



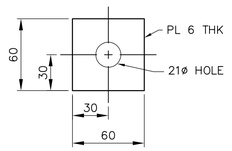
BRIDGE GUARDRAIL LAYOUT
SCALE 1:50

BILL OF MISCELLANEOUS METAL FOR BRIDGE RAILING			
MK.	NO.	DESCRIPTION	SIZE
GP1	18	RAILPOST – GALVANIZED	W200x46, 1190 LONG AS DETAILED
A	18	WASHER – GALVANIZED	AS DETAILED
BB1	18	WASHER – GALVANIZED	AS DETAILED
U1	18	RAILPOST ANCHOR UNIT–COMPLETELY GALVANIZED	
		EACH UNIT TO BE FABRICATED FROM:	
		PLATE	1–PL150x250x12
		HEX. COUPLING UNIT	2–22ø x63.5mm LG. BOLT
E1	18	ANCHOR PLATE–COMPLETELY GALVANIZED	
		EACH UNIT TO BE FABRICATED FROM:	
		PLATE	1–PL. 10x90x150 LG. AS DETAILED
		BARS	2–15Mx900 LG. DEFORMED BARS
C11	36	HEAVY HEX. BOLT (A325)	19ø x55 LG. NO NUT, GALVANIZED
C12	36	HEAVY HEX. BOLT (A325)	22ø x215 LG. NO NUT, GALVANIZED
R22	36	HEAVY HEX. BOLT (A325)	22ø x125 LG. NO NUT, GALVANIZED
	36	LOCK WASHERS	ONE REQ'D PER C12, GALVANIZED
	36	LOCK WASHERS	ONE REQ'D PER C11, GALVANIZED

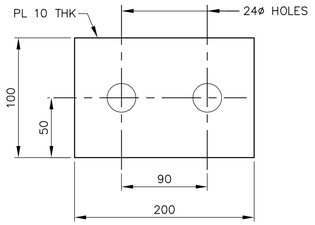
BILL OF REINFORCING STEEL			
MK.	NO.	LENGTH	MASS (kg)
D1001	4	4500	18
D1002	64	350	14
TOTAL MASS OF REINFOCING STEEL			32 kg



RAIL POST MK. GP1
SCALE 1:10

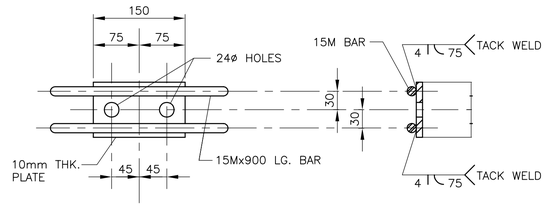


WASHER MK A

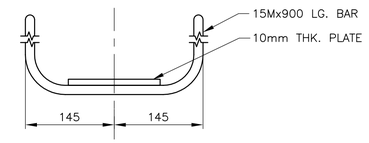


WASHER MK BB1
SCALE 1:5

SUPPLY AND INSTALLATION BRIDGE RAIL ANCHORS ONLY IN THIS CONTRACT. CONTRACTOR NOT RESPONSIBLE FOR SUPPLY AND INSTALLATION OF BRIDGE POSTS AND RAILINGS

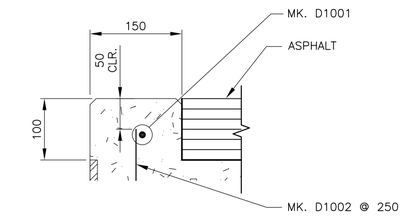


ELEVATION SIDE VIEW

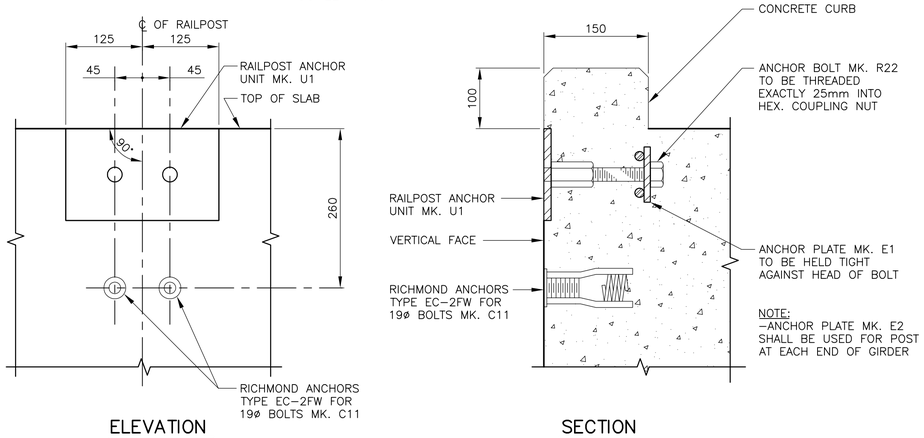


PLAN

ANCHOR PLATE MK. E1–GALVANIZED
SCALE 1:5

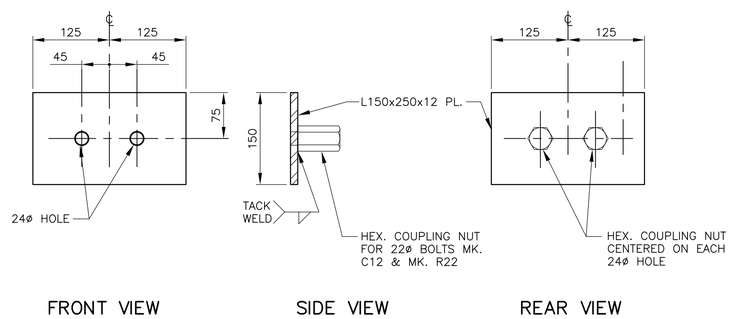


CURB REINFORCING STEEL
SCALE 1:5



ELEVATION SECTION

A – GUARD POST INSERT DETAILS
SCALE 1:5



FRONT VIEW SIDE VIEW REAR VIEW

RAILPOST ANCHOR UNIT MK. U1–GALVANIZED
SCALE 1:5

Certificate of Authorization
Earth Tech Canada Inc.
No. 730 Expiry: April 30, 2006

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	06/02/03	KC

B.M.
ELEV.

CH2MHILL
Fredericksen Cooper ARCHITECTS
EarthTech A Tyco International Ltd. Company

DESIGNED BY	AP	CHECKED BY	EBL
DRAWN BY	KC	APPROVED BY	D.J. TANIGUCHI
SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
		DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED BY
E.B. LOEWEN
Member 8325
06/02/06
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
WN–S0484

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
AQUEDUCT BRIDGES
FOUNDATIONS & CONCRETE STRUCTURES

STRUCTURAL
MIDDLE BRIDGE
APPROACH SLAB DETAILS

CITY FILE NUMBER

SHEET 6 OF 7

CITY DRAWING NUMBER
1-060IN-A-S0484-001-00D

Last Save: 2006–02–07 1:23 PM

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