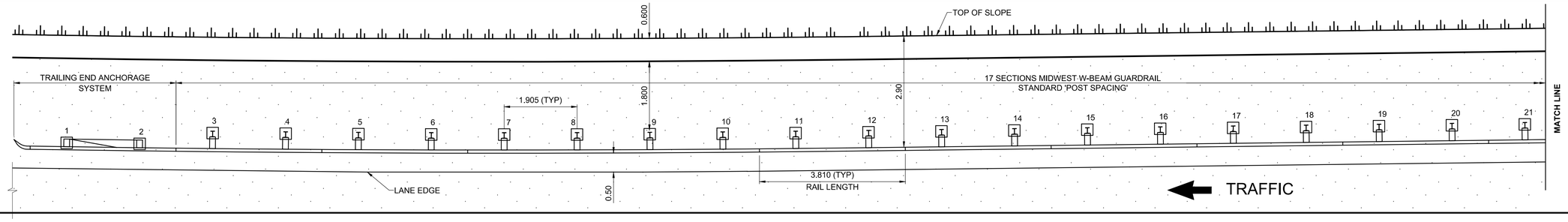
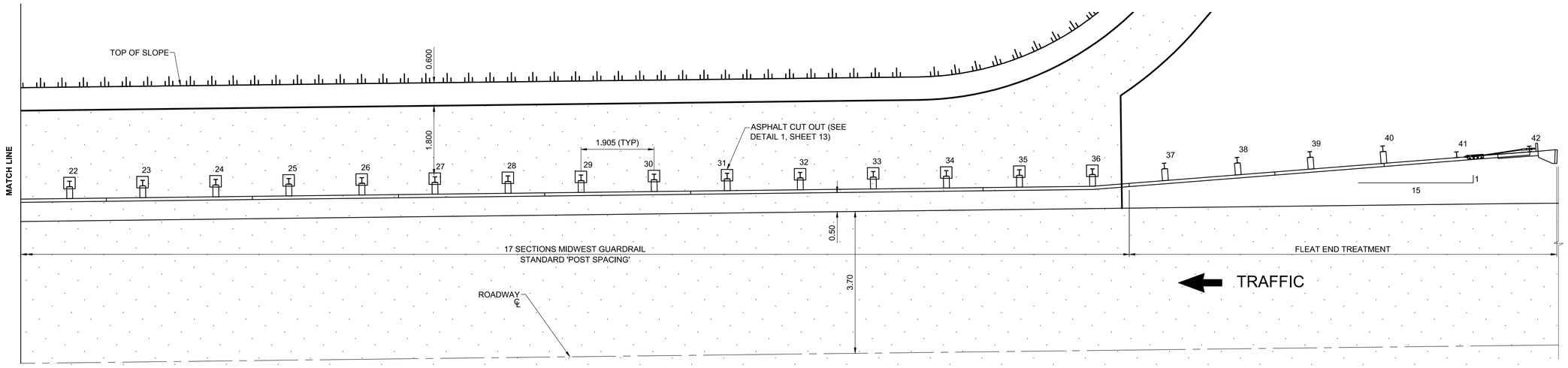




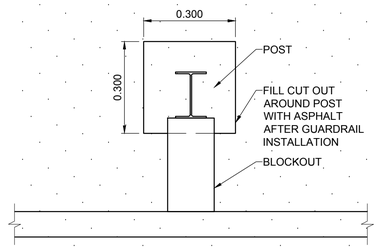
NORTH GUARDRAIL LAYOUT PLAN

1:100

NORTH GUARDRAIL CENTRE OF POST LAYOUT TABLE		
POST #	STATION	OFFSET
1	0+232.122	-4.383 L
2	0+234.039	-4.383 L
3	0+235.954	-4.663 L
4	0+237.873	-4.664 L
5	0+239.786	-4.663 L
6	0+241.702	-4.663 L
7	0+243.618	-4.663 L
8	0+245.534	-4.663 L
9	0+247.447	-4.663 L
10	0+249.364	-4.663 L
11	0+251.281	-4.663 L
12	0+253.194	-4.663 L
13	0+255.099	-4.663 L
14	0+257.004	-4.663 L
15	0+258.909	-4.663 L
16	0+260.814	-4.663 L
17	0+262.719	-4.663 L
18	0+264.624	-4.663 L
19	0+266.529	-4.663 L
20	0+268.434	-4.663 L
21	0+270.339	-4.663 L

NORTH GUARDRAIL CENTRE OF POST LAYOUT TABLE		
POST #	STATION	OFFSET
22	0+272.244	-4.663 L
23	0+274.149	-4.663 L
24	0+276.054	-4.663 L
25	0+277.959	-4.663 L
26	0+279.864	-4.663 L
27	0+281.769	-4.663 L
28	0+283.674	-4.663 L
29	0+285.579	-4.663 L
30	0+287.484	-4.663 L
31	0+289.389	-4.663 L
32	0+291.294	-4.663 L
33	0+293.199	-4.663 L
34	0+295.104	-4.663 L
35	0+297.009	-4.663 L
36	0+298.914	-4.663 L
37	0+300.789	-4.789 L
38	0+302.690	-4.916 L
39	0+304.591	-5.042 L
40	0+306.492	-5.169 L
41	0+308.413	-4.991 L
42	0+310.311	-5.118 L

BILL OF MATERIALS - GUARDRAILS - NORTH SIDE		
DESIGNATOR	QUANTITY	DESCRIPTION
MIDWEST W-BEAM GUARDRAIL SYSTEM		
FBB01	136	GUARDRAIL SPLICE BOLTS (38mm) AND NUTS
FBB06	34	GUARDRAIL POST BOLTS (356mm) AND NUTS
FWC16a	34	ROUND WASHER
-	34	NEOPRENE BLOCKOUT (305 x 356 x 152mm)
PWE06	34	WIDE-FLANGE GUARDRAIL POST (W 150 x 14 x 1830mm)
RWM04a	17	W-BEAM RAIL (4-SPACE)
	34	16D NAIL, GALVANIZED
TRAILING-END ANCHORAGE SYSTEM		
FBB01	8	GUARDRAIL SPLICE BOLTS (38mm) AND NUTS
FBB03	2	GUARDRAIL POST BOLTS (255mm) AND NUTS
FBX16a	2	HEX HEAD BOLT (254mm) AND NUT
FBX16a	8	HEX HEAD BOLT (38mm) AND NUT
FBX22a	2	HEX HEAD BOLT (191mm) AND NUT
FCA01	1	BCT ANCHOR CABLE ASSEMBLY
FMM02	1	BCT POST SLEEVE
FPA01	1	ANCHOR BRACKET ASSEMBLY
FPB01	1	BCT BEARING PLATE
FWC16a	22	ROUND WASHER
FWC22a	4	ROUND WASHER
PDF01	2	BCT TIMBER POST (140 x 190 x 1080 mm)
PTE06	2	FOUNDATION TUBE
RWE01a	1	W-BEAM FLARED END SECTION
RWM14a	1	BCT TERMINAL RAIL SECTION
PFP02	1	STRUT AND YOKE ASSEMBLY
END TREATMENT		
-	1	FLEAT TERMINAL MIDWEST GUARDRAIL SYSTEM; STEEL POSTS (FLEAT-SP-MGS)



1 / 13|13 ASPHALT CUT OUT DETAIL

SCALE: 1:10

BID OPPORTUNITY No. 698-2017

NOTES:
1. SPLICES TO BE LAPPED IN THE DIRECTION OF TRAFFIC
2. REFER TO AASHTO-AGC-ARTBA JOINT COMMITTEE TASK FORCE 13 'A GUIDE TO STANDARDIZED HIGHWAY BARRIER FOR DESIGNATOR SPECIFICATIONS.
3. REFER TO MANUFACTURERS INSTALLATION MANUAL FOR FLEAT TERMINAL DETAILS.

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MORRISON HERSHFIELD
No. 1736

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE — DATE

NOTE:
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

BM
ELEV

No.	REVISIONS	YY/MM/DD	BY
0	ISSUED FOR TENDER	17/09/15	JGK

MORRISON HERSHFIELD

DESIGNED BY	JGK	CHECKED BY	DAN
DRAWN BY	MS	APPROVED BY	SAL
HOR SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERT SCALE	AS SHOWN		
DATE		DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
J.G. KENNEDY
ORIGINAL SIGNED
17/09/15
22326
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME
5160966-GRDL-13 TO 15.DWG

Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

RUE DES TRAPPISTES AT WESTENDORF COULEE CULVERT REPLACEMENT AND ROAD RECONSTRUCTION
NORTH GUARDRAIL LAYOUT PLAN AND BILL OF MATERIALS

CITY DRAWING NUMBER: C372-17-13
SHEET 13 OF 22
DRAWING No. 13 REV 0

ISO A1 - 594mm x 841mm
M:\Proj\5160966\09_Drawing\05_Design\06_Sheets\Detailed Design\5160966-GRDL-13 TO 15.dwg Last Saved: 9/4/2017 10:35 AM by mshabbir Plotted: 9/13/2017 2:17 PM by Dave Lane