

**BRIDGE QUANTITY SHEET**

STATION	POS.	BRIDGE NUMBER	OFFSET BLOCK (mm)	402.12 (MOD.) (T)	525.40 (M)	525.40 (MOD. 3) (M)	621.20 (MOD.) (M)	621.21 (M)	621.505 FLARED (EA)	621.60 (EA)	621.80 (M)	621.81 (M)	REMARKS
<b>WESTFORD</b>													
0+745.9 TO 0+814.3	RT	17	150	10		11.4	30.4	19.8	1	1	61		INSTALL NEW MTS (FLARED) AT STA. 0+745.9 RT. AND ANCHOR AT STA. 0+810.5 RT. ITEM 621.21 IS PAID FOR AT A FACTORED RATE AS SHOWN IN THE TABLE FOR SCHEDULE I ON THIS SHEET
0+764.9 TO 0+814.3	LT	17	150	10		11.4	11.4	19.8	1	1	45		INSTALL NEW ANCHOR AT STA. 0+764.9 LT AND MTS (FLARED) AT STA. 0+802.9 LT. ITEM 621.21 IS PAID FOR AT A FACTORED RATE AS SHOWN IN THE TABLE FOR SCHEDULE I ON THIS SHEET
<b>SUBTOTALS</b>				20		22.8	41.8	39.6	2	2	106		

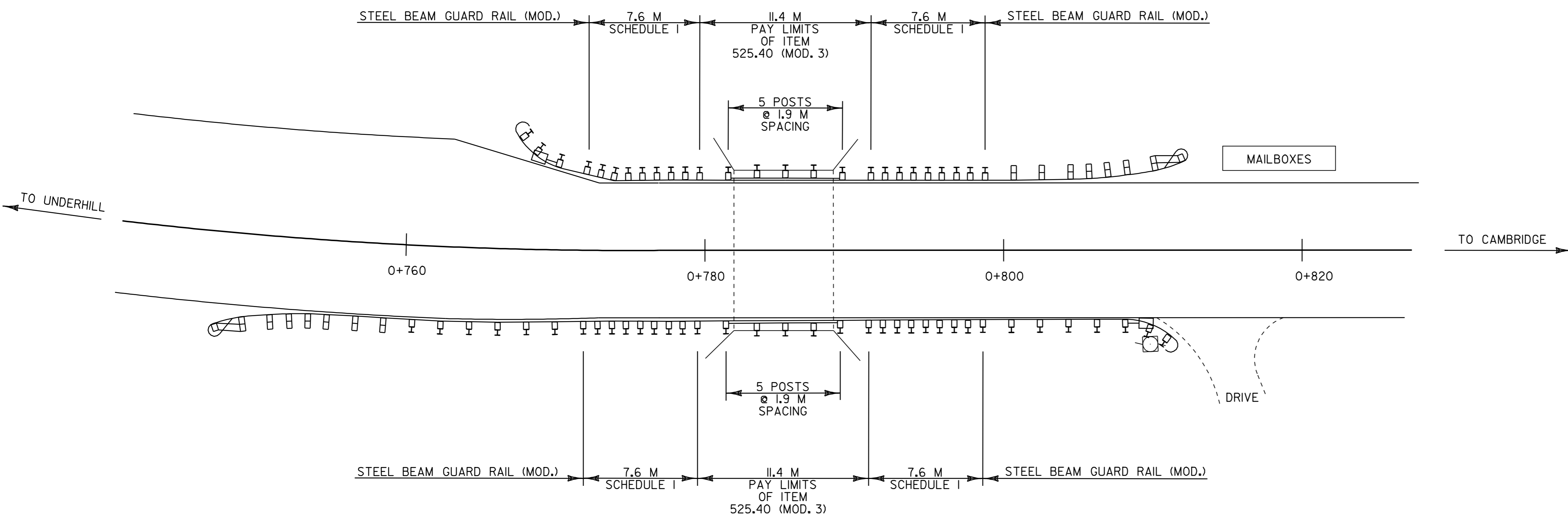
SCHEDULE I		
POST NO.	SPACING	PAYMENT FACTOR
1		
2	0.95 M	1.4 x 3.8 M
3	0.95 M	
4	0.95 M	
5	0.95 M	
6	1.27 M	1.2 x 3.8 M
7	1.27 M	
8	1.27 M	
9	1.90 M (TYP.)	1.0 (TYP.)

SCHEDULE II		
POST NO.	SPACING	PAYMENT FACTOR
1		
2	0.95 M	1.4 x 5.7 M
3	0.95 M	
4	0.95 M	
5	0.95 M	
6	0.95 M	
7	0.95 M	1.2 x 3.8 M
8	1.27 M	
9	1.27 M	
10	1.27 M	1.0 (TYP.)
11	1.90 M (TYP.)	

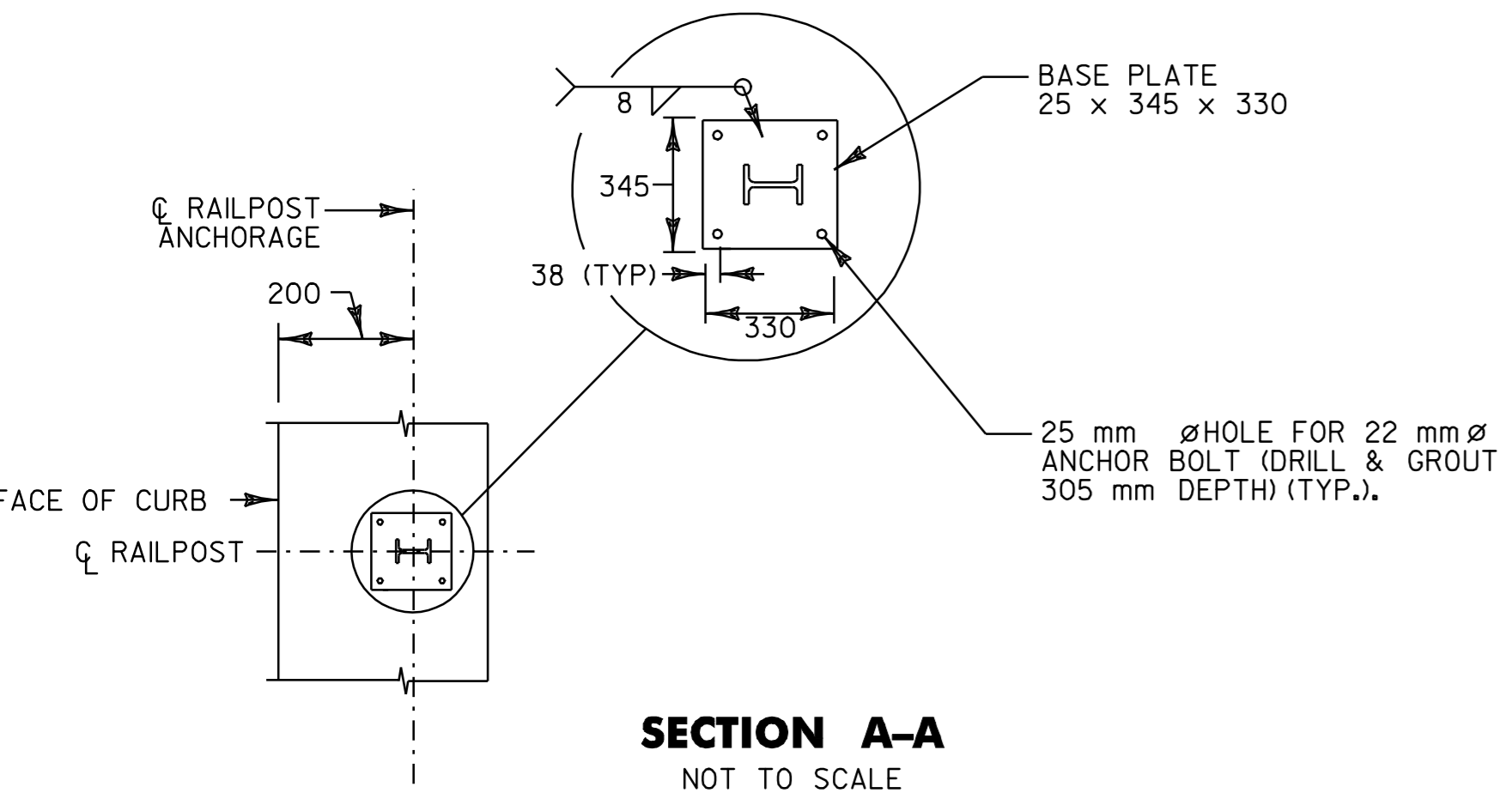
**BRIDGE APPROACH RAILING**  
 WHEN A RAIL PANEL SPLICE OCCURS AT POST NO. 1 USE SCHEDULE I FOR APPROACH RAILING. WHEN A RAIL PANEL SPLICE OCCURS AT THE BRIDGE END POST USE SCHEDULE II FOR APPROACH RAILING.

**NOTES**

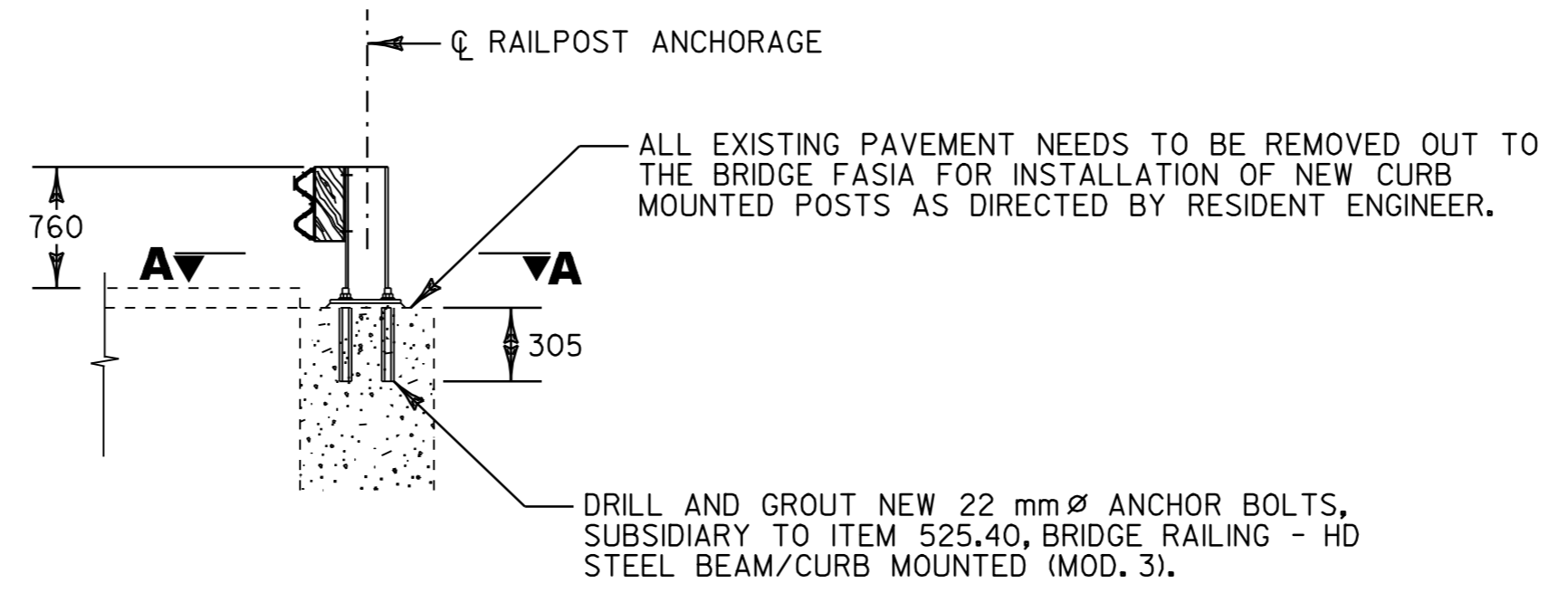
- SEE VTrans STANDARDS G-IM, G-IDM AND SB-R6-82M FOR ADDITIONAL DETAILS.
- ALL HEAVY DUTY STEEL BEAM BRIDGE RAIL, OFFSET BLOCKS AND RELATED HARDWARE SHALL BE PAID FOR UNDER THE ITEM 525.40, BRIDGE RAILING - HD STEEL BEAM/CURB MOUNTED (MOD. 3)
- ALL OFFSET BLOCKS, POSTS, BASE PLATES AND FIXTURES SHALL BE ASTM A-36 EXCEPT AS OTHERWISE NOTED, AND SHALL BE GALVANIZED AFTER FABRICATION TO CONFORM TO M11M/M11L.
- SEE STANDARD SHEETS G-IM AND SB-R6-82M FOR CONNECTION OF STEEL BEAM TO OFFSET BLOCK AND OFFSET BLOCK TO BRIDGE POST.
- RIDGE RAIL SHALL BE HEAVY DUTY STEEL BEAM RAIL.
- BRIDGE APPROACH RAIL HEIGHT SHALL BE TRANSITIONED TO NORMAL ROADWAY RAIL HEIGHT IN 7.6 M.
- FOR BRIDGE RAILING, THE TRANSITION POST SHALL HAVE AN OFFSET BLOCK AND BE LOCATED AS CLOSE AS POSSIBLE TO THE MID-POINT BETWEEN THE BRIDGE END POST AND APPROACH POST 1.
- APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR 7.6 M FROM THE ENDS OF THE BRIDGE.
- SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
- NEW BRIDGE RAILING POSTS SHALL BE SET NORMAL TO GRADE.
- ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
- NEW ASTM A-449 22 mm DIAMETER ANCHOR BOLTS TO BE GROUTED IN PLACE WITH EPOXY MORTAR PER SECTION 530 OF THE VTrans STANDARD SPECIFICATIONS FOR CONSTRUCTION. EACH BOLT SHALL BE FURNISHED WITH TWO NUTS AND WASHERS FOR LEVELING THE ANCHOR PLATE. ANCHOR PLATES SHALL BE PLACED ON A TYPE IV MORTAR PAD. BOLTS, NUTS AND WASHERS SHALL BE FURNISHED UNDER BRIDGE RAILING - HD STEEL BEAM/CURB MOUNTED (MOD. 3)
- GROUT NEW BOLTS WITH A TWO COMPONENT ADHESIVE MORTAR. DRILLING AND GROUTING NEW ANCHOR BOLTS SHALL BE SUBSIDIARY TO BRIDGE RAILING - HD STEEL BEAM/CURB MOUNTED (MOD. 3)
- A MINIMUM PULLOUT STRENGTH OF 13,600 kN SHALL BE ATTAINED ON ALL NEW BOLTS THAT ARE GROUTED IN PLACE. A SAMPLE GROUTED BOLT WILL BE TESTED BEFORE MATERIALS ARE APPROVED FOR USE, AND THEN RANDOM BOLTS WILL BE FIELD TESTED BY THE STATE OF VERMONT TO ENSURE THIS STRENGTH IS BEING ATTAINED. 48-HOURS ADVANCE NOTICE IS REQUIRED TO ALERT VTrans AS TO WHEN THE CONTRACTOR WILL BE READY FOR THIS TESTING.
- SEE STANDARD SHEET G-IM FOR DELINEATION DETAILS AND PLACEMENT.
- ERECT DELINEATORS ON EVERY FIFTH POST OR APPROXIMATELY 9 M APART. PAYMENT SHALL BE SUBSIDIARY TO OTHER ITEMS.



**PLAN VIEW**  
NOT TO SCALE



**SECTION A-A**  
NOT TO SCALE



**ELEVATION VIEW**  
NOT TO SCALE

**PROPOSED BRIDGE RAIL MOUNTING DETAILS FOR BRIDGE BR17**

NOT TO SCALE  
 WESTFORD  
 STA. 0+785.77 = MM 0.488

NOTES: 1) ALL DIMENSIONS IN MILLIMETERS EXCEPT WHERE OTHERWISE INDICATED.

<b>GUARD RAIL DETAILS AT BR17</b>	PROJECT NAME: UNDERHILL-CAMBRIDGE	FILE NAME: _____	PLOT DATE: 26-JAN-2006 11:00
	PROJECT NUMBER: STP_2212(1)S	PROJECT LEADER: JLL	DRAWN BY: D-H
		DESIGNED BY: D-H	CHECKED BY: _____
		IPARM FILE NAME: pbl76qr2.i	SHEET 5 OF 36

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IN DPR

