

**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. RAILING CONFIGURATION IS BASED ON A RAILING CONFIGURATION THAT HAS BEEN CRASH TESTED AND MEETS THE REQUIREMENTS OF NCHRP 350, TEST LEVEL 4. (EQUIVALENT TO PERFORMANCE LEVEL 2 OF AASHTO GUIDE SPECIFICATIONS FOR BRIDGE RAILING, 1989).
3. RAILING SHALL BE USED WITH CURB CONFIGURATION SHOWN.

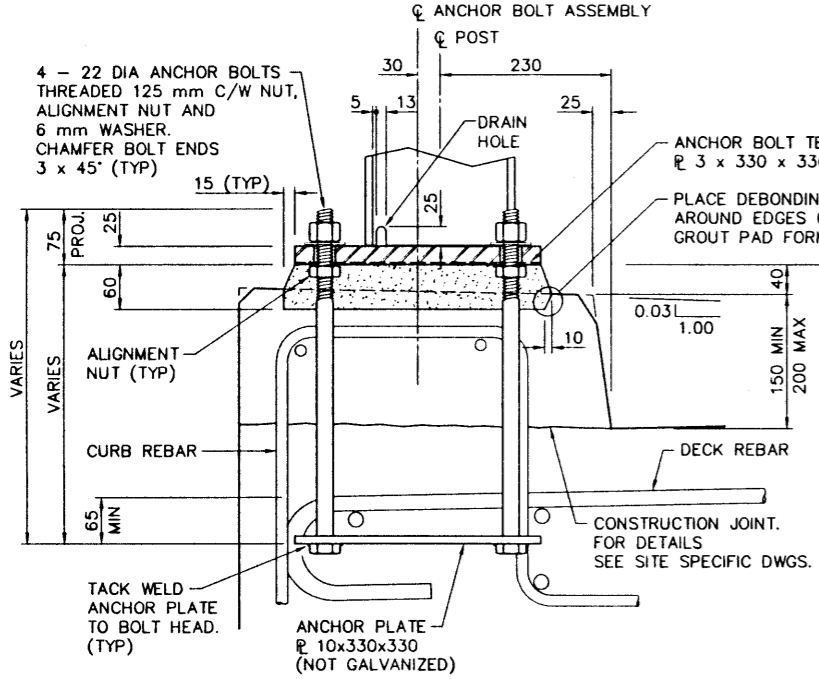
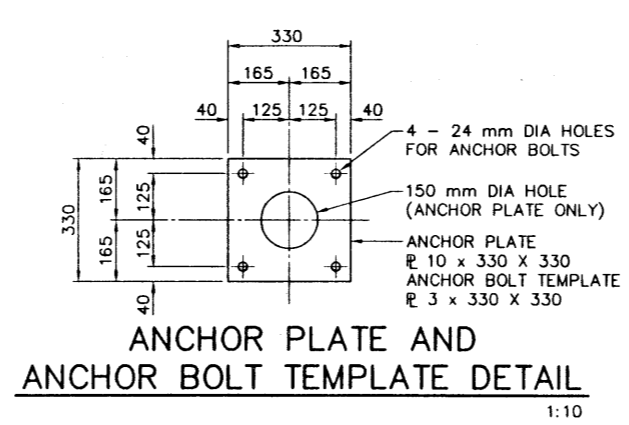
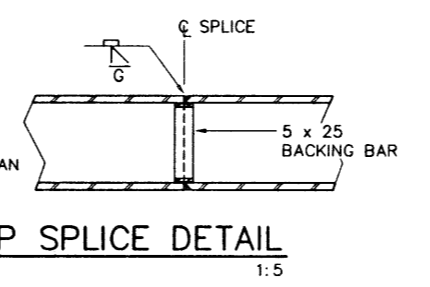
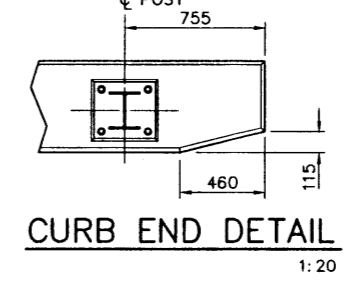
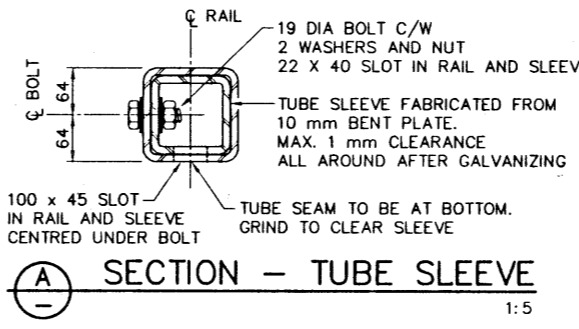
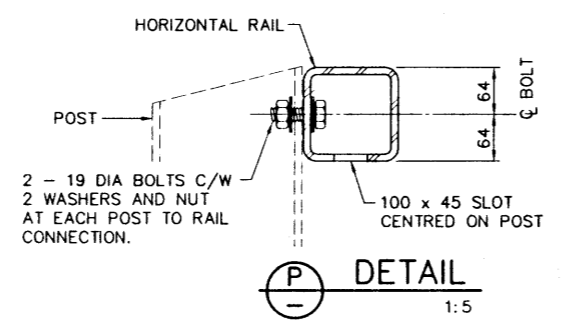
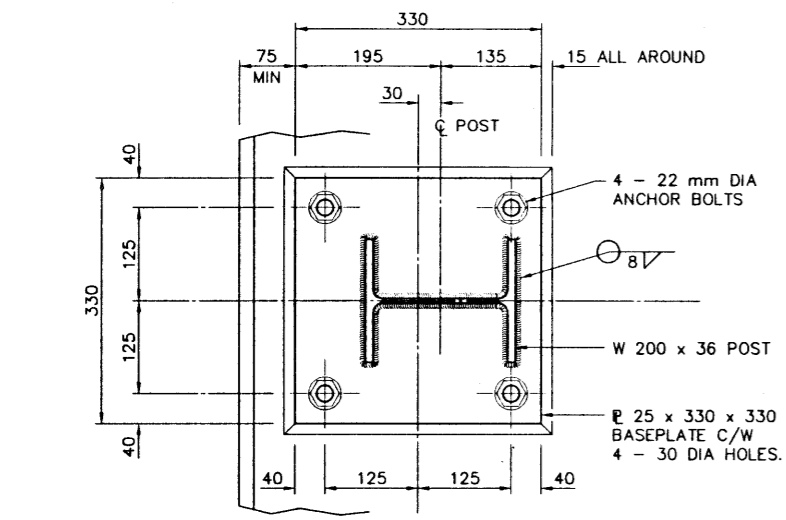
**FABRICATION**

1. BRIDGERAIL INCLUDING APPROACH RAIL TRANSITION SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION SECTION 12 - BRIDGE RAIL AND SECTION 14 - GUARDRAIL.
2. ALL PLATE STEEL AND STRUCTURAL SHAPES SHALL CONFORM TO CSA G40.21 GRADE 300W, OR ASTM A36 EXCEPT STRUCTURAL TUBING SHALL CONFORM TO ASTM A500B.
3. ALL BOLTS SHALL CONFORM TO ASTM A325 UNLESS NOTED OTHERWISE.
4. ALL W-BEAM AND THRIE BEAM GUARDRAIL (INCLUDING THRIE BEAM TERMINAL CONNECTOR AND W-THRIE BEAM TRANSITION SECTION) SHALL HAVE A MINIMUM YIELD STRENGTH OF 345 MPa.
5. ALL WELDING SHALL CONFORM TO CURRENT AWS SPECIFICATION D1.5.
6. POST BASEPLATES SHALL BE PLACED ON BEVEL IF ROADWAY GRADE EXCEEDS 2% (SEE POST BEVEL DETAIL).
7. IF THE ROADWAY GRADE EXCEEDS 1%, AN ADJUSTMENT OF THE RAIL LENGTH SHALL BE MADE BY VARYING THE 655 mm DIMENSION AT THE ENDS OF THE BRIDGERAIL.
8. TUBE SECTIONS SHALL BE FABRICATED IN THE CONFIGURATIONS SHOWN IN 'TUBE SECTION TYPES'.
9. ALL MATERIALS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH CSA G164 UNLESS NOTED OTHERWISE.
10. THE BOTTOM SURFACE OF THE BASE PLATES SHALL BE COATED WITH AN APPROVED COATING SYSTEM, SUITABLE FOR APPLICATION ON GALVANIZED STEEL, TO PREVENT CONTACT BETWEEN THE ZINC AND THE GROUT. THE COLOUR SHALL BE MEDIUM GREY.

**ERECTION**

1. ALL A325 BOLTS SHALL BE TIGHTENED AN ADDITIONAL 1/3 TURN OF THE NUT PAST THE "SNUG-TIGHT" CONDITION EXCEPT FOR ANCHOR BOLTS WHICH SHALL BE TIGHTENED AN ADDITIONAL 1/2 TURN OF THE NUT PAST THE "SNUG TIGHT" CONDITION.
2. ALL POSTS SHALL BE VERTICAL.
3. ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP OF CURB AND ALONG THE CENTRELINE OF ANCHOR BOLT ASSEMBLIES.
4. LINE AND ELEVATION OF RAIL SHALL BE SET BY INSTRUMENT.

WORK THESE DRAWINGS TOGETHER: S-1642-00 AND S-1643-00



**ANCHOR BOLT ASSEMBLIES DETAIL**

(ANCHOR BOLT ASSEMBLY SHALL BE MINIMUM 25 CLEAR FROM BOTTOM OF DECK) 1:5

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<p><b>UMA Engineering Ltd.</b> Engineers, Planners &amp; Surveyors</p>	<p>PERMIT TO PRACTICE UMA ENGINEERING LTD. Signature: [Signature] Date: March 30, 2000 PERMIT NUMBER: P329 The Association of Professional Engineers, Geologists and Geophysicists of Alberta</p>	<p>DESIGNER</p>	<p>CHECKER</p>	<p>RECOMMENDED DIRECTOR BRIDGE ENGINEERING</p>	<p>APPROVED EXECUTIVE DIRECTOR TECHNICAL STANDARDS BRANCH</p>	<p>Albarta INFRASTRUCTURE</p> <p>PL-2 DOUBLE TUBE TYPE BRIDGERAIL BRIDGERAIL DETAILS</p>			
		<p>DATE: March 30, 2000</p>	<p>DATE: March 30, 2000</p>				<p>DATE: March 31, 2000</p>		
<p>WORK THESE DRAWINGS TOGETHER: S-1642-00 AND S-1643-00</p>						<p>AI BAR CODE F28423</p>	<p>DATE: 2000-03-30</p>	<p>SHEET: 1 of 2</p>	<p>DRAWING: S-1642-00</p>