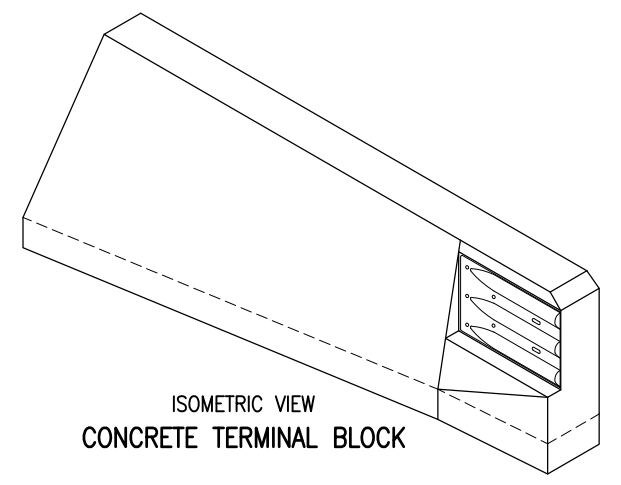
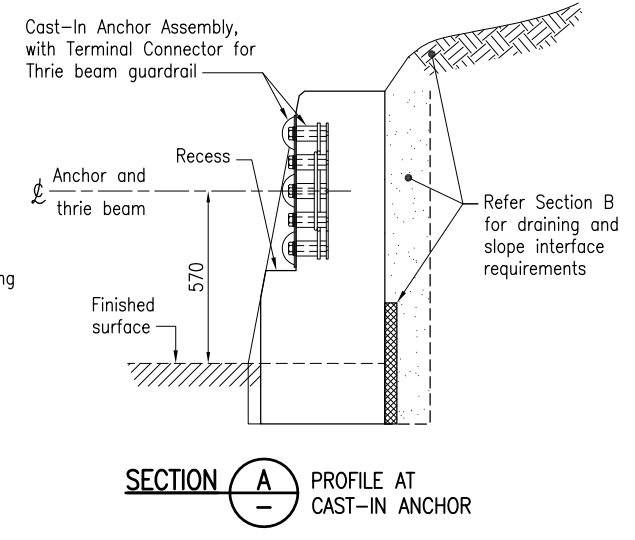
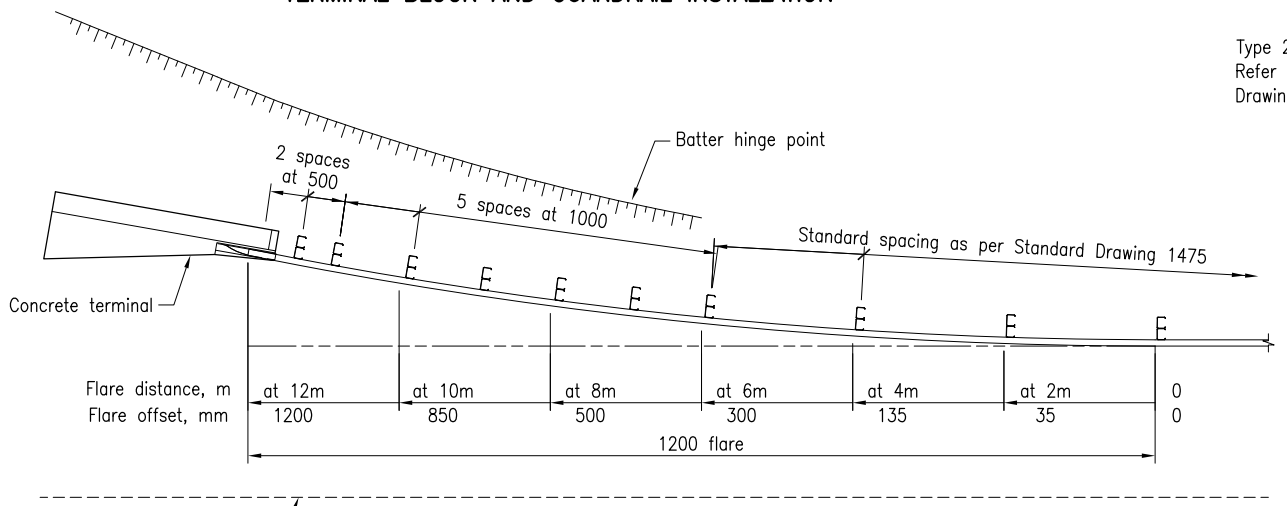
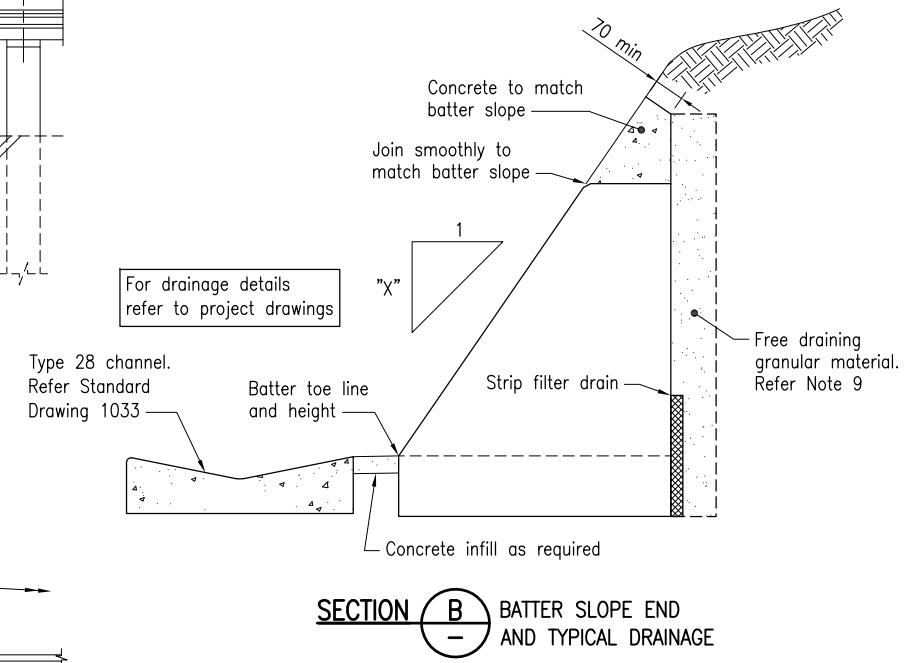


TERMINAL BLOCK AND GUARDRAIL INSTALLATION

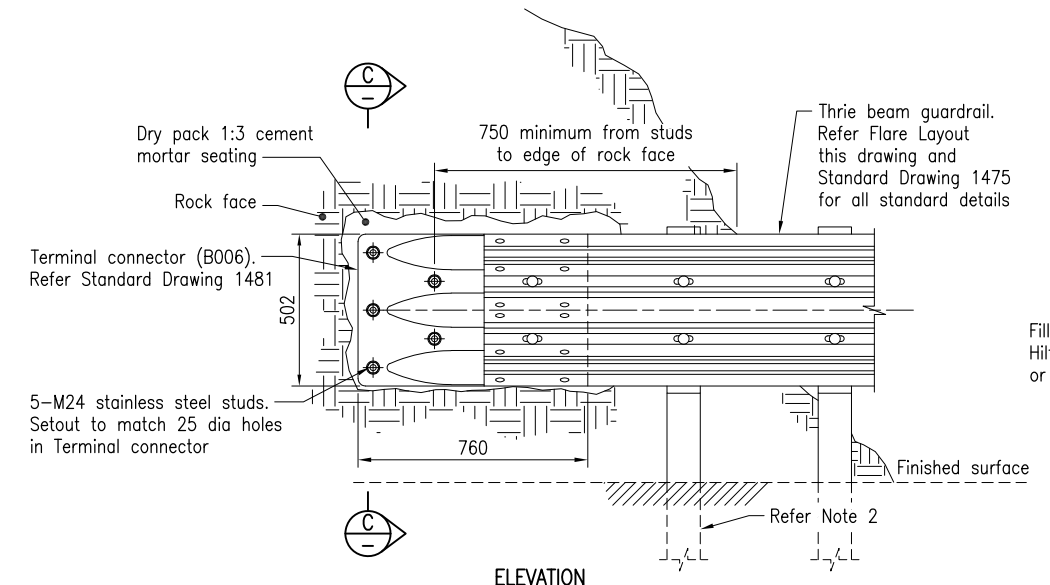


NOTES:

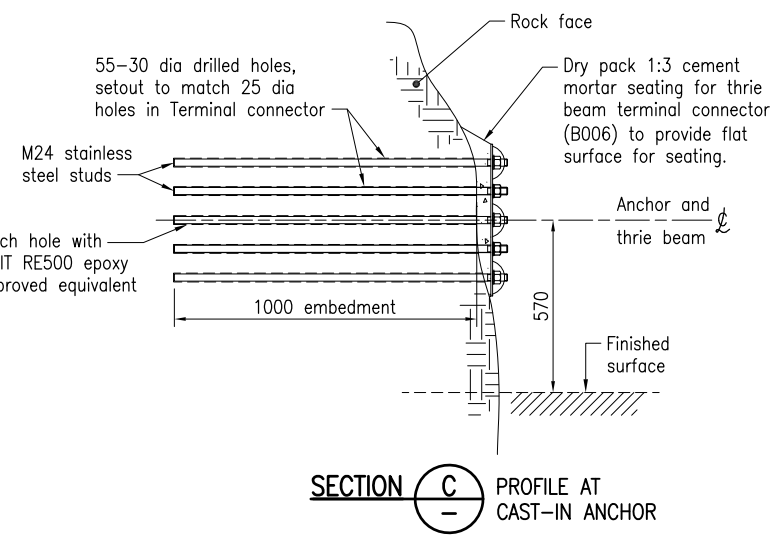
- SCOPE: This Standard Drawing provides details for thrie beam guardrail connection to concrete terminal block or rock face, for use at batter slopes 1 on 1 and steeper. A suitable road safety barrier design solution shall be adopted in accordance with the Road Planning and Design Manual, Traffic and Road Use Manual, MRTS03, MRTS14 and Standard Drawing 1475. The design decisions leading to adoption of this solution shall be fully documented and Project specific design shall be developed.
- MINIMUM 1000 OFFSET for guardrail installation detailed in this Standard Drawing is to allow for nominal deflection upon impact, i.e. no hazards within this zone.
- THE GUARDRAIL POSTS and BASE PLATES SYSTEM shown in this Standard Drawing shall be constructed in accordance with MRTS14.
- POST ON BASE PLATE detailed on Standard Drawing 1478 shall be used where rock encountered prevents the driving of guardrail posts.
- RAIL LAP AND POST AND BLOCKOUT ORIENTATION in relation to traffic direction as shown is essential. Stiffener plates shall be used at posts without a rail lap.
- CONCRETE TERMINAL BLOCK shall be constructed in accordance with Standard Drawing 1485. Batter slope "X" shall conform with existing batter or batter slope shown in the project drawing. Flattest slope permitted shall be 1 on 1. Length of concrete terminal and maximum width shall provide a smooth transition from batter slope end to the recess and single slope at the guardrail connection end, and shall be shown in the project drawing. Minimum length of concrete terminal shall be 1500. Notched blockouts P006 and P007 shall not be used in terminals.
- ROCK FACE ANCHORAGE shall be as detailed on this drawing, and may be used in lieu of the concrete terminal block, only in sound rock approved by a Geotechnical Engineer. Where the batter slope prevents the use of adjacent posts, a blockout or approved spacer may be used in lieu of the post. Fixing of a blockout to rock face shall be similar to the anchorage detail shown using 2/M16 stainless steel studs in 20mm dia holes.
- SHEET FILTER DRAIN may be used, in lieu of free draining granular material, in conjunction with a strip filter drain. Filter drains are to be in accordance with the standard specification MRTS03.
- DIMENSIONS are in millimetres.



GUARDRAIL FLARE LAYOUT



ROCK FACE ANCHORAGE AND GUARDRAIL INSTALLATION



ASSOCIATED DEPARTMENTAL DOCUMENTS:
 Road Planning and Design Manual (RPDM)
 Traffic and Road Use Manual (TRUM)

- REFERENCED DOCUMENTS:**
 Departmental Standard Drawings:
 1033 Kerb and Channel - Profiles
 1467 Concrete Barriers - Cast-in Anchor Assembly
 1475 Steel Beam Guardrail - Installation on Bridge and Barrier Approaches
 1478 Steel Beam Guardrail - W Beam Anchor Bracket Delineation Unit Post on Base Plate Abraham Blockout
 1481 Steel Beam Guardrail - Fabrication Details for Thrie Beam Rails and Rail Components
 1485 Steel Beam Guardrail - Batter Slope Terminals - 1 on 1 and Steeper - Concrete Terminal Block
- Departmental Specifications:
 MRTS14 Road Furniture
 MRTS03 Drainage, Retaining Structures and Protective Treatments
 MRTS70 Concrete

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STEEL BEAM GUARDRAIL			
BATTER SLOPE TERMINALS 1 ON 1 AND STEEPER - GENERAL ARRANGEMENT AND INSTALLATION DETAILS		A3	Standard Drawing No
		Not to Scale	1484
			Date 7/2020
A	B	C	