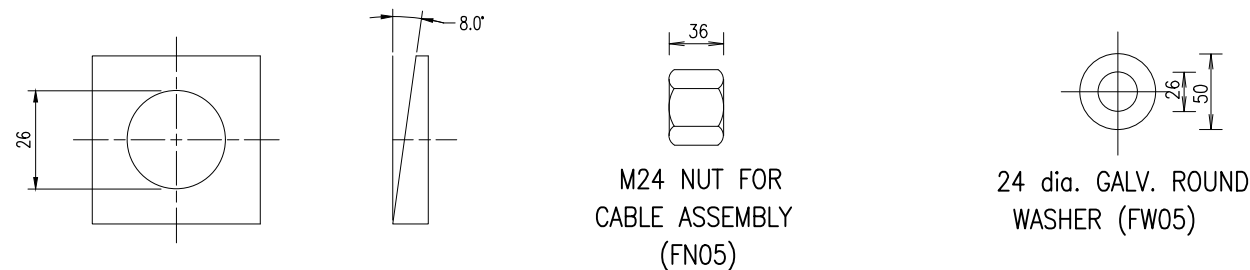
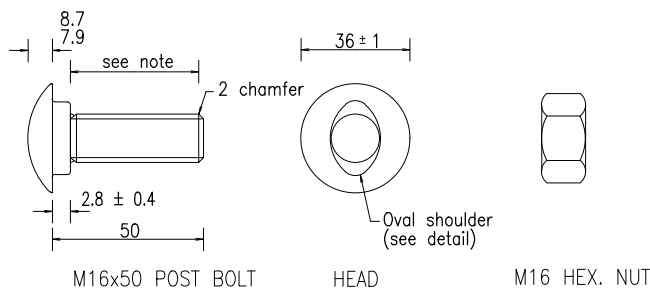


CABLE ASSEMBLY (FC01)

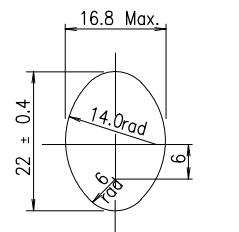


SQUARE TAPER WASHER (FW06)
(Terminal Type 1 only)

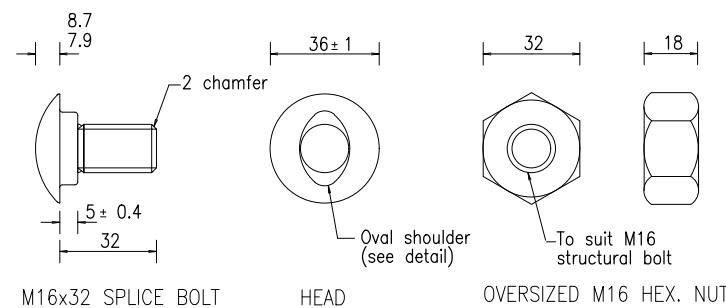
CABLE ASSEMBLY AND FASTENERS
(for MELT and departure end treatment)



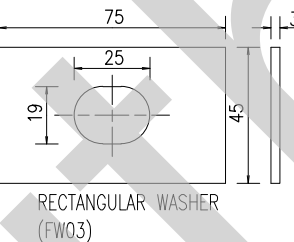
MUSHROOM HEAD POST BOLT (FB01) & NUT (FN01) FOR RAIL CONNECTION TO BLOCKOUT PIECE



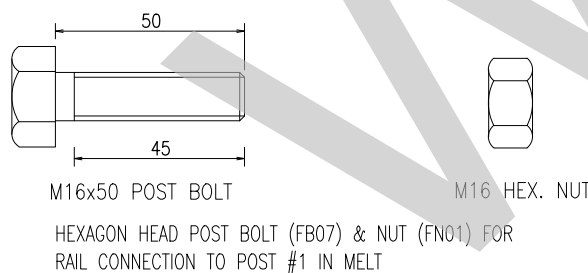
DETAIL OF SHOULDER



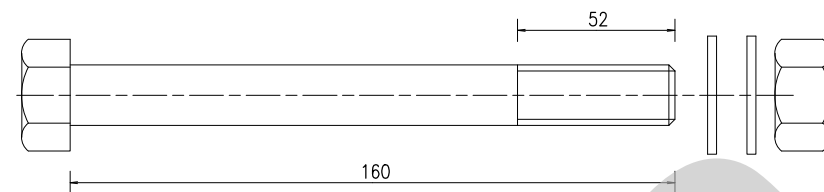
MUSHROOM HEAD SPLICE BOLT (FB03) AND OVERSIZED NUT (FN02) FOR RAIL TO RAIL CONNECTION



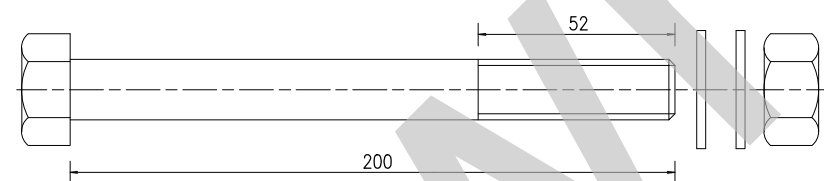
Washer (FW03) to be used only on end treatments, not on mid span lengths of rail.



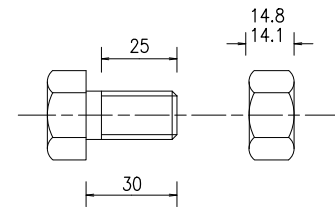
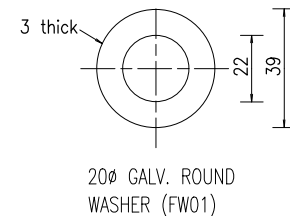
M16 BOLTS & NUTS – RAIL



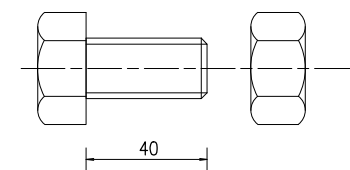
M20x160 BOLT (FB08), WASHERS (FW01) AND NUT (FN04)
SOIL PLATE CONNECTION TO STEEL POST – MELT



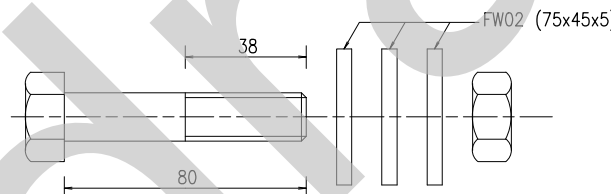
M20x200 BOLT (FB06), WASHERS (FW01) AND NUT (FN04) STRUT AND YOKE CONNECTION TO STEEL POSTS – MELT



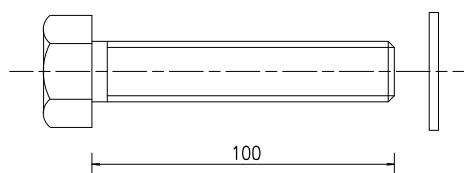
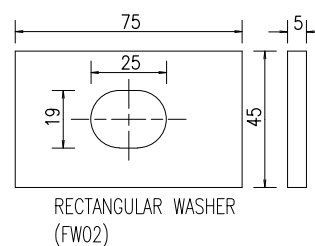
M16x30 BOLT (FB02) AND NUT (FN01)
BLOCKOUT CONNECTION TO POST



M20x40 BOLT (FB09) & NUT (FN04) SOIL PLATE CONNECTION TO POST – DEPARTURE END TREATMENT



M16x80 BOLT (FB05), RECTANGULAR WASHERS (FW02) AND NUT (FN01) FOR SLIP BASE PLATE CONNECTION TO BOTTOM SLIP BASE PLATE



M20x100 HEXAGON HEAD SCREW (FB11) AND WASHER (FW01) FOR BASE PLATE (PP01) CONNECTION TO CONCRETE SURFACE

FASTENER COMPONENTS TO POSTS
– HEXAGON HEAD BOLTS AND NUTS

NOTES:

1. POST BOLTS FB01 & FB07 to have physical properties identical to AS/NZS 1111 (grade 4.6). Hexagon nut FN01 to AS 1112 (grade 5). SPLICE BOLT FB03 and NUT FN02 to have physical properties identical to AS/NZS 1252 (class 8.8). Nuts shall be tapped to suit galvanised threads. The length of thread on mushroom headed bolts FB01 & FB03 to be such that the nut shall touch the oval shoulder when tightened by hand.
2. HEXAGON BOLTS AND SCREWS to AS/NZS 1111 (grade 4.6).
3. HEXAGON NUTS to AS 1112 (grade 5). Nuts shall be tapped to suit galvanised threads.
4. BLACK STEEL WASHERS, large series to AS 1237 and taper washer to AS/NZS 1252.
5. ALL BOLTS, NUTS, SCREWS AND WASHERS to be treated to AS 1627 and shall be hot dip galvanised in accordance with the requirements of AS 1214.
6. CABLE ASSEMBLY :
 - 6.1 Cable to be minimum 20 dia. 6x19 or 6x25 wire strand core or independent wire rope core, galvanised, right regular lay to AS 3569.
 - 6.2 Cable shall be supplied with two 36 thick M24 nuts, two 5 thick gal. steel washers and one
7. TIGHTENING OF NUTS: Nut FN01 for slip base plates to FN05 to cable assembly to be tightened so that there other nuts shall be snug tight to AS 4100.
8. DIMENSIONS are subject to manufacturer's tolerances & tolerances are nominated.
9. ALL DIMENSIONS in millimetres unless otherwise shown.

ASSOCIATED DOCUMENTS:
Department of Main Roads Manual of Standard Drawings
Department of Main Roads Standard Specifications Roads
REFERENCED DOCUMENTS:
Standard Specifications:
Road Furniture
Australian Standards:
AS/NZS 3845 Road Safety Barrier Systems

This Standard Drawing is withdrawn. Public domain steel barrier systems are not to be used as Normal Design Domain (NDD) for new projects or installations within the TMR network. However, this drawing can be used for the purposes of maintaining existing installations when repairs and replacements can be reasonably and readily undertaken or if justified and certified by an RPEQ as an Extended Design Domain (EDD) for new installations, where appropriate proprietary products are not suitable/feasible.

Updated Guidance stamp 3/2025

STEEL BEAM GUARDRAIL		Queensland Government Department of Main Roads	
BOLTS, NUTS, SCREWS AND WASHERS CABLE ASSEMBLY WITH FASTENERS	Size A3	Drawing No 1479	
	Scales	Date 12/01	
	as shown	A	B C