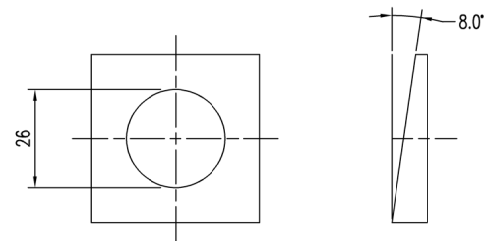
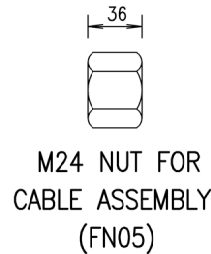


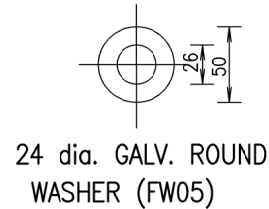
CABLE ASSEMBLY (FC01)



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

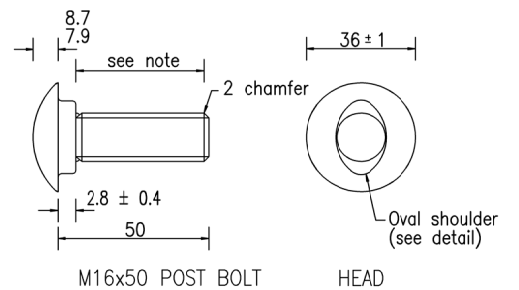


M24 NUT FOR
CABLE ASSEMBLY
(FN05)

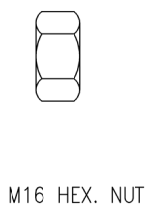


24 dia. GALV. ROUND
WASHER (FW05)

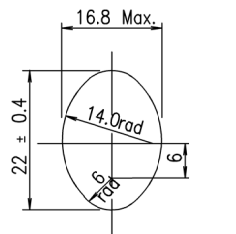
CABLE ASSEMBLY AND FASTENERS
(for MELT and departure end treatment)



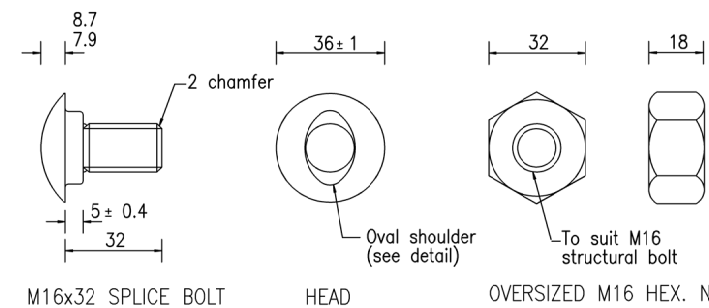
M16x50 POST BOLT HEAD
MUSHROOM HEAD POST BOLT (FB01) & NUT (FN01) FOR
RAIL CONNECTION TO BLOCKOUT PIECE



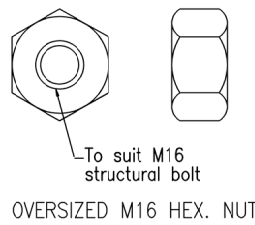
M16 HEX. NUT



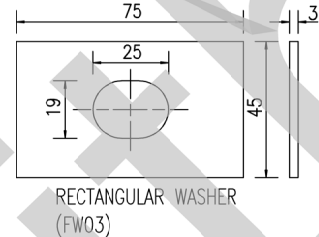
DETAIL OF SHOULDER



M16x32 SPLICE BOLT HEAD
MUSHROOM HEAD SPLICE BOLT (FB03) AND OVERSIZED
NUT (FN02) FOR RAIL TO RAIL CONNECTION

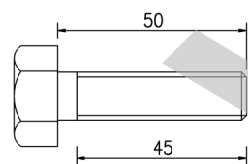


OVERSIZED M16 HEX. NUT

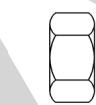


RECTANGULAR WASHER
(FW03)

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



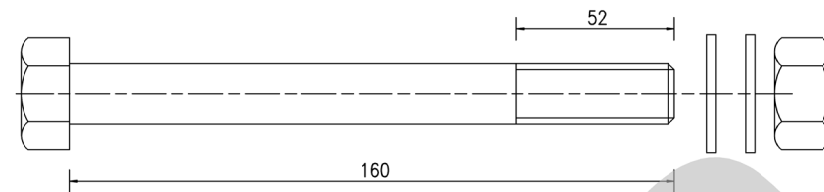
M16x50 POST BOLT



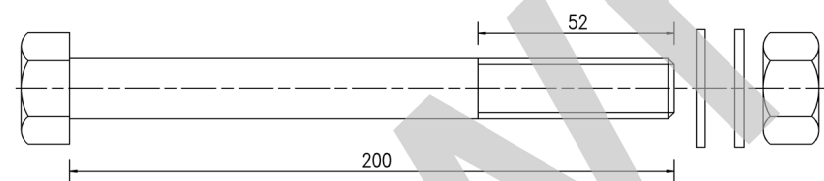
M16 HEX. NUT

HEXAGON HEAD POST BOLT (FB07) & NUT (FN01) FOR
RAIL CONNECTION TO POST #1 IN MELT

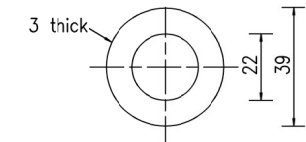
M16 BOLTS & NUTS - RAIL



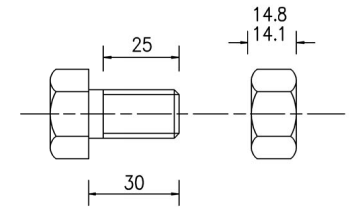
M20x160 BOLT (FB08), WASHERS (FW01) AND NUT (FN04)
SOIL PLATE CONNECTION TO STEEL POST - MELT



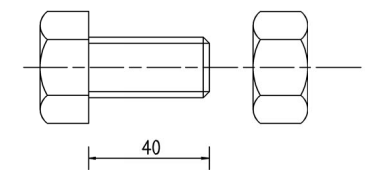
M20x200 BOLT (FB06), WASHERS (FW01) AND NUT (FN04) STRUT AND
YOKE CONNECTION TO STEEL POSTS - MELT



20 dia GALV. ROUND
WASHER (FW01)

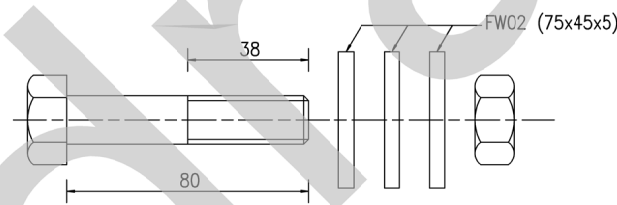


M16x30 BOLT (FB02) AND NUT (FN01)
BLOCKOUT CONNECTION TO POST

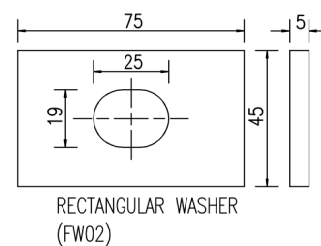


M20x40 BOLT (FB09) & NUT (FN04) SOIL
PLATE CONNECTION TO POST -
DEPARTURE END TREATMENT

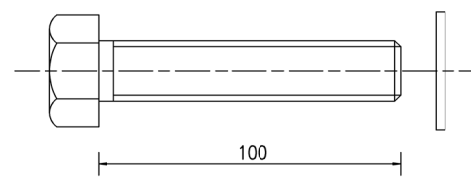
FASTENER COMPONENTS TO POSTS
- HEXAGON HEAD BOLTS AND NUTS



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



RECTANGULAR WASHER
(FW02)



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

POST BASE PLATE HEXAGON HEAD SCREW AND SLIP
BASE PLATE HEXAGON HEAD BOLT AND NUT

NOTES:

- 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.
- HEXAGON BOLTS AND SCREWS to AS/NZS 1111 (grade 4.6).
- HEXAGON NUTS to AS 1112 (grade 5). Nuts shall be tapped to suit galvanised threads.
- BLACK STEEL WASHERS, large series to AS 1237 and taper washer to AS/NZS 1252.
- 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.
- CABLE ASSEMBLY :
 - Cable to be minimum 20 dia. 6x19 or 6x25 wire strand core or independent wire rope core, galvanised, right regular lay to AS 3569.
 - Cable shall be supplied with two 36 thick M24 hexagon galvanised steel nuts, two 5 thick gal. steel washers and one galv. taper washer.
- TIGHTENING OF NUTS: Nut FN01 for slip base plates to be tightened to 25 Nm. Nut FN05 to cable assembly to be tightened so that there is no slack in the cable. All other nuts shall be snug tight to AS 4100.
- DIMENSIONS are subject to manufacturer's tolerances except where allowable tolerances are nominated.
- 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 on new projects or installations within the TMR network. 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 a RPEQ as an exception for new installation.

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