

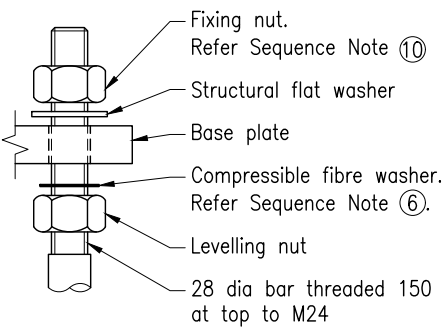
The purpose of this Standard Drawing is to provide typical standard details that shall be used within the limitations specified in the drawing, and shall be assessed by the project designer for project specific slope and soil conditions. When there is uncertainty regarding the application of the standard details on this drawing for a specific project, advice shall be sought from E&T Structures. The details specific to the project shall be shown on the project specific drawings, and certified by an RPEQ Engineer.

### WARNING

In order for the slip base mechanism to operate correctly it is IMPERATIVE that the anchor cage is installed to the dimensions marked '\*' and the nuts are installed as per sequence notes ⑩ and ⑫. Failure to install the anchor cage and nuts strictly in accordance with this plan will make the Contractor liable for any resulting loss or damage to the Principal and to third parties.



INSTALLATION OF CONDUITS AND PITS IS THE RESPONSIBILITY OF THE LICENSED ELECTRICAL CONTRACTOR



DETAIL 1

### SEQUENCE OF INSTALLATION:

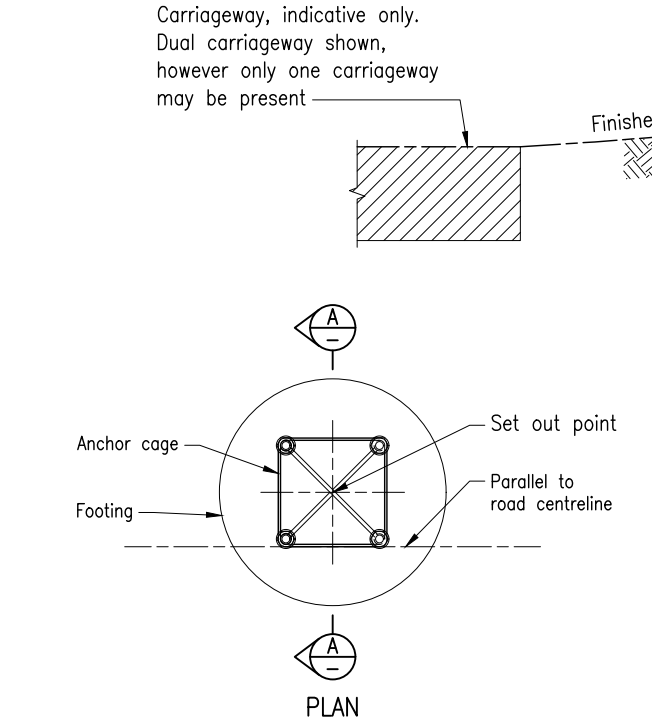
- ① Footing shall be accurately located horizontally and vertically, and existing utility service investigation carried out, prior to commencement of excavation. HOLD POINT 1 of MRTS92.
- ② Dig/bore and excavate the hole to the required depth and width for the specified anchor cage. The excavation shall be inspected by the Administrator, HOLD POINT 2 of MRTS92, and surveyed as per MRTS56.
- ③ Determine finished surface level and suspend the anchor cage in correct position such that the finished surface level is at the top of anchor cage within tolerance, and at correct orientation relative to the roadway. WITNESS POINT 18 of MRTS56.
- ④ Threads shall be protected and conduit plugged before pouring concrete.
- ⑤ Pour concrete footing to bottom of the threads of anchor cage and allow to set. Allow seven day minimum curing period or until 20MPa before installing the slip base mount.
- ⑥ Locate slip base mount 60 above top of footing. Ensure compressible fibre washers are placed on the levelling nuts under the slip base mount.
- ⑦ Level slip base mount using the levelling nuts, then finger tighten the fixing nut on each threaded bar onto the bottom base plate. Form a 100 dia void in the mortar pad above the electrical conduit with a 60 long x 100 dia conduit.
- ⑧ Immediately form mortar pad under bottom base plate using a TMR registered high early strength, rapid setting, flowable, cementitious grout, in accordance with manufacturer's specifications. Mortar pad edges bevelled as shown.
- ⑨ Wait until mortar has achieved final set in accordance with manufacturer's specifications before tensioning the fixing nuts.
- ⑩ Tension the fixing nuts on the slip base mount to 135 Nm minimum, in accordance with TN64.
- ⑪ Install the light pole.
- ⑫ Tension the M36 clamping bolts to  $90 \pm 10\text{Nm}$  in accordance with TN64.
- ⑬ Install the slip bolt tethering system in accordance with TN200 and SD 1755.

### NOTES:

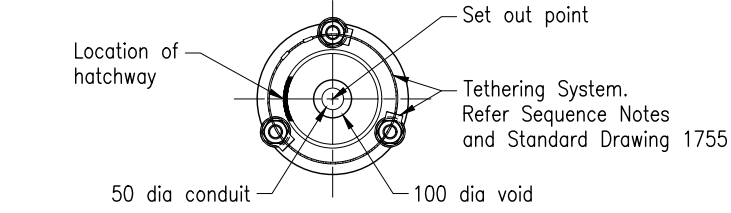
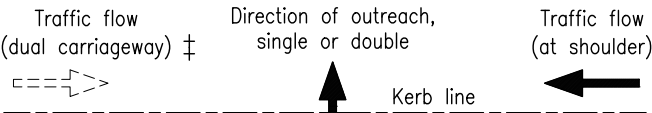
1. SCOPE : This standard drawing shall be used for slip base mounted pole footing details when installed on slopes of up to and including 1:6, and in good to average soil. Installations proposed in poor soil or in sandy materials shall require specialist design by Geotechnical Engineer.
2. FOOTING for slip base mounted pole shall be in accordance with MRTS92 and with the details on this drawing. Selection of depth of footing is to be determined by the designer from the project design documents, such as geotechnical report, site survey, and road cross sections. No permanent forms shall be used for excavation except if required for top 1000.
3. Good Soil ( $S_u \geq 50 \text{ kPa}$ ) consists of Stiff to Hard Clayey materials or Weathered Rocks. Average Soil ( $25 \text{ kPa} \leq S_u < 50 \text{ kPa}$ ) consists of Firm Clayey materials or Compacted Earthfill materials. Poor Soil ( $S_u < 25 \text{ kPa}$ ) requires specialist design, and consists of Very Soft to Soft Clayey materials.  $S_u$  is the undrained shear strength of clayey materials. Sandy Materials comprising Loose to Very Dense Sands require specialist design.
4. ANCHOR CAGE shall be in accordance with Standard Drawing 1328 and the details on this drawing. Finished surface level shall be determined prior to commencement of anchor cage installation. For the level of the slip plane to be within tolerance, the projected finished surface level shall be 150 above the top of the footing  $\pm 25$ . Horizontal tolerance shall be in accordance with MRTS70. Compressible fibre washers can only be used once. If an existing slip base mount is being reinstated onto its original anchor cage, new fibre washers are required to be used.
5. Road/Verge surface of the errant vehicle approach to the slip base mounted pole must be uniform and be consistent for the type of crossfall installation. Refer Warning text box for further information.
6. CONCRETE shall be in accordance with MRTS70. MORTAR under the base plate shall be a TMR registered high early strength, rapid setting, flowable, cementitious grout product with the following minimum strengths: 4 hours to 15MPa and 28 days to 32MPa.
7. CONDUIT shall be in accordance with MRTS91. Ensure conduit is not blocked, and is flush with top of footing, with 100 void formed above in the mortar pad. 500 minimum/3000 maximum distance from edge of footing to pit.
8. SLIP BASE MOUNTED POLE shall be in accordance with MRTS97. Positioning of the clamping bolts will depend on the slip base orientation. Slip bolt tethering shall be accordance with TN200 and Standard drawing 1755. Slip base mount shall not be buried and slip base recess shall not be filled with concrete. Clear away immediate area around the slip base mount and remove debris that has collected in slip base recess on a regular basis, to minimise corrosion of steel components.
9. ORIENTATION OF HATCHWAY: Typical orientation for slip base pole is detailed on this drawing.
10. Dimensions are in millimetres.

### REFERENCED DEPARTMENTAL STANDARD DRAWINGS, SPECIFICATIONS AND TECHNICAL NOTES:

- 1149 Installation of Underground Electrical and Communications Conduit
- 1328 Road Lighting – Anchor Cage Fabrication Details
- 1699 Traffic Signals/Road Lighting/ITS – Parts List
- 1755 Road Lighting – Slip Bolt Tethering System for Slip Base Poles
- MRTS56 Construction Surveying; MRTS70 Concrete; MRTS91 Conduits and Pits
- MRTS92 Traffic Signal and Road Lighting Footings
- MRTS97 Mounting Structures for Roadside Equipment
- TN64 Tensioning and Re-tensioning of Slip Base Light Pole Bolts
- TN200 Slip Base Pole Clamping Bolt Tethering System Installation

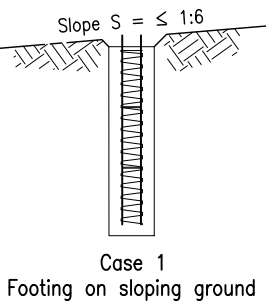


### SET OUT DETAILS FOR ANCHOR CAGE

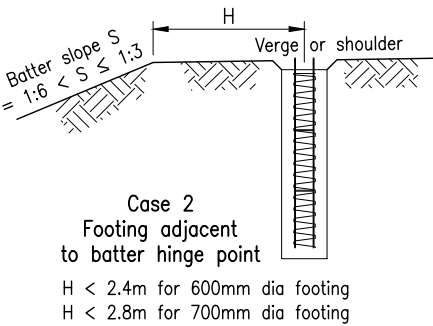


### SLIP BASE ORIENTATION

† For dual outreach only

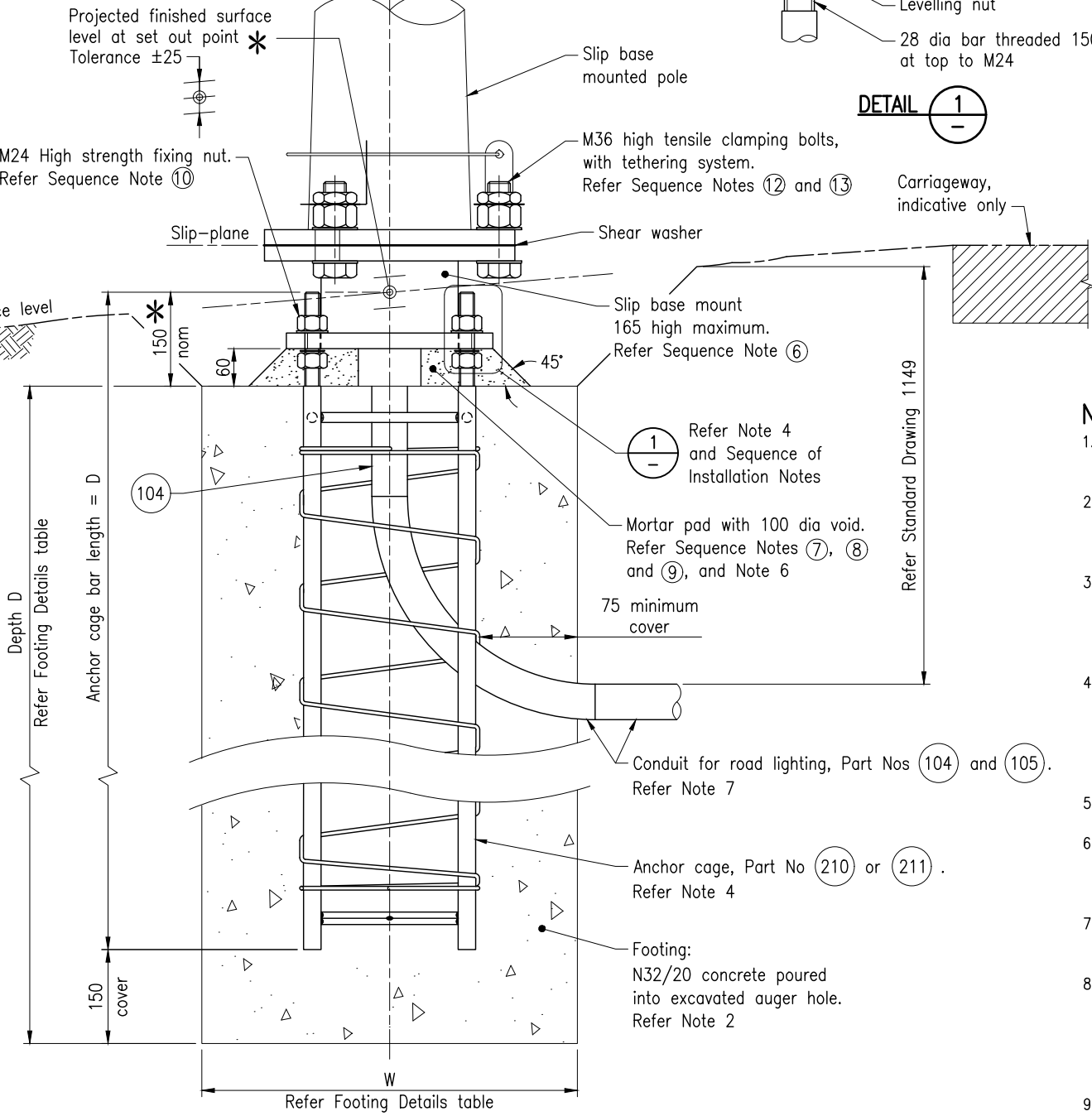


### INSTALLATION ON SLOPES OF UP TO AND INCLUDING 1:6



### SLOPE DIAGRAM

### SECTION A ELEVATION



### FOOTING DEPTHS

Slope diagram	Vertical Height of Pole	Minimum Diameter of Footing W	Minimum Depth of Footing D	
			Good soil, refer Note 3	Average soil, refer Note 3
Case 1	7000	600	2100	2800
	8500			
	10000			
	13000	700	2500	3200
Case 2	Where the footing for slip base mounted pole is on a verge or shoulder within horizontal distance (H) from the batter hinge point, the footing details shall be in accordance with Standard Drawing 1382.			

Department of Transport and Main Roads					
ROAD LIGHTING		Standard Drawing No		1381	
SLIP BASE MOUNTED POLE – FOOTING DETAILS FOR INSTALLATION ON SLOPES OF UP TO AND INCLUDING 1:6		A3		Date 3/2025	
Not to Scale		H		K L	