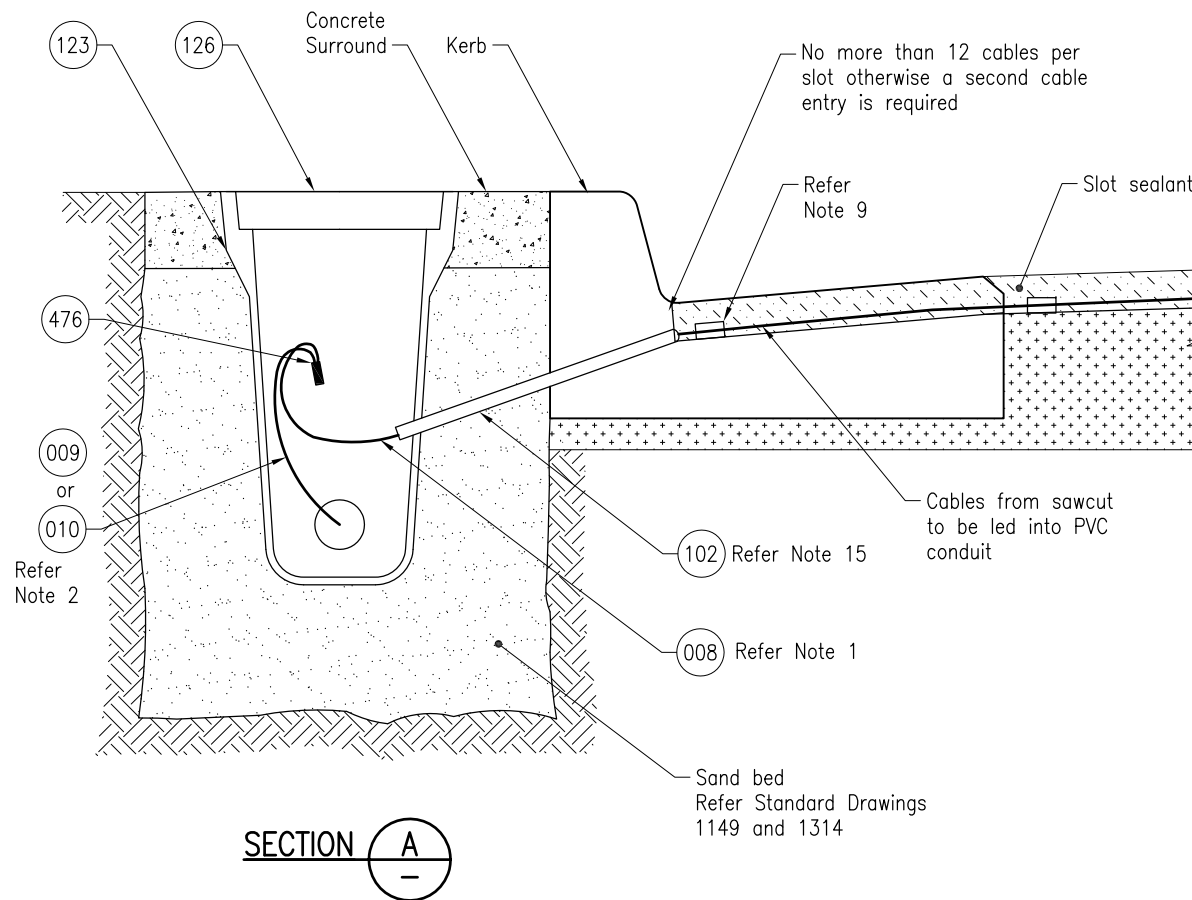
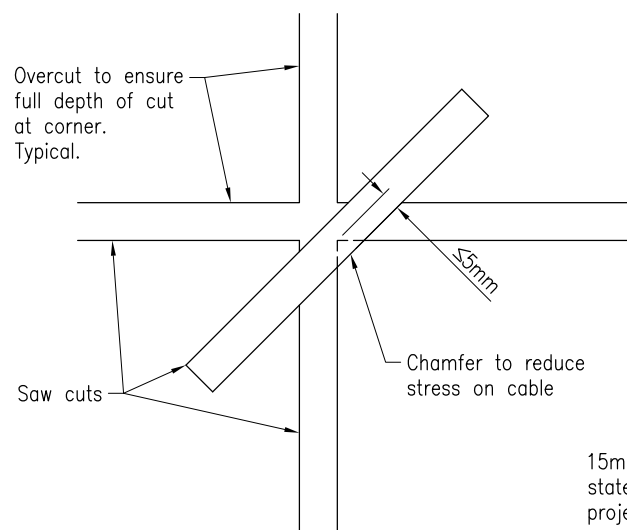


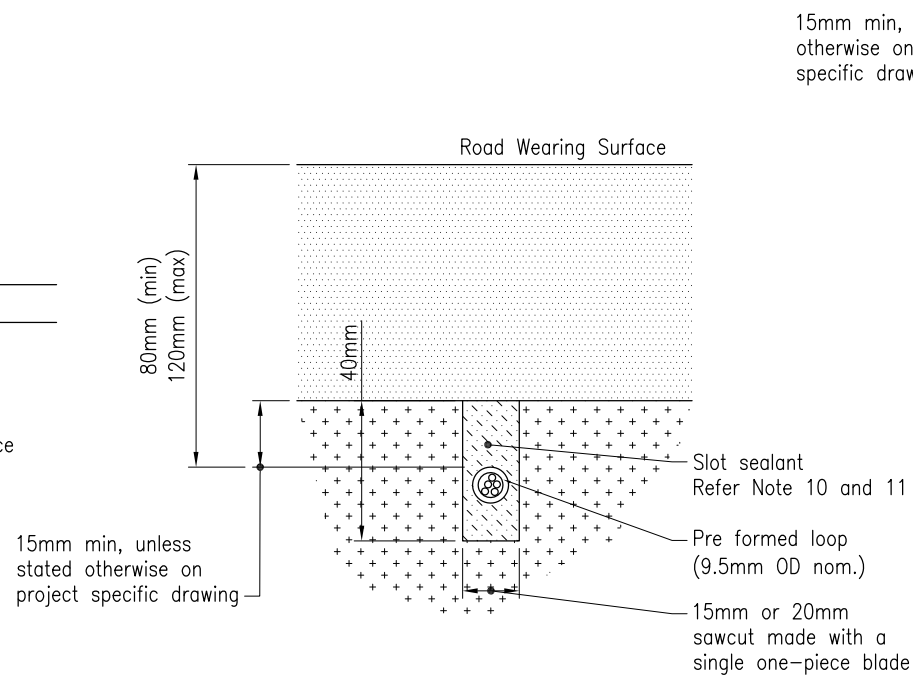
TYPICAL RECTANGULAR LOOP DETECTOR WIRING FOR 4 POSSIBLE ENTRY POSITIONS (DIAGRAMMATIC)



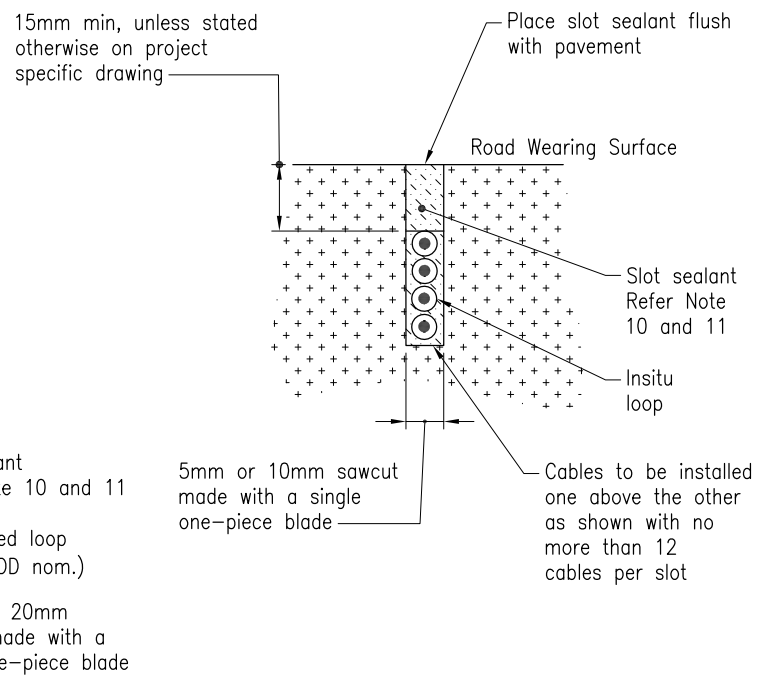
SECTION A



DETAIL 1
NTS
STRESS RELIEF CHAMFER FOR CABLE



SECTION B
FOR ALL NEW PAVEMENTS (CONCRETE OR ASPHALT BASE)



SECTION B
FOR EXISTING PAVEMENT FOR INSITU REPLACEMENT OF DAMAGED LOOPS IN ASPHALT PAVEMENTS

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

NOTES:

1. Preformed loop cable shall comply with MRTS257.
2. Loop feeder cable shall comply with AS/NZS 2276 - Part 2.
3. Loop cable shall be continuous, i.e. no joints permitted between Start (S) and Finish (F).
4. Loop leadings (S and F) to each loop shall be twisted together at approximately 1 turn per 100mm.
5. Loop detector cables and feeder cables shall be joined in assigned pits. Each joint shall be separately insulated and sealed to prevent ingress of water.
6. All loop feeders shall be returned to the cable pit in the footpath (or the median of a minimum of 2 metres width) except right turn presence loops in the two lanes closest to the median within a four or more lane approach which may be returned to a cable pit in the median, if a median post is required.
7. All loop cable ends shall be labelled with Helagrip markers (HG2-5) or equivalent, with Start (S), Finish (F) and numbered as per the details shown elsewhere in the documents.
8. All feeder cables shall be labelled with Helagrip markers (HG4-9), or equivalent at each end to show the detector number as shown in the documents.
9. Fit retaining wedges at 300-400mm spacing to ensure loop cable does not move while sealant is applied. The wedge material to be resilient and impervious to water.
10. Slots shall be cut in the pavement surface using
 - (a) for asphalt surface, a water-cooled diamond-tipped blade, and
 - (b) or a spray sealed surface, a carborundum blade used dry.
11. The loop shall be sealed in the slots using slot sealant approved by Engineering and Technology Branch.
12. The number of turns for loops shall be:
 - Rectangular - 4 turns clockwise
 - Quadrupole - 3 turns clockwise
 For feeder cable lengths in excess of 250m, a 1% variation check of inductance is required to determine if another loop turn is needed.
13. Wiring rules
 - a. Mark 'S' at start end of cable.
 - b. Always lay loop to ensure adjacent loops are wound as shown above.
 - c. Always change direction at the center (longitudinal) cut to make a 'figure 8' pattern for Quadrupole loops.
 - d. Mark 'F' at finish end of cable.
14. For all new pavements, only pre-formed loops shall be used. Preformed loops shall be installed prior to laying the wearing surface.
15. Item 102 is indicative only. Use larger diameter conduit if required to cater for additional cables.

ASSOCIATED DEPARTMENTAL DOCUMENTS:

- Standard Drawings Specifications
- Manual of Uniform Traffic Control Devices (MUTCD) - Part 14 Traffic Signals
- Traffic Road Use Manual (TRUM) - Volume 4 Part 5 Configuration and Placement of Vehicle Detection Sensors

REFERENCED DOCUMENTS:

- Standard Drawings:
 - 1149 Traffic Signals/Road Lighting/ITS - Installation of Underground Electrical and Communications Conduit
 - 1314 Traffic Signals/Road Lighting - Cable Jointing Pit Drainage Details
 - 1425 Traffic Signals - Detector Loops Placement Details
 - 1699 Traffic Signals/Road Lighting/ITS - Parts List
 - 1702 ITS - Detector Loops Motorway Management Placement Details

Departmental Specifications:
MRTS93 Traffic Signals

Australian Standards:
AS/NZS 2276 Cables for Traffic Signal Installations

Department of Transport and Main Roads			
TRAFFIC SIGNALS			
DETECTOR LOOPS INSTALLATION DETAILS		A3	Standard Drawing No
		Not to Scale	1424
			Date 3/19
A	B	C	D
E	F	G	