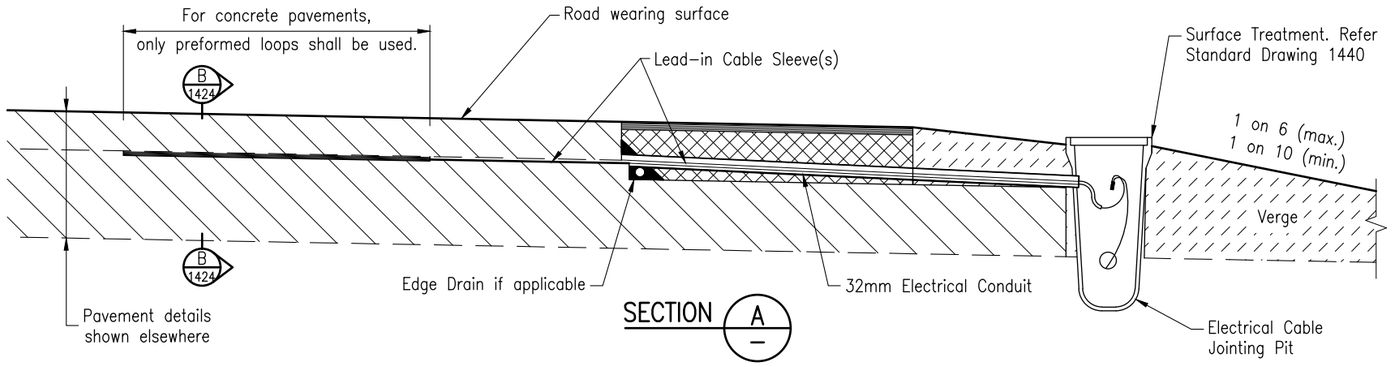
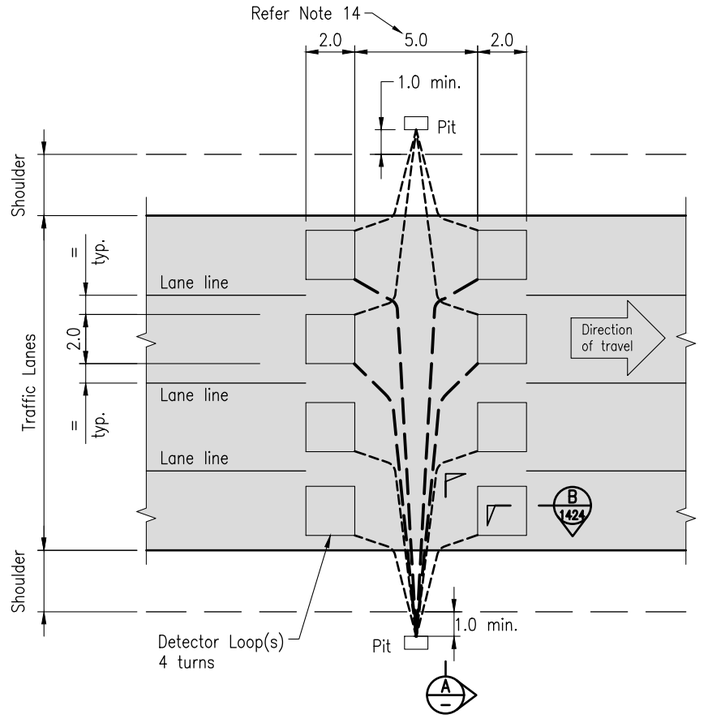
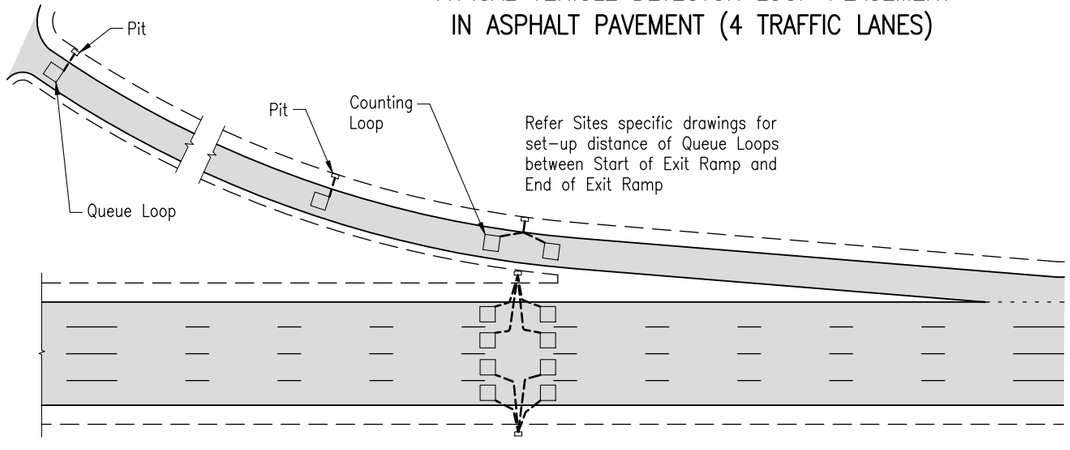


LOOPS INSTALLED IN PAVEMENT

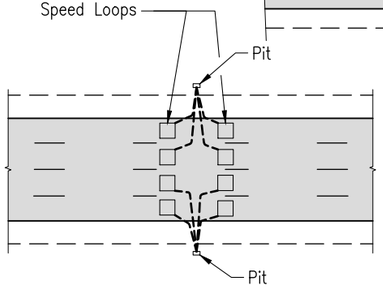


TYPICAL VEHICLE DETECTOR LOOP PLACEMENT IN ASPHALT PAVEMENT (4 TRAFFIC LANES)

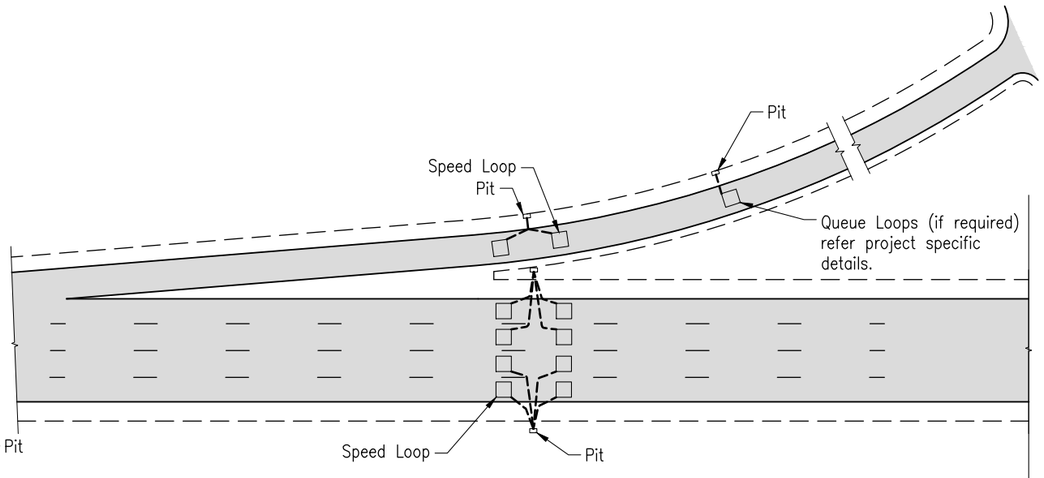


INSTALLATION OF CONDUITS AND PITS IS THE RESPONSIBILITY OF THE LICENSED ELECTRICAL CONTRACTOR

VEHICLE DETECTOR LOOP LOCATION NEAR ENTRY RAMP



VEHICLE DETECTOR LOOP LOCATION THROUGH CARRIAGEWAY



VEHICLE DETECTOR LOOP LOCATION NEAR EXIT RAMP

NOTES:

1. Loops are to be preformed or square (measuring 2 x 2 supplied with 5 turns of No. 16 gauge).
2. Preformed loops to be assembled, joined and tested prior to delivery at site. Cores to be continuous – jointing of cores is unacceptable.
3. The individual loop cores to be insulated individually and encapsulated within a flexible sleeve constructed from polypropylene, polyethylene, XPLE or other suitable material approved by ITS and Electrical Technology Section.
4. Lead–in and loop to be one continuous cable with no joins. Lead–in to be insulated individually, twisted together at approximately 4 turns per 100mm and encapsulated within a flexible sleeve.
5. Detector loops are to be installed and sealed into slots cut into the top of a concrete subbase before overlay of asphalt.
6. Slots for the preformed loops to be cut using conventional loop cutting or milling type equipment. Under no circumstances percussion type equipment is to be used to form the slots.
7. Refer to Standard Drawing 1424 for guidance on slot cutting.
8. Refer to Standard Drawing 1424 for loop sealant guidelines.
9. All loop feeders to be returned to the cable pit in the footpath (or the median of minimum width of 2). Length of lead–ins to be kept to a minimum to extend 600mm to 1000mm past the top of the pit. Loops in the two lanes closest to the median in a four or more lane approach may be returned to a cable pit in the median.
10. Refer to Standard Drawing 1424 for cable jointing requirements.
11. Loops in asphalt pavement to be installed to MRTS93 in dense grade with open grade cover.
12. For all new pavements, only pre–formed loops shall be used. Preformed loops shall be installed prior to laying the wearing surface.
13. For section B, refer Standard Drawing 1424.
14. Distance between loops may vary as determined by concrete joints. For loop configuration, refer to Standard Drawing 1424.
15. Dimensions are in metres unless shown otherwise

ASSOCIATED DEPARTMENTAL DOCUMENTS:
- Manual of Uniform Traffic Control Devices (MUTCD)
  – Part 14 Traffic Signals
- Traffic and Road Use Management (TRUM)
  – Volume 4 Part 5 Configuration and Placement of Traffic Sensors

REFERENCED DOCUMENTS:
Departmental Standard Drawings:
- 1424 Traffic Signals – Detector Loops Installation Details
- 1425 Traffic Signals – Detector Loops Placement Details
- 1440 Traffic Signals/Road Lighting – Cable Jointing Pit Rectangular Concrete Surround

Departmental Standard Specifications:
- MRTS93 Traffic Signals

Department of Transport and Main Roads

ITS

DETECTOR LOOPS
MOTORWAY MANAGEMENT
PLACEMENT DETAILS

Queensland Government

A3
Not to Scale

Standard Drawing No
1702
Date 5/2026

A | B | C | D