

Pavement Reinstatement Manual

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1 General

- 1.1 This manual provides details of the pavement that must be reinstated when an existing pavement on a road under the care, control, and management of the Commissioner of Highways is excavated.
- 1.2 This manual is not intended to be used as a standalone document and should be read in conjunction with the relevant DIT Master Specifications, including (but not limited to) RD-PV-C6 and the Specification for Works on Roads Carried Out for Organisations other than the Commissioner of Highways.
- 1.3 The information contained in this document has been collected for internal use by the department and is provided herein as an information resource only. It is not a substitute for independent professional advice and users should exercise their own skill, care, and judgement with respect to the use of the material.
- 1.4 Whilst all reasonable care has been taken in its preparation, the State of South Australia does not guarantee, and accepts no legal liability arising from or connected to, the accuracy, reliability, currency, suitability, or completeness of the material.

2 Design of Pavement Reinstatements

Overview

- 2.1 As an absolute minimum, the design of pavement reinstatements should consider:
 - a) the surfacing type;
 - b) the traffic volume; and
 - c) the extent of surfacing reinstatement.

Selection of Surfacing Type

- 2.2 The surfacing type selected for the proposed pavement reinstatement shall match the surfacing of the existing pavement adjacent to the reinstatement site.
- 2.3 Examples of surfacing types include (but are not limited to):
 - a) Spray Seal;
 - b) Asphalt;
 - c) Concrete Slab;
 - d) Segmental Pavers (typically not approved for use on DIT roads); or
 - e) Unsealed.
- 2.4 Spray Seals shall be designed and constructed in accordance with the “*Sprayed Seal Surfacing*” and “*Sprayed Seal Considerations*” Sections of DIT Master Specification RD-PV-D1.

Estimation of Traffic Volumes

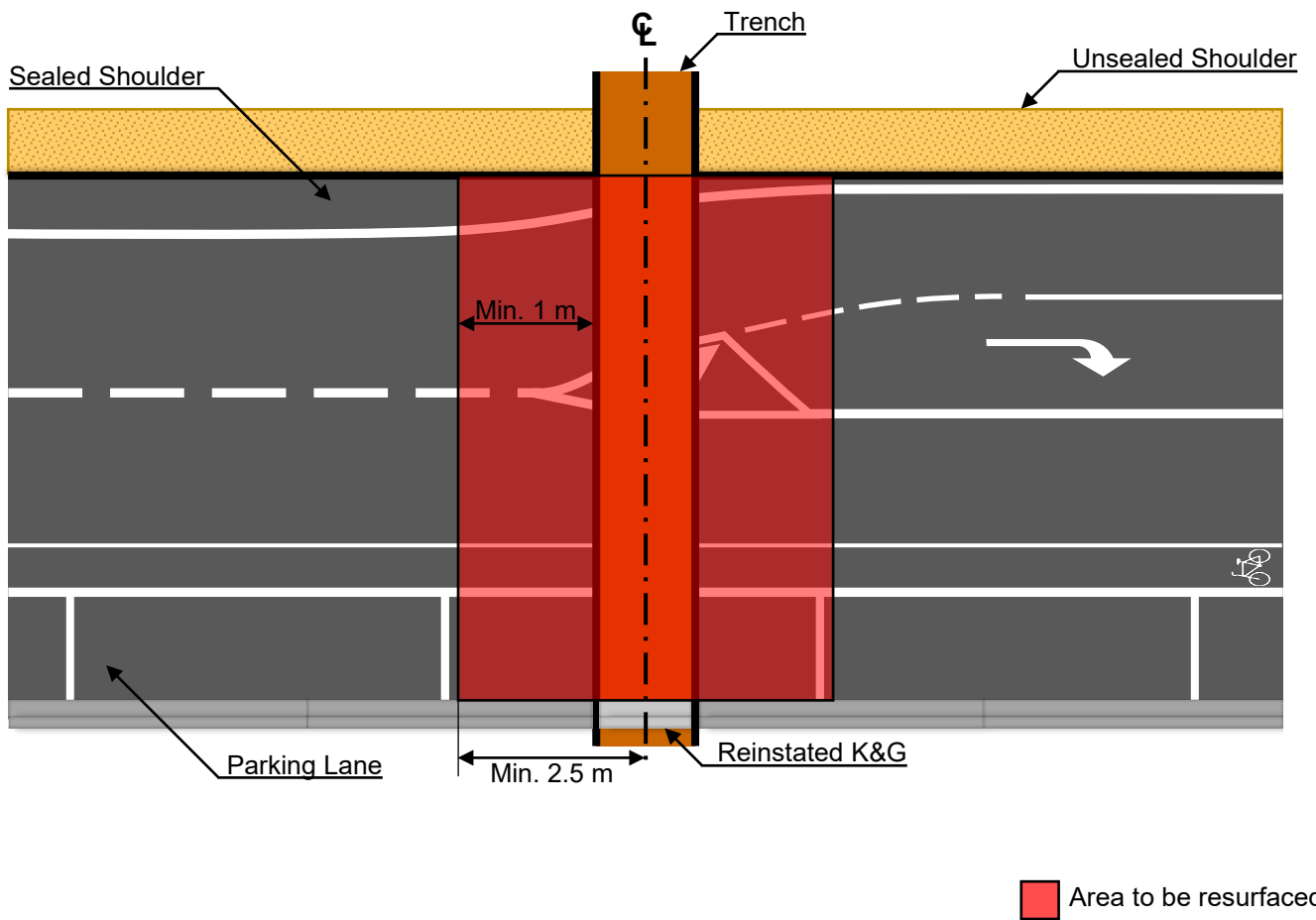
- 2.5 Unless otherwise directed by DIT, traffic volumes to inform pavement reinstatement requirements shall be estimated in accordance with the guidance on the DIT website (https://dit.sa.gov.au/traffic_volumes).

Extent of Surfacing Reinstatement

- 2.6 The extent of surfacing reinstatement shall be assessed on a per-lane basis.
- 2.7 Longitudinal joints shall run parallel to the traffic lanes with no diagonal, skewed, or oblique sections.
- 2.8 Longitudinal joints shall not be located within any traffic lane (including bike lanes) unless prior approval is obtained from DIT.
- 2.9 Transverse joints shall be perpendicular to the traffic lanes with no diagonal, skewed, or oblique sections.
- 2.10 Joints must not be located in wheel paths unless unavoidable. Where unavoidable, joints in wheel paths must be detailed appropriately. Such details can include stepping layer terminations and / or using reinforcing geofabrics and geogrids, as appropriate to the pavement configurations and materials, support conditions, traffic loads, project scope and other factors.
- 2.11 Surfacing reinstatement for trenches which cross the road shall extend, along the traffic lanes, a minimum of:
- a) 2.5 m from the centreline of the service trench; and
 - b) 1 m from the edge of the service trench.
- 2.12 Surfacing reinstatement for trenches which run along the road shall extend for the full width of all traffic lanes which overlay the service trench.

2.13 A diagram of the minimum surfacing reinstatement extents for perpendicular trenches is provided in Figure 2-1.

Figure 2-1 Minimum surfacing reinstatement extents for perpendicular trenches (not to scale)



2.14 Diagrams of the minimum surfacing reinstatement extents for oblique trenches are provided in Figure 2-2 and Figure 2-3.

Figure 2-2 Minimum surfacing reinstatement extents for oblique trenches (from Centre of Trench) (not to scale)

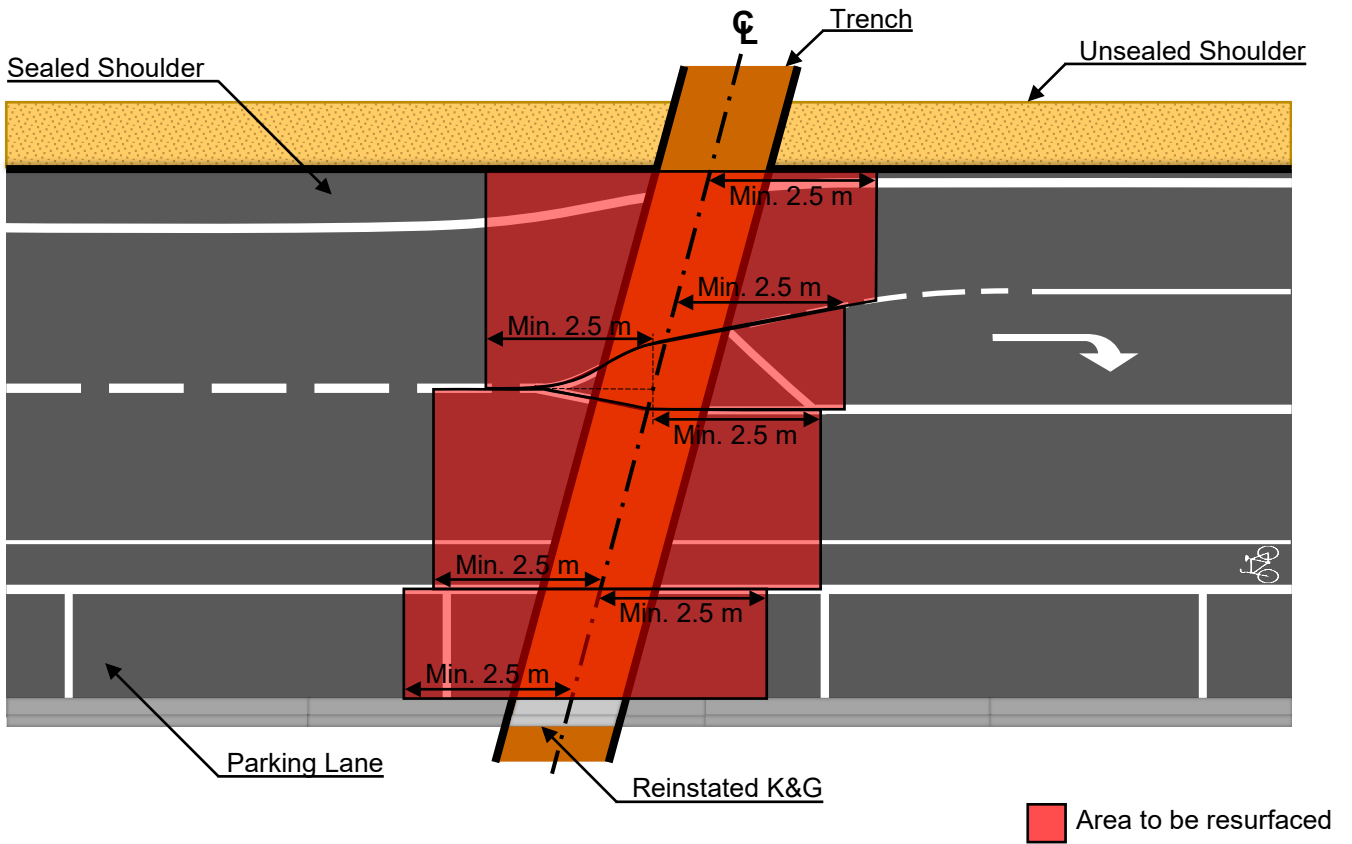
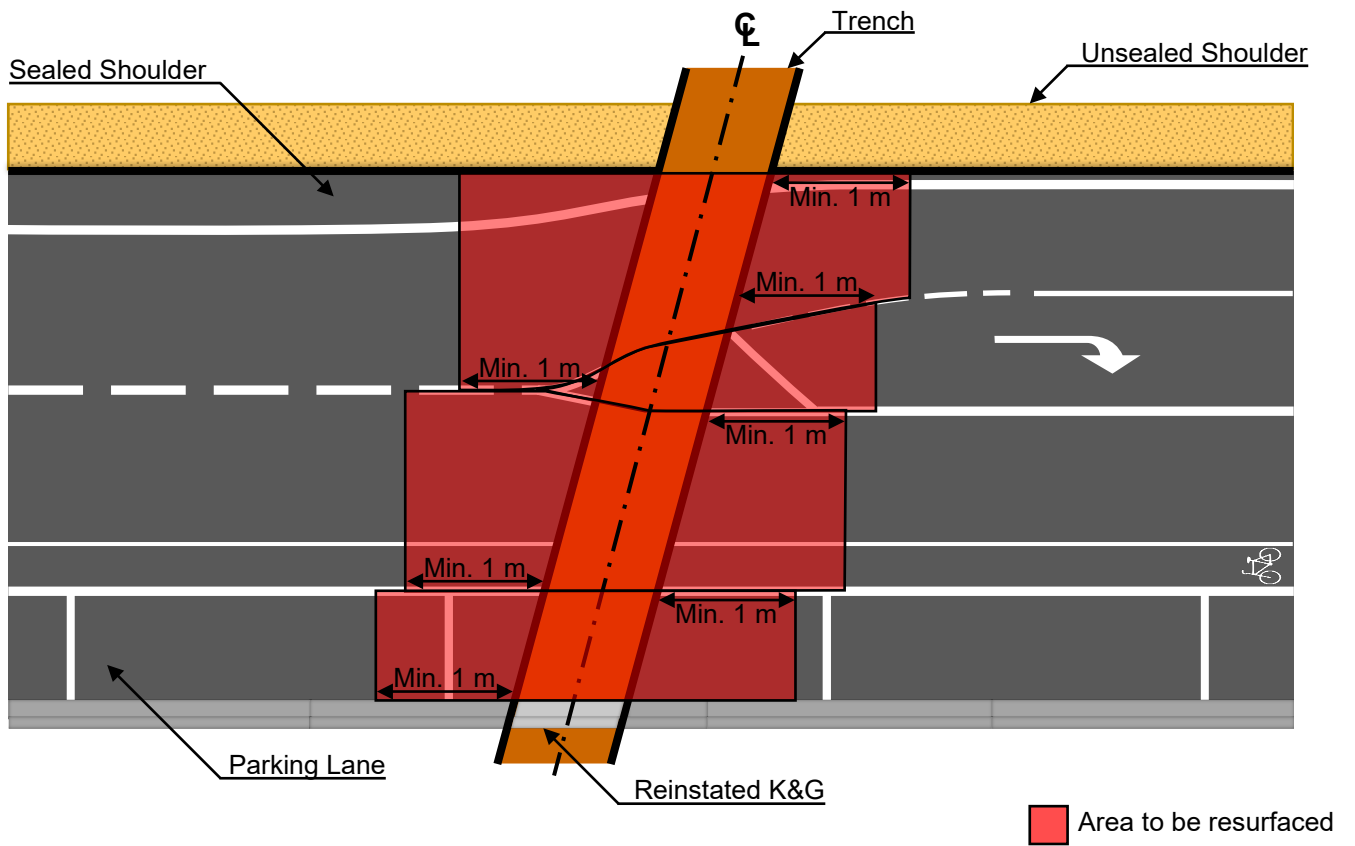
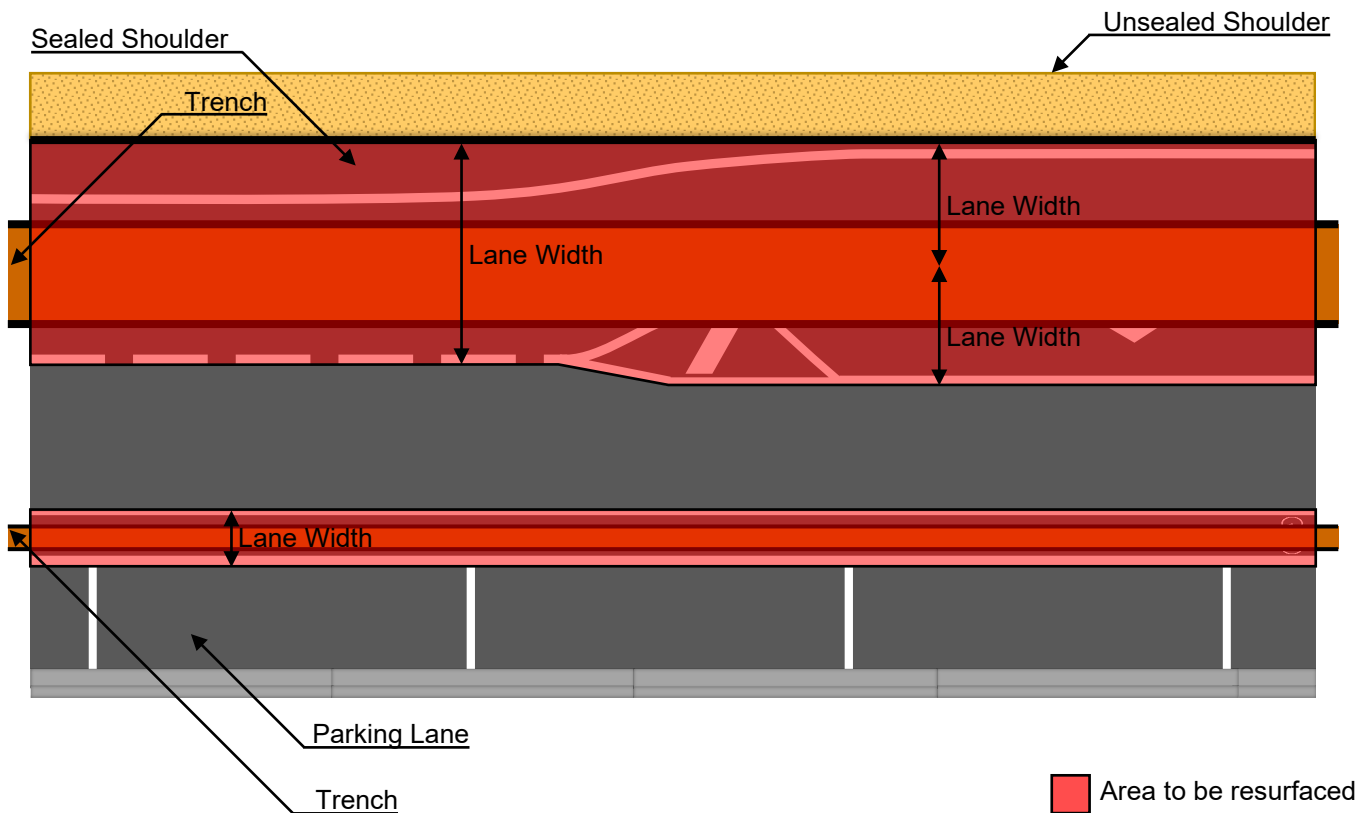


Figure 2-3 Minimum surfacing reinstatement extents for oblique trenches (from Edge of Trench) (not to scale)



2.15 A diagram of the minimum surfacing reinstatement extents for parallel trenches is provided in Figure 2-4.

Figure 2-4 Minimum surfacing reinstatement extents for parallel trenches (not to scale)



3 Typical Pavement Reinstatement Configuration Diagrams

3.1 The following notes shall apply to all Figures within Clause 3:

- a) Diagrams are not to scale;
- b) All dimensions are in millimetres, unless otherwise specified;
- c) Layer thicknesses are the final compacted thickness, unless otherwise specified;
- d) Where pavement options are given, the actual product will be advised by the DIT Project Manager;
- e) The wearing course of sealed roads shall extend either side of the excavated trench in accordance with the “*Extent of Surfacing Reinstatement*” Section from Clause 2 of this manual;
- f) For reinstatement configurations with asphalt basecourse layers, consideration should be given to stepping the joint in accordance with the DIT Standard Pavement Joint Details (available from: https://www.dit.sa.gov.au/standards/standards_and_guidelines);

- g) For sealed roads, the outer edge of the wearing course shall be saw cut;
- h) For sealed roads, these reinstatement requirements apply to the full width of the sealed carriageway (including bike lanes and sealed shoulders);
- i) For longitudinal trenches where the trench is solely located within the sealed shoulder, the appropriate lightly trafficked road configuration may be approved by the DIT Project Manager, subject to the considerations in Clauses 8.21 and 8.23 of RD-PV-D1;
- j) Where unsealed shoulders are present on a sealed road, the unsealed shoulder configuration remains applicable;
- k) For asphalt layers, a tack coat shall be evenly applied to the base and sides of the excavation. A tack coat is not required between individual asphalt layers if a hot bond is achieved;
- l) Spray rates are nominal values only and may vary due to stone ALD, surface texture, weather conditions, etc. Rates are to be verified by the Superintendent prior to application;
- m) Any topstones, chambers, service pits, etc. shall be installed and / or reinstated to a flat and smooth surface to avoid noise and vibration by traversed vehicles;
- n) Where the embedment fill is aggregate, geotextile separation required below the backfill;
- o) The Embedment Zone shall be constructed in accordance with Conduit or Service requirements, including minimum overlay and bedding thicknesses; and
- p) Except for DIT assets (e.g. lighting conduit) or stormwater drainage, the depth of the top of the conduit or service shall be a minimum of 1 m below the surface. Where this minimum depth requirement cannot be achieved, further guidance must be sought from the Principal.

Roads with Spray Seal Surfacing

Figure 3-1 Pavement Reinstatement Configuration for Lightly Trafficked Roads with a Spray Seal Surface (AADT ≤ 10,000 vehicles per day)

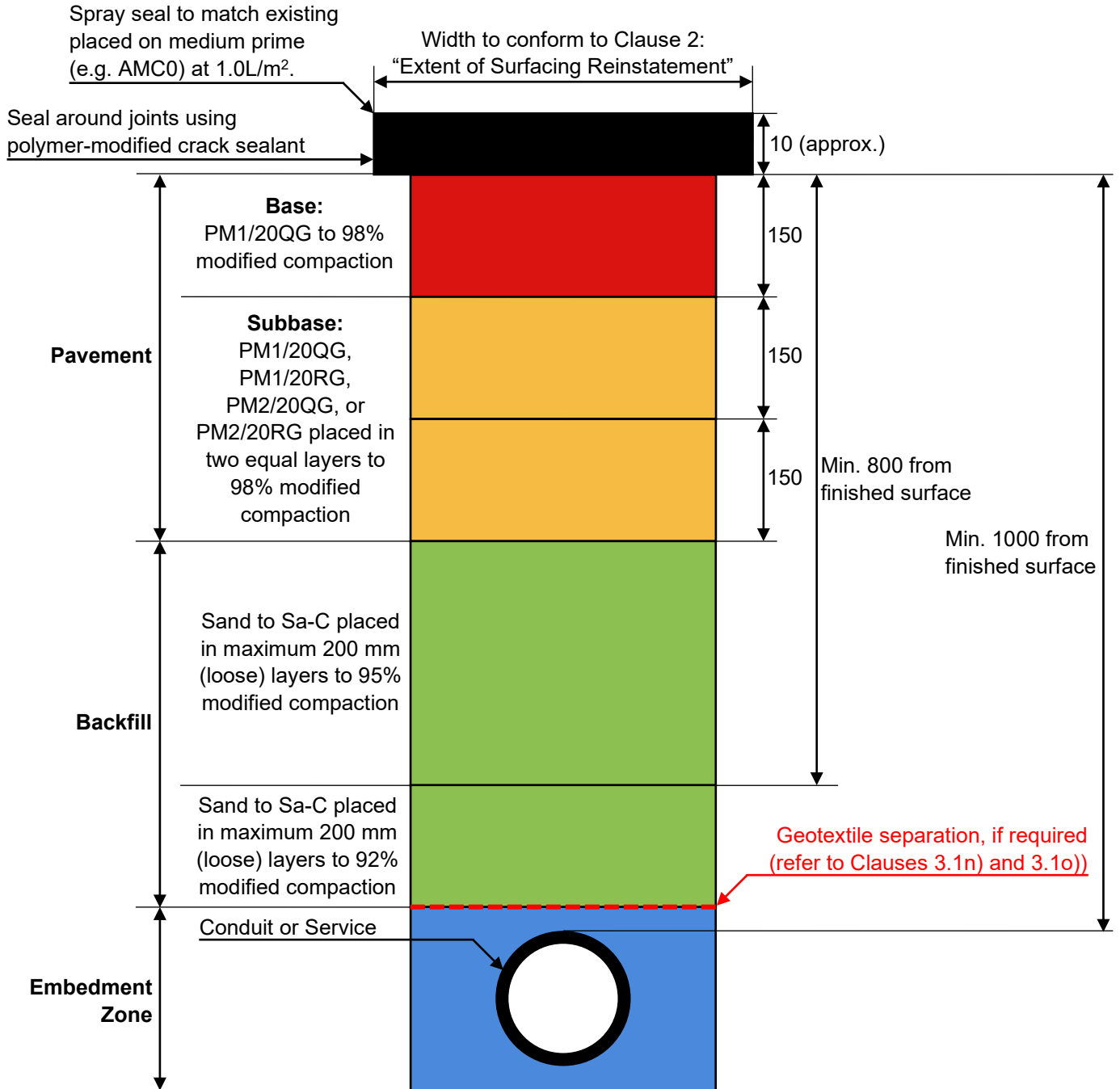
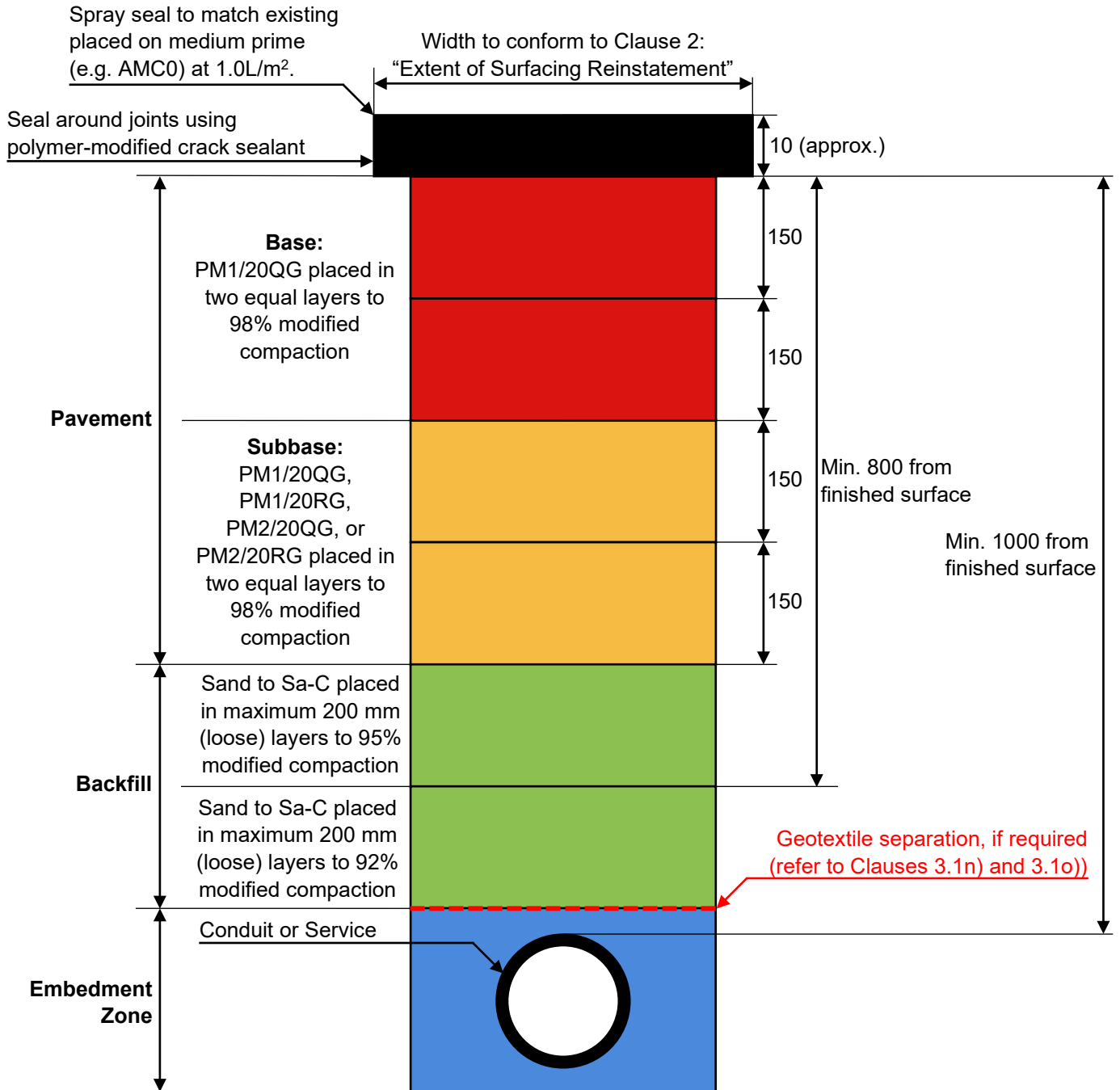


Figure 3-2 Pavement Reinstatement Configuration for Moderately to Heavily Trafficked Roads with a Spray Seal Surface (AADT > 10,000 vehicles per day)



Roads with Asphalt Surfacing

Figure 3-3 Pavement Reinstatement Configuration for Lightly Trafficked Roads with an Asphalt Surface (AADT ≤ 2,000 vehicles per day)

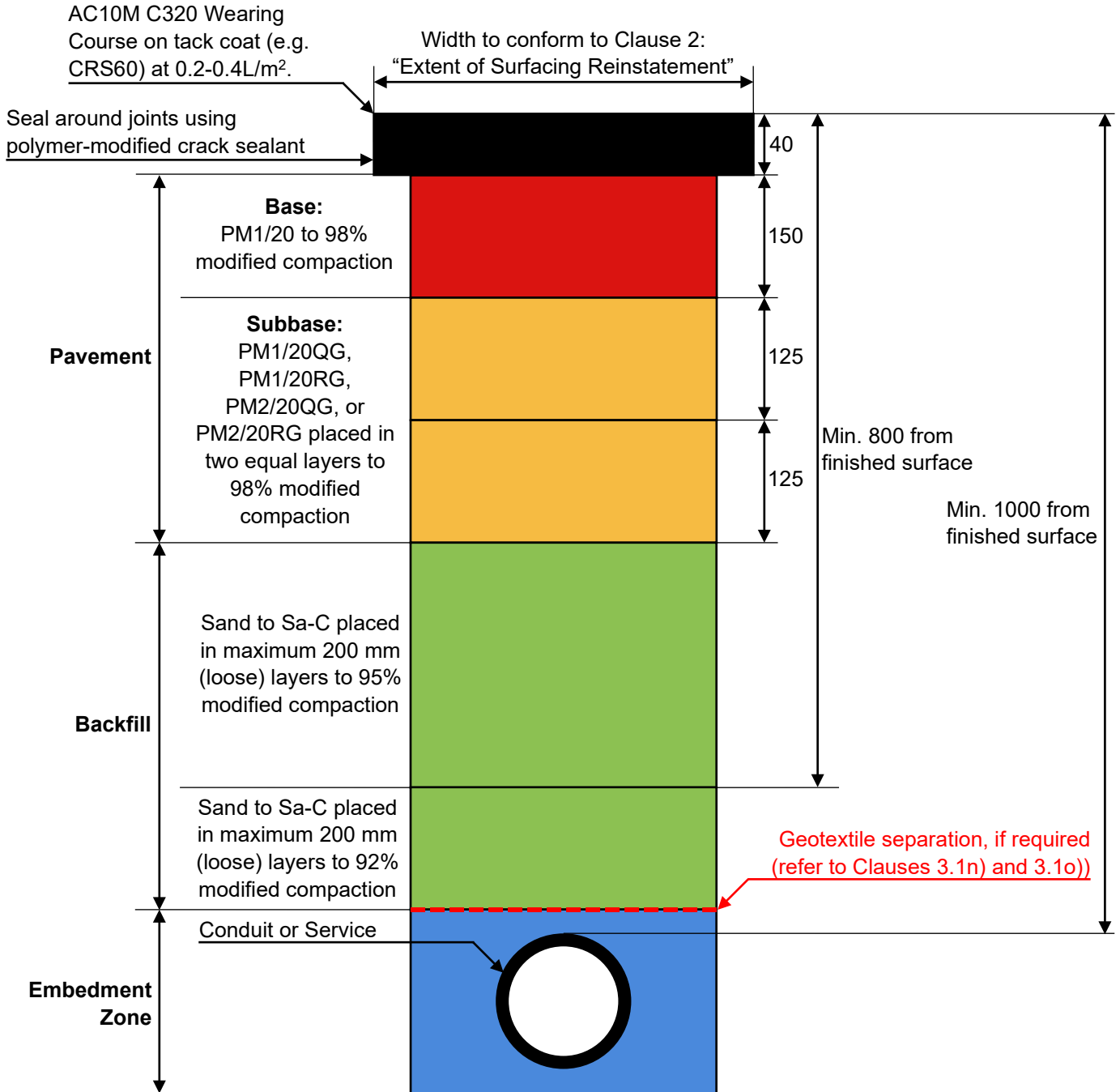


Figure 3-4 Pavement Reinstatement Configuration for Moderately Trafficked Roads with an Asphalt Surface (2,000 < AADT < 20,000 vehicles per day)

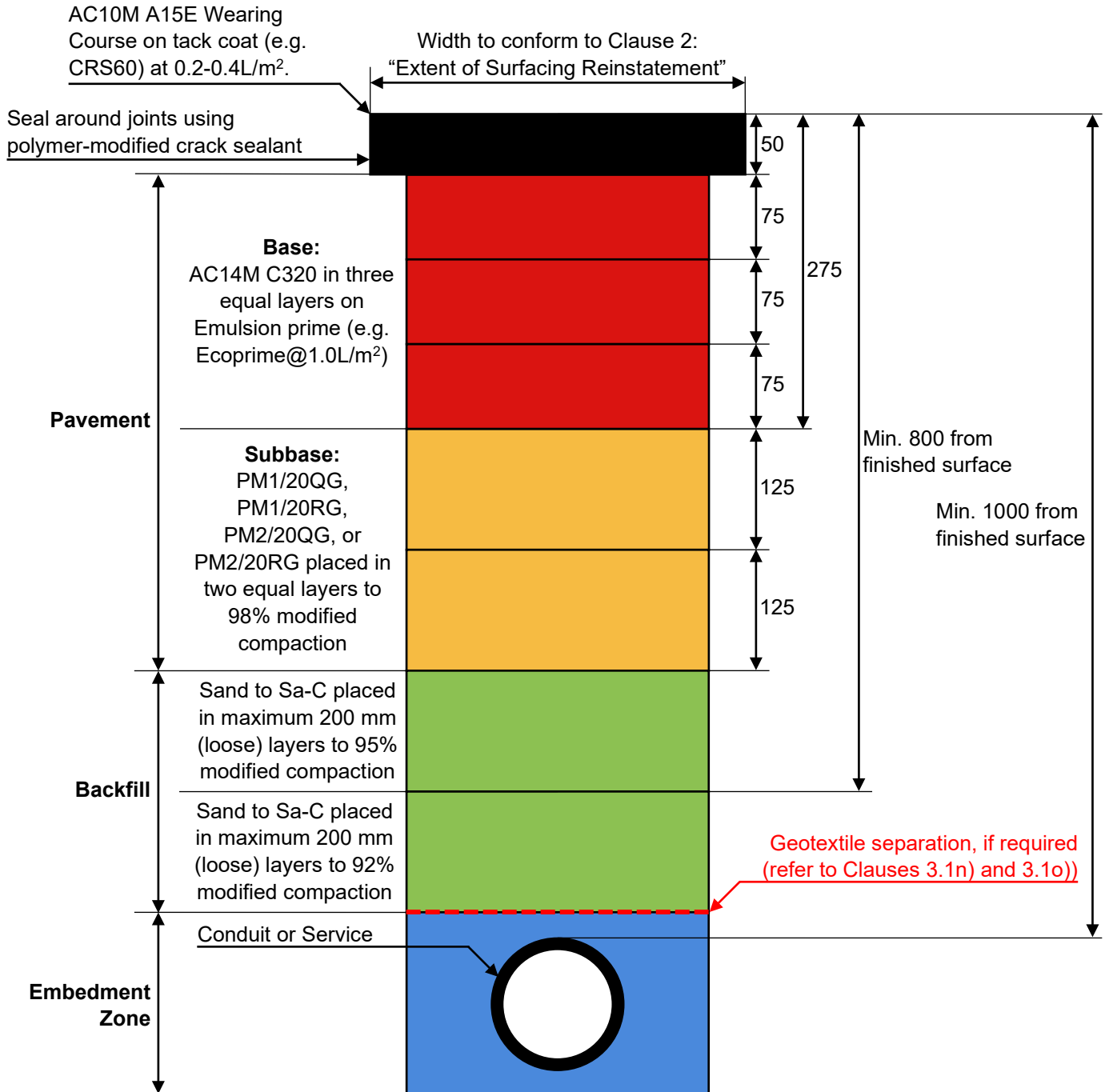
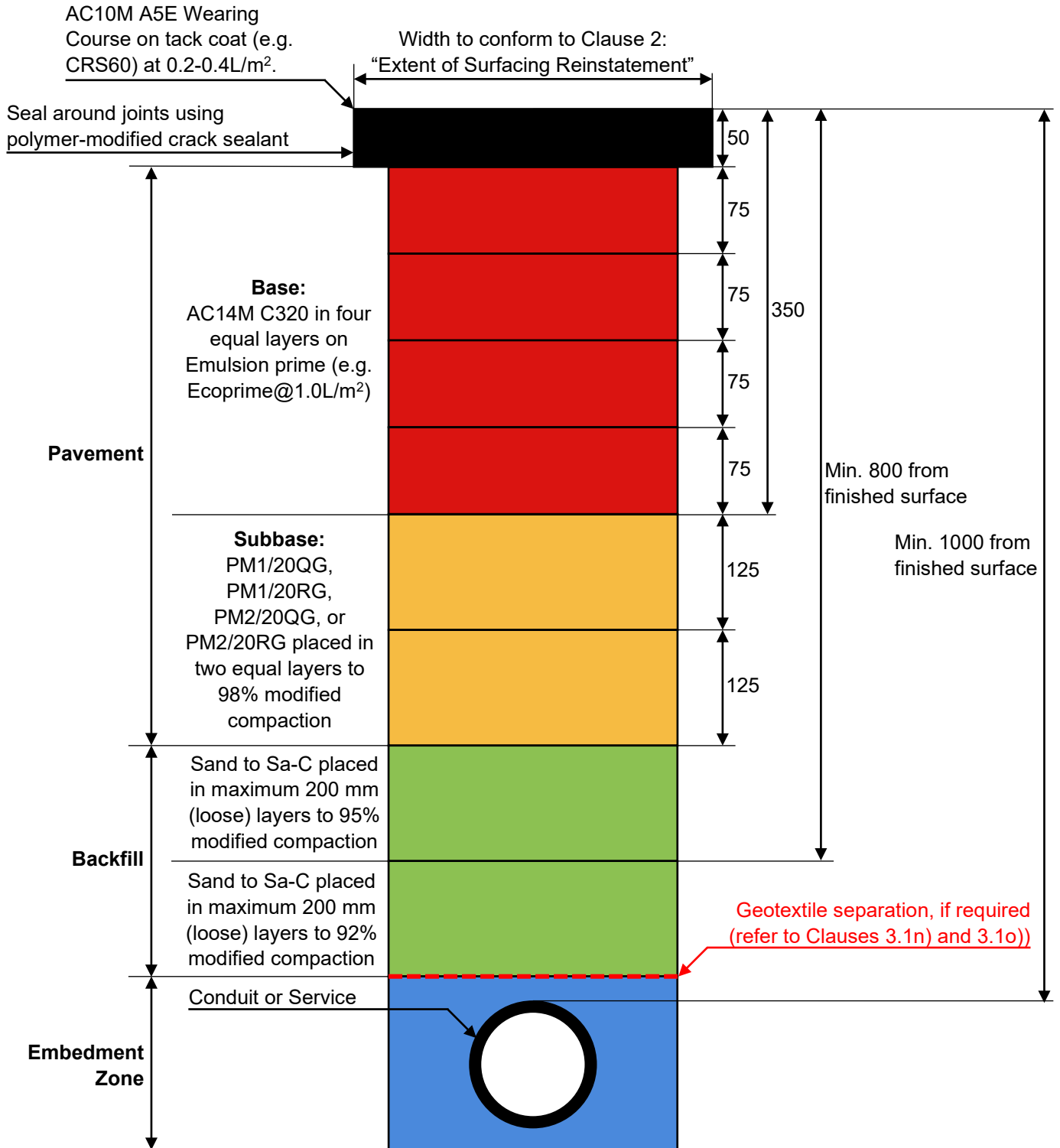


Figure 3-5 Pavement Reinstatement Configuration for Heavily Trafficked Roads with an Asphalt Surface (AADT ≥ 20,000 vehicles per day)



Unsealed Roads and Unsealed Shoulders

Figure 3-6 Pavement Reinstatement Configuration for Unsealed Roads and Unsealed Shoulders

