



8510 Raised Safety Platforms

REVISION 16/01/2024

8510.1 Introduction

This supplementary requirement applies to the supply and installation of raised safety platforms, as detailed in the project drawings. The proposed product and installation procedure are to be confirmed with the Superintendent.

8510.1.1 Definition of Terms

This section describes any term which are specific to this specification or requires clarification due to an ambiguous understanding.

The terms used in this Technical Specification shall be as defined in Clause 2 of MRTS01 *Introduction to Technical Specifications*. Additional terms used in this Technical Specification are defined in the Table below.

Term	Definition
Raised safety Platforms	Defined as a proprietary product of raised elongated sections manufactured from recycled material (usually rubber) which can be utilised for the purpose of reducing speed.

8510.2 Referenced Documents

This supplementary specification shall be read in conjunction with the following:

- MRS01 and MRTS01 *“Introduction to Technical Specifications”*;
- MRS05 and MRTS05 *“Unbound Pavement”*
- MRS45 and MRTS45 *“Road Surface Delineation”*;
- MRS70 and MRTS70 *“Concrete”*
- MRs14 & MRTS14 *“Road Furniture”*
- MRS11,12,20,21,22 & MRTS11,12,20,21,22 as applicable for seal treatment
- MRS30 & MRTS30 *“Asphalt Pavements”*
- Austroads Guide to Traffic Management Part 8: Local Area Traffic Management
- MRC Standard Drawing A3-08415 *“Standard Typical LATM Devices”*
- Preferred supplier’s / manufacturer’s specifications; and
- the project Drawings.

8510.3 Description of Work

Work items incorporated by this supplementary specification are identified in Section 8510.6 and 8510.7 with individual activities/tasks for measurement and payment sourced from the Bill of Quantities and listed in MRC Supplementary Specification Annexure 8510_1Speed Cushions Section 1



8510.4 Quality Systems Requirements

8510.4.1 Std Test Methods (Testing Regime)

The following minimum testing regime applies to this specification:

Unless otherwise stated the manufacturer certification of the speed cushions shall form the basis of the requirements.

Concrete, pavement, and seal testing shall be carried out as per the relevant MRTS Specification

8509.4.2 Hold Points, Witness Points and Milestones

The following table represents the minimum inspection requirements for this specification;

Activity	Inspection Type	When
Product Type proposed for use, Construction Procedure and Traffic Management Plan (with TGS's) and other submissions as required by Clause 8508.5	Milestone	4 Weeks prior to works commencing
Seal design (as required)	Hold Point	14 days prior to pavement proof roll
Inspection of materials and documentation	Hold Point	As delivered to site
Base course proof roll (as required)	Hold Point	After compaction and trimming
Pavement seal (as required)	Hold Point	Prior to sealing of pavement
Asphalt works (as required)	Witness point	After primer seal has been carried out and approval to proceed given
Concrete prepour inspection of formwork and reinforcing (as required)	Hold Point	Prior to concrete pour proceeding
Approval to strip formwork (as required)	Hold Point	After 70% strength gain
Post concrete pour inspection for finish and geometric compliance (as required)	Hold Point	After formwork stripping has occurred and prior to installation of flexible kerbing installation
Prepare surface to manufacturers specification	Witness Point	Prior to spot marking exact location of the flexible kerb
Layout survey through spot marking surface	Hold Point	During site layout survey prior to works commencing.
Installation of flexible kerb as required by design drawings and Manufacturers Specification and procedure	Witness Point	After location layout approval by the Superintendent and during installation
Geometric survey for compliance with manufacturers specification and design drawing requirements	Hold Point	At completion of works
Fixings inspection and testing	Hold Point	After manufacturers specified time for fixing and epoxy set



		prior to bungs being installed
Signage and linemarking installation (as required)	Hold Point	Approval to proceed 48 hours after seal works
Works as Executed documentation	Hold Point	4 weeks prior to practical completion being requested.

8508.4.3 Construction Tolerances

Unless noted on the design drawings or otherwise approved by the Superintendent the following construction tolerances shall apply to this Specification;

The construction activity outcome shall not depart from the widths, lengths, heights, and shapes specified by design drawings as applies to this specification;

- Manufacturers dimensions and tolerances for installation of speed cushions
- Horizontal and vertical tolerances of +/- 10mm's (as applies to concrete kerb Clause 18.4 MRTS03)

Tolerances specific to the project are detailed on the design drawings and are included in Clause 2 of MRC Supplementary Specification Annexure 8510_1 Speed Cushions

8510.5 Preliminary

The Contractor is to submit or ensure the following documentation is in place 4 weeks prior to delivery or a prestart is conducted. **(MILESTONE)**:

- Submission of proposed product to be used including profile with manufacturers specification for consideration and approval
- Construction and installation procedure
- Seal design submitted 14 days prior to pavement proof roll inspection (as required)
- Approved traffic management plan and TGS's
- Quality Plan including inspection and test plan

Other requirements unique to the project will be listed in the MRC Supplementary Specification Annexure 8510_1 Speed Cushions **(MILESTONE)**

8510.5.1 Materials

Supply of all materials to site is the responsibility of the Contractor at their cost, where items are Principal supplied the nominated storage site shall be obtained from MRC Supplementary Specification Annexure 8510_1 Speed Cushions Section 3 and shall be the point of supply.

Unless instructed otherwise by the Superintendent existing components to be salvaged and the nominated storage site will be detailed in MRC Supplementary Specification Annexure 8510_1 Speed Cushions Section 4. This will also include any reuse of existing items.

The Contractor shall provide a copy of the manufacturer's specification for the proposed speed cushion to be installed to the Superintendent for approval.

All other materials shall be supplied and used in accordance with the relevant manufacturers specification and requirements.



8510.6 Construction

This section lays out the works operations with more detail based on specific requirements of this supplementary specification. Some activities may appear to include items which are stated within other specifications, the purpose is to reinforce that requirement specific to this supplementary specification.

Specific construction requirements associated with these works is detailed in MRC Supplementary Specification Annexure 8510_1 Speed Cushions Section 5

The construction procedure for the installation of the speed cushions shall be in accordance with the manufacturer's specifications, and the construction procedures shall be submitted to the Superintendent for approval, prior to works commencing.

8510.6.1 Work Operations

Work Operations incorporated in these items include:

a) Work operations included in Clause 2.1.5 of MRS01 "Introduction to Specifications";

b) Supply of all materials;

All materials, plant, and labour required to carry out the works under this Specification is to be supplied by the Contractor, where the speed cushion components and/or fixings are Principal supplied the designated storage site will be the point of supply for the purposes of this Specification.

All items shall be inspected at delivery to site prior to use. Any items which are damaged or do not meet the required specification are not to be used and are to be returned to the supplier. **(HOLD POINT)**

c) Existing speed cushion removal (as required)

The removal of existing speed cushion shall be carried out prior to the surface preparation and spot marking of the new speed cushion where applicable. The Contractors chosen method of removal will be such that any impact on surrounding pavement and environment is minimised.

Unless otherwise approved by the Superintendent all new surface fixings are not to be in the same location/hole as the existing.

Existing speed cushion components and fixings to be salvaged are identified on the design drawings or as directed by the Superintendent. Refer to MRC Supplementary Specification Annexure 8510_1 Speed Cushions for items to be salvaged and the storage site location.

Disposal of any demolished flexible speed cushion components and fixings not identified as requiring storage shall be disposed of by the contractor at their cost to the nearest MRC waste disposal transfer station.

All existing fixings shall be removed with any surface holes being epoxy sealed as approved by the Superintendent. **(WITNESS POINT)**

d) Pavement works (where required)

Where pavement works are required as detailed in the design drawings to accommodate the speed cushion these shall be carried out as per MRTS04 and MRTS05 including testing and inspections.

At the time of the proof roll the pavement is to be presented for inspection by the Superintendent. **(HOLD POINT)**



Finished pavement surface shall be trimmed and finished as required by the design drawings.

Seal design is to be submitted to MRC 14 days prior to pavement proof roll being requested. **(HOLD POINT)**

Seal works are to be carried out as per the relevant MRT Specification and design drawings unless otherwise directed by the Superintendent, inspection of surface by the Superintendent prior to seal works commencing shall be carried out. **(HOLD POINT)**

Where asphalt is proposed the Superintendent shall give the approval to proceed with after the required time has lapsed after primer seal **(HOLD POINT)**, with the asphalt to be laid and compacted to the requirements of MRTS30 **(WITNESS POINT)**

Line marking and signage shall be carried out in accordance with MRTS14 and the design drawings unless otherwise directed by Superintendent. **(HOLD POINT)**

e) **Concrete works (where required)**

Where concrete works are required to be carried out as detailed in the design drawings or manufacturers specification the works shall conform to MRTS70 including all inspections and testing. **(HOLDPOINT)**

f) Prior to approval to proceed with the installation of the speed cushions the concrete works shall be stripped and presented for the Superintendent to inspect the finish and the geometric tolerances, no works are to be carried out until the Superintendent gives the approval to proceed **(HOLD POINT)**

g) **Preparation of surface according to the manufacturer's requirements;**

New concrete surfaces shall be allowed to cure for 7 days, and asphalt surfaces shall be allowed to cure for 14 dry days prior to installations.

Existing surfaces shall be prepared and cleaned completely of dust, dirt and loose materials to provide debris free surface as per the manufacturer's requirements. **(WITNESS POINT)**

h) **Spotting for placement of the speed cushion;**

The final location of the speed cushion is to be spot marked out on site and shall be inspected and approved by the Superintendent prior to installation activities commencing. **(HOLD POINT)**

i) **Installation of speed cushions, in accordance with details provided on the project drawings, and to the manufacturer's specification and Superintendent's approval;**

Approval to proceed by the Superintendent shall be granted, the installation of the flexible kerb shall be carried out as required by the manufacturers specification, this includes but not limited to drilling holes, cleaning of drill holes, epoxy application, insertion of fixings, and tightening of fixings. **(WITNESS POINT)**

Any works associated with replacement of non-conforming material and/or construction procedures shall be carried out at no cost to the Principal.

j) **Testing for conformity with construction procedures and specifications.**

Prior to the rubber bungs being inserted all fixings are to be tested to ensure they have set solidly and no movement or rotation occurs as required by the manufactures specification. Any segments that move or rotate are to be replaced. **(HOLD POINT)**

A geometric survey of the installations will be required to ensure location of the flexible kerb is as required by the design drawings and manufacturers tolerances. **(HOLD POINT)**

k) **Clean up of Site**



The site is to be cleaned of all debris, waste, and construction materials

8510.7 Post Construction

Items which close out the project, and readies the project for Practical Completion inspection

a) **Collection and submission of all As Constructed data including QA data requirements.**

Contractor is to supply and submit Works as Executed documentation as required by *MRC D20 - Drawings and Documentation* for approval by the Superintendent 4 weeks prior to requesting a practical completion inspection. **(HOLD POINT)**

Certification of works shall be submitted with the “Works as Executed” Plans and documentation.

Format of submitted “As Constructed” documentation shall be compliant with MRC Supplementary Specification 8919.

8510.8 Measurement and Payment

Provision for these works shall be included in the scheduled unit rate for the items shown in Clause 8510.3 of this Supplementary Specification and Annexure. No separate payment will be made for the works specified in this Supplementary Specification. Any works associated with replacement of non-conforming material and/or construction procedures shall be at no cost to the Principal.

Version Control:

Version	Description	Reviewed / Endorsed	Date
1.0	Original issue	R. Mogg	20.01.2022
2.0	Review of Specification	C. Sultana	16.01.2024