

Main Roads Specification

MRS45

Road Surface Delineation

SUPERSEDED

June 09

IMPORTANT INFORMATION

The requirements of this document represent Technical Policy of the department and contain Technical Standards. Compliance with the department's Technical Standards is mandatory for all applications for the design, construction, maintenance and operation of road transport infrastructure in Queensland by or on behalf of the State of Queensland.

This document will be reviewed from time to time as the need arises and in response to improvement suggestions by users. Please send your comments and suggestions to the feedback email given below.

FEEDBACK

Your feedback is welcomed. Please send to mr.techdocs@tmr.qld.gov.au.

COPYRIGHT

© State of Queensland (Department of Transport and Main Roads) 2009

Copyright protects this publication. Except for the purposes permitted by and subject to the conditions prescribed under the Copyright Act, reproduction by any means (including electronic, mechanical, photocopying, microcopying or otherwise) is prohibited without the prior written permission of the department. Enquiries regarding such permission should be directed to the Road & Delivery Performance Division, Queensland Department of Transport and Main Roads.

DISCLAIMER

This publication has been created for use in the design, construction, maintenance and operation of road transport infrastructure in Queensland by or on behalf of the State of Queensland.

Where the publication is used in other than the department's infrastructure projects, the State of Queensland and the department gives no warranties as to the completeness, accuracy or adequacy of the publication or any parts of it and accepts no responsibility or liability upon any basis whatever for anything contained in or omitted from the publication or for the consequences of the use or misuse of the publication or any parts of it.

If the publication or any part of it forms part of a written contract between the State of Queensland and a contractor, this disclaimer applies subject to the express terms of that contract.

June 09

Table of Contents

	Page
1 INTRODUCTION.....	1
2 MEASUREMENT OF WORK	1
2.1 Standard Work Items	1
2.2 Work Operations	2
2.3 Calculation of Quantities	4

SUPERSEDED

SUPERSEDED

Road Surface Delineation

1 INTRODUCTION

This Specification applies to the supply and installation of pavement markings, raised pavement markers and audio tactile line marking (ATLM).

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications* and other specifications as appropriate.

This Specification forms part of the Main Roads Specifications and Technical Standards Manual.

2 MEASUREMENT OF WORK

2.1 Standard Work Items

In accordance with the provisions of Clause 2 of MRS01 *Introduction to Specifications*, the Standard Work Items incorporated in this specification are listed in this specification shall be in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of Measurement
	Line Marking	
6301	Spotting only for longitudinal lines.	m
6311	Dividing line, broken 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].	m
6312	Dividing line, continuous 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].	m
6313	Barrier line, single, 100 mm wide.	m
6314	Barrier line, one direction, 80 mm wide each line, 80 mm lateral gap between lines, 3000 mm line length and 9000 mm gap length on broken side, colour [colour], material [material].	m
6315	Barrier line, both directions, 80 mm wide each line, 80 mm lateral gap between lines, colour [colour], material [material].	m
6316	Lane line, broken, 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].	m
6317	Freeway lane line, broken, 150 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].	m
6318	Lane line, continuous, 100 mm wide, colour [colour], material [material].	m
6319	Edge line, 150 mm wide, colour [colour], material [material].	m
6321	Continuity line, 200 mm wide, colour [colour], material [material].	m
6322	Turn line, 100 mm wide, colour [colour], material [material].	m
6323	Outline, 150 mm wide, colour [colour], material [material].	m
6324	Audio tactile line marking – Edge line, 150 mm wide, 50 mm rib length, 250 mm gap length, 8 mm rib height, [with 1.5 m gap every 20 m for cyclists/ with no gaps for cyclists].	m
6325	Audio tactile line marking – Double barrier line, consisting of two barrier lines each 80 mm wide, 50 mm rib length, 250 mm gap length, 8 mm rib height (applied to both lines).	m

Standard Item No.	Description	Unit of Measurement
6331	Transverse lines (stop lines, holding lines, markings at Stop and Give Way signs, pedestrian crosswalk lines, arrows, shapes, symbols and numerals), colour [colour], material [material].	m ²
6332	Transverse lines (diagonal and chevron markings, parking areas and kerb markings), colour [colour], material [material].	m ²
6341	Removal of existing longitudinal line, [width] mm wide, by [method of removal].	m
6342	Removal of existing transverse lines or shapes, by [method of removal].	m ²
Raised Pavement Markers		
6351	Retroreflective raised pavement markers.	each
6352	Non-retroreflective raised pavement markers.	each
6353	Temporary raised pavement markers.	each
6354	Pavement bars.	each
6355	Removal of existing raised pavement markers, by [method of removal].	each

2.2 Work Operations

Item 6301 Spotting only for longitudinal lines.

Work Operations incorporated in the above item include –

- Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- Supply of all materials;
- Setting out for line spotting;
- Provision of traffic management; and
- Installation of line spotting.

Item 6311 Dividing line, broken 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].

Item 6312 Dividing line, continuous 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].

Item 6313 Barrier line, single, 100 mm wide.

Item 6314 Barrier line, one direction, 80 mm wide each line, 80 mm lateral gap between lines, 3000 mm line length and 9000 mm gap length on broken side, colour [colour], material [material].

Item 6315 Barrier line, both directions, 80 mm wide each line, 80 mm lateral gap between lines, colour [colour], material [material].

Item 6316 Lane line, broken, 100 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].

Item 6317 Freeway lane line, broken, 150 mm wide, [line length] mm line length, [gap length] mm gap length, colour [colour], material [material].

Item 6318 Lane line, continuous, 100 mm wide, colour [colour], material [material].

Item 6319 Edge line, 150 mm wide, colour [colour], material [material].

Item 6321 Continuity line, 200 mm wide, colour [colour], material [material].

Item 6322 Turn line, 100 mm wide, colour [colour], material [material].

Item 6323 Outline, 150 mm wide, colour [colour], material [material].

Work Operations incorporated in the above items include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Supply of all materials;
- c) Setting out for line gap configuration;
- d) Provision of traffic management;
- e) Installation of pavement markings; and
- f) Installation of reflective glass beads.

Item 6324 Audio tactile line marking – Edge line, 150 mm wide, 50 mm rib length, 250 mm gap length, 8 mm rib height, [with 1.50 m gap every 20 m for cyclists/ with no gaps for cyclists].

Item 6325 Audio tactile line marking – Double barrier line, consisting of two barrier lines each 80 mm wide, 50 mm rib length, 250 mm gap length, 8 mm rib height (applied to both lines).

Work Operations incorporated in the above items include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Supply of all materials;
- c) Provision of traffic management; and
- d) Installation of audio tactile profile.

Item 6331 Transverse lines (stop lines, holding lines, markings at Stop and Give Way signs, pedestrian crosswalk lines, arrows, shapes, symbols and numerals), colour [colour], material [material].

Item 6332 Transverse lines (diagonal and chevron markings, parking areas and kerb markings), colour [colour], material [material].

Work Operations incorporated in the above items include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Supply of all materials;
- c) Setting out for pavement markings;
- d) Provision of traffic management;
- e) Spotting of all markings;
- f) Installation of pavement markings; and
- g) Installation of reflective glass beads.

Item 6341 Removal of existing longitudinal line, [width] mm wide, by [method of removal].

Item 6342 Removal of existing transverse lines or shapes, by [method of removal].

Work Operations incorporated in the above items include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Provision of traffic management; and
- c) All work necessary to remove or hide the existing pavement markings by the method stated.

Item 6351 Retroreflective raised pavement markers.

Item 6352 Non-retroreflective raised pavement markers.

Item 6353 Temporary raised pavement markers.

Item 6354 Pavement bars.

Work Operations incorporated in the above items include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Supply of all materials;
- c) Provision of traffic management; and
- d) Installation of pavement markers and pavement bars.

Item 6355 Removal of existing raised pavement markers, by [method of removal].

Work Operations incorporated in the above item include –

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*;
- b) Provision of traffic management; and
- c) All work necessary to remove the existing raised pavement markers by the method stated.

2.3 Calculation of Quantities

The length of longitudinal lines and spotting shall be calculated as the overall length of pavement surface subject to application of longitudinal line or spotting, inclusive of gaps for broken lines and spotting.

The area of transverse lines shall be calculated as the overall surface area of pavement actually covered by marking material, exclusive of gaps.

SUPERSEDED