

# Main Roads Specification

**MRS39**

## **Lean Mix Concrete Sub-base for Pavements**

SUPERSEDED

**June 09**

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# Table of Contents

	Page
1 INTRODUCTION.....	1
2 MEASUREMENT OF WORK.....	1
2.1 General.....	1
2.2 Standard Work Items.....	1
2.3 Work Operations.....	1

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# Lean Mix Concrete Sub-base for Pavements

## 1 INTRODUCTION

This specification applies to the construction of concrete road pavements.

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 General

The standard work items for work carried out in accordance with this specification are listed in Clause 2.2.

Work operations common to all Work Items include those given in MRS01 *Introduction to Specifications* and those given in the next two paragraphs in this Clause. Work operations that are particular to a Work Item are given in Clause 2.3.

Work operations include the furnishing and cost of all labour, plant, materials, overheads, testing, establishment and disestablishment, royalties, permit fees, rent, hire, lease and all other costs required to complete the Works.

Work operations also include the removal from the site and safe disposal of work and materials which do not conform and are not accepted for a reduced level of service, and their replacement with work and materials which conform to the requirements of the documents or Drawings. Payment shall be made only for conforming work and such payments shall be as set out in MRS01 *Introduction to Specifications*. A reduced payment may be made for work which is accepted for a reduced level of service.

All requirements in the specification are the responsibility of the Contractor and are a cost to the Contractor unless specifically stated otherwise.

### 2.2 Standard Work Items

The standard work items covered by this specification are listed in Table 2.2.

**Table 2.2 – Standard Work Items**

Standard Work Item No.	Description	Unit of Measurement
4401	Trim Substrate to Tolerance.	m <sup>2</sup>
4402	Supply of Additional Materials.	m <sup>3</sup>
4403	Supply and Place Lean Mix Concrete Sub-base.	m <sup>3</sup>
4404	Finish and Cure Lean Mix Sub-base.	m <sup>2</sup>
4405	Supply and Place Bitumen De-bonding Treatment.	m <sup>2</sup>
4406	Supply and Place Subgrade Beams.	m <sup>3</sup>

### 2.3 Work Operations

#### Item 4401 Trim Substrate to Tolerance.

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Placing and compacting additional material if required;
- b) Trimming the layer beneath the lean mix sub-base to the tolerance specified in this document;
- c) Removal and disposal of the trimmed material; and
- d) Delivery of the results of all tests and inspections, including monitoring testing, within five working days of the specified time for the test or inspection.

**Item 4402 Supply of Additional Materials.**

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Supply and delivery of additional material;
- b) Provision, calibration and maintenance of laboratory facilities; and
- c) Sampling, testing and quality assurance requirements.

**Item 4403 Supply and Place Lean Mix Concrete Subbase.**

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Supply and storage of raw materials;
- b) Quality assessment of raw materials;
- c) Trial mixing and quality assessment of concrete;
- d) Mixing and delivery of concrete;
- e) Placement and compaction of concrete;
- f) Maintenance of the subgrade and/or lower subgrade and/or working platform and/or controlled subgrade and/or pavement courses;
- g) Provision of all labour and equipment;
- h) Provision, calibration and maintenance of laboratory facilities;
- i) Sampling, testing and quality assurance requirements;
- j) Construction of all joints; and
- k) Delivery of the results of all tests and inspections, including monitoring testing, within five working days of the specified time for the test or inspection.

**Item 4406 Supply and Place Subgrade Beams.**

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Supply and storage of raw materials (including reinforcing steel);
- b) Quality assessment of raw materials;
- c) Trial mixing and quality assessment of concrete;
- d) Mixing and delivery of concrete;
- e) Installation, support and maintenance of reinforcing steel;
- f) Excavation of material from the trench for subgrade beams and use in embankments or disposal as indicated in the Addendum;
- g) Placement and compaction of concrete;
- h) Maintenance of the subgrade and/or lower subgrade and/or working platform and/or controlled subgrade and/or pavement courses;
- i) Provision of all labour and equipment;
- j) Provision, calibration and maintenance of laboratory facilities;
- k) Sampling, testing and quality assurance requirements;
- l) Construction of all joints; and
- m) Delivery of the results of all tests and inspections, including monitoring testing, within five working days of the specified time for the test or inspection.

**Item 4404 Finish and Cure Lean Mix Subbase.**

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Supply, storage and quality assessment of curing compounds;
- b) Finishing and curing of the slab;
- c) Maintenance of the subgrade and/or lower subgrade and/or working platform and/or controlled subgrade and/or pavement courses;
- d) Provision of all labour and equipment;
- e) Provision, calibration and maintenance of laboratory facilities;
- f) Sampling, testing and quality assurance requirements; and
- g) Delivery of the results of all tests and inspections, including monitoring testing, within five working days of the specified time for the test or inspection.

**Item 4405 Supply and Place Bitumen De-Bonding Treatment.**

The Contractor is responsible for all costs associated with carrying out the Works including the following –

- a) Supply, storage and quality assessment of de-bonding treatment materials;
- b) Application of the de-bonding treatment;
- c) Maintenance of the subgrade and/or pavement courses;
- d) Provision of all labour and equipment;
- e) Provision, calibration and maintenance of laboratory facilities;
- f) Sampling, testing and quality assurance requirements; and
- g) Delivery of the results of all tests and inspections, including monitoring testing, within five working days of the specified time for the test or inspection.

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