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Specification (Measurement)

**Transport and Main Roads Specifications
MRS38 Pavement Drains**

October 2016

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1 Introduction

This Specification applies to the supply and construction of pavement drains. Pavement drains are to be used in trafficked areas where new pavements abut old, and in other areas considered appropriate for their use. Pavement drains shall consist of a strip filter drain and backfill (filter) material. The strip filter drain shall consist of a plastic core encased in geotextile.

This specification consists of Clauses 1 and 2 of this MRS38 and all Clauses of MRTS38.

This specification shall be read in conjunction with standard specifications MRS01 *Introduction to Specifications*, MRS50 *Specific Quality System Requirements*, all other specifications as appropriate (including those described in Clause 4 of MRTS38) and the drawings for the works.

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

2 Administration requirements

2.1 Measurement of work

2.1.1 General

The Standard Work Items for work carried out in accordance with this specification are listed in Clause 2.1.2.

Work Operations common to all Work Items include those given in MRS01 *Introduction to Specifications* and those given in the next paragraph of this Clause.

Work Operations 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 for the project. 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.

2.1.2 Standard Work Items

The Standard Work Items covered by this specification are listed in Table 2.1.2.

Table 2.1.2 – Standard Work Items

Standard Work Item No.	Description	Unit of Measurement
Pavement Drains		
2801	Pavement Drain	m
2802	Pavement Drain Outlets	each
2803	Pavement Drain Cleanout Point	each
2804P	Additional Excavation (Provisional Quantity)	m ³
2805P	Additional No Fines Concrete Filter Material (Provisional Quantity)	m ³

2.1.3 Work Operations

Item 2801 Pavement drain

Work operations included in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials including no fines concrete, strip filter (plastic core and geotextile), connections and fittings
- c) quality assessment of materials
- d) provision of all labour and equipment
- e) provision, calibration and maintenance of laboratory facilities
- f) sampling, testing and quality assurance requirements
- g) carrying out all excavations, including excavation of pavement drain trench to the specified depth below the bottom of the working platform
- h) utilising or disposing of excavated material
- i) installing the pavement drain including the strip filter drain (plastic core and geotextile), connections and fixing, and
- j) installing the no fines concrete filter material.

Item 2802 Pavement drain outlets

Work operations included in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply, handling and storage of materials in accordance with the drawings, including fittings, 100 mm unslotted plastic pressure pipe and joining
- c) quality assessment of materials
- d) provision of all labour and equipment
- e) provision, calibration and maintenance of laboratory facilities
- f) sampling, testing and quality assurance requirements
- g) installing collector pipes including all fittings and connections to the strip filter drains
- h) installing the concrete ends at pipe outlets
- i) supplying and installing marker maintenance posts, and
- j) installing galvanised chicken-wire cones / pest-proof flaps to the outlets of drainage pipes.

Item 2803 Pavement drain cleanout point

Work operations included in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply, handling and storage of materials in accordance with the Drawings, including fittings, 100 mm unslotted plastic pressure pipe and joining
- c) quality assessment of materials
- d) provision of all labour and equipment
- e) provision, calibration and maintenance of laboratory facilities
- f) sampling, testing and quality assurance requirements
- g) installing pipe and fittings, including connections to the strip filter drains
- h) installing concrete surrounds
- i) supplying and installing marker maintenance posts, and
- j) installing cleanout point caps.

Item 2804P Additional excavation (provisional quantity)

Work operations included in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply, handling and storage of materials
- c) quality assessment of materials
- d) provision of all labour and equipment
- e) provision, calibration and maintenance of laboratory facilities
- f) sampling, testing and quality assurance requirements
- g) additional excavation of pavement drains where trench depths must be increased to achieve the specified minimum gradient, and
- h) utilising / disposing of excavated material.

Item 2805P Additional no fines concrete filter material (provisional quantity)

Work operations included in the above item include:

- a) Work operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply, handling and storage of materials
- c) quality assessment of materials
- d) provision of all labour and equipment
- e) provision, calibration and maintenance of laboratory facilities
- f) sampling, testing and quality assurance requirements, and
- g) installing additional no fines concrete filter material required to backfill trenches that have been increased in thickness to comply with the minimum specified gradient.

2.2 Calculation of quantities

2.2.1 General

Unless specified in Clause 2.2, quantities shall be calculated in accordance with the provision of *Clause 2.3 of MRS01 Introduction to Specifications*.

2.2.2 Additional excavation and no fines concrete filter material

The dimensions of the additional excavation and no fines concrete filter material shall be as shown in the drawings or as directed by the Administrator to achieve the minimum gradient. The sides of the trench shall be taken as vertical.

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