



8206 CBD-Style Footpath Pavers

REVISION 10/01/2024

8206.1 Introduction

This supplementary specification refers to the supply and installation of unit pavers to footpaths/shared paths designated for the Mackay City Centre Local Plan Area and the Mackay Waterfront PDA. This specification does not cover concrete path works or street tree planting.

8206.2 Referenced Documents

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

- MRS01 *“Introduction to Specifications”*;
- MRTS01 *“Introduction to Technical Specifications”*;
- MRS03 and MRTS03 *“Drainage, Retaining Structures and Embankment Slope Protections”*;
- MRS70 and MRTS70 *“Concrete”*;
- AS 1428.1 – Design for access and mobility – Part 1: General requirements for access – New building work
- AS/NZS 3661.2 – Slip resistance of pedestrian surfaces – Part 2: Guide to the reduction of slip hazards
- AS 4586 – Slip resistance classification of new pedestrian surface materials
- AS 4663 – Slip resistance measurement of existing pedestrian surfaces
- Mackay Regional Council Standard Drawing A3-00989; and A3-00899
- the project Drawings.

8206.3 Description of Work Items

Work items incorporated by this supplementary specification are identified in Section 8206.6 and 8206.7 with individual activities/tasks for measurement and payment sourced from the Bill of Quantities and listed in MRC Supplementary Specification Annexure 8206_1 CBD Style Footpath Pavers Section 1

8206.4 Quality Systems Requirements

8206.4.1 Std Test Methods (Testing Regime)

Unless otherwise approved by the Superintendent the following minimum testing regime applies to this specification:

The minimum test frequencies and minimum numbers of tests shall be as follows:

- Geometric survey of crossfall and longitudinal laying of pavers utilising a straightedge

Where there are additional testing requirements these are included in Clause 2 of MRC Supplementary Specification Annexure 8206_1 CBD – Style Footpath Pavers Annexure

8206.4.2 Hold Points, Witness Points and Milestones

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



Activity	Inspection Type	When
Construction Procedure and other required documents as per 8210.5	Milestone	4 Weeks prior to works commencing
Inspection of delivered items	Hold Point	At delivery time for each item.
Surface clean and moist	Witness Point	Prior to mortar bed being laid
Finished level and alignment of pavers	Witness Point	Prior to grouting of pavers
Approval to commence grouting, pavers are bedded firmly with no movement	Hold Point	After curing has occurred
Pavers cleaned of grout, cement, and blemishes, and approval to seal	Hold Point	Prior to sealing of pavers commences
Pavers are sealed with 3 coats	Witness Point	During sealing process
All areas cleaned and tidied	Hold Point	At completion of works prior to Works execute inspection.
Works as executed documentation submitted and accepted	Hold Point	4 weeks prior to Works as Executed inspection request

8206.4.3 Construction Tolerances

Unless otherwise approved by the Superintendent the following construction tolerances shall apply to this Supplementary Specification;

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

- Pavers are to be laid flush with surrounding surfaces, 0 +/- 3mm tolerance applies vertically to concrete path and back of kerb or 0 +/- 5mm provided the edges have bevelled or rounded edge to reduce the likelihood of tripping
- Pavers are to be laid such that the longitudinal tolerance under a 3 m straightedge is 0 +/- 3mm..

Tolerances specific to the project are detailed on the design drawings and are included in Clause 2 of MRC Supplementary Specification Annexure 8206_1 CBD – Style Footpath Pavers

8206.5 Preliminary

The project design manager shall ensure that the required State government permits have been obtained and are current prior to the issuing of tender documents.

The Contractor is to submit the following documentation 4 weeks prior to commencing work or a prestart is conducted. **(MILESTONE)**:

- Works procedure – all activities and order of construction
- Quality Plan
- Environmental Management Plan

Other preliminary requirements unique to the project will be listed in the MRC Supplementary Specification Annexure 8206_1 CBD-Style Footpath Pavers **(MILESTONE)**

The contractor is to ensure their construction activities are based on the design drawing requirements.

8206.5.1 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 8206_1 CBD-Style Footpath Pavers Section 3 and shall be the point of supply.

All items and materials shall be supplied in accordance with the design drawings and the relevant specification

8206.5.1.2 Unit Pavers

Unless stated on the project Drawings, unit pavers will be a 300 x 300 x 40mm masonry paver. Paver units must have a base colour equal to Australian Standard AS2700 B64 Charcoal with a shot blast finish.

Pavers shall maintain a slip resistance classification in accordance with AS4586 as follows which shall be supported by NATA verified test data in advance of laying Unit Pavers used in situations with grades less than 1 in 14 Wet Pendulum Test Class P4 and Oil-wet inclining platform R11 and for surfaces with grades greater than 1 in 14 Wet Pendulum Test Class P5 and Oil-wet inclining platform R12

8206.5.1.2 Bedding Mortar, Grout, Water Proofing, and Crack Suppression

All waterproofing, slurry coats, screed mortars, paver fixing and grouting materials shall be compatible, from the one manufacturer (*Laticrete* or approved equivalent), and covered by a manufacturer's certificate of compliance. Materials are to be handled, stored, and mixed in strict compliance with the manufacturer's instructions.

8206.5.1.3 Bonding Slurry

A bonding slurry is to be applied at the interface of the insitu concrete base and the bedding mortar, and at the interface of the bedding mortar and the paving.

Where required, slurry bond coat shall be *Laticrete 4237 Admix* gauged with *Laticrete 290 Super Floor and Wall Adhesive*.

8206.5.1.4 Mortar Bed

Paving shall be fully bedded into a mortar bed with a nominal thickness of 25mm. The pavers are to be fully supported by the mortar bed with no air voids in the mortar bed.

Bedding mortar and concrete patching shall be *Laticrete 3701 Latex Admix* gauged with *Laticrete 226 Mortar Mix* (or approved equivalent).

8206.5.1.5 Jointing Material

Paving shall be grouted to the full depth of the paving slab using a non-shrink cementitious grout. Grouted joints shall be between 4 and 6mm for all paver applications.

Pavers shall be grouted using *Laticrete 226 Mortar Mix* gauged with *Laticrete 1776 Grout Enhancer* (or approved equivalent).

Where specified on the project Drawings, crack suppression materials shall be *Laticrete Hydro Ban* waterproof membrane (or approved equivalent).

8206.5.1.6 Sealer

Sealer to completed paving installation shall be *Colour Systems Streetscape Sealer* (or approved equivalent).

8206.6 Construction

8206.6.1 Work Operations

Work operations incorporated in this item will include;



a) **Work operations included in Clause 2.1.5 of MRS01 “Introduction to Standard 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 materials 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 are not to be used and are to be returned to the supplier. **(HOLD POINT)**

c) **Preparation and Mixing**

The bonding slurry should be mixed in accordance with manufacturer’s instructions, and using the following ratio:

- 19 litres *Laticrete 4237 Latex Thin Set Admix*
- 2 x 20kg bags *Laticrete 290 Super Floor & Wall Adhesive*

The mortar bed mix should be mixed in accordance with manufacturer’s instructions, and using the following ratio:

- 10 x 20kg bags *Laticrete 226 Thick Bed Mortar*
- 20 litres *Laticrete 3701 Mortar Admix* (adjust quantity of liquid to obtain proper consistency)

The grout should be mixed in accordance with manufacturer’s instructions, and using the following ratio:

- 6 x 20kg bags *Laticrete 228 Thick Bed Mortar*
- 20 litres *Laticrete 1776 Grout Enhancer*

d) **Carrying out all works to allow the installation of pavers including; sealing of the pavers as required, bedding mortar, joint filling sand, including any cutting of pavers,**

Joints

Expansion joints and control joints shall be installed in accordance with Standard Drawing A3-00989 and TMR Specifications MRTS03 and MRTS70.

Mortar Bed

Sweep clean the concrete base and remove all foreign materials. Prepare mortar and slurry mixes as specified. Dampen concrete base with clean water. **(WITNESS POINT)**

Using a hand broom, apply slurry mix to concrete base evenly and thoroughly (approx. 2mm thick) to an area which will not exceed the extent of paving to be immediately laid. Slurry must be wet to assist with the next step.

Place the screed/mortar bed while the slurry bond coat is still wet and tacky. The plastic mortar shall be rodded and compacted, then struck off to the desired level and finished with a wood float. Only as much mortar shall be laid and spread onto the substrate as can be covered while the mortar bed is still plastic.

Whilst the mortar bed is still fresh, apply a slurry bond coat to the mortar bed, to a nominal thickness of 3mm.

Pavers

The paver shall be then placed and bedded, ensuring it is flush with the surround concrete footpath and top of kerb level. When installing the paver, bond coat shall be trowelled onto the whole back



of each piece with the flat side of the trowel. The paver shall then be set in place, beaten with a mallet and manipulated to ensure 100% full bedding (i.e. full contact of mortar bed and bond coat to the paver and substrate) and a true surface. The paver shall be aligned to show uniform joints and then allowed to set until firm. **(WITNESS POINT)**

Trowel fill any voids with mortar at front edge and/or front corners of the paver. Discard excess mortar. Excess adhesive must be cleaned from the surface of the paver with a wet cloth or sponge while the adhesive is fresh. Do not allow bedding mortar or bond coat to dry on the face of the paver.

On completion of the area, cover paver with hessian sheets and spray with water mist. Allow to remain moist for 12 hours minimum. In areas subject to pedestrian traffic, place wooden boards or similar over pavers for the first 12 hours of curing.

Grouting

Joints may be grouted after a minimum 12 hours of curing. If the mortar and bedding treatment has not achieved the required stiffness, bond or strength within the approved curing period, the Contractor shall not proceed with the grouting until further instruction is received from the Superintendent. **(Hold Point)**

Remove any residual material from within joints prior to commencing the joint filling operation. After preparation of the grout mix, dampen joints with a sponge and apply grout mix into joints ensuring full penetration for the thickness of the paving slab by lightly tamping down a trowel edge into the grouting mix. Use a rubber squeegee to spread grout evenly into all joints until filled flush with the top of the pavers. Remove excess grout with a trowel. Allow initial set and lightly broom off remaining excess perpendicular to the joints.

Wipe pavers clean with a damp sponge, continuously rinsing the sponge clean with fresh water. Remove all traces of grout and cement from the surfaces of the paver. After 12 hours check for any remaining cement or grout residue and remove using clean water and stiff scrubbing brush.

The contractor is to notify the Superintendent of the intention to seal the pavers and arrange a site inspection with the Superintendent. The Superintendent shall give approval to seal the pavers only when all grout, cement, and blemishes have been removed from the surface of the pavers. **(HOLD POINT)**

e) Application of sealer to paving area.

Following completion of paving operations and subsequent clean up, and before opening areas of paving to pedestrians/traffic, the contractor shall apply 3 coats of sealer, in accordance with the manufacturer's instructions. **(WITNESS POINT)**

Sealer should be reapplied by MRC maintenance personnel after 3 years and inspected 3 yearly with subsequent applications required 3 to 5 years.

f) Clean site

The site is to be cleaned of all debris, excavated material, and construction materials prior to request for works as executed inspection. **(HOLD POINT)**

8204.7 Post construction

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)**



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

8204.8 Measurement and Payment

No separate payment will be made for the works specified in this Supplementary Specification or it’s Annexure. Provision for these works shall be deemed to be included in the scheduled unit rates for the items shown at Clause 8206.3.

The quantity specified for this item refers to the total square metre of pavers installed. The concrete infill areas shall be claimed under item 30661.04 “Hand placed concrete paving, CBD-style footpath (excluding pavers)

Version Control:

Version	Description	Reviewed / Endorsed	Date
1.0	Review	R. Mogg	02.03.2022
2.0	Review of specification	C. Sultana	10.01.2024