

Transport and Main Roads Specifications Amendment Register – 2014 to 2024

Publication Cycle

Specifications updates are released tri-annually: March, July and November.

The amendment table captures the respective changes to specifications including exceptions to the quarterly cycle.

Sixth Edition (released July 2017)

March 2024

Specification	Title	Change Type	Description of change
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30 updates include: <ul style="list-style-type: none"> The maximum manufacturing temperature for asphalt has been reduced by 20°C (when compared to the July 2023 versions of MRTS30) with the aim of reducing emissions and improving sustainability outcomes while still achieving a conforming product. To help facilitate this change, the department will now require all asphalt mixes to contain a WMA additive.
MRTS32 Suite	High Modulus Asphalt (EME2)	Amendment	<ul style="list-style-type: none"> MRTS32 updates include: <ul style="list-style-type: none"> The maximum manufacturing temperature for asphalt has been reduced by 20°C (when compared to the July 2023 versions of MRTS32) with the aim of reducing emissions and improving sustainability outcomes while still achieving a conforming product. To help facilitate this change, the department will now require all asphalt mixes to contain a WMA additive.
MRTS93 Suite	Traffic Signals	Amendment	<ul style="list-style-type: none"> Some of the main changes in MRTS93 include: <ul style="list-style-type: none"> Introducing new terminology (e.g., EPROM has been replaced with Configuration files) to accommodate NextGen (Clause 7.3). Addition of Hold points: For testing of Configuration files, as well as for the submission of installation test plans by the contractor (Clauses 7 and 16) Classification of Configuration files as Principal-Supplied item (7) Reference to TRUM Volume 4 Part and the Electrical Certificate of Test (Clause 5) Clarification on usage of cement mortar and/or grout (Clause 6.7) Pedestrian radar detectors (Clause 10.3), and vehicle radar detection (Clause 11.2)

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> - Implementation of dimming (Clauses 12.1 and 12.2) - Detailed documentation and forms completion requirements (Clause 17) - Several Quality assurance (QA) forms based on stakeholder feedback (Appendices) - NGTSC pre-deployment and deployment forms are also listed here (Clause 17). - Various other changes as listed in the stakeholder list attached to this impact statement. • Some of the main changes in MRS93 include: <ul style="list-style-type: none"> - length of outreach arm as an option - Supply and installation of decals (labels) - Supply and Installation of terminals (new item requiring item #) - HPSM LED lanterns as an option, along with 5 mm LED - ELV lanterns as an option, along with LV - Supply and Installation of cabinet top hat extension (new item) - ITC3 controllers as an option along with the traditional TRAFF controller - Supply and Installation of Traffic signal controller concrete plinth (new item) - Principal-supplied configuration and testing. - Provision of As Constructed and detailed documentation - Amended Work Item Number descriptions for the following: <ul style="list-style-type: none"> ▪ 60452, 60456, 60460, 60501, 60502, 60507, 60508, 60552, 60553, 60554, 60556, and 60557. - New Work Item Numbers include: <ul style="list-style-type: none"> ▪ 60471, 60472, 60473, 60559, 60560, 60581, 60582, and 60583.
MRTS206 Suite	Provision of Variable Speed Limit and Lane Control Signs	Amendment	<ul style="list-style-type: none"> • MRTS206 updates include: <ul style="list-style-type: none"> - Achieving a closer alignment between MRTS206 and AS/NZS 5156. - Streamlining the reference documents list in Clause 3 by removing unnecessary documents from AS/NZS 5156. - Replacing TRUM Volume 1 Part 10 with QGTM/AGTM Part 10 in Clause 3. - Clarifying Roadside cabinet requirements according to MRTS226 in Clause 6.3. - Proposing an Extra Low Voltage (ELV) variant of VSL/LUMS to align with TfNSW's TS 03647 (formerly TSI-SP-011) in Clause 7.2. - Adding RCM compliance in Clause 7.6 to harmonize with TfNSW's TS 03647.

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> - Ensuring asset data conforms with Transport and Main Roads ROAR requirements, as outlined in Clause 11.4.1.
MRTS234 Suite	Communications Cables	Amendment	<ul style="list-style-type: none"> • MRTS234 updates include: <ul style="list-style-type: none"> - Minor editorial changes - Addition of Clause 16, referring to the Evaluation Compliance Form - Inclusion of Compliance Evaluation to be added to the Intelligent transport systems and electrical Approved products and suppliers webpage.
MRTS300 Suite	Construction of Boat Ramps	Amendment	<ul style="list-style-type: none"> • MRTS300 updates include: <ul style="list-style-type: none"> - Title change from <i>Boat Ramps</i> to <i>Construction of Boat Ramps</i> - General review as documents are greater than 5 years - Revisions to reflect current practices and standards - Addition of Forms Appendix • MRS300 updates include: <ul style="list-style-type: none"> - Amended Work Item Number descriptions for the following: <ul style="list-style-type: none"> ▪ 77102, 77103, 77111, and 77116 - Withdrawn Work Item Number descriptions for the following: <ul style="list-style-type: none"> ▪ 77114 and 77120. - New Work Item Number: <ul style="list-style-type: none"> ▪ 77123, 77124 and 77125.
MRTS330 Suite	Trackwork	New	<ul style="list-style-type: none"> • New MRS which applies to the construction of heavy rail and light rail trackwork and is to be used in conjunction with Queensland Rail technical documents.
MRTS331 Suite	Overhead Lines and Equipment	New	<ul style="list-style-type: none"> • New MRS which applies to the construction of overhead wiring structures and overhead wiring and is to be used in conjunction with Queensland Rail technical documents.
MRTS332 Suite	Signalling and Communications	New	<ul style="list-style-type: none"> • New suite which applies to the construction of rail signalling and communications and is to be used in conjunction with Queensland Rail technical documents.

November 2023

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> • MRTS02 update includes <ul style="list-style-type: none"> – relocated requirements for end of queue risk control measures to <i>Queensland Guide to Temporary Traffic Management (QGTMM)</i> Part 3 Section 4.8.3 and added reference to section – updated references to <i>Traffic Management Works on Roads</i> for supplementary devices to reduce speed and treatments to prevent end-of-queue crashes – new reference added 6.5.11.6 to <i>TMR Accepted Road Safety Barrier Systems and Devices</i> and added requirements to submit proposed post / pin / anchor types to the administrator – new Clause 6.5.11.8 for the removal of temporary road safety barriers and end treatments, and – Clause 5.8 MRTS02 Annexure expanded to include all options for end-of-queue treatments, including the relevant options for managing speeds on approach to the traffic queue
MRTS11 Suite	Sprayed Bituminous Treatments (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> • MRTS11 update includes <ul style="list-style-type: none"> – update this Technical Specification and its Annexure align with the recent changes to <i>ATS 3110 Supply of Polymer Modified Binders</i> – Table 6.1.1, 6.1.2(a), 6.1.2(b), 12.5 and 12.7 and Clause 11.2 have been updated with binder classes S9R and S9RF replacing "a blend of C170 and 10 parts (9%) crumb rubber" and binder class S45R has been reclassified as S15R
MRTS18 Suite	Polymer Modified Binder (including Crumb Rubber)	Amendment	<ul style="list-style-type: none"> • MRTS18 update includes <ul style="list-style-type: none"> – update to align / harmonise with the recent changes to <i>ATS 3110 Supply of Polymer Modified Binders</i> – Clause 1 has been updated to reference the June 2023 version of <i>ATS 3110</i> – Tables 5.1 and 8.1 have been updated to include binder classes S9R and S9RF, which will replace "a blend of C170 and 10 parts (9%) crumb rubber" previously specified in <i>MRTS11 Sprayed Bituminous Treatments (Excluding Emulsion)</i> – Tables 5.1 and 8.1 have been updated with binder class A25E removed, binder class A5E added and binder class S45R reclassified as S15R, and – Table 8.1 has been updated to include modified binder properties for A35P binder
MRTS62 Suites	Bridge Substructure	Amendment	<ul style="list-style-type: none"> • MRTS62 update includes <ul style="list-style-type: none"> – the construction tolerances for headstock top level, girder restraint blocks, bearing recess are added to the Technical Specification

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			<ul style="list-style-type: none"> - a minimum installation gap of 15 mm between the soffit of bridge girder and top of headstock is added in accordance with recent Industry Notice currently published with the MRTS62 <i>Bridge Substructure</i> - a hold point is added for the inspection of bridge bearing recess before placing the bearing. It is to ensure that bearing height is set correctly before placing the deck unit - voids between top of piles/ columns and precast headstock are to be filled with registered proprietary shrinkage compensated grout or shrinkage compensated micro-concrete - the use of permanent packers for the installation of precast headstock is not allowed - reference to MRTS64 <i>Driven Tubular Steel Piles</i> is added - the concrete requirements for low strength concrete is removed because it is now covered in MRTS70 <i>Concrete</i> - reference MRTS71.1 Annexure is removed because it is superseded and no longer listed in the department's website - reference MRTS63.1 Annexure is removed because it is not for bridge - MRTS03 <i>Drainage, Retaining Structures and Protective Treatments</i> title is updated - the following Work Item Numbers have had description changes: 70309 and 70311 - new Work Item Number: 70316
MRTS74 Suite	Supply and Erection of Prestressed Concrete Deck Units, Kerb Units and Winged Planks	Amendment	<ul style="list-style-type: none"> • Title change from Supply and Erection of Prestressed Concrete Deck and Kerb Units • MRTS74 update includes <ul style="list-style-type: none"> - The Technical Specification title is updated to include winged planks - the requirements for supply and erection of winged planks are now added - the need for cement to comply with MRTS70 <i>Concrete</i> has been added - the compressive strength test method for post tensioning grout has been superseded and replaced with current test methods - the requirement for a proprietary cementitious grout for hold down bolts is added - the requirement to have a minimum gap of 15 mm between top of headstock and soffit of deck units and winged planks are added - the requirement for placement of grout in the joints between deck units at least 48 hours prior to transverse stressing has been added and aligns with standard drawings - added the requirement for calibrating the jacks and gauges in accordance with AS 2193 <i>Calibration and classification of force-measuring systems</i>. Calibration certificate is to be issued by a NATA laboratory

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> - added the requirements for holding down bolt grout - removed foot anchor for deck unit lifting because it is no longer used - the unused formed holes in the deck units, kerb units, and winged planks are to be filled with a cementitious mortar or concrete with a design strength of not less than 40 MPa - the reference for hold down bolts, nuts and washers are now referred to the updated Technical Specification MRTS278 <i>Supply of Structural Fasteners</i> - the following Work Item Numbers have had description changes: 71701, 71703, 71707 and 71709
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> • MRTS94 update includes <ul style="list-style-type: none"> - Inclusion of the provision of clamping bolt tethering systems with the installation of Rate 3 slip base road lighting poles to prevent clamping bolts from being projected a high speed and long distance from poles when impacted in vehicle crashes - Work Operations (within MRS94) to include addition of slip base clamping bolt tethering system - the following Work Item Numbers have had description changes: 60719 and 60720
MRTS226 Suite	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> • MRTS226 update includes <ul style="list-style-type: none"> - incorporate individual cabinet layout details for each cabinet design, in alignment with the best practices adopted by other States - align vertical levels content with MRTS56 <i>Construction Surveying</i> - will ensure projects are provided with accurate and detailed design documentation of all cabinets commissioned and assemble - establish a consistent documentation standard for all ITS cabinet design ensuring that projects generate adequate designs and records, which will be beneficial for manufacturers and for keeping accurate records of ITS assets installed on-site, and - reduce variations from facilitating accurate project costs
MRTS274 Suite	Repair of New Concrete Construction	New	<ul style="list-style-type: none"> • New Technical Specification sets out how repairs are to be approved and acceptable methods to efficiently manage repair of minor defects in new concrete structures during construction. It sets out how repairs are to be approved and acceptable methods by which they can be undertaken. It is envisaged that non-conformances can be rectified with less administrative overhead by allowing pre-approval of repair procedures. • The Technical Specification also sets out the criteria for various repair materials, allowing registration assessment to be more standardised.

July 2023

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> • MRTS02 update includes <ul style="list-style-type: none"> – relocated requirements for end of queue risk control measures to <i>Queensland Guide to Temporary Traffic Management (QGTMM)</i> Part 3 Section 4.8.3 and added reference to section – updated references to Traffic Management Works on Roads for supplementary devices to reduce speed and treatments to prevent end-of-queue crashes – new Clause 6.5.11.8 for the removal of temporary road safety barriers and end treatments – Clause 5.8 MRTS02 Annexure expanded to include all options for end-of-queue treatments, including the relevant options for managing speeds on approach to the traffic queue
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> • MRTS30 update includes <ul style="list-style-type: none"> – remove duplication of departmental and Australian Standard (AS) test methods, to harmonise with national test methods – align vertical levels content with MRTS56 <i>Construction Surveying</i> – update description of ride quality and asphalt sampling to align with current terminology – allow a lower maximum asphalt mix temperature to be specified when crumb rubber modified binders are used, to reduce worker exposure to fumes/emissions during the asphalt laying and compaction process – removal duplicated clauses in Technical Note 148 <i>Asphalt Mix Design Registration</i> – added requirement for asphalt contractors, who use a nuclear gauge to determine insitu compacted density of the mat, to establish the asphalt density bias on the first asphalt lot constructed as part of the Works – inclusion of default international roughness index requirement for single layer of asphalt placed over a pavement constructed by others (consistent with TfNSW Specification R116)
MRTS32 Suite	High Modulus Asphalt (EME2)	Amendment	<ul style="list-style-type: none"> • MRTS32 update includes <ul style="list-style-type: none"> – remove duplication of departmental and AS test methods to harmonise with national test methods – remove details of test methods now included in departmental test methods – remove the requirement for an aggregate flakiness index value different to that specified in MRTS101 <i>Aggregates for Asphalt</i> – change in the way a compacted sample's bulk density is determined – requirement for A2 and A3 prequalified asphalt contractors to conduct a placement trial on each project

Specification	Title	Change Type	Description of change
MRTS41 Suite	Concrete Pavement Base (Ancillary Works)	New	<ul style="list-style-type: none"> New suite including MRTS, MRS and Annexure which provides specification for smaller project quantities of concrete pavement such as bus stations, 'Park N Ride' facilities, indented bus stops/bays, floodways and short widenings of existing concrete pavements
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRS45 update includes: <ul style="list-style-type: none"> The following Work Item Numbers have all had description changes including line lengths and type: 52102, 52103, 52104, 52105, 52106, 52107, 52108, 52109, 52110, 52111, 52112, 52113, 52114, 52115, 52116, 52120, 52121, 52122, 52123, 52124, 52125, 52126, 52127
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes <ul style="list-style-type: none"> renaming of Clause 6.1 to 'Asbestos Containing Materials' inclusion of Workplace Health and Safety Qld (WHSQ) requirements on Respirable Crystallised Silica (RCS) in Clause 6.2
MRTS140 Suite	Horizontal Directional Drilling (HDD)	Amendment	<ul style="list-style-type: none"> MRTS140 update includes <ul style="list-style-type: none"> Clause 1 culverts included in the 'Introduction' for consistency with MRTS141 <i>Microtunnelling and Pipe Jacking</i> Clause 5.2.5 settlement criteria refers to Geotechnical Design Standards – Minimum Requirements Figure 5.2.2(a) and 5.2.2(b) reference to updated TN163 <i>Third Party Utility Infrastructure Installation in State Controlled Road Technical Guidelines</i> for the minimum cover depth of various utilities Clause 6 delete text 'Materials for Transport and Main Roads electrical or communication assets shall be in accordance with MRTS91 <i>Conduits and Pits</i> Clause 7.10 remediation works of disturbed areas now refers to 'relevant departmental pavement specifications' MRS140 update includes: <ul style="list-style-type: none"> Withdrawal of Work Item Number 33304

Specification	Title	Change Type	Description of change
MRTS141 Suite	Microtunnelling and Pipe Jacking	Amendment	<ul style="list-style-type: none"> • MRTS141 update includes <ul style="list-style-type: none"> – Clause 1 culverts included in the 'Introduction' and pipe jacking in MRTS03 <i>Drainage Structures, Retaining Structures and Embankment Slope Protections</i> shall refer to MRTS141 for consistency – Clause 5.2.5 settlement criteria refers to Geotechnical Design Standards – Minimum Requirements – Figure 5.2.2(a) and 5.2.2(b) reference to updated TN163 <i>Third Party Utility Infrastructure Installation in State Controlled Road Technical Guidelines</i> for the minimum cover depth of various utilities – Clause 7.7 removal of redundant '(15 m)' referring to volume between grout ports – Clause 7.8 Figure 3 redrawn to clarify 'carrier pipes' and 'enveloper pipes', and revise c) 'water' to 'ground water' – Clause 7.9 revised to refer to MRTS03 • MRS141 update includes: <ul style="list-style-type: none"> – Work Item Number minor description changes to 33403 – Withdrawal of Work Item Number 33404
MRTS170 Suite	Public Utilities in Road Projects Site Works	Amendment	<ul style="list-style-type: none"> • MRTS170 update includes <ul style="list-style-type: none"> – minor updates in line with soon to be released Volume 2 Noise Management Code of Practice – additional requirements defined for contractors regarding vibration impacts to PUP during construction works and survey requirements post installation
MRTS171 Suite	Public Utilities in Road Projects Principal Contractor Responsibilities	Amendment	<ul style="list-style-type: none"> • MRTS171 update includes <ul style="list-style-type: none"> – minor updates in line with soon to be released Volume 2 Noise Management Code of Practice – additional requirements defined for contractors regarding vibration impacts to PUP during construction works and survey requirements post installation

Specification	Title	Change Type	Description of change
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> • MRTS201 update includes <ul style="list-style-type: none"> – revision of Clause 5 to include meeting both requirements of the Professional Engineers Act and Regulatory Compliance Marks (RCM) – revision of Clause 10.1 to include detailed designs of electrical systems and products to be certified by the Contractor's RPEQ before being submitted to the Administrator for acceptance prior to construction – revision of Clause 16 regarding exemption from further approval processes once successful type approval process of electrical devices or systems undertaken incorporating Factory Acceptance Test (FAT) and Site Acceptance Test (SAT)
MRTS219 Suite	Internally Illuminated Pavement Markers	Amendment	<ul style="list-style-type: none"> • MRTS219 update includes <ul style="list-style-type: none"> – align requirements with AS 1906.3, AS/NZS 2633 and AS 60068.2.6, Queensland <i>Manual of Uniform Traffic Control Devices</i> (Queensland MUTCD) and <i>Road Planning and Design Manual</i> (RPDM) – addition of Type-Approval Checklist
MRTS229 Suite	Electronic Traffic Control Signs	Amendment	<ul style="list-style-type: none"> • MRTS229 update includes <ul style="list-style-type: none"> – alignment with recent update to AS 4852 – examples of eTCS ("workers" symbolic TC2272 and Merge Right TC2274) added for clarity (Clause 7.3.1) – clarifications around use of RGB LED for electronic signs and colour mixing (Clause 8.4.3) – addition of Asset Data acquisition clause to align with Road Operations Asset Register (ROAR) (Clause 14.1) – addition of Type-Approval Checklist
MRTS231 Suite	Road Weather Monitor (RWM) Systems	Amendment	<ul style="list-style-type: none"> • MRTS231 update includes <ul style="list-style-type: none"> – clarification around surface friction sensors – addition of Asset Data acquisition clause to align with Road Operations Asset Register (ROAR) requirements (MRTS231 and MRTS233) – clarifications around STREAMS connectivity – addition of Product Approval Checklist (MRTS231 and MRTS233)
MRTS233 Suite	Roadway Flood Monitoring Systems	Amendment	<ul style="list-style-type: none"> • MRTS233 update includes <ul style="list-style-type: none"> – update on road signage (TC sign) changes in Clause 9 – updated referenced documents

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> - addition of Asset Data acquisition clause to align with Road Operations Asset Register (ROAR) requirements (MRTS231 and MRTS233) - clarifications around STREAMS connectivity - addition of Product Approval Checklist (MRTS231 and MRTS233)
MRTS242 Suite	Recreational Boating Infrastructure Lighting	New	<ul style="list-style-type: none"> • New suite including MRTS, MRS and Annexure which provides specification for supplying and installing lighting for recreational boating infrastructure
MRTS253 Suite	Traffic Signal Lanterns	Amendment	<ul style="list-style-type: none"> • MRTS253 update includes <ul style="list-style-type: none"> - wind speed updated to 55 m/s and removal of requirement for NATA testing (Clause 6.6) - removed 'voltage waveform' as THD requirements are for current, not voltage - emphasise only one option is allowed: voltage diming or control wire diming - replacement of terms 'will' and 'should' with 'shall'
MRTS256 Suite	Power Cables	Amendment	<ul style="list-style-type: none"> • MRTS256 update includes <ul style="list-style-type: none"> - Clause 8.1 instructs contractors to ensure TPS/PVS materials do not come into contact with polystyrene or polyurethane materials - clarification in Clause 8.2.1 regarding the labelling of cables installed underground and need to meet segregation requirements defined in AS/NZS 3000 - use of metallic labels on electrical cables is banned as it poses an electrical safety risk arising from the conductive nature of metallic labels - Hold Point added for confirmation of cable approval by Transport and Main Roads prior to installation - replacement of AS/NZS 1660.5.2, now superseded by AS/NZS IEC 61034 - Measurement of smoke density of cables burning under defined conditions (Clause 6.7) - TPS/PVC cables of non-migratory plasticiser type recommended where it is not possible to prevent contact with harmful chemicals (Clause 8.1) - clarification around cable hauling practices (Clause 8.2) - modification of the clause on installation of draw ropes (Clause 8.2) - clarification on labelling requirements when an installation complies to Part 1 or Part 2 of AS/NZS 3000 and recommendation of labelling methods - clarification on marking for under-depth underground cables – reference to TN159 Treatment of Under-depth Underground Wiring Systems (UWS) in Brownfield Installations - new checklist added to aid in assessment of power cable products for type approval evaluation

Specification	Title	Change Type	Description of change
MRTS260 Suite	Temporary Variable Speed Limit Signs	Amendment	<ul style="list-style-type: none"> • MRTS260 update includes <ul style="list-style-type: none"> – introduction of Appendix D – editorial changes to ensure currency and clarification of existing clauses and addition of <i>Guideline – Traffic Management at Works on Roads</i> as a referenced document

Exception June 2023

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> • MRTS04 update includes: <ul style="list-style-type: none"> – Clause 2 new definitions added. – Clause 3 updated of referenced documents and inclusion of EP175 <i>Deposition of Surplus Material – Assessment and Methodology</i> and new Technical Note 208 <i>Managing Slaking and Dispersive Soil Risks in Transport Infrastructure Projects</i>. – Clause 4 Standard Test Methods updated Q168 <i>Emerson Class of a soil</i> (modified) and Q719 <i>Field spread rate of solid stabilising agents</i>. – Clause 5 amendment to Hold Point 1 to include Surplus Material Management Plan, inclusion of additional Hold Points and Witness Points regarding treatments and applications rates for ameliorants. – Clause 8 minor clause amendments regarding stripping of Topsoil. – Clause 9 update to commentary box to align with MRTS51 <i>Environmental Management</i> Surplus Material requirements. – Clause 10 change from Acid Sulfate Soils (ASS) to High-Risk Soils and inclusion of ASS and new requirements for acceptance, management and treatment of Slaking and Dispersive Soils within Earth Fill and Cut Surface material. – Clause 11 changed to 'Use of or Deposition of Surplus Material' – New MRTS51 <i>Environmental Management</i> requirements. – Clause 14 change to required properties for Earth Fill materials. – Clause 15 amendments to Table 15.3(b) Compaction requirements for Bedding, Haunch and Side Zones for concrete pipe construction. – Clause 19 separation of requirements for bedding and drainage aggregates. – Appendix A amended testing requirements for Cut Surfaces and Earth Fill. <p>MRS04 update includes:</p> <ul style="list-style-type: none"> – Work Item Number minor description changes to 32010P, 32358P, 32401.

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> – Admin changes the Work Item Numbers 32022P, 32026P, 32030P, 32202, 32206P, and 32414P. – New Slaking and Dispersive Soils Work Item Numbers 32241, 32242, 32243 and 32244. • Associated Contract Administration System checklists CAC032M, CAC033M, CAC034M, CAC035M, CAC036M, CAC037M have been reviewed for currency.
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> • MRTS51 update includes: <ul style="list-style-type: none"> – Clause 2 new definitions for Contractor's Declaration, Deposition, Deposition Area, Legislative Requirements, Off-site, Reuse, and Surplus Material. – Clause 3 inclusion of Contractor's Declaration, Engineering Policy EP175, Hydrologic and Hydraulic Modelling Guideline, Native Title Act and Native Title Work Procedures. – Clause 5 inclusion of Hold Point for submission of the Contractor's Declaration for Deposition of Surplus Material prior to Deposition. – Clause 6 inclusion of reference to the Contractor's Declaration in Clause 6.4. – Clause 7 EMP(C) Administrative requirements: Inclusion of deposition area locations in the Site induction in Clause 7.12. – Clause 8 EMP(C) Specific element requirements, including: <ul style="list-style-type: none"> ▪ references to deposition areas for surplus material in Clause 8.1. ▪ assessment, consultation and approval outcomes for deposition areas in relation to Cultural Heritage within the EMP(C) in Clause 8.4.4, and ▪ updates to Clause 8.13 to include Deposition of Surplus Material requirements, including references to MRTS04 <i>General Earthworks</i> and EP175 <i>Deposition of Surplus Material – Assessment and Methodology</i>. • Associated Contract Administration System checklists CAC003M, CAC004M, CAC032M, CAC069M, CAC070M, CAC071M have been reviewed for currency.

March 2023

Specification	Title	Change Type	Description of change
MRTS06 Suite	Reinforced Soil Walls	Amendment	<ul style="list-style-type: none"> • MRTS06 Suite has been renamed. Formerly titled '<i>Reinforced Soil Structures</i>' • MRTS06 update includes: <ul style="list-style-type: none"> – Changes made to terminology to be consistent with other State-road authorities. – Test method references are also being changed to reflect current versions of these documents • MRS06 update includes Work Item Number description changes to 33001, 33002 and 33003.

Specification	Title	Change Type	Description of change
MRTS71 Suite	Reinforcing Steel	Amendment	<ul style="list-style-type: none"> • MRTS71 and its Annexure, MRS71 and update includes: <ul style="list-style-type: none"> – Introduction of new method for splicing reinforcing bar (friction-welded connections) – Reinstatement of substitution clause, and subsequent renumbering of hold points. – Relaxation of dimensional tolerance for reinforcement for use in precast concrete elements that are not prestressed. • Associated Contract Administration System checklists CAC013M, CAC016M, CAC062M, CAC072M, CAC073M, CAC089M, CAC090M have been reviewed for currency.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> • MRTS91 and its Annexure update includes: <ul style="list-style-type: none"> – Clarify the definition of the Administrator in Clause 2. – Additional requirement regarding the release of Hold Points and Witness Points and Milestones in Clause 5.1. – For a more logical arrangement, Clause 5.2 has been renumbered 5.3, and Clause 5.3 is now 5.2. – Clarify the treatment of asbestos containing materials (ACM) in Clause 6.1. – Scenarios for management and replacement of pits in ACM-suspected installations, added to Section 6.1.1 for clarity – Option for lockable covers for both rectangular and circular pits in Clause 7.7.6.1. – Cross reference to MRTS40 had been updated to match existing MRTS40 in Clause 7. – Relaxing of restriction on installation of pits if local area being obstructed with other services in Clause 10.2. – A cross reference error had been corrected in Clause 13.2, to reference Clause 7.12, not 7.14 (did not exist). – Updating a cross reference in the Annexure MRTS91.1.

Specification	Title	Change Type	Description of change
MRTS100 Suite	High Strength Geosynthetic Reinforcement in Road Embankments	Amendment	<ul style="list-style-type: none"> • MRTS100 and its Annexure update includes: <ul style="list-style-type: none"> – A clarification of the process for the selection of geosynthetic reinforcements (for road embankments and slopes) in MRTS100 and MRTS100.1 Annexure. – The Designers' input table in Annexure 1 is expanded to include three distinct, short-term and long-term, applications for geosynthetic reinforcement for SLS (serviceability limit state) and ULS (ultimate limit state) conditions. Specifically: <ul style="list-style-type: none"> ▪ Basal reinforcement for embankments. ▪ Piled embankments with basal reinforcement. ▪ Reinforced embankment slopes. – A requirement for the Contractor and their geosynthetic supplier to provide more complete documentation (including calculations) of the geosynthetic selection process, for acceptance of the product. – The manufacturer's certification of the geosynthetic product, to be endorsed by a senior representative of the manufacturer's company, will be required to satisfy the requirements of the Annexure, and release of Hold Point 1. – The changes are intended to eliminate ambiguities associated with the selection of geosynthetic reinforcements, and this is expected to improve long-term safety for the road users.
MRTS110 Suite	Coloured Surface Treatments	Amendment	<ul style="list-style-type: none"> • MRTS110 and its Annexure update includes: <ul style="list-style-type: none"> – The term "skid resistance" has been changed to "slip resistance" to be consistent with the terminology used in AS 4663. – The sampling requirements for slip resistance and texture depth testing have been updated to harmonise with Australian Standard test methods. – Slider 55 only has been nominated for slip resistance testing (. i.e., Slider 96 (which is intended for pedestrian applications) cannot be used). – Clarified that product installation must be undertaken in accordance with the manufacturer's recommendations. – Clarified the inspection and suitability assessment requirements for the existing road surfaces prior to application of a CST or HFST. – Improved guidance on selecting the product registration level to be used on projects is included in the specification annexure. – Clause 12 has been amended to better reflect the performance standards outlined in Clause 11. – Colour matching to be assessed by visual assessment (instead of test method AS 1580.601.1). – Waterborne paint has been removed from the list of unacceptable binder types.

Specification	Title	Change Type	Description of change
MRTS111 Suite	High Friction Surface Treatments	Amendment	<ul style="list-style-type: none"> • MRTS111 and its Annexure update includes: <ul style="list-style-type: none"> – The term "skid resistance" has been changed to "slip resistance" to be consistent with the terminology used in AS 4663. – The sampling requirements for slip resistance and texture depth testing have been updated to harmonise with Australian Standard test methods. – Slider 55 only has been nominated for slip resistance testing (i.e, Slider 96 (which is intended for pedestrian applications) cannot be used). – Clarified that product installation must be undertaken in accordance with the manufacturer's recommendations. – Clarified the inspection and suitability assessment requirements for the existing road surfaces prior to application of a CST or HFST. – Improved guidance on selecting the product registration level to be used on projects is included in the specification annexure. – Clause 12 has been amended to better reflect the performance standards outlined in Clause 11.
MRTS207 Suite	Traffic Survey Foundation Equipment	Amendment	<ul style="list-style-type: none"> • MRTS207 Suite has been renamed. Formerly titled '<i>Traffic Monitoring Foundation Equipment</i>' • MRTS207 update includes: <ul style="list-style-type: none"> – Terminology change from Traffic Monitoring to Traffic Survey and reference departmental standard drawing titles. • MRS207 update includes Work Item Number description changes to 61849, 61850 and 61851.
MRTS218 Suite	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> • MRTS218 update includes: <ul style="list-style-type: none"> – Appendices added within MRTS218. – Inclusion of speed indicator sign requirements. – General updates for currency.
MRTS220 Suite	Third-Party Radio Facilities in Transport and Main Roads Transport Corridors	Amendment	<ul style="list-style-type: none"> • MRTS220 update includes: <ul style="list-style-type: none"> – Streamlining the process of small cell installations on departmental infrastructure and fosters readiness amongst departmental district asset owners and maintenance providers in dealing with a new set of infrastructure with structural, electrical and environmental impacts.
MRTS227 Suite	Changeable Message Signs	Amendment	<ul style="list-style-type: none"> • MRTS227 update includes: <ul style="list-style-type: none"> – Appendices added within MRTS227. – General updates for currency.

Specification	Title	Change Type	Description of change
MRTS249 Suite	Transportable Changeable Message Signs	New	<ul style="list-style-type: none"> New MRTS provides guidance to both the Transportable Changeable Message Signs (TCMS) Providers in preparing their designs and to departmental officers in assessing the applications. The requirements set out in the MRTS detail minimum standards to achieve electrical structural and operational safety.
MRTS271 Suite	Glass Fibre Reinforced Polymer (GRFP) Reinforcement	New	<ul style="list-style-type: none"> New MRTS for GFRP reinforcement as an alternative to steel reinforcement in aggressive environments.

November 2022

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 update includes: Clause 5.10 clarifies the requirement for payment for supply chain haul route management to be included as a provisional sum in the tender documents by the Principal.
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 and its Annexure, MRS04 and contract administration checklists CAC035M and CAC066M have been amended to reflect: <ul style="list-style-type: none"> redefinition of the Structure zone updated reference to <i>Acid Sulfate Soil guidelines</i> increase the target density ratio to 97% in supplementary requirements to Test Method AS 1289.6.1.1 changed moisture content conformance from CV to individual values clarification on the use of blinding layer for culverts additional compliance requirement or alternative method of compaction verification for earth fill materials with > 20%, ≤ 40% of material retained on a 37.5 mm sieve amendment to Hilf adjusted moisture variation limits for earth fill amended reference to AS/NZS 3725 incorporate of new requirements for stabilised materials published in MRTS10 <i>Plant Mixed Lightly Bound Pavements</i> incorporate new requirements for Cultural Heritage published in MRTS51 <i>Environmental Management</i>, and clarification on the typical target density ratio nominated for CBR in MRTS04.1 Annexure.
MRTS07B Suite	Insitu Stabilised Pavements using Cement or Cementitious Blends	Administrative	<ul style="list-style-type: none"> MRTS07B.1 Annexure Clause 4: changes reference from Clause 8.7.1 to 8.6.1

Specification	Title	Change Type	Description of change
MRTS08 Suite	Plant-Mixed Heavily Bound (Cemented Pavements)	Amendment	<ul style="list-style-type: none"> MRTS08 and its Annexure, MRS08 and its Annexure and Contract Administration System checklist CAC0048M update includes: <ul style="list-style-type: none"> Updated to implement the new mix design registration system for plant-mixed cementitiously stabilised pavement materials. Requires that only registered mix designs can be used for plant-mixed heavily bound pavements. Mix design requirements removed from MRTS08 and instead included in the new mix design Technical Note TN204 Mix Design Registration of Plant-mixed cementitiously stabilised pavement material. Adoption of Australian Standard test methods for sampling in lieu of the department's Q050 and Q060 methods Clarification of requirements for road roughness (surface evenness) testing, and Clarification of surface dry back requirements to be met prior to covering a heavily bound layer with asphalt or sprayed bituminous treatment. Contract administration checklist CAC048M <i>Assessment of Stabilised Pavement Mix Design Submission</i> (CAC048M) has been updated to clarify it is for use with versions of MRTS08 and MRTS10 published before November 2022. The checklist is not required for contracts that include the November 2022 version of MRTS08 or MRTS10 as mix designs will be registered centrally.
MRTS10 Suite	Plant-Mixed Lightly Bound Pavements	Amendment	<ul style="list-style-type: none"> MRTS10 and its Annexure, MRS10 and its Annexure and Contract Administration System checklist CAC0048M update includes: <ul style="list-style-type: none"> Updated to facilitate the new mix design registration system of plant-mixed cementitiously stabilised pavement material. Requires that only registered mix designs can be used for plant-mixed lightly bound pavements. Mix design requirements removed from MRTS10 and instead included in the new mix design Technical Note TN204 Mix Design Registration of Plant-mixed cementitiously stabilised pavement material. Adoption of Australian Standard test methods for sampling in lieu of department's Q050 and Q060 methods Clarification of requirements for road roughness (surface evenness) testing, and Clarification of surface dry back requirements to be met prior to covering a lightly bound layer with asphalt or sprayed bituminous treatment. Contract administration checklist CAC048M <i>Assessment of Stabilised Pavement Mix Design Submission</i> (CAC048M) has been updated to clarify it is for use with versions of MRTS08 and MRTS10 published before November 2022. The checklist is not required for contracts that include the November 2022 version of MRTS08 or MRTS10 as mix designs will be registered centrally.

Specification	Title	Change Type	Description of change
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 and its Annexure update includes: <ul style="list-style-type: none"> alter Audio-Tactile Line Marking (ATLM) placement tolerances, and amend cold applied plastic line marking requirements to reflect recent changes to the 2022 Road Safety Policy, and inclusion of performance testing in MRS45 Line Item specifications for pavement marking. MRS45 update includes: the rib height has been changed from 8 mm to 10 mm in the following Work Item Numbers: 52114, 52115, 52120, 52121, 52122, 52123, and 52124.
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> MRTS50 update updates the CMT SRS to incorporate levels similar to the contractor's prequalification list. The primary aim is to act in a similar way the contractor levels in trying to ensure that the supplier of testing has the requisite capacity to properly service the project that engages it.
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 and its Annexure and associated Checklists have been updated to improve cultural heritage outcomes. The changes include: <ul style="list-style-type: none"> definition of Cultural Heritage Management Agreement (CHMA) 'historical' changed to 'Historical' for consistent with the departmental Cultural Heritage Process Manual addition of a new section requiring Contractors to verify known heritage sites in the field before work and to flag / fence to prevent harm addition of a new section requiring Contractors to monitor Historical / European heritage sites if approval conditions stipulate monitoring Environmental Management Plan (Construction) requirements for Cultural Heritage updated to require details of how Cultural Heritage sites have been flagged or fenced off addition of a new clause in MRTS51.1 Annexure requiring the Principal's Cultural Heritage Risk Assessment to be included, and addition of a new clause in MRTS51.1 Annexure requiring Principal-obtained approvals for impacts to Historical / European Cultural Heritage to be included.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> MRTS94 update includes: Clause 8.2.2.3 amended to clarify requirements of Smart Lighting Controllers on TMR Rate 3 Road and pathway LED luminaires
MRTS101 Suite	Aggregates for Asphalt	Administrative	<ul style="list-style-type: none"> MRTS101 update includes: Corrected text in Table 7.2 from AS 1142.12 to AS 1141.12.
MRTS203 Suite	Provision of Weigh-in-Motion System		<ul style="list-style-type: none"> MRTS203 update includes: Removal of materials from MRTS203 that already exist in TRUM Volume 4 Part 5 and Standard Drawings SD1911. Clarification of WiM system accuracy tolerances.
MRTS216 Suite	Provision for Road Condition Information Signs		<ul style="list-style-type: none"> MRTS216 update includes: Incorporation of Appendices A and B.

Specification	Title	Change Type	Description of change
MRTS220	Third-Party Radio Facilities in Transport and Main Roads Transport Corridors	New	<ul style="list-style-type: none"> New MRTS to guide telecommunications providers in preparing their site designs and Transport and Main Roads officers in assessing the applications for small cell installations on departmental assets. The requirements set out in the MRTS detail minimum standards to achieve electrical and structural safety.
MRTS221 Suite	Help Phones		<ul style="list-style-type: none"> MRTS221 update includes: Incorporation of Appendix A.
MRTS234 Suite	Communications Cables		<ul style="list-style-type: none"> MRTS234 update includes: <ul style="list-style-type: none"> Table 3: duplicate entry of AS/NZS 11801 removed. Clause 4.5.1.1: Details of a testing centre amended and requirements, including the approval process updated for testing the cable. Clause 6.6.1: New Hold Point with cable path installation requirements added. Table 7.3.1(b): Bend radius requirements for Full Load and No Load conditions updated. Clause 7.5.1: Commscope part numbers completed and use of oval port clarified. Clause 7.5.1.2: 19-inch rack mount enclosure features included. Clause 7.6.6: two-way average testing and results with positive gain for light source power meter testing requirements clarified. Clause 7.6.10: Test instrument calibration requirement updated. Clause 7.6.11: requirement to depressurise joint at completion of test added. Clause 8.5.1: test equipment calibration and test technician certification requirements added.

Exception September 2022

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 has been modified to provide guidance on the Roadways Behaviour Monitoring System (RBMS) camera enforcement process and responsibilities. RBMS cameras will be deployed initially at selected Transport and Main Roads roadwork sites to promote safe and compliant speeds via enforcement. Most of the changes are within Appendix B of the MRTS02. There are several modifications in the main body of the document and Appendix A to provide definitions and context for the Appendix B changes. Similarly, Annexure MRTS02.1 has been updated with one additional clause regarding RBMS speed enforcement. This addition would allow the Principal to indicate if speed enforcement using RBMS is required. This will be based on knowledge of the area and previous projects in the same area. No changes required for MRS02 Annexure.

July 2022

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> Replace reference to Test Method Q050 – <i>Selection of sampling and test locations</i> with AS 12891.4.1 <i>Methods of testing soils for engineering purposes, Method 1.4.1: Sampling and preparation of soils – Selection of sampling or test sites – Random number method</i> in the definition of random sampling in Table 2.1. Replace reference to Test Method Q050 – <i>Selection of sampling and test locations</i> with AS 1289.1.4.2 <i>Methods of testing soils for engineering purposes, Method 1.4.2: Sampling and preparation of soils – Selection of sampling or test sites – Stratified random number method</i> in the definition of random stratified sampling in Table 2.1. Add test methods AS 1289.1.4.1 and AS 1289.1.4.2 to Table 3. Add prefixes joint Australia/New Zealand test methods, Transport for New South Wales test methods to Clause 4. Add additional prefixes for Austroads test methods to Clause 4. No changes required for MRS01 and MRTS01 Annexure.
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> Changing water absorption testing requirements for Type 1 and Type 2 products to be 'report only'. Reinstating degradation factor testing compliance requirements for sedimentary and duricrust materials for Type 1 and Type 2 products. Adding a guide note to outline that when water absorption results should be forwarded to nominated areas of Transport and Main Roads for information (in addition to reporting them through the project). Clarifying the test fractions required for coarse and fine components. Adopting relevant Australian Standard test methods for sampling in lieu of departmental (Q050 and Q060) test methods. Clarifying the requirement that petrographic assessments for production conformance need to be done (consistent with QRS requirements meaning this is not additional testing). Clarifying the requirements for road roughness (surface evenness testing). Clarifying default source rock testing frequencies (consistent with QRS requirements meaning this is not additional testing). Making other minor corrections and changes (e.g. correcting typographical errors, clarifying definitions).
MRTS07A Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> The changes will provide improved clarity based on recent project learnings, feedback, research and developments, along with other minor formatting amendments.
MRTS07B Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> The changes will provide improved clarity based on recent project learnings, feedback, research and developments, along with other minor formatting amendments. MRS07A update includes: description change for work item 40209.

Specification	Title	Change Type	Description of change
MRTS07C Suite	Insitu Stabilised Pavements Using Foam Bitumen	Amendment	<ul style="list-style-type: none"> The changes will provide improved clarity based on recent project learnings, feedback, research and developments, along with other minor formatting amendments. MRS07C update includes: description change for work item 40309.
MRTS09 Suite	Plant-Mixed Foamed Bitumen Stabilised Pavements	Amendment	<ul style="list-style-type: none"> The changes will provide improved clarity based on recent project learnings, feedback, research and developments, along with other minor formatting amendments. MRS09 update includes: description change for work item 40503.
MRTS32 Suite	High Modulus Asphalt (EME2)	Administrative	<ul style="list-style-type: none"> MRTS32 administrative change to Table 5.3.2(d): '0 1 per layer' amended to '0¹ per layer' in Minimum Number of Test column.
MRTS43 Suite	Supply of Armourstone	New	<ul style="list-style-type: none"> This new Technical Specification applies to the supply and delivery of armourstones and the construction of stockpile sites for the storage of armourstone. Armourstone could be used in breakwaters, sea revetment walls, riverine protection walls groynes, ripraps. This specification should not be applicable to general rock fill, drainage rocks, erosion protection stones and similar applications.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> Updates to MRTS45 clarify the requirements for paint applications prior to a final coat of cold applied plastic, application rates for glass beads to thermoplastic, and requirements for gaps in Audio Tactile Line Marking (ATLM) for people riding bicycles, with the intention to offer operational efficiencies and cost savings.
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> Add test methods AS 1141.3.1 and AS 1289.1.4.2 to Table 3. Remove Test Method Q050 from Table 3. Replace reference to Test Method Q050 – <i>Selection of sampling and test locations with AS 1289.1.4.2 Methods of testing soils for engineering purposes</i>, Method 1.4.2: <i>Sampling and preparation of soils – Selection of sampling or test sites – Stratified random number method</i> in the definition of random stratified sampling in Clause 8.7. Add section on sampling referring to AS 1141.3.1 <i>Methods for sampling and testing aggregates - Sampling – Aggregates</i> to Clause 8.7, including: <ul style="list-style-type: none"> Defining the purpose of the sampling, which controls the technique used in AS 1141.3.1, and defining test method AS 1141.3.1 as the default method for obtaining representative samples, replacing Test Method Q060. No changes required for MRS50 and MRTS50 Annexure.
MRTS57 Suite	Geotextiles for Paving Applications	Amendment	<ul style="list-style-type: none"> The changes to MRTS57 suite include a complete reformatting and restructuring to align with current MRTS specifications. In addition, more details and guidance has been included which will provide improved clarity based on recent project learnings, feedback, research and developments. MRS57 update includes: new work item number 43404P, 43408, and withdrawal of work item numbers 43401, 43402, and 43403.

Specification	Title	Change Type	Description of change
MRTS58 Suite	Subgrade Reinforcement Using Pavement Geosynthetics	Amendment	<ul style="list-style-type: none"> The changes to MRTS58 suite include a complete reformatting and restructuring to align with current MRTS specifications. In addition, more details and guidance has been included which will provide improved clarity based on recent project learnings, feedback, research and developments. MRS58 update includes: new work item number 43504, and withdrawal of work item numbers 43501, 43502, and 43503.
MRTS70 Suite	Concrete	Amendment	<ul style="list-style-type: none"> Minor updates to test methods and reference documents. Minor changes to cementitious blends to achieve additional sustainability benefits. Changes to aggregate testing requirements. Minor changes to slump and spread specifications. Changes to water retention test requirements for cast in place piling mixes. Minor changes to permissible variations in mix design proportions. Changes to Section 10.3 on mixer requirements. Guidance for volumetric batching and mixing. Minor changes to placement and transport time limits. Minor changes to temperature limits and monitoring for large concrete elements and accelerated curing temperature limits. Changes to early loading and stripping requirements. Guidance on use of recycled aggregate in N Class concrete.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> Inclusion of the provision of clamping bolt tethering systems with the installation of Rate 3 slip base road lighting poles to prevent clamping bolts from being projected a high speed and long distance from poles when impacted in vehicle crashes.
MRTS97 Suite	Mounting Structures for Roadside Equipment	Amendment	<ul style="list-style-type: none"> Inclusion of the provision of clamping bolt tethering systems with the installation of Rate 3 slip base road lighting poles to prevent clamping bolts from being projected a high speed and long distance from poles when impacted in vehicle crashes.
MRTS104 Suite	Retarding Pavement Reflective Cracking Using Asphalt Geosynthetics	Amendment	<ul style="list-style-type: none"> The changes to MRTS104 suite will provide improved clarity based on recent project learnings and feedback, along with other minor formatting and typo amendments. MRS104 update includes: Work Item Number 'parent' headings updated.
MRTS115 Suite	Insitu Stabilised Subbases Using Triple Blend	New	<ul style="list-style-type: none"> A new specification to align with the department of Transport and Main Roads' recently published <i>Structural Design Procedure for Triple Blend Stabilised Subbase</i> and will assist the department, Contractors, and Administrators in the successful construction of an insitu triple blend stabilised layer.
MRTS217 Suite	Motorway Ramp Information Signs (RIS)	Amendment	<ul style="list-style-type: none"> This change incorporates the addition of Appendix C to MRTS217, and editorial changes to clarify clauses and add reference to the added Appendix on approval checklist.

Specification	Title	Change Type	Description of change
MRTS251 Suite	Traffic Counter / Classifier	Amendment	<ul style="list-style-type: none"> • This revision of MRTS251 clarifies existing material on installation of Loops and introduces new material on the placement and installation of Piezoelectric sensors, Pneumatic tubes, and Passive infrared sensors, which are used in vehicle counters/Classifiers, bicycle/pedestrian counters, and Weigh-in-Motion Applications. • TRUM volume 4 Part 5 is now the reference document for placement of all traffic sensors.
MRTS262 Suite	Transportable Variable Message Signs	Amendment	<ul style="list-style-type: none"> • This change incorporates the addition of Appendix B to MRTS262.

Exception May 2022

Specification	Title	Change Type	Description of change
MRTS11 Suite	Sprayed Bituminous Treatments (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> • MRTS11 has had several changes as follows: <ul style="list-style-type: none"> – Clause 5.2 has been amended to require the Contractor to have documented procedures for both mitigating the risk of bituminous material wash-off in the event of rain or other events, and enhanced construction procedures to mitigate the risk of sealing in cool weather. Additionally, Clause 5.2 has been amended to clearly state that binder samples for conformance/compliance must be taken at both the point of manufacture and point of delivery. – Clause 6.1 has been amended as follows: Class 240 bitumen and a blend of class 170 bitumen and 5 parts crumb rubber have been added to the list of acceptable binder classes for single/single and double/double seal treatments. A blend of Class 170 bitumen and 10 parts crumb rubber has replaced S45R and S15RF as acceptable binder classes for HSS1-M, HSS2-M and SAM-S seal treatments and compliance requirements, such as point of delivery limits for softening point and torsional recovery of the binder, have been added for blends of Class 170 bitumen and 5 and 10 parts crumb rubber. – Clause 11.2 has been amended to include minimum pavement temperature requirements for three new binder classes, and increase the minimum pavement temperature to 20 degrees Celsius for initial seals that use AMC7. – Clause 12.1 has been amended to include an additional paragraph stating that the Contractor shall take all reasonable steps to prevent wash-off of bituminous material used to prime pavement surfaces and minimise environmental harm that may result from the wash-off of bituminous material. – Clause 12.5 has been undated to include spraying temperature limits for Class 240 bitumen and blends of Class 170 bitumen and 5 and 10 parts crumb rubber. – Clause 12.6 has been amended to indicate that spraying shall cease immediately if the bituminous material is not being applied uniformly to the pavement surface and shall not recommence until the cause of the non-uniform application of binder has been rectified. – Clause 14.3 has been modified to allow the Principal to specify, in the annexure, a shorter maximum time limit for spreading cover aggregate, particularly when sealing in cool weather conditions. – Clause 14.5 has been modified to allow intelligent construction rollers to be trialled on projects. – Guide notes relating to enhanced construction procedures, use of alternative binder classes, aggregate size combinations for double/double seals, minimum pavement temperatures, sprayer nozzles, binder application rate uniformity, cutting practices and minimum circulation times for crumb rubber modified binders have been updated or added to the specification.

March 2022

Specification	Title	Change Type	Description of change
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> Minor (e.g. administrative, typographical) corrections, including correction to heading of Table 8.4.7 that relates to Ball Penetration requirements. Update to include water absorption limits and liquid limits specifically for glassy basalt materials (i.e. where the Transport and Main Roads Quarry Registration Certificate states the rock / material type is 'undersaturated glassy basalt' or 'oversaturated glassy basalt'). Clarification of frequencies for testing the properties of source rock(s). A requirement that Suppliers producing Type 2 materials containing more than 30% recycled materials need to be registered by Transport and Main Roads as a Recycled Material Site included.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> Updated Clause 13.4.2 and 14.4.5 to include spell checking of sign messages.
MRTS17 Suite	Bitumen and Multigrade Bitumen	Amendment	<ul style="list-style-type: none"> Point of delivery sampling requirements in Clause 9.3.1 have been changed to require two 1 L tins of binder (instead of only one 1 L tin of binder) to be taken for sprayed seal work. (This is consistent with point of delivery sampling requirements for bitumen used in asphalt polymer modified binders used in asphalt and sprayed seals.)
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30 Table 4, Table 5.4.1(b) and Table 7.2.2 (a) – Test method Q306D has been removed as a test method for the determination of compacted density of open graded asphalt. Only AS/NZS 2891.9.3 can be used. MRTS30 Clause 7.2.1.4 – Definition of asphalt plants that require a minimum of 1.0% hydrated lime to be added to dense graded asphalt mixes (instead of a 1.5% minimum) has been expanded to include plants that feed hydrated lime directly into the mix after secondary dust extraction processes have been completed. MRTS30 Table 7.2.2(b) – a note has been added to the stone mastic fixed binder fraction requirement to ensure a consistent method of calculation is used. MRS30 Clause 2.2 Item 41901 – Clause (b) has been amended to clarify that only suitably prequalified asphalt contractors can perform the work.
MRTS32 Suite	High Modulus Asphalt (EME2)	Amendment	<ul style="list-style-type: none"> Table 7.1.5 in MRTS32 has been amended as follows: <ul style="list-style-type: none"> delta ring and ball testing to be completed on material passing a 0.125 mm sieve using C170 bitumen binder, and the maximum delta ring and ball limit has been changed from 16°C to 25°C. In MRS32 Clause 2.2 Item 42101 – Clause (b) has been amended to clarify that only suitably prequalified asphalt contractors can perform the work.

Specification	Title	Change Type	Description of change
MRTS56 Suite	Construction Surveying	Amendment	<ul style="list-style-type: none"> • Inclusion of definition of critical terms for Mistakes, Errors, Accuracy, Precision and Tolerance to have a common technical language in the context of surveying and civil engineering. • Included secondary control marks (in addition to PSM's) for validation prior to construction. • Added additional uncertainty values for accuracy of secondary survey control. • Removing wording "February 2016" from 2 clauses with references to the <i>TMR Surveying Standards</i>. • Amended wording and included reference to the supervision clause in the <i>TMR Surveying Standards</i>. • Added item in the Survey control requirement to ensure any PSM's disturbed / destroyed are to be reinstated prior to practical completion. • Cosmetic changes to 4 'As Constructed Survey' diagrams. • Minor amended wording in 4 other clauses. • Deleted 3 clauses which are no longer relevant as the content is now referenced in the <i>TMR Surveying Standards</i>. • Included providing an updated Survey Control Register as part of the monthly deliverables.
MRTS91 Suite	Conduit and Pits	Amendment	<ul style="list-style-type: none"> • Recycled crushed glass may now be used as a bedding material. • Additional details on Split Pit with reference to description and installation of split pits.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> • Technical requirements, asset data collection requirements and associated works items numbers for Smart Lighting Controllers have been included in MRS94 and MRTS94 for design and construction documentation. Additional technical requirements for LED luminaires have been added for further clarification to LED luminaire product assessment requirements. • MRS94 update includes new work item numbers 60727, 60728, 60729, and 60795.
MRTS217 Suite	Motorway Ramp Information Signs	New	<ul style="list-style-type: none"> • To provide clarity on Transport and Main Roads technical requirements for Ramp Information Signs (RIS).

Exception December 2021

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> • MRS04 update includes: Reinstatement of 32001 for 'Clearing and grubbing (m²)' and withdrawal of work item number 32034.

November 2021

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 suite update includes: new item l) added to Clause 5.4 to reference requirements in the new Clause 5.10, amended Clause 5.6.4 to update the Geocentric Datum of Australia from 1994 (GDA94) format to 2020 (GDA2020) format, and added item new Clause 5.10 'Supply Chain Haul Route Management' added.
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 updates include: Clause 2 clarification of a lot for embankment construction, Table 14.2.2 Note 3 has been added, Clause 14.2.3 addition to clarify approved sources of rock fill materials, Table 14.2.3 Note 2 added to clarify point load test is not required if material sources from quarry registered under TMR Quarry Registration Scheme, Table 14.3.1 Notes 6 amended to clarify the embankment materials permitted for embankments > 10 m in height and Note 7 amended to specify the maximum particle size for embankment fill where pre-boring for piling operations is required, Table 15.4 has been re-formatted for clarity of interpretation, Clause 17.2 references to Annexure MRTS04.1 were incorrect and have now been corrected, Clause 18.2.1. The standard compaction requirements for CBR testing of subgrade materials has been changed from 95% to 97%, to align with the requirements of the TMR <i>Pavement Design Supplement 2021</i>, Clause 19.2 amended to include the use of recycled crushed concrete as a material option, Appendix A, Table A.2 requirements/frequency for geometric conformance checks in Table A.2 Sections 2.8 and 2.9 have been amended for clarity. MRTS04.1 updates includes: Clause 9.3 provides an opportunity for designers to specify the option of either a zoned embankment of homogeneous embankment, where there is no mandatory requirement for one or the other and Clause 12.5 will require testing of the existing subgrade to be mandatory by default, unless nominated or directed otherwise by the Principal or the Administrator. MRS04 update includes: New work item number 32034 to replace withdrawn 32001, note unit of measurement change from m² to m³. Figure 2.1(b) amended to clarify remove and replace treatment (Type A) required for under embankments. Clause 2.2.1 work operations amended to include removal of areas of existing pavement, as required. Clause 2.2.8 work operations amended to include compaction of base of excavation and placement and compaction of appropriate fill material. Clause 4 amended to adopt the wording from Clause 8 of MRTS56 <i>Construction Surveying</i> for consistency.
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 suite update includes: minor administrative changes, removed optional requirement for regular noise and vibration monitoring for major projects to ensure major projects are meeting the baseline benchmark level for assessment under the Infrastructure Sustainability Rating Scheme, included requirement for Noise Management Plans to be signed off by an RPEQ as consistent with TMR accepted Noise Assessment Report and linked EMP(C) requirements for waste management to the completed Waste to Resource Plan Tender Schedule S12 (C7810.S12).
MRTS52 Suite	Erosion and Sediment Control	Amendment	<ul style="list-style-type: none"> MRTS52 suite update includes: minor administrative changes.

Specification	Title	Change Type	Description of change
MRTS71 Suite	Reinforcing Steel	Amendment	<ul style="list-style-type: none"> MRTS71 update includes: Harmonisation to ATS 5310 <i>Supply and Placement of Steel for the Reinforcement of Concrete</i>. This version includes incorporation of stainless reinforcement, rendering MRTS71A obsolete. Significant changes are also included relating to the registration of suppliers of pre-fabricated reinforcing cages. This will speed up reviews on individual projects while raising the bar in quality. MRTS71.1 Annexure withdrawn.
MRTS71a Suite	Stainless Steel Reinforcing	Withdrawal	<ul style="list-style-type: none"> MRTS71a withdrawn as part of MRTS71 harmonisation to ATS 5310.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: inclusion of Hold Point 2 in Clause 6.1, Additional details on testing requirement of non-metallic conduits in Clause 7.2.2, note to clarify that although the material used for pit cover could be of any type to support loading and other requirements, the material shown on the standard drawings is steel in Clause 7.7.1, and note to clarify only covers for circular pits are required to be lockable in Clause 7.7.6.1.
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> MRTS201 update includes: Clause 13.2 had been added to cover CyberLocks requirements and removal of section B8.3 on Cyclic thermal performance, as this test is not practical to be undertaken.
MRTS202 Suite	Variable Message Signs	Amendment	<ul style="list-style-type: none"> MRTS202 update includes: includes new clause on Product Approval and associated Checklists.
MRTS210 Suite	Provision of Mains Power	Amendment	<ul style="list-style-type: none"> MRTS210 update includes: removal of the requirement on harmonic filtering in Clause 9.3.
MRTS262 Suite	Transportable Variable Message Signs	Amendment	<ul style="list-style-type: none"> Formerly titled Temporary Variable Message Signs MRTS262 update includes: Amendments align with the revised version of AS 4852.2. Additionally Clauses 6.2.3 and 6.3 inclusion of high visibility colours requirements as specified in AS 2700.
MRTS267 Suite	Boom Barriers for Roadworks	New	<ul style="list-style-type: none"> New specification suite (MRTS) that outlines technical requirements for boom barriers. A boom barrier can be used either stand-alone or in conjunction with portable traffic signals.

July 2021

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> MRS01 update includes: content amended within Clause 2.1.7, new Clause 2.1.8 Provisional Sum added, and renumbered Clause 2.1.9 Non-Standard Work Items (90000 Series Items).

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 suite update includes: inclusion of expanded TTM inspection gating requirements to include site with high numbers of VRU, and clarified that a safety check of VRU infrastructure/routing forms part of all inspections. Clause 5.7.7 into subclauses regarding pedestrian and cyclists respectively to meet the intent of the assurance review. Added a new recommendation that the speed of traffic should be ≤ 40 km/h where cyclist are mixed with traffic. This echoes safe system principles. Associated checklists CAC008M, CAC009M, CAC041M and CAC055M to incorporate mentioned changes. MRS02 update includes: inclusion of vulnerable road users (cyclists, pedestrians, and motorcyclists) and temporary traffic management to work operations.
MRTS03 Suite	Drainage Structures, Retaining Structures and Embankment Slope Protections	Amendment	<ul style="list-style-type: none"> Formerly titled Drainage, Retaining Structures and Protective Treatments MRTS03 update includes: inclusion of recently published SD2242 for Type 8 – Riprap protection for heavy duty abutment protection applications. Inclusion of recently published MRTS272 <i>Shotcrete for Aboveground Applications</i>. Removal of clauses relating to obsolete construction practices, being fabric-encased concrete batter protection and helical lock-seam corrugated aluminium. Testing requirements are specified for earthworks and concrete. MRS03 update includes: description changes for work items 30001, 30552, 30555, 30556, 30562 and 30563. Removal of work item numbers 30056, 30156, 30256, 30360, 30361, 30363, 30364, 30365 and 30670. New work item number 30677.
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> MRTS05 Suite updates include: introduces the option to require the use of IC rollers for the assessment of roller pass-count and coverage, updated requirements for Liquid Limit and Water Absorption of 'glassy basalt' sources, clarification of the use of recycled materials, new factsheet to improve the understanding of how recycled materials can be used in unbound pavement materials.
MRTS07a Suite	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a update includes: new Witness Point for particle size check prior to final wet pass, all pulverisation and stabilising agent incorporation passes shall be undertaken with the stabiliser hooked-up to a water truck, in acceptance clause – reword the compliance test results submission requirements and minor referencing, grammatical and formatting edits. MRS07a update includes: formula changed under Clause 3.2.4.
MRTS07b Suite	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS07b update includes: widen the relative moisture ratio requirements to 85-105%, all pulverisation and stabilising agent incorporation passes shall be undertaken with the stabiliser hooked-up to a water truck, increase the maximum allowable time between spreading the stabilising agent and incorporation into the insitu material to 60 minutes, provide guidance for the Administrator on the maximum road roughness (Rs) value when the stabilised layer will be overlaid with asphalt or another pavement layer, in acceptance clause – reword the compliance test results submission requirements and minor referencing, grammatical and formatting edits. MRS07b update includes: formula changed under Clause 3.2.5.

Specification	Title	Change Type	Description of change
MRTS07c Suite	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS07c update includes: all pulverisation and stabilising agent incorporation passes shall be undertaken with the stabiliser hooked-up to a water truck, increase the maximum allowable time between spreading the stabilising agent and incorporation into the insitu material to 60 minutes, provide guidance for the Administrator on the maximum road roughness (Rs) value when the stabilised layer will be overlaid with asphalt or another pavement layer, in acceptance clause – reword the compliance test results submission requirements and minor referencing, grammatical and formatting edits. MRS07c update includes: formula changed under Clause 3.2.5.
MRTS08 Suite	Plant-Mixed Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS08 Suite updates include: introduces the option to require the use of IC rollers for the assessment of roller pass-count and coverage, clarification of process for adjusting stabilising agent content during production of heavily bound materials to ensure ongoing conformance, clarification to construct multiple layers of heavily bound material within a single work shift, updates to permissible use of recycled materials in heavily bound base layers and changes to clarify/confirm mix design requirements, including the use of chemical admixtures.
MRTS09 Suite	Plant-Mixed Foamed Bitumen Stabilised Pavements	Amendment	<ul style="list-style-type: none"> MRTS09 update includes: remove RAP as it is now included in MRTS05 <i>Unbound Pavements</i>, unbound materials to have a CBR \geq 60%, include details on using a metered inline injection system for the incorporation of the foaming agent into the bitumen, provide guidance on testing and extending the allowable working time, include the C170 spray seal interlayer as a new method for bonding PMFB layers together, provide guidance for the Administrator on the maximum road roughness (Rs) value when the stabilised layer will be overlaid with asphalt or another pavement layer, in acceptance clause – reword the compliance test results submission requirements and minor referencing, grammatical and formatting edits. MRS09 update includes: formula changed under Clause 3.2.7. New Clause 5 added regarding Class 170 spray seal interlayer requirements.
MRTS10 Suite	Plant-Mixed Lightly Bound Pavements	Amendment	<ul style="list-style-type: none"> MRTS10 Suite updates include: introduces the option to require the use of IC rollers for the assessment of roller pass-count and coverage, clarification of the process for adjusting stabilising agent content during production of lightly bound pavement materials to ensure ongoing conformance, clarification of the requirements for constructing multiple layers of lightly bound pavement materials within a single work shift, addition of permissible use of recycled materials in lightly bound base (subject to traffic loading), changes to clarify/confirm mix design requirements including the use of chemical admixtures and addition of example lot control charts in Appendix B
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 update includes: new reference to new Technical Specification MRTS110 <i>Coloured Surface Treatments</i> and clarification to Clause 6.1.1. MRS45 update includes: work item description change to number 52103.

Specification	Title	Change Type	Description of change
MRTS82 Suite	Bridge Deck Expansion Joints	Amendment	<ul style="list-style-type: none"> MRTS82 update includes: inclusion of three additional expansion joint types namely, 'Sealant joints with elastomeric concrete nosing', 'strip seal expansion joints without deck anchors' and 'elastomeric compression seal', departmental approved alternative joints types are now included, inclusion of joint type suitability table to help design engineers select appropriate joint type. MRS82 update includes: work item description changes to numbers 72801 and 72802. Removal of work item number 72803. New work items 72804, 72805 and 72806 have been added.
MRTS104 Suite	Retarding Pavement Reflective Cracking using Asphalt Geosynthetics	Amendment	<ul style="list-style-type: none"> MRTS104 update includes a complete review, some key changes include: provide guidance on the function and types of asphalt geosynthetics, redefine the asphalt geosynthetic 'types' to improve clarity and understanding, provide guidance on minimum asphalt cover, waterproofing function and surfaces upon which the asphalt geosynthetic is installed, redefine and improve clarity for the material properties, inclusion of technical prestart meeting, improved clarity and guidance on pavement surface preparation, bitumen bond coat, asphalt geosynthetic placement, asphalt placement and sampling and compliance testing requirement. MRTS104.1 Annexure added to the suite.
MRTS110 Suite	Coloured Surface Treatments	New	<ul style="list-style-type: none"> New specification suite. Supersedes project specific supplementary specification MRSS10B
MRTS111 Suite	High Friction Surface Treatments	New	<ul style="list-style-type: none"> New specification suite. Supersedes project specific supplementary specification MRSS10A
MRTS202 Suite	Provision of Variable Message Signs	Amendment	<ul style="list-style-type: none"> MRTS202 suite has been updated to align with the revised AS 4852.1:2019 <i>Variable Message Signs</i>.
MRTS204 Suite	Vehicle Detectors	Amendment	<ul style="list-style-type: none"> MRTS204 update includes: addition of one Witness Point regarding installation and termination of loops in Clause A6.3 and Table 4.1, clarification around the inductance range for loop and feeder cable (minimum 100uH specified) in Clause A3.4, reference to test forms for recording tests (IAT and CT) in Clause A8.1, minor correction in the numbering of the Witness Points in Table 4.1 and Appendix A and minor corrections in the numbering of headers in Appendix B.
MRTS222 Suite	Electronic School Zone Signs	Amendment	<ul style="list-style-type: none"> MRTS222 update includes: AS 2892.2 for radar equipment included in Clause 7.14, further alignment with AS 5156 in Clauses 7.16 to 7.19, production data in accordance with the QTDF format in Clause 7.15, requirements for modem restart upon power restoration in Clause 8.3, communications protocol preferably based on SA TS 5719:2017 in Clause 8.5, whereas the previous requirement only specified 3G, the current version specifies communication requirements to be to 4G/5G and possibly IoT as 3G is due to be decommissioned in 2024 in Clause 12, AS/CA S042 for communication equipment requirements included in Clause 12. MRS222 update includes: work item description changes to numbers 63431, 63471, 63472, 63501, 63502, 63503, 63591 and 63592.
MRTS228 Suite	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> MRS228 update includes: removal of work item numbers 64251 and 64252.

Specification	Title	Change Type	Description of change
MRTS250 Suite	Provision of Automatic Number Plate Recognition System	Amendment	<ul style="list-style-type: none"> MRTS update includes: Reference to the Queensland Traffic Data Format (QTDF), expansion of the processes and systems for the Automatic Number Plate Recognition (ANPR) Image data and folder structure, alignment of the terminology, definitions and syntax formats with the QTDF for consistency, clarity of the cameras and illuminators and Image data requirements for ANPR, expansion of the performance accuracy minimum requirements for specific ANPR applications, restructure of the communications requirements section to align with other relevant Technical specifications for consistency, update of installation requirements, addition of a multi-purpose CCTV clause, alignment of the testing and commissioning process with MRTS201, addition of a Type Approval clause and the related compliance checklist in Appendix A New MRS250 added to suite.
MRTS262 Suite	Temporary Variable Message Signs	Administrative	<ul style="list-style-type: none"> MRTS262 update includes replacing 'transportable' and 'portable' with 'temporary'.

March 2021

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Administrative	<ul style="list-style-type: none"> MRS01 administrative update includes: removal of Clause 2.1.9. This clause is redundant as only relevant to MRTS35 Suite which was withdrawn in July 2020.
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 suite update includes: various references to previous TTM standards amended and alignment to new MUTCD Part 3 and QGTMM. Also some changes to VMS and TGS used. MRTS02 specific changes to Clauses 1.1, 1.3, 2, 4.2, 5.6.4, 5.7.3, 6.4, and 6.5.7. Associated checklists amended to reflect these changes.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> MRTS14 update includes: inclusion TGSi requires testing of slip resistance and luminance contrast to ensure the final product is safe and complies with the requirements of AS 1428.4.1. Product warranty required to be included as part of the contractor's quality control documentation. Minor amendments to Clauses 5.2 and 10.3.3. MRS14 update includes: new work items 50201 and 50202 relevant to TGSi, also Clause 5.4.1 has been updated.
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> MRTS50 update includes: addition of new Clause 7.6 relating to requirement to record Registered Quarry Reference Number (RQ No.) on Test Reports. Additional sentence added to Clause 11.1 b).
MRTS56 Suite	Construction Surveying	Amendment	<ul style="list-style-type: none"> MRS56 update includes: major revision and reduction in WINs
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: references to updated Standard Drawings to cover new Type 100 Circular Pits in Table 3.1, additional requirements on plastic circular pit collars in Clauses 10.5 and 10.6 and changes to construction surveying requirements in Clause 11. MRS91 update includes: removal of work item numbers 60209, 60210 and 60211

Specification	Title	Change Type	Description of change
MRTS93 Suite	Traffic Signals	Amendment	<ul style="list-style-type: none"> MRTS93 update includes: additional references included in Tables 2, 3.1 and 3.2, removal of note under Table 3.2, term and reference updates in content of Clauses 5, 7, 8.4, 9.3 and 9.5.
MRTS170 Suite	Public Utilities in Road Projects Site Works	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that outlines requirements for Public Utilities in Road Projects Site Works
MRTS171 Suite	Public Utilities in Road Projects Principal Contractor Responsibilities	New	<ul style="list-style-type: none"> New specification suite (MRTS and Annexure) that outlines requirements for Public Utilities in Road Projects Principal Contractor Requirements.
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> MRTS201 update includes: clearance requirements for equipment access door has been updated in Clause 15.9, cabinet clearance diagram has been relocated from RPDM Volume 5 to MRTS201 Clause 15.9 with a reference to MRTS201 included in RPDM Volume 5. References between MRTS201 and RPDM Volume 6 revised.
MRTS206 Suite	Provision of Variable Speed Limit and Lane Control Signs	Amendment	<ul style="list-style-type: none"> MRTS206 update includes: harmonisation to AS 5156:2020. Major changes associated include; minimum number of pixel rings of the flashing annulus is reduced, width of the annulus (50% to 80% of static sign) and height of the numerals (90% to 95% of static sign) are made smaller to address issues caused by diffusion of light, luminance levels of white and red colours specified as a ratio to have visually similar brightness red and white colours, luminance ratios are amended, and communication protocol requirements (RMS Protocol instead of SA TS 5719).
MRTS264 Suite	Type-1 Portable Traffic Signals	Amendment	<ul style="list-style-type: none"> MRTS264 update includes: Tables 2 and 3 have been updated for currency and relevance. Clarification provided on required behaviour of PTSS when a critical fault occurs in Clauses 8.1 and 8.1.1. Requirement to provide charging facility while PTSS is in operation has been removed in Clauses 10.3.1 and 10.3.2.

November 2020

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 update includes: Inclusions of references to MRTS10, MRTS36 and MRTS55, Clause 4 inclusion of supplementary requirements for test methods AS 1289.6.1.1 and Q115 and additional CBR testing requirements. Clause 5.2 additional requirements added for embankment construction method, stockpile locations and mass haul diagram. Clauses 5.4 and 5.5 updated to reflect current Materials testing requirements. Table 14.3.1 Addition of Class A2 material for permissible use on homogeneous embankments less than or equal to 3 m in height. Clause 16 clarified requirements for finishing batters. Clause 19 backfill update to material specification with recycled glass aggregate now added as a permissible alternative to sand, coarse sand and bedding material. Appendix A Tables A1 and A2 updated to include minimum testing frequencies. Appendix B includes reference to CBR test requirements to Clause 4.2. MRTS04 Annexure update includes: Clause 12.2 title amended to align with MRTS04 Clause 18.2.5.1.
MRTS05 Suite	Unbound Pavements	Administrative	<ul style="list-style-type: none"> MRTS05 administrative update includes: removal of 'equal to' from Clause 7.2.1, and added 'Wet' into Table A2.
MRTS27 Suite	Geotextiles Separation and Filtration	Amendment	<ul style="list-style-type: none"> MRTS27 update includes: Table 3 includes Austroads reference for G Rating and also inclusion of AS test method for Particle Size Distribution using hydrometer. Table 4 replaces Q103C with AS 1289.3.6.3 and removed references to Q101. Table 6.4.2(a) split into (i) and (ii) with header amended to D15 > 0.075 mm.
MRTS36 Suite	Recycled Glass Aggregate	Amendment	<ul style="list-style-type: none"> MRTS36 update includes: Clause 1 amended to add use of (MRTS36 compliant) RGA in general earthworks permitted uses. Tables 1 and 3 now include a reference to MRTS04.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 update includes: changed work item numbers description for 52122, 52123 and 52124. ATLM - wide centreline width amended from 100 mm to 150 mm.
MRTS61 Suite	Gantries and Support Structures for Road Signs, Tolling Systems and ITS Devices	Amendment	<ul style="list-style-type: none"> MRTS61 update includes: Specification for the installation of gantries using jacking bolts, information provided in Technical Note TN68 <i>VMS Gantry Installation Procedure</i> is now incorporated, additional Hold Points and Witness Points included to support the contract Administrator and editorial improvements for clarity and readability.
MRTS63 Suite	Cast-In-Place Piles	Amendment	<ul style="list-style-type: none"> MRTS63 update includes: minor changes to the Table 3, new requirement to mark liner length before driving, clarification of Geotechnical Assessor qualifications, geotechnical assessment, and addition of requirement to be independent, adoption of MRTS70 (Nov 2018) concrete requirements, addition of Pile Integrity Testing and associated new Hold Point, addition of as-constructed survey and additional requirements for as-constructed records. MRTS63 update includes: changed description for work item 70412 and new work item 70416 added.

Specification	Title	Change Type	Description of change
MRTS63a Suite	Piles for Ancillary Structures	Amendment	<ul style="list-style-type: none"> MRTS63a update includes: minor changes to Table 3, new requirement to mark liner length before driving, minor changes to steel liner fabrication requirements, clarification of Geotechnical Assessor qualifications, geotechnical assessment, and addition of requirement to be independent, adoption of MRTS70 (Nov 2018) concrete requirements, addition of Pile Integrity Testing and associated new Hold Point, addition of as-constructed survey and additional requirements for as-constructed records. MRS63a update includes: changed description for work item 70515 and new work item 70516 added.
MRTS64 Suite	Driven Tubular Steel Piles (with reinforced concrete pile shaft)	Amendment	<ul style="list-style-type: none"> MRTS64 update includes: minor change to terminology shaft base level and toe of steel tube, introduction of and reference to requirements for as-constructed survey, clarification of requirements to consider self-weight of pile during calculating and certifying the geotechnical capacity of the pile, minor amendments to welding requirements for the steel tube, requirement to mark length on steel tube, minor amendments to restrike clause, extension of time to cast concrete plug, requirement for Geotechnical Assessor to be independent of the piling design, construction and testing, unless approved otherwise by the Administrator, minor clarification to underwater inspection requirements, extension of time between certification and concrete placement for the pile shaft, highlight the need for water retention testing of concrete as per MRTS70 and addition of concrete test results and as-constructed survey information to the as-constructed records. MRS64 update includes: changed description for work item 70610.
MRTS65 Suite	Precast Prestressed Concrete Piles	Amendment	<ul style="list-style-type: none"> MRTS65 update includes: minor change to terminology, symbols and reference documents, introduction of and reference to requirements for as-constructed survey, minor updates to terminology throughout the suite, deletion of text boxes referring to CAS Manual checklists, update to Director details that referred to, update to certification requirements for vehicles transporting piles, requirements to use pile stability frames for safety of pile stacks on site to be consistent with requirements in precast yards, minor updates and clarification relating to testing, requirement of the pile driving contractor to manage heave of adjacent piles during driving, clarification and more detail on permissible stresses during driving, more accurate detail on splicing of reinforcing bars for pile extensions and minor updates. MRS65 update includes: new work item 70721 added. MRTS65.1 and MRS65: minor updates to be consistent with MRTS65 amendments.
MRTS78 Suite	Fabrication of Structural Steelwork	Amendment	<ul style="list-style-type: none"> MRTS78 updates includes: references to AS/NZS 5131, additional documentation for Hold Point 1 and Hold Point 2 required to reduce Administrators time, removal of information about structural bolts which now has a separate specification – MRTS278, traceability of material the responsibility of the fabricators, reorder of Hold Points, additional information about: abrasive blasting, welding of liners and tubes, welding of studs, welding of tacks and welding finish requirements, and editorial improvements for clarity and readability.
MRTS78a Suite	Fabrication of Structural Stainless Steelwork	Amendment	<ul style="list-style-type: none"> MRTS78a update includes: specified minimum class of finish for durability process and editorial improvements for clarity and readability.

Specification	Title	Change Type	Description of change
MRTS79 Suite	Fabrication of Aluminium Components	Amendment	<ul style="list-style-type: none"> MRTS79 update includes: updated information in line with current technical guides and resources documents and editorial improvements for clarity and readability.
MRTS81 Suite	Bridge Bearings	Amendment	<ul style="list-style-type: none"> MRTS81 update includes: Alignment to AS 5100 (2017) terminology and requirements, additional detail provided for testing of bearings including clarification of the document required to be submitted prior to testing, change of testing requirements (first test to be a Hold Point and remaining are a Witness Point), additional information for non-standard bearing types and editorial improvements for clarity and readability.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: inclusion of Hold Point 2 on Finding Asbestos, additional details on testing requirements of non-metallic conduits, clarification on material used for pit cover could be any type to support loading and other requirements, the material shown on the standard drawings is steel and clarification that only covers for circular pits are required to be lockable.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> MRTS94 suite update includes: update to establish LED's as department's preferred luminaire. DALI drivers are now standard and Transport and Main Roads will move to a 0 degree upcast for luminaire performance requirements.
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> MRTS201 update includes: Clause 13.2 added to cover CyberLocks requirements and removal of Clause B8.3 on Cyclic thermal performance, as this test is not practical to be undertaken.
MRTS204 Suite	Vehicle Detectors	Amendment	<ul style="list-style-type: none"> MRTS204 update includes: scope expanded to include the installation, testing and commission of the detector systems, loop and feeder cables, technical requirements are aligned to AS 2703 wherever applicable to practice in Queensland of the National Standard. MRS204 update includes: withdrawing work item numbers 61501, 61502 and 61503. New work item numbers assigned: 61504, 61505, 61506, 61507, 61508, 61509, 61510, 61511, 61512, 61513, 61514, 61593 and 61594.
MRTS226 Suite	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> MRS226 update includes: changed descriptions for work item numbers 64041, 64042 and 64043. New work item numbers assigned: 64064 and 64093.
MRTS233 Suite	Roadway Flood Monitoring Systems	Amendment	<ul style="list-style-type: none"> MRTS233 update includes: interface with STREAMS is a mandatory requirement using drivers supported by STREAMS for the Simple Device Interface. IP rating requirements are specified according to the location of the enclosure with respected to highest known flood level recorded. Technical parameters of water level sensors updated, and minor updates around remote monitoring, network connectivity, data exchange, and references.
MRTS253 Suite	Traffic Signal Lanterns	Amendment	<ul style="list-style-type: none"> MRTS253 update includes: references to outdated testing methods have been updated. An additional option for lantern dimming has been provided to give flexibility to manufacturers in providing compliant devices.
MRTS255 Suite	Traffic Signal Controllers	Amendment	<ul style="list-style-type: none"> MRTS255 update includes: all references to socket outlets traffic signal controller cabinet extensions has been removed, a requirement for hardwired power supply has been added to improve consistency, special red phase timing added to operational requirements, and reference to MRTS253 added for control wire dimming requirements.

Specification	Title	Change Type	Description of change
MRTS256 Suite	Power Cables	Amendment	<ul style="list-style-type: none"> MRTS256 update includes: amendment to Clause 8.2 to include power cables for ITS installations and to clarify the requirements on cable slack in electrical pits.
MRTS257 Suite	Feeder Cable and Loop Cable for Vehicle Detector	Amendment	<ul style="list-style-type: none"> MRTS257 update includes: scope of document limited to technical requirements of feeder and loop cables, technical requirements are aligned to AS 2276.2 and AS 2276.3 wherever applicable to practice in Queensland of National Standard.
		Withdrawn	<ul style="list-style-type: none"> MRS257 has been withdrawn. Work item numbers moved to assigned new numbers under MRS204.
MRTS272 Suite	Shotcrete for Aboveground Applications	New	<ul style="list-style-type: none"> New specification suite (MRTS) that outlines requirements for aboveground applications of shotcrete.
MRTS273 Suite	Fibre-reinforced Concrete	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRTS Annexure) that specifies requirements for concrete reinforced with fibres.
MRTS278 Suite	Supply of Structural Fasteners	New	<ul style="list-style-type: none"> New specification suite (MRTS) for the supply of bolts and other fasteners. Consolidated updated information from both MRTS78 and TN66 into this specification suite. Includes testing procedure for the Transport and Main Roads Assembly Test.

Exception September 2020

Specification	Title	Change Type	Description of change
MRTS50 Suite	Specific Quality System Requirements	Amendment	<p>MRTS50 update includes:</p> <ul style="list-style-type: none"> Clause 1 – Text added regarding As Constructed drawings to refer to requirements in the <i>Drafting and Design Presentation Standards Manual (DDPSM)</i> and <i>EP172 Electronic Signature Policy for Engineering Drawings</i>. Clause 10.1.1 – Requirements added for Contractor to provide Administrator with Conformance Report on completion of relevant lot and prior to substantial progress on subsequent lots. Table 12.3 –Design and then Construct Delivery Model - Additional Contract Types added and Road Maintenance Contracts removed. Design and Construct Delivery Model – Additional Contract Type added and Early Contractor Involvement Contract Type removed. Table 12.3 - Amendments to who supplies As Constructed drawings for Delivery Model (Design and then Construct) changed from Principal or Contractor to now read Contractor. Clause 12.1 and 12.3 – references to Contractors Construction Representative changed to Contractor's Representative in line with defined term in Clause 2 of the General Conditions of Contract (GCoC). Clauses 12.1 and 12.4.2 – remove text 'in hard copy and electronic formats' regarding As Constructed drawings. Clause 12.4.2 – Add text 'other than As Constructed drawings' to align with Clause 12.1.

July 2020

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision of Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 update includes: Clause 6.5.13 – Guidance reduced and amended to reference the requirements of MUTCD Part 3 for temporary road lighting and requirements maintained have been amended to align with the practice of 'shall', 'should' and 'may'. Appendix A Speed management plan – Differentiated levels of speed surveillance for longer (≤ 2 weeks) and shorter duration (< 2 weeks) sites. Added new guidance on alternative methods undertaking speed surveys and aligned with available devices in MUTCD Part 3 Supplement. Added guidance on manual speed surveys as prescribed in MUTCD Part 4 and Austroads Guide to Traffic Management will not be practicable. MRS02 update includes: Clauses 2.1 and 2.2, replaced withdrawn Work Item Number 20001 with new Standard Work Items numbers: 20017, 20018, 20019 and 20020. References updated in Clauses 2.4, 2.5 and 2.6. MRS02.1 Annexure update includes: Clause 4, corrected reference to MRTS02 Clause 7.4.
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 update includes: subgrade depth is amended from 2 m to 1.5 m in embankment, updated Figures 2(d) and 2(e) to reflect above, upper limit requirement for % passing 0.75 mm for Class A1 is removed, fixing formatting of Table 14.2.3, clause references updated, Class A1/B was replaced with Earthfill in Table 15.3(b), editorial changes in Clause 18.3.3 to make clear the subgrade treatment requirements, specification for coarse sand is provided in Table 19.2.6 and new MRTS56 reference added. MRTS04.1 Annexure update includes: minor update in Clause 9.1. MRS04 update includes: commentary box associated with work item number 32122P updated to clarify intent.
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> MRTS05 update includes: requirements of recycled material blends to be used in pavements (previously specified in MRTS35) has been included, a requirement for recycled material suppliers to be registered under department's Quarry Registration System (QRS) has been included – new requirement, construction requirements for unbound pavements have been updated to align with latest updates to MRTS08 and MRTS10 suites and As-constructed survey requirements in accordance with new MRTS56 suite have been included.
MRTS07a Suite	Insitu Stabilised Pavements using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a update includes: correction to minor typos and grammatical errors, additional clarification and guidance, update references and standard test methods, include As-constructed survey as part of the lot compliance requirement (Hold Point) to facilitate new MRTS56 suite, and with regards to the slaking of quicklime requirements - provide definitions of Principal Contractor and Stabilising Subcontractor. MRTS07a.1 Annexure update includes: Nominate a default of 'product standard' if no indication is given in table.

Specification	Title	Change Type	Description of change
MRTS07b Suite	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS07b update includes: correction to minor typos and grammatical errors, additional clarification and guidance, update references and standard test methods, include As-constructed survey as part of the lot compliance requirement (Hold Point) to facilitate new MRTS56 suite, and align the unbound granular requirements with the latest MRTS05 suite. MRTS07b.1 Annexure update includes: Nominate a default of 'product standard' if no indication is given in table.
MRTS07c Suite	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS07c update includes: correction to minor typos and grammatical errors, additional clarification and guidance, update references and standard test methods, include As-constructed survey as part of the lot compliance requirement (Hold Point) to facilitate new MRTS56 suite, with regards to the slaking of quicklime requirements - provide definitions of Principal Contractor and Stabilising Subcontractor and align the unbound granular requirements with latest MRTS05 suite.. MRTS07c.1 Annexure update includes: Nominate a default of 'product standard' if no indication is given in table.
MRTS08 Suite	Plant-Mixed Heavily Bound (Cemented) Pavements	Amendment	<ul style="list-style-type: none"> MRTS08 update includes: alignment to MRTS10 suite where appropriate, including mix design and construction requirements, alignment to MRTS05 suite relating to use of recycled materials and also alignment to new MRTS56 suite regarding construction surveying.
MRTS09 Suite	Plant-Mixed Foamed Bitumen Stabilised Pavements	Amendment	<ul style="list-style-type: none"> Formerly titled Plant-Mixed Pavement Layers Stabilised using Foamed Bitumen. MRTS09 update includes: correction to minor typos and grammatical errors, additional clarification and guidance, update references and standard test methods, include As-constructed survey as part of the lot compliance requirement (Hold Point) to facilitate new MRTS56 suite, align the unbound granular requirements with the latest MRTS05 suite, update requirements of UM1, UM2 and UM3 materials, provide additional clarity regarding testing requirements for UM1, UM2 and UM3 materials in Appendix A, bitumen agent content and Annexure check box for road roughness, relax the maximum layer thickness, unsealed trafficking requirements and additional guidance and relax the lower limit of RMR FSP. MRTS09.1 Annexure update includes: Nominate a default of 'product standard' if no indication is given in table. MRS09 update includes: changed description of work items 40508.
MRTS10 Suite	Plant-Mixed Lightly Bound Pavements	Amendment	<ul style="list-style-type: none"> MRTS10 update includes: alignment to MRTS05 suite relating to use of recycled materials and also alignment to new MRTS56 suite regarding construction surveying.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> MRTS14 update includes: corrected references under Clauses 13.3.3.1 and 13.4.12.1, information from Annexure included in Clause 13.3.3.2.1, updates to Clauses 20 and 21 regarding manufacturing, testing and installation of road safety barriers. MRTS14.1 Annexure update includes: Deleted original Clause 7.1, information has been moved to Clause 13.3.3.2.1 of MRTS14 and renumbered original Clause 7.2 to Clause 7.1.

Specification	Title	Change Type	Description of change
MRTS18 Suite	Polymer Modified Binder (including Crumb Rubber)	Amendment	<ul style="list-style-type: none"> MRTS18 update includes: Harmonising to ATS 3110 <i>Supply of Polymer Modified Binders</i> where appropriate, inclusion of 'How to use this document' section, adopting the ATS 3110 point of manufacture requirements for PMBs in lieu of those in AGPT/T190, referencing Austroads AP-C87 where possible and removing from MRTS18 any definitions that conflict with or duplicate terms include in AP-C87, Consistency 6% at 60°C test replaces the Consistency at 60°C test and the stress ratio test has been added, point of delivery requirements for the S20E and S25E PMBs have been modified to align with changes made to point of manufacture requirements in ATS 3110 and commentary about audit testing to be undertaken by Administrators has been updated to align with changes made.
MRTS20 Suite	Cutback Bitumen	Amendment	<ul style="list-style-type: none"> MRTS20 update includes: Tables 4 and 6.4 removing superseded references to test methods Q330, Q336, Q371 and Q373 leaving Australian Standard methods to be used.
MRTS21 Suite	Bituminous Emulsion	Amendment	<ul style="list-style-type: none"> MRTS21 update includes: Tables 4 and 6.4(a) removing superseded references to test methods Q352, Q353, Q354, Q355, Q358, Q359 and Q362 leaving Australian Standard methods to be used. Test method AS/NZS 2341.27 has been added to Tables 4 and 6.4(a) as an equivalent to test method Q361 (either can be used). Table 6.4(b) removed superseded test methods Q352, Q353, Q355, Q359 and Q362 leaving Australian Standard methods to be used.
MRTS22 Suite	Supply of Cover Aggregate	Amendment	<ul style="list-style-type: none"> MRTS22 update includes: correct sampling method has been included in Table 4, Clause 6 updated to be consistent with requirements in latest Quarry Registration System and to reference relevant clause in MRTS50. Requirements in Clause 7.1.3 have been clarified to avoid confusion regarding source rock testing for Degradation Factor (Q208B) and Wet/Dry strength variation (AS 1141.22) with option to test single size aggregates (product test) removed. Clause 8.2 has been updated to remove the source rock tests – the clause applies to stockpiles of finished products.
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30 update includes: Clause 7.1.3 has been changed to include option to use recycled glass aggregate as a fine aggregate for dense graded asphalt provided it is within specified limits, Table 7.1.36(a) and Table 7.2.1.3.1(a) have been amended to increase by 3% the maximum allowable RAP for producers qualified to RAP Approved Level 2 (increased to 25%). Clause 7.2.5 amended to implement a lower minimum tensile strength requirement for dense graded asphalt mixes containing SBS-based polymer binder modified binders such as A10E and A15E. Commentary box in Clause 7.4.1 has been expanded to explain requirements for registration and approval to use mix designs containing non-standard constituent materials and Clause 9.6.1 has been amended to ensure the Contractor provides all ride quality data to the Administrator for conformance assessment.
MRTS35 Suite	Recycled Material Blends for Pavements	Withdrawn	<ul style="list-style-type: none"> Withdrawn suite. Requirements for recycled material blends in pavements have been included in MRTS05 <i>Unbound Pavements</i>.
MRTS36 Suite	Recycled Glass Aggregate	New	<ul style="list-style-type: none"> New specification suite (MRTS) that standardises the requirements of recycled glass aggregate used in road pavement applications for Transport and Main Roads and allow contractors the option to use recycled glass aggregate as a substitute for the fine aggregate component of asphalt or an unbound granular material.

Specification	Title	Change Type	Description of change
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 suite update includes: harmonise project waste reporting for efficient and effective departmental waster reporting, benefits include electronic register for streamlined Contractor waste reporting and submission. MRTS51.A Appendix update includes: removal of Form C.
MRTS56 Suite	Construction Surveying	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that defines the surveying requirements during civil construction works including the establishment and maintenance of survey control, validation of existing ground surface prior to works, setting out, conformance testing, as-constructed survey, conformance results and deliverables.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: inclusion of Hold Point designation to clarify the process, submission and release point conditions before the Hold Point is satisfied. Inclusion of activities related to asbestos which are mandatory or strictly prohibited in Clause 6.1, Mandating Solid Plain Wall type of construction of PVC conduits and cessation of the Sandwich type of construction conduits, removal of Hold Point 6 in Clause 9.2 as it duplicates Hold Point 3 in Clause 8.1, removal of the requirement that draw rope has to be installed separately from any cable installation, in Clause 9.4, as if conflicts with MRTS256 <i>Power Cables</i>, a clarification in Clause 10.2 that pits should be installed outside the working width behind the barrier and changes to construction surveying requirements due to new MRTS56 <i>Construction Surveying</i>. MRS91 update includes: corrected reference of Figure A of Appendix A of MRTS91 under Clause 2.3.
MRTS101 Suite	Aggregates for Asphalt	Amendment	<ul style="list-style-type: none"> MRTS101 update includes: Clause 7.2 has been amended to include the option to use recycled glass aggregate as a fine aggregate, Clause 8.1 has been changed to include a requirement for a recycled glass aggregate production procedure to be submitted as part of an asphalt mix design submission and Clause 9.3.1.3 has been updated to include testing requirements for recycled glass aggregate.
MRTS203 Suite	Provision of Weigh-in-Motion System	Amendment	<ul style="list-style-type: none"> MRTS203 update includes: changes to bring in line with development in technology, guidance on supply systems that meet the technical requirements, and inclusion of Appendix.
MRTS216 Suite	Provision of Road Condition Information Signs	New	<ul style="list-style-type: none"> New specification suite (MRTS) that defines technical requirements for Road Condition Information Signs (RCIS). Provides guidance to develop products that meet requirements outlined in the Technical Specification to ensure a reliable and standard device is used across the network.
MRTS233 Suite	Roadway Flood Monitoring Systems	Administrative	<ul style="list-style-type: none"> MRTS233 administrative change is clarifying TRUM reference under Clause 10.
MRTS234 Suite	Communications Cables	Amendment	<ul style="list-style-type: none"> MRTS234 update includes: additional information included under Clause 7.5.5 <i>Patch leads</i> and corrected reference under Clause 6.3.1.
MRTS245 Suite	ITS Telecommunications Network (ITS TN)	Amendment	<ul style="list-style-type: none"> MRTS245 update includes: introduction of visual representation of high-level processed already outlined in a textual format, minor functional requirements criteria updates that guide delivery and management of ITS telecommunications network services, reference documents and minor technical requirement updates for improved network capability and ongoing management. Changes found in the following Clauses: 1, 2, 3, 5, 6.3, 6.4, 6.6, 6.9, 6.10, 6.11, 6.11.1-6.11.5, 6.12.2, 6.14.3, 6.15, 6.16.3, 6.17.1, 9.1.1 - 9.1.5, 11 and Appendix A.

March 2020

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 update includes: table 2 definitions aligned with changes throughout document, figures updated to reflect MRTS04.1 changes, figures added defining subgrade depth, updated proof rolling test method and requirements, changed compaction conformance requirements, clarified sampling test methods and requirements, confirmed that default testing frequencies are minimums only, clarified depth of topsoil requirements, separated compaction requirements from subgrade treatments, clarified requirements for existing subgrade testing, and clarified backfill material testing requirements. MRTS04.1 Annexure update includes: deleted item for varying default testing frequencies (still possible via item 14), combined items 10.1 and 13.2, added default CBR requirement for subgrade fill, and deleted option to vary subgrade depth. MRS04 update includes: changed descriptions of work items 32301, 32302P, 32310P, 32354P, withdrawn work items: 32205, 32501 and 32502, and addition of work items 32504 and 32505.
MRTS19 Suite	Cutter Oils	Amendment	<ul style="list-style-type: none"> MRTS19 update includes: name change from "Cutter and flux oils" to "Cutter Oils", alignment with Austroads report AP-T344-19, and simplification of requirements to allow a wider range of materials that can be used as cutter oils.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 update includes: removal of reference to "trowelling, screeding or extruding" in CI 7.5.4.2 to reduce confusion regarding the appropriate methods of applying CAP. MRS45 update includes: changed descriptions for 52114 and 52115, and addition of work items 52120, 52121, 52122, 52123, 52124, 52125, 52126, 52127.
MRTS64 Suite	Driven Tubular Steel Piles (with reinforced concrete pile shaft)	Amendment	<ul style="list-style-type: none"> MRTS64 update includes: editorial changes and improvements to definitions, specifying minimum pile diameter of 1.2m, further definition of structural and geotechnical design requirements, addition of requirements for non-destructive testing of steel tube field splice welds, and alignment with MRTS70 Concrete (11/18).
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: removed mounting strap as an accessory with circular pits (Section 7.8.3), specified cable supports for rectangular pits must be removed during the load tests (Section 7.8.5), added requirement for horizontal drilling to comply with MRTS140 "Horizontal Directional Drilling" (Section 9.4), and added requirement for pits on slopes to be installed such that the drain holes are at the lowest point.
MRTS214 Suite	Provision of Wireless Traffic Sensors (WTS)	Amendment	<ul style="list-style-type: none"> MRTS214 update includes: instructions to vendors wishing to apply for type approval of wireless traffic sensors to submit the application with a type approval checklist, and collection of commissioning details via the commissioning sheet. UI and BT data structures are now Appendix A and B respectively within MRTS214. MRTS214.A Appendix update includes: Appendix C and D, which are the commissioning report for traffic monitoring device installations and the evaluation checklist for the provision of wireless traffic sensors respectively.

Specification	Title	Change Type	Description of change
MRTS222 Suite	Electronic School Zone Signs	Amendment	<ul style="list-style-type: none"> MRTS222 update includes: required radar vehicle detection capability and time synchronization, harmonizing optical performance requirements to AS5156, and additional requirements for the control and monitoring of enhanced school zone signs. MRTS222 Appendix added, which includes a type approval compliance checklist.
MRTS225 Suite	Imaging	Amendment	<ul style="list-style-type: none"> MRTS225 update includes: requirements for inbuilt image stabilization for cameras installed on top of poles.
MRTS231 Suite	Road Weather Monitor (RWM) Systems	Amendment	<ul style="list-style-type: none"> MRTS231 update includes: requirements to provision bird deterrent mechanisms for road weather monitors and sensors.
MRTS234 Suite	Communications Cables	Amendment	<ul style="list-style-type: none"> MRTS234 update includes: clarified cable construction type defined in project specific scope of work, removed figures 4.5 & 4.6, added rodent testing acceptance criteria, clarified testing requirement for unterminated fibre delivery, added ability to nominate an independent cable installation and commissioning certifiers, detail on specific enclosures, colour code requirements for fibre optic strands and tubes, use of bend insensitive patch leads on connections, use of FOBOTs, requirement to pressure test each fibre optic joint after build completion, twisted pair cabling requirements, patch lead labelling requirements, and warranty criterion specification.

November 2019

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision of Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 update includes: changes to Table 5.2 and Clause 6.5.7 MRTS02 Annexure update includes: change to Clause 5.7
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> MRTS05 suite update includes: incorporating findings of NACOE research into Mod C, including changes to grading envelopes, use of linear shrinkage and changed limits for linear shrinkage, deletion of the plastic index requirements, degree of saturation limits, testing requirements and adoption of the modified standard of compaction for base class materials to improve pavement resilience and stabilisation and reduce maintenance costs.
MRTS10 Suite	Plant-Mixed Lightly Bound Pavements	Amendment	<ul style="list-style-type: none"> MRTS10 update includes: Changes to make unconfined compressive strength (UCS) production testing 'report only' as well clarifying requirements for use of lightly bound materials as a subbase course. Testing frequencies suitable for small lots has been introduced. MRS10 update includes: New Work Item Number 40603 added.
MRTS28 Suite	Contractor's Site Facilities and Camp	Amendment	<ul style="list-style-type: none"> MRTS28 update includes: Amendments to Table 3 and Clause 4.3, 4.4.1, 4.4.2, 4.5.1 and 4.5.6.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 update includes: amendment reflects the revised information in TRUM Volume 2 Part 5, with changes to Clauses 7.7.1, 7.7.3, 7.7.5 and 7.11.1.

Specification	Title	Change Type	Description of change
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> MRTS50 update includes: alignment with MRTS05 Unbound Pavements with changes to Clauses 8.1.1 and 8.6.1.
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 update includes: removal of references to department's state-wide high risk SMP for Micro bats and birds as this SMP has been withdrawn from District use. Reference to Department of Environment and Heritage Protection has been removed and replaced with Administrating Authority to future proof against departmental name changes. MRTS51 Appendix C update includes: modification to details of the project identification numbers for easier cross referencing. MRS51 update includes: amendments to the following Work Item Numbers and descriptions with Provisional removed: 20212, 20213, 20217, 20221, 20226, 20230 and 20246. Amendment to description only: 20222P and 20250P. New Work Item Numbers added 20208P, 20254P and 20258P. Withdrawn Work Item Number 20207P.
MRTS83 Suite	Anti-Graffiti Protection	Amendment	<ul style="list-style-type: none"> MRTS83 update includes: amending references for anti-graffiti protection coating conformance and including use of departmental registered proprietary products and suppliers for the application of protection coatings, refer to Clause 5.2 MRTS83 Annexure update includes: Changes to Clauses 1 and 2. MRS83 update includes: amendments to the following Work Item Number description for 72901 and 72902.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 suite update includes: additional note on work associated with existing installations containing asbestos, combining two clauses into one 'Pit Components', new requirements on UV resistance, removal of Clause 10.2.2, changes to Clause 10.7 and addition of Clause 10.8, clarification added to Clause 14 and 15. Technical note TN63 has been updated to reflect these changes.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> MRTS94 update includes: Removal of part of Clause 7.6.2 c). Slip base solar lighting poles are now approved for use.
MRTS202 Suite	Variable Message Signs	Amendment	<ul style="list-style-type: none"> MRTS202 update includes: smaller size VMS for use in rural motorway environment, standalone power system to energize VMS, VMS enclosures without front cover, simple case letters with descenders and capability to integrate radar vehicle detectors for activation of VMS.
MRTS204 Suite	Vehicle Detectors	Amendment	<ul style="list-style-type: none"> MRTS204 update includes: preformed loops shall be installed for managed motorways with new asphalt pavements and use of type approved non-intrusive technologies where existing concrete pavement sections do not have sufficient asphalt overlays for cutting in loops.
MRTS214 Suite	Provision of Wireless Traffic Sensors (WTS)	Amendment	<ul style="list-style-type: none"> MRTS214 update includes: new technical requirements of classic Bluetooth traffic sensor as a compatible device.
MRTS225 Suite	Imaging	Amendment	<ul style="list-style-type: none"> MRTS225 update includes: correcting incorrect reference of superseded document S-005 with MRTS97, correcting references to incorrect system names, removing incorrect parameters of specification of PTZ cameras and including requirements around counter weights for installation of cameras on hinged poles.

Specification	Title	Change Type	Description of change
MRTS252 Suite	Next Generation Traffic Signal Controllers	Amendment	<ul style="list-style-type: none"> MRTS252 update includes: clarification regarding Traffic Signal Controller cabinet mechanical and electrical specifications, operator interface requirements and functionality.
MRTS263 Suite	Standalone Solar (PV) Power Systems	Amendment	<ul style="list-style-type: none"> MRTS263 update includes: Removal of Clause 6.6 g). Slip base solar lighting poles are now approved for use.

July 2019

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> MRTS01 update includes: Amendments to Clauses 2.2, 2.3, 3, 4, 12, 14 and 16. Tables 2.4, 3, 12(a), 12(b) and 12(c) and Figure 13 also had minor changes. MRS01 update includes: Addition of text under Table 2.1.1.
MRTS02 Suite	Provision of Traffic	Administrative	<ul style="list-style-type: none"> MRTS02 update includes: References updated and Clause 5.4 now includes methodology of undertaking independent inspections to be included in the Traffic Management Plan. MRS02 update includes: New Work Item Number 20016 added.
MRTS07a Suite	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a update includes: Aligning with recent revisions to the <i>Materials Testing Manual</i> and Test Methods. Aligning characteristic value requirements of Test Method Q020 and MRTS01 update. Clarified the laboratory testing requirements and associated time limits for compaction and moisture compliance testing. Included guidance for the establishment of a laboratory annex onsite, interpretation of failed compaction results and new Q723 test method. Included requirement to limit the amount of excess stabilising agent (powder) being spilt into adjoining sections. Revised the transverse joint requirements by removing the 1.5m cutback option and time limits for submitting compliance testing results. Increased the maximum amount of lime that can be spread on the first day of stabilisation from 50% to 66%. MRTS07a Annexure update includes: Removed the clause regarding ratio for determination of relative density and clarifying the datum for measurement of the design depth.
MRTS07b Suite	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS07b update includes: Aligning with recent revisions to the <i>Materials Testing Manual</i> and Test Methods. Aligning characteristic value requirements of Test Method Q020 and MRTS01 update. Clarified the laboratory testing requirements and associated time limits for compaction and moisture compliance testing. Included guidance for the establishment of a laboratory annex onsite, interpretation of failed compaction results and new Q723 test method. Included requirement to limit the amount of excess stabilising agent (powder) being spilt into adjoining sections. Revised the transverse joint requirements by removing the 1.5m cutback option and time limits for submitting compliance testing results. Updated Figure and provided additional guidance on the formation of longitudinal joint. MRTS07b Annexure update includes clarifying the datum for measurement of the design depth.

Specification	Title	Change Type	Description of change
MRTS07c Suite	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS07c update includes: Aligning with recent revisions to the <i>Materials Testing Manual</i> and Test Methods. Aligning characteristic value requirements of Test Method Q020 and MRTS01 update. Clarified the laboratory testing requirements and associated time limits for compaction and moisture compliance testing. Included guidance for the establishment of a laboratory annex onsite, interpretation of failed compaction results and new Q723 test method. Included requirement to limit the amount of excess stabilising agent (powder) being spilt into adjoining sections. Revised the transverse joint requirements by removing the 1.5m cutback option and time limits for submitting compliance testing results. Updated Figure and provided additional guidance on the formation of longitudinal joint and formulas for ordering of bitumen quantities (L) and calculation of lot sizes (m²). MRTS07c Annexure update includes: Removed the clause regarding ratio for determination of relative density and clarifying the datum for measurement of the design depth.
MRTS09 Suite	Plant-Mixed Pavement Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS09 update includes: Aligning with recent revisions to the <i>Materials Testing Manual</i> and Test Methods. Aligning characteristic value requirements of Test Method Q020 and MRTS01 update. Clarified the laboratory testing requirements and associated time limits for compaction and moisture compliance testing. Included guidance for the establishment of a laboratory annex onsite, interpretation of failed compaction results and new Q723 test method. Relax the traffic loading requirements for the minimum modulus of the laboratory mixed foamed bitumen stabilised materials. Removed the subbase minimum modulus of the laboratory mixed foamed bitumen stabilised materials. Clarified the sampling requirements (location and method) for feed stockpiles and materials sampling requirements (location and method) for stabilised materials. Included formulas for calculating the stabilising agent contents. MRTS09 Annexure update includes: Removed the clause regarding ratio for determination of relative density.
MRTS11 Suite	Sprayed Bituminous Treatments (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> MRTS11 update related to new TN186 <i>Sealing in Cold Weather Conditions</i>. Correction to commentary related to cutting practice for double/double seals. Added reference between annexure and MRTS to clarify which party is responsible for the seal design.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> MRTS14 update includes: Clarifying road edge guide posts categories under Clause 10.1. Clause 10.2.1 heading now includes 'Rigid'.
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> MRTS50 update includes: Major changes to Clauses 8.4, 10.1.1, 10.1.2, 12.1 and 12.3. MRS50 update includes: Changing references of 'Superintendent' to 'Administrator' and removal of Clause 4.
MRTS63a Suite	Piles for Ancillary Structures	Amendment	<ul style="list-style-type: none"> MRS63A update includes: Alignment to MRS63 with new Work Item numbers 70514 and 70515 added.
MRTS72 Suite	Manufacture of Precast Concrete Elements	Amendment	<ul style="list-style-type: none"> MRTS72 suite update includes: reflecting amendments from MRTS70 <i>Concrete</i> (Nov 2018 version) and Australian Standards, including removal of provisions now included in MRTS70, update of dynamic factors for lifting, detailing or pre-production and post-production submissions and removal of exemption from supplier registration for boat ramp planks.

Specification	Title	Change Type	Description of change
MRTS73 Suite	Manufacture of Prestressed Concrete Members and Stressing Units	Amendment	<ul style="list-style-type: none"> MRTS73 suite update includes: reflecting amendments from MRTS70 <i>Concrete</i> (Nov 2018 version) and Australian Standards, including removal of provisions now included in MRTS70, update of dynamic factors for lifting, detailing or pre-production and post-production submissions, additional option of grade of prestressing strand and update to prestressed pile lifting and storage requirements.
MRTS77 Suite	Bridge Deck	Amendment	<ul style="list-style-type: none"> MRTS77 update includes: reflecting amendments made previously to MRTS75 and MRTS76 suites, and the <i>Design Criteria for Bridges and Other Structures</i>. Changes to Clauses 5, 5.12, 5.13, 5.14, 8.3, 8.5, and 8.9. MRTS77 Annexure update includes: changes to Clauses 6 and 7. MRS77 update includes: amendments to the following Work Item Number descriptions: 72001, 72002, 72003, 72004, 72005, 72006, 72010, 72011, 72012, 72033, 72181 and 78182. New Work Item Number 72185 added. Work Item Number 72013 is now withdrawn.
MRTS84 Suite	Deck Wearing Surface	Amendment	<ul style="list-style-type: none"> MRTS84 update includes: reflecting amendments made to MRTS11, MRTS17, MRTS18, MRTS22, MRTS30, TN175 and withdrawal of Type C Waterproofing Membrane. Changes to Clauses 3, 4.2, 5.2.2, 5.3, 7, 8, 10.1, 10.2 and 11.5. MRTS84.1 Annexure updates includes: Removal of clauses to align with amendments to MRTS84. MRS84 update includes: amendments to the following Work Item Number descriptions: 73002 and 73003. New Work Item Numbers 73006 and 73007 added.
MRTS94 Suite	Road Lighting	Amendment	<ul style="list-style-type: none"> MRTS94 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.
MRTS98 Suite	Standalone Solar (PV) Powered Lighting	Withdrawn	<ul style="list-style-type: none"> Superseded by new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.
MRTS100 Suite	High Strength Geosynthetic Reinforcement in Road Embankments	Amendment	<ul style="list-style-type: none"> MRTS100 update to internal references. New MRS100 introduced this cycle. Content from former MRTS100.2 was incorporated into MRS100. With content from former MRTS100.2 being moved, former MRTS100.3 now renumbered to MRTS100.2 and MRTS100.3 withdrawn.
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> MRTS201 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.
MRTS203 Suite	Provision of Weigh-in-Motion System	Amendment	<ul style="list-style-type: none"> MRTS203 Suite has been updated to reflect utilisation change and compliance changes in the recently revised AS3000:2018 Wiring Rules.
MRTS206 Suite	Provision of Variable Speed Limit and Lane Control Signs	Amendment	<ul style="list-style-type: none"> MRTS206 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.

Specification	Title	Change Type	Description of change
MRTS207 Suite	Traffic Monitoring Foundation Equipment	Amendment	<ul style="list-style-type: none"> Renamed suite: Previously known as 'Traffic Survey Data Management (TSDM) Foundation Equipment'. MRTS207 update includes: reflect utilisation change and compliance changes in the recently revised AS3000:2018 Wiring Rules MRS207 update includes: amendment to Work Item Number 61893 description. Work Item Number 'parent' headings updated.
MRTS214 Suite	Provision of Wireless Traffic Sensors (WTS)	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRTS Appendix) that defines the design, supply, installation, testing and commissioning, performance, documentation, training, maintenance and handover requirements for Wireless Traffic Sensors (WTS) consisting of MAC-address detector with antenna and a MAC-address processor either in a single enclosure or as separate components.
MRTS218 Suite	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> MRTS218 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS218 update includes: amendment to Work Item Number 63092 description. Work Item Numbers 63041, 63042 and 63043 are now withdrawn.
MRTS221 Suite	Help Phones	Amendment	<ul style="list-style-type: none"> MRTS221 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS221 update includes: amendments to the following Work Item Number descriptions: 63301 and 63302.
MRTS222 Suite	Electronic School Zone Signs	Amendment	<ul style="list-style-type: none"> MRTS222 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS222 update includes: amendment to Work Item Number 63591 description. Work Item Numbers 63531, 63532 and 63533 are now withdrawn.
MRTS225 Suite	Imaging	Amendment	<ul style="list-style-type: none"> MRTS225 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.
MRTS229 Suite	Electronic Traffic Control Signs	Amendment	<ul style="list-style-type: none"> MRTS229 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS229 update includes: amendment to Work Item Number 64301 description. Work Item Number 64302 is now withdrawn.
MRTS231 Suite	Road Weather Monitor (RWM) Systems	Amendment	<ul style="list-style-type: none"> MRTS231 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS231 update includes: amendments to the following Work Item Number descriptions: 64504, 64505 and 64506. Work Item Numbers 64507, 64508 and 64509 are now withdrawn.
MRTS233 Suite	Roadway Flood Monitoring Systems	Amendment	<ul style="list-style-type: none"> MRTS233 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS236 update includes: amendments to the following Work Item Number descriptions: 64704, 64705 and 64706. Work Item Numbers 64707, 64708 and 64709 are now withdrawn.
MRTS250 Suite	Provision of Automatic Number Plate Recognition System	Amendment	<ul style="list-style-type: none"> MRTS250 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.
MRTS260 Suite	Temporary Variable Speed Limit Signs	Amendment	<ul style="list-style-type: none"> MRTS260 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS260 update includes: amendments to the following Work Item Number descriptions: 67501 and 67502. Work Item Numbers 67504 and 67521 are now withdrawn.

Specification	Title	Change Type	Description of change
MRTS262 Suite	Temporary Variable Message Signs	Amendment	<ul style="list-style-type: none"> MRTS262 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite. MRS262 update includes: amendment to Work Item Number 67701 description. Work Item Number 67702 is now withdrawn.
MRTS263 Suite	Standalone Solar (PV) Power Systems	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that defines design, supply, fabrication, installation, testing and commissioning, performance, documentation, training and maintenance requirements for isolated Standalone Solar (PV) Power Systems. Incorporates content of withdrawn MRTS98 suite.
MRTS265 Suite	Type-2 Portable Traffic Signals	Amendment	<ul style="list-style-type: none"> MRTS265 Suite now includes references to new MRTS263 <i>Standalone Solar (PV) Power Systems</i> suite.

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Specification	Title	Change Type	Description of change
MRTS09 Suite	Plant-Mixed Pavement Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS09 update includes: Removal of references to SD1416 in Clauses 10.5 and 14
MRTS14 Suite	Road Furniture	Administrative	<ul style="list-style-type: none"> MRTS14.1 update includes: Minor changes to table heading in Clause 9 to reflect MRTS14 content.
MRTS15 Suite	Noise Fences	Amendment	<ul style="list-style-type: none"> MRTS15 update includes: Changes to guidance notes, structural design, manufacture, quality system, and the acceptance of construction materials.
MRTS17 Suite	Bitumen and Multigrade Bitumen	Amendment	<ul style="list-style-type: none"> MRTS17 update includes: Harmonisation of TMR's bitumen requirements with AS 2008-2013, harmonisation of the TMR's sampling and testing requirements of bitumen for polymer modified binders with MRTS18, the removal of references to Principal supplied bitumen, and the inclusion of additional bitumen grades (e.g. Class 450). The title has also changed from 'Bitumen' to 'Bitumen and Multigrade Bitumen'.
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30 suite update includes: removing 75 blow Marshall designs and adjusting the requirements for 50 blow Marshall designs, adjusting the deduction regime for insufficient air voids in laboratory compacted specimens for mixes containing polymer modified binders, and revising requirements for dense graded asphalt mixes with higher proportions of reclaimed asphalt pavement.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 update includes specification of the application of cold applied plastics for line marking (excluding application of pavement surfacing for bus lanes, bicycle threshold treatments, and pavement patches for symbols).
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 update includes: Removal of event size for water quality investigation criteria (Clause 8.2.2), removal of contact threshold for waste reporting (Clause 8.13.2) MRS51 update includes: Modification of Work Item 20238P 'Management of Contaminated Sites' to separate out investigation of contaminated sites (Work Item 20250P). MRTS51.1 update includes: Removal of contractual threshold for waste reporting. MRTS51 Appendix update includes: Revised waste categories for waste reporting.

Specification	Title	Change Type	Description of change
MRTS76 Suite	Supply and Erection of Steel Girders	Amendment	<ul style="list-style-type: none"> MRTS76 update includes: Removal of 'Licence to hire' of prime movers etc issued by TMR and included National Heavy Vehicle Accreditation scheme as alternative to certifying prime mover inspections (Clause 5.2.3.2), use of TMR registered suppliers and products for epoxy past for seating steel girders (Clause 6.1), updated requirements for installation of girder restraints. MRS76 update includes changes to Work Items 71905, 71906, 71931, and 71961. Work Item 71907 has been removed. MRTS76.1 Annexure has been added.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 update includes: Removal of references to SD1416 (Clause 10.5 and 14) and minor editorial changes.
MRTS102 Suite	Reclaimed Asphalt Pavement Material	Amendment	<ul style="list-style-type: none"> MRTS102 update includes: removing 75 blow Marshall designs and adjusting the requirements for 50 blow Marshall designs, adjusting the deduction regime for insufficient air voids in laboratory compacted specimens for mixes containing polymer modified binders, and revising requirements for dense graded asphalt mixes with higher proportions of reclaimed asphalt pavement.

Exception to the publication cycle - January 2019

Specification	Title	Change Type	Description of change
MRTS03 Suite	Drainage, Retaining Structures and Protective Treatments	Amendment	<ul style="list-style-type: none"> MRTS03 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.

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Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> MRS01 update includes: Amendments to Clauses 2.1.2, 2.1.4, 2.1.8, 2.1.9 and Table 3.1.
MRTS02 Suite	Provision for Traffic	Administrative	<ul style="list-style-type: none"> MRTS02 administrative change includes: Removal of outdated course information in Table 5.2, removal of Table 7.2 notes and Clause 8.2 'necessary modifications' altered to 'necessary TMD approved modifications'.
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.

Specification	Title	Change Type	Description of change
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> MRTS05 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Minor amendments to include wording on dust management as requested by the IMD Asbestos Task Force. The wording reflects current practices in the handling of unbound granular materials (to prevent the generation of dust requires that materials are not transported and delivered to site dry). Clarify the requirements to dry back High Standard Granular Base materials (to reduce ambiguity).
MRTS06 Suite	Reinforced Soil Structures	Amendment	<ul style="list-style-type: none"> MRTS06 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS07a Suite	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a update includes: Updates to Tables 2, 4, 8.7.10, update visible deflection test to proof rolling test in accordance with test method RMS T198, standardise maximum lot sizes and minimum testing frequencies, minimum compaction requirement for the placement of new materials replacing unsuitable materials, additional details for the incorporation of the stabilising agent on the 'first day' of stabilising, guidance on the timing for the wet incorporation (or wet pass) on the 'second day' of stabilising, additional details for the process of removing the padfoot marks. MRTS07a.1 update includes: Standardised maximum lot sizes and minimum testing frequencies, provide 'default' requirements when no conformance information is nominated. MRS07a update includes: Minor changes to Work Operations, details on how to measure the quantity of removal and disposal of material not suitable for stabilisation (m³), new 'extended limit' and 'reduced value' for insufficient thickness of a stabilised layer. New MRS07a.1 introduced this cycle.
MRTS07b Suite	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS07b update includes: Removal of bituminous curing coat(s), updates to Tables 2, 3, 4, 6.3, and 8.7.15, update visible deflection test to proof rolling test in accordance with test method RMS T198, standardised maximum lot sizes and minimum test frequencies, permit use of recycled materials RM001 complying with MRTS35 requirements, clarification for allowable working hours, include minimum compaction requirement for placement of new materials replacing unsuitable materials, additional details for the process of removing padfoot marks, addition of bituminous surfacing requirements, road roughness (surface evenness) from NASRA counts/km to IRI m/km, addition of surface finish requirements and ball penetration testing requirements. MRTS07b.1 update includes: Standardised maximum lot sizes and minimum testing frequencies, 'default' requirements when no conformance information is nominated, ball penetration testing requirements and maximum allowable working time details included. MRS07b update includes: Minor updates to work operation details, removal of bituminous curing coat(s), details on how to measure the quantity of removal and disposal of material not suitable for stabilisation (m³), road roughness (surface evenness) from NASRA counts/km to IRI m/km, new 'extended limit' and 'reduced value' for insufficient thickness of a stabilised layer. MRS07b.1 update includes: Application of reduced value payment for insufficient thickness of stabilised layer.

Specification	Title	Change Type	Description of change
MRTS07c Suite	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> • MRTS07c update includes: Updates to Tables 2, 3, 4, 8.7.19 and Figure 2, update visible deflection test to proof rolling test in accordance with test method RMS T198, standardised maximum lot sizes and minimum testing frequencies, permit use of recycled materials RM001 complying with MRTS35 requirements, additional details for the process of removing padfoot marks, and road roughness (surface evenness) from NASRA counts/km to IRI m/km. • MRTS07c.1 update includes: Standardised maximum lot sizes and minimum testing frequencies, 'default' requirements when no conformance information is nominated. • MRS07c update includes: Withdrawal of Work Item Numbers 40315 and 40316, minor updates to work operation details, details on how to measure the quantity of removal and disposal of material not suitable for stabilisation (m³), road roughness (surface evenness) from NASRA counts/km to IRI m/km, new 'extended limit' and 'reduced value' for insufficient thickness of a stabilised layer. • MRS07c.1 update includes: Application of reduced value payment for insufficient thickness of stabilised layer.
MRTS08 Suite	Plant-Mixed Heavily Bound (Cemented) Pavements	Amendment	<ul style="list-style-type: none"> • MRTS08 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS09 Suite	Plant-Mixed Pavement Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> • MRTS09 update includes: Withdrawal of bituminous curing coat(s), updates to Tables 2, 3, 4, 6.1.2 and 6.1.3(a), visible deflection test to proof rolling test in accordance with test method RMS T198, calibration of mixing plant tightened from $\pm 2.5\%$ to $\pm 1\%$, updated references to TN179, standardised maximum lot sizes and minimum testing frequencies, relative moisture ratio feed stockpile (RMR FSP) to 30-55%, use of alternative mixing plants which are not the Wirtgen KMA 220 mobile cold recycling unit, alternative plants/work operations for the cutback, additional details for process of removing padfoot marks, road roughness (surface evenness) from NASRA counts/km to IRI m/km. • MRTS09.1 update includes: Standardised maximum lot sizes and minimum testing frequencies. • MRS09 update includes: Withdrawal of Work Item Numbers 40509 and 40510, minor updates to work operations details, removal of bituminous curing coat(s), removal of Clause 2.4, updated road roughness (surface evenness) from NASRA counts/km to IRI m/km, includes new 'extended limit' and 'reduced value' for insufficient thickness of a stabilised layer. • MRS09.1 update includes: application of reduced value payment for insufficient thickness of stabilised layer.
MRTS10 Suite	Plant-Mixed Lightly Bound Pavements	Amendment	<ul style="list-style-type: none"> • MRTS10 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Aligned to MRTS08 general requirements including: inclusion of 'blended lime' as an allowable stabilising agent, removal of requirement for cementitious blends to have minimum 40% Portland Cement, inclusion of sulphate content requirements for water quality testing and specification of a minimum testing frequency for segregation.

Specification	Title	Change Type	Description of change
MRTS11 Suite	Sprayed Bituminous Treatments (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> • MRTS11 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Increase in the minimum pavement temperature when spraying polymer modified binders (other than crumb rubber modified binders) and implementation of risk management procedures to better manage the risk of early life failure of sprayed seals due to cold weather. • MRS11 update includes: Amending Standard Work Item Numbers and their work operations to require all bitumen and cutback bitumen to be supplied by the Contractor and withdrawing Standard Work Item numbers for transport and return of Principal supplied bitumen and associated requirements.
MRTS12 Suite	Sprayed Bituminous Emulsion Surfacing	Amendment	<ul style="list-style-type: none"> • MRTS12 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS13 Suite	Bituminous Slurry Surfacing	Amendment	<ul style="list-style-type: none"> • MRTS13 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS18 Suite	Polymer Modified Binder (including Crumb Rubber)	Amendment	<ul style="list-style-type: none"> • MRTS18 update includes: Removes requirement that only size 16 crumb rubber can be used in field blended crumb rubber modified binder classes (S15F and S18F). Aligns more closely with national polymer modified binder specification framework – AGPT/T190.
MRTS22 Suite	Supply of Cover Aggregate	Amendment	<ul style="list-style-type: none"> • MRTS22 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS35 Suite	Recycled Material Blends for Pavements	Amendment	<ul style="list-style-type: none"> • MRTS35 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Included clarification that there are no restrictions on the use of recycled pavement materials in carparks.
MRTS39 Suite	Lean Mix Concrete Sub-base for Pavements	Amendment	<ul style="list-style-type: none"> • MRTS39 suite update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Other minor amendments

Specification	Title	Change Type	Description of change
MRTS40 Suite	Concrete Pavements Base	Amendment	<ul style="list-style-type: none"> MRTS40 suite update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update. Update the roughness limits to be expressed in IRI units rather than NAASRA counts. This aligns with department's current test methods (Q708B and Q708D), now consistent with MRTS05 and MRTS30.
MRTS45 Suite	Road Surface Delineation	Administrative	<ul style="list-style-type: none"> MRTS45 administrative change to Clause 6.1.1, removal of sentence. Annexure clause references updated. MRTS45.1 administrative change, addition of Clause 2 (with reference to Clause 6.1), and renumber following clauses
MRTS70 Suite	Concrete	Amendment	<ul style="list-style-type: none"> MRTS70 suite major update includes: Restructure of document, clarifying application to Special Class Concrete vs Normal Class Concrete and Insitu Concrete vs Precast Concrete, consideration of AS 3600 and AS 5100, embedding of Registration Scheme for assessment of precast procedures, update of Aggregate Testing and Performance Criteria, widened scope for Normal Class Concrete and clearer requirements, and addition of new Contract Administration Checklists CAC072M and CAC073M.
MRTS71a Suite	Stainless Steel Reinforcing	Amendment	<ul style="list-style-type: none"> MRTS71a update includes: Aligning to MRTS71 <i>Reinforcing Steel</i>
MRTS75 Suite	Supply and Erection of Prestressed Concrete Girders	Amendment	<ul style="list-style-type: none"> MRTS75 update includes: Alignment with Design Criteria for Bridges and Other Structures to Clause 9.1 to now include 'drilling or coring of holes into girders is not permitted'. New MRTS75.1 introduced this cycle.
MRTS91 Suite	Conduits and Pits	Administrative	<ul style="list-style-type: none"> MRTS91 administrative change to remove 'rectangular' in Clause 9.9.
MRTS101 Suite	Aggregates for Asphalt	Amendment	<ul style="list-style-type: none"> MRTS101 update includes: Harmonisation of Q Test Methods with AS Test Methods, as per Materials Testing Manual update.
MRTS213 Suite	UPS for Roadside Devices	New	<ul style="list-style-type: none"> New specification suite (MRTS) that defines the general design, supply, construction, installation, testing, commissioning and maintenance requirements for Uninterruptible Power Systems (UPS) for ITS and Traffic Signal Controllers (TSC) applications.
MRTS252 Suite	Next Generation Traffic Signal Controllers	New	<ul style="list-style-type: none"> New specification suite (MRTS) that specifies the minimum, mandatory and desirable requirements for permanently installed Traffic Signal Controllers for the state of Queensland.
MRTS254 Suite	Portable Traffic Signals	Withdrawn	<ul style="list-style-type: none"> Separated content across two new specification suites – MRTS264 and MRTS265.
MRTS264 Suite	Type-1 Portable Traffic Signals	New	<ul style="list-style-type: none"> New specification suite (MRTS) that applies Type-1 Portable Traffic Signals. Type-1 content from formerly published MRTS254 suite has been incorporated into this new suite. PTSS lantern target board requirements have been aligned to the MUTCD, as well as wind loading requirements. Target boards may be required if the visibility assessment indicates that visibility is compromised.
MRTS265 Suite	Type-2 Portable Traffic Signals	New	<ul style="list-style-type: none"> New specification suite (MRTS) that applies Type-2 Portable Traffic Signals. Type-2 content from formerly published MRTS254 suite has been incorporated into this new suite, including wind loading requirements.
MRTS270 Suite	Precast Geopolymer Concrete Elements	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that applies to the manufacture of precast reinforced geopolymer concrete elements, with a design life of 50 years or under.

Exception to the publication cycle - September 2018

Specification	Title	Change Type	Description of change
MRTS231 Suite	Road Weather Monitor (RWM) Systems	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Provision of Road Weather Monitors'. MRTS231 update includes: addition of two new sensors – visibility and surface friction indicators. New MRS231 introduced this cycle.

July 2018

Specification	Title	Change Type	Description of change
MRTS02 Suite	Provision of Traffic	Administrative	<ul style="list-style-type: none"> MRTS02 administrative change to commentary under Clause 5.4.
MRTS07a Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a update includes: new paragraph under Clause 8.7.5.3 specifying quicklime slaking work operations are to be performed by a specialised Stabilising Subcontractor.
MRTS07c Suite	Insitu Stabilised Pavements Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS07c update includes: new paragraph under Clause 8.7.7 specifying quicklime slaking work operations are to be performed by a specialised Stabilising Subcontractor.
MRTS08 Suite	Plant-Mixed Heavily Bound (Cemented) Pavements	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Plant-Mixed Stabilised Pavements using Cement or Cementitious Blends'. Suite has undergone a major update: construction and material testing requirements now align with MRTS05 and MRTS10 Suites, standardised the material requirements which now aligns with recently updated <i>Pavement Design Supplement</i>, consistent requirements for the use of recycled or quarried materials in plant-mixed heavily bound pavement materials, terminology aligns to Austroads. MRS08 update includes: Withdrawal of Work Item Numbers 404011 40402 and 40403. New Work Item Number 40404.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> MRTS14 and MRTS14.1 update includes: alignment to performance requirements of new AS/NZS 1906.1:2017. MRS14 update includes: New Work Item Number 50062.
MRTS15 Suite	Noise Fences	Amendment	<ul style="list-style-type: none"> MRTS15 undergone a major review, update includes: departmental requirements – particularly in relation to design and construction of departmental and third party noise fences, design submission and acceptance of construction, mandating painting and concrete sill beam, amendments of structural requirements – design and maintenance life, fire, traffic safety, light reflection and robustness, removal of timber products – except plywood subject to Administrator approval, removal of light weight cementitious panels, inclusion of masonry walls, composite panels and stainless connectors, drainage slots and post capping, construction requirements when earth mound and retaining wall, revision of material testing and acceptance, requirement to move the removal and salvage of existing noise fence under construction.

Specification	Title	Change Type	Description of change
MRTS22 Suite	Supply of Cover Aggregate	Amendment	<ul style="list-style-type: none"> MRTS22 update includes: aligning terminology and requirements with latest MRTS11 Suite and TN175, introduction of lighter flakiness index (cover aggregate) requirements for double-double seals which is consistent with TN175, clarifying minimum testing frequencies and test methods, clarifying aggregate quality and precoating requirements, providing guidance for the appropriate selection of aggregate quality requirements on projects.
MRTS35 Suite	Recycled Material Blends for Pavements	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Recycled Materials for Pavements'. Suite update includes: alignment with MRTS05, MRTS10 and revised MRTS08 suites, clarification of where recycled materials are permitted for use in pavement construction, reduced barriers to the 'as of right' substitution of recycled materials for quarried materials (and vice versa) in the right applications, better reflect relationship MRTS35 and other MRTS Suites referenced, provide material testing requirements that are more consistent with similar quarry sourced material. MRS35 update includes: description changes for Work Item Numbers 42401R through to 42406R. Work Item Numbers 42407R and 42408R have been withdrawn.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 and MRTS45.1 update includes: additional material and performance criteria for pavement markings, additional colours for paint (including blue and green), additional clause for the application of audio tactile line marking (ATLM) for wide centre line treatments, corrections to referencing. MRTS45.1 update includes: new Clause 5 for geometric tolerances.
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 update includes: clarity and guidance to Contractors and Contract Administrators on the requirements of the Technical Specification. Added requirement for the Contractor to generate and provide the Principal with As-Constructed drawings and maintenance and operational plans of 'permanent environmental infrastructure'. MRS51 update includes: major description changes to all Work Item Numbers.
MRTS52 Suite	Erosion and Sediment Control	Amendment	<ul style="list-style-type: none"> MRTS52 update includes: removal of references to water quality management. All water quality requirements are specified in MRTS51 Suite.
MRTS74 Suite	Supply and Erection of Prestressed Concrete Deck and Kerb Units	Amendment	<ul style="list-style-type: none"> MRTS74 Suite has been updated to align to Standard Drawings, Design Criteria for Bridges and Other Structures. MRTS74 update includes: amendments to Clauses 5.2.1.3.2, 6.3, and 8.2. MRS74 update includes: description changes to Work Item Numbers 71709 and 71711. Work Item Number 71710 has been withdrawn.
MRTS91 Suite	Conduits and Pits	Administrative	<ul style="list-style-type: none"> MRTS91 update includes: aligning with changes to Technical Note 63.
MRTS201 Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> MRTS201 update includes: enclosure air temperature requirements modified to refer to requirements of operating equipment parameters, references to road lighting and traffic signals have been removed, enclosure lighting changed to energy saving LED.
MRTS203 Suite	Provision of Weigh-in-Motion System	Amendment	<ul style="list-style-type: none"> MRTS203 update includes: WiM system accuracy class definitions and addition of calibration requirements. New MRS203 introduced this cycle.

Specification	Title	Change Type	Description of change
MRTS206 Suite	Provision of Variable Speed Limit and Lane Control Signs	Amendment	<ul style="list-style-type: none"> MRTS206 major revision. Update includes: harmonisation with AS 5156:2010 and aligned with VicRoads technical specification, sign will be sealed and not field serviceable to avoid water ingress and improve reliability, sign will have Ethernet based IP ports for maintenance access and control, sign will be ready for the new communication protocol SA TS 5719:2017, while supporting current protocol TSI-SP-003. MRS206 update includes: minor description changes to Work Item Numbers 61742 and 61743.
MRTS207 Suite	Traffic Survey Data Management (TSDM) Foundation Equipment	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that applies TSDM foundation equipment. Specifies the requirements on TSDM field cabinet and foundation equipment installed inside the cabinet to support the operation of the basic TSDM system which features WiM, ANPR, VCU and Bluetooth.
MRTS208 Suite	Roadway Ancillary ITS Infrastructure Monitoring and Control	New	<ul style="list-style-type: none"> New specification suite (only MRTS) that applies Roadway Ancillary ITS Infrastructure Monitoring and Control. This specification details the technical, operational and functional requirements for provision of monitoring and controlling systems for roadway ancillary infrastructure.
MRTS210 Suite	Provision of Mains Power	Amendment	<ul style="list-style-type: none"> MRTS210 update includes: addition of requirements for ITS switchboards, Clause 12 has been relocated from MRTS228.
MRTS219 Suite	Internally Illuminated Pavement Markers	New	<ul style="list-style-type: none"> New specification suite (only MRTS) that applies to Internally Illuminated Pavement Markers (IIPMs). Defines the performance criteria for both solar powered and externally powered IIPMs, designed to provide enhanced road and lane delineation at night and in adverse weather conditions, or where traditional Retro-Reflective Pavement Marker (RRPM) performance is limited due to gradient/geometry.
MRTS226 Suite	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> MRTS226 update includes: clarification on the standard and extended range of temperatures for cabinets, switchboard component list has been deleted – as this is included in SD1689 along with the switchboard layout and single line drawing, section on surge diverters has been deleted as the surge filter provides suitable protection making the diverter unnecessary.
MRTS228 Suite	Electrical Switchboard	Amendment	<ul style="list-style-type: none"> MRTS228 update includes: clarification of switchboards for road lighting installations to include metered as well as unmetered switchboards, clarification of the requirement to have a dedicated Earth pit, clause on 'Removal of mains connection' has been deleted and incorporated into MRTS210.
MRTS234 Suite	Communications Cables	Amendment	<ul style="list-style-type: none"> MRTS234 update includes: Hold Points and Witness Points changes, Definitions table, indoor cable section and indoor cable construction diagram were added, aerial cable and direct buried cable were removed, removal of old cable by contractor included. MRS234 update includes: minor description change to Work Item Number 64805.
MRTS256 Suite	Power Cables	Amendment	<ul style="list-style-type: none"> MRTS256 update includes: HDPE testing requirements added, improved wording in Clause 10 to help ensure unused or abandoned cables are removed from conduits.

March 2018

Specification	Title	Change Type	Description of change
MRTS03 Suite	Drainage, Retaining Structures and Protective Treatments	Administrative	<ul style="list-style-type: none"> MRTS03 administrative correction to Clause 56.3.1, measurement corrected to 0.2%.

Specification	Title	Change Type	Description of change
MRTS07a Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRS07a updates include: adjusted clause numbering to align with MRS07b, MRS07c and MRS09. Table 3.1 correction – increase stabilising agent content rejection criteria from 0.5% to 1.0% and update 'extended limit' descriptions to provide better clarity. Clause 3.2.3 update to 'stabilising agent content' percentage reduction formula description to provide better clarity.
MRTS07b Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRS07b updates include: Table 3.1 update to 'extended limit' descriptions to provide better clarity. Clause 3.2.4 update to 'stabilising agent content' percentage reduction formula description to provide better clarity.
MRTS07c Suite	Insitu Stabilised Pavements Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRS07c updates include: Table 3.1 update to 'extended limit' descriptions to provide better clarity and removal of 'relative moisture ratio' extended limit. Clause 3.2.4 update to 'stabilising agent content' percentage reduction formula description to provide better clarity. Clause 3.2.5 removal of the reduced value requirement for 'relative moisture ratio'.
MRTS09 Suite	Plant-Mixed Stabilised Pavements Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS09 updates include: Clause 8 update to clause reference, Clause 8.1.15 clarified requirement for equipment that is capable of tack coating and Clause 9.4 provided clarification on the requirement for an external measure of the amount of bitumen used during production. MRS09 updates include: Table 3.1 update to 'extended limit' descriptions to provide better clarity. Clause 3.5.5 update to 'stabilising agent content' percentage reduction formula description to provide better clarity and new Clause 3.3.6 added, which includes a reduced value formula for 'relative moisture ratios feed stockpile and foamed bitumen stockpile'.
MRTS14 Suite	Road Furniture	Administrative	<ul style="list-style-type: none"> MRS14.1 administrative correction to Clause 2.2 description.
MRTS28	Contractor's Site Facilities and Camp	Amendment	<ul style="list-style-type: none"> MRTS28 update includes: Reference to Annexure and clarity around requirements added to Clause 4.4. MRTS28.1 updated to reflect correct clause references.
MRTS61	Gantries and Support Structures for Road Signs, Tolling Systems and ITS Devices	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Mounting Structures for ITS Devices' MRTS61 updates includes: gantry and cantilever structures for road signs and tolling systems, covers road sign sizes greater than 7.5 m wide or 8 m high or 40 m² in area, pole type mounting structures has been removed, fabrication requirements for aluminium components have been added, requirements for handling, transport and storage, erection and inspection of the gantries and support structures have been added, use of levelling nuts to support gantries during erection is prohibited, gantries shall be supported on non-shrink mortar for uniform distribution of the load over the whole base plates, required concrete foundation strength has been increased from 70% to 100% of the 28 day characteristic strength.
MRTS91	Conduits and Pits	Administrative	<ul style="list-style-type: none"> MRTS91 update includes: aligning with changes to Technical Note 63.
MRTS92	Traffic Signal and Road Lighting Footings	Amendment	<ul style="list-style-type: none"> MRTS92 update includes: minor changes to reflect current legislation in Clauses 5 and 8.3.6, corrected drawing title in Clause 7.2.1
MRTS210	Provision of Mains Power	Amendment	<ul style="list-style-type: none"> MRTS210 update includes: Electricity Entities requirements have been updated, mention of ambulance levy in electricity charges has been removed, and clarity regarding submission of an 'approved' schedule of loads for unmetered connections.

Exception to the publication cycle - January 2018

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 updates include: 'untreated subgrade definition updated to 'existing subgrade', Clause 18.4 'existing subgrade' testing is only varied by the annexure, clarification on testing frequencies specified in QRS for rock fill apply to materials sourced from a QRS quarry. Alternative frequencies specified where rock fill sourced elsewhere, replace RMS Test Methods T102 and T103 with departmental Standard Test Method Q101E, Table 15.3 reformatted to provide clarity of the compaction requirements, earth fill materials combined in single table, and MRTS10 <i>Lightly Bound Pavements</i> included as reference. MRS04 update includes: 'trimming' included in the work operations for embankments.
MRTS25 Suite	Steel Reinforced Precast Concrete Pipes	Amendment	<ul style="list-style-type: none"> MRTS25 Suite updates include: updated references across both documents, aligns Annexure to MRTS25.
MRTS104 Suite	Retarding Pavement Reflective Cracking using Asphalt Geosynthetics	New	<ul style="list-style-type: none"> New specification suite (MRTS and MRS) that applies to Retarding pavement reflective cracking using asphalt geosynthetics. This specification suites provides the technical basis on which selection of asphalt geosynthetic products could be made and used in projects.

October 2017

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> MRTS01 updates include: Table 2.1 RDD definition amended and new Relative Compaction added, Table 12(b) changes to 'property' and 'rounding value' columns.
MRTS04 Suite	General Earthworks	Administrative	<ul style="list-style-type: none"> MRTS04 administrative corrections: Table 19.2.3 and Table 19.2.6. MRS04 administrative correction: 4 digit number reference corrected.
MRTS07a Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Administrative	<ul style="list-style-type: none"> MRTS07a administrative corrections: references under Clause 8 and Clause 8.7.5.1 corrected.
MRTS07b Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Administrative	<ul style="list-style-type: none"> MRTS07b administrative corrections: references under Clause 8.7.8.1 and Clause 8.7.8.2 corrected.
MRTS07c Suite	Insitu Stabilised Pavements Using Foamed Bitumen	Administrative	<ul style="list-style-type: none"> MRTS07c administrative correction: reference under Clause 8 corrected.
MRTS09 Suite	Plant-Mixed Stabilised Pavements Layers Stabilised Using Foamed Bitumen	Administrative	<ul style="list-style-type: none"> MRTS09 administrative corrections: Clause 8.5 title corrected, reference under Clause 8.9.1 corrected, and under Clause 8.9.9.3 'to' has been changed to 'by'.
MRTS10 Suite	Lightly Bound Pavements	Administrative	<ul style="list-style-type: none"> MRTS10 administrative correction: Clause 8.2.10 'unbound' changed to 'lightly'.

Specification	Title	Change Type	Description of change
MRTS11 Suite	Sprayed Bituminous Treatments (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Sprayed Bituminous Surfacing (Excluding Emulsion)' Suite has undergone a major update: facilitating the permissive and increased use of crumb rubber modified (CRM) binder in sprayed seals, enabling use of new TN175 <i>Selection and Design of Sprayed Bituminous Treatments</i>, aligning terminology to Austroads, new commentaries added, prohibiting use of cockerel spreaders for spreading aggregate as part of sprayed sealing operations. All new simplified Work Item Numbers in MRS11.
MRTS14 Suite	Road Furniture	Administrative	<ul style="list-style-type: none"> MRTS14 Annexure administrative correction: Clause 3 heading.
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30/MRS30 updates include: addition of reduced level of service provisions for asphalt with low insitu air voids and/or low air voids in laboratory compacted specimens, amendments to the requirements for levels and layer thickness to align more closely with historical departmental requirements and addition of proof rolling of the substrate to identify weak support conditions prior to asphalt placement. A number of additional minor changes have been made aimed at improving the performance characteristics of asphalt mixes and reducing the number of occurrences of nonconforming asphalt.
MRTS32 Suite	High Modulus Asphalt (EME2)	New	<ul style="list-style-type: none"> New specification suite that applies to High modulus asphalt (EME2). EME2 is now available for use in Australia. EME2 asphalt has the potential to provide more structurally efficient (thinner) and better performing thick/heavy duty asphalt pavements. This specification has been developed based on PSTS107, and is to be read in conjunction with MRTS30 <i>Asphalt Pavements</i> and updated TN148 <i>Asphalt Mix Design Registration</i>.
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> MRTS45 updates include: Aligning spacing of ATLM with national harmonised spacing of 250 mm centre to centre with a tolerance of 50 mm and aligning the installation of ATLM near residential buildings to Part 5 of the Austroads <i>Guide to Road Safety</i> and TRUM.
MRTS64 Suite	Driven Tubular Steel Piles (with reinforced concrete pile shaft)	New	<ul style="list-style-type: none"> New specification suite that applies to use of Driven, Tubular Steel Piles with reinforced concrete pile shafts. It's been developed based on MRTS63 <i>Cast in place piles</i>, MRTS65 <i>Precast Prestressed Concrete Piles</i> and RMS B54.
MRTS72 Suite	Manufacture of Precast Concrete Elements	Administrative	<ul style="list-style-type: none"> MRTS72 administrative correction: Clause 10.4.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 updates include: Clarification of the batch approval process, under Clause 5.2, for pit products with reference to TN63 and clarification on requirements on concrete in Clause 7.9.1.2.
MRTS93 Suite	Traffic Signals	Amendment	<ul style="list-style-type: none"> MRTS93 updates include: standardise the installation practice of vehicle detectors in new and existing asphalt and concrete pavements for local roads and motorways. Some of the amendments are – introduction of preformed loop installation method in new asphalt pavement, discontinued the VID loop installation method and red light camera loop installation details clarified.
MRTS204 Suite	Vehicle Detectors	Amendment	<ul style="list-style-type: none"> MRTS204 updates include: standardise the installation practice of vehicle detectors in new and existing asphalt and concrete pavements for local roads and motorways. Some of the amendments are – introduction of preformed loop installation method in new asphalt pavement, discontinued the VID loop installation method and red light camera loop installation details clarified.

Specification	Title	Change Type	Description of change
MRTS211 Suite	Pedestrian Push Buttons and Audio Tactile Drivers	New	<ul style="list-style-type: none"> New specification suite (only MRTS) that applies to inclusion of demand indicators in pedestrian push buttons.
MRTS257 Suite	Feeder Cable and Loop Cable for Vehicle	Amendment	<ul style="list-style-type: none"> MRTS257 updates include: standardise the installation practice of vehicle detectors in new and existing asphalt and concrete pavements for local roads and motorways. Some of the amendments are – introduction of preformed loop installation method in new asphalt pavement, discontinued the VID loop installation method and red light camera loop installation details clarified.

July 2017

Specification	Title	Change Type	Description of change
Sixth Edition	All Specification Suites	New	<ul style="list-style-type: none"> The Sixth Edition introduces the new 5 digit work item numbers in MRS (Specification Measurement) documents, inclusive of updated descriptions and addition/amendment of headings. Please refer to MRTS01 and MRS01 for more information on the 5 digit work item numbers and groups. All documents have been redated July 2017 excluding MRTS25.1 Annexure. Consistent formatting has been applied and internal references updated throughout. Specification suites with additional technical amendments are outlined below.
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> MRTS01 updates include: Clause 1 modification to clarify the use of Specifications for contracts outside of departmental contracts and non-technical issues associated with departmental works outside of the scope of specifications. Table 2.1 and Table 6 amended. MRS01 updates include: Clause 1 amended as per MRTS01. Clause 2.1.3 amended to include new 5 digit Standard Item groups effective from 1 August 2017, and amendment Clause 2.1.4.
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> MRTS02 update includes: Removal of note from Table 5.2. Revised date for publication of data specification for communicating roadworks information. Addition of new Clause 6.5.1.1. MRTS02 Annexure includes addition of Clause 5.1
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> MRTS04 update includes: Corrections to Tables 19.2.3 and 19.2.6
MRTS05 Suite	Unbound Pavements	Amendment	<ul style="list-style-type: none"> MRTS05 update includes: Implemented NACoE research outcomes through the introduction of a HSG material specification. Updated general construction requirements to reflect best practice and improved consistency in testing requirements.

Specification	Title	Change Type	Description of change
MRTS07a Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> MRTS07a updates include: Figure 8.7.6.2.2 reformatted to provide clarity. Improved resolution of Figure 8.7.7.2. Additional details in Clause 8.7.9 to align with MRTS07b and 07c. MRS07a updates include: Clause 2.3 formulas reformatted to provide clarity. Include a process for calculating the quantity of water curing. Updated Table 2.4.1 to align with MRS07b and 07c. Corrected an error in Clause 2.4.2.3 formula.
MRTS07b Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRTS07b updates include: Figure 8.7.9 reformatted to provide clarity. Include Figure 8.7.11.2 to align with MRTS07a and 07c. Added details in Clause 8.7.13. MRTS07b Annexure update to Clause 9 to provide clarity. MRS07b updates include: Clause 2.1 formulas reformatted to provide clarity. Include a process for calculating the quantity of water curing. Updated Table 3.1 to provide clarity. Corrected a reference error in Clause 4.2 formula.
MRTS07c Suite	Insitu Stabilised Pavements Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS07c updates include: Figure 2 to provide clarity. Improved resolution of Figure 8.7.15.2. More details added in Clause 8.7.18. Clause 9.6 formulas reformatted to provide clarity. MRS07c updates include: Clause 2.3 formulas reformatted to provide clarity. Corrected reference error in Clause 4.2 formula.
MRTS08 Suite	Plant-Mixed Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> MRS08 updates include: added material and construction testing in Clause 2.1.1. Clause 2.3 formula reformatted to provide clarity.
MRTS09 Suite	Plant-Mixed Stabilised Pavements Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> MRTS09 updates include: inclusion of TN150 references. Renumbered Clause 8.4 and Clause 8.5 to align with chronological order of construction. Additional details in Clause 8.9.20. Clause 9.4 formulas reformatted to provide clarity. MRTS09 Annexure updates include: Clause 1 testing levels. Clause 3 includes correct test method. Renumber Clause 10 and 11 to align with chronological order for construction. MRS09 updates to Clause 2.2 and Clause 3.3.5 formulas to provide clarity.
MRTS10 Suite	Lightly Bound Pavements	New	<ul style="list-style-type: none"> New Specification Suite that applies to the construction of pavement materials with an Unconfined Compressive Strength (UCS) of between 1.0 and 2.0 MPa. These materials have previously been referred to as cement modified base (CMB) in Queensland, however the terminology 'lightly bound' has been chosen to align with Austroads terminology.
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> MRTS14 update is to permit the use of digital printing using matched component systems developed by sheeting manufacturers.
MRTS16 Suite	Landscape and Revegetation Works	Amendment	<ul style="list-style-type: none"> Complete revision.

Specification	Title	Change Type	Description of change
MRTS18 Suite	Polymer Modified Binder (including Crumb Rubber)	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Polymer Modified Binder' Update to MRTS18 adopts Austroads AGPT/T190 binder requirements with MRTS18 supplementing or replacing Austroads requirements only where needed. Update aligns the departments CRM binder requirements with Austroads CRM binder requirements. Aligns with Austroads binder classifications. Updates to sampling and testing requirements and insert 'point of use' conformance requirements based on Technical Note EN07 <i>Conformance of Polymer Modified Binders</i>
MRTS26 Suite	Manufacture of Fibre Reinforced Concrete Drainage Pipes	Amendment	<ul style="list-style-type: none"> MRTS26 Annexure provides a realignment granting manufacturers of fibre-reinforced pipes the same interim relaxations that steel-reinforced precast concrete pipes suppliers received previously.
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> MRTS30 minor update to changed reference from 'A5S' to 'A15E' in Clauses 1.1, 7.1.6 and 7.2.10
MRTS50 Suite	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> MRTS50 update includes inclusion of 'As constructed data for structures' MRS50 update includes new work item number for As constructed documents
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> MRTS51 updates include changes to water quality, waste reporting and spoil.
MRTS52 Suite	Erosion and Sediment Control	Amendment	<ul style="list-style-type: none"> MRTS52 updates include changes to water quality, new references to MRTS51, minor updates to Clauses 8 to 10.
MRTS65 Suite	Precast Prestressed Concrete Piles	Amendment	<ul style="list-style-type: none"> MRTS65 suite updates include: allowable hammer types allow a wider range of types. Term 'drop height' has been largely eliminated and replaced by 'input energy'. Includes described cases where set is achieved at a different level that design. Jetting and shooting have been removed. Spirally wound steel piles have been included. Pile monitoring requirements have significantly changed. Nominal refusal set has been changed to 2.5 mm from 2.0 mm. New commentaries. CAC017M checklist amended, and new checklist CAC067M has been released.
MRTS66 Suite	Driven Steel Piles	Amendment	<ul style="list-style-type: none"> MRTS66 suite updates are aligned to MRTS65 suite changes above. New commentaries.
MRTS85 Suite	Repainting Steel Bridges	Amendment	<ul style="list-style-type: none"> MRTS85 suite updates include: aligning with current industry practice, emphasise surface preparation and clarify requirements in this space, revised Annexure to specify the paint system and method of application per project, new technologies such as Total Weather Stations. Inclusion for repair of paint systems.
MRTS85a Suite	Repainting Existing Steel Bridges and New Steel Bridges Zinc Metal Systems	Withdrawn	<ul style="list-style-type: none"> Updated MRTS85 July suite, in conjunction with MRTS88 suite, makes MRTS85a suite redundant and therefore withdrawn.
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> MRTS91 updates include: Clause 5.2 includes existing requirements for the Batch approval process for pit products with reference to TN63 <i>Clarification of electrical pit requirements to MRTS91 and MRTS78</i>. Clarification on requirements on materials for rectangular pit covers in Clause 7.9.1.2.
MRTS253 Suite	Traffic Signal Lanterns	Amendment	<ul style="list-style-type: none"> Updated to include technical specifications for the implementation of Pedestrian Countdown Timer (PCT) displays at signalised intersections with pedestrian crossings.
MRTS256 Suite	Power Cables	Amendment	<ul style="list-style-type: none"> MRTS256 administrative change to Table 6.2c

Specification	Title	Change Type	Description of change
MRTS257 Suite	Feeder Cable and Loop Cable for Vehicle Detector	Amendment	<ul style="list-style-type: none"> MRTS257 update includes additional requirement in Clause 8.3, on the installation of feeder cable – where the unterminated end of the loop feeder cable should be able to be lifted out of the pit by a minimum of 300 mm and a maximum of 500 mm.

Fifth Edition (inclusive of February 2014 to May 2017)

Exception to the publication cycle - May 2017

Specification	Title	Change Type	Description of change
MRTS254 Suite	Portable Traffic Signals	Amendment	<ul style="list-style-type: none"> Updates communications requirements to be less prescriptive, allowing wired and wireless between PTSUs and the HRC Updated to align with the relevant section in the MUTCD Pt. 3 Supplement

April 2017

Specification	Title	Change Type	Description of change
MRTS04 Suite	General Earthworks	Amendment	<ul style="list-style-type: none"> Updates to: testing frequencies (flow chart added), test methods, references, rock fill grading and properties, moisture limits for compaction, compaction compliance procedure (flow chart added) zonal embankment, culvert backfill materials and redefined Class A material MRS04 - Work Items (new and amended) and Work Operations: 3307, 3308, 3407P, 3415P, 3416P, 3417P
MRTS07b Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> Administrative change to Clause 8.8.2
MRTS51 Suite	Environmental Management	Amendment and New	<ul style="list-style-type: none"> Major revision to MRTS51 MRS51 - Work Items (new and amended) and Work Operations: 1330, 1333, 1334, 1335, 1336P, 1341P, 1355P, 1362P, 1375P, 1382, 1383P, 1384, 1385P New MRTS51 Appendix
MRTS52 Suite	Erosion and Sediment Control	Amendment	<ul style="list-style-type: none"> MRS52 - Minor update to Work Items 1231 and 1254
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Administrative change: <ul style="list-style-type: none"> Reference AS/ACIF S008 and S009 are updated to AS/CA S008:2010 and AS/CA S009:2013
MRTS226 Suite	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> MRTS226 - Updated to include metered cabinets, and pole or post mounted cabinets MRS226 – Updated Work Item descriptions: 6969 through to 6974 and 6978 New Standard Drawings 1689 and 1690 references added
MRTS228 Suite	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> MRTS228 - Updated to include metered switchboards in single and three phase configurations

Specification	Title	Change Type	Description of change
			<ul style="list-style-type: none"> • MRS226 – Updated Work Item descriptions: 6802, 6804 • New Standard Drawings 1686, 1687 and 1688 references added

January 2017

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> • Administrative change to MRTS01 Table 2.1.1
MRTS07a Suite	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> • Complete revision
MRTS07b Suite	Insitu Stabilised Pavements Using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> • Complete revision
MRTS07c Suite	Insitu Stabilised Pavements Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> • Amendments, in addition to updating references and test methods and clarifying requirements, include: <ul style="list-style-type: none"> – Mandate the requirement of the foaming agent (at least 0.4% by mass) to be incorporated into the C170 bitumen to reduce the risk of incurring poor foaming properties – Includes equations to assist the Contractor and Administrator in calculating the required content of stabilising agent in the field based on the laboratory mix designs – Mandate that any 'rework' shall be done to the full depth of the stabilised layer to ensure that the upper 150mm does not become too stiff
MRTS09 Suite	Plant-Mixed Stabilised Pavements Layers Stabilised Using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> • Complete revision
MRTS11 Suite	Sprayed Bituminous Surfacing (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> • Administrative corrections to MRTS11.1 Annexure
MRTS15 Suite	Noise Fences	Amendment	<ul style="list-style-type: none"> • Administrative change only to clause reference under MRTS15 Clause 7.11.2.2
MRTS24 Suite	Manufacture of Precast Concrete Culverts	Amendment	<ul style="list-style-type: none"> • Administrative change only to Table 6.3.1(b)
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> • Administrative change only to clause reference under MRTS45 Clause 7.10

Specification	Title	Change Type	Description of change
MRTS63 Suite	Cast-In-Place Piles	Amendment	<ul style="list-style-type: none"> Administrative change to Work Item Numbers in MRS63: <ul style="list-style-type: none"> 7415 changed to new number 7416 7425 description corrected
MRTS84a Suite	Removal of Bridge Deck Wearing Surface	Amendment	<ul style="list-style-type: none"> Renamed: Previously known as 'Cold Milling Bridge Deck Wearing Surface' Amendments align to current TMR Technical Specifications and Project requirements, with inclusion of DMS removal, investigation methods and requirements and acceptance of equipment plan New Work Item Number added
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Administrative change only to include reference to MRTS78 in MRTS91
MRTS92 Suite	Traffic Signal and Road Lighting Footings	Amendment	<ul style="list-style-type: none"> Administrative change to Work Item Number in MRS92: <ul style="list-style-type: none"> 6711 changed to new number 6715
MRTS140 Suite	Horizontal Directional Drilling (HDD)	New	<ul style="list-style-type: none"> New Specification Suite for Horizontal Directional Drilling
MRTS141 Suite	Microtunnelling and Pipe Jacking	New	<ul style="list-style-type: none"> New Specification Suite for Microtunnelling and Pipe Jacking
MRTS142 Suite	Thrust Boring and Auger Boring	New	<ul style="list-style-type: none"> New Specification Suite for Thrust Boring and Auger Boring
MRTS202 Suite	Variable Message Signs	Amendment	<ul style="list-style-type: none"> Amendment includes reference to MRTS78 and also specific reference to fabrication requirements MRS Work Item Number description changes to 6891, 6892, 6893.
MRTS218 Suite	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> Administrative corrections to Work Item Number 6103 description in MRS218

October 2016

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> Minor changes to incorporate the standardisation of terminology of Q140A (published in Materials Testing Manual Edition 4, March 2016) <ul style="list-style-type: none"> 'Relative Dry Density' amended to 'Relative Compaction' MRTS77 – also has heading added within Table for 'Standard Work Items'
MRTS05 Suite	Unbound Pavements		
MRTS06 Suite	Reinforced Soil Structures		
MRTS77 Suite	Bridge Deck		

Specification	Title	Change Type	Description of change
MRTS63 Suite	Cast-In-Place Piles	Amendment	<ul style="list-style-type: none"> Work Item Numbers have been changed from 'Provisional Quantity' to Standard Work Item Number: <ul style="list-style-type: none"> MRTS63 – 7407, 7411, 7412, 7413, 7421, 7422, and 7425 MRTS63a – 7407, 7415, 7425, 7426, and 7427 MRTS68 – 7801, 7802, and 7803 MRTS85a – 8715, 8716, 8717 and 8718 'Provisional Quantity' has been amended to 'Provisional Quantity As Directed': <ul style="list-style-type: none"> MRTS63a – 7408P
MRTS63a Suite	Piles for Ancillary Structures		
MRTS68 Suite	Dynamic Testing of Piles		
MRTS85a Suite	Repainting Steel Bridges		
MRTS65 Suite	Precast Prestressed Concrete Piles	Amendment	<ul style="list-style-type: none"> 'Provisional Quantity' has been amended to 'Provisional Quantity As Directed': <ul style="list-style-type: none"> MRTS65 – 7513P and 7514P MRTS66 – 7611P and 7613P
MRTS66 Suite	Driven Steel Piles		
MRTS98 Suite	Standalone Solar (PV) Powered Lighting	Amendment	<ul style="list-style-type: none"> Work Item Number description has been amended: <ul style="list-style-type: none"> MRTS98 – 6365, 6366 and 6367 MRTS300 – 8823 MRTS305 - 4714
MRTS300 Suite	Boat Ramps		
MRTS305 Suite	Dredging		
MRTS11 Suite	Sprayed Bituminous Surfacing (Excluding Emulsion)	Amendment	<ul style="list-style-type: none"> Administrative change - Heading added within Table for 'Standard Work Items'
MRTS35 Suite	Recycled Materials for Pavements		
MRTS39 Suite	Lean Mix Concrete Sub-base for Pavements		
MRTS40 Suite	Concrete Pavement Base		
MRTS80 Suite	Supply and Erection of Bridge Barrier		
MRTS82 Suite	Bridge Deck Expansion Joints		
MRTS84a Suite	Cold Milling Bridge Deck Wearing Surface		
MRTS88 Suite	Protective Coating for New Work		
MRTS89 Suite	Poste-tensioned Concrete		
MRTS251 Suite	Traffic Counter/Classifier		
MRTS50 Suite	Specific Quality System Requirements		
MRTS92 Suite	Traffic Signal and Road Lighting Footings		

Specification	Title	Change Type	Description of change
MRTS03 Suite	Drainage, Retaining Structures and Protective Treatments	Amendment	<ul style="list-style-type: none"> Minor changes to incorporate the standardisation of terminology of Q140A (published in Materials Testing Manual Edition 4, March 2016) <ul style="list-style-type: none"> 'Relative Dry Density' amended to 'Relative Compaction' Work Item Numbers have been changed from 'Provisional Quantity' to Standard Work Item Number – 2731, 2741, 2751 Minor changes to incorporate 'TMR Surveying Standards' Feb 16 clause detailing the: <ul style="list-style-type: none"> Requirement for capture of survey accurate spatial location of existing underground assets Requirement for setting out, conformance and As Constructed survey of newly installed or relocated underground assets
MRTS22 Suite	Supply of Cover Aggregate	Amendment	<ul style="list-style-type: none"> Minor changes to incorporate the standardisation of terminology of Q140A (published in Materials Testing Manual Edition 4, March 2016) <ul style="list-style-type: none"> 'Relative Dry Density' amended to 'Relative Compaction' Administrative change - Heading added within Table for 'Standard Work Items'
MRTS38 Suite	Pavement Drains		
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Minor changes to incorporate the standardisation of terminology of Q140A (published in Materials Testing Manual Edition 4, March 2016) <ul style="list-style-type: none"> 'Relative Dry Density' amended to 'Relative Compaction' Minor changes to incorporate 'TMR Surveying Standards' Feb 16 clause detailing the: <ul style="list-style-type: none"> Requirement for capture of survey accurate spatial location of existing underground assets Requirement for setting out, conformance and As Constructed survey of newly installed or relocated underground assets
MRTS14 Suite	Road Furniture	Amendment	<ul style="list-style-type: none"> Updates to the following: <ul style="list-style-type: none"> Retroreflector specifications for proprietary barriers Review of motor grid section Review of Australian Standards and general references Review of approved products, registered suppliers, and registered manufacturers Updates to Standard Drawing and references
MRTS45 Suite	Road Surface Delineation	Amendment	<ul style="list-style-type: none"> Major changes: <ul style="list-style-type: none"> Adoption of Australian Paint Approval Scheme Specification for Cold Applied Plastic and Glass Beads Adoption of AS 3554 for epoxy for raised pavement marker installation Aligning testing methods and frequency of testing with AS 4049.4 Measurement of retroreflectivity has been changed to 20 days after line marking Inclusion of type B-HR and D-HR beads for greater retroreflectivity New Clause for the use of Cold Applied Plastic for line marking Revised application rates for paint and glass beads Reference to Technical Note 155

Specification	Title	Change Type	Description of change
MRTS46 Suite	Skid Resistant Friction Coating for Steel Road Plates	Withdrawn	<ul style="list-style-type: none"> Withdrawn
MRTS51 Suite	Environmental Management	Amendment	<ul style="list-style-type: none"> Amendments to MRTS include: <ul style="list-style-type: none"> Update in response to Biosecurity Act 2014 and Biosecurity Regulation 2016 enactment Update terminology to reflect Biosecurity Act 2014 and Biosecurity Regulation 2016 enactment Annexure and MRS amendment includes - Update to include reporting requirements for the TMR's Waste Recycling and Reduction Plan
MRTS52 Suite	Erosion and Sediment Control	Amendment	<ul style="list-style-type: none"> Amendments to MRTS include: <ul style="list-style-type: none"> Modify risk category name "General" to "Medium". Amendment to provide the option to specify different risk levels at different times of year due to seasonality of rainfall. Inclusion of a cross-reference with MRTS16 and MRTS04 in relation to soil testing Annexure – Addition of clauses to specify different erosion risk levels due to seasonal rainfall MRS - Description has been amended – 1237P
MRTS256 Suite	Power Cables	Amendment	<ul style="list-style-type: none"> Administrative change from 'cable joint' to 'junction box'

Exception to the publication cycle - August 2016

Specification	Title	Change Type	Description of change
MRTS25.1 Annexure	Steel Reinforced Precast Concrete Pipes	Amendment	<ul style="list-style-type: none"> Amendments in regard to MRTS25 are presented in the Annexure to overcome difficulties during the procurement of pipes. Annexure MRTS25.1 is for use until a revised MRTS is developed and published. Additional details are covered in the "Notice of Amended Annexure MRTS25.1 (August 2016)"

July 2016

Specification	Title	Change Type	Description of change
MRTS68 Suite	Dynamic Testing of Piles	Amendment	<ul style="list-style-type: none"> Revised for currency and minor amendments include: <ul style="list-style-type: none"> Modern equipment now used by industry and inclusion of commentary
MRTS77 Suite	Bridge Deck	Amendment	<ul style="list-style-type: none"> Minor amendments to: <ul style="list-style-type: none"> Revised Bridge Deck Plate Standard Drawing 2005, as well updated references to 'SD2000 series' Clause 5.2.1 Clause 19.2

Specification	Title	Change Type	Description of change
MRTS80 Suite	Supply and Erection of Bridge Barrier	Amendment	<ul style="list-style-type: none"> Minor amendments to: <ul style="list-style-type: none"> MRTS - Clause 8 MRS - amended to include stainless steel balustrades and safety rails Work Item numbers removed (Item numbers 8411 to 8416 inclusive)
MRTS87 Suite	Supply of Timber Bridge Materials and Components	Amendment	<ul style="list-style-type: none"> Minor amendments to (MRTS only): <ul style="list-style-type: none"> Australian Standards references added Inappropriate species proven to show reduced performance have been removed Tolerances have been adjusted as appropriate – either tightened or opened up
MRTS91 Suite	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Minor amendments to (MRTS only): <ul style="list-style-type: none"> Clause 7.8.1.1 – Preference to Circular Pits has been added Clause 10.4 – Removal of Relative Dry Density (RDD)
MRTS96 Suite	Management and Removal of Asbestos	Amendment	<ul style="list-style-type: none"> Minor amendments to: <ul style="list-style-type: none"> Reflect changes to TMR Asbestos Framework Includes electrical conduits and pits and other asbestos used in infrastructure Includes Environmental Act
MRTS200 Suite	General Requirements for Intelligent Transport Systems Infrastructure	Amendment	<ul style="list-style-type: none"> Minor amendment: <ul style="list-style-type: none"> Maximum distance between adjacent communications pits had been reduced from 250 m to 240 m, to align with electrical power conduit spacings
MRTS202 Suite MRTS229 Suite MRTS262 Suite	Provision of Variable Message Signs Electronic Traffic Control Signs Temporary Variable Message Signs	Amendment	<ul style="list-style-type: none"> The revision incorporates a five year warranty for MRTS202, MRTS229 and MRTS262 regarding electronic signage Addressed the chromaticity requirements for the display of text and graphics of signs installed on TMR networks Signs using RGB colour mixing functionality are not to be used
MRTS226 Suite	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> Incorporates changes made to the physical security of ITS Telecommunication cabinets: <ul style="list-style-type: none"> Addition of CyberLock Stainless Steel three point locking system Procedural changes – Users to update keys once every 10 days
MRTS253 Suite	Traffic Signal Lanterns	New	<ul style="list-style-type: none"> New Specification Suite for Traffic Signal Lanterns
MRTS254 Suite	Portable Traffic Signals	New	<ul style="list-style-type: none"> New Specification Suite for Portable Traffic Signals

Specification	Title	Change Type	Description of change
MRTS255 Suite	Traffic Signal Controllers	Amendment	<ul style="list-style-type: none"> • Incorporates changes made to the physical security of Traffic Single Controller cabinets: <ul style="list-style-type: none"> • Addition of CyberLock • Three point locking system – aligning with MRTS226 • Procedural changes – Users to update keys once every 10 days • Requirement for non CardBus memory devices to store data • Replacing the dialup modem with an Ethernet interface
MRTS260 Suite	Temporary Variable Speed Limit Signs	Amendment	<ul style="list-style-type: none"> • Amendment incorporates part of a new road zone safety initiative in conjunction with updated TRUM Volume 1 Part 10 – Traffic Control and Communications Devices

Exception to the publication cycle - May 2016

Specification	Title	Change Type	Description of change
MRTS86 Suite	Widening, Strengthening and Rehabilitation of Bridges	Amendment	<ul style="list-style-type: none"> • Renamed: Previously named 'Preparation for Bridge Widening' • Addition of references to: MRTS96 and SA TS 101 and requirements for surface tolerant wet-to-dry epoxy and new clause for requirement of epoxy bonding agent • All clauses for chemical fasteners have been revised • MRS includes installer accreditation under AEFAC or installer trained by the product supplier • Reinforcing bar installation guidelines revised

April 2016

Specification	Title	Change Type	Description of change
MRTS01 Suite	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> Minor amendment to MRTS and Annexure: <ul style="list-style-type: none"> Clause 14
MRTS02 Suite	Provision for Traffic	Amendment	<ul style="list-style-type: none"> Major amendments to: <ul style="list-style-type: none"> Traffic Management Inspection Speed Management Plan Minor amendments to: <ul style="list-style-type: none"> Traffic Management Reinspection Fee Removal Part B of the Annexure to MRTS02 Clarification of qualifications for Nominated Traffic Officer Use of Truck Mounted Attenuator units Amending Annexure to allow other measures to prevent end of queue crashes Variable Message Signs Inclusion of commentary
MRTS03	Drainage, Retaining Structures and Protective Treatments	Amendment	<ul style="list-style-type: none"> Administrative change only: <ul style="list-style-type: none"> Correction to Standard Drawings references '2000 series'
MRTS28 Suite	Contractor's Site Facilities and Camp	Amendment	<ul style="list-style-type: none"> Equation has been amended Addition of MRTS52 reference Other minor amendments throughout
MRTS35 Suite	Recycled Materials for Pavements	Amendment	<ul style="list-style-type: none"> Major update to include use of recycled materials for stabilised layers <ul style="list-style-type: none"> Option of recycled crushed concrete in stabilised layers, includes requirements and test methods RM007 has been removed NSW RMS test methods have been replaced with Australian Standards where appropriate Updated to align with updated Materials Testing Manual MRS has new Work Item Number
MRTS62 Suite	Bridge Substructure	Amendment	<ul style="list-style-type: none"> New Clauses added, inclusive of: <ul style="list-style-type: none"> Precast (reference to MRTS70, MRTS72, MRTS73) Bearing requirements (reference to MRTS81) Metalwork requirements (reference to MRTS78) As-constructed documents (reference to MRTS69) MRS has new Work Item Numbers

Specification	Title	Change Type	Description of change
MRTS63A Suite	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> Major amendment: <ul style="list-style-type: none"> Removed majority of requirements for using liners, now only supports loose materials Geotechnical assessment / certification now focuses on socket walls Commentary added to reference CAS
MRTS98	Standalone Solar (PV) Powered Lighting	New	<ul style="list-style-type: none"> New Specification Suite for Standalone Solar (PV) Powered Lighting
MRS218	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> Major amendment to MRS: <ul style="list-style-type: none"> Work Item Numbers 6929 and 6943 have been replaced with 6161, 6162, 6163, 6164 and 6103
MRTS221	Help Phones	Amendment	<ul style="list-style-type: none"> Minor update: <ul style="list-style-type: none"> Reflects changes from TRUM Manual – references Volume 1 Part 9, Section 6.1.6-2
MRTS228	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> Clause 8.1 – Removed redundant sentence on requirement of concrete base, which is no longer required

January 2016

Specification	Title	Change Type	Description of change
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> Minor amendments: <ul style="list-style-type: none"> Replacing RMS test methods with recently released national (Australian Standard) test methods Streamlining (reducing) some of the production trial requirements for asphalt mix design registration where appropriate to do so, and Simplifying the usage requirements for material transfer vehicles (MTV) In addition, the deductions associated with nonconforming insitu air voids have been increased for AC20M and AC20H
MRTS40	Concrete Base in Pavements	Amendment	<ul style="list-style-type: none"> Renamed: Previously named 'Concrete Base in Pavements – Jointed Unreinforced, Jointed Reinforced, Continuously Reinforced and Steel Fibre Reinforced Pavements' Major amendments, inclusive of improved useability: <ul style="list-style-type: none"> Aligned to major update to R83 Increased harmonisation between states Allows increased use of manufactured sands rather than natural sands

Specification	Title	Change Type	Description of change
MRTS63	Cast-In-Place Piles	Amendment	<ul style="list-style-type: none"> Revised for currency and minor amendments include: <ul style="list-style-type: none"> Geotechnical assessment and verification The use of spirally wound liners is now permitted in some applications As constructed records – New section to formalise the supply of as constructed records CAS manual references have been included in the commentary boxes (CAS Manual checklists have also been extensively updated – CAC013M, CAC014M, CAC015M and CAC021M)
MRTS78	Fabrication of Structural Steelwork	Amendment	<ul style="list-style-type: none"> To use slit flats bar and laser cut plate the silicon content must be above 0.1% for any items which will be galvanised. This is to eliminate the galvanising issue where steel does not have sufficient coating thickness and therefore reducing the durability of the product All material used on TMR projects must either have boron reported on the material test certificate or have the material tested for boron content. The boron content must be below 0.0008% as recommended by the WTIA. The addition of too much boron will cause the heat-affected zone of a weld to become brittle The Hold Point for the selection of bolts for the assembly tests has been changed to a Witness Point. The bold industry has incorporated the TMR testing requirement into the supply of bolts for TMR projects
MRTS94	Road Lighting	Amendment	<ul style="list-style-type: none"> Aligns with the new MRTS97 Mounting Structures for Roadside Equipment
MRTS97	Mounting Structures for Roadside Equipment	New	<ul style="list-style-type: none"> New Specification Suite for Mounting Structures for Roadside Equipment, inclusive of: <ul style="list-style-type: none"> Road lighting mounting structures (Rate 3) Pathway lighting mounting structures Traffic signal mounting structures ITS equipment mounting structures Solar panels To be used in accordance with MRTS94
MRTS201	General Equipment Requirements	Amendment	<ul style="list-style-type: none"> Updated due to various suite being updated within Category 4: Electrical and ITS Used in accordance with the New 'TRUM Volume 4, Part 8'
MRTS218	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> Updated to specify five year warranty on all electronic signage products – intended for use in VAS installations state-wide
MRTS229	Electronic Traffic Control Signs	New	<ul style="list-style-type: none"> New Specification Suite for Electronic Traffic Control Signs To be used in accordance with TRUM Volume 1, Part 10
MRTS245	ITS Telecommunications Network (ITS TN)	Amendment	<ul style="list-style-type: none"> Renamed: Previously named 'Principal's Telecommunications Field Cabinets' Complete revision
MRTS256	Power Cables	Amendment	<ul style="list-style-type: none"> Updated to include Work Item Numbers for the supply and installation of Power Cables for use with ITS equipment

October 2015

Specification	Title	Change Type	Description of change
MRTS07A	Insitu Stabilised Subgrades Using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> Administrative change to Clause 8.1.3.3 – changed ‘process’ to ‘product’
MRTS24	Manufacture of Precast Concrete Culverts	Amendment	<ul style="list-style-type: none"> Minor amendments: <ul style="list-style-type: none"> Reinforcing bar spacing Curing requirements (including removing 70% strength checks) to revert to original intention Minor clarifications and typographical errors
MRTS30 Suite	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> Clause 9.3 – SMA14 value is 1.1 mm Administrative corrections throughout Suite (MRTS, MRS, and Annexure)
MRTS50	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> Clarification to existing requirements within MRTS50: <ul style="list-style-type: none"> Clause 10.1.1 (including Commentaries) Clause 11.1 Clauses 12, 12.1, 12.2 and 12.3 (including Commentaries)
MRTS58	Subgrade Reinforcement using Pavement Geosynthetics	Amendment	<ul style="list-style-type: none"> Addition of New MRS
MRTS88	Protective Coating for New Work	Amendment	<ul style="list-style-type: none"> Renamed: Previously named ‘Painting New Work” Amended to now include: <ul style="list-style-type: none"> Painting of timber Protective coatings for steel, concrete and timber Upgrades to surface preparation Includes new technologies such as Total Weather Stations Section added to address repair of paint systems Reference to New Technical Note 144 <i>Paint Systems for MRTS88</i> MRTS88.1 (Annexure) has been updated to specify paint system and method of application
MRTS91	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Changes are to standardise and clarify requirements on concrete surrounds: <ul style="list-style-type: none"> Surface Treatment of electrical pits, now to include all pits, rectangular and circular and Standard Drawing 1416 to include details on concrete surrounds for circular pits
MRTS94	Road Lighting	Amendment	<ul style="list-style-type: none"> Includes provision for LED luminaire technology
MRTS101	Aggregates for Asphalt	Amendment	<ul style="list-style-type: none"> Administrative corrections to MRTS
MRTS102	Reclaimed Asphalt Pavement Material	Amendment	<ul style="list-style-type: none"> Administrative corrections to MRTS
MRTS227	Changeable Message Signs	Amendment	<ul style="list-style-type: none"> Addition of New MRS Minor reference changes

Specification	Title	Change Type	Description of change
MRTS228	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> Update to MRS Work Item Numbers 6802 and 6803 tasks listed for supply and installation of top mounted Rate-3 electrical switchboards
MRTS234	Communications Cables	Amendment	<ul style="list-style-type: none"> Clarity around the use of Coarse Wave Division Multiplexing (CWDM) passive optical fibre communications technology, using the features of G652.d compliant fibre optic cable.
MRTS256	Power Cables	Amendment	<ul style="list-style-type: none"> Administrative changes to clarify name of cable (loop feeder cable instead of cable)
MRTS262	Temporary Variable Message Signs	New	<ul style="list-style-type: none"> New Specification Suite for Temporary Variable Message Signs (TVMS) To be used in accordance with operational requirements of the TRUM Volume 1, Part 10
MRTS300	Boat Ramps	New	<ul style="list-style-type: none"> New Specification Suite for Boat Ramps Used in accordance with the New 'Design Criteria for Boat Ramps' Manual Reference Boat Ramp Standard Drawings 4000, 4001, 4020, 4021 and 4023
MRTS301	Fabrication and Construction of Floating Walkways	New	<ul style="list-style-type: none"> New Specification Suite for Fabrication and Construction of Floating Walkways Used in accordance with the New 'Design Criteria for Floating Walkways and pontoons' Manual
MRTS302	Fabrication and Construction of pontoons	New	<ul style="list-style-type: none"> New Specification Suite for Fabrication and Construction of pontoons Used in accordance with the New 'Design Criteria for Floating Walkways and pontoons' Manual
MRTS305	Dredging	Amendment	<ul style="list-style-type: none"> Updated references within Suite: <ul style="list-style-type: none"> MRTS – reference updates under Clause 5.2 and 7.2 MRTS Annexure – reference updates under Clause 4 and 5

July 2015

Specification	Title	Change Type	Description of change
MRTS05	Unbound Pavements	Amendment	<ul style="list-style-type: none"> 'Modified C' grading option has been introduced
MRTS09	Plant Mixed Foamed Bitumen Stabilisation	New	<ul style="list-style-type: none"> Formerly known as Supplementary Specification MRTS08B/MRS08B
MRTS14	Road Furniture	Amendment	<ul style="list-style-type: none"> Simplify clauses relating to performance test methodology for flexible road edge guide posts, information on colours of road edge guide posts and the use of corflute as a substrate for temporary signs at roadworks
MRTS15	Noise Fences	Amendment	<ul style="list-style-type: none"> Minor change to Clause 8 Addition of 'Sandwich panels' in Clause 5 of Annexure
MRTS28	Contractor's Site Facilities and Camp	Amendment	<ul style="list-style-type: none"> Clarification of the formula in MRTS28
MRTS30	Asphalt Pavements	Amendment	<ul style="list-style-type: none"> Renamed. Previously named 'Dense Graded and Open Graded Asphalt' Inclusive of Medium duty dense graded asphalt (replaces MRTS30 mixes), Heavy duty dense graded asphalt (replaces MRTS31 mixes), Stone mastic asphalt (replaces MRSS548 and NRSS548 mixes) and Open graded asphalt (replaces MRTS30 mixes)

Specification	Title	Change Type	Description of change
MRTS31	Heavy Duty Asphalt	Withdrawn	<ul style="list-style-type: none"> Is now included within MRTS30 Asphalt Pavements
MRTS50	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> Clarifies transition arrangements for the new harmonised asphalt specifications Update aligns with new QRS
MRTS51	Environmental Management	Amendment	<ul style="list-style-type: none"> Minor amendment to fix errors of reference between MRS51 and Clauses within MRTS51.1
MRTS60	Installation of Fibre Reinforcement Polymer (FRP) Composite Girders	Amendment	<ul style="list-style-type: none"> New SD2285, SD2286, SD2285 and SD2286 reference
MRTS92	Traffic Signal and Road Lighting Footings	Amendment	<ul style="list-style-type: none"> Standard Work Item numbers 6603P and 6703P were amended to maintain consistency with SD1680 Footing extension detail for poor soil conditions is now incorporated into Specification
MRTS100	High Strength Geosynthetic Reinforcement in Road Embankments	New	<ul style="list-style-type: none"> Supply and installation of geosynthetic reinforcement to be used generally for applications as follows: <ul style="list-style-type: none"> As embankment basal reinforcement (embankment over soft ground, load transfer mats and platforms) Within reinforced embankment (batter slop $\leq 70^\circ$)
MRTS101	Aggregates for Asphalt	New	<ul style="list-style-type: none"> New specification suite specifies requirements for coarse and fine aggregates that are used in asphalt
MRTS102	Reclaimed Asphalt Pavement Material	New	<ul style="list-style-type: none"> New specification suite specifies requirements for reclaimed asphalt pavement (RAP) material that is used in asphalt
MRTS103	Fillers for Asphalt	New	<ul style="list-style-type: none"> New specification suite applies to the material requirements for added filler for use in asphalt
MRTS202	Provision of Variable Message Signs	Amendment	<ul style="list-style-type: none"> Addition of New MRS and Annexure Changes and additions include standard work measurements, security requirements, definition of default configuration parameters and a commissioning sheet
MRTS204	Vehicle Detectors	Amendment	<ul style="list-style-type: none"> Removal of duplicate Work Items on loop detector cables
MRTS210	Provision of Mains Power	Amendment	<ul style="list-style-type: none"> Addition of New MRS Update to references
MRTS218	Vehicle Activated Signs	Amendment	<ul style="list-style-type: none"> Addition of New MRS
MRTS226	Telecommunications Field Cabinets	Amendment	<ul style="list-style-type: none"> Addition of New MRS
MRTS228	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> Removal of reference to MRTS95 which was removed April 15
MRTS233	Roadway Flood Monitoring Systems	New	<ul style="list-style-type: none"> New specification suite to provide improved incident management mechanisms for alerting motorists of flooding events in the road network
MRTS234	Provision of Telecommunications Cables	Amendment	<ul style="list-style-type: none"> Addition of New MRS Minor update, including addition of diagram which will provide more clarity around general arrangement of the various layers within fibre cable including the Rodent and Termite protection layers
MRTS257	Vehicle Loop Cables and Loop Feeder Cables	Amendment	<ul style="list-style-type: none"> Minor update to clarify the requirements on pre-formed loops Remove duplicate Work Items

Specification	Title	Change Type	Description of change
MRTS259	Transportable Generator	New	<ul style="list-style-type: none"> New specification suite that defines the technical requirements, testing requirements and specification of transportable generators and accessories
MRTS305	Dredging	New	<ul style="list-style-type: none"> New specification suite applies to the dredging of navigation channels and related areas (including moorings where required) used by recreational vessels

April 2015

Specification	Title	Change Type	Description of change
MRTS03	Drainage, Retaining Structures and Protective Treatments	Amendment	<ul style="list-style-type: none"> Revised to provide technical guidelines for construction of Type 7 Abutment protection system using rock filled Gabion and mattresses New Drawing SD2241 reference
MRTS15	Noise Fences	Amendment	<ul style="list-style-type: none"> Removal of departmental requirements in relation to design and construction by prequalified companies where prequalified road and bridge companies are capable of doing work Minor revision to sandwich and polycarbonate transparent panels – design requirements and sampling Inclusion of acoustic and commentary text boxes for timber, plywood and transparent panels
MRTS30	Dense Graded and Open Graded Asphalt	Amendment	<ul style="list-style-type: none"> Minor revision to definition of performance reporting, including role of Contract Administrator, to coincide with revised Asphalt Supplier Registration System (ASRS)
MRTS81 MRTS81A	Bridge Bearings Stainless Steel Bridge Bearings	Amendment	<ul style="list-style-type: none"> Revised testing and witnessing process Update definitions table and unified the strip bearings and plain bearings sections into one, to reflect terminology used in AS 5100.4
MRTS91	Conduits and Pits	Amendment	<ul style="list-style-type: none"> Update to: <ul style="list-style-type: none"> Type of approval of pit products Installation of pits and conduits Inspection at Witness / Hold Points and Milestones
MRTS93	Traffic Signals	Amendment	<ul style="list-style-type: none"> Addition of instructions on installation of wireless equipment in the controller
MRTS95	Provision of Switchboards	Withdrawn	<ul style="list-style-type: none"> MRTS95 is obsolete as this specification has been split and published as two new, separate suites – MRTS228 and MRTS256
MRTS200	General Requirements for Intelligent Transport Systems Infrastructure	Amendment	<ul style="list-style-type: none"> Minor reference update (from MRTS247 to MRTS204)
MRTS204 MRS204	Vehicle Detectors	Amendment New	<ul style="list-style-type: none"> Update to supply and installation of vehicle detectors (including technical requirements for loop detectors, radar vehicle detectors and infrared vehicle detectors) Addition of MRS204
MRTS221 MRS221	Help Phones	Amendment New	<ul style="list-style-type: none"> Includes new Operational requirement on Automatic Diagnostic Reporting Addition of MRS221

Specification	Title	Change Type	Description of change
MRTS222	Electronic School Zone Signs	Amendment	<ul style="list-style-type: none"> Update to colour requirements of the LED annulus component - change from referencing AS 2144 to now using AS 5156
MRS222		New	<ul style="list-style-type: none"> Addition of MRS222
MRTS225	Imaging	Amendment	<ul style="list-style-type: none"> Minor updates relating to: minor topographical corrections, update to Figure 1 for CCTV architecture clarity and minor security amendments
MRS225		New	<ul style="list-style-type: none"> Addition of MRS225
MRTS228	Electrical Switchboards	Amendment	<ul style="list-style-type: none"> Update to supply and installation of electrical switchboards, with inclusion of technical details on the installation of concrete bay Removal of Pillar mounted switchboards
MRS228		New	<ul style="list-style-type: none"> Addition of MRS228
MRTS232	Provision of Field Processors	Amendment	<ul style="list-style-type: none"> Updated to align with current practice in the provision of communication and control technologies Compliance with IS18-QGCIO Information security standard
MRS232		New	<ul style="list-style-type: none"> Addition of MRS232
MRTS251	Traffic Counter/Classifier	Amendment	<ul style="list-style-type: none"> Minor change – Section 11
MRS251		New	<ul style="list-style-type: none"> Addition of MRS251
MRTS256	Power Cables	Amendment	<ul style="list-style-type: none"> Amended to address electrical power cables as a whole, as MRTS95 has been withdrawn Requirements from TRUM Manual and the Road Design Manual are now listed, including requirements on traffic signals multi-core power cables
MRS256			
MRTS257	Feeder Cable and Loop Cable for Vehicle Detector	New	<ul style="list-style-type: none"> New specifications that define the design, supply, installation, testing and commissioning for vehicle detector loop cables and feeder cables
MRS257			
MRTS260	Temporary Variable Speed Limit Signs	New	<ul style="list-style-type: none"> New specification for Temporary Variable Speed Limit (TVSL) Signs for the use in maintenance and construction road work activities
MRS260			

January 2015

Specification	Title	Change Type	Description of change
MRTS01	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> Superintendent replaced with Administrator Contract clause references updated to reflect Contract Document changes
MRTS06	Reinforced Soil Structures	Amendment	<ul style="list-style-type: none"> Superintendent replaced with Administrator
MRTS24	Manufacture of Precast Concrete Culverts	Amendment	<ul style="list-style-type: none"> Small box culverts amended to align to Australian standards
MRTS51	Environmental Management	Amendment	<ul style="list-style-type: none"> Major amendment to Clause 10 to reflect new MRTS52
MRTS51_1	Environmental Management	Amendment	<ul style="list-style-type: none"> Text box added under Clause 2.1 Project specific requirements
MRTS52	Erosion and Sediment Control	New	<ul style="list-style-type: none"> New Specification for Erosion and Sediment Control

Specification	Title	Change Type	Description of change
MRTS57	Geotextiles for Paving Applications	Amendment	<ul style="list-style-type: none"> A range of amendments that contribute to the significant improvements in product quality, efficiency and performance
MRTS58	Subgrade Reinforcement using Pavement Geosynthetics	New	<ul style="list-style-type: none"> A new specification that addresses geogrids for subgrade reinforcement
MRTS71	Reinforcing Steel	Amendment	<ul style="list-style-type: none"> Update requirements for reinforcement and bar coupler suppliers, reflect Australian Standards for welding and include details for pre-fabrication of reinforcing cages Requirements and / or restrictions for the use of Class L reinforcement
MRTS72	Manufacture of Precast Concrete Elements	Amendment	<ul style="list-style-type: none"> Addition of Clause 5.6 to permit manufacture of boat ramps by non-registered suppliers Addition of Section 10.4.1 which contains additional information for formwork Addition of tolerances in Table 10.10
MRTS83	Anti-Graffiti Protection	Amendment	<ul style="list-style-type: none"> Specification reviewed for currency. Minor editorial changes – no impact to technical content
MRTS89	Post-tensioned Concrete	Amendment	<ul style="list-style-type: none"> Specification reviewed for currency Include match casting based on Design Criteria for Bridges and other structures
MRTS90	Modular Bridge Expansion Joints	Amendment	<ul style="list-style-type: none"> Specification updated to include B318 modular expansion joints as the Australian Standard Superintendent replaced with Administrator
MRTS93	Traffic Signals	Amendment	<ul style="list-style-type: none"> Improved installation practices
MRTS206	Provision of Variable Speed Limit and Lane Control Signs	Amendment	<ul style="list-style-type: none"> Updates to reflect consensus agreed by Austroads in relation to the signs annulus flashing requirements
Quarry Registration System			
MRTS05	Unbound Pavements	Amendment	<ul style="list-style-type: none"> A range of specifications have been updated to reflect the changes made as a result of the new Quarry Registration System. The Quarry Registration System also introduces a self-assessment based registration process Additionally for MRTS13, MRTS30, MRTS39 and MRTS40 – some Q test methods have been amended to align to the Australian Standard
MRTS13	Bituminous Slurry Surfacing		
MRTS22	Supply of Cover Aggregate		
MRTS30	Dense Graded and Open Graded Asphalt		
MRTS31	Heavy Duty Asphalt		
MRTS39	Lean Mix Concrete Sub-base for Pavements		
MRTS40	Concrete Base in Pavements - Jointed Unreinforced, Jointed Reinforced, Continuously Reinforced and Steel Fibre Reinforced Pavements		
MRTS50	Specific Quality System Requirements		

October 2014

Specification	Title	Change Type	Description of change
MRTS01	Introduction to Technical Specifications	Amendment	<ul style="list-style-type: none"> Contract terminology changes due to upcoming contract document changes
MRTS02	Provision for Traffic	Amendment	<ul style="list-style-type: none"> Contract terminology changes due to upcoming contract document changes
MRTS03	Drainage, Retaining Structures and Protective Treatments	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> Table 3 – replaced ASTM C109 (referenced in Clause 6.3) with Q476 Table 4 – Density Index replaced Q142E with AS 1289.5.5.1 Table 4 – Density Index replaced Q140B with AS 1289.5.6.1 Table 4 – Los Angeles Abrasion replaced Q206 with AS 1141.23 Table 4 – Soundness replaced Q209 with AS 1141.24

Specification	Title	Change Type	Description of change
MRTS04	General Earthworks	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 – Density Index replaced Q142E with AS 1289.5.5.1 • Table 4 – Density Index replaced Q140B with AS 1289.5.6.1 • Table 4 – Lime content replaced Q117A with AS 5101.3.2 • Table 4 – Moisture content removed Q102C, Q102E, Q102F • Table 4 – pH replaced Q121 with AS 1289.4.2.1 • Table 4 – replaced Q131A with AS 1289.4.2.1 • Clause 5.4.3 Replaced the third paragraph: “The density shall be determined by Test Method Q141B or Q143 and the maximum dry density of a reference sample shall be determined by Test Method Q142A or Q144A. The density index of non-cohesive materials shall be determined using Test Methods Q142E and Q140B”, with “The relative compaction shall be determined by Test Method Q140A. The density index of non-cohesive materials shall be determined using Test Method AS 1289.5.5.1 and AS 1289.5.6.1”

Specification	Title	Change Type	Description of change
MRTS06	Reinforced Soil Structures	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 - Angle of internal friction replaced Q177 with AS 1289.6.4.2 • Table 4 - Angle of internal friction replaced Q181B with AS 1289.6.2.2 • Table 4 – Angle of internal friction removed Q178 • Table 4 - Effective cohesion replaced Q177 with AS 1289.6.4.2 • Table 4 - Effective cohesion replaced Q181B with AS 1289.6.2.2 • Table 4 - Effective cohesion removed Q178 • Table 4 - One-dimensional consolidation properties replaced Q183 with AS 1289.6.6.1 • Table 4 - Undrained shear strength replaced Q152A with AS 1289.6.2.1 • Table 4 - Undrained shear strength replaced Q173A with AS 1289.6.4.1 • Clause 6 - Undrained shear strength added AS 1289.6.5.1 • Table 4 - Correct property name replaced “Minimum/maximum density of cohesionless material” with “Density Index” • Table 4 - Density Index (see changed property title above) replaced Q142E with AS 1289.5.5.1 • Table 4 - Density Index replaced Q140B with AS 1289.5.6.1 • Table 4 – pH replaced Q121 with AS 1289.4.2.1 • Table 4 – Permeability replaced Q125A with AS 1289.6.7.1 • Table 5.3 Compliance testing of fill material for reinforced soil block: <ul style="list-style-type: none"> - Density Index replaced Q140B with AS 1289.5.6.1 - pH replaced Q121 with AS 1289.4.2.1 - Permeability replaced Q125A with AS 1289.6.7.1 • Clause 6 Site Investigation: <ul style="list-style-type: none"> - replaced Q177 with AS 1289.6.4.2 - replaced Q181B with AS 1289.6.2.2 - Removed Q178 - Either - removed Q151B, or replaced with AS 1289.6.5.1 - replaced Q152A with AS 1289.6.2.1 - replaced Q173A with AS 1289.6.4.1 - replaced Q183 with AS 1289.6.6.1 - replaced Q121 with AS 1289.4.3.1 • Replaced references to “Grading” with “Particle Size Distribution” • Contract terminology changes due to upcoming contract document changes

Specification	Title	Change Type	Description of change
MRTS07A	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 - Sulfate content removed Q131A with AS 1289.4.2.1 • Table 4 - Laboratory reference density removed Q141B and Q142C • Clause 9.5 Compaction change the 5th paragraph as follows: • Replaced "The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of either: <ul style="list-style-type: none"> a) the compacted dry density to the maximum dry density b) the compacted dry density to the maximum converted dry density, or c) the compacted wet density to the maximum converted wet density For Test Method Q140A the use of the ratio of compacted wet density to the maximum converted wet density shall only be used where the insitu moisture content is within the range of - 4% to + 2% of the moisture content corresponding to the maximum converted wet density. The relative compaction shall be determined for the entire thickness of the stabilised layer", with "The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of the compacted dry density to the maximum dry density. The relative compaction shall be determined for the entire thickness of the stabilised layer"
MRTS07B	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 – Moisture content removed Q102C and Q102E • Table 4 - Sulfate content removed Q131A with AS 1289.4.2.1 • Table 4 - Laboratory reference density removed Q141B and Q142C • Table 4 – Road Roughness-Surface evenness removed Q708A • Clause 9.5 Compaction change the 5th paragraph as follows: <ul style="list-style-type: none"> - Replaced "The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of either: <ul style="list-style-type: none"> a) the compacted dry density to the maximum dry density b) the compacted dry density to the maximum converted dry density, or c) the compacted wet density to the maximum converted wet density For Test Method Q140A the use of the ratio of compacted wet density to the maximum converted wet density shall only be used where the insitu moisture content is within the range of - 4% to + 2% of the moisture content corresponding to the maximum converted wet density. The relative compaction shall be determined for the entire thickness of the stabilised layer", with "The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of the compacted dry density to the maximum dry density. The relative compaction shall be determined for the entire thickness of the stabilised layer"

Specification	Title	Change Type	Description of change
MRTS07C	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 – Moisture content removed Q102C and Q102E • Table 4 – Relative compaction removed Q140A • Table 4 - Sulfate content removed Q131A with AS 1289.4.2.1 • Table 4 - Laboratory reference density removed Q141B • Table 4 - Road roughness – surface evenness replaced Q708 with Q708A, Q708B, Q708C, Q708D • Clause 9.4.2 - Surface evenness replaced Q708 with Q708B, Q708C, Q708D • Clause 9.5 Compaction: <ul style="list-style-type: none"> - removed reference to Q142C in 4th paragraph - change the 5th paragraph as follows: <ul style="list-style-type: none"> ○ Replaced "The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of either: <ul style="list-style-type: none"> a) the compacted dry density to the maximum dry density b) the compacted dry density to the maximum converted dry density, or c) the compacted wet density to the maximum converted wet density <p>For Test Method Q140A the use of the ratio of compacted wet density to the maximum converted wet density shall only be used where the insitu moisture content is within the range of - 4% to + 2% of the moisture content corresponding to the maximum converted wet density. The relative compaction shall be determined for the entire thickness of the stabilised layer", with</p> <p>"The relative compaction of the stabilised material as detailed in Test Method Q140A shall be determined using the ratio of the compacted dry density to the maximum dry density. The relative compaction shall be determined for the entire thickness of the stabilised layer"</p>
MRTS08	Plant-Mixed Stabilised Pavements using Cement or Cementitious Blends	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4 – Moisture content removed Q102C and Q102E • Table 4 – Road Roughness-Surface evenness removed Q708A • Table 4 - Sulfate content removed Q131A with AS 1289.4.2.1 • Clause 4.1 – removed Application of Test Numbers Q142A, Q144A • Clause 4.2 – removed Application of Test Numbers Q141A and A141B
MRTS12	Sprayed Bituminous Emulsion Surfacing	Amendment	<p>Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them):</p> <ul style="list-style-type: none"> • Table 4, Clause 6.2.3, Clause 11.1, Table 16.2 - Ball embedment test replaced Q706 with AG:PT/T251
MRTS16	Landscape and Revegetation Works	Amendment	<ul style="list-style-type: none"> • Contract terminology changes due to upcoming contract document changes

Specification	Title	Change Type	Description of change
MRTS35	Recycled Materials for Pavements	Amendment	Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them): <ul style="list-style-type: none"> • Table 4.1 – Moisture content removed Q102C and Q102E • Table 4.1 – Permeability replaced Q125A with AS 1289.6.7.1 • Table 4.1 - Sulfate content replaced Q131A with AS 1289.4.2.1 • Table 4.1 – added pH AS 1289.4.3.1
MRTS50	Specific Quality System Requirements	Amendment	<ul style="list-style-type: none"> • Contract terminology changes due to upcoming contract document changes
MRTS77	Bridge Deck	Amendment	Materials Testing Manual updates to reflect national harmonisation requirements (replacing Q methods with equivalent national methods where there is no difference between them): <ul style="list-style-type: none"> • Clause 11.12 - Texture depth replaced Q705 with AG:PT/T250
MRTS78	Fabrication of Structural Steelwork	Amendment	<ul style="list-style-type: none"> • Accommodation for the 3rd party certification system by ACRS as well as the existing system to ensure properties of steel conforms to the Australian Standard
MRTS91	Conduits and Pits	Amendment	Amendment to: <ul style="list-style-type: none"> • the type approval of pit products • installation of pits and conduits • inspection at witness/hold pints and milestones • update of relevant Standard Drawings
MRTS95	Provision of Switchboards	Amendment	<ul style="list-style-type: none"> • Title change from Switchboards and Cables to Provision of Switchboards • Changes to the supply and installation of electrical switchboards • Document now addresses electrical switchboards only • Pillar mounted switchboards have been removed • References to electrical cables moved to MRTS256
MRS96	Management and Removal of Asbestos	New	<ul style="list-style-type: none"> • Provision of Standard Work Items for the management and removal of asbestos
MRTS96	Management and Removal of Asbestos	Amendment	<ul style="list-style-type: none"> • Reference to “QLD Government Asbestos Framework”
MRTS200	General Requirements for Intelligent Transport Systems Infrastructure	New	<ul style="list-style-type: none"> • New specification to provide the general requirements for ITS infrastructure
MRTS225	Imaging	Amendment	<ul style="list-style-type: none"> • Title change from Imaging Equipment to Imaging • Update reflects current practices for use of IP cameras and enhanced network security
MRTS234	Communications Cables	Amendment	<ul style="list-style-type: none"> • Title change from Provision of Telecommunications Cables to Communications Cables • Update reflects current project requirements, maintenance considerations and currently available industry cabling options (including fibre optic and MIL Spec cables) • Clarification around the use of cable rodent protection and reduced cable burn smoke toxicity in tunnels via LSZH cables

Specification	Title	Change Type	Description of change
MRTS256	Power Cables	New	<ul style="list-style-type: none"> • New specification to address the supply and installation of power cables for road lighting, traffic signals and ITS installations

Exception to the publication cycle - September 2014

Specification	Title	Change Type	Description of change
MRTS02	Provision for Traffic	Amendment	<ul style="list-style-type: none"> • Further emphasis of the need for speed limits to reflect the conditions, in line with the recent announcement by the Premier and Minister • Clarification of the use of crash barrier end treatments and the relevance to MRTS11 • Correction of cross fall reference on side-tracks • Correction of Easter terminology
MRTS03	Drainage, Retaining Structures and Protective Treatments	Amendment	<ul style="list-style-type: none"> • Minor changes due to update of MRTS25 & 26, including defining pipe joint requirements and referencing the construction and installation loading requirements specified in MRTS25 & 26 • Addition of the requirement to inspect pipes with CCTV cameras
MRTS24	Manufacture of Precast Concrete Culverts	Amendment	<ul style="list-style-type: none"> • Alignment to Australian Standards (for small and large culverts), TMR design criteria for large culverts and MRTS72 • Addition of design and lifting requirements • Simplification of testing requirements, deferring to AS 1597 as required
MRTS25	Manufacture of Precast Concrete Pipes	Amendment	<ul style="list-style-type: none"> • Definition of internal design diameter, and a process to allow manufacturers to offer alternative internal design diameters if they cannot supply the internal design diameter as specified • Definition of environments (exposure classifications) more aligned with AS/NZS 4058 and cover to reinforcement aligned with AS/NZS 4058. Definition of aggressive environment and associated cover to reinforcement where not defined with AS/NZS 4058 • Inclusion of PASS/ASS in the definition of environments • Inclusion of a tighter definition of saltwater than AS NZS 4058 • Definition of pipe joint and jacking pipe requirements • Specification of allowable construction loading during installation • Definition and submission process of concrete mix designs in a format acceptable to the CPAA • Revised testing frequencies and a process for submission of conformance information • Inclusion of commentary

Specification	Title	Change Type	Description of change
MRTS26	Manufacture of Fibre Reinforced Concrete Drainage Pipes	Amendment	<ul style="list-style-type: none"> Changes to the definitions of exposure classifications to achieve alignment with MRTS25 and the relevant Australian Standards, including AS 4058, AS 3725 and AS 4139 Inclusion of guidance and advice on design for installation including construction loads Changes to supply of conformance information to align with MRTS25
MRTS59	Manufacture of Fibre Reinforced Polymer Composite Girders	Amendment	<ul style="list-style-type: none"> Inclusion of commentary
MRTS73	Manufacture of Prestressed Concrete Members and Stressing Units	Amendment	<ul style="list-style-type: none"> Added requirements regarding the durability of concrete and lifting arrangements
MRTS82A	Finger Type Bridge Deck Expansion Joints	Amendment	<ul style="list-style-type: none"> Changing of Dynamic Load Allowance from 1.0 of 0.6 to align with AS 5100.4 and "Design of Fingerplate Joints" position paper by Road and Maritime Services in NSW Increase of gap width for Sawtooth joints from 50mm to 60mm, and increase of minimum overlap of teeth on the opposite side of the joint from 15mm to 25mm.

July 2014

Specification	Title	Change Type	Description of change
MRTS07C	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> Allowable working time has been increased from 4 hours to 6.5 hours Considerations for the Administrator if unforeseeable circumstances or delays are experienced Explanation of terms "Lower Reference Level", "Finished Surface Level", "Target Depth" and "Bulking Height" Range of moisture ratios amended to improve coating of foamed bitumen to finer particles Introduction of compaction standard of 100% for corrector/overlay granular material where the overlay depth exceeds 75mm Increase of compaction standard from 100% to 102% Relative Dry Density Adjusting primary vertical tolerances to align with thickness tolerances Maximum power capacity of the stabiliser changed from 375 kW to 16 Kw/meter of the drum width
MRTS92	Traffic Signal and Road Lighting Footings	Clerical Amendment	<ul style="list-style-type: none"> Clerical correction. No impact on technical content

Exception to the publication cycle - April 2014

Specification	Title	Change Type	Description of change
MRTS16	Landscape and Revegetation Works	Amendment	<ul style="list-style-type: none"> Consolidation of MRTS16, MRTS16A, MRTS16B, MRTS16C, MRTS16D and MRTS16E to simplify use and update content

April 2014

Specification	Title	Change Type	Description of change
MRTS02	Provision for Traffic	Amendment	<ul style="list-style-type: none"> Additional section outlining TMR's willingness to consider innovation in the application and development of traffic management treatments at roadworks Other changes aimed at enhancing safety at road work sites through enhanced traffic management
MRTS04	General Earthworks	Amendment	<ul style="list-style-type: none"> Addition of Test Method Q142 to determine the insitu density in Clause 5.4.3
MRTS07A	Insitu Stabilised Subgrades using Quicklime or Hydrated Lime	Amendment	<ul style="list-style-type: none"> Amendment of clerical error in expression of sulfate content in Clause 6.1
MRTS07B	Insitu Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> Amendment of clerical error in expression of sulfate content in Clause 6.1 and 6.2
MRTS07C	Insitu Stabilised Pavements using Foamed Bitumen	Amendment	<ul style="list-style-type: none"> Amendment of clerical error in expression of sulfate content in Clause 6.1 and 6.2
MRTS08	Plant-Mixed Stabilised Pavements using Cement or Cementitious Blends	Amendment	<ul style="list-style-type: none"> Amendment of clerical error in expression of sulfate content in Clause 6.10
MRTS15	Noise Fences	Amendment	<ul style="list-style-type: none"> Changes in departmental requirements in relation to design and construction of prequalified companies and painting of panels with the requirements of new <i>Transport Noise Management: Code of Practice Volume 1 – Road Traffic Noise</i> New reference documents for hardwood timber, timber posts, timber natural durability, and addition of aluminium and plastic New design requirements, design life for transparent panels and minimum section properties for reflective type fences New design requirements for transparent panels, particularly glass and acrylics New design requirements of footing and construction
MRTS59	Manufacture of Fibre Reinforced Polymer Composite Girders	New	<ul style="list-style-type: none"> Manufacture of Fibre Reinforced Polymer (FRP) composite girders
MRTS60	Installation of Fibre Composite Girders	New	<ul style="list-style-type: none"> Addresses the installation of the following two categories of FRP Composite Girders destined for: <ol style="list-style-type: none"> 1) Timber bridge renewal 2) The road bridge Timber bridge renewals will work in combination with Standard Drawing 2605 and 2606

Specification	Title	Change Type	Description of change
MRTS70	Concrete	Amendment	<ul style="list-style-type: none"> Amendment of clerical error table lines on figure 16.3.3 created
MRTS72	Manufacture of Precast Concrete Elements	Amendment	<ul style="list-style-type: none"> Additional inspection hold point added for elements which are manufactured from coloured concrete or have patterns case into the surface
MRTS96	Management and Removal of Asbestos	New	<ul style="list-style-type: none"> Management and removal of asbestos

