

# Technical Publication News

## Technical Publications

## Industry update – July 2024

The Department of Transport and Main Roads (the department) is committed to continually reviewing and improving our technical publications to ensure we deliver best value for money and embrace the latest technological advancements.

To help you stay informed about any upcoming changes to technical publications we have provided a look ahead of proposed amendments, we have broken these into two timelines: next four months, and into the future.

✉ [tmr.techdocs@tmr.qld.gov.au](mailto:tmr.techdocs@tmr.qld.gov.au)

🖨 [tmr.qld.gov.au/business-industry/Technical-standards-publications](https://tmr.qld.gov.au/business-industry/Technical-standards-publications)

### NEXT FOUR MONTHS (July 2024 – October 2024)

#### SPECIFICATIONS

##### MRTS02 Provision for Traffic

- Added the use of transportable VMS and existing permanent VMS to Clause 6.5.2.1.
- Reference to the relevant MRTS VMS specification documents.
- Corrected an incorrect Clause reference to MRTS01 in Clause 6.5.3.3.
- Added the use of transportable VMS and existing permanent VMS to Annexure.

##### MRTS06 Reinforced Soil Walls

- Test method references updated to reflect current versions.
- Update to testing materials to be supplied in tons (t) rather than cubic metre ( $m^3$ ).

##### MRTS07A Insitu Stabilised Subgrades using Quicklime or Hydrated Lime

##### MRTS07B Insitu Stabilised Pavements using Cement or Cementitious Blend

##### MRTS07C Insitu Stabilised Pavements using Foamed Bitumen

##### MRTS09 Plant-Mixed Foamed Bitumen Stabilised Pavements

##### MRTS23 Supply and Delivery of Quicklime and Hydrated Lime for Road Stabilisation

##### MRTS57 Geotextiles for Geotextile Reinforced Seals

##### MRTS58 Geosynthetics for Subgrade and Pavement Reinforcement

##### MRTS104 Asphalt Geosynthetics for Delaying Pavement Reflective Cracking

##### MRTS115 Insitu Stabilised Subbases using Triple Blend

- Changes provided to improve clarity based on recent project learnings, feedback, research, and developments along with other minor formatting amendments.

##### MRTS14 Road Furniture

- Updated to meet current project designs, delivery methods and available products regarding proprietary products and how contractors can use alternative products from design; the requirements for delineators and hold points for installation of proprietary products.

##### MRTS51 Environmental Management

- Alignment to *Transport Noise Management Code of Practice Volume 2: Constructions Noise and Vibration 2023*.
- Minor updates to in response to user feedback and tidal environment language.

##### MRTS93 Traffic Signals

- Introduction includes modifications of traffic signal equipment (previously only referred to supply and installation).
- Outlines the process for supply and installation of configuration files (clarified in Clause 7.3).
- Clarification regarding positioning of Traffic Signal Controller (TSC) cabinet doors (now referring to SD1423 *Traffic Signals – TSC Base Installation Details* in Clause 12.1).
- Clarification regarding application of dimming including removal of dimming specification as sperate item as dimming is part of the design and configuration.

##### NEW MRTS332 Power Supply and Distribution

- New addition to the Rail suite which aims to improve the project cost estimating methodology and the planning and delivery of rail infrastructure projects.

##### MRS330 Trackwork

- Work Item Numbers updated: Addition of 80224 and withdrawal of 80215 and 80217.

#### STANDARD DRAWINGS

##### SD1311, SD1312, SD1313, SD1443, SD1444, SD1459 Concrete Gully suite of drawings

- Remove yearly proof load test.
- Change the concrete class from S-class to N-class.
- Remove the approved product requirement.
- Align with current standards, guides, and practices.

##### SD1423 Traffic Signals – Traffic Signal Controller Base Installation Details

- Note 1 has been updated to clarify the direction the controller door should open under different arrangements.
- Note 2 (g) was added to ensure the required permanent label to the main earthing conductor is readable.

##### SD1427 Traffic Signals / Road Lighting – Mast Arm (U Series) Installation Details

- Update adds a new note detailing the potential absence of an upper mounting assembly for installations adopting the method in TN210 *Installation guidelines for extended range lantern supply conductors*.

##### SD1428 Traffic Signals - Traffic Signal Post Base Mounted

- Guidance on retrofitting of earth bonding in stumpy posts and will be the reference document for all such retrofits. This standardised process will provide clarity to all contractors.
- Clarification of audio tactile mounting orientation and mounting height to all contractors.
- Clarification regarding the pushbutton mounting height to all contractors.
- Clarification regarding lantern mounting height.

#### **SD1430, SD1623, SD1638 Road Lighting, SD1689, SD1690 ITS Switchboard and SD1709 Traffic Signal / ITS**

- Improve the safety, reliability, and maintainability of the earth system:
  - replacement of the earth clamp with earth block
  - addition of part numbers 426 & 427 (SD1690), and
  - SD1430 Note 1(b) rewritten in accordance with RPDM Vol 3 Part 6.

#### **SD1452 Traffic Sign - Sight Board**

- Installation details have been updated to reflect Queensland MUTCD harmonisation to AS 1742 *Manual of Uniform Traffic Control Devices*.

#### **SD1603 Fencing - Koala Proof Fence and Gate**

- Note F5 amended to add missing "m" to the 150m interval for bracing stays.

#### **SD1635 Traffic Signals - Traffic Signal Upper Mounting Assembly and Split Shell Assembly**

- Note on Detail 1, Support Bracket Casting has been amended from 'Slots to facilitate typing of cables' to 'Slots to facilitate tying of cables'.
- Note on Detail 2, Cable Support has amended punctuation marks on Jubilee' clip for consistent and professional drawing presentation.

#### **SD1699 Traffic Signals / Road Lighting / ITS - Parts List**

- Added Part Number 383, Hex head bolt.

#### **SD1736 ITS - ITS Symbols**

- Incorporate new symbols such as network switches, network termination units and fibre optic devices.

#### **NEW SD1836 Electrical Symbols**

- To be used for ITS drawings of equipment within cabinets.

## MANUALS

#### **Drafting and Design Presentation Standards Manual (DDPSM) Volume 2, Part 2 – Development Phase Drawings (Preliminary Detailed Design Phase)**

- Addition of a new section outlining requirements for ITS Design Presentation. Includes update to SD1736 and new SD1836.

#### **NEW Design Manual ITC-3 Traffic Signal Installation**

- New manual based on the existing guidelines for Traffic Signal Design revised to ensure Swarco ITC-3 controller design drawings provide full and accurate information include information regarding the required endorsement of the drawing.

#### **Nuclear Gauge Testing Manual, Edition 4, Amendment 2**

- Amend methods following feedback from stakeholders.
- Continued alignment with Australian Standards test methods.
- Changes to style, format.

#### **NEW Queensland Road Safety Technical User Volumes (QRSTUV): Guide to Safe System Assessment**

- Safe System Assessment (SSA) is a tool that has been developed to assess the extent to which a proposed infrastructure project aligns with Safe System principles, with the objective to eliminate fatal and serious injuries. This document will provide new guidance for conducting SSAs in Queensland.

#### **QRSTUV Guide to Speed Management Manual**

- Changes impact delivery of speed limit reviews by road authorities to improve road safety outcomes for all road users.

#### **Queensland Guide to Temporary Traffic Management (QGTTM) Parts 1, 3, 4, 5, and 8**

- Changes harmonised to the *Austrroads Guide to Temporary Traffic Management* (AGTTM) principles and practices for traffic management and feedback from industry.
- Changes will assist industry in the application and adoption of the new practices and processes.

#### **Queensland Manual of Uniform Traffic Control Devices (Queensland MUTCD) Part 3: Works on Road**

- Harmonised with AS 1742.3 *Manual of Uniform Traffic Control Devices, Part 3: Traffic Control for Works on Roads* and only contains Queensland specific variations, additions, or deletions from AS1742.3 and feedback from industry.
- Changes will assist industry in the application and adoption of the new practices and processes.

#### **Queensland Manual of Uniform Traffic Control Devices (Queensland MUTCD) Part 9: Bicycle facilities**

- Clarify wording and figures relating to shared path signage, and reinstatement of guidance for setback distance for stop signs relevant to people riding bicycles.

#### **Road Planning and Design Manual (RPDM) Volume 3, Part 1: Objectives of Road Design**

Updates to Section 5:

- Appropriate wording to stipulate it will now be a requirement that Road Design Unit, Engineering and Technology Branch, Transport and Main Roads be engaged to peer review OnQ Type 1, Type 2 and major projects (Project Assurance Framework) throughout the design lifecycle from detailed planning to finalisation phases.
  - Additional content to include Design Development Reports as 'live' documents from utilised from Strategic Planning to Finalisation.
- Updates to Appendix A:
- Relevant content from the withdrawn Preconstruction Processes Manual, edited and incorporated, related to the design development process and design management. Terminology and references will be updated as required.
  - Incorporated commentary provided by representatives from Project Management Improvement (PMI) and the Project Management Strategic Advisory Group (PM SAG).
  - Improved definition on design involvement during project management and how it is integrated.
  - Greater clarity on design deliverables for each stage within the design lifecycle.
  - Revised expected design deliverables for defined percentage completed at concept, business case and detailed design stages.

#### **Road Planning and Design Manual (RPDM) Volume 3, Part 6: Roadside Design, Safety and Barriers**

- Integrates the guidance from the withdrawn TN209 *Reduced Working Width for Single Slope concrete Barrier Design*, which outlines guidance on designing single slope concrete barriers for reduced working widths, into the RPDM Part 6 Supplement.
- Minor clarification on the correlation between the working width and the barrier height, a note under Table 2(b) to highlight the application of a factor of safety of 1.2 at high-risk sites.
- Additional commentary on the proportional increase in system width when intending to achieve a different working width.

## GUIDELINES

#### **NEW Guidelines for Geotechnical Investigations**

- Detail the minimum requirements for execution of geotechnical investigations for and on behalf of the department.

#### **NEW Guideline on Asphalt Deck Wearing Surface (DWS) Rehabilitation**

- Details the latest best-practise techniques and guidance for asphalt DWS investigation and rehabilitation.

#### **NEW Guideline on Pavement Investigation and Analysis**

- Previously published as TN192 *Pavement Rehabilitation Investigation and Analysis*, now incorporates the latest best-practise techniques and guidance for pavement investigation.

#### **NEW Guideline on Preparation Pavements for Resealing**

- Guideline to assist project managers scope and program preparatory works prior to delivery or the annual road reseal program.

## TECHNICAL NOTES

#### **TN148 Asphalt Mix Design Registration**

- Updates align with the Transport and Main Roads / Australian Flexible Pavements Association (AFPA) Strategic Alliance Implementation Program for Sustainability.

#### **NEW TN189 Generic Road Safety Camera Poles**

- Outlines the departments requirements for generic Road Safety Camera (RSC) Poles to be installed on both local and state-controlled road networks.

## WITHDRAWN TN192 Pavement Rehabilitation Investigation and Analysis

- Incorporated into the *Guideline on Pavement Investigation and Analysis*.

## WITHDRAWN TN209 Reduced Working Width for Single Slope Concrete Barrier Design

Incorporated into the *Road Planning and Design Manual, Edition 2: Volume 3, Supplement to Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers*.

## OTHER

**NEW Building Information Modelling (BIM) File Naming Convention** guidance on the department's preferred metadata codes to be used in the naming of the files to align with nominated fields of BIM File Naming Convention. Consistency of files across all projects using BIM.

### Contracts

**Transport Infrastructure Contract (TIC-CO, TIC-SI and TIC-DC)**

**Minor Infrastructure Contract (MIC-CO and MIC-SI)**

**Small Scale Minor Works Contract (SSMW)**

- Updating Infrastructure documents to align with the latest government policies, legislations, and stakeholder feedbacks.

### Design Development Report (Small Projects) and Design Development Report (Large Projects)

- Templates amended to acknowledge the Planning phase (Strategic and Detailed planning), define and include elements expected to be handed over for Concept phase options analysis.

### Display of Information on Variable Message Signs (VMS) Organisational Policy

- Revised policy statement to reflect the importance of VMS in the operation of an efficient and reliable transport network.
- Expansion of policy scope to clearly outline what is in scope and what is out of scope.
- Updating message type, hierarchy and priority to reflect the content previously published in the *Traffic and Road Use Management Manual*, noting this content has been removed from the *Queensland Guide to Traffic Management* including:
  - splitting Category 1 (Incident) priority messages into 2, being 1 (Incident) and 1E (Disaster or emergency incidents).
  - inclusion of approval, conditions of display and text case selection criteria, and
  - clarity around filler messages – what constitutes a road safety message and a general transportation message.
- Replaced reference to TRUM Part 2.9 *Variable Message Signs Use and Operation Guideline* reference with the soon to be released *Queensland Guide to Traffic Management Part 10 Transport Control – Types of Devices*.
  - Inclusion of new content to clarify the department's policy position on single and multiple frame messages; use of abbreviations; driver distraction; use of conspicuity devices; and pictorial messages and symbols.

## FUTURE UPDATES AND NEW RELEASES

## NEW GUIDELINES, MANUALS, POLICIES TECHNICAL NOTES AND FORMS

### NEW Non-Transport Utility Management and Design Manual

- Replaces TN163 *Third Party Utility Infrastructure Installation in State-Controlled Roads Technical Guidelines* revised in line with current industry standards and provides additional clarity for improved design and management of Third-Party Utility infrastructure installations that meet the departments expectations. Opportunity for consultation soon.

## NEW STANDARD DRAWINGS

### NEW SD4004, SD4033, SD4034 Boating Infrastructure

- New issue to replace a withdrawn drawings for glass fibre reinforced slabs and precast planks to reflect emerging technology.

## FUTURE UPDATES

### Technical Specifications

- **MRTS03 Drainage Structures, Retaining Structures and Embankment Slope Protections** revisions based on feedback from stakeholders, including checks against current Standard Drawings, NACOE research reports, and enquiries and non-conformance reports (NCR) from construction sites across Queensland.
- **MRTS24 Manufacture of Precast Concrete Culverts** harmonisation and alignment to MRTS70 *Concrete and Austroads Technical Specification ATS 2230 Supply of Small Box Culverts*.
- **MRTS25 Steel Reinforced Precast Concrete** harmonisation with *Austroads Technical Specification ATS 2210 Supply of Steel Reinforced Precast Concrete Pipes* and removal of non-manufacture clauses.
- **MRTS52 Erosion and Sediment Control** update to accommodate release of new Technical Specification MRTS53 *Erosion and Sediment Control – Provisional Sum Method*.
- **MRTS53 Erosion and Sediment Control – Provisional Sum Method** alternate erosion and sediment control to MRTS52 *Erosion and Sediment Control*, developed to provide a standardised approach to high risk (environmentally) projects using a Provisional Sum method to pay for project temporary Erosion and Sediment Control (ESC) costs.
- **MRTS88 Protective Coating for New Work** update to provide more performance-based criteria and broaden the types of coatings that are covered.
- **MRTS92 Traffic Signal and Road Lighting Footings** review and update in conjunction with the revision of the suite of associated standard drawings.
- **MRTS97 Mounting Structures for Roadside Equipment** review and improve clarity and design based on feedback from industry to improve safety for road users.
- **MRTS200 General Requirements for Intelligent Transport Systems Infrastructure** update to clause 4.5 that all professional engineering services shall be undertake in accordance with the Queensland Professional Engineers Act.
- **MRTS211 Pedestrian Push Button** general review of the specification and inclusion of touchless sensor type to the specification, and touchless push buttons provide health benefits as well as better accessibility.

### Manuals

- **Boat Ramp Design Manual and MRTS300 Boat Ramps** general review for the manual, including updates to Clause 10.9, Referenced documents and MRTS300.2 Form F changes.
- **Drafting and Design Presentation Standards Manual (DDPSM) Volume 3: Structural Drafting Standards** provide stakeholders with departmental preferences and minimum requirements when preparing engineering drawings for the department's structural projects with an updated concise manual that is better harmonised with the departments 2D and 3D drafting standards, and national standards, ensuring continuance of knowledge sharing without loss.
- **Materials Testing Manual (MTM)** revised test methods for testing stabilised materials and minor editorial changes and corrections.
- **Queensland Guide to Traffic Management (QGTM), Part 10: Guideline Bicycle Awareness Zones** general review and restructure of content to assist with document clarity and alignment with departmental documentation and guidelines.
- **Queensland Manual of Uniform Traffic Control Devices (Queensland MUTCD) Part 15: Direction signs, information signs and route numbering** review of references due to name change of *Guideline: Signing and pavement marking for toll roads*.
- **Structures Inspection Manual** review for currency and align inspection practice with modern asset management for structures.



- **Temporary Traffic Management (TTM) Training Updates** to reflect the changes in training requirements to meet the TTM new guidelines and practice.
- **TMR Surveying Standards Manual** updates to align with the rapid advancement of equipment and software technology such as drones, airborne and terrestrial LIDAR, underwater scanning / sonar, methods of data capture and all forms of transport infrastructure.
- **Traffic and Road Use Management Manual (TRUM) Volume 3, Part 10: Signing and pavement marking for toll roads** improvements to layout, clarity and readability of the document.

#### Other

- **Compliance evaluation forms for MRTS201 General Equipment Requirements, MRTS202 Variable Message Signs and MRTS253 Traffic Signal Lanterns** evaluation forms to assist in the product evaluation process.
- **Earth Bonding Retrofits for Pedestrian and Bicycle Pushbuttons** provide guidance and installation requirements necessary for the retrofitting of Pedestrian and bicycle pushbutton posts (stumpy posts) with protective earth bonding
- **Hazard Reduction Burns within the State-controlled Road Corridor** Updates focus on greater clarity and explanation for external stakeholders to provide a consistent and standardised approach to bushfire management.

#### Standard Drawings

Review for currency and alignment with other departmental documents and guidelines and industry standards for:

- **SD881 Cane Railway Crossings - Asphalt Paved and Concrete**
- **SD1045 Revegetation - Treatment of Cut Batters**
- **SD1116 Subsoil Drains - Outlets and Cleanouts**
- **SD1178 Diversion of Water - Diversion of Water from Roadway and Table Drains**
- **SD1359 Culverts – Installation, Bedding and Filling / Backfilling against other Culverts**
- **SD1380, SD1381, SD1382, SD1392, SD1393, SD1395, SD1396, SD1403, SD1429, and SD1684** revision to full suite of pole footings and installation standard drawings that align with current standards.
- **SD1446 Kerb Ramp - Ramped Kerb Crossing and SD1447 Median and Island Crossing – Ramped and Cut-Through Treatment for Pedestrian Facilities**
- **SD1468 Single Slope Concrete Barrier - Extruded Median Barrier - Barrier, Reinforcing and Expansion Joint Details**
- **SD1602 Chainwire Fences and Gates Standard Drawing**
- **SD1615 Fauna Exclusion Fencing - Floppy Top Mesh Fence and Gate** update regarding gate arrangement and maintenance.
- **SD1643, SD1644, SD1647, SD1650, SD1651, SD1653, SD1654.** review regarding proposed updated to **MRTS16 Landscape and Revegetation Works**.

#### APPROVED PRODUCTS AND REGISTER SUPPLIERS

The department's Approved Products and Registered Suppliers for infrastructure works are frequently updated. To see the status and how to register, view via [Approved Products and Registered Suppliers](#).

#### DEFINITIONS

**SPECIFICATIONS and STANDARD DRAWINGS:** Rules and procedures by which a product, process or activity can be specified or defined.

**CONTRACTS:** The binding legal agreements between two parties.

**TECHNICAL NOTES:** Provide clarity or additional options not previously detailed in a specification, manual or guideline, or address emerging issues.

**MANUALS:** Technical information gathered into a single publication; discipline based.

**POLICY:** Provides a desired position and a guide for action.

**GUIDELINES:** Provide options on actions that will achieve optimal outcomes in line with Technical Standards.

#### LATEST PUBLICATION HIGHLIGHTS

Have you seen the new [Fauna Sensitive Transport Infrastructure Delivery manual](#)?

The **Fauna Sensitive Transport Infrastructure Delivery manual** provides evidence-based information and recommendations for fauna connectivity to guide the planning, design, construction, operation and maintenance of roads and rail.

Adopting the processes, principles and advice in this manual, means the department will be able to meet its legislative requirements and ensure the roads and rail built today achieve positive ecological outcomes through improved habitat connectivity and reduced rates of wildlife vehicle collisions.

This manual replaces *Fauna Sensitive Road Design* manual, Volume 1, and Volume 2.



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