

Technical Specification

**MRTS171 Public Utilities in Road Projects Principal
Contractor Responsibilities**

July 2023



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1 Introduction

This Technical Specification defines or applies to the installation and / or protection of Public Utility Plant (PUP) within the State Controlled Road (SCR) including busways and cycle lanes. It is suitable for use with all Transport and Main Roads contract types and details the Principal Contractor Responsibilities. It does not apply to local government owned stormwater assets or other third-party assets that are not PUP.

Utility Authorities specify testing methods and technical requirements for their assets in their own technical standards or adopt Australian Standards requirements. Refer to MRTS170 *Public Utilities in Road Projects Site Works* for standards and Technical Specifications.

This Technical Specification shall be read in conjunction with MRTS01 *Introduction to Technical Specifications*, MRTS50 *Specific Quality System Requirements*, MRTS170 *Public Utilities in Road Projects Site Works* and other Technical Specifications as appropriate.

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

2 Definitions of terms

The terms defined in Clause 2 of MRTS01 *Introduction to Technical Specifications* apply to this Technical Specification. Additional terminology relevant to this Technical Specification is defined in Table 2 below.

Table 2 – Definitions of terms

Term	Definition
Act	An Act is a statute or law passed by both Houses of Parliament that has received Royal Assent. On Royal Assent, Acts are given a year and number. Once an Act is formally enacted it can generally only be amended or repealed by another Act. When an Act changes, a compilation of the Act is prepared to show the Act as amended. Acts are also known as primary legislation.
ADAC	Asset Design and As Constructed Data
Alignment Approval	Utility assets are permitted within the road corridor however the Utility Infrastructure Owner must obtain an alignment approval from the road authority. The alignment approval confirms the location for the utility asset (generally an offset from the property boundary or kerb). Failure to obtain an alignment approval can result in the asset being removed at the Utility Infrastructure Owner's cost. This approval may be supplied through contractual or other agreement processes.
Approved Supplier / Materials	Utility Infrastructure Owners have identified particular products (pipe types, valve types, pits, and so on) or manufacturers that can be used on their infrastructure. Generally, the prequalified Utility Owner Contractor or the road construction Contractor is responsible for purchasing materials from approved suppliers however the details will be taken from the design drawings.
Assets	An item of property owned by a person or company, regarded as having value
BIM	Building Information Modelling

Term	Definition
Civil works	Separate works which are undertaken by a construction company in order to facilitate work by an Utility Infrastructure Owner. This may be installation of conduits and pits, access roads, excavations.
Contestable Works	Works on Utility Infrastructure that can be undertaken or managed by an organisation / contractor who is not the Utility Infrastructure Owner. Contractors who undertake the works generally require prequalification (approved supplier status) from the Utility Infrastructure owner.
Contractor	A company engaged to undertake the works
Council assets	Council assets may include land, sewerage pipelines, water pipelines, pumping stations, drainage channels, and so on.
Design	Design of the electrical network, water pipeline, gas pipeline, sewerage pipeline and related infrastructure
BYDA	Before You Dig Australia. Data supplied from DBYD is only valid for 60 days.
Distribution network	The network of pipes (water, gas) or electrical lines that supply the utility service to the end user. Property service connections are feed from the distribution network
Fees	Some Utility Infrastructure Owner charge fees for example design lodgement fee, field audit fee, inspection fee, switching fee
High voltage power	Includes 11 kV, 33 kV, 66kV, 110 kV and 275 kV power (electrical) lines
IFC	Issued for Construction
Investigation	A detailed investigation of an Infrastructure Utility assets, used to determine the location, depth and extent of the asset. The quality of the information is categorised in accordance with AS 5488.
LGA	Local Government Authority, also referred to as "council"
Local Laws	Some councils have a register of local laws and subordinate local laws.
Low voltage power	a power (electrical) line conducting electricity in the range from 50 to 1000V
MoU	Memorandum of Understanding – a non-legally binding agreement between two organisations.
Non-Contestable Works	Works on Utility Infrastructure that can only be undertaken (or managed) by the Utility Infrastructure Owner.
Permits	Government or agencies require contractors to obtain authorisation to conduct works in road corridors or land parcels such as clearing permits or Road Corridor Permits.
Prequalified Supplier	In some cases, the Infrastructure Utility Infrastructure Owner has a list of approved companies and individuals that are authorised to undertake, manage and/or coordinate works on their assets.
PUP	Public Utility Plant, means plant permitted under another Act or a Commonwealth Act to be on a road. This can also be referred to as Utility Infrastructure or Utility Assets.

Term	Definition
Public Utility / Public Utility Provider	An entity that owns PUP. An organisation that has a right, under federal, state or local legislation, to undertake Works in the road corridor. These are entities empowered by legislation to own and operate infrastructure for the purpose of providing essential services to the community. This covers electricity entities (generation, transmission and distribution), gas suppliers / pipeline licence holders (distribution and transmission), telecommunications carriers (excluding mobile towers which are considered commercial assets), retail-distributors or council water suppliers (water / wastewater / recycled water / sewage delivery but not bulk water).
QUU	Queensland Urban Utilities
SCR	State Controlled Road
Utility Infrastructure Owner / Authority	Includes electric power distribution or transmission company owned by the Government of Queensland (for example, Energex, Ergon, Powerlink), statutory authority of the Government of Queensland (e.g. Urban Utilities) private company (for example, APA Group, Optus, Telstra), corporation owned by the Australian government (for example, NBN Co). Also known as a public utility provider in the <i>Transport Infrastructure Act 1994</i> (Section 105N).
URMP	Utility Relocation Management Plan

3 Referenced documents

The requirements of the referenced documents listed in Table 3(a) and (b) below apply to this Technical Specification and specifies the technical and legislative requirements associated with utility assets. This list is not complete as it is the designer's obligation to confirm all legislative requirements associated with a particular utility asset are specified in the issue for construction (IFC) design and comply with the Utility Authorities and Transport and Main Road's requirements. Where there are inconsistencies between this Technical Specification and the referenced documents, the requirements specified in this Technical Specification shall take precedence.

Table 3(a) – Referenced documents

Reference	Title
MRTS01	<i>Introduction to Technical Specifications</i>
MRTS50	<i>Specific Quality System Requirements</i>
MRTS56	<i>Construction Surveying</i>
MRTS170	<i>Public Utilities in Road Projects Site Works</i>

Table 3(b) – Referenced legislation

Legislation	Jurisdiction
<i>Telecommunications Act 1997</i>	Commonwealth / Federal
<i>Telecommunications Code of Practice 1997</i>	Commonwealth / Federal
<i>Electricity Act 1994</i>	Queensland (State)
<i>Gas Supply Act 2003 – distribution gas assets</i>	Queensland (State)
<i>Local Government Act 2009</i>	Queensland (State)
<i>Mineral and Energy Resources (Common Provisions) Act 2014</i>	Queensland (State)

Legislation	Jurisdiction
<i>Petroleum and Gas (Production and Safety) Act (2004) – Transmission gas assets including gas wells and gathering pipelines</i>	Queensland (State)
<i>South East Queensland Water (Distribution and Retail Restructuring) Act 2009</i>	Queensland (State)
<i>Transport Infrastructure Act 1994</i>	Queensland (State)
<i>Transport Infrastructure (State-controlled Roads) Regulation 2017</i>	Queensland (State)
<i>Water Supply (Safety and Reliability) Act 2008</i>	Queensland (State)
<i>Water Act 2000</i>	Queensland (State)

4 Quality system requirements

4.1 Hold Points, Witness Points and Milestones

General requirements for Hold Points, Witness Points and Milestones are specified in Clause 5.2 of MRTS01 *Introduction to Technical Specifications*.

The Hold Points, Witness Points and Milestones applicable to this Technical Specification are summarised in Table 4.1.

Table 4.1 – Hold Points, Witness Points and Milestones

Clause	Hold Point	Witness Point	Milestone
5	1. Evidence of road authority's alignment approval and Utility Authority acceptance of the design has been provided to the Administrator.		
7.2	2. The Principal Contractor shall appoint a Utility co-ordination representative with appropriate experience who is acceptable to the Administrator to manage, supervise and co-ordinate all Utility relocation and protection work.		
7.3	3. Prepare a URMP and submit to the Administrator for a direction as to the suitability under the General Conditions of Contract.	1. The Principal Contractor shall provide the Construction Vibration Assessment and all correspondence with relevant utility authority to the Administrator.	

Clause	Hold Point	Witness Point	Milestone
7.4			The Principal Contractor shall monitor and update the URMP as necessary and inform the Administrator (in writing), while carrying out the work under this contract.
7.16	<p>5. Details of the proposed barrier systems must be provided to the Administrator not less than 14 days prior to the trenching works commencing.</p> <p>6. Where the Principal Contractor's work operations necessitate the temporary support or protection of utility assets, the Principal Contractor shall notify the Utility Authority concerned. All such supports and protection shall be carried out with the approval of the Utility Authority. Written approval shall be provided to the Administrator not less than 14 days prior to the commencement of the works requiring the temporary support.</p>		
8			The Principal Contractor shall review and confirm all utility infrastructure As Constructed survey data has been provided and collated with the electronic models (including BIM model where specified in the contract documents) and As Constructed drawings submitted to the Administrator within 28 days of the Date of Practical Completion.

5 Construction procedures

The Contractor shall prepare documented procedures for all construction processes as defined in Clause 6 of MRTS50 *Specific Quality System Requirements*.

No Utility relocation / protection works shall commence until evidence of road authority's alignment approval and Utility Authority acceptance of the design has been provided to the Administrator,

Hold Point 1

6 Materials

Utility Authorities specify acceptable materials and products for their assets – often listing an Approved Supplier. It is the obligation of the designer to confirm all materials specified in an IFC design comply with the Utility Authority's material and product requirements. Consequently, this Technical Specification does not identify Utility Authority material or product requirements.

Transport and Main Roads material requirements associated with backfilling trenches, asphalt, and so on are specified in the MRTS170 *Public Utilities in Road Projects Site Works*.

7 Construction

7.1 General

The purpose of Utility relocation management during the Contract period is to provide for the co-ordination and/or completion of protection and relocation of affected Utility Infrastructure as identified on the “Public Utility Plan Layout” drawings for the impacted utility assets by the adoption of an appropriate Utility Relocation Management Plan (URMP).

7.2 Appointment of a utility asset co-ordination representative

The Principal Contractor shall appoint a utility co-ordination representative with appropriate experience who is acceptable to the Administrator to manage, supervise and co-ordinate all utility relocation and protection work. The utility co-ordination representative will be required to specialise in the Administration of the URMP. **Hold Point 2**

The utility co-ordination representative must have a minimum of five years' experience in the management of utility relocation work and be able to demonstrate an understanding of the URMP. The utility representative shall also be the nominated person to contact in the event of an emergency situation on site, requiring the immediate action of the responsible Utility Infrastructure Owner.

7.3 Preparation of the utility relocation management plan (URMP)

Within 28 days after the acceptance of the tender, the Principal Contractor shall prepare a URMP and submit to the Administrator for a direction as to the suitability under the General Conditions of Contract. **Hold Point 3**

The URMP shall be consistent with the following:

- Provision for the relocation of all affected utilities within the site during the Contract period.
- This Technical Specification suite.
- The other contract documents for this project.

- The Principal Contractor's construction program.
- The Cultural Heritage Plan, Environmental Management Plan, Traffic Management Plan, the Staging Plan, the Quality Plan and the Safety Plan.
- Construction Vibration Assessment and all correspondence with the relevant Utility Authority.

Witness Point 1

- Revised program and all other work necessary to complete the project.

7.4 Implementation of the utility relocation management plan

The Principal Contractor shall implement the URMP in accordance with the requirements of this Technical Specification and in accordance with the "Public Utility Plant Layout" drawings.

The Principal Contractor shall also monitor and update the URMP as necessary, and inform the Administrator (in writing), while carrying out the work under this contract. **Milestone**

7.5 General Scope of utility relocation management plan

The URMP shall address all aspects of management of the different utility asset protection / relocation activities as required under the contract.

7.6 Utility authorities fees for representatives on site

As part of the Principal Contractor's works involving utility assets (utility assets being relocated / protected and adjacent assets impacted by relocation / protection or road works), a representative from the respective Utility Authority may be required on site for supervision.

7.7 Utility assets identified on Site and not shown on the drawings

If, during the execution of the work under the contract, the Principal Contractor locates any utility assets that are not shown, in either the utility activity plans or detailed in other contract documents, the Principal Contractor shall immediately forward written notice of its finding to the Administrator as follows:

- Notify the Administrator of the location, verification and identification of the utility asset.
- Immediately forward written notification to the relevant Utility Authority requesting formal confirmation as to whether the utility asset is live or decommissioned.
- If the asset is live, obtain an estimate of cost for the relocation and a timing program to complete the relocation / protection of the affected public utility.
- The Administrator shall advise the Principal Contractor whether the new utility assets referred to in the notice is an affected utility.
- Subject to the Administrator's approval that the utility network assets are affected, the Principal Contractor shall revise the construction program, to accommodate the necessary works to be undertaken by the respective Utility Authority, to rectify the utility asset in conflict.

7.8 Potholing surveying and physical identification of existing underground utility assets

The Contractor is responsible for physically locating and exposing all existing utility assets within 3.0 m of proposed excavations using vacuum / hydro excavation (potholing) by a suitably qualified Contractor to confirm the asset type, location, material, size and depth in accordance with AS 5488

Quality Level A data. The Contractor shall dispose of the excavated material offsite and backfill the excavation with a material approved by the relevant Utility Owner / Authority and the Administrator.

7.9 Field investigation (potholes) and utility assets relocation

Utility asset information provided within the consolidated survey and shown on the IFC design drawings has been used as a design aid only. The information has come from several sources including potholing, induction locating and as constructed survey and has been compiled over a number of years.

For information, drawings and the electronic 12d and AutoCAD files are provided to allow the contractor to co-ordinate and plan Utility related activities only.

It is the Contractor's responsibility to confirm the alignment and levels of utility assets on site in various locations prior to commencing works.

Some information provided within the IFC drawings and electronic files may have been sourced from Ground Penetrating Radar (GPR). All GPR must be validated by potholing at each end of the section and at intervals no greater than 20 m.

7.10 Before You Dig Australia

The Principal Contractor must obtain all relevant utilities plans by contacting the '1100' – [Before You Dig Australia](#) service. The Principal Contractor is to ensure that all utility location drawings / plans are current prior to the commencement of any excavations. The alignments and levels of all utility assets must be confirmed by the Principal Contractor prior to excavation. The Principal Contractor should ensure that all sub-contractors engaging in excavation works have been provided with, advised of, and understand the current utility location drawings / plans.

7.11 New / relocated utility assets

Where Transport and Main Roads have received "as constructed survey" detail showing the alignments and depths of new (relocated) installations where relocations were coordinated by the department prior to the commencement of roadworks. This information is made available to the Principal Contractor as part of the contract documents.

7.12 Damage and repair of utility assets

The Principal Contractor shall be responsible for any damage to any utility assets (including any completed utility asset relocation) caused by the execution of the work under the contract. The Principal Contractor shall notify the Administrator forthwith of any such damage and shall make good any such damage at their cost.

The Principal Contractor shall make arrangements directly with the relevant Utility Authority, for any such repair work and the Principal Contractor shall have no claim against the Principal, for any payment, loss or delay occasioned by any such damage or repair work.

The Principal Contractor shall be responsible for any damage caused to the work under the contract, by any fault that may develop in any utility asset during the contract period, where such fault is caused by a breach, act or omission of the Contractor.

7.13 Disruption to the public

The Principal Contractor shall ensure that disruption, in disconnecting and reconnecting utility assets to individual landowners and / or occupiers, is kept to a minimum.

The Principal Contractor shall provide notification to the Administrator at least 14 calendar days prior to any activity associated with the planned disruption. The Principal Contractor will assist the Administrator with the consultation with affected landowners and / or occupiers, to arrange for a mutually acceptable time for such work, at least seven days before the anticipated event.

The Principal Contractor shall identify and consult with any landowner and / or occupier with special requirements regarding continuity of supply of any utility service and shall take all measures necessary to satisfy such requirements.

7.14 Negotiations with responsible Authority

All negotiations between the Principal Contractor and responsible Utility Authority shall be confirmed in writing by the Principal Contractor and copies of all such correspondence to and from the responsible Utility Owner / Authority shall be promptly forwarded to the Administrator by the Principal Contractor.

7.15 Modification and adjustments to existing utility assets

As part of the roadworks, existing utility assets (valves, hydrants, water services, pits, etc), require modification to suit the final surface levels. The Principal Contractor shall liaise with the respective Utility Authorities for these works to be carried out. All modifications and adjustments to utility assets are to be carried out by the respective Utility Authorities or by their approved Contractor unless noted otherwise on the IFC drawings. All adjustments of pits are to be negotiated with the relevant Utility Authority.

Where utility works are being undertaken concurrently with the road works, the Principal Contractor shall supply all the necessary information and set out on site to enable the respective Utility Authorities to complete their works. The timing and staging of these works are to be determined on site by the Principal Contractor in direct liaison with the respective Utility Authorities and to the approval of the Administrator. Upon completion of the relocation / modification works the Principal Contractor shall survey the assets in accordance with MRTS56 Construction Survey and deliver the information as indicated in Clause 8.

Where utility works are being undertaken prior to road works (early works), the Utility Authority supply all necessary information and set out on site to enable the respective the completion of their works.

Where this information was not conducted, the Principal Contractor shall conduct field investigations as indicated in Clause 7.9. Where the utility is not constructed in accordance with the approved design drawings, this information shall be provided to the Principal in order to review potential conflicts with the project.

The scope of modification of existing installations shall be confirmed by the Contractor based on the set-out of the new works on site, and after undertaking practical assessment of what can be accommodated with minor adjustment of the footpath profile, as approved by the Administrator.

The Contractor shall be responsible for coordination of all modification work to suit the Contractor's program.

The Contractor shall contact the relevant Utility Authority within the agreed timeframes to undertake the necessary works.

The payment for any work undertaken by a Utility Authority will be paid as detailed within MRTS170 *Public Utilities in Road Projects Site Works*.

7.16 Temporary support of utility assets

Where the Principal Contractor's work operations necessitate the temporary support or protection of utility assets, the Principal Contractor shall notify the Utility Authority concerned. All such supports and protection shall be carried out with the approval of the Utility Authority. Written approval shall be provided to the Administrator not less than 14 days prior to the commencement of the works requiring the temporary support. **Hold Point 4** and **Hold Point 5**

The cost to the Principal Contractor of temporarily supporting and / or protecting utility assets during work operations shall be deemed to be included in the schedule unit rates and lump sum amounts for the various items of work concerned. No claim for additional payment on this account will be considered.

Where utility assets require protection, the Principal Contractor shall supply the necessary plant, material and labour to carry out the protection, as required by the relevant Utility Authority and will be fully responsible for all works associated with the works.

8 Post Construction

The Principal Contractor shall review and confirm all utility infrastructure As Constructed surveyed data has been provided and collated with the electronic models (including ADAC and BIM where specified in the contract documents) and As constructed survey information as specified in MRTS56 *Construction Surveying* submitted to the Administrator within 28 days of the Date of Practical Completion. **Milestone**

The Principal shall attend a Post-Construction review meeting and provided feedback on the utility relocation / protection works, including lessons learnt and/or information that may improve the delivery of future departmental infrastructure projects.

9 Supplementary requirements

The requirements of this Technical Specification are varied by the supplementary requirements specified in Clause 1 of Annexure MRTS171.1.

