



WATER SERVICES
ASSOCIATION OF AUSTRALIA

GRAVITY SEWERAGE CODE OF AUSTRALIA

Melbourne Retail Water Agencies Edition
Version 2.0



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 - 16.16.4.3 Not used
 - 16.16.4.4 Not used
- 16.16.5 Not used
 - 16.16.5.1 Not used
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 - 16.16.5.3 Not used
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 - 17.2.4 Benching and channels
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WATER SERVICES
ASSOCIATION OF AUSTRALIA

PART 3: DRAWINGS

Gravity Sewerage Code of Australia

Melbourne Retail Water Agencies Edition

Version 2.0

MRWA 26 — Listing of Drawings

The following standards provide detailed requirements on the design and construction of City West Water, South East Water and Yarra Valley Water supply assets.

The standards encompass drawing, specification and commentary information.

The standards provide deemed-to-comply solutions, however they will not suit all circumstances or overcome all problems.

In non-standard situations, designers and contractors are encouraged to optimize outcomes through design innovation.

Authorization from the Water Agency will be required where non-standard solutions are proposed.

Where Preferences are given, higher order preferences shall be adopted unless there is a compelling reason to do otherwise.

All numbers are in mm unless otherwise stated.

All products used in construction shall be listed in the MRWA products portal for the relevant Water Agency and the products shall be used within the stated limitations and conditions of use.

TABLE 000-A: STANDARDS MOST RELEVANT TO DESIGNERS

Drawing No.	Drawing Name	Relevance
STANDARDS PRODUCED PRIMARILY FOR DESIGNERS ✓✓✓ IF BOLD ✓✓✓✓		
<i>MRWA-S-100 Design template- notes, schedules & locality plan</i>	Design template- notes, schedules & locality plan	Designs to be produced in compliance with the template
<i>MRWA-S-101 Design template- detailed plan</i>	Design template- detailed plan	Designs to be produced in compliance with the template
<i>MRWA-S-102A Design template- long section sheet 1</i>	Design template- long section sheet 1	Designs to be produced in compliance with the template
<i>MRWA-S-102B Design template- long section sheet 2</i>	Design template- long section sheet 2	Designs to be produced in compliance with the template
<i>MRWA-S-105 Reticulation design</i>	Reticulation design	Reticulation design process and rules
<i>MRWA-S-106 Reticulation examples</i>	Reticulation examples	Examples of the design rules being applied
<i>MRWA-S-107 Pipeline details</i>	Pipeline details	Images of more complex configurations
<i>MRWA-S-108 Private property reticulation</i>	Private property reticulation	Requirements of private property sewers
<i>MRWA-S-109 Road reserve dual reticulation</i>	Road reserve dual reticulation	Layout of sewers on both sides of the road
<i>MRWA-S-110 Road reserve reticulation with road crossings</i>	Road reserve reticulation with road crossings	Layout of sewers when crossing a road
<i>MRWA-S-111 Sewers in undeveloped land_easements & offsets</i>	Sewers in undeveloped land_easements & offsets	Requirements of easements, offsets and assets in undeveloped land
<i>MRWA-S-203 Pipeline structural design- e'e = 3 & 5 mpa</i>	Pipeline structural design- e'e = 3 & 5 mpa	Suggests when a detailed structural design will be required

Drawing No.	Drawing Name	Relevance
<i>MRWA-S-204 Pipeline structural design- e'e = 7 & 10 mpa</i>	Pipeline structural design- e'e = 7 & 10 mpa	Suggests when a detailed structural design will be required
<i>MRWA-S-209 Sewerage assets around retaining walls</i>	Sewerage assets around retaining walls	Clearance, alignment, cover and structural requirements
<i>MRWA-S-300 Maintenance structures-general</i>	Maintenance structures- general	When to I.Ss, M.Ss, M.Cs and M.Hs
<i>MRWA-S-301 Property services- general</i>	Property services- general	When to use type 1A, 1B, 2, 4A, 4B and I.S property connections
<i>MRWA-S-307 Maintenance hole design- general</i>	Maintenance hole design- general	How to specify M.Hs (ie: complete design schedules and inverts)
<i>MRWA-S-308 Concrete maintenance holes-detailed design</i>	Concrete maintenance holes- detailed design	Requirements of concrete M.H detailed designs (based layout etc)
STANDARDS IMPORTANT TO DESIGNERS ✓✓		
<i>MRWA-S-103 Pipes and jointing</i>	Pipes and jointing	Commonly used pipe types and sizes nominated
<i>MRWA-S-104A Junctions</i>	Junctions	Property branch sizing and connection requirements described
<i>MRWA-S-104B Bends and curves</i>	Bends and curves	Acceptable bends and limitations nominated
<i>MRWA-S-202 Embedment</i>	Embedment	Embedment system selection outlined
<i>MRWA-S-200 Soil classification</i>	Soil classification	Enables charts MRWA-S-203 and MRWA-S-204 to be interpreted
<i>MRWA-S-205 Sloping mains and trench drainage</i>	Sloping mains and trench drainage	Design requirements for sloping mains and trench drainage
<i>MRWA-S-207 Major crossings</i>	Major crossings	Design requirements for major crossings
<i>MRWA-S-403 Water seals</i>	Water seals	Design requirements for water seals
STANDARDS RELEVANT TO DESIGNERS ✓		
<i>MRWA-S-201 Trenching and trenchfill</i>	Trenching and trenchfill	Provides minimum cover information
<i>MRWA-S-208 Trenchless construction</i>	Trenchless construction	Design requirements for trenchless construction
<i>MRWA-S-311 Concrete maintenance holes-internal drops</i>	Concrete maintenance holes- internal drops	Design requirements for internal M.H drops
<i>MRWA-S-312 Concrete maintenance holes-external drops</i>	Concrete maintenance holes- external drops	Design requirements for external M.H drops

Drawing No.	Drawing Name	Relevance
<i>MRWA-S-313 Maintenance hole- top construction</i>	Maintenance hole- top construction	Cover and top selection (ie: complete M.H schedules)
<i>MRWA-S-314 Concrete maintenance holes- ancillary items</i>	Concrete maintenance holes- ancillary items	Design requirements for landings, step irons and ladders
<i>MRWA-S-404 Emergency relief structures</i>	Emergency relief structures	Design requirements for emergency relief structures

TABLE 000-B: SPECIFICATIONS MOST RELEVANT TO PLANNERS

Drawing No.	Drawing Name	Relevance
<i>MRWA-S-103 Pipes and jointing</i>	Pipes and jointing	Common pipe internal diameters and k factor outlined
<i>MRWA-S-207 Major crossings</i>	Major crossings	Options and considerations for major crossings outlined
<i>MRWA-S-208 Trenchless construction</i>	Trenchless construction	Limitations of trenchless construction described
<i>MRWA-S-401 Sewerage network airflow management</i>	Sewerage network airflow management	H ₂ S risk calculation & vent and water seal rules outlined

TABLE 000-C: STANDARDS MOST RELEVANT TO CONTRACTORS

Drawing No.	Drawing Name	Relevance
STANDARDS PRODUCED PRIMARILY FOR CONTRACTORS ✓✓✓ IF BOLD ✓✓✓✓		
<i>MRWA-S-104A Junctions</i>	Junctions	Junction selection and installation
<i>MRWA-S-201 Trenching and trenchfill</i>	Trenching and trenchfill	Trenching and trenchfill
<i>MRWA-S-202 Embedment</i>	Embedment	Selection and installation of embedment
<i>MRWA-S-206 Trench bulkheads and trenchstops</i>	Trench bulkheads and trenchstops	Trench bulkheads and trenchstops
<i>MRWA-S-301 Riser construction details</i>	Riser construction details	Materials and installation
<i>MRWA-S-302 Type 1 property connections</i>	Type 1 property connections	Pipework configuration and installation
<i>MRWA-S-303 Type 2 property connections</i>	Type 2 property connections	Pipework configuration and installation
<i>MRWA-S-304 Type 4 property connections</i>	Type 4 property connections	Pipework configuration and installation
<i>MRWA-S-305 Maintenance shafts</i>	Maintenance shafts	Product configuration and installation
<i>MRWA-S-306 Maintenance chambers</i>	Maintenance chambers	Product configuration and installation

Drawing No.	Drawing Name	Relevance
<i>MRWA-S-309 Concrete maintenance holes- general construction</i>	Concrete maintenance holes- general construction	Material, finish and construction joints
<i>MRWA-S-310 Concrete maintenance holes- base construction</i>	Concrete maintenance holes- base construction	Size, shape and installation
<i>MRWA-S-311 Concrete maintenance holes- internal drops</i>	Concrete maintenance holes- internal drops	Pipework, configuration and installation
<i>MRWA-S-312 Concrete maintenance holes- external drops</i>	Concrete maintenance holes- external drops	Pipework, configuration and installation
<i>MRWA-S-313 Maintenance hole- top construction</i>	Maintenance hole- top construction	Flat top M.Hs, conical top M.Hs and covers
<i>MRWA-S-314 Concrete maintenance holes- ancillary items</i>	Concrete maintenance holes- ancillary items	Ladders, step irons, brackets, landings and fasteners
<i>MRWA-S-400 Insertion into live sewers</i>	Insertion into live sewers	Installing M.Ss, M.Cs, M.Hs and pipe into live sewers
<i>MRWA-S-402 Vents</i>	Vents	Components and installation
STANDARDS IMPORTANT TO CONTRACTORS ✓✓		
<i>MRWA-S-103 Pipes and jointing</i>	Pipes and jointing	Pipe jointing information provided
<i>MRWA-S-104B Bends and curves</i>	Bends and curves	Bend specifications and installation
<i>MRWA-S-107 Pipeline details</i>	Pipeline details	Images of more complex configurations
<i>MRWA-S-111 Sewers in undeveloped property</i>	Sewers in Undeveloped Property	Connection and Maintenance Structure construction in undeveloped land
<i>MRWA-S-205 Sloping mains and trench drainage</i>	Sloping mains and trench drainage	Sloping mains and trench drainage
<i>MRWA-S-207 Major crossings</i>	Major crossings	Major crossings
<i>MRWA-S-208 Trenchless construction</i>	Trenchless construction	Micro-tunneling and hdd requirements for major crossings
<i>MRWA-S-403 Water seals</i>	Water seals	Pipework configuration and installation
<i>MRWA-S-404 Emergency relief structures</i>	Emergency Relief Structures	Pipework and pit configuration and installation
STANDARDS RELEVANT TO CONTRACTORS ✓		
<i>MRWA-S-209 Sewerage assets around retaining walls</i>	Sewerage assets around retaining walls	Clearance, alignment and cover requirements

Note

- **Bolded** items are those that would likely be referred to very regularly.
- These tables provide guidance into what standards the MRWA believe to be most relevant to each party within the asset creation process.

It is however, expected that all parties become familiar with all the requirements.
