

Clause	Description	Requirement	Supporting Document
Glossary	Referenced Documents	Additional Acts and Regulations applying in SA	Glossary (Pg 1)
1.2.5.2	Requirements	SA Water requires a pre-laid service to each property	
Table 2.3	Maximum Service Pressures	Due to the difficulty in serving isolated areas, SA Water may allow up to 1000 kPa (100 m) provided a note is placed on the Design Drawings stating that a Pressure Limiting Valve (PLV) is required for each individual premise affected by the higher pressure (as specified in the plumbing standard AS/NZS 3500.1). Pressures in excess of 1000 kPa (100 m) may be experienced in some areas, due to local exceptional circumstances.	
2.5.3.4.4	Dual Water Supply Systems	While desirable, it is not essential that the water supply be 5-10 m higher than the recycled system	
Section 3	Pipe Selection Size / Class / Type	SA Water has standardised on Class 16 for all pipework used in its infrastructure system. Lesser classes shall only be used with project specific approval from SA Water.	See also TG105 - SA Water Policy on pipe size, class & material
3.1.5	Fire Flows	SA Water requires all fire service connections to be supplied from its Potable Water system	
4.8.5	Cathodic Protection	CP shall be considered for all steel mains >DN300	
5.2 Fig 5.1 & 5.2	Looped and Link Mains	Looped and link mains may be used where the main will be a "dead end" for an extended period of time e.g. expected area of slow land development.	
Table 5.1 Fig 5.3	Cul-de-sacs	A flushing point is required at the end of all reduced size mains in Cul-de-sacs	
5.4	Location of Water mains	Mains laid in SA are primarily laid in the road reserve carriageway. All mains laid in road reserves are to meet the requirements as detailed in SA Water's WSCM Drawings D1 & D2	
5.4.4	Water Mains in Easements	To be in accordance with details as shown :-	Pt1 – 5.4.4 (Pg 2)
5.4.5	Dual Water Supply systems	Drinking and non-drinking water mains each have their own allocated alignment and are NOT to be installed in shared trenches.	
5.4.16	Marking tape	SA Water only requires Marking tape in areas where the main does not follow its normal allocated alignment e.g. across parks and reserves and in Cul-de-sacs.	
5.6	Shared Trenching	Shared Trenching is not used in SA. All Services have an allocated area in streets (see WSCM Drawings D1 & D2). See also 5.4.5.	
5.11.2	Connections to Water mains	Split service connections are not to be used without location specific approval by SA Water.	
5.12.4	Minimum Clearance from Structures	Finished clearance to values to be confirmed with SA Water	
5.12.5 and Table 5.5	Clearances	General the minimum horizontal clearance between adjacent parallel pipelines is to be 600 mm unless special permission is given by SA Water and the other utility owner. ETSA require 1 m to Pillar	
7.4.2 and Fig 7.1	Pipe Cover /Embedment	SA Water's minimum pipe cover and embedment materials are to be as detailed on WSCM Section B Drawings (particularly Drg B1)	
7.6.2	Concrete Encasement	No pipes shall be concrete encased without project specific approval by SA Water	
7.9.2	Thrust Blocks	See also SA Water WSCM Drawing B10. Timber and Plastic Thrust blocks (WAT-1206) may only be used for temporary Thrust Block applications	

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7.9.3	Anchor Blocks	All valves \geq DN100 are to be anchored in position. See SA Water WSCM Drawing B8	
7.10	Bulkheads and Trenchstops	Use only on steep slopes where main passes through water body i.e. underground stream. SA Water concurrence required or may direct installation.	
8.2	Stop Valves	All Stop Valves shall be clockwise closing. Unless authorised otherwise all valves shall be flanged. Only Authorised valves shall be used.	
8.2.2.2	Gate Valves	Gate Valves shall be clockwise closing. Valves shall not be used for throttling flow	
8.2.2.3	Butterfly valves	On all butterfly valves \leq DN300 the trunnions shall be vertical. For valves $>$ DN300 SA Water is to be consulted as to the installation procedures and the position of trunnions	
8.2.3	Stop valves in mains	Stop valves are to be laid under the road pavement where applicable in the services in streets code. See WSCM Drg D1	
8.2.6	Bypass of Stop Valves	Minimum bypass size for water mains \leq DN600 is DN80	
Table 8.2	Stop Valve Spacing Criteria	To be in accordance with details as shown:	Pt1-Tbl 8.2 (Pg4)
8.2.7	Stop Valve - Location and arrangements	Stop Valves shall be located and arranged as specified in WSCM Drg Sections C & D	
8.2.7.2 Fig 8.8	Branch Valve Adjacent to Main	See SA Water WSCM Drawings C5 – C8	
8.2.7.3 Fig 8.9	Branch Valve Adjacent to Inner Splay Corner	See SA Water WSCM Drawings C5 – C8	
8.2.7.4 Fig 8.10	Valve/hydrant combinations	SA Water use the system shown in Figure 8.10(b)	
8.8.4	Hydrants Types	SA Water use the screw down hydrant (b). Pillar hydrants (c) may be specified for specific areas and need SA Water approval before installation	
8.8.9	Hydrant Location	SA Water's preferred location for hydrants is directly above the main but when specified by SA Water it may be laid behind the curb	Pt1 –8.8.9 (Pg 4)
8.11	Location Marking	See SA Water WSCM Drawings C17 and F6	
9.2	Design Drawings	Attached SA Water specific requirements apply	Pt1-9.2 (Pg 5)
Additional Requirements			
Annexures			
Annex A		Typical SA Water Drawings	
Annex B		Symbols and Abbreviations	

SA Water Supplementary Documentation

Water Supply Code - Part 1 - Design

Related Requirements

Pt 1 – 5.4.4 Water Mains in Easements

All Water Supply easements shall be vested in the name of the South Australian Water Corporation.

Power, gas and telecommunications utilities are not permitted to share or co-locate within SA Water easements to facilitate their respective services. This is due to the OHS&W implications for SA Water's maintenance and operational personnel, or personnel contracted by SA Water.

Location of Mains/Easements

All water mains and valves shall normally be located in roadways in accordance with the requirements of SA Water's Water Supply Construction Manual (WSCM) Drawings D1 and D2.

Where it is not practical to run the water mains in the roadway, (e.g. due to topographical or linking requirements), water mains may be located in easements taken specifically for that purpose.

Where a water main easement is shared with a stormwater pipeline, the Council/Developer shall obtain their own stormwater easement from the landowner. The stormwater easement may overlap either a portion or the whole width of the SA Water easement. Because of the potential for damage to buildings and property the water main should be located on the side of the easement away from any buildings.

SA Water has no obligation to share water main easements with Councils or any other authorities. SA Water takes no responsibility for the stormwater pipeline, other than any damage caused to the stormwater pipeline by SA Water personnel or personnel contracted by SA Water.

Notes:

Where it is impossible to attain lateral clearances from trees, it may be practical to tunnel beneath (or alongside) the tree(s), provided the tree type and root growth will permit such action and provided the tunnelling will not affect or endanger the health OR stability of the tree(s).

Easement Widths and Clearances

Because of the potential for damage if a water main bursts, the easement width and clearance requirements are considerably greater than those required for sewers. SA Water's minimum requirements are as follows in table 1:-

Water Main Diameter	Easement Widths (mm)	Minimum Clearance (mm)	
		Structures	Other Pipes
DN63 to DN 150	7 000	4 000	1 200
DN200 to DN 375	10 000	5 000	1 500

Table 1 - Easement Widths and Clearances

Dual Water Supply Systems within Easements

Where it is necessary for dual water supply (drinking and recycled) mains to share the same easement there shall be a minimum separation of 1.5 m between the mains.

Easements Obtained under Developer Contracts

The Developer shall be responsible for all costs associated with the acquisition of water main easements that are required within the development.

Easements within the development shall be established on the basis of the Final Plan of the Development. The final plan shall be prepared and lodged with the Development Assessment Commission by the Licensed Surveyor engaged by the Developer.

Where easements external to the development are required, the Developer may acquire the easements independently or may request that SA Water compulsorily acquire the easements at the Developers cost.

Pt 1 – Table 8.2 Stop Valve Spacing Criteria

SA Water’s policy is for all valves used in the reticulation system to be placed in locations so that in the event of a shut-down, no more than 50 premises will be affected. Whilst this is not always possible, all greater values shown in WSA-03 Part 1 Table 8.2 should be considered the absolute maximum.

Pt 1 –8.8.9 Hydrant /Air Valve Location

Hydrants (fireplugs) shall be located in the roadway directly above the main as shown in WSCM Drawings Section C. Where specified they can be located behind the kerb.

SA Water uses hydrants (fireplugs) as scours and air release appurtenances.

Adjustment can be made within the normal minimum spacing requirements for hydrants to be placed at high and low points within the system. When hydrants are unsuitable for a particular application, air relief valves and/or scours are to be used at high and low points (respectively) on the main.

When hydrants are to be used for scouring and air relief purposes they are to be identified on the design Drawings as to their purpose by use of the symbol as detailed in Annex B (e.g. FPAV and FPSc)

Pt 1 –9.2 Design Drawings

General

Design Drawings shall be drawn in black ink on copies of A3 size SA Water Pre-Titled Sheets and be of such clarity as to permit microfilming, scanning, and reduction to A4 size. Typical Drawings are shown as Annex A and symbols to be used on the drawings shall be in accordance with Annex B.

Scale

Drawings shall be at 1:1000 scale, except where enlargements are required for complex fixtures.

Drawing

Items that shall be shown are:

- Suburb or Township Names
- Street Names
- Allotment Numbers to the Real Property Act.
- Boundaries
- New Water Mains
- Existing Mains
- Easements (including enlargement to show details if required)–see Annex A
- Restrained Joint sections of pipe (e.g. Tyton-Lok)
- Size and Type of Pipes
- Hydrants (Fire Plugs) including alternate usage e.g. scour
- Fire Plug Connectors (with Thrust Block)
- Stop Valves and Reflux Valves
- Tapers (change in main size)
- Existing Meters, Pressure Reducing Valves or any other special fitting
- New Fire Services (if required)
- New Large Domestic Services (if required)
- Obsolete/Lifted Mains
- Cathodic Protection Test Points and Insulated Joints
- Dogleg Details around Obstructions
- North Point
- Bar Scale
- Title Block entries - Main Details, Certification, Suburb/Township, Council, Water District, Design Plan Number, Contract Number, Map Reference and Docket Number.

As-Constructed Information

The drawings shall make space allowance for the addition of As-constructed information once the reticulation system has been installed. See Supporting Documentation to WSA-03 Part 3 – Construction.

Annexures

Annex A	Typical SA Water Drawings
Annex B	Symbols and Abbreviations

TYPICAL SA WATER DESIGN DRAWING



LIMITS OF CONTRACT

1. Construct the reticulation water main as shown.

2. Provide the siting of 'X' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

3. Provide the siting of 'Y' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

4. Provide the siting of 'Z' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

5. Provide the siting of 'AA' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

6. Provide the siting of 'BB' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

7. Provide the siting of 'CC' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

8. Provide the siting of 'DD' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

9. Provide the siting of 'EE' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

10. Provide the siting of 'FF' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

11. Provide the siting of 'GG' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

12. Provide the siting of 'HH' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

13. Provide the siting of 'II' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

14. Provide the siting of 'JJ' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

15. Provide the siting of 'KK' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

16. Provide the siting of 'LL' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

17. Provide the siting of 'MM' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

18. Provide the siting of 'NN' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

19. Provide the siting of 'OO' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

20. Provide the siting of 'PP' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

21. Provide the siting of 'QQ' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

22. Provide the siting of 'RR' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

23. Provide the siting of 'SS' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

24. Provide the siting of 'TT' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

25. Provide the siting of 'UU' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

26. Provide the siting of 'VV' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

27. Provide the siting of 'WW' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

28. Provide the siting of 'XX' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

29. Provide the siting of 'YY' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

30. Provide the siting of 'ZZ' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

31. Provide the siting of 'AAA' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

32. Provide the siting of 'BBB' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

33. Provide the siting of 'CCC' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

34. Provide the siting of 'DDD' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

35. Provide the siting of 'EEE' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

36. Provide the siting of 'FFF' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

37. Provide the siting of 'GGG' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

38. Provide the siting of 'HHH' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

39. Provide the siting of 'III' (through off existing main - stainless steel flange offset copy) (refer WSCM 22).

NOTES

The Contractor shall give the Superintendent's Representative a minimum of 5 working days' notice of intent to carry out any fit-up.

The Superintendent's Representative will arrange for the siting down and carrying up of mains as necessary for the fit-up process.

The Contractor shall not open or close any valves on existing mains unless otherwise directed by the Superintendent's Representative.

The Contractor shall ensure that any fittings installed on the fit-up shall be 150mm. Ready top fittings may be fitted to the fit-up.

Any fittings removed from the system shall remain the property of SA Water and shall be returned to the nearest South Australian Water Corporation depot.

Once the work has been tested to the satisfaction of the Superintendent's Representative (see Clause 4.12) and the fit-up completed, the Contractor shall remain in accordance with WSCM Section 6.

When ordered by the Contractor that the fit-up is complete including the anchor/insert blocks (refer WSCM Section 6), the Superintendent's Representative will arrange to change up an anchor for the new main.

EXISTING SERVICES

1. Contractors shall verify the location and depth of the following services prior to the start of work:

- Prior to commencing ANY construction work, the Contractor shall locate and depth of other existing underground services in the vicinity of works. Any discrepancies of depth or location from that indicated on drawings shall be reported to the Contracting Engineer.
- If any other services are located during the course of the work, the Contractor shall advise the Superintendent's Representative immediately.
- It shall be the Contractor's responsibility to determine if other underground services are present and have all services located and depthed prior to commencing works.

SA Water
SOUTH AUSTRALIAN WATER CORPORATION
1000 RUNDLE STREET, ADELAIDE SA 5000
TEL: 08 8234 2000
WWW.SAWATER.COM.AU

CONTRACT NO.: 62369
CONTRACT DATE: 12/03/2011
JOB NO.: 62369
DRAWING NO.: 62369-3001-31

FOR FURTHER INFORMATION VISIT
WWW.SAWATER.COM.AU

DATE: 12/03/2011
DRAWN BY: J. BROWN
CHECKED BY: J. BROWN
APPROVED BY: J. BROWN

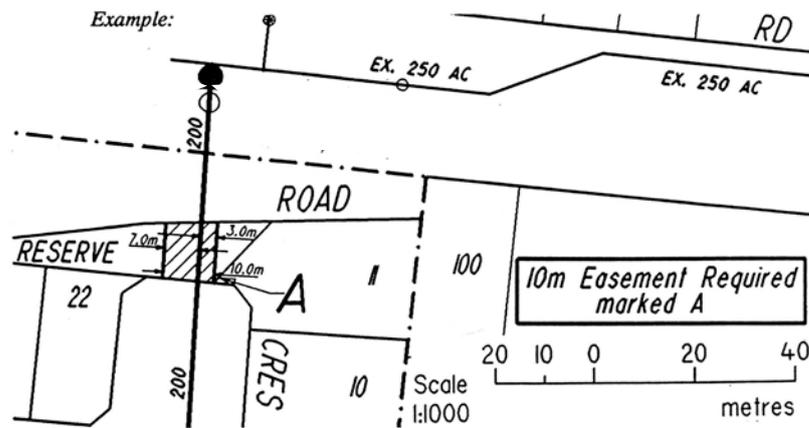
PROJECT: SOMERERE SOUTH
STAGE 2
POTABLE WATER IN MARITIME RD, TIDE ST,
ATLANTIS AV, MESSAGE RD, ANCHOR RD, STAND ST
LOCALITY PLAN

SHEET 1 OF 5
2069 - 3001 - 31

CONTRACTORS WORKSPACE
LOGS NOT PERMITTED
FREE ASSET
APPROVALS
Signature: _____ Date: _____
Name: _____
CHARTERED ENGINEER

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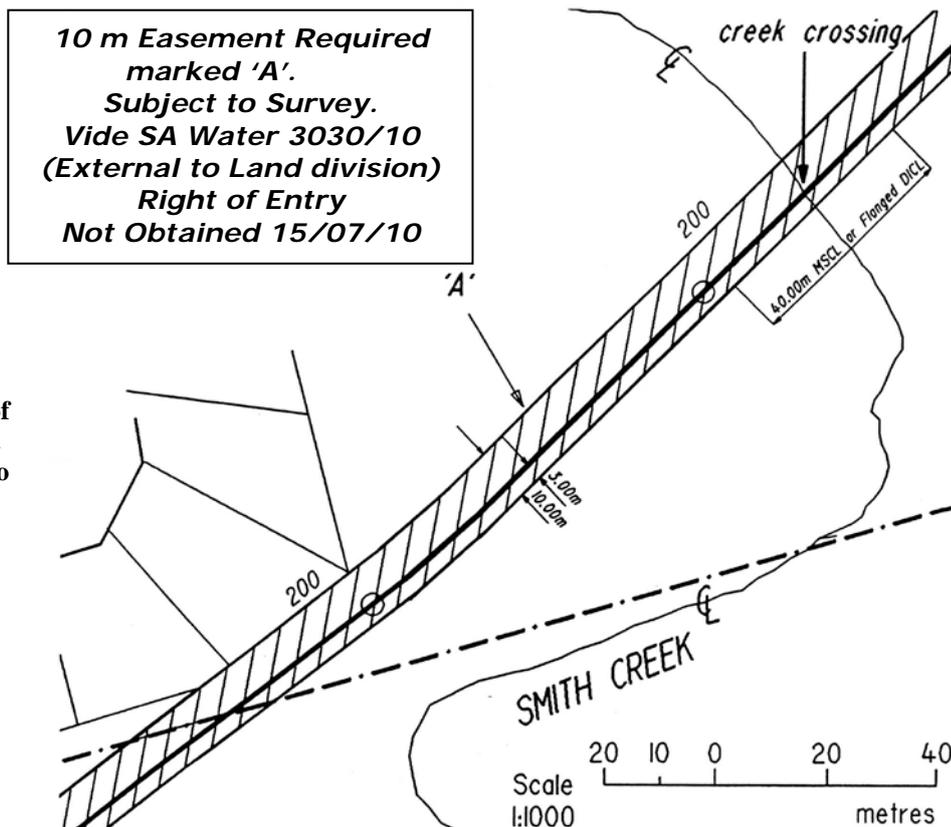
TYPICAL EASEMENT ENLARGEMENT DETAILS (for Drawings)



Notes

- Easement boundaries to be in bold lines, hatch easement in thin lines and mark it with the letter 'A'.
- Fix location of easement by showing offsets to the property boundaries and locate main in easement in a similar manner.
- If the exact location of easement is undecided insert "subject to survey".

EXAMPLE



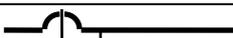
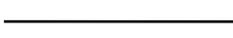
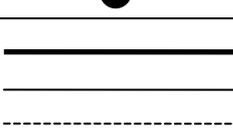
Example of Easement External to Land Division

**10 m Easement Required marked 'A'.
Subject to Survey.
Vide SA Water 3030/10
(External to Land division)
Right of Entry
Not Obtained 15/07/10**

Note:

- Easement to be shown as for Internal Easement (see above) with the addition of the docket number dealing with the easement acquisition (obtain from SA Water) and whether rights have been obtained and the date.

**SYMBOLS AND ABBREVIATIONS FOR DRAWINGS
AND AS-CONSTRUCTED AMENDMENTS**

ITEM	SYMBOL	TEXT	SIZE
Air Valve		AV	4mm
Bend and angle of deflection		x°y' Bend	
Boundary Cock		BC	
Branch or Tee		Br or Tee	
Branch with Scour Valve		Sc	4mm
Branch with Stop Valve		SV	4mm
Bypass		BP	
Cathodic Protection Rectifier		CPR	
Cathodic Protection Test Point		CPTP	4mm
Change of Type			
Change of Size - in line - at junction		x dia/y dia Taper x dia/y dia Taper	4mm 4mm
Connection			0.50mm
Connection Nipple		CN	
Cross Over			
Fire Plug		FP	4mm
Fire Plug Air Valve		FPAV	4mm
Fire Plug Scour		FP Sc	4mm
Fire Plug Connector (with thrust block)		FP Con	4mm
Locked Stop Valve		LSV	4mm
Main Cock		MC	
Meter		Meter	
Pillar Hydrant		PH	4mm
Pressure Reducing Valve		PRV	4mm
Reflux Valve		RV	4mm
Stop Valve		SV	4mm
Flushing Point		FP	4mm
Water Main - new - existing - lifted/abandoned			1.00mm 0.35mm 0.35mm

Annex B

<p>Water Main - material type :- Ductile Iron Concrete Lined Ductile Iron Concrete Lined with Restraining Ring (Tyon) Jointing PolyEthylene Mild Steel Concrete Lined PolyVinyl Chloride</p>		<p>DICL DCTJ PE MSCL PVC</p>	
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