



**DUBBO
REGIONAL
COUNCIL**

TECHNICAL SCHEDULE

DRC-W206

WATER METER REPLACEMENT

TECHNICAL SCHEDULE DRC-W206 – WATER METER REPLACEMENT

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DRC-W206: WATER METER REPLACEMENT

DRC-W206.1 SCOPE

This Specification applies to the replacement of residential water meters nominally 20 mm in diameter. The purpose of the work under this Contract is to remove inaccurate and aged water meters from the Principal's water supply system in order to maintain accurately reading meters.

This Specification does not apply to the supply of water meters, which are purchased separately by the Principal.

The work required to be performed under this Contract shall comply with the referenced documents in Clause DRC-W206.2, unless specified otherwise herein.

DRC-W206.2 REFERENCED DOCUMENTS

The following documents are referred to in this Specification. The latest version of the document including any published amendments shall apply. Where the drawings or a project specific specification are in conflict or inconsistent with these referenced documents or this Specification, then the details on the drawings or project specific specification shall apply.

Australian Standards

AS 3500.1 Plumbing and drainage – water services
AS 3565 Meters for water supply

Works shall also comply with the current versions all other relevant Australian Standards where not specifically listed above.

Water Services Association of Australia Standards (WSAA)

WSA03-2011 Water Supply Code of Australia
N/A WSAA Product Specifications

DRC-W206.3 QUALIFICATIONS

The replacement of water meters and all associated activities shall be carried out and supervised by suitably experienced and acceptably qualified or accredited personnel. These personnel shall be either a licensed plumber or suitably experienced persons operating under a licenced plumber.

The licensed plumber shall hold appropriate qualifications issued by a registered training organisation and have attended a relevant training course and received accreditation relating to the work being carried out.

DRC-W206.4 PROTECTION OF THE ENVIRONMENT

All work shall be carried out in such a manner as to avoid nuisance and/or damage to the environment. The Contractor shall comply with the requirements of the conditions of approval imposed by Council and the NSW Environment Protection Authority. No variation in costs or extensions of time will be considered due to these requirements.

Toxic chemicals shall not be used without the prior written approval of the Superintendent.

DRC-W206.5 DAMAGE TO PROPERTY

The Contractor is entirely responsible for any damage caused to any property, including any existing utility services by his operations. The Contractor shall immediately carry out or arrange for any repairs and pay for the full cost of such repairs and any associated damages.

Damage shall not be caused in order to obtain access to a property. Access to a property must be by an appropriate route such as a driveway or path where these exist.

Where the safety and access to an existing utility service is likely to be endangered, the Contractor shall request the attendance of an officer of the utility concerned to advise on precautions to be taken, and shall take such actions as may be recommended by that officer.

DRC-W206.6 CUSTOMER COMPLAINTS

The Contractor shall be the point of contact for all customer or resident queries and complaints associated with works carried out under this Contract. Queries and complaints shall be resolved promptly by the Contractor and as a minimum:

- The Contractor shall respond to the customer within 24 hours of receiving a complaint/query.
- The Contractor shall resolve all complaints within five working days.
- Where a complaint cannot be resolved within five working days, the Contractor shall notify the Superintendent of the issue, progress and expected date of resolution.
- If a complaint cannot be resolved within seven working days, the Superintendent may without any further notice undertake to resolve the complaint at the Contractor's cost.

The Contractor shall keep a record of all customer contact relating to complaints, queries and out of hours access including date, time, name and address of contact, method of contact, issue raised and actions taken.

DRC-W206.7 DEALING WITH DOGS

Dogs can inflict serious injury and, in some cases, death. This procedure details the general procedure when dealing with dogs.

Dogs tend to be protective of both people and property and may turn savage when confronted.

Where dogs are present on private property, the Contractor shall arrange for the dog owner to restrain the dog. This shall comprise of having the dog tied or put in an area from which it cannot escape whilst works are carried out. Do not accept the owner's advice that "it will be okay".

Where the dog owner is not present to be able to restrain the dog on private property, the Contractor shall leave a Customer Notification Card and defer works until the owner is available. If a suitable time cannot be arranged with the dog owner, the Contractor shall refer the matter to the Superintendent for direction.

Where the owner/controller of the dog is available but is unwilling or unable to control the dog, or the dog is uncontrolled on public property, the Contractor shall report this to the Superintendent who will arrange for the Principal's Animal and Ranger Services to assist.

DRC-W206.8 ITEMS TO BE SUPPLIED BY THE PRINCIPAL

The Contractor is required to supply all materials, tools, equipment and labour for the execution of the Contract with the exception of the water meter assembly and couplings which will be supplied by the Principal to the Contractor free of charge.

The water meter assemblies, couplings and washers will be supplied to the Contractor exactly as received from the manufacturer.

The Principal will supply an electronic device (iPad type or similar) for the use in recording meter replacement documentation. At the completion of the Scope of Work, the Contractor shall return the electronic device to the Principal. The Contractor is responsible for any and all damage to the electronic device, notwithstanding reasonable wear and tear.

DRC-W206.9 DELIVERY, TRANSPORTATION, HANDLING AND STORAGE OF MATERIALS

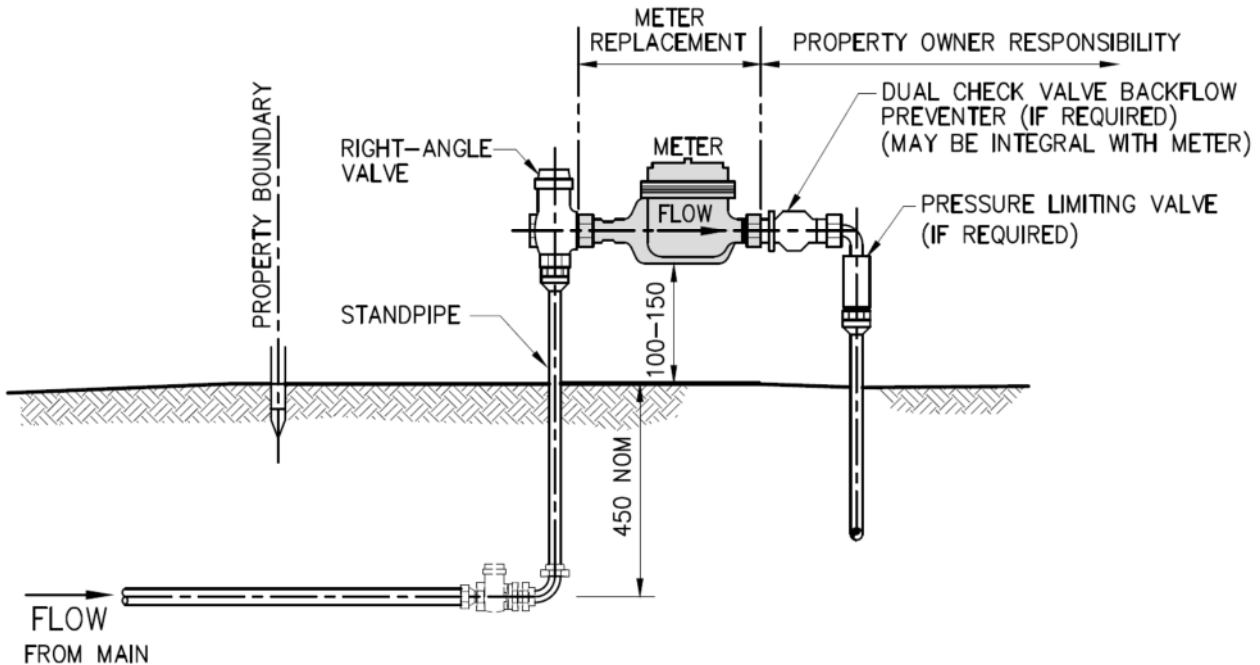
The Contractor shall transport, handle and store all products and materials in accordance with the manufacturers' recommendations and in a manner that prevents damage or deterioration or excessive distortion.

The Contractor shall reject any damaged, or defective products or materials along with any unauthorised or unspecified products or materials unless written approval has been given for their use. No rejected products or materials shall be used in the works, however shall be placed in a quarantined area and removed from the site by the Contractor at the earliest opportunity.

DRC-W206.10 WORK SCOPE

The Contractor shall remove the existing water meter as listed in the Scope of Work and replace with a new water meter. All work is to be carried out in accordance with AS 3500 and the applicable national and state requirements in place at the time such as the Local Government Act 1993 Water Supply Regulations.

The typical water meter arrangement is as shown in the figure below (extract from WSAA Standard Drawing WAT-1109). Whilst this arrangement is typical, the Contractor shall be responsible for inspecting the actual existing water meter installations listed in the Scope of Work to determine the actual configuration.



DRC-W206.11 WATER METER COLLECTION

The Contractor shall be responsible for the collection and transportation of new water meters from the Principal’s nominated location, and then return of the removed water meters and any removed backflow prevention devices to the Principal.

Once evidence of the insurances being taken out are accepted by the Superintendent, a group of water meters of an agreed quantity shall be booked out from the Principal. These meters shall be signed out on the appropriate pro-forma.

DRC-W206.12 METER ACCESS AND VERIFICATION

The Contractor shall locate the water meter at the property and verify that the water meter number matches the number provided by the Principal for that property. In the event that the water meter number at an address listed does not match, the Contractor shall not proceed with the replacement and shall advise the Superintendent. Advice to the Superintendent shall take the form of quoting the actual meter number and the meter reading in the “Comments” column of the pro-forma. On these occasions, the water meter for the property may be been previously replaced for some other reason.

The Contractor shall verify the pipe material of the water service connection on the Principal’s side of the water meter. If the material is galvanised iron, the Contractor shall not proceed with the replacement and shall advise the Superintendent.

Whilst meters are required to be accessible for reading and replacement, it is recognised that some existing meters may not be readily accessible. This could be due to meters being located inside residential and business premises, access obstructed by locked gates, dogs or for other reasons. In the event that a meter cannot be accessed and the premises is unattended, the Contractor shall leave a Meter Access Card. It is the Contractor's responsibility to negotiate with the resident an appropriate time to access the meter and undertake the replacement.

DRC-W206.13 WATER SUPPLY SHUT DOWN

Following verification of the water meter number and water service pipe material, the Contractor shall advise the resident that their water supply will be shut down for the duration of the replacement. In the event that it is not convenient for the resident at the time, the Contractor shall reschedule a more suitable time with the resident to replace the water meter. Shut down of the resident's water supply shall only be undertaken between the hours of 9 am and 5 pm Monday to Friday (excluding public holidays) unless otherwise requested by the resident or Superintendent.

DRC-W206.14 METER REPLACEMENT

If agreed to by the resident, or if no one is at the premises, the Contractor shall proceed with the replacement of the water meter as follows:

- Confirm the water meter reading and record this on the pro-forma.
- Use an approved electrical bridging conductor before proceeding with the work using safe work practices as per the Essential Energy "Electricity and Plumbing" brochure, provided in Appendix A.
- Carefully remove the existing water meter.
- If there is a separate backflow prevention device (usually a double check valve assembly), the Contractor shall remove the internal assembly of the backflow prevention device so that there is no impediment to water flow. If removal of the internal assembly is not possible, the Contractor shall remove the entire backflow prevention device using couplings to be supplied by the Principal.
- Install the new water meter and plumb between any resulting gap with approved fittings. Any required pipe or fittings are to be supplied by the Contractor (noting that the only materials supplied by the Principal are as specified in clause drC-W206.8).
- The Contractor shall reconnect the water supply to the premises and ensure the new meter assembly is not leaking any water, and by using a hose cock or similar, he/she shall confirm the meter is registering flow.

On completion of the work the Contractor shall:

- Remove the electrical bridging conductor.
- Collect and remove any debris from the site and dispose of properly.
- Complete the meter changeover form required, including meter reading and recording the meter reading of the new meter, the date of the changeover and the signature of the person who effected the meter replacement.
- Leave a Meter Replacement card in the letterbox of the property in all cases, even if there was a resident at home. The Meter Replacement card shall be supplied by the Principal and is a courtesy

card to advise the resident what has occurred. It provides a phone number if the resident has any questions that may arise after the Contractor has left the site.

DRC-W206.15 ELECTRICAL SAFETY

The Contractor shall ensure that the works are carried out in a safe manner, taking into account electrical safety risks and work practices. The Contractor shall comply with Essential Energy's "Electricity and Plumbing" brochure contained in Appendix A.

Before carrying out replacement of any meter, the Contractor shall carry out an electrical safety test as required by AS 3500.1.2. In the event that electrical potential is indicated, the Contractor shall not proceed with the water meter replacement and shall immediately notify the electricity supply authority and the Superintendent. The Contractor shall then negotiate with the electricity supply authority and the customer before completing the water meter replacement.

The Contractor shall connect a bridging conductor with a minimum current rating of 70A across the intended gap. The conductor shall be fitted with suitable clamps onto sections of pipe cleaned back to bare metal. The bridging conductor shall not be removed, or conductivity broken, until work on the water service has been completed and continuity of metallic service pipe is restored.

DRC-W206.16 RETURN OF REMOVED WATER METERS AND DOCUMENTATION

Following replacement of the group of water meters, the Contractor shall return the removed water meters, any removed backflow prevention devices and completed changeover forms to the Principal's depot. Following acceptance of the completed documentation by the Principal, the Contractor may then book out another group of water meters from the Principal's depot for use.

The Superintendent shall supply the Contractor with a spreadsheet containing water replacement data for the meters to be replaced. The Contractor shall complete the spreadsheet and return the spreadsheet to the Superintendent at regular intervals upon the completion of each group of water meter replacements.

The Principal will supply an electronic device (iPad type or similar) for use in recording meter replacement documentation. Completed electronic meter replacement forms shall be submitted to the Superintendent at regular intervals upon the completion of each group of water meter replacements.

DRC-W206.17 WATER METER READING PERIODS

Water meter replacement works shall not be undertaken seven days prior to or during the Principal's quarterly water meter reading periods, which take place during the following dates:

- December
- March
- June
- September

APPENDIX A – ESSENTIAL ENERGY ELECTRICITY AND PLUMBING DOCUMENT



What should I do before starting work?

- Complete a risk assessment so as to identify and put in place the appropriate control measures to prevent any hazards (including work practices and procedures) which may have the potential to harm the health or safety of a person. This should be completed for each paddock and piece of machinery to be used
- Know the location of underground powerlines and their proximity to your work site before commencing digging – obtain accurate, up-to-date maps/diagrams showing the location of powerlines on the property from Essential Energy
- Check gutters and metal roofs prior to commencing a job, as they can become live due to deteriorating insulation on electrical wiring
- Use a safety switch to reduce the risk of shock from portable tools
- Enquire with the occupant if they have experienced any minor electrical shocks from taps, sink etc
- Visually check the connections of the electrical services at both ends, pole and house are present with no arcs or sparks
- If accessible check the condition of earth connection at earth stake and hot water system bond
- Test water pipes with a self-testing voltage indicator for stray voltage
- It is strongly recommended that a powerpoint safety tester be purchased and used to check the customer's powerpoint before connecting equipment. These simple devices can be purchased from most electrical wholesalers
- If the earth wire needs to be moved, disconnected or shows signs of being damaged or where any existing metallic pipe is to be replaced in part or in its entirety by plastic pipe or other non-metallic fittings or couplings the work must not commence until the earthing requirements have been checked by an electrical contractor and modified, if necessary
- If isolation of electricity supply is required contact Essential Energy on 13 23 91
- Contact Essential Energy supply interruptions on 13 20 80 if a fault is apparent.



Detection of stray voltage

Electrical bridging cable requirements

- Visually check the bridging conductors for any damage before use, every time
- Ensure bridging conductors have a current rating of not less than 70 amps
- Ensure strong clamps are fitted to each end of the electrical bridging conductor



Bridging out of water meter

- Bridging must not be broken or removed until all work on the water service is completed and continuity of the metallic service pipe is restored
- Removal of bridging conductor during work may result in a serious or fatal electric shock.

Primary control measures when changing water meter

- Inform the customer and isolate electrical supply if practicable
- Locate main switch/s, there can be more than one main switch and turn off, attaching a "Do not operate" tag or lock the switchboard until work is completed. Remember this may not isolate all stray voltage
- Ensure PPE is used, especially insulated electrical gloves (minimum 500 volts – ensure they are checked for damage such as holes, every time prior to use)
- Thoroughly clean a section of metallic pipe each side of the work area (eg meter) and ensure bridging cables have good physical contact with the metal pipes
- Bridging must not be broken or removed until all work on the water service is completed and continuity of the metallic service pipe is restored.



Be safe, because they need you



Safe work habits

- To prevent electric shock, use a bridging conductor when cutting out any section of water pipe
- Exercise extreme caution when working near the point of attachment of electrical supply lines to the house
- Look out for electrical arcs or tingles – if identified do not commence work and contact Essential Energy on 13 20 80.

What else can I do to make my worksite 'power safe'

- Find out about any work areas which may be hazardous, electricity, gas, water etc
- Know the location of overhead and underground powerlines and their proximity to your work site before commencing work (digging or climbing)
- Look for obvious signs of underground services such as conduits, pipes, warning tape, bricks or equipment
- Test gutters and metal roofs prior to commencing a job, as they can become live due to deteriorating insulation on electrical wiring.



Insulated matting and tiger tail fitted to overhead service line

- If required, arrange for isolation of electricity supply or the application of insulating matting onto service and point of attachment by Essential Energy
- If powerlines are near the worksite install appropriate signage (see Essential Energy's fact sheet 'Increase Visibility of Powerlines' for more information)
- Ensure extra care is taken when handling roofing materials, especially when windy or at heights.

Determine whether there are any new hazards

- Have the implemented control measures resulted in the introduction of any new hazards or in the worsening of any existing hazards?
- Have the changes made to control exposure to the assessed risk(s) resulted in what was intended?
- Has exposure to the assessed risk(s) been eliminated or adequately reduced?

For more information

Essential Energy's Public Safety team is available to conduct Electrical Awareness sessions and discuss any questions relating to electrical safety.

For more information on electrical safety please call Essential Energy:

General enquiries 13 23 91
 Supply interruptions 13 20 80
 or visit essentialenergy.com.au/safety

SAFETY FIRST:

- Know the location of overhead and underground powerlines near the worksite
- Ensure safety clearances are maintained (see Essential Energy's fact sheet 'Work near overhead powerlines' for more information)
- Always use a safety switch (RCD)
- Ensure PPE is used and in working condition
- Test for stray voltage using a self-testing voltage indicator
- Always bridge pipes that might carry current
- Leave bridging in place until work is finished
- If any electrical fault is suspected immediately notify the consumer and Essential Energy on 13 20 80.