

1.0 GENERAL

1.1 Scope

1.1.1 This section refers to the supply of pressurized, temporary water service.

1.2 Related Sections

1.2.1 Section 02511 – Watermains

1.2.2 Section 02516 – Water and Sewer Connections

1.2.3 Section 02517 – Watermain Tests

1.3 Interruption of Potable Water Service

1.3.1 Provide and maintain pressurized, temporary water supply to all services connected to watermains that must be or are depressurized for any reason. The only exception to this requirement is the performance of emergency repair and only if the repair interruption is expected to last less than eight consecutive hours. Provide temporary water supply if the repair interruption extends past eight consecutive hours. Whenever reasonable undertake emergency repairs while still maintaining minimum 70 - 100 kPa in the main to be repaired. If this is done, provision of temporary water supply is not required.

1.3.2 Maintain and operate temporary water supply until completion of required disinfection and flushing procedures and, receipt of confirmation of acceptable bacteriological test results for the section of watermain that was depressurized.

1.4 Temporary Water Service during Freezing Temperatures

1.4.1 Performance of work requiring temporary water service will not normally be approved if either daytime or night time temperatures are forecast to be below 0°C during the expected duration of the temporary supply requirement. In special circumstances the City of Regina may consider some latitude to this stipulation. The decision of the City of Regina is final in this regard.

1.4.2 In the event installation of temporary water supply is allowed to proceed when temperatures are forecast to be at or below freezing, provide all means to ensure continuous availability of temporary supply. This may include some or all of the following:

- .1 Ensure that each temporary branch service is left partially or fully running continuously.
- .2 Design, supply and installation of acceptable means to prevent supply hydrant(s) from freezing.

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- .3 Provision of personnel to continuously monitor the system and all equipment necessary to promptly reinstate flow to lines which do freeze.
 - .4 Provision of a system with means to heat and/or circulate water to maintain the water temperature at a minimum of 3 °C at the furthest point in the system. Such system must be designed by a professional engineer and requires review by the City of Regina before installation can proceed. Such system must employ components which are suitable for use with potable water and are completely disinfected prior to installation.
- 1.4.3 Where provision of temporary water supply during freezing conditions is approved, prepare and submit a detailed plan for review by City of Regina which shows the proposed installation and details all provisions that will be put in place to prevent freezing. Submit the plan at least two full working days in advance of the time the temporary system installation is desired.
- 1.5 Acquisition of Temporary Water Service
- 1.5.1 The use of a fire hydrant or hydrants as the source of temporary supply is permissible. To do so obtain a Hydrant Permit at City of Regina, Building A, 2425 – 4th Ave, Regina, Saskatchewan. A Hydrant Permit Fee will be payable for all projects but it will be refundable if the project is either being done directly for the City of Regina on its water utility or, on the water system portion of any private project which necessitates an interruption of water service to existing customers. The Hydrant Permit Fee is not refundable for any project where the work requiring temporary water supply does not directly involve or impact the water utility.
 - 1.5.2 Upon issuance of a Hydrant Permit, the City of Regina, will supply and connect a portable water meter and hydrant assembly to the designated supply hydrant(s). A non-refundable Hydrant Connection Fee must be paid for each Hydrant Permit Assembly installed regardless of the nature of the project.
 - 1.5.3 Refund of the Hydrant Permit Fee is conditional upon the hydrant assembly being returned undamaged and the conditions previously stated.
 - 1.5.4 Ensure that the assembly remains continuously connected to the hydrant for the duration of the project or interruption.
 - 1.5.5 The Contractor will be charged at the prevailing City of Regina water rate as metered by the hydrant assembly or rate per calendar week in Schedule A of Bylaw 8942, whichever is the greater.
 - 1.5.6 The Contractor shall be responsible for advising the City of Regina when the assembly is no longer required and for reimbursing the City for loss of or damage to hydrant assemblies provided.
 - 1.5.7 Obtain a Hydrant Permit for every hydrant used as a supply connection.

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- 1.6 Temporary Supply System Arrangement and Requirements
- 1.6.1 Provision of a suitable temporary water supply connection point is the responsibility of each property owner affected. The normal residential connection point will be the outside hose bibb on the residence. If a property owner refuses to or cannot provide a suitable connection point then provision of temporary supply to that property is not mandatory.
 - 1.6.2 For normal residential areas provide minimum 50 mm diameter main service line with minimum 20 mm pipe into each individual property.
 - 1.6.3 Each 50 mm temporary main service line may supply a maximum of twenty-six (26) residential connections or have a maximum length of 175 metres, whichever is the lesser.
 - 1.6.4 For temporary supply of services larger than standard residential provide temporary branch service pipe no more than one nominal pipe size smaller than the permanent service to a maximum 100 mm size. In these instances the required size and maximum length characteristics of the temporary main supply line size will be subject to the pre-approval of City of Regina.
 - 1.6.5 In the event that it is not possible or feasible to provide temporary supply from a hydrant, obtain the Engineer's approval to use alternate means such as a portable tank. Provide the means to continuously and automatically pressurize the supply from the tank to consumers and to control the delivered pressure to a maximum of 490 kPa (70 psi). Provide the Engineer with a detailed description of the proposed system for review well in advance of the date of proposed use. Disinfect all tanks and equipment to be used to conform to the latest revision of AWWA C652 Disinfection of Water Storage Facilities and do not deploy the equipment until bacterial samples taken from it have been tested at the Provincial Water Laboratory and declared satisfactory.
 - 1.6.6 Use of any hydrant or standpipe to directly fill containers which contain chemicals or to which chemicals have previously been added is strictly prohibited. An exemption may be granted to this if the fill arrangement is approved by the Cross Connection Control Program Coordinator, City of Regina.

2.0 PRODUCTS

- Use only those products in the approved products list, Product ID:
 - WP – 01: Fitting: Aluminum or Stainless Steel

2.1 Piping

- 2.1.1 Pipe conforming to the latest revision of CSA B137.1, rated for 1100 kPa (160psi) at 20 °C, and certified for potable water service under NSF/ANSI 61.

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- 2.2 Fittings
- 2.2.1 PVC, hose shank insert ends, approved for potable water service and having a working pressure rating of at least 690 kPa (100psi). Join to pipe using stainless steel band clamps or other method approved by the Engineer.
- 2.2.2 Aluminum or 316 stainless steel body, hose shank end, over-centre, twin lever insert type with a working pressure rating of at least 690 kPa (100 psi). Join to pipe using stainless steel band clamps or other method approved by the Engineer.
- 2.3 Portable Tanks
- 2.3.1 Portable tanks employed for the purpose of storing potable water must be constructed of materials suitable for direct contact with potable water and in accordance with AWWA D100 Welded Steel Tanks for Water Storage. Tanks to be used must not have previously been used to transport petroleum, chemical or waste products of any description. All coatings in contact with potable water must be certified to ANSI/NSF 61.

3.0 EXECUTION

- 3.1 Notification of Customers
- 3.1.1 Hand deliver written notification to all customers that will be affected by interruption of service a minimum of seven (7) days prior to the date of interruption
- 3.1.2 Include the following information in the written notice:
- .1 Start date and time and anticipated duration of the interruption to service
 - .2 Instructions to close the isolation valve at the water meter and standard water service schematic.
 - .3 Names and phone numbers of Contractor and City of Regina project contacts.
- 3.1.3 In the event that seven days advance notice is not possible due to a short interruption developing into a longer one or where conditions dictate prompt action, attempt to provide all customers with a minimum of one hour's advance notice before discontinuing service. In these cases, provide verbal notice to each customer.
- 3.2 Disinfection and Disposal
- 3.2.1 Prior to connection to temporary connection points ensure that all temporary main and branch piping is disinfected with a minimum 1% chlorine solution held in contact in the pipe for at least 15 minutes and then flushed with City water for a minimum of 15 minutes.
- 3.2.2 Immerse service connection fittings in minimum 1% chlorine solution for a minimum of 15 minutes before installing in temporary service piping.

- 3.2.3 Disinfect potable tanks in accordance with AWWA C652, Method 1 using liquid chlorine. For portable tanks, fill the tank with potable water while adding sufficient chlorine chemical to obtain a minimum 10 mg/l concentration in the full tank at the end of a 24 hour period.
- 3.2.4 Dispose of high strength chlorine solution in a manner that will not pose a threat to health or damage public or private property and in accordance with applicable regulations.
- 3.3 Placement and Operation of Temporary Water Service
 - 3.3.1 Place supply lines parallel to each side of the street and as close as possible to the premises being serviced
 - 3.3.2 When a street must be crossed with temporary water supply piping either core under pavement and lay pipe in the cored hole or lay pipe on the surface of the pavement. Pipe installed on the road surface is to be protected from vehicular and pedestrian traffic with suitable ramps and provided with suitable traffic warning acceptable to the Engineer. Cuts in pavement may be made only with permission of the Engineer.
 - 3.3.3 Only City of Regina personnel may operate a hydrant. Provide additional manual shutoff valves as may be required to control or isolate any temporary supply system.
 - 3.3.4 Arrange for bacteriological sampling and testing by the City of Regina prior to placing temporary water supply into service.