



DEPARTMENT OF NATIONAL DEFENCE

SPECIFICATION

FOR

STANDING OFFER

WATERMAIN AND SEWER REPAIRS

AT

CANADIAN FORCES BASE SHILO

SHILO, MANITOBA

Design Officer

SO 72

2015-04-09

A-NMS00000++

National Defence	List of Contents	Section	00000
Spec No. 72		Page	1
CFB Shilo			2015-04-09

<u>Section Title</u>	<u>Pages</u>
<u>Division 01 - General Requirements</u>	
01001 GENERAL INSTRUCTIONS	10
<u>Division 02 - Sitework</u>	
02511 Watermain and Sewer Repairs	5

Annex 'A' Building Service Record form

1 DESCRIPTION OF
ACTIVITY

- .1 Activity under this Standing Offer covers the furnishing of all labour, materials, equipment and supervision required to excavate, repair and backfill sewer and water lines and provide other excavating and backfilling services as requested at the Brandon Armouries and at Canadian Forces Base Shilo, Manitoba on an as and when required basis.
- .2 Activity included by this Standing Offer, but not necessarily restricted to the following, includes:
 - .1 Preliminary survey for all buried utilities and their subsequent protection during activity.
 - .2 Co-ordination and supervision of all activity related to excavation.
 - .3 Notification of building occupants affected by activity.
 - .4 Notification of Military Police and Base Fire Chief in the event of road closures or activity on services related to their jurisdictions.
 - .5 Installation of protective fencing and/or barricades where required.
 - .6 Emergency service with response time of four (4) hours.
 - .7 Repair of sewer and water lines including excavation and backfilling operations.
 - .8 Termination of sewer and water lines, for abandoned buildings back to main lines.
 - .9 Restoration of site to a safe and useable condition as directed by Project Authority which may include:
 - .1 Asphalt and concrete roads, concrete curbs, sidewalks and adjacent grassed areas.
 - .10 Provision of as built drawings detailing activity performed.

2 CODES AND
REFERENCES

- .1 Perform activity in accordance with National Building Code of Canada 2005, National Plumbing Code of Canada 1995, Environment Canada, Canadian General Standards Board (CGSB), American Society for Testing and Materials (ASTM) and any other code of provincial or local application. In any case of conflict or discrepancy, the more stringent requirements will apply.

3 DEFINITIONS

- .1 Engineer:
- .1 Reference to the Project Authority will be construed as that person responsible for overlooking the contract's inspection and progress.
- .2 This person will be designated at the time of standing offer award or pre-startup meeting prior to activity commencing.

4 SHILO'S
"ENVIRONMENTAL"
POLICY

- .1 In accordance with Canadian Forces Base Shilo's "Environmental" policy, the Offeror will propose "environmentally safe" products for those materials listed. The Offeror will submit product data and WHMIS for all "environmentally safe" products as requested by Engineer.

5 ACTIVITY SCHEDULE

- .1 Project Authority will provide activity schedule through to Contract completion date.
- .2 Interim reviews of activity progress based on activity schedule will be conducted as decided by Project Authority and schedule updated by Offeror in conjunction with and to approval of Project Authority.

6 OFFEROR'S
USE OF SITE

- .1 Use of site will be as directed by the Project Authority .

7 SETTING OUT
OR ACTIVITY

- .1 Assume full responsibility for and execute complete layout of activity to locations, lines and elevations as required.

8 CUTTING AND
PATCHING

- .1 Cut and patch as required to make activity fit.
- .2 Make cuts with clean, true, smooth edges.
- .3 Where new activity connects with existing and where existing activity is altered, cut, patch and make good to match existing activity.
- .4 Obtain Project Authority's approval before cutting, boring or sleeving any load-bearing members.

9 EXISTING
SERVICES

- .1 Where activity involves breaking into or connecting to existing services, carry out activity at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .2 Before commencing activity, establish location and extend of service lines in area of activity and notify Project Authority of findings.
- .3 Submit schedule to and obtain approval from Project Authority for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .4 Where unknown services are encountered, immediately advise Project Authority and confirm findings in writing.

10 INTERFERENCE
AND SECURITY

- .1 Execute activity with least possible interference or disturbance to occupants, public and normal use of premises. Arrange with Project Authority to facilitate execution of activity.
- .2 Where security has been reduced, provide temporary means to maintain security.
- .3 Provide temporary dust screens, barriers, warning signs in locations as required to areas used by others and when requested by the Project Authority.

11 ASBESTOS
DISCOVERY

- .1 Demolition of asbestos can be hazardous to health. Should material resembling asbestos, stop activity and notify Project Authority immediately. Do not proceed until written instructions have been received from Engineer.

12 PROTECTION

- .1 Provide temporary barriers and warning signs in locations where activity is adjacent to area used by vehicle traffic and pedestrian.

13 ON SITE
SUPERVISION

- .1 The Offeror will provide, at the job site, a full-time, experienced supervisor capable of and having authority to speak on behalf on day-to-day matters.

14 REMOVAL OF
MATERIAL AND
EQUIPMENT

- .1 The Offeror will not remove any salvageable materials or hardware from the job site without written permission from the Project Authority.

15 COMMENCING
ACTIVITY

- .1 The Offeror will not commence activity without first obtaining the approval of the Project Authority.
- .2 The Offeror will be responsible for giving ample notification to the building occupant.
- .3 Movement around site and the immediate area of activity will be subject to restrictions as laid down by the location and as specified by the Project Authority.

16 INSPECTION

- .1 The Project Authority will be given ample notice and opportunity to inspect each completed phase of activity. Activity will not proceed until the proceeding phase has been approved.

17 SMOKING POLICY

- .1 There will be **NO SMOKING** within any Base Building or within the POL compound at any time.

18 HEATING AND
VENTILATION

- .1 Pay for costs of temporary heat and ventilation including costs of installation, fuel, operations, maintenance and removal of equipment. Use of direct-fired heaters discharging waste products into activity areas will not be permitted unless prior approval is given by Project Authority.
- .2 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress.
 - .2 Protect area against dampness and cold.
 - .3 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
 - .4 Provide adequate ventilation to meet health regulations for safe work environment.

- .3 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
 - .1 Conform with applicable codes and standards.
 - .2 Enforces safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.
- .4 Existing or new equipment and systems will not be used for temporary heating and ventilating.

19 SAFETY MEASURES

- .1 Conduct activity in accordance with construction safety measures of National Building Code 2010 Part 8, Manitoba Workplace Safety and Health (Construction Industry Safety MR 189/85), Workers Compensation Board and in any case of conflict or discrepancy, the more stringent requirement will apply.
- .2 Offeror is aware of, and accepts, the appropriate safety and health jurisdiction where activity is being performed. Offeror accepts the responsibility to comply with the specified provincial and federal guidelines and regulations to ensure all subcontractors do likewise.
- .3 Offeror is responsible for all subcontractors with respect to safety and health issues and will be deemed as "site coordinator" to facilitate employer/work coordination.
- .4 Offeror and subcontractors will submit proof of WCB coverage for all their personnel to Project Authority prior to commencing activity.
- .5 DND owned equipment, devices, tools, machinery and personal protective equipment (PPE) will not be used.

20 POWER AND
WATER SUPPLY

- .1 DND may provide, free of charge, temporary electric power and water for construction purposes if approved by the Project Authority.
- .2 Project Authority will determine delivery points and quantitative limits. Project Authority's written permission is required before an connection is made. Connect to existing power supply in accordance with Canadian Electrical Code.
- .3 Provide at no cost to DND, all equipment and temporary lines to bring these services to project site.
- .4 Supply of temporary services by DND is subject to DND requirements and may be discontinued by DND site representative at any time without notice, without acceptance of any liability for damage or delay caused by such withdrawal of temporary services.
- .5 Temporary electrical power may be available within the confines of Canadian Forces Housing Agency (CFHA) Residential Housing Units (RHU) in the residential areas of the Base. The Offeror must contact the CFHA Housing Manager at (204)765-3000 ext. 3054 for permission and approval prior to doing so.
- .7 If temporary power is not available within the RHU area of the Base, the Offeror will be required to provide own power at no cost to DND.

21 WHMIS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada, and, Health and Welfare Canada.

- .2 Deliver copies of WHMIS data sheets to Project Authority on delivery of materials.

22 FIRE SAFETY

- .1 Offeror to be aware of the location of nearest fire alarm box and telephone including the emergency phone number at all times.
- .2 Report immediately all fire incidents to the Base Firehall by activating nearest fire alarm box and calling 911 then immediately call the Project Authority.
- .3 When reporting a fire by telephone, give location of fire and name or number of building.
- .4 Fire protection and alarm systems will not be:
 - .1 obstructed;
 - .2 shut-off; and
 - .3 left inactive at the end of a day or shift without authorization by the Base Fire Chief.
- .5 Portable extinguishers will be installed and maintained for the duration of the activity being performed in conformance with Part 6 of the National Fire Code of Canada.
- .6 In addition to the requirements stated above, portable extinguishers will be provided adjacent to:
 - .1 cutting or welding operations;
 - .2 areas where combustibles are stored;
 - .3 any internal combustion engines;
 - .4 areas where flammable liquids or gases are stored or handled;
 - .5 temporary oil or gas fires equipment;
 - and
 - .6 bitumen heating equipment.
- .7 The minimum rating for extinguishers in Sentences (1) and (2) will be:
 - .1 2-A:10-BC on movable equipment,
 - .2 4-a:40-BC in all other locations.

- .8 Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by the Base Fire Chief.
- .10 Advise Base Fire Chief of any activity that would impede emergency Firehall responses around Base.
- .11 Obtain from Base Fire Chief a "Hot Work" permit for ALL activity involving welding, burning or the use of blow torches and salamanders.
- .12 Direct any questions or clarification on "Fire Safety" in addition to above requirements to the Base Fire Chief.
- .13 A fire watch, either 24 hour or periodic, may be required and will be at the discretion of the Base Fire Chief and in accordance with the National Fire Code.

23 SHOP DRAWINGS

- .1 Shop drawings: original or modified standard drawings are to be provided by Offeror to illustrate details of the activity including materials and how being assembled which are specific to the activity being performed.

24 PRODUCT DATA
AND SAMPLES

- .1 Product Data: manufacturer's catalogue sheets, brochures, literature, performance charts and diagrams used to illustrate standard manufactured products.

25 AS BUILT AND
RECORD DRAWINGS

- .1 Provide the Project Authority with one set of as-built record drawings clearly showing as the job progresses all changes and deviations from the original scope of activity OR changes made to original installation prior to commencing activity.

- .2 If no drawings were provided to the Offeror, marked up sketches will be acceptable to the Project Authority.
- .2 Show on the Contract Drawings so that on completion of the job, the exact "as-built" location will be recorded including offset distances from known or fixed points.
- .3 Deviations and changes will be marked with "red" ink.
- .4 Drawings and/or sketches are to be signed and dated by the Offeror stating Offeror's name and date as well as date activity completed.
- .5 Offeror will also complete a CFB Shilo "Building Service Record" form for activity completed. See Annex A.

26 ACCEPTABILITY
OF MATERIALS

- .1 The acceptance of materials will be determined by the Base's Project Authority.

27 CLEAN-UP

- .1 On completion of activity, the Offeror will remove all surplus materials, plant, tools, equipment and waste materials from site.

PART 1 - GENERAL1.1 References

- .1 All activity will be done to approval of the Project Authority and in accordance with procedures and methodology detailed in the City of Brandon "Standard Construction Specifications", 2003.
- .2 In addition, to prevent cross contamination, all activity associated with Base's water supply system including temporary water activity will be done to AWWA's "Canadian Cross Control Manual, 2011", AWWA's "Recommended Practice for Backflow Prevention and Cross Connection Control (M14), Third Edition" and CSA's B64.10-11/B64.10.1-11 "Selection and Installation of Backflow Preventers/Maintenance and Field Testing of Backflow Preventers".

1.2 Samples

- .1 Submit samples of new materials to be used when requested by Project Authority.

1.3 Material Certification

- .1 Submit manufacturer's test data and certification that materials meet requirements of this section prior to commencing activity. Include manufacturer's drawings, information and shop drawings where pertinent.

1.4 Shop Drawings

- .1 Submit shop drawings of all new materials used.

1.5 Record Drawings

- .1 Provide record or as built drawings marked in red ink for all new installation, repaired sections, changes to existing installations found or where existing installations differ from existing record/as built drawings while performing any activity.

- .2 Offeror will complete a CFB Shilo "Building Service Record" form (see Annex A) for all activity completed and handover to Project Authority upon completing activity and before final payment is authorized.

1.6 Scheduling of Activity

- .1 Schedule activity to minimize interruptions to existing services. Schedule to be approved by Project Authority prior to commencing activity.
- .2 Notify Project Authority minimum of 24hrs notice of any planned interruption in service.
- .3 Notify Base Fire Chief directly of any planned or emergency-related interruption of water service with an immediate notification to the Project Authority.

PART 2 - PRODUCTS

2.1 Materials

- .1 All materials including pipe, copper tubing, building connections, connection saddles, fittings, joint restraints, valves, valve boxes, curb stops, couplers, hydrants and related materials will be approved by Project Authority prior to installation and final placement.
- .2 All backfill material at pipe installation point including immediate levels of bedding material will be approved by Project Authority prior to installation and final placement.
- .3 All backfill materials up to finish grade including road base/subbase courses, asphalt (ie. depths, thicknesses, gradations and mix designs) or concrete is to be approved by Project Authority prior to installation and final placement.

- .4 All topsoil, seeding and sodding materials will be approved by Project Authority prior to installation and final placement.
- .5 All concrete related materials used in repair of sidewalks, curbs and gutters and associated repairs to grassed areas will be approved by Project Authority prior to installation and final placement.

PART 3 - EXECUTION3.1 Preparation

- .1 Clean pipes, fittings, valves, hydrants, and appurtenances of accumulated debris and water before installation. Carefully inspect materials for defects to approval of Project Authority. Remove defective materials from site as directed by Project Authority.

3.2 Connection Procedures

- .1 Offeror will excavate to existing mains and clean all new cut openings.
- .2 Bedding and backfilling procedures will be approved by Project Authority.
- .3 Grade and slope pipe to approval of Project Authority.
- .4 Cut and trim existing mains and install new pipe sections or fittings.
- .5 Interior of new pipe sections and existing main pipe will be disinfected with a solution containing 50 ppm of chlorine prior to joining sections.
- .6 New pipe sections, valves and fittings will be hydrostatically pressure tested in presence of Project Authority and in accordance to City of Brandon Standard Construction Specifications.

- .7 Where connections are made to existing watermains, the pressure used to test sections of new pipe which cannot be isolated from the existing mains will be determined by the Project Authority. This does not relieve the Offeror from obligation to repair leaks or defective material.
- .8 Disinfection of all new or repaired mains or building connections will be performed in accordance to methods described in the City of Brandon "Standard Construction Specifications" and provincial guidelines and regulations and in conjunction with cross connection prevention as stated in Para 1.1.2 above.
- .9 When piping and fittings have been pressure tested, disinfected and flushed to the Project Authority's approval, the Offeror (in the presence of the Project Authority) will turn the section of distribution back into service.

3.3 Surface Restoration

- .1 Offeror will restore site to original condition prior to commencing activity and be approved by Project Authority.
- .2 Restoration includes all required thicknesses and compaction of backfilled materials; placement and compaction of asphalt repairs; and final site grading restoration which will include topsoiling, seeding/sodding in addition to restoration of concrete walks, curbs and gutters.
- .3 Restoration activity that is season dependant will be required to be completed the following spring with the Offeror making arrangements with the Project Authority to coordinate dates and finalizing the repair for turnover back to DND.

- .4 Interim repairs completed in the winter will be the responsibility of the Offeror to ensure proper backfilling and compaction procedures are taken to ensure no settlement takes place through the remaining winter months. It will be the Offeror's responsibility to return to the site to correct any settlement that has taken place upon the Project Authority's direction.

3.4 As-Builts

- .1 Offeror will provide as builts and "Building Service Record" (BSR) forms to Project Authority upon completion of activity.
- .2 Final payment will not be made until as builts and BSR forms are received by the Project Authority.

CFB Shilo
Building Service Record

Drawing No.	Area:
Service Location	Service Type
Street:	Service Street:
Construction Record:	Service Nature:
	Building Nature:
Water Service	Materials
Position of SC:	Size (mm):
Position of CC:	Corp:
Distance SC to Street Line:	Curb Stop:
Depth of Service @ Main:	Pipe Material:
Length of Service:	Cathodic Protection:
Connected To:	
Distance from Main to SC:	Standard Water Comments:
Depth of Service at SC:	
Depth of Main:	
Wastewater Service	
Riser:	Junction Location @ Main:
Length:	
Service Inv. @ Property Line:	Location @ House
Standard Sewer Comments:	Materials:
	Size:
	Pipe:
Install Date (mm/dd/yyyy):	Inspectors Name: