

**DISTRICT OF LILLOOET
REQUEST FOR PROPOSALS**

**Universal Water Metering Program
Meter Supply and Installation**



534-281
July 2011

PLANHOLDER REGISTRATION FORM

Request for Proposal No. 534-281

DISTRICT OF LILLOOET UNIVERSAL WATER METERING PROGRAM METER SUPPLY AND INSTALLATION

CLOSING DATE AND TIME: 4:00 PM, Wednesday, August 24, 2011

For any further distributed information about this Request for Proposal please complete this form and e-mail, fax or hand deliver to:

TRUE CONSULTING
201-2079 FALCON ROAD
KAMLOOPS, BC V2C 4J2
Attention: **T.R. Underwood, P. Eng.**
Fax: 250-828-0717
Email: info@true.bc.ca

Company Name:			
Address:			
Contact Person:			
Contact Telephone:		Contact Fax:	
Contact Email:			

Only Proponents completing this form will be issued any addendums and/or any additional information regarding this proposal. It is the sole responsibility to the Proponent to ensure that the receipt confirmation form has been received by TRUE Consulting.

Signature

Date

DISTRICT OF LILLOOET

**Universal Water Metering Program
Meter Supply and Installation**

REQUEST FOR PROPOSALS

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REQUEST FOR PROPOSALS
DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM

The District of Lillooet is inviting proposals for the supply and installation of approximately 750 water meters with radio read capability. The project also includes the proponent providing technical assistance for data management and billing systems to the District.

Proposals must be submitted to the District of Lillooet, 615 Main Street, PO Box 615, Lillooet, B.C. up to 4:00 p.m. local time on Wednesday, August 24, 2011.

Consultant
TRUE Consulting
Ste. 201 – 2079 Falcon Road
Kamloops, BC V2C 4J2

Telephone: (250) 828-0881
Fax: (250) 828-0717

District of Lillooet
615 Main Street, PO Box 615
Lillooet, BC
V0K 1V0

Telephone: (250) 256-4289
Fax: (250) 256-4288

**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

INSTRUCTIONS TO PROPONENTS

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**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

INSTRUCTIONS TO PROPONENTS

IP-1 OBJECTIVE

- 1.1 The District of Lillooet is requesting proposals with radio read capability from qualified and experienced firms to supply and install approximately 750 water meters within the District. The universal water metering program is a component of a larger water supply upgrading program for which the District has obtained a gas tax grant which is administered by the Union of British Columbia Municipalities (UBCM).
- 1.2 The anticipated water conservation benefits that will result from the universal water metering program are important elements of the District's short and long term water supply plans.

IP-2 SUBMISSION REQUIREMENTS

- 2.1 Proposals shall be submitted in a sealed clearly marked envelope. A total of five printed and signed copies and one electronic copy shall be submitted. Proposals will be received by the District of Lillooet up to 4:00 PM, August 24, 2011.
- 2.2 Proposals shall be addressed and delivered to:

District of Lillooet
615 Main Street, PO Box 610
Lillooet, B.C. V0K 1V0
Attention: Mr. Grant Loyer, Chief Administrative Officer

IP-3 GENERAL REQUIREMENTS

- 3.1 All costs associated with preparing a proposal to respond to this proposal request are to be borne by the proponent. It is expressly understood by proponents that no claims for reimbursement of proposal preparation costs may be made against the District of Lillooet. Additionally, the District will not be responsible for any of the proponent's costs for meeting attendance, discussions and/or post submission negotiations that could result in proposal acceptance and contract award.
- 3.2 Proponents shall carefully examine the Proposal Documents and shall fully inform themselves as to the intent, existing conditions and limitations that may affect their proposal submission. No consideration will be given after submission of a Proposal to any claim that there was any misunderstanding with respect to the conditions imposed.

IP-3 GENERAL REQUIREMENTS (continued)

- 3.3 Proponents may withdraw or amend a proposal by submission of a notice to the District on or before the specified submission date and time. After the closing time, all proposals become irrevocable.
- 3.4 Proposals that may be delivered to the District of Lillooet after the specified closing date and time will not be accepted and will be returned to the proponent unopened.
- 3.5 All submitted proposals shall become the property of the District of Lillooet and will not be returned.

IP-4 PROPOSAL CONTENTS

- 4.1 Proponents, at a minimum shall submit all basic information requirements as described herein and the pricing schedule. Failure to respond to any of the information requirements or to fully complete the pricing schedule may result in the proposal being considered incomplete and not given any consideration in the assessment process.

IP-5 ADDENDA

- 5.1 If there are any changes, additions, or deletions to the Proposal scope, conditions or closing date, Proponents will be advised by means of an Addendum issued by the District. All Addenda shall become part of the Proposal Documents and receipt of Addenda shall be acknowledged by the Proponent in their submission.
- 5.2 Verbal discussion, instructions or explanations between the District's agents, employees, or representatives and a Proponent shall not become a part of the Proposal Document or modify the Proposal Document unless confirmed by written Addendum.
- 5.3 If a Proponent finds discrepancies in or omissions from the Proposal Documents or has any question or doubt as to the meaning or intent of any part thereof, he shall at once inform the District, preferably in writing. Any necessary changes, additions or further explanations will be made by the issuance of an Addendum.
- 5.4 To ensure that respondents to this proposal request receive any addenda, a Proposal Document holder registration form must be completed and emailed to TRUE Consulting.

IP-6 PROPOSAL TIMELINE

6.1 The timelines on a milestone basis for the assessment and acceptance of proposal to undertake the universal metering program is summarized as follows.

<i>Milestone</i>	<i>Date</i>
Request for Proposal Documents	July 28, 2011
Proposal Closing	August 24, 2011
Proposal Assessments, Proponent Interviews (if required) and Contract Negotiations (if required)	August 29 to Sept. 8, 2011
Contract Award and Notice to Proceed	September 15, 2011
Project Completion	May 31, 2012

6.2 The dates presented herein are subject to change at the sole discretion of the District.

IP-7 WORKSAFE BC

7.1 For all work associated with the Universal Water Metering Program, the successful proponent for the purposes of application of WorkSafe BC regulations shall be considered as the “Prime Contractor”. As prime contractor, the successful proponent will be responsible for all safety and other WorkSafe BC related requirements for all subtrades and subcontractors

IP-8 REVIEW OF PROPOSALS

8.1 Proposals will be reviewed considering project team, experience, material specifications, references and price to thereby identify the proposal representing best value to the District. The lowest price or any proposal may not necessarily be accepted.

8.2 Proposals will be reviewed by an Evaluation Committee. The evaluation process will involve the assignment by each member of the committee, of points for each key evaluation criteria. Points will be assigned as follows.

- | | |
|---|------------------|
| • Quality of Submission | 5 points |
| • Project Management, Experience and References | 20 points |
| • Project Methodology, Procedures and Schedule | 20 points |
| • Public Information and Customer Consultation | 10 points |
| • Materials and Operating Criteria | 10 points |
| • Billing System, including Integration into District Accounting System, Support Services and Warranty | 10 points |
| • Pricing Schedule (calculated as lowest cost proposal divided by proposal being evaluated x 25 points) | <u>25 points</u> |
| Total | 100 points |

IP-8 REVIEW OF PROPOSALS (continued)

- 8.3 At the sole discretion of the District, any number of proponents may be invited to make a presentation to the Evaluation Committee. Invited proponents will be allotted a two hour interview period of which the first 45 minutes will be allocated for proponents to present their proposal and the remaining 1 hour and 15 minutes, a time period for committee members to ask questions.
- 8.4 The proposal evaluation process will conclude with the identification of a preferred proponent as determined by the proponent having the highest number of points as scored by a majority of evaluation committee members.

IP-9 PROPOSAL ACCEPTANCE AND CONTRACT AWARD

- 9.1 In the course of or at the conclusion of the proposal evaluation, the District reserves the right to:
- not accept the lowest priced or any proposal.
 - negotiate with any of the proponents with the objective of finalized acceptable terms and conditions for contract award.
 - request clarifications to assist in the evaluation of proposals.
 - retain independent persons for assistance in evaluating proposals.
- 9.2 Following acceptance of a proposal by the District, the successful proponent is expected to enter into a contract with the District to undertake the Universal Water Metering Program. The contract shall include the entire Request for Proposal, the Proponent's total submission together with any written, mutually agreed upon modifications, changes or negotiated adjustments.
- 9.3 The General Conditions that will form part of the contract are appended herewith. Where there is a conflict between the General Conditions and the "Instruction to Proponents", "Proposal Requirements" or "Contract Conditions and Requirements", these sections shall take precedence over the General Conditions.

**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

INFORMATION REQUIREMENTS

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**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

INFORMATION REQUIREMENTS

PR-1 GENERAL REQUIREMENTS

1.1 The successful proponent will be required to provide the following within 7 days of receipt of “Notice of Acceptance” issued by the District of Lillooet.

- District of Lillooet Business Licence
- WorkSafe BC Clearance Letter
- Commercial General Liability Insurance in an amount of not less than \$5 Million with the District of Lillooet as a named insured.

PR-2 SUBMISSION CONTENT

2.1 Proponents are encouraged to provide information demonstrating an understanding of the District of Lillooet’s goals and objectives and describing an appropriate work plan. The District is open to consider any innovative or alternate approaches as may be presented by proponents. All submissions shall include:

- description of the proponent’s understanding of the work.
- a detailed work program including local arrangements for staff, equipment and materials.
- a project schedule identifying key milestones and what components of the project could be undertaken without being adversely impacted by winter weather conditions.
- proposed meeting schedule with District staff and typical issues that will represent agenda items at these meetings.
- detailed description of Public Information/Education Plan and Customer (Water Account) Communications Plan.
- methodology to merge completed meter installations with the District’s account list and opportunities for the District to undertake meter reads as the project proceeds. Capabilities of the system to identify unusual events, i.e. leaks, backflow, etc. should be described.
- software and related training to assist the District in generating “dummy” invoices having the objective of informing individual water accounts of their actual water use.
- description of the project team with résumés provided for each project team member. Local subtrades that are proposed to be involved in the project should be identified with a description of proposed role.

PR-2 SUBMISSION CONTENT (continued)

- recent, relevant and comparable project experience. Ideally the experience will focus on municipalities of a comparable size to Lillooet. Year of construction, size of project, and reference with phone number should be provided.

PR-3 PRICING SCHEDULE

- 3.1 The pricing schedule must be completed and submitted as a component of the response document.
- 3.2 Proposals and the pricing schedule shall remain open for acceptance by the District for a period of four months after the closing date.
- 3.3 All prices in the pricing schedule shall remain firm for the period of the contract.

PR-4 EXECUTION

- 4.1 The proposal shall be signed by a member of the Proponent's staff who is authorized to sign on behalf of the proponent and who is in a position to commit the proponent to submitted work program and pricing schedule.
- 4.2 The pricing schedule shall be separately executed on the spaces provided by authorized staff of the proponent.

PR-5 MATERIAL SPECIFICATIONS AND DESCRIPTIVE MATERIAL

- 5.1 Proponents may include in their proposals technical or additional information pertaining to any aspect of the project. Proponents are however encouraged to use judgement and minimize the amount of supplemental information submitted with the proposal.

**DISTRICT OF LILLOOET
REQUEST FOR PROPOSAL
UNIVERSAL WATER METERING PROGRAM
SUPPLY AND INSTALLATION
PRICING SCHEDULE**

Supply and install the following works in accordance with these Contract Documents and Specifications complete with labour, equipment, materials, permits, and incidentals.

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
1.0	Inside Cut Ins Supply and installation of water meter complete with digital encoder, radio transmitter, appurtenant wiring, plumbing, etc.				
1.1	19 x 19mm meter.	ea.	225	_____	_____
1.2	25 x 25mm meter.	ea.	16	_____	_____
1.3	38 x 38mm meter.	ea.	10	_____	_____
1.4	50 x 50mm meter.	ea.	10	_____	_____
2.0	Inside Change Outs of Existing Meters Supply and installation of water meter complete with digital encoder, radio transmitter, appurtenant wiring, removal of the existing meter, plumbing, etc. on services where there is an existing water meter.				
2.1	19 x 19mm meter.	ea.	58	_____	_____
2.2	25 x 25mm meter.	ea.	8	_____	_____
2.3	38 x 38mm meter.	ea.	4	_____	_____
3.0	Outside Cut Ins Supply and installation of water meter complete with digital encoder and wireless transmitter, meter pit, antenna and appurtenant cable, excavation, backfill, boulevard surface restoration and incidentals.				
3.1	19 x 19mm meter.	ea.	380	_____	_____
3.2	25 x 25mm meter.	ea.	5	_____	_____
3.3	38 x 38mm meter.	ea.	4	_____	_____
3.4	50 x 50mm meter.	ea.	4	_____	_____
3.5	50mm irrigation meter.	ea.	2	_____	_____
3.6	75mm irrigation meter.	ea.	2	_____	_____

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE	
4.0	Water Meter Reading Equipment and Modifications to Existing Sensus Meters					
4.1	Supply meter reading equipment supplemental and additional to the District's current Sensus VXU meter reader. If no additional meter reading equipment is required, enter "0".	L.S.			_____	
4.2	Modify the existing 250 Sensus water meters in North Lillooet to be compatible with the replacement meter reading equipment in 4.1. If no modifications are required, enter "0".	L.S.			_____	
5.0	Public Education and Customer Communication Organize and host public information meeting, and prepare and distribute informational booklet.					
		L.S.			_____	
6.0	Data Management and Billing Systems and Software					
6.1	On completion of 20% of the meter installation, merge meter data with District's current software, supply and install alternative software if required, provide meter reading and invoicing training to District staff, compile meter reads for two consecutive days and generate "mock" billings for not less than 95% of the installed meter accounts.	L.S.			_____	
6.2	On project completion, provide verification that 100% of installed water meters and retrofitted radio transmitters are capable of reading. Following verification of read status, provide all meter data to the District in spreadsheet format, merge with data provided under 6.1, compile meter readings for two consecutive days and generate "mock" billings for not less than 98% of the installed meter accounts.	L.S.			_____	
7.0	Water Meter Installation Appurtenant Items					
7.1	Plumbing modifications.					
7.1.1	Minor plumbing modifications comprising up to 2 additional fittings or relocation of an existing valve.	ea.	70		_____	

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
7.0	Water Meter Installation Appurtenant Items (continued)				
7.1.2	Moderate plumbing modification comprising between 3 and 6 additional fittings and/or piping to accommodate valves.	ea.	70		
7.2	Plumbing Appurtenances Supply and install the following plumbing system appurtenances.				
7.2.1	19mm meter horn	ea.	150		
7.2.2	25mm meter horn.	ea.	15		
7.2.3	38mm meter resetter without bypass.	ea.	8		
7.2.4	50mm meter resetter without bypass.	ea.	8		
7.2.5	19mm ball valve.	ea.	40		
7.2.6	25mm ball valve.	ea.	10		
7.2.7	38mm ball valve.	ea.	5		
7.2.8	50mm ball valve.	ea.	5		
7.3	Curb Stop Assembly Concurrent with the installation of a pit meter assembly, supply and install 19mm dia. Curb stop assembly complete with service box, and connection to existing service pipe.				
		ea.	10		
7.4	Carpentry Undertake the following described carpentry necessary for an inside meter installation.				
7.4.1	Minor carpentry - work necessary to accommodate the water meter in an open wall.	ea.	70		
7.4.2	Major carpentry - work necessary to accommodate the water meter in a finished wall comprising wallboard cutting and removal and the supply and installation of a finishing cabinet with framing.	ea.	20		
7.5	Crawl Space Additional cost to unit prices in Item 1.0 to install water meter in crawl space.				
		ea.	30		
7.6	Galvanized Iron Servicing Piping Additional cost to unit price in Item 1.0 to install water meter in galvanized iron service piping.				
		ea.	20		

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
8.0	Supply only the meters listed following complete with radio transmitter.				
8.1	50mm compound meter	ea.	4	<hr/>	<hr/>
8.2	75mm compound meter	ea.	4	<hr/>	<hr/>
8.3	100mm compound meter	ea.	2	<hr/>	<hr/>
9.0	Plumbing All inclusive hourly rate for plumbing/installer services to be applicable to the installation 50mm and larger component meters or other installations not specifically referenced in the Pricing Schedule.				
		hr.	100	<hr/>	<hr/>
					<hr/>
					<u>\$80,000.00</u>
					<hr/>
					<hr/> <hr/>

Name of Corporation, Partnership or Organization

Correct Mailing Address

Phone

Fax

HST Registration No.

Names and Addresses of Corporation Officers or Members of Organization

Position

Name

Address

Position

Name

Address

Signature of Witness

SIGNED BY

POSITION

DATE

Address of Witness

**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

CONTRACT CONDITIONS AND REQUIREMENTS

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**DISTRICT OF LILLOOET
UNIVERSAL WATER METERING PROGRAM
METER SUPPLY AND INSTALLATION**

CONTRACT CONDITIONS AND REQUIREMENTS

CCR-1 GENERAL

- 1.1 The conditions, terms and requirements presented in this section represent the requirements that will form the basis of a contract resulting from the acceptance of a preferred proposal.

CCR-2 WATER METERS

- 2.1 Water meters shall comply with AWWA Standard C700-09 and NSF Standard No. 61.
- 2.2 Water meters shall be manufactured from no lead brass.
- 2.3 The water meter main case markings shall include meter serial number, model number, meter size, date of manufacture and direction of flow.

CCR-3 ENCODER REGISTERS

- 3.1 Encode registers shall comply with all applicable requirements of AWWA C707-05.
- 3.2 Measurements shall be shown and stored in cubic meters and the flow reading on the register shall have a minimum of 3 decimal places.
- 3.3 Encoder registers shall be capable of being removed and replaced without removal of the meter.
- 3.4 Encoder registers in meter pits shall be specifically rated for installation in pits and shall be capable of operation when fully submerged.

CCR-4 RADIO TRANSMITTERS

- 4.1 Radio transmitters may be integral with the meter encoder or separately mounted.
- 4.2 Radio transmitters shall be labelled with an ID number and state approval of senior government agencies having jurisdiction.
- 4.3 The radio transmitter will provide a non reading on tamper.

CCR-4 RADIO TRANSMITTERS (continued)

4.4 Each radio transmitter will transmit a unique ID number.

CCR-5 METER READING EQUIPMENT

5.1 The District of Lillooet currently reads approximately 250 Sensus SR.EBII water meters equipped with radio transmitters with a Sensus VXU vehicle mounted data collector. All meters to be supplied and under this contract must be compatible (readable) by the District's current meter reading equipment or new (alternative) metering equipment comparable in capacity and capability to the District's reading equipment shall be provided to the District. Modifications may be necessary to the District's 250 Sensus meters for reading with alternative meter reading equipment.

5.2 The Pricing Schedule includes provisions for the supply of alternative vehicle mountable radio reading equipment and modifications, if necessary, to the District's existing 250 Sensus meters for compatibility with the alternative reading equipment.

CCR-6 SOFTWARE FOR METER READ DOWNLOADS AND BILLING

6.1 The District of Lillooet currently has a water meter reading route comprising of about 250 residential meters in North Lillooet; necessary software, as provided by Sensus to download meter readings into the District's accounting/data management MAIS system; and necessary software, to generate initially "mock" water billings and in the future meter based water billings.

6.2 The objective is that the contractor will supply and install water meters throughout the District, record specified information for each installed meter, and provide data for each installed meter to the District in spreadsheet format such that all installation data can be, without any manipulation or revisions by District staff, merged with the District's current meter database. If the contractor's meter and account data is inconsistent with the District's existing systems, the contractor shall:

- supply, install and make fully operational alternative software systems to suit the proposed meters and radio read equipment.
- provide training to District staff on the overall function of the software including data entry for new meter installations, meter reads input and water billings.
- convert the District's present meter data and meter reading route for North Lillooet to be compatible with proposed software.

CCR-6 SOFTWARE FOR METER READ DOWNLOADS AND BILLING (continued)

- 6.3 If the successful proponent offers meter download and billing software different from the District's current data management and billing software, necessary software shall be fully described to the District. At a point in time that not more than 20% of the meters have been installed, the successful proponent shall:
- supply and install on the District computer network, all necessary download and billing software.
 - download to the software system, all necessary data for the first 20% of meters.
 - provide training to District staff on data download, meter data input and billings.
 - create meter reading route for the first 20% of installed meters.
 - train District staff in meter reading, and take meter readings on two consecutive days for the first 20% of installed meters.
 - download meter reading data for the two consecutive days and provide necessary training and instruction to District staff to generate "mock" billings for not less than 95% of the installed meters.
- 6.4 The objective is that download software, training and invoice generation will be undertaken at a point in time that no more than 20% of the meters are installed to:
- ensure that District staff are familiar with the reading and invoice systems at an early stage of the project.
 - ensure that software/reading system software related problems are identified at an early stage and can thereby be immediately resolved.
 - minimize the time period between meter installation completion, data compilation and input and billing generation.
- 6.5 Once the meter installation phase of the work of the contract is complete, the contractor shall:
- using meter reading equipment comparable to the District's equipment, conduct a system wide integrity check and confirm that 100% of the installed water meters and replacement radio transmitters (if required) are readable.
 - download to the District's meter data and billing software, data for all installed meters and replacement radio transmitters (if required).
 - undertake meter reading to confirm 100% read success. Meter readings shall be undertaken on consecutive days or a frequency acceptable to the District.
 - in consultation with District, generate "mock" billings for not less than 98% of meter accounts based on two meter readings as described herein.

CCR-7 PROJECT STAFF

- 7.1 The successful proponent shall identify a project manager for the project that:
- is available to the project as his first priority. The project manager shall have extensive experience on projects of a similar size.
 - has the authority to represent the successful proponent to the public and the District on all aspects of the contract including monetary items.
 - assumes 100% responsibility for the training and activities of installation subcontractors; public contact and installation scheduling; and data management and related billing systems.
 - prepares progress reports, summarizes issues, requires input and comment from the District and attends project status review meetings in Lillooet at a frequency not less than every two weeks and not more than once a week.
- 7.2 Upon acceptance of the nominated project manager by the District, the project manager cannot be changed without the approval of the District.

CCR-8 PUBLIC INFORMATION

- 8.1 The successful proponent is expected to fully describe the proposed public information program. Public consultation is essential for general support of the universal metering program as it addresses issues, to the greatest extent reasonable and practical, raised by groups within the District having concerns with the metering program.
- 8.2 At a minimum, the successful proponent's public information and consultation program shall include:
- a public information meeting describing the metering program, metering materials including radio transmitters, meter installation scheduling appointments, and contacts for additional information.
 - an informational brochure to be distributed to all property owners. The informational brochure shall include:
 - o description of overall water supply related upgrading program of which the universal metering program is one component. This information will be provided by the District.
 - o introduction to the Contractor.
 - o detailed description of how the work will be undertaken including property owner contacts, meter installation scheduling, meter location criteria, what the meter installation comprises, restoration, etc.
 - o how the meter can be read and information that the meter can provide to assist property owners with water conservation.

CCR-8 PUBLIC INFORMATION (continued)

- how the radio transmitter for the meter functions with information from third parties having the objective of responding to public concerns related to the potential adverse health impacts of the radio transmitters.
- frequently asked questions.
- information for contacts for additional information on all aspects of the project including materials scheduling, complaints, etc.

8.3 A required component of the contractor's public information program will include phone numbers that the public can contact on a 24 hours per day basis. At project review meetings, the contractor shall provide a summary of "call centre" type contacts by the public and a description of the issues of public concerns.

CCR-9 TYPICAL METER INSTALLATIONS

9.1 The work of the contract will comprise both inside building and pit enclosed water meters. Generally, the decision between pit enclosed and inside building meter installations will be as follows.

- to the greatest extent practical non single family residential water services including all commercial, industrial and institutional connections will be inside building installations. Where there are multiple buildings on a non single family residential property and where these buildings are not provided water service from a single inside building location, a pit enclosed meter shall be provided. Non-single family residential properties where pit enclosed meters are proposed shall be listed with supporting justification and presented at project meetings, by the contractor.
- for relatively new single family neighbourhoods where there is clearly one water service installed to a residential unit, with a curb stop at property line, an inside building meter installation will be required. Mapping included herewith illustrates that inside building meter installation will be provided in the following neighbourhoods.
 - Foster Drive and Summers Street Area
 - Columbia Street south of 7th Avenue including Eagleson Crescent.In these neighbourhoods where the residential lot being serviced is of a rural residential size or there are concerns related to adequate freezing related protection for the meter, a pit enclosed meter shall be provided.
- in older residential neighbourhoods, the age and condition of on property servicing piping and/or whether or not a building is serviced directly from the main are concerns. In these neighbourhoods, listed following, pit enclosed meters shall be installed.

CCR-9 TYPICAL METER INSTALLATIONS (continued)

- neighbourhood south of Mountainview Road 14th to 17th Avenues, Main Street, Garden Street and Pine Grove Street.
- neighbourhood comprising Victoria Street, Columbia Street, Panorama Terrace, Pine Street and Park Drive.
- neighbourhood comprising Phair and McEwen Road areas.

Through the course of the project, it is expected that both the contractor and District staff will review all connections in these three neighbourhoods and identify individual properties where an inside building meter location may be acceptable.

9.2 Inside water meter installations shall be in substantial conformance with the District's standard drawing. Inside water meters shall be installed horizontally unless the meter manufacturer specifically certifies that installation in a surficial plane will not in any way impact the long term satisfactory operation or accuracy of the meter. For inside installation, the meter register shall be orientated such that homeowners can conveniently read the meter.

9.3 Plumbing for Inside Meter Installations

It is anticipated that a majority of inside meter installations will require connections to copper piping. Where the service piping is copper, lead free solder shall be used for soldered joints. Where the existing service piping is galvanized iron pipe, appropriate adaptors shall be used to brass or copper tubing which then connects to the meter. As indicated in the pricing schedule, additional payment will be made for meter installations in galvanized iron service pipe.

Where the building electrical grounding system is connected to the plumbing system upstream of the meter or where the grounding location cannot be determined, a grounding wire complying with the electrical code shall be installed around the meter assembly.

9.4 Pit meter installations for 19mm and 25mm services shall be in conformance with the District standard drawing for a pit installation. Referring to the standard drawing for a pit installation:

- there is no requirement for a dual check valve assembly on the meter outlet.
- the meter chamber shall be the coiled pipe type. Additional acceptable manufacturers of coil type pit chambers are Ford and AY MacDonald.
- the pit meter chamber lid shall have a recessed area to accommodate the radio transmitter.

CCR-9 TYPICAL METER INSTALLATIONS (continued)

- 9.5 Pit installations for 38mm (1½") and 50mm (2 inch) shall be as described for the 19mm and 25mm pit mounted meters with the difference being that a coil type pit chamber is replaced with one containing rigid vertical inlet and outlet pipes. As shown on the District standard drawing for 38 and 50mm meters, the pit chamber shall be equivalent to Ford.
- 9.6 For pit meter installations, District staff will locate the curb stop. The pit shall be installed as close as practical to the curb stop on private property. Where locating the pit meter close to the curb stop is complicated by:
- being within a travelled surface.
 - requiring significant concrete or asphalt surface restoration.
 - other physical works such as walls, poles, other utilities, etc.

the pit location may be moved from the immediate area of the curb stop. Relocations to avoid some or all of the complicating factors described herein shall be made in consultation with District staff.

- 9.7 The contractor is responsible for existing utility locates as may be necessary prior to undertaking an excavation for a pit meter. To the greatest extent practical, excavated materials shall be used for backfill. The contractor shall dispose of excess material, sod, concrete, asphalt, etc. at an appropriate disposal site. If the disposal site is a location other than the landfill, the contractor shall provide a written statement from the property owner confirming approval to accept waste materials.
- 9.8 The price for a pit meter installation shall include backfill of the meter chamber, and surface restoration where the preconstruction surface was grass, gravel or unimproved. Grassed area restoration shall comprise topsoil, a minimum of 150mm in thickness and seeding. Where restoration of a pavement or concrete surface is required, restoration will be undertaken on an extra work basis in a manner mutually agreeable to both the District and the contractor.

CCR-10 METER INSTALLATION TESTING

- 10.1 The contractor will be responsible for turning on and turning off the water to each residence, business, etc. and ensuring that there are no leaks after installation of the water meter. Where the installation of the water meter results in draining of the property owner's service piping, the contractor shall carefully run water from inside the building service to remove air which may have entered the plumbing system. For pit meter installations, significant time running fixtures may be necessary to ensure that there is no air in the property owners plumbing system.

CCR-10 METER INSTALLATION TESTING (continued)

- 10.2 Any leaks that may become evident arising from the meter installation shall be immediately repaired. Water shall be run through the meter after installation to insure the direction of flow is correct, and the meter register is functioning properly.
- 10.3 Concurrent with checking of the water meter, the radio transmitter shall be activated and confirmed to be operational.

CCR-11 METER INSTALLATION DATA

- 11.1 For each water account where a meter is to be installed, the District will, in spreadsheet format, provide the following information:
- folio and account number
 - installation address
 - property owner(s)
 - property owner mailing address
 - service size, if information is available
- 11.2 Following the public information meeting as described in CCR-8.2, the District will, on their letterhead, send out an initial letter to all property owners on the meter installation list. This letter will describe the program, contact procedures and conclude indicating that a contractor's representative will be in contact with them to arrange an install appointment.
- 11.3 For each meter installed the contractor shall provide the following information.
- folio and account number
 - account name
 - installation address
 - meter number
 - meter location
 - register number
 - radio transmitter number
 - meter size
 - meter manufacturer
 - meter model
 - date of installation
 - longitude and latitude
 - initial meter reading
 - installer name

CCR-11 METER INSTALLATION DATA (continued)

The District will provide a spreadsheet for the required installation information. The contractor shall provide the information on the spreadsheet provided to thereby enable the District to merge the data file with its billing software.

- 11.4 A before and after photograph for each meter installation appropriately labelled by address and installation date shall be provided to the District on a compact disc.

CCR-12 INSTALLATION APPOINTMENT SCHEDULING

12.1 In addition to the introductory correspondence by the District and informational brochures that may be distributed by the contractor, the contractor will make a minimum of three attempts to contact property owners for the purpose of scheduling an installation appointment. Contact options that the contractor may utilize include neighbourhood canvassing, notice letter and phone contacts. A phone contact is not considered successful unless the contractor's staff actually speaks to the property owner. At least one contact attempt has to be made in the evening, before 8:00 PM, or on weekends.

12.2 The contractor will provide the District with a contacts report at each Project Progress meeting. The contacts report will identify all accounts that the contractor has, after three contact attempts, not been successful in setting up an installation appointment. For these difficult accounts, the District may at its sole discretion:

- utilize its own staff to set up an installation appointment. The contractor shall, for this purpose, identify time periods that the District staff can commit to on the contractor's behalf.
- direct the contractor to install a pit meter.

In order for the contact efforts by the District to be effective, the contractor shall advise the District of all difficult accounts within 14 days of the third contact attempt.

CCR-13 PROGRESS/PRODUCTION MEETINGS

13.1 Through the duration of the project, weekly or biweekly (every two weeks) progress/production meetings will be scheduled with the contractor's onsite project manager. It is anticipated that the meeting frequency will be once a week in the initial phases of the project and possibly reducing to once every two weeks in the later phases.

13.2 For each progress meeting the contractor shall:

- provide a production report including a tabulation of all installed meters since the previous meetings.

CCR-13 PROGRESS/PRODUCTION MEETINGS (continued)

- a list of accounts considered difficult because of inability to contact and schedule an installation appointment.
- a list of accounts considered non-standard for a technical reason. Examples include unsafe plumbing systems, water shutoff valves will not work, major carpentry requirements, etc.

All difficult accounts will be discussed and District staff to the greatest extent practical, will provide the contractor with instructions on all difficult and non-standard accounts. Instructions may include authorization of additional work as listed in the pricing schedule. Some difficult or unusual installations may require District staff to accompany the contractor's staff for an inspection.

- 13.3 The contractor's staff is responsible for preparing minutes for all progress meetings and distributing the minutes to all attendees.

CCR-14 NON-STANDARD WATER METER INSTALLATIONS

- 14.1 Section 7 of Pricing Schedule lists a number of "Meter Installation Appurtenant Items" that are included to address and appropriately compensate the contractor for additional work related to unusual conditions. The following items listed in Section 7.0 of the Pricing Schedule do not require specific authorization by the District.

- Item 7.1.1 – minor plumbing modifications
- 7.2.1 to 7.2.8 – Plumbing Appurtenances
- 7.4.1 – Minor Carpentry
- 7.5 – Crawl Space Installation
- 7.6 – Galvanized Service Piping

For additional work for these items, the contractor shall, on his monthly progress claim, list all accounts where additional work was done and list and total the applicable appurtenant items.

- 14.2 For all other items in Section 7 of the Pricing Schedule, specific authorization will be required from District staff. To the greatest extent possible this authorization will be provided in the course of discussion of accounts at the weekly progress meetings.
- 14.3 As a general guide, examples of non-standard water meter installations are listed following with a brief description of how the unusual conditions would normally be addressed.

CCR-14 NON-STANDARD WATER METER INSTALLATIONS (continued)

- Irrigation or other water branches located between curb stop and building where an inside meter installation would normally be located:
Resolution: Install pit meter.
- There is no shut off valve on the water service at the building entrance, the main shut off will not close or the shut off valve leaks even after packing is tightened.
Resolution: Locate curb stop, close and install new shut off valve. District staff may be contacted for assistance in locating the curb stop.
- Service line is inaccessible because of finished walls.
Resolution: With authorization of the District, this meter installation would involve major carpentry. The meter is to be installed in a prefabricated wood enclosure with a door. It is expected that the enclosure will be consistent with the existing wall and thereby enable the property owner to finish the cabinet similar to adjacent walls.
- Service piping within the building is non-standard and represents a concern in terms of ongoing satisfactory operation.
Resolution: Review options with District staff, i.e. revise to pit meter or undertake major plumbing. Major plumbing in this instance if deemed appropriate by District would be undertaken on an hourly basis.
- Service piping is vertical and modification for horizontal meter installation is not straightforward.
Resolution: Supply and install meter horn. Decision does not require prior approval of the District and meter horn will be compensated for in accordance with Pricing Schedule.
- Freezing related potential of water meter is identified by the installer.
Resolution: Meters are proposed to be located where service piping is exposed and readily accessible. Presumably, the freezing related risk of the meter in this case would be no greater than the service piping itself. Meter locations where there is an identified concern of freezing related problems should be identified and brought forward for review and comment with District staff at project review meetings. Resolution options may include relocation of meter to heated area or revision to a pit meter.

CCR-14 NON-STANDARD WATER METER INSTALLATIONS (continued)

- Radio transmitter signal cannot be read by vehicle mounted meter reader on the adjacent street.
Resolution: If the installed meter has an integral radio transmitter, the meter register would be changed to accommodate an exterior wall mounted Meter Interface Unit (MIU). If the installed meter has a wire connection to a wall mounted radio transmitter, the transmitter would be relocated to an exterior wall where there is less interference, i.e. physical works, between the transmitter and receiver.

- In the course of construction of a pit meter, the curb stop was determined to be either not operable or would not shut off.
Resolution: The curb stop would be replaced on authorization from the District. As expeditiously as possible the District would isolate the water mains, and distribute water service interruption notices to affected properties. The replacement water curb stop shall comply with the specifications on District of Lillooet meter standard drawings included herein.

CCR-15 REMOVED WATER METERS – INSIDE CUT INS

- 15.1 As referenced in the Pricing Schedule, the project will require the removal and replacement of about 70 existing in service Badger water meters. The removal and replacement of the Badger meters is based on information that the meters cannot be converted to be radio read capable by either Sensus or Neptune Meter readers.

- 15.2 If the existing Badger meters can in some manner be converted to be radio read compatible with the proponent's systems and equipment, the Badger meters in this case would be modified and remain in service. Part 2.0 of the Pricing Schedule in this case would be completed on the basis of meter medication instead of replacement. If Part 2.0 is being completed on the basis of modification, proponents should clearly describe this basis in their submission.

- 15.3 If the contractor proceeds with replacement of all Badger meters as described in Part 2.0 of the Pricing Schedule, all removed meters remain the property of the District and are required to be delivered to a receiving location, likely the public works yard, to be identified by the District.

CCR-16 WARRANTIES AND SYSTEM SUPPORT

16.1 Warranties related to the water meters and appurtenant equipment to be supplied and installed by the contractor shall comply with the following:

- | | |
|--|--|
| - meter, accuracy complying with applicable AWWA standards | 5 years or 3000m ³ |
| - encoder register | 10 years |
| - lithium batteries providing power to radio transmitters | 10 years from the date of installation without prorating and 20 years prorated |

16.2 On project completion, it is anticipated that the District will require ongoing support from the contractor related to all components of the system. The contractor for a period of twelve months from the date of project substantial completion shall provide technical support to the District on an ongoing basis, without cost to the District, comprising but not specifically limited to:

- meters and meter functions
- radio transmitters
- installation data, data merge with District's billing software, billing software and "mock" billings.

It is expected that the technical and general support will be completed as described by responding to the request for proposals.

16.3 Installation work by the contractor shall be warranted for a period of one year from the date of installation. The warranty shall apply only to work undertaken by the contractor. The installation warranty includes leaks from fittings installed by the contractor and "damage" caused by the contractor's negligence. If damage is attributed to the age and condition of the existing service piping or a latent defect in piping systems not in any way affected by the work of the contractor, the contractor will not be held responsible for presented damage claims.

CCR-17 CONTRACTOR'S INSTALLATION STAFF

17.1 The general expectation is that all of the contractor's installation staff will:

- be fully trained by the contractor on all aspects of meter installation.
- be fully trained in public relations, safety and WorkSafe BC requirements.
- present themselves to the public in a professional manner including a uniform, identification and appropriate vehicle identification.

CCR-17 CONTRACTOR'S INSTALLATION STAFF (continued)

17.2 As it relates to the contractor's staff and contact with the public related to meter installations, it is required that the contractor staff:

- always be courteous to the public even though the public may not be fully supportive of the District's metering program.
- not enter a residence or building without the permission of an adult, 19 years of age or older.
- not perform any work in the residence or other building other than what is necessary to complete the meter installation.

17.3 The contractor shall provide a list of all installers to be utilized for the work of the contract. The District reserves the right to undertake a criminal records check of all of the contractor's staff and "reject" any of the contractor's staff who do not successfully pass the criminal records check.

CCR-18 CONTINGENCY ALLOWANCE

18.1 The Pricing Schedule include a specified contingency allowance that must be included in the pricing of a response to this request for proposals.

18.2 The contingency allowance is intended to pay for unforeseen items that are not included in the Pricing Schedule. Authorized extra work, not covered by an item in the Pricing Schedule, will be paid for from the contingency allowance. If no extra work items in the course of the project construction are authorized by the District, the contingency allowance would remain as an unexpended item in the account of the District.

CCR-19 PROGRESS PAYMENTS

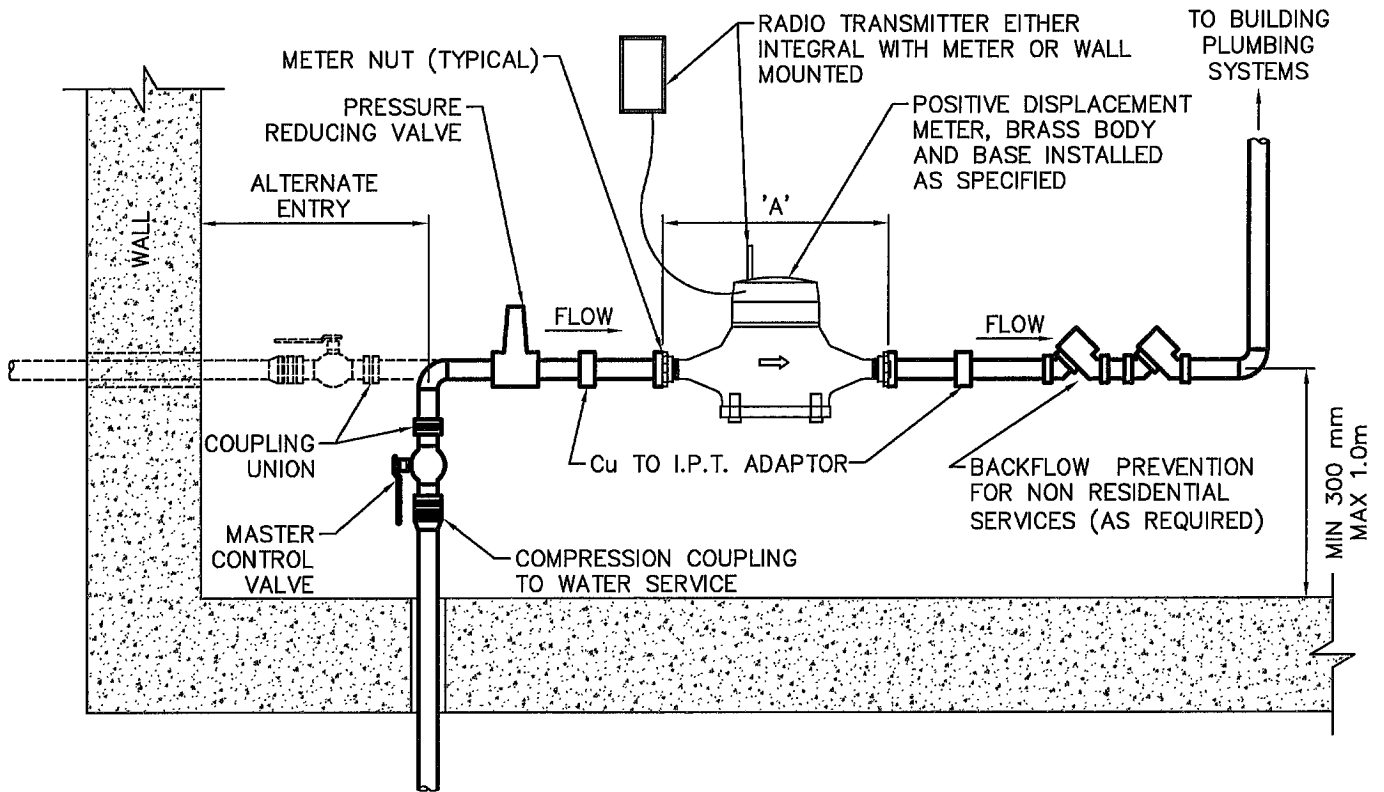
19.1 The contractor will be required to submit a progress payment claim on a monthly basis to the District. The progress payment claim shall list all items of the Pricing Schedule and the completed quantities (numbers) of each item in the progress estimate claim period. Claims for extra work items should be listed on an item by item basis with an associated claim amount.

19.2 The District will review and audit the contractor's progress claim. The District will inspect a number of the meter installations listed for the progress estimate claim period for the purpose of confirming the contractor's costs claims.

CCR-19 PROGRESS PAYMENTS (continued)

- 19.3 The contractor's progress claim shall be received on or before the 5th day of the month following the progress claim period. The District will review, audit and process payment of the contractor's progress claim on or before the last day of the month following the progress claim period.
- 19.4 The District will process payment for completed installations and appurtenant works only. No payment will be made to the contractor for materials on site.
- 19.5 All payments to the contractor will be subject to a 10% holdback in accordance with the Builders Lien Act.

STANDARD DRAWINGS



TYPICAL METER SETTING

METER SIZE	'A' MIN	METER	FLOW RANGE (USgpm)
19mm (3/4")	229 mm		0.75-30
25mm (1")	273 mm		1-50

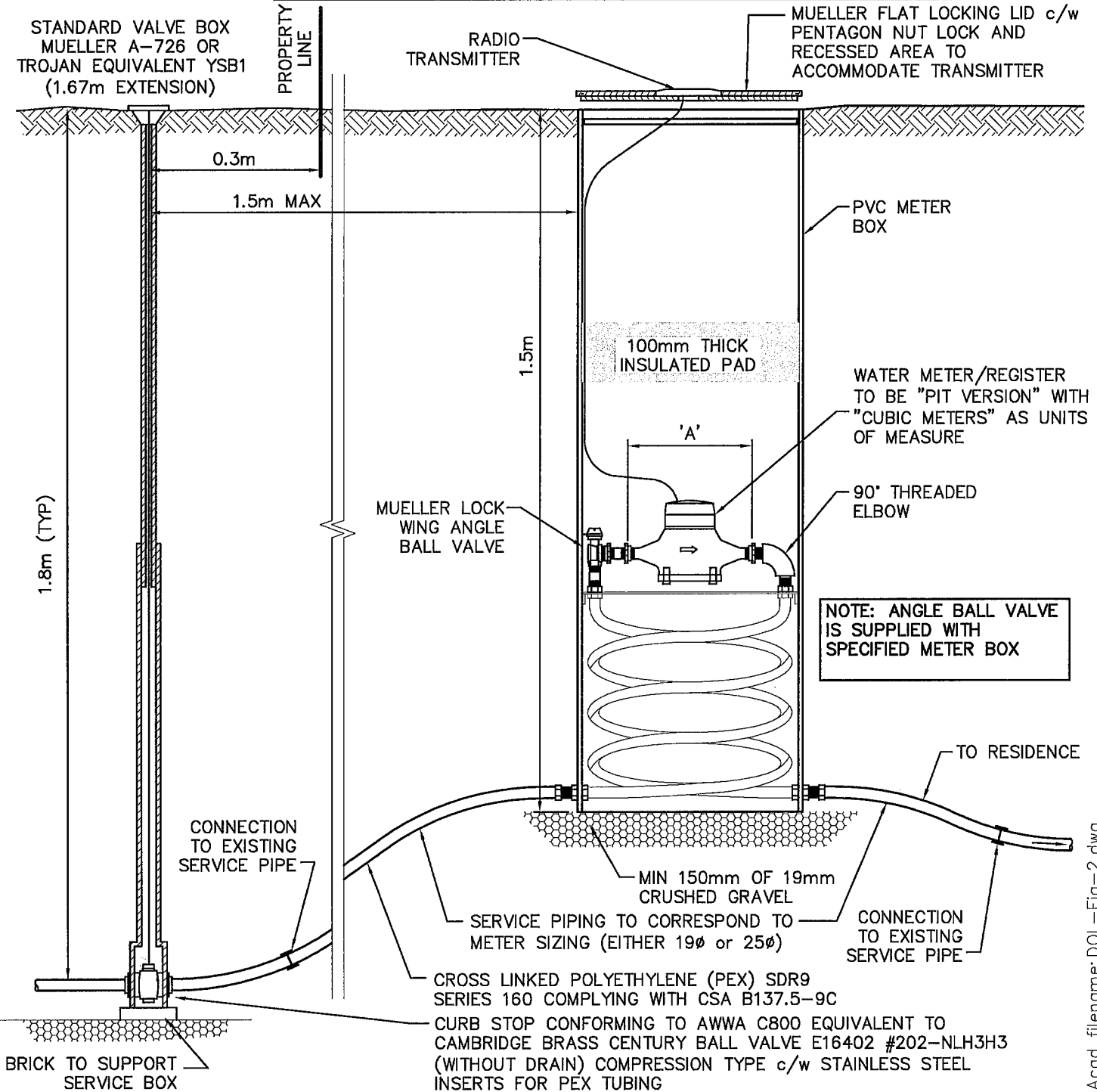
NOTES:

1. PIPING ON EACH SIDE OF METER MUST BE ADEQUATELY SUPPORTED.
2. PIPING FOR METER MUST BE ON A HORIZONTAL PLANE.
3. MINIMUM DISTANCE OF 300mm BETWEEN ANY WALL AND A METER.
4. THE AREA 600mm IN FRONT OF THE METER SHALL BE FREE OF OBSTRUCTION TO ALLOW FOR CONVENIENT READING AND SERVICING OF THE METER.
5. THE MASTER CONTROL BALL VALVE AND BACKFLOW PREVENTION VALVE (WHERE REQUIRED) SHALL CONFORM TO THE B.C. PLUMBING CODE.
6. METER TO HAVE "CUBIC METERS" AS UNITS OF MEASURE.

Acad filename: DOL-Fig-1.dwg

<p>TYPICAL INSIDE WATER METER INSTALLATION 19mm & 25mm dia.(3/4" & 1" dia.)</p>	DISTRICT OF LILLOOET		
	DWN. BY: LK	SCALE: N.T.S.	
	DATE: APR 07	DWG. NO.:	REV.:
	CHK. BY: SW	FIG 1	1
	DATE: APR 07		

METER SIZE	19mm (3/4")	25mm (1")
METER		
METER BOX	MUELLER 250CS1560FABS	MUELLER 330CS1860FABS
METER BOX LID	MUELLER 282924TR	MUELLER 282925TR
INSULATED PAD	MUELLER 790022	MUELLER 790153
LAYING LENGTH ('A' MIN)	229 mm	273 mm
FLOW RATE (USgpm)	0.75-30	1-50



Acad filename: DOL-Fig-2.dwg

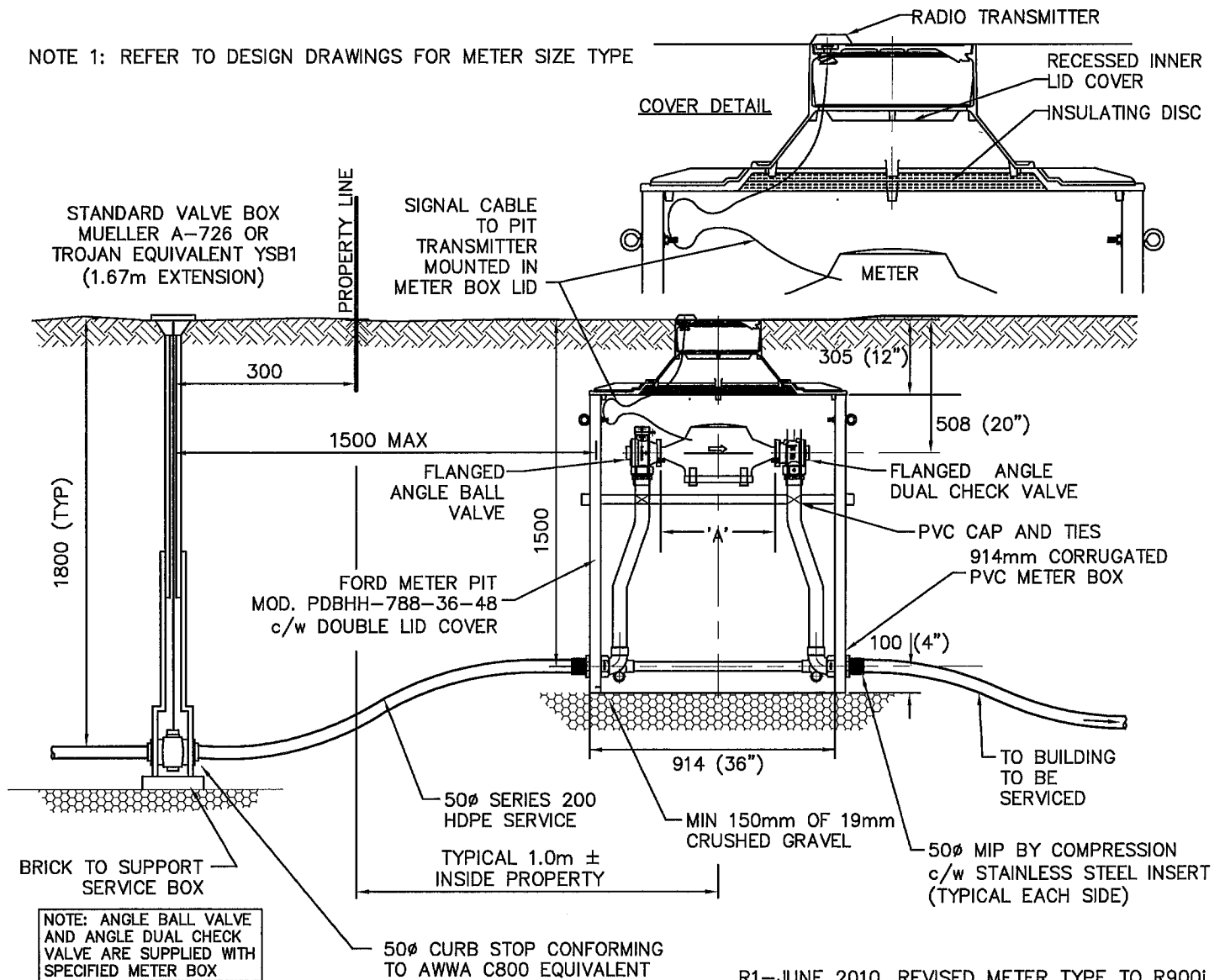
DISTRICT OF LILLOOET

DWN. BY: DL	SCALE: N.T.S.
DATE:	DWG. NO.:
CHK. BY: SW	REV.: 2
DATE: MAR 2007	FIG 2

**FROSTPROOF
19mm & 25mm METER PIT
FOR NON-TRAFFIC AREAS**

ITEM	38 ϕ (1½") SERVICE	50 ϕ (2") SERVICE	50 ϕ (2") SERVICE
METER TYPE (NOTE 1)	STANDARD	STANDARD	or COMPOUND
METER			
REGISTER			
UNITS	CUBIC METRES	CUBIC METRES	CUBIC METRES
RADIO TRANSMITTER			
METER BOX	FORD PDBHH-688-36-48-KT	FORD PDBHH-788-36-48-KT	FORD PDBHH-788-36-48-KT
METER BOX LID	FORD W3	FORD W3	FORD W3
RING EXTENSION	FORD No.5 EXTENSION	FORD No. 5 EXTENSION	FORD No. 5 EXTENSION
LAYING LENGTH ('A' MIN)	330 mm	432 mm	387 mm

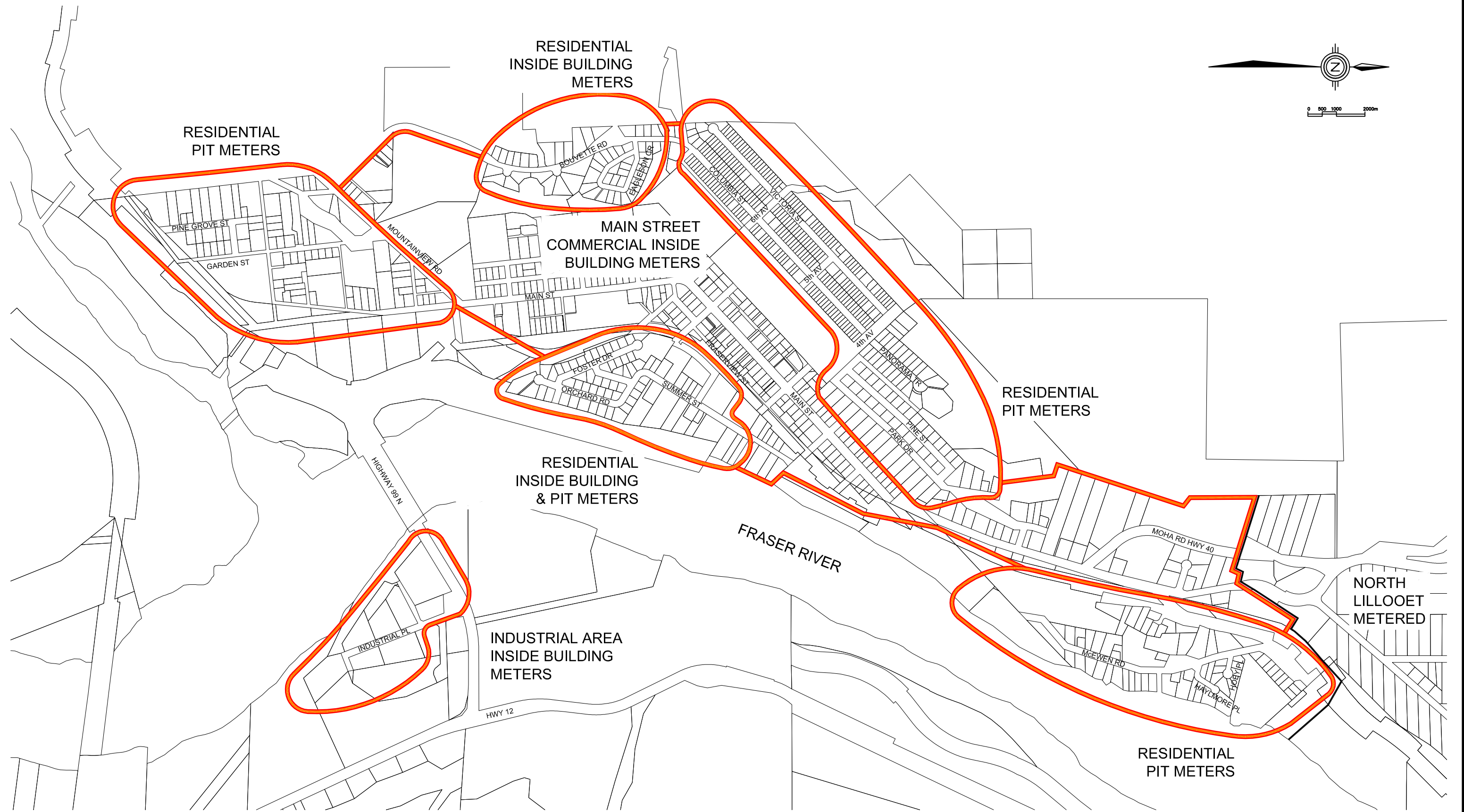
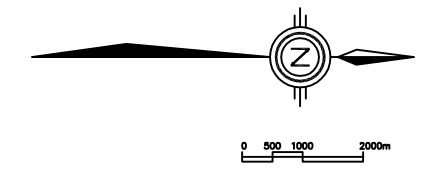
NOTE 1: REFER TO DESIGN DRAWINGS FOR METER SIZE TYPE



38mm & 50mm METER PITS FOR NON TRAFFIC AREAS

DISTRICT OF LILLOOET

DWN. BY: DLJ.	SCALE: N.T.S.	
DATE:	DWG. NO.:	REV.:
CHK. BY: TRU	FIG 3	1
DATE: JULY2011		



**District of Lillooet
South & East Lillooet
Water Meter Installation Areas**



DRAWN BY: DL
DATE: JULY 2011

DESIGN BY: KK
SCALE: 125,000
DWG NO.:
REV:
Fig 5

GENERAL CONDITIONS

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GC-1.0 **DEFINITIONS**

1.1 The term **Contract Documents** means:

Contract Forms:

- the Tender
- the Contract Agreement
- the Certificate of Insurance
- the Performance Bond
- the Labour and Materials Payment Bond;

Conditions of the Contract:

- the General Conditions
- the Supplementary Conditions;

Specifications;

Addenda;

Contract Drawings;

and any other documents associated with the Contract such as Field Orders and Change Orders.

1.2 The term **Engineer** wherever used in these documents shall mean the representative(s) as may be appointed or authorized by the Owner to act on his behalf for the purposes of this Contract.

1.3 The term **Work** wherever used in these documents shall mean the entire Work, including materials, labour, equipment, transportation, or other facilities or items ancillary to the foregoing, required to be done, furnished, and performed by the Contractor to complete the Contract, in accordance with the Contract Documents.

1.4 The term **Owner** shall mean the Party of the First Part as defined in the Contract Agreement for whom the Work is being undertaken.

1.5 The term **Contractor** wherever used in these documents shall mean the second party to this Contract who has submitted a Tender to perform the Work under this Contract which has been accepted by the Owner.

1.6 The term **Subcontractor** wherever used in these documents shall mean a person neither contracting with nor employed directly by the Owner for doing any of the Work, but contracting with and being employed directly by the Contractor. A person, party or company which only supplies or furnishes materials is not a subcontractor.

1.7 The term **Other Contractor** wherever used in these documents means any person or firm or corporation employed by the Owner other than through the Contractor.

1.8 The terms **Contract Price**, **Contract Sum**, and **Tendered Unit Price** are the amount(s) of the Contract as shown in the Tender Form and in the Contract Agreement.

GC-1.0 **DEFINITIONS** (Cont'd)

1.9 Certificates:

- i) A **Progress Payment Certificate** and/or **Progress Payment** is a certificate or document prepared and issued by the Engineer on which progress payments to the Contractor are based.
- ii) A **Substantial Completion Certificate** is a certificate or document prepared by the Engineer and signed by the Owner which certifies that a minimum of ninety-eight percent (98%) of the Work is complete and that the Work may be used by the Owner for the purposes intended.
- iii) A **Construction Completion Certificate** is a certificate issued by the Engineer and signed by the Owner upon full completion of the Work, including cleanup and rectification of all deficiencies.
- iv) A **Final Acceptance Certificate** is a certificate prepared by the Engineer and signed by the Owner within thirty (30) days following the expiry of the maintenance period. A Final Acceptance Certificate is issued provided that all conditions of the Contract are met.

1.10 Correspondence:

- i) The term **on receipt of written notice** means the date of delivery of correspondence to the Contractor, if delivered by hand, or the date of delivery of the postal courier or other delivery service.
- ii) The term **Notice of Contract Award** is a written notice from the Owner or the Engineer advising the Contractor of the Owner's acceptance of his Tender for the Work.
- iii) The term **Notice to Proceed** is written correspondence to the Contractor from the Owner or the Engineer which advises the Contractor that Work may commence.
- iv) A **Field Order** or **Field Memo** is written communication from the Engineer to the Contractor requesting changes in the Work, clarifying the Contract Documents, issuing instructions or requesting information.
- v) A **Change Order** is a written communication issued by the Engineer setting forth the authorized amount which is to be paid to the Contractor for the changes in the Work covered by a Field order, or the authorized amount which is to be deducted from the Contract Price as a credit on account of the changes in the Work covered by a Field Order.

1.11 The term **Maintenance Period** or **Guarantee Period** is the period of time beginning on the date specified in the Substantial Completion Certificate during which the Contractor is responsible for repairing or correcting deficiencies in the Work.

1.12 The term **Completion Date** is the date by which Work covered by these Contract Drawings shall be completed.

GC-2.0 THE CONTRACT AGREEMENT

2.1 The Contract Agreement shall be signed in triplicate by the Owner and the Contractor.

GC-3.0 DRAWINGS AND SPECIFICATIONS

3.1 The Owner will furnish to the Contractor five (5) sets of Contract Documents including Drawings.

3.2 A set of Contract Documents is to be kept at the site of the Work for reference by the Engineer, the Owner, or other regulatory agencies.

3.3 All drawings, specifications and copies thereof furnished by the Engineer are his property. They shall not be used on other work and, with the exception of the signed Contract Document set, are to be returned to the Engineer on request, upon completion of the Work.

GC-4.0 STANDARD SPECIFICATIONS

4.1 Standard Specifications referred to in these Contract Documents are prepared or compiled by agencies or organizations such as CSA, ASTM, and AWWA. Clarification of the intent of these Standard Specifications may be obtained from the Engineer. Whenever referred to, the current edition at the date of the Invitation to Tender shall apply.

GC-5.0 THE ENGINEER AND THE CONTRACTOR

5.1 The Contractor shall have complete control of his own organization, and the carrying out of the Work, and the method of carrying out the Work.

5.2 The Engineer's efforts shall be directed towards reviewing construction progress, providing interpretation of the Contract Documents and ensuring the Work is carried out expeditiously.

5.3 The Engineer does not guarantee the Contractor's work nor undertake to check the quality and quantity of work on behalf of the Contractor. The Engineer is not responsible to the Contractor for discovering defects in the Work nor for advising the Contractor of defects in the Work.

5.4 The Engineer is, in the first instance, the interpreter of the Contract and the judge of its performance.

5.5 Should the Contractor dispute any decision of the Engineer, the dispute shall be referred to Arbitration in accordance with these General Conditions.

5.6 The Contractor shall notify the Engineer in writing within five (5) days if, in the Contractor's opinion, a decision by the Engineer is in error and not a correct interpretation of the Contract.

GC-5.0 THE ENGINEER AND THE CONTRACTOR (continued)

- 5.7 If the dispute between the Contractor and the Engineer cannot be resolved and the Engineer decides that the disputed work shall be carried out, the Contractor shall act according to the Engineer's written decision. Any question of change in the Contract Price or extension of time for completion, due to such dispute, shall be decided by Arbitration in accordance with these General Conditions.
- 5.8 Nothing contained in the Contract Documents shall create any contractual obligation between the Engineer and the Contractor.

GC-6.0 SUBCONTRACTORS

- 6.1 The Contractor shall preserve and protect the rights of the Owner with respect to any Work performed under the Contractor and shall:
- a. require Subcontractors to perform Work in accordance with and subject to the terms and conditions of the Contract Documents; and
 - b. be as fully responsible to the Owner for acts and omissions of Subcontractors and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the Contractor.
- 6.2 All Subcontractors shall comply with the provisions of the Workers' Compensation Act. Confirmation of Workers' Compensation Act coverage for Subcontractors may be requested by the Engineer from the Contractor.
- 6.3 The Contractor shall employ those Subcontractors proposed in the Tender Form, and accepted by the Owner, for such portions of the Work as may be designated.
- 6.4 Nothing contained in the Contract Documents shall create any contractual obligation between any Subcontractor and the Owner.

GC-7.0 OTHER CONTRACTORS

- 7.1 The Owner reserves the right to let other contracts related to the Work.
- 7.2 The Owner and/or the Engineer shall coordinate the work of Other Contractors insofar as it affects the Work of this Contract.
- 7.3 The Contractor shall coordinate his work with that of Other Contractors and tie into Works constructed by others as specified or shown in the Contract Documents.
- 7.4 The Contractor shall report to the Engineer any apparent deficiencies in Other Contractors' work which would affect the Work of this Contract as soon as they come to his attention and shall confirm such report in writing. Failure by the Contractor to so report shall invalidate any claims against the Owner by reason of the deficiencies of Other Contractors' work except as to those of which the Contractor could not reasonably be aware.

GC-8.0 ASSIGNMENT

- 9.1 Neither Party to the Contract shall assign the Contract or any portion thereof, nor any monies due to either Party, without the written consent of the other.

GC-9.0 INDEMNITY

- 9.1 The Contractor shall indemnify and save harmless the Owner, from and against all losses and all claims, actions, and judgments brought against him or the Owner by reason of any act or omission of the Contractor, his agents, or employees, in the execution of the Work, which shall include protecting the Work and protecting the public from the hazard arising out of the Work.

GC-10.0 OWNER'S RIGHT TO DO WORK

- 10.1 Should the Contractor fail or neglect to execute the Work in accordance with these Contract Documents by:
- i. refusing or failing to supply proper workmanship, materials, or construction equipment,
 - or
 - ii. refusing or failing to rectify deficiencies identified in Field Memos;

then the Engineer may notify the Contractor in writing that he is in default of his contractual obligations and instruct him to correct the default within five (5) working days.

- 10.2 Where the default cannot be corrected in the five (5) working days referred to in 10.1, the Contractor shall be considered to be in compliance if he commences with the corrective measures and submits a schedule for resolving the defaults which is acceptable to the Owner.
- 10.3 If the Contractor fails to comply with the provisions 10.1 and 10.2, the Owner may, without prejudice to any other right or remedy he may have, correct such default and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided however that the Engineer shall, in the first instance, determine that both the corrective action and the amount subsequently charged to the Contractor are reasonable.

GC-11.0 OWNER'S RIGHT TO TERMINATE THE CONTRACT

- 11.1 If the Contractor should:
- a. be adjudged bankrupt, or make a general assignment for the benefit of creditors, or if a receiver is appointed on account of his insolvency, or
 - b. fail to make sufficient payments due to his subcontractors, or suppliers, or
 - c. disregard laws or bylaws, or the Engineer's instructions, or

GC-11.0 OWNER'S RIGHT TO TERMINATE THE CONTRACT (continued)

- d. abandon the Work, or fail to adhere to the Work Schedule to such an extent that there is danger of failing to meet Completion Dates, or
- e. otherwise violate the fundamental conditions of the Contract,

the Owner shall, by written notice, instruct the Contractor to correct the default within five (5) working days. If the default is not corrected within five (5) working days, then the Owner may, without prejudice to any other right or remedy he may have, terminate the Contract.

- 11.2 If the Owner terminates the Contract under the conditions set out above, and if the performance guarantee is unconditional, the Owner shall be entitled to:
- a. take possession of the premises and products and finish the Work by whatever method he may deem expedient but without undue delay or expense;
 - b. withhold any further payments to the Contractor until the Work is finished;
 - c. upon completion of the Work, determine the full cost of finishing the Work as certified by the Engineer, including compensation to the Engineer for his additional services and a reasonable allowance as determined by the Engineer to cover the cost of any corrections required under the maintenance period, and charge the Contractor the amount by which the full cost exceeds the unpaid balance of the Contract Price; or if such cost of finishing the Work is less than the unpaid balance of the Contract Price, pay the Contractor the difference.
 - d. on expiry of the maintenance period, charge the Contractor the cost of corrections.
 - e. If the performance guarantee is in the form of a Performance Bond, the provisions of this General Condition shall be exercised in accordance with the conditions of such Performance Bond. In that event the Surety shall perform the Contract in accordance with all of its conditions including adherence to the Completion Dates in the Contract Agreement.

GC-12.0 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

- 12.1 If the Owner should be adjudged bankrupt, or makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of his insolvency, the Contractor may, without prejudice to any other right or remedy he may have, by giving the Owner five (5) days written notice, hold the Owner in default.
- 12.2 If the Work should be stopped or otherwise delayed for a period of ninety (90) days or more under an order of any Court, or other public authority, and provided that such order was not issued as the result of any act or fault of the Contractor or of anyone directly or indirectly employed by him, the Contractor may, without prejudice to any other right of remedy he may have, by giving the Owner written notice, hold the Owner in default.

GC-12.0 **CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT** (continued)

- 12.3 The Contractor may notify the Owner in writing, with a copy to the Engineer, that the Owner is in default of his contractual obligations if the Owner, subject to requirements of these General Conditions, fails to pay to the Contractor when due, any amount certified by the Engineer.

Such written notice shall advise the Owner that if such default is not corrected within fifteen (15) calendar days from the receipt of the written notice the Contractor may, without prejudice to any other right or remedy he may have, stop the Work and terminate the Contract for fundamental breach.

- 12.4 If the Contractor terminates the Contract under the conditions set out above, he shall be paid for all work performed and for any loss sustained upon products and construction machinery and equipment, with reasonable profit.

GC-13.0 **MAINTENANCE PERIOD**

- 13.1 The Maintenance or Guarantee Period shall begin on the date specified in the Substantial Completion Certificate and is for a period of at least one (1) year.
- 13.2 The Contractor shall correct, at his own expense, any defects in the Work due to faulty products or workmanship appearing within the Maintenance Period.
- 13.3 The Owner shall notify the Contractor promptly of such defects. If the Contractor does not cause repairs to be made within ten (10) days after such notice, the Owner shall have the right to purchase materials and employ men to execute said repairs, and the cost of the same shall be the responsibility of the Contractor or his Surety.
- 13.4 Where repairs must be made immediately by reason of an emergency existing or otherwise, the Owner shall have the right to undertake such repairs and charge the cost of the work to the Contractor, except that the Owner shall immediately notify the Contractor and shall withdraw from the work of repair if and as soon as the Contractor's forces are ready to start work.
- 13.5 The Contractor shall be responsible for all costs including the cost of engineering required for investigation of any repair of defects in his work.
- 13.6 At least one month prior to expiry of the Maintenance Period, the Owner shall advise the Contractor of defects which the Contractor is required to remedy, under the Contract, and the Contractor shall promptly remedy such defects.

GC-14.0 **ARBITRATION**

- 14.1 In the event of a dispute between the Owner and the Contractor in relation to the stipulations and provisions of this Contract, or to the manner and performance of the whole or any part of the Contract by either of the parties, the matter may be submitted to Arbitration as provided for by the "Arbitration Act" of the Province where the Work is situated.

GC-14.0 ARBITRATION (continued)

- 14.2 Either party initiating action under the Arbitration provisions shall give written notice to the other party.
- 14.3 The Contractor shall not cause a delay of the Work while the Arbitration proceedings are pending or in progress.

GC-15.0 SCHEDULE

- 15.1 The Contractor shall submit, prior to the commencement of the Work, to the Engineer, a Work Schedule which shall show the order in which the Contractor proposes to carry out the Work, and estimated dates of completion of each component. The Work Schedule shall be updated by the Contractor as requested by the Engineer.
- 15.2 If, in the opinion of the Engineer, any Work Schedule submitted is inadequate to secure the completion of the work as specified, or is otherwise not in accordance with the specifications, the Engineer shall have the right to request a revised schedule.

GC-16.0 DELAYS AND EXTENSION OF TIME

- 16.1 If the Contractor is delayed in the performance of the Work by;
- i) labour disputes, strikes, and/or lock-outs beyond his control;
 - ii) fire, or transportation problems beyond his control;
 - iii) other unusual event beyond his control;
- then the Completion Date shall be extended for a time period equal to the time lost due to these factors. No extension of Completion Date will be made unless the Contractor makes the appropriate request within seven (7) days of the event occurring.
- 16.2 The factors described in 16.1 shall not be the basis of extra cost claims by the Contractor.
- 16.3 If the Contractor is delayed in the performance of the Work by failure of the Owner to make decisions respecting the Work, late delivery of materials furnished by the Owner, or acts or omissions of the Owner, the Contractor shall be compensated for any additional costs thereby incurred, and the Completion Date shall be changed. The amount of the compensation and the extent of change in Completion Date shall be determined by the Engineer.
- 16.4 If the Contractor is delayed in the performance of the Work by a Stop Work Order issued by a Court or other public authority, and provided that such Order was not issued as a result of any act or fault of the Contractor, or of anyone employed by him directly or indirectly, then the Contractor shall be entitled to claim compensation

GC-16.0 **DELAYS AND EXTENSION OF TIME (continued)**

for additional costs thereby incurred, and the Completion Date shall be changed. The amount of compensation and the extent of change in Completion Date shall be determined by the Engineer.

GC-17.0 **CHANGES IN THE WORK**

17.1 The Owner may, as the need arises, order changes in the Work through additions, deletions, modifications, or variations without invalidating the Contract and without notice to the Contractor's surety. The value, if any, of such changes shall be taken into account in ascertaining the amount of the Contract Sum. All such Work shall be executed under the conditions of the Contract supplemented where necessary for varying conditions.

17.2 No extra Work, or change, shall be made unless in pursuance of a written Field Memorandum or a letter request, and no change in the Contract Sum shall be valid without an Extra Work Order.

17.3 The value of any additional Work or change shall be determined in the following manner for either an increase or decrease in the Work:

- i) by Unit Prices named in the Contract;
- ii) as for "Extra Work" where Unit Prices have not been tendered.

17.4

1. When there is an increase or decrease in the Work not covered by Contract Unit Prices, it shall be known as "Extra Work". The value of such Work may be determined by the following:

- i) On the basis of Personnel and Equipment Rates included on the Tender Form.
- ii) Labour rates not included on the Tender Form will be determined on the basis of actual costs to the Contractor of the labour including additional payroll costs covering Workers' Compensation, Unemployment Insurance, Holiday Pay, Statutory Holidays, Public Liability and Property Damage Insurance and such other payroll costs as may be mandatory according to the laws of the Province in which the Work is being carried out, plus twenty percent (20%) to cover the use of tools, office expense, overhead and Contractor's profit. The services of superintendents, time-keepers, and the like shall be deemed to be included in overhead.
- iii) By Agreement on a Lump Sum or other basis between the Owner and the Contractor.
- iv) In the absence of submitted equipment rates on the Tender Forms, the current Provincial Government Ministry of Transportation and Highways approved rates shall apply. For equipment which has to be brought in for the specific purpose, transportation costs will be paid. A piece of

GC-17.0 **CHANGES IN THE WORK** (continued)

equipment shall mean a unit complete including operator, fuel, grease and maintenance, and such costs as are normal to an operating unit. Rental shall be paid for actual hours of work only.

- v) Supplies and materials will be paid for at invoiced cost plus twenty percent (20%) for overhead and profit.
- 2. When an "Extra Work" order involves work by a Subcontractor, the payment for materials and services shall be similar to that for the Contractor. The Contractor shall be entitled to a fee of ten percent (10%) for general supervision.
- 3. Each day on which Extra Work is being done, the Engineer shall, after consultation with the Contractor, complete a force account statement in triplicate indicating the man hours, equipment rental hours and materials used on the Extra Work. Each copy shall be signed by the Engineer and Contractor; with one copy being returned to the Contractor, the second copy used in calculating the actual cost of the Extra Work and the third copy being submitted to the Owner. Extra Work claims not submitted on the day of the Work taking place may not be validated.
- 4. Extra Work shall be done during normal working hours unless otherwise requested by the Engineer.
- 5. The Performance Bond shall be extended to cover Extra Work and the guarantee period shall apply to this Work.

17.5 Claims for Extra Work

If the Contractor claims that any instruction by Drawings or otherwise involves extra cost under this Contract, he shall give the Engineer written notice thereof immediately, and he shall then follow the Engineer's instructions regarding proceeding with the Work in question. No such claim shall be valid unless so made. If the Contractor's claim is approved, the procedure shall be as provided for under GC-17.0.

GC-18.0 **PAYMENT**

- 18.1 Payment for materials, labour and equipment shall be as set forth in the Contract Documents, and the Engineer, in cooperation with the Contractor, will calculate all progress payments and prepare Certificates for approval and payment by the Owner. Where Unit Prices apply, payment will be calculated on the basis of the Tendered Prices and Units of Work completed, as determined by the Engineer. Where a Lump Sum Price applies, payment will be calculated on the basis of the Engineer's estimated percentage of Work completed. Extra Work payments will be added to the monthly progress payments.

GC-18.0 PAYMENT (continued)

The Owner shall, on or about the twentieth (20th) day of each month, make payment on account of the Contract to the extent of ninety percent (90%) of the value of the labour and materials incorporated into the Work, up to the last day of the previous payment period. The Owner will retain the balance of ten percent (10%) of the value of the Work done in compliance with the requirements of the Builders' Lien Act. The monthly estimates shall not bind the Owner in any manner in the preparation of the final estimate of the Work done, but shall be construed and held to be approximate only, and shall in no case be taken as an acceptance of the Work or as a release of the Contractor from his responsibility thereof.

18.2 Payment Delays

The Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any Progress Payment Certificate to such an extent as may be necessary to protect himself from loss on account of the following:

- a) The Contractor not making satisfactory progress in the opinion of the Engineer;
- b) Defective Work not remedied;
- c) Claims filed or reasonable evidence indicating probable filing of claims;
- d) Failure of the Contractor to make payment properly to Subcontractors or for material or for labour;
- e) Damage to another utility or Contractor.

When the above grounds are removed, payments shall be made for amounts withheld because of them.

18.3 Substantial Completion Certificate

Upon receipt of a written notice from the Contractor stating that the Work is substantially complete and ready for inspection (accompanied by a list of the known deficiencies), the Engineer shall promptly make the required inspection, and when he finds the Work to be at least ninety-eight percent (98%) complete and available for the use that it was intended for, then he shall issue a "Substantial Completion Certificate" to the Contractor. This Certificate shall state that the Work provided for under the Contract has been substantially completed, and that the Work may be used for the purpose for which it was intended. Should the Work not be deemed as substantially complete by the Engineer, then a written notice will be given to the Contractor stating the deficiency corrections required for substantial completion.

18.4 Construction Completion Certificate

Upon completion of all project related work items, the Contractor shall notify the Engineer in writing that the project is one hundred percent (100%) completed and request a Construction Completion Certificate for the project. Upon a satisfactory inspection of the Works, the Engineer shall prepare and forward a Construction Completion Certificate to the Owner and to the local approving agencies, for their acceptance of the project and signature on the noted Certificate. The project Maintenance Period will begin on the date of issuance of the Substantial Completion Certificate.

GC-18.0 PAYMENT (continued)**18.5 Final Progress Payment and Builders' Lien Holdback**

The final progress payment shall be made after the issuance of the Construction Completion Certificate and in accordance with Paragraph 17.1, and the Contractor has filed with the Engineer, a statement that he agrees with the final quantities as presented and that all claims and demands for Extra Work or otherwise under or in connection with this Contract have been presented and approved for payment, thus establishing the amount of the final payment.

The ten percent (10%) Builders' Lien Holdback payment shall be made after the following conditions have been met:

- a. A Construction Completion Certificate has been issued.
- b. A Statutory Declaration has been filed with the Engineer by the Contractor certifying that all materials, labour and sub-contract claims incurred, directly or indirectly on account of the Works, have been fully paid by the Contractor and that no lien exists against the premises or materials mentioned herein, for work done or materials furnished in respect of anything done under or by virtue of this Agreement. The declaration shall be filed fifty-five (55) days after the date of issuance of a Substantial Completion Certificate.
- c. A statement has been filed with the Engineer from the Workers' Compensation Board certifying that all assessments due by the Contractor have been paid.
- d. The Contractor has provided the Engineer with all required invoices, project diaries and required reports.
- e. Sufficient deficiency holdbacks have been retained equal to twice the Engineer's estimate of the value of the Works remaining. Part or all of the Builders' Lien Holdback may be retained as a deficiency holdback until such time that the remaining Works have been completed and accepted.

18.6 The Engineer's inspection upon completion of the Work and issuance of the Construction Completion Certificate or Final Payment and Builders' Lien Holdback release do not constitute a waiver of the Guarantee period, nor shall they or attendant acts of the Engineer or the Owner prejudice their rights under any requirement of the Contract, or relieve the Contractor of any of his responsibilities thereunder.

GC-19.0 FINAL ACCEPTANCE CERTIFICATE

- 19.1 Upon the expiration of the one (1) year maintenance period and the successful completion of tests and satisfactory performance under operating conditions meeting the performance warranty or the requirements of maintenance, as the case may be, the Owner or the Engineer on his behalf shall accept the Works whereupon the Final Acceptance Certificate shall be issued.
- 19.2 The issuance of the Final Certificate shall not release the Contractor from responsibility for latent defects in his work or materials for which the Contractor may in future be found liable in a Court of Law or otherwise.

GC-20.0 INSURANCE**20.1 Liability**

The Contractor shall save and hold harmless the Owner and the Engineer from and against all and any suits or claims alleging damage or injury (including death) to any person or property that may occur or that may be alleged to have occurred, in the course of the performance of this Contract, whether such claim shall be made by an employee of the Contractor, or by a third person and whether or not it shall be claimed that the alleged damage or injury (including death) was caused through the negligent act or omission of the Contractor, its officers, servants, agents or employees or a willful or negligent act or omission of any of its Subcontractors or any of their officers, servants, agents or employees: and at its own expense, the Contractor shall defend any and all such actions and pay all legal charges, costs and other expense arising therefrom.

20.2 Contractor's Insurance

The Contractor shall maintain and keep in force during the term of the Contract and until the date of the Completion Certificate, the following insurance:

- "All Risk" insurance in the joint names of the Owner and the Contractor, in a form and by an insurance company satisfactory to the Owner, for the work and all material, plant, fuel, machinery, tools and equipment acquired, possessed or provided by the Contractor for incorporation into the Work, whether or not such material, plant, fuel, machinery, tools and equipment are brought to or from the Work or upon land of the Owner, in an amount equal to one hundred percent (100%) of the total value of the materials and equipment and work.
- Maintain Public Liability and Property Damage insurance in the amount specified in the Special Provisions of this Contract.

The Contractor shall, at the time the Contract Agreement is signed, submit to the Engineer two (2) copies of the insurance policies required under this Article and shall also provide to the Engineer from time to time, as may be required, satisfactory proof that such policies are still in force and effect.

GC-20.0 INSURANCE (continued)

All insurance companies or policies must be acceptable to and approved by the Owner. Under no circumstances shall the policy be altered in any manner which would affect the interest of the Owner, without thirty (30) days written notice by registered mail to the Owner. When changes in the Contract are sufficient to require insurance additions, the Contractor shall notify the insurance companies and the surety. In the event of the Owner using the completed Works prior to the Construction Completion Certificate, any increase in the cost of insurance arising out of this use shall be at the Owner’s expense.

20.3 Insurance Coverage Limits

The Contractor shall, at his sole expense, maintain in effect at all times during the performance of his obligations hereunder, insurance coverages with limits not less than those set forth as follows, with insurers and under forms of policies satisfactory to the Engineer. Prior to commencing this Contract, the Contractor shall furnish the Engineer with Certificates of Insurance as evidence that policies providing such coverages and limits of insurance are in full force and effect, which Certificates shall provide that not less than thirty (30) days advance notice be given in writing to the Engineer prior to cancellation, termination or alteration of said policies of insurance. Such Certificates and Notices shall be sent directly to the Engineer’s authorized representative as specified elsewhere in the Contract.

Coverage	Minimum Amounts and Limits
a) Workers’ Compensation	Statutory Limits
b) Owned Automobile Liability covering bodily injury (including death) and property damage.	\$2,000,000 inclusive
c) Non-owned Automobile Liability covering bodily injury (including death) and property damage.	\$2,000,000 inclusive
d) “All Risk” Contractor Insurance	Contract Sum
e) Comprehensive Contractor’s Liability Insurance to cover bodily injury, property damage and personal injury. This policy of insurance shall be endorsed to include the interests of the Owner, and his Engineers as principals during the performance of this Contract.	\$2,000,000 inclusive

GC-21.0 GUARANTY BONDS

21.1 Prior to the signing of the Contract Agreement, the Contractor shall furnish a Performance Bond, and a Labour and Materials Payment Bond in accordance with Article 4 of the Contract Agreement. The Performance Bond shall cover the faithful performance of the Contract including the corrections after completion as provided for in Article 19 of these General Conditions, and the payment of all obligations arising under the Contract, in such form as the Engineer may prescribe. The Owner reserves the right to approve or reject any surety company.

GC-22.0 PROTECTION OF WORK AND PROPERTY

- 22.1 The Contractor shall continuously maintain adequate protection of all of the Work from damage, and protect the Owner's property from damage or loss arising in connection with this Contract. He shall make good any such damage or loss.
- 22.2 The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection required by public authority or local conditions.
- 22.3 The Contractor shall protect the property adjacent to the Work from damage as a result of his operations.
- 22.4 In an emergency affecting the safety of life, or of the Work, or adjoining property, the Contractor, without special instruction or authorization from the Engineer, shall act at his discretion to prevent such threatened loss or injury. Liability for payment of compensation and the amount thereof shall be determined by agreement, or if an agreement cannot be reached, by arbitration.
- 22.5 If the Engineer becomes aware of an emergency affecting the safety of life, or of the Work, or of adjoining property, and the Contractor, having been advised in writing of the emergency, fails or refuses to act to prevent such threatened loss, injury or damage, or if the Engineer is unable to advise the Contractor, the Engineer may order labour, materials and equipment to be applied to prevent loss, injury or damage. The cost of labour, materials and equipment so used shall be the responsibility of the Contractor, and such action by the Engineer shall not relieve the Contractor of any responsibility for loss, injury, or damage which does occur.

GC-23.0 TAXES AND DUTIES

- 23.1 The Contractor shall pay all government sales taxes, customs duties and excise taxes with respect to the Contract, unless specified otherwise elsewhere in the Contract Documents.

GC-24.0 PATENT FEES

- 24.1 The Contractor shall pay all royalties and patent licence fees required for the performance of the Contract. He shall hold the Owner harmless from and against all claims, demands, losses, costs, damages, actions, suits or proceedings arising out of the Contractor's performance of the Contract which are attributable to an infringement or an alleged infringement of any patent of invention, by the Contractor, or anyone for whose acts it may be liable.
- 24.2 In the event that the Contractor claims that, during the performance of the Work, he has encountered a claim for a patent licence fee, for use of a material, process, or method which was specified by the Engineer, and that he was not previously aware that use of such material, process or method was restricted under patent, or that a

GC-24.0 **PATENT FEES (continued)**

patent licence fee was required, he shall immediately notify the Engineer, in writing, setting out the details of such claim and evidence of his previous lack of awareness of such licence fee being required. The Engineer shall immediately investigate the claim and if it is judged valid, and the material, process or method is used, the Owner shall pay the patent licence fee.

GC-25.0 **SURVEYS, PERMITS, AND REGULATIONS**

- 25.1 The Laws and Regulations of the place where the Work is performed shall govern.
- 25.2 The Owner shall provide all legal surveys except legal surveys required to replace survey pins destroyed or damaged by the Contractor.
- 25.3 The Contractor shall obtain all Permits, Licences and Certificates, and pay all fees required for the performance of the Work.
- 25.4 The Owner shall obtain all easements and rights-of-way, and the Contractor shall have free use thereof for the purposes of this Contract, provided that such use shall not interfere with or impede the operation of any other Contractors or workmen employed by the Owner, nor be in conflict with conditions of easement agreement or right-of-way limits.
- 25.5 The Contractor shall give all required notices, and comply with all laws, bylaws, regulations, codes and orders of all authorities having jurisdiction relating to the Work, to preservation of public health, and to construction safety. If the Contractor observes anything in the Contract Documents to be at variance with the foregoing, he shall promptly notify the Engineer, in writing, and await the Engineer's instructions. If the Contractor performs any work, knowing it to be contrary to such laws, bylaws, regulations, codes or orders, and without giving notice to and requesting instructions from the Engineer, he shall bear all costs arising therefrom.
- 25.6 The Contractor shall make all arrangements with local authorities, operating departments, railway and highway officials, utility and service companies and such like, for detours, crossings, utility locations, traffic control and similar requirements relating to performance of the Work, and he shall, at his own cost, observe their requirements and regulations.
- 25.7 The Contractor shall comply with all applicable laws, statutes, regulations, or bylaws of Her Majesty the Queen in Right of Canada, the Province and any local government.

GC-26.0 **REFERENCE POINTS AND LAYOUT**

- 26.1 The Engineer will establish base lines and reference points for the location of principal components of the Work, as well as benchmarks in reasonable proximity to the Work.

GC-26.0 REFERENCE POINTS AND LAYOUT (continued)

- 26.2 The Contractor shall carefully preserve benchmarks, reference points and stakes, and legal survey pins, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their loss or disturbance.
- 26.3 The Contractor shall provide all detailed layout of dimensions, locations, and elevations of the Work from the base lines, reference points, and benchmarks set by the Engineer.
- 26.4 The Contractor shall not proceed with the Work until he has received from the Engineer such base lines, reference points, elevations, and other points and instructions required for the execution of the Work.
- 26.5 The Contractor shall, before commencing work at any point, satisfy himself as to the meaning and correctness of all stakes and instructions. No claims shall be considered for any allowance based on alleged inaccuracies, failure to read reference points correctly, or failure to interpret instructions correctly.
- 26.6 If the Contractor, in the course of the Work, finds any discrepancy between the Drawings and the physical conditions of the locality or any errors or omissions in Drawings or in the layout as given by points and instructions, he shall inform the Engineer immediately in writing, and the Engineer shall promptly verify the same and issue appropriate instructions. Any work done after such discovery, before further work is authorized, will be done at the Contractor's risk.

GC-27.0 COMPLIANCE WITH WORKERS COMPENSATION ACT AND RELATED REGULATIONS

- 27.1 The Contractor shall be considered as the "Prime Contractor" and "Principal Contractor" in reference to the Workers Compensation Act and Regulations, or other statutes. The Contractor is solely responsible for all safety within the project boundaries.
- 27.2 Prior to commencing work the Contractor must provide the Engineer with a Notice of Project Confirmation from the WorkSafe BC which identifies the Contractor as the Prime Contractor.
- 27.3 The Contractor shall ensure compliance on his part and on the part of all of his Subcontractors with the Workers Compensation Act and Regulations thereunder.
- 27.4 In any case, where pursuant to the provisions of the Workers Compensation Act, an order is given to the Contractor or one of his Subcontractors in respect to their operations under this Contract to cease operations because of failure to install or adopt safety devices or appliances or methods as directed, or required by the Act or Regulations thereunder, or because conditions of immediate danger exist that would be likely to result in injury to any person, and the Contractor is not available or capable of removing the danger to life or equipment resultant from the Contractor's operations, then the Engineer may issue Written Notice to the Contractor and may immediately arrange for the removal of this danger, and the

GC-27.0 **COMPLIANCE WITH WORKERS COMPENSATION ACT AND RELATED REGULATIONS (continued)**

Contractor shall be liable for the costs of such arrangements, but such act by the Engineer shall not relieve the Contractor of responsibility for injury, loss of life, or damage which may occur in that situation.

27.5 In the event that the Contractor refuses or fails to comply with an order under the Workers Compensation Act or Regulations thereunder, so that the performance of the Work is stopped, the Owner may, upon written notice, terminate the Contract and proceed in accordance with Clause 11.2.

27.6 The Contractor will be responsible for reimbursement of any costs, fines, and penalties incurred by the Owner or the Engineer as a result of the Contractor performing work in breach of any Workers Compensation Act order or regulation.

GC-28.0 **CONDITIONS**

28.1 In the event that during the execution of the Work, sub-surface conditions at the site are found to differ materially from those indicated in the Contract Documents and soil reports, or otherwise represented by the Owner or Engineer to the Contractor, then the Contractor shall promptly notify the Engineer in writing of such conditions. The Engineer shall promptly investigate such conditions and if he finds that they differ materially and will result in an increase or decrease in the cost of, or time required for, performance of this Contract, an equitable adjustment shall be made between the parties and the Contract modified in writing accordingly. If the parties fail to agree upon the adjustment to be made, the dispute may be determined as provided for in **GC-14**.

GC-29.0 **ACCESS ROADS**

29.1 The Contractor shall construct and maintain, at his own expense, all roads, accesses and areas required by him for his performance of the Contract, including snow removal. The Contractor shall, as required, obtain necessary permits from appropriate authorities for use of the Provincial roads.

GC-30.0 **TOOLS, PLANT AND EQUIPMENT**

30.1 If, at any time before the commencement or during the progress of the Work, the tools, plant or equipment appear to the Engineer to be insufficient, inefficient, or inappropriate to secure the quality of work required or the progress, the Engineer may order the Contractor to increase their efficiency, to augment their number or to substitute new tools, plant or equipment as the case may be, and the Contractor must conform to such order. The failure of the Engineer to demand such increases shall not relieve the Contractor of his obligation to secure the quality of Work and rate of progress necessary to complete the Work within the time required by the Contract.

GC-31.0 CONTRACTOR'S UNDERSTANDING

31.0 It is understood and agreed that the Contractor has, by careful examination, satisfied himself of the nature and location of the Work, the soil structure and topography at the site, the nature and quantity of materials to be used, the equipment facilities needed preliminary to and during the prosecution of the Work, and all other matters which can in any way affect the Work under this Contract.

GC-32.0 CONTRACTOR'S RESPONSIBILITIES AND CONTROL OF THE WORK

- 32.1 The Contractor shall have the required expertise to carry out the Work in a competent manner.
- 32.2 The Contractor shall have complete control of the Work. He shall effectively direct and supervise the Work using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all parts of the Work under the Contract.
- 32.3 The Contractor shall have the sole responsibility for the design erection, operation, maintenance and removal of temporary structural and other temporary facilities and the design and execution of construction methods required in their use.
- 32.4 The Contractor shall carefully examine the Contract Documents and shall promptly report to the Engineer any error, inconsistency or omission he may discover.
- 32.5 Although the Engineer may agree to special methods of carrying out the Work, the Contractor will not be relieved of his responsibility for the result. The Engineer's agreement with such special methods shall not constitute grounds for claims by the Contractor for any additional payment, nor for relief of his responsibility for the methods used.

GC-33.0 INSPECTION OF THE WORK

- 33.1 The Engineer and his representatives shall at all times have access to the Work whenever it is in preparation or progress and the Contractor shall provide proper facilities for such access and for inspection.
- 33.2 If the specifications, the Engineer's instructions, laws, bylaws, or any public authority requires any Work to be specially tested or approved, the Contractor shall give the Engineer timely notice of his readiness for inspection, and if the inspection is by an authority other than the Engineer, of the date fixed for such inspection.
- 33.3 Inspections by the Engineer shall be made promptly. If any Work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense.

GC-33.0 INSPECTION OF THE WORK (continued)

- 33.4 Materials to be used in the Work are subject to inspection and approval of the Engineer. Materials condemned as being unsuitable and not in conformity with the specifications, shall be removed from the Work and its vicinity without delay, and if the Contractor fails to do so within forty-eight (48) hours after having been directed by the Engineer, the rejected material may be destroyed or removed by the Owner and the cost of removal shall be charged to the Contractor.
- 33.5 The Engineer shall inspect the Work in the Owner's interest for the purpose of promoting effective completion of the project until the Construction Completion Certificate is issued, and such inspection or lack of it shall not relieve the Contractor of his responsibility to perform the Work in accordance with the Contract.

GC-34.0 SUPERINTENDENCE

- 34.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Work site at all times while Work is being performed.
- 34.2 The superintendent shall be satisfactory to the Engineer and shall be the person named in the Contractor's Schedule of Supervisory Personnel in the Tender and shall not be changed except for good reason and only then after consultation with and agreement by the Engineer.
- 34.3 The superintendent shall represent the Contractor at the Work site and directions given to him by the Engineer shall be held to have been given to the Contractor.

GC-35.0 LABOUR

- 35.1 The Contractor shall employ Canadian Labour to the fullest extent possible and shall ensure that no person will be discriminated against because of race, colour, sex, age, religion, or origin.
- 35.2 Wages and hours of labour employed shall be in accordance with Federal, Provincial or Territorial enactments.
- 35.3 The Contractor shall at all times enforce discipline and good order among his employees, and shall not employ on the Work any unfit person or anyone not skilled in the Work assigned to him. Any men employed on the Work who become intoxicated, intemperate, disorderly, incompetent, or willfully negligent, shall be removed from the Work site.

GC-36.0 MATERIAL SUPPLIED BY THE CONTRACTOR

- 36.1 The Contractor shall use materials of Canadian manufacture to the fullest extent practicable.

GC-36.0 **MATERIAL SUPPLIED BY THE CONTRACTOR (continued)**

- 36.2 Unless otherwise specified, all materials shall be new, and of good quality. The Contractor shall furnish satisfactory evidence as to the kind and quality of materials. The Contractor shall be responsible for replacement at his own cost of all materials that are found to be defective in manufacture or that have become damaged in handling.
- 36.3 The Contractor shall be responsible for the safe storage of material furnished by or to him, and accepted by him, and intended for the Work, until it has been incorporated into the completed project.
- 36.4 Where, in the specifications or Drawings, any material, equipment or method is specified, the Contractor may not use another material, equipment or method unless the Engineer has issued to the Contractor a written authorization for the use. The Contractor shall submit in writing an application for review to the Engineer. All submissions shall be accompanied by sufficient data, including the following:
- a. Delivery
 - b. Manufacture
 - c. Technical Data and Specifications in accordance with the International System of Units (S.I.) - metric units.
 - d. Specified material, method or equipment for which the alternative is submitted.
 - e. Prices in relation to the material; method or equipment specified originally. Where required by the Engineer, samples shall be submitted.
- 36.5 Whenever alternatives, materials or methods are accepted for use on the Contract, whether as a result of an alternative proposal by the Contractor or an equivalent alternative submitted by the Contractor, the Contractor shall be responsible for making all consequent adjustments, at his own cost, to make the alternative fit into the Work as specified.

GC-37.0 **MATERIAL SUPPLIED BY THE OWNER**

- 37.1 The Owner undertakes to provide any such materials as are specifically shown in the Contract Documents as being provided by the Owner.
- 37.2 It shall be the responsibility of the Contractor to arrange for and schedule delivery and storage of these materials.
- 37.3 The Contractor's responsibility for material furnished by the Owner shall begin at the time and place of delivery thereof to the Contractor. Materials already on the site shall become the Contractor's responsibility on the date specified in the Notice to Proceed. The Contractor shall be responsible for unloading all owner-supplied material and the Contractor and the Engineer shall jointly examine material furnished by the Owner at the time and place of delivery to the Contractor, and shall prepare a statement of acceptance, specifically noting defective material, and rejecting any such defective material. The Contractor shall sign the statement of acceptance of materials into his charge. Any material furnished by the Owner and installed by the Contractor shall, if found defective, be replaced with sound material

GC-37.0 MATERIAL SUPPLIED BY THE OWNER (continued)

by the Contractor. The Contractor shall, at his own expense, furnish supplies, labour and facilities necessary to remove the defective material and install the sound material in a satisfactory manner.

GC-38.0 STORAGE FACILITIES AND USE OF PREMISES

- 38.1 The Contractor may use such facilities and areas as the Owner may be willing and able to designate for the storage of material and equipment for the job, without charge to the Contractor.
- 38.2 Should the Contractor require additional facilities or areas he shall make all the necessary arrangements with the owners and occupants of such other facilities or areas and shall pay all rentals and all damages caused by such occupancy and shall furnish good and sufficient releases by the owners or occupants of such land or premises, before Final Payment is made to him under the Contract.
- 38.3 The Contractor shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, bylaws, permits or directions of the Engineer and shall not unreasonably encumber the premises with his materials.
- 38.4 The Contractor shall enforce regulations regarding signs, advertisements, fires, smoking, and storage of inflammable material.
- 38.5 The Contractor shall not load or permit any part of a structure to be loaded in any way that will endanger its safety.

GC-39.0 SHOP DRAWINGS

- 39.1 The Contractor shall arrange for the preparation of clearly identified Shop Drawings and submit Shop Drawings in one of the following forms:
- a. One (1) copy of a reproducible transparency plus two (2) prints, or
 - b. Two (2) prints to be retained by the Engineer plus the number of copies required by the Contractor.
- 39.2 Shop Drawings shall be accurately drawn to scale sufficiently large to show all pertinent features of the item and its method of connection to the Work, and shall have sufficient space for the Contractor's stamp and the Engineer's stamp.
- 39.3 Shop Drawings shall be in accordance with the International System of Units (S.I.) metric units.

GC-39.0 SHOP DRAWINGS (continued)

- 39.4 Prior to submission to the Engineer, the Contractor shall review all Shop Drawings. By this review the Contractor represents that he has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and similar data or will do so, and that he has checked and coordinated each Shop Drawing with the requirements of the Work and of the Contract Documents. The Contractor's review of each Shop Drawing shall be indicated by stamp, with the date and signature of a responsible person.
- 39.5 The Contractor shall submit Shop Drawings to the Engineer for his review with reasonable promptness and in orderly sequence so as to cause no delay in the Work or in the work of other Contractors. If either the Contractor or the Engineer so requests, they shall jointly prepare a schedule fixing the dates for submission and return of Shop Drawings. At the time of submission, the Contractor shall notify the Engineer in writing of any deviations in the Shop Drawings from the requirements of the Contract Documents.
- 39.6 The Engineer will review and return Shop Drawings in accordance with a schedule agreed upon, or otherwise with reasonable promptness. The Engineer's review shall be for conformity to the design concept and for general arrangement only and such review shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings or of responsibility for meeting all requirements of the Contract Documents unless a specific deviation on the Shop Drawings has been approved in writing by the Engineer.
- 39.7 The Contractor shall make any changes in Shop Drawings which the Engineer may require consistent with the Contract Documents, and resubmit unless otherwise directed by the Engineer. When resubmitting, the Contractor shall notify the Engineer in writing of any revisions other than those requested by the Engineer.
- 39.8 Each Shop Drawing will be stamped by the Engineer with the following form of stamp;

REVIEWED ()
REVIEWED AS MODIFIED ()
REVISE AND RE-SUBMIT ()
NOT REVIEWED ()

This review, by TRUE Consulting Group, is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that TRUE Consulting Group approves the detailed design inherent in the Shop Drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the Shop Drawings, or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated to the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

GC-40.0 REJECTED WORK

- 40.1 Defective Work, which has been rejected by the Engineer as failing to conform to the Contract Documents, whether the result of poor workmanship, use of defective products or damage through carelessness or other act of omission of the Contractor, and whether incorporated in the Work or not, shall be removed promptly from the premises by the Contractor and replaced or re-executed promptly at the Contractor's expense.
- 40.2 Other Contractor's work destroyed or damaged by such removals or replacements shall be made good promptly at the Contractor's expense.
- 40.3 If, in the opinion of the Engineer, it is not expedient to correct defective Work or Work not done in accordance with the Contract Documents, the Owner may deduct from the Contract Price the difference in value between the Work as done and that called for by the Contract. The difference shall be determined in the first instance by the Engineer.

GC-41.0 USE OF COMPLETED PORTIONS OF THE WORK

- 41.1 The Owner shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or such portions of the Work may not have expired; but such taking possession of and use shall not be deemed an acceptance of the Work.
- 41.2 If such prior use increases the cost of the Work, the Contractor shall be entitled to such compensation as the Engineer in the first instance may determine.
- 41.3 If a planned taking possession of and use of portions of the Work has been stipulated in the Contract Documents, then the Contractor shall have no claim for compensation on that account.

GC-42.0 SAMPLES

- 42.1 The Contractor shall submit for the Engineer's approval such manufacturers' samples as the Engineer may reasonably require. Samples shall be labelled as to origin and intended use in the Work and shall conform to the requirements of the Contract Documents.

GC-43.0 CLEANUP AND FINAL CLEANING OF WORK

- 43.1 The Contractor shall maintain the Work in a tidy condition, free from accumulation of waste products and debris caused by his own operations.
- 43.2 When the Work is fully completed, the Contractor shall remove all surplus products, tools, construction machinery and equipment. He shall also remove any waste products and debris, other than those caused by the Owner, other Contractors or their employees. He shall generally leave the Work site in a neat and orderly condition.

GC-44.0 REMEDIES

- 44.1 The specific remedies to which the Contractor and the Owner may resort under the terms of the Contract Documents are cumulative and are not intended to be exclusive of any other remedies to which the Contractor and the Owner may be lawfully entitled in a case of breach or threatened breach of any covenant, term or provision of the Contract Documents.
- 44.2 The waiver by the Owner or Engineer of any breach of any covenant or condition in the Contract shall not be construed as a waiver of any future breach of the same terms of the Contract, and the approval of the Owner or Engineer of any act by the Contractor or Subcontractor requiring the Engineer or Owner's approval shall not be construed as an approval to any subsequent similar acts by the Contractor or Subcontractor.

GC-45.0 CONFLICTS

- 45.1 In the event of an inconsistency or conflict between the provisions of the Contract Agreement, the Specifications and Drawings, the General Conditions or the Tender Form, or any other Documents or writings, then the governing documents shall take precedence in the following order:
1. Contract Agreement
 2. Addenda
 3. Special Provisions
 4. Tender Form
 5. General Conditions
 6. Specifications
 7. Design Drawings
 8. Standard Drawings
 9. Instructions to Tenderers
 10. Other Documents and/or Writings