



REQUEST FOR PROPOSALS

RFP NO. PW 24-03

LIQUID FUEL TANK SYSTEM REMOVALS AND INSTALLATION

DATE OF ISSUE: May 3, 2024

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APPENDICES

- Specifications
- Drawings
- CCDC 2-2020 Contract
- CCDC Insurance Requirements

1 INTRODUCTION

The Township of Esquimalt (The Township) invites qualified Contractors to submit proposals for the removal of 2-4500L underground tanks, pumps and all associated electrical and piping and install 1 new double wall split compartment 7,500L per compartment ULC approved above ground steel tank. All new pumps, electrical, piping, card reader and overhead Davit.

2 BACKGROUND

The Township of Esquimalt Public Works operate, monitor, and maintain both Gasoline and Diesel dispensing pumps that service vehicles and equipment in Public Works, Parks, Emergency Services and Administration departments. This system is equipped with a Comptroller card reader system. Fuel is stored in 2 separate 4500L underground tanks. The entire system is due for replacement. The Public Works would like to move to one 15,000L 2-Compartment above ground steel tank. New card reader system and an overhead Davit to accommodate fueling on Drivers side of vehicle.

3 SCHEDULE

The proposed schedule for this Work is as follows:

- RFP issued on **May 3, 2024**.
- Mandatory Site Meeting on **May 8, 2024 at 1:00 pm local time**, Esquimalt Public Works yard located at 601 Canteen Road.
- RFP closes on **May 16, 2024 at 2:00 pm local time**.
- Proposals can be emailed to: ken.gawryluk@esquimalt.ca
- Completion of project on or before **November 15, 2024**.
- The preferred Proponent will need to demonstrate how the tasks as outlined in the Scope of Work will be achieved to meet this deadline.
- **Proponent must complete the work during the hours of 7:00 am-3:30 pm Monday to Friday. There will be times that certain tasks will have to be completed after 3:30 pm or on weekends. These after hour schedules will have to be pre-arranged with Public Works Manager.**
- It is the Township's expectation that work will progress in an organized and timely manner.

4 SCOPE OF WORK

Please refer to 1.02 **Work Covered by Contract Documents** in Section 01 11 00 Page 1 of Summary of Work.

1. Township Responsibilities:

- a. Cut asphalt and remove.
- b. Construct Concrete Pad that New Fuel Tank will be located.
- c. Backfill and Compact Trenches
- d. Repave

2. Proponent Responsibilities:

The Proponent is responsible for purchasing and installing all approved and certified materials and equipment as per specifications. Qualified personal shall complete the install of all components of the new system. All WorkSafe procedures along with the Public Works Health and Safety Policies shall be followed while on site.

5 PROPOSAL ENQUIRIES

All enquiries should be emailed and directed to:

Darryl Brizan
Lead Consultant
Email: DarrylBrizan@b4engineering.com
Telephone: 250-961-5208

6 SUBMISSION REQUIREMENTS

The Proponent shall provide their proposal submission on the attached schedule forms to the Township.

- **Title Page:**
 - Reference the RFP number and title, the firm's address, the name and number of the contact person and the date of the Proposal.
- **Proposal Price Summary**
- **Schedule 'A' - Methodology:**
 - The Proposal should be clear and concise with a methodology and corresponding task list that details the steps to; fully understand all issues and concerns, secure adequate data to be used to carry out the various activities required and address how all aspects of the Scope of Work will be carried out.

- **Schedule 'B' – Project Schedule:**
 - Provide a schedule that shows completion of the work based on the work plan and methodology provided.
- **Schedule 'C' – Experience and References:**
 - Provide a minimum of 3 to maximum of 5, past project experience. Information should provide details on past projects the Proponent has completed that are similar to the project and demonstrate the Proponent's suitability.
 - Each reference shall contain the following:
 - Name of the contact person.
 - Position of contact person held in the previous project
 - Phone number and email address
 - Project name/description/cost of project
- **Schedule 'D' – Sub-Contractors**
 - Proponent to identify all sub-contractors to be used to complete the work.
- **Schedule 'E' - Cost Estimate:**
 - Provide the expected costs to complete the project. The costs should be broken down by person, hours for each task listed in the methodology.
 - Provide an upset level for the project.
- **Schedule 'F' – Hourly Rates:**
 - Proponent to identify labour rates that are all inclusive for works not identified in the cost estimate.
- **Schedule 'G' - Addenda**

7 AVAILABLE INFORMATION

The following information is available to the Proponent:

- Drawings.
- Specifications.
- Environmental Report
- Environmental Code of Practice Documents
- CCDC 2-2020 Contract Documents
- CCDC Insurance Requirements

8 EVALUATION CRITERIA

The following criteria outlined below will be utilized in the evaluation of the Proposals.

- Cost of Project – 60 points
- Project Methodology and Task list – 15 points
- Schedule – 15 points
- Experience and Capacity– 10 points

9 GENERAL INSTRUCTIONS FOR THE PROPONENTS

The following instructions, terms and conditions apply to all Proposals related to this Request for Proposal.

- 9.1 The Corporation of The Township of Esquimalt expressly reserves rights to the following:
 - 9.1.1 To accept any Proposal;
 - 9.1.2 To reject any and/or all irregularities in the Proposal submitted;
 - 9.1.3 To reject any and/or all Proposals;
 - 9.1.4 To accept a Proposal that is not the lowest cost;
 - 9.1.5 To make decisions with due regard to quality of service and experience, compliance with requirements and any other such factors as may be necessary in the circumstances;
 - 9.1.6 To work with any Participant whose Proposal, in the opinion of the Management, is in the best interest of The Township;
 - 9.1.7 To cancel or re-issue the RFP.
 - 9.1.8 All Proposals must be submitted via email as a PDF attachment to Ken.Gawryluk@esquimalt.ca. The email submission subject line must clearly state "**RFP No. PW 24-03 – LIQUID FUEL TANK SYSTEM REMOVALS AND INSTALLATION**", and received by **May 16, 2024 at 2:00 PM local time**.

Please Note: Email submissions could be delayed or rejected by the Township of Esquimalt's email security system. The onus is on the Proponent to make sure the Township receives the email submission.

Maximum email submission size is 20 MB. If email is larger than 20 MB, please submit in multiple emails.
- 9.2 A Proposal will not be considered if it is deemed to be incomplete in any fashion or unsigned by the appropriate authority.
- 9.3 Any Proposal received after the hour and date specified will not be considered and will be returned unopened.
- 9.4 Telephoned Proposals will not be accepted.
- 9.5 Modification of a Proposal after the RFP closing date will result in the return of the Proposal.
- 9.6 Any contract that may be entered into as a result of this Proposal will be subject to the laws of the Province of British Columbia.
- 9.7 It is the responsibility of the Proponent to thoroughly examine these documents and satisfy itself as to the full requirements of this RFP.

- 9.8 While The Township has used considerable effort to ensure an accurate representation of information in this RFP, the information contained herein is supplied solely as a guideline for Proponents. The information is not guaranteed to be accurate, nor is it necessarily comprehensive or exhaustive. The Township will assume no responsibility for any oral information or suggestion(s).
- 9.9 Proponents are solely responsible for their own expenses in preparing a response and for subsequent negotiations, if any. If The Township elects to reject all responses, The Township will not be liable to any Proponent for any claims, whether for costs or damages incurred by the Proponent in preparing the response, loss of any anticipated profit in connection with any final contract, or any other matter whatsoever.
- 9.10 All documents, reports, proposal submissions, working papers or other materials submitted to The Township shall become the sole and exclusive property of The Township and as such, are subject to Freedom of Information Legislation. To request documentation confidentiality, proponents must submit a covering letter, with their proposal, detailing the specifics of their request.
- 9.11 Except as expressly and specifically permitted in these General Instructions to Proponents, no Proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in the RFP, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.
- 9.12 The Proponent warrants that the Proponent is not employed by The Township, nor is an immediate relative of such an employee, if the goods or services to be supplied under this Proposal are intended to be supplied to the department in which such employee works.
- 9.13 If the Proponent is a company, the Proponent warrants that none of its officers, directors or employees with authority to bind the company is an immediate relative of employees of The Township, if the goods or services to be supplied under this proposal are intended to be supplied to the department in which such employee works.
- 9.14 In this section "Immediate Relative" means a spouse, parent, child, brother, sister, brother-in-law, or sister-in-law or a municipal employee.
- 9.15 If any director, officer, employee, agent or other representative of a Proponent makes any representation or solicitation to any Mayor, Councillor, officer or employee of The Township with respect to the Proposal, whether before or after the submission of the Proposal, The Township shall be entitled to reject or not accept the Proposal.
- 9.16 The key personnel named in the Proponents RFP response, shall remain in these key positions throughout the project. In the event that key personnel leave the firm, or for any unknown reason are unable to continue fulfilling their role, the Proponent must propose a suitable replacement, and obtain written consent from The Township. Acceptance of the proposed replacement is at the sole discretion of The Township.
- 9.17 Any and all addendums to this RFP opportunity will be emailed directly to the proponents. It is the sole responsibility of participants to make sure that they are in receipt of all addendums prior to the RFP closing.
- 9.18 Proponents responding to this competitive process agree to the terms and conditions of the Proposal opportunity as issued by The Township. Submissions shall not contain any alterations to the posted document other than entering data in the spaces provided or including attachments as necessary. Participants who alter the document as issued may be disqualified from this competition.

- 9.19 The Proponent shall indemnify and save harmless The Township and its officials, officers, employees and agents from any claim, lawsuit, liability, debt, demand, loss or judgment (including costs, defence expense and interest) whatsoever and howsoever arising either directly or indirectly as a result of the granting of this contract or the use of The Township's property or facilities.
- 9.20 The Proponent shall waive all rights or subrogation or recourse against The Township as a result of the granting of this contract or the use of The Township's property or facilities.
- 9.21 The Proponent shall indemnify and pay The Township promptly, on demand for any loss or damage to The Township's property and facilities arising either directly or indirectly as a result of the use of the property or facilities under the terms of this contract.
- 9.22 The successful proponent must possess an inter-municipal or non-resident business licence and will be required to provide evidence of same.
- 9.23 The Proponent must be registered and remain in good standing, throughout the terms of this contract with the WorkSafe BC and will be required to provide evidence of same.
- 9.24 INSURANCE
- 9.24.1 The Proponent shall, at their own expense, provide and maintain until the completion of the Project the following insurance in a form acceptable to The Township with an insurer licensed in British Columbia:
- | | |
|--|----------------|
| 9.24.1.1 Comprehensive General Liability Insurance | \$2,000,000.00 |
| 9.24.1.2 Professional Liability | \$1,000,000.00 |
- 9.24.2 The Proponent shall provide and maintain Comprehensive General Liability Insurance with a minimum limit of \$2,000,000 and Professional Liability with a minimum limit of \$1,000,000 inclusive per occurrence, for bodily injury, death and property damage. Such policy shall include:
- 9.24.2.1 The Township and its officers, employees, officials, agents, representatives and volunteers as Additional Insured
- 9.24.2.2 Cross liability and a waiver of subrogation or recourse against The Township
- 9.24.2.3 Thirty (30) days prior written notice of cancellation or reduction in coverage in favour of The Township, to be delivered by registered mail to the attention of the Risk Manager at the address of Municipal Hall.
- 9.24.3 The Proponent shall be responsible for any deductibles or reimbursement clauses within the policy.
- 9.24.4 The Proponent shall provide The Township with a Certificate of Insurance prior to the commencement of the Proponent programs and within two weeks of the expiry date of the policy to evidence renewal of the policy and continuous coverage.
- 9.24.5 The Township shall be under no obligation to verify that the coverage outlined in Clause 9.25.2 is adequate for the needs of the Proponent.
- 9.25 The successful Proponent will enter into a contract in the format as in the attached in Appendix D, including all conditions included in the RFP.

9.26 All Proposals shall be irrevocable to remain open for acceptance for at least (60) sixty days after closing time, whether or not another Proposal has been accepted.

9.27 BEST OFFER

9.27.1 The Township will notify the successful Proponent that its proposal has been selected as the Best Offer.

9.27.2 A contract is formed only when the owner issues a purchase order to the selected Proponent who has submitted the Best Offer.

PROPOSAL PRICE SUMMARY

The undersigned having carefully read the Instructions to Proponents, Schedules "A through G" and Scope of Work hereby offers to supply the labour and materials listed in accordance with said requirements at the following price:

Company Name: _____

Address: _____

TOTAL PRICE: \$ _____ (carried forward from Schedule "E")

DATED THIS _____ DAY OF _____, 2024

Signature of Proponent

Name (please print)

SCHEDULE “B” – PROJECT SCHEDULE

Indicate a schedule with bar chart with major item descriptions and duration.

The Proponent is to base the schedule on the assumption that Notice of Award would be issued on May 24, 2024.

Proponent may attach a schedule providing it is in the similar format to the table displayed below.

Activity	Project Schedule (weeks)											
	1	2	3	4	5	6	7	8	9	10	11	12

TOTAL PROPOSED DURATION = _____ WEEKS

SCHEDULE "C" – EXPERIENCE AND REFERENCES

Project Name:	
Date of Work:	
Project Description:	
Reference:	

Project Name:	
Date of Work:	
Project Description:	
Reference:	

Project Name:	
Date of Work:	
Project Description:	
Reference:	

Project Name:	
Date of Work:	
Project Description:	
Reference:	

SCHEDULE “E” – COST ESTIMATES

Work Area	Description	Quantity	Unit Price	Total (exclude taxes)
15,000L ULC approved above ground steel tank				
Card reader capable of integrating information with the Townships Finance department				
Overhead Davit to support dispensing nozzles				
			Sub Total	\$
			PST	\$
			GST	\$
Carried forward to Proposal Price Summary on page 12			TOTAL	\$

SCHEDULE "F" – HOURLY RATES

Proponent to identify labour rates that are all inclusive for works not identified in the cost estimate.

	Labour Type	Hourly Rate (exclude taxes)
1.		
2.		
3.		
4.		

SCHEDULE "G" – ADDENDA

(See "Instructions to Proponent's" Section 9.17)

Acknowledgement is hereby made of receipt and inclusion of the following Addenda to the contract documents.

Addendum No. 1	Date _____	No. of Pages _____
Addendum No. 2	Date _____	No. of Pages _____
Addendum No. 3	Date _____	No. of Pages _____

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TOWNSHIP OF ESQUIMALT
PUBLIC WORKS
B4 1271-01

SPECIFICATION
TITLE PAGE

SECTION 00 00 00
PAGE 1
2024-01-10

PROJECT TITLE LIQUID FUEL TANK SYSTEM REMOVALS AND INSTALLATIONS - TOWNSHIP OF
 ESQUIMALT PUBLIC WORKS YARD - 604 CANTEEN ROAD

PROJECT NUMBER B4 ENGINEERING INC 1271-01

PROJECT DATE 2024-01-10

END OF SECTION

SECTION	TITLE	APPROVAL DATE
00 01 10	Table of Contents	2023-11-06
00 01 15	List of Drawing Sheets	2018-07-23
01 11 00	Summary of Work	2018-10-29
23 11 13	Facility Fuel Oil Piping	2009-12-31
33 56 13	Aboveground Fuel - Storage Tanks	2023-05-03

APPENDICES

Appendix A Card Reader Printout Example sheets

Appendix B Site Photos

Appendix C Design Drawings

Appendix D Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products PN1326

END OF SECTION

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 01 78 00 - Closeout Submittals.
- .2 Section 23 11 13 - Facility Fuel-Oil Piping.
- .3 Section 26 05 00 - Common Work Results Electrical.
- .4 Section 33 56 13 - Aboveground Fuel Storage Tanks.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract includes the removal of existing underground liquid fuel storage and dispensing systems and installation of replacement aboveground liquid petroleum storage tank and dispensing systems at the Township of Esquimalt Public Works Yard at 601 Canteen Road.
- .2 Contractor shall obtain applicable permits and utility locates for the Work.
- .3 Contractor shall be qualified to conduct fuel storage tank removal and installation work as a liquid fuels' contractor.
- .4 The contractor shall perform the following fuel tank system removal works:
 - .1 Remove and dispose of the 2-4500L underground fuel tanks.
 - .2 Remove and dispose underground product piping connected to the underground fuel tank that is no longer being used.
 - .3 Remove and dispose all existing storage tank appurtenances, including hoses, pumps, bollards, and associated concrete islands.
- .5 The following identifies the mechanical work required relating to the petroleum storage tank system. The work must be completed in accordance with these specifications, drawings, and the Federal petroleum storage tank regulations with supporting documentation:
 - .1 Install one (1) new dual fuel diesel and gasoline, double walled steel storage tank with a capacity not less than 7500L diesel and 7500L gasoline.
 - .2 The tank is required to be constructed to CAN/ULC standard S601 and be double walled equipped with vacuum monitoring. The tanks shall be equipped from the manufacturer with adequately sized emergency vents. The tanks must come equipped with spill containment devices for fuel containment during refueling activities. Each tank shall be equipped with a galvanized steel staircase to access the fill connection, complete with handrails and non-slip, treaded, galvanized steel steps and landing.
 - .3 Inside the spill containment manhole there shall be two (2)

connection points, one for dipping the tank with manufacturer supplied dipstick, and the other for attaching the delivery hose via liquid-tight fitting. The liquid tight fill connections must be capped with liquid-tight fittings when not in use. Tags and labels are required to be provided on the new spill containers.

- .4 Install a ULC-approved mechanical overfill prevention valve on each tank fill pipe. Install each overfill valve such that it will prevent the tank compartment from being filled past 95% of its maximum storage capacity as per CPPI recommended practices.
- .5 Install new normal and emergency vents on each tank, sized to meet the requirements as governed by the CAN/ULC S601 standard.
- .6 Install new UL-listed, float-type manual tank level gauges on each tank complete with drop tubes. Each manual tank level gauge shall read in cm.
- .7 Install a new steel dispenser sump manufactured to ULC/ORD C107.21 standard with integral shear valve bracket mounting rails. All openings in sump for piping and electrical shall use petroleum rated flexible entry boots sized according to the associated pipe, conduit, or cable.
- .8 For each tank, install a new normally closed solenoid valve on each product line above the top of the tank. Both solenoid valves are to be controlled by the dispenser.
- .9 Install a new inline vertical check valve with shear groove on each product line inside the new steel dispenser sump. Each shear valve is to be mounted using manufacturer approved shear valve bracket kits.
- .10 Any air elimination components on the new dispenser shall be plumbed back to the tank using stainless steel tubing and swage type stainless steel fittings supported from the new product piping.
- .11 Install one (1) new dual-product dispenser at the new fuel dispensing location, complete with two (2) pumps to dispense diesel and gasoline products. The dispenser shall be equipped with two (2) ULC-listed non-scuff marine hoses certified for use with petroleum products and intended for cold temperature applications. Gasoline hose and associated hardware shall be NPS 3/4, and diesel associated hardware shall be NPS 1. The third pump shall be connected to a new underground 40mm double wall pipe to the generator day tank located inside the public works building. Install a new re-attachable breakaway coupling on each dispenser hose. Each dispenser nozzle shall be interlocked such that only one product can be dispensed at one time.

- .12 For each product hose, install a high-hose retraction mechanism hose storage devices with a hose length of 16m. The 2 hoses will be attached to a swing boom assembly as shown on the drawings so that vehicles can be serviced from the driver's side with the pumps located on the passenger side.
- .13 Install a flow limiter device on each product hose to restrict the dispensing flow rate to 38 litres per minute (10 usgpm).
- .14 Provide and install all control wiring, including terminations and programming, to satisfy the intent of and the requirements of the design.
- .15 Provide fire extinguishers, safety signage, labels, and tags for equipment.
- .16 Install a new fuel storage tank monitoring system, including tank monitoring panel, probes, sensors, and ancillary devices (overfill alarm, emergency stop button, etc.). Wiring and conduit installation shall be completed by Division 26.
- .17 Install a new Fuel Management System ("Cardlock". The Fuel Management system shall have the ability to prepare custom reports including vehicle summary report, operator activity report, product usage report, unit activity report, tank activity report, PCU summary report, product usage summary report & vehicle performance report as shown in appendix A. Alternate report formats need to be authorized by the Township Of Esquimalt Public works Department.
- .18 Provide all required fittings, flex hoses, supports, devices, products, and equipment to satisfy the intent of the design.
- .19 The Contractor is to fill each new fuel storage tank with diesel and gasoline as appropriate to 85% maximum capacity prior to turning over the system to the Owner.
- .6 The following identifies the civil work required:
 - .1 Install new traffic protection bollards. (NIC by OWNER)
 - .2 Install new concrete tank pad, concrete containment curbing around the tank pad, and concrete fueling apron. (NIC by OWNER)
- .7 The following identifies the electrical work required:
 - .1 Conduct the necessary electrical requirements for the installation of suction pumps and sensors for each dispenser.
 - .2 Supply and install all conduits and wiring between existing power panels and new fuel storage, dispensing, monitoring, and fuel management equipment.
 - .3 Supply and install conduits and wiring between existing power panel and new tank monitoring panels in building.
 - .4 Supply and install all interconnecting conduit and wiring between the fuel monitoring system panel and the fuel storage system probes, sensors, and ancillary devices (overfill alarm, emergency stop button, etc.).

- .5 Supply and install all interconnecting conduit and wiring between the fuel management system ("cardlock"), fuel dispensers, and tank monitoring panel.
- .6 Provide necessary grounding for all equipment.
- .7 Provide all necessary conduit, boxes, and seals.
- .8 Install all equipment as specified in the specifications and drawings to satisfy the intent of the design.
- .9 Provide all fittings, valves, and equipment necessary to complete the work described in the specifications and design drawings, whether explicitly shown or not.
- .10 Provide system commissioning, complete with manufacturer's involvement. Commissioning forms must be reviewed by the Engineer and owner and feedback implemented before any final system commissioning occurs.
- .11 Assist the owner with training on-site staff in new system operation after commissioning is complete.
- .12 Provide redline markup drawings to the engineer for development of as-built drawings. As-built drawings must be developed before any fuel is placed inside the new fuel storage tank system.
- .13 Provide all documents requested by engineer and owner to assist with producing Operation and Maintenance manuals and closeout documentation after construction work is substantially complete.
- .14 Refer to appendices for the design drawings for further details.

1.03 CONTRACT METHOD

- .1 Construct Work under stipulated price contract CCDC 2 (2020).

1.04 WORK BY OTHERS

- .1 Co-operate with other Contractors in carrying out their respective works and carry out instructions from engineer and owner.
- .2 Co-ordinate work with that of subcontractors. If any part of work under this Contract depends for its proper execution or result upon work of subcontractor, report promptly to engineer, in writing, any defects which may interfere with proper execution of Work.

1.05 WORK SEQUENCE

- .1 Complete all Work in these specifications before May 31, 2023.
- .2 Do not decommission existing underground fuel tanks and pumps until new fuel system has been installed and successfully commissioned.
- .3 Create a Progress Schedule and co-ordinate with engineer and owner on site during construction. Updates during construction must occur at least twice per month.

1.06 CONTRACTOR USE OF PREMISES

- .1 Limit use of premises Work to allow:
 - .1 Public works staff use and occupancy.
 - .2 Work by other contractors.
 - .3 Access for fuel delivery operators.
- .2 Co-ordinate use of premises under direction of the engineer and owner.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

- .4 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
- .5 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by engineer or owner on site.
- .6 At completion of operations condition of existing work shall be equal to or better than that which existed before new work started.

1.07 PUBLIC WORKS STAFF OCCUPANCY

- .1 PUBLIC WORKS employees will occupy premises during entire construction period for execution of normal operations.
- .2 Co-operate with owner in scheduling operations to minimize conflict and to facilitate staff usage.

1.08 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDINGS

- .1 Execute work with least possible interference or disturbance to building operations and normal use of premises. Arrange with engineer and owner on site to facilitate execution of work.
- .2 Accept liability for damage, safety of equipment and overloading of existing equipment.

1.09 EXISTING SERVICES

- .1 Notify the engineer and owner of intended interruption of services and obtain required permissions.
- .2 Where Work involves breaking into or connecting to existing services, give owner and engineer 72 hours' notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by the owner or engineer, and within the requirements of the owner on site, with minimum disturbance to site operations.

- .3 Provide alternative routes for personnel and vehicular traffic as required by the engineer and owner on site.
- .4 Establish location and extent of service lines in area of work before starting Work. Notify engineer and owner of findings.
- .5 Submit schedule to and obtain approval from engineer and owner for any shut-down or closure of active service or facility including power and communications services, upon contract award. Adhere to approved schedule and provide notice to affected parties.
- .6 Provide temporary services when directed by engineer or owner on site to maintain critical building systems.
- .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- .8 Where unknown services are encountered, immediately advise engineer and owner, and confirm findings in writing.
- .9 Protect, relocate, or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction and advise the engineer and owner immediately.
- .10 Record locations of maintained re-routed and abandoned service lines.
- .11 Construct barriers and erect temporary chain-link fencing in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

1.10 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .1 Contract Documents.
 - .2 Specifications and Drawings.
 - .3 Permit Application/Approval.
 - .4 Addenda.
 - .5 Reviewed Shop Drawings.
 - .6 List of Outstanding Shop Drawings.
 - .7 Change Orders.
 - .8 Other Modifications to Contract.
 - .9 Field Test Reports.
 - .10 Copy of Approved Work Schedule.
 - .11 Health and Safety Plan and Other Safety Related Documents.
 - .12 Other documents as specified.
 - .13 Underground service utility locates.

END OF SECTION

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 23 05 05 - Installation of Pipework

1.02 REFERENCE STANDARDS

- .1 American Society of Mechanical Engineers (ASME):
 - .1 ASME-B16.3-[2006], Malleable-Iron Threaded Fittings: Classes 150 and 300
 - .2 ASME-B16.9-[2007], Factory-Made Wrought Steel Buttwelding Fittings
- .2 ASTM International (ASTM):
 - .1 ASTM A47/A47M-[99(2004)], Standard Specification for Ferritic Malleable Iron Castings
 - .2 ASTM A53/A53M-[07], Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless
 - .3 ASTM B61-[08], Standard Specification for Steam or Valve Bronze Castings
 - .4 ASTM B75M-[99(2005)], Standard Specification for Seamless Copper Tube [Metric]
- .3 Canadian Environmental Protection Act (CEPA):
 - .1 CCME PN 1326-[2008], Environmental Code of Practice for Aboveground and Underground Storage Tank Systems for Petroleum Products and Allied Petroleum Products
- .4 CSA Group (CSA):
 - .1 CSA B139-[09], Installation Code for Oil Burning Equipment
 - .2 CSA B140.0-[03], Oil Burning Equipment: General Requirements
 - .3 CSA C282-[05], Emergency Electrical Power Supply for Buildings
- .5 Green Seal Environmental Standards (GSES):
 - .1 Standard GS-11-[2008, 2nd Edition], Paints and Coatings
- .6 Health Canada / Workplace Hazardous Materials Information System (WHMIS):
 - .1 Safety Data Sheets (SDS)
- .7 Manufacturers Standardization Society of the Valve and Fitting Industry (MSS):
 - .1 MSS-SP-80-[08], Bronze Gate, Globe, Angle and Check Valves
- .8 National Association of Corrosion Engineers (NACE):
 - .1 NACE SP0169-[2007], Control of External Corrosion on Underground or Submerged Metallic Piping Systems
- .9 National Research Council Canada (NRC):
 - .1 National Fire Code of Canada [2015] (NFC)
- .10 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards:

- .1 SCAQMD Rule 1113-[2016], Architectural Coatings
- .11 ULC Standards (ULC):
 - .1 CAN/ULC S603.1-[03], External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids
 - .2 ULC ORD-C107.12-[1992], Line Leak Detection Devices for Flammable Liquid Piping

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-Installation Meetings:
 - .1 Convene pre-installation meeting [one] week before beginning [work of this Section] [and] [on-site installations] in accordance with Section 01 31 19 - Project Meetings.
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Coordination with other building subtrades.
 - .4 Review manufacturer's installation instructions and warranty requirements.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's product literature, specifications, and datasheets for piping, fittings and equipment and include product characteristics, performance criteria, physical size, finish and limitations.
 - .1 Indicate on manufacturer's catalogue literature the following: [valves].
 - .2 Provide WHMIS SDS.
- .3 Indicate VOC's for adhesive and solvents during application and curing.
- .4 Test Reports:
 - .1 Submit certified test reports from approved independent testing laboratories indicating compliance with specifications for specified performance characteristics and physical properties.
- .5 Certificates:
 - .1 Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .6 Manufacturers' Instructions: submit manufacturer's installation instructions.
- .7 Sustainable Design Submittals: in accordance with Section [01 35 21 - LEED Requirements].

- .1 Low-Emitting Materials: provide listing of [adhesives and sealants] [and] [paints and coatings] used in building, comply with VOC and chemical component limits or restriction requirements.

1.05 CLOSEOUT SUBMITTALS

- .1 Submit maintenance and engineering data for incorporation into manual specified in Section Section 01 78 00 - Closeout Submittals.

1.06 QUALITY ASSURANCE

- .1 Ensure piping is installed by [company] [individual] authorized by authority having jurisdiction.

2 PRODUCTS

2.01 FILL VENT AND CARRIER PIPE

- .1 Materials as per [CSA B139] [CEPA SOR/2008-197] [NFC].
- .2 Steel: to ASTM A53/A53M, Schedule 40, continuous weld or electric resistance welded, screwed.
- .3 Copper: type [K] [L], soft copper tubing, to ASTM B75M, in [long] lengths.

2.02 OUTER CASING

SPEC NOTE: For buried installations see CCME PN 1326.

- .1 [_____].

2.03 STEEL PIPE COATING

- .1 Bituminous paint: in accordance with manufacturer's recommendations.
- .2 [Primers] [Paints] [Coating]: in accordance with manufacturer's recommendations for surface conditions.
 - .1 Primer: maximum VOC limit [to Standard GS-11] [to SCAQMD Rule 1113].
 - .2 Paints: maximum VOC limit [to Standard GS-11] [to SCAQMD Rule 1113].

2.04 JOINTING MATERIAL

- .1 Screwed fittings: [Teflon tape] [or] [pulverized lead paste].
- .2 Brazed fittings: [85/15].
- .3 Outer casing: [_____].

2.05 FITTINGS

- .1 Steel:
 - .1 Malleable iron: screwed, banded, Class 150 to ASME-B16.3

- .2 Welding: butt-welding to ASME-B16.9
- .3 Unions: malleable iron, brass to iron, ground seat, screwed, to ASTM A47/A47M
- .4 Nipples: Schedule 40, to ASTM A53/A53M
- .2 Copper:
 - .1 Piping: brazed type.
 - .2 Connections to equipment: compression.

2.06 GATE VALVES

- .1 NPS 2 and under, screwed bonnet: rising stem: to MSS-SP-80, Class 125, 860 kPa, bronze body, solid wedge disc as specified under Section [23 05 23.01 - Valves - Bronze].

2.07 GLOBE VALVES

- .1 NPS 2 and under, screwed: to MSS-SP-80, Class 125, 860 kPa, bronze body, screwed over bonnet, renewable [bronze disc] [composition disc suitable for oil service] as specified under Section [23 05 23.01 - Valves - Bronze].
 - .1 Lockshield handles: as indicated.

2.08 BALL VALVES

- .1 NPS 2 and under: bronze body, screwed ends, TFE seal, hard chrome ball, 4 MPa, WOG as specified under Section [23 05 23.01 - Valves - Bronze].

2.09 SWING CHECK VALVES

- .1 NPS 2 and under, screwed: to MSS-SP-80, Class 125, 860 kPa, bronze body, [bronze swing disc,] [renewable composition disc suitable for oil service], screw in cap, regrindable seat as specified under Section [23 05 23.01 - Valves - Bronze].

2.10 LUBRICATED PLUG COCKS

- .1 NPS 2 and under, screwed: to ASTM B61, Class 150, 1 MPa, bronze body

2.11 FUEL OIL TRANSFER PUMPS

- .1 [Two] positive displacement self-priming, rotary [gear] [screw] type, direct driven from [TEFC] motor, mounted on common base. Complete with mechanical seal, permanently sealed ball bearings, relief valve, [compound gauge on inlet], [pressure gauge on discharge].
- .2 Capacity:
 - .1 Pumped fluid: [number 2] fuel oil.
 - .2 Flow rate: [as indicated]L/h; [_____] kPa discharge pressure.
 - .3 Motor: [_____] [hp] [kW], [_____] V, [_____] ph., [60] Hz, [_____] r/min.

2.12 OIL FILTER

- .1 [Duplex type] replaceable cartridge type as recommended by oil burner manufacturer.
- .2 Furnish spare filter cartridge.

2.13 CATHODIC PROTECTION

- .1 Supply cathodic protection in accordance with Section [26 42 00.01 - Telethermics - Cathodic Protection].

2.14 OIL METERS

- .1 Accuracy: tested and certified by manufacturer for accuracy within plus or minus 0.2% between 20% and 100% rated capacity.
- .2 Capacity: [_____] L/s; [_____] kPa pressure drop.

3 EXECUTION

3.01 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.02 PIPING

- .1 Install piping in accordance with Section [23 05 05 - Installation of Pipework], supplemented as specified.
- .2 Install oil piping system in accordance with [NFC] [CSA B139] [and] [CSA B140.0].
- .3 Slope piping down in direction of storage tank unless otherwise indicated.
- .4 Underground piping to be protected in conformance with CAN/ULC-S603.1
- .5 Above ground piping to be protected from physical impact due to impact.
- .6 Piping inside building:
 - .1 Ensure piping in solid flooring is installed to [CSA B139] [authority having justification].
 - .2 Use [flare joint] [approved fitting] to CSA B139 for [steel] [copper] [brass] piping.
 - .3 Install filter, gate valve, and fire valve at burners.
- .7 Fill, vent, suction [and return] piping outside building:
 - .1 Steel piping welded throughout except at tanks where electrically isolating fittings are used.
 - .2 Grading: slope piping at [1]% minimum back to tanks.
- .8 Install buried piping in [outer casings] [double-wall piping] to [CSA B139] [authority having jurisdiction].

- .9 Piping at tanks:
 - .1 Suction: terminate [150] mm from bottom of tank [with foot valve and strainer].
 - .2 Return: terminate [_____] mm from bottom of tank [with return bend].
 - .3 Comply with [CSA B139] [authority having jurisdiction] for piping for venting at tanks [including venting whistle] [venting alarm].
 - .4 Fill pipes: install to comply with [CSA B139].
 - .1 Include [vapour] [liquid] tight [tamperproof] cover.
 - .2 Equip fill pipes on tanks with capacity greater than 5000 L with liquid and vapour tight connections.
 - .5 Dipstick: extend tube to within [150] mm from bottom of tank. Terminate at grade with [lockable] cap and chain, and watertight cover.
- .10 Interconnections between multiple tanks:
 - .1 Interconnect vent, suction, [return] to ensure equal level in tanks.
 - .2 Valve to permit isolation of tanks without interfering with use of other tanks.
 - .3 Mount tanks on common foundation
 - .4 Align tank tops at same elevation.
 - .5 Connect inlet fill pipe to one tank only, [unless indicated].
 - .6 Install vent whistle to tank with vent pipe connected.
 - .7 Ensure connecting pipe between tank bottoms is at least equal to size of inlet pipe.
 - .8 Vent each tank separately from top.
 - .9 Terminate vent pipe to exterior location.
 - .10 Join separate vents to common vent pipe cross-connected to tops of each tank using vent manifold pipe located above highest liquid level in tanks.
 - .11 Size common vent and manifold pipes to [CSA B139].
- .11 Clearly label piping runs in legible form indicating;
 - .1 Piping product content.
 - .2 Direction of flow.
 - .3 Identify transfer points in piping systems to CPPI Colour-Symbol System to Mark Equipment and Vehicles for Product Identification

3.03 VALVES

- .1 Install valves with stems upright or horizontal unless approved otherwise by [Departmental Representative] [DCC Representative] [Consultant].
- .2 Install [gate] [ball] valves at branch take-offs, to isolate pieces

of equipment and as indicated.

- .3 Install globe valves for balancing and in by-pass around control valves.
- .4 Install swing check valves [on discharge of pumps] and as indicated.
- .5 Install plug cocks as indicated.

3.04 OIL TRANSFER PUMPS

- .1 Equip pumps with check valve installed below suction pump to permit contents of pipe to drain back to storage tank if suction is broken.
- .2 Install as indicated.
- .3 Install [gate] [ball] -valves on inlet and discharge connections.
- .4 Install pressure gauge at pump discharge, [compound gauge on pump inlet] connection.
- .5 Install relief valve in pump discharge piping with relief valve discharge pipe [to return line to tank] [as indicated].

3.05 OIL FILTERS

- .1 Install [ULC approved] [as indicated] in supply line to.
- .2 At time of acceptance, replace filter cartridge with new.

3.06 OVERFILL AND SPILL PROTECTION

SPEC NOTE: Select most appropriate method of overfill and spill protection. Suggested methods include (a) spill and catchment basin; (b) prevention of any further fill at 95% of tank capacity; (c) alarm at 90% of tank capacity; (d) restrict flow at 90% of tank capacity.

- .1 To [CSA B139].

3.07 LEAK DETECTION

- .1 Install line leak detector to ULC ORD C107.12
- .2 Install secondary containment systems that will allow leaks to accumulate in containment sump available for visual inspection.

3.08 CATHODIC PROTECTION SYSTEM

- .1 Install in accordance with Section [26 42 00.01 - Telethermics - Cathodic Protection].
- .2 Cathodic protection to [CEPA] [NACE SP0169].
- .3 Use electric isolating type fittings [and electric isolating components for tank manhole covers] supplied with fuel oil storage tanks to isolate piping from tanks.
- .4 Isolate buried piping into separate sections as indicated.
- .5 Isolate buried piping systems from remainder of system inside building.

- .6 Coat buried steel outer casing piping, before installation, with electrically resistant coating highly resistant to mechanical damage.
 - .1 Ensure 100% coverage.
 - .2 Repeat after installation at joints and damaged parts only.
- .7 Inspect buried steel outer casing piping and repair damaged coatings using same materials as original coatings.

3.09 SITE QUALITY CONTROL

- .1 Site Tests and Inspections:
 - .1 Test system to CSA B139 and CSA B140.0 and authorities having jurisdiction
 - .2 Isolate tanks from piping pressure tests.
 - .3 Maintain test pressure during backfilling.
- .2 Manufacturer Services:
 - .1 Have manufacturer of products, supplying materials for work of this Section, review work involved in handling, installation, protection and cleaning, of its products and submit written reports, in acceptable format, to verify compliance of work with Contract.
 - .2 Provide manufacturer's site services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
 - .3 Schedule site visits, to review work, at stages listed:
 - .1 After delivery and storage of products, and when preparatory work, or other work, on which the work of this Section depends, is complete but before installation begins.
 - .2 [Twice] during progress of work at [25]% and [60]% complete.
 - .3 Upon completion of the work, after cleaning is carried out.
 - .4 Obtain reports, within [3] days of review, and submit, immediately, to [Departmental Representative] [DCC Representative] [Consultant].
- .3 Performance Verification: refer to Section [23 08 13 - Performance Verification HVAC Systems].
- .4 Refer to Section [_____] for commissioning requirements.

3.10 CLEANING

- .1 Clean in accordance with Section [23 08 16 - Cleaning and Start-Up of HVAC Piping Systems] [and] [manufacturer's recommendations], supplemented as follows:
 - .1 Flush after pressure test with [number 1] [number 2] fuel oil for a minimum of [two] hours. Clean strainers and filters.
 - .2 Dispose of fuel oil used for flushing out in accordance with requirements of authority having jurisdiction.

- .3 Ensure vents from regulators, control valves are terminated in approved location and are protected against blockage and damage.
- .4 Ensure entire installation is approved by authority having jurisdiction.
- .5 Clean in accordance with Section 01 74 00 - Cleaning.

END OF SECTION

1 GENERAL**1.01 RELATED REQUIREMENTS**

- .1 Section 23 11 13 - Facility Fuel Oil Piping

1.02 DEFINITIONS

- .1 Above Ground Tank: Means a tank that operates at atmospheric pressure and that has all of its volume either above ground or encased within an unfilled secondary containment.
- .2 Certification Mark: Means the mark, such as a tag, label, plate or embossing, on or affixed to a tank or a component of a storage tank system, certifying that the tank or component conforms to the standards of a certification organization accredited by the Standards Council of Canada, or conforms to the standards of the American Petroleum Institute, or ASTM International.
- .3 Coating Application Specialist: An individual who performs surface preparation and application of protective coatings and linings to steel and concrete surfaces of complex industrial structures.
- .4 Storage Tank System: Means a tank or commonly connected tanks and all piping, vents, pumps, sumps, diking, overfill protection devices, spill containment devices, and oil-water separators. [For systems located at an airport, the system ends at the pump discharge.]
- .5 Transfer Area: Means the area around the connection point between a delivery truck, railcar, aircraft, or vessel and a storage tank system of which the tanks have an aggregate capacity of more than 2500 L. Transfer areas from systems with tank capacities of more than 2500 L must be designed to contain spills that occur during the transfer process. [New storage tank systems, transfer areas must be designed to be compliant before they are put into service.]

1.03 REFERENCE STANDARDS

- .1 American Petroleum Institute (API):
 - .1 API STD 650, Welded Tanks for Oil Storage [Thirteenth Edition, Includes Errata 1 (2021)]
 - .2 API RP 651-[2014], Cathodic Protection of Aboveground Petroleum Storage Tanks
 - .3 API STD 653, Tank Inspection, Repair, Alteration, and Reconstruction [Fifth Edition, Includes Addendum 1 (2018), Addendum 2 (2020), and Errata 1 (2020)]
- .2 Canadian Council of Ministers of the Environment (CCME):
 - .1 CCME-PN1326-[2003], Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied

Petroleum Products

- .3 Department of Justice Canada:
 - .1 Canadian Environmental Protection Act, [1999] (CEPA)
- .4 CSA Group (CSA):
 - .1 CSA B139 Series:[19], Installation Code for Oil Burning Equipment
- .5 Association for Materials Protection and Performance (AMPP) (Formerly NACE International):
 - .1 ANSI/NACE No. 13/SSPC-ASC-1-[2016]-SG, Industrial Coating and Lining Application Specialist Qualification and Certification
- .6 Minister of Justice:
 - .1 SOR/[2008]-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations
 - .2 Transportation of Dangerous Goods Act, 1992 (TDGA)
- .7 National Research Council Canada (NRC):
 - .1 National Fire Code of Canada [2020] (NFC)
- .8 The Master Painters Institute (MPI):
 - .1 Architectural Painting Specification Manual, [current edition]
- .9 ULC Standards (ULC):
 - .1 ULC/ORD-C58.12-[92], Leak Detection Devices (Volumetric Type) for Underground Flammable Liquid Storage Tanks
 - .2 ULC/ORD-C58.14-[92], Nonvolumetric Leak Detection Devices for Underground Flammable Liquid Storage Tanks
 - .3 ULC/ORD-C107.19-[92], Secondary Containment of Underground Piping for Flammable and Combustible Liquids
 - .4 CAN/ULC-S601-[14], Standard for Shop Fabricated Steel Aboveground Tanks for Flammable and Combustible Liquids
 - .5 CAN/ULC-S602-[14], Standard for Aboveground Steel Tanks for Fuel Oil and Lubricating Oil
 - .6 CAN/ULC-S603.1-[11], Standard for External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids
 - .7 CAN/ULC-S652:[2016], Standard for Tank Assemblies for the Collection, Storage and Removal of Used Oil
 - .8 CAN/ULC-S653:[2016], Standard for Aboveground Horizontal Steel Contained Tank Assemblies for Flammable and Combustible Liquids
 - .9 CAN/ULC-S660-[08], Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids
 - .10 CAN/ULC-S661-[10], Standard for Overfill Protection Devices for Flammable and Combustible Liquid Storage Tanks
 - .11 CAN/ULC-S663-[11], Standard for Spill Containment Devices for Flammable and Combustible Liquid Aboveground Storage Tanks
 - .12 CAN/ULC-S668-[12], Standard for Liners Used for Secondary Containment

of Aboveground Flammable and Combustible Liquid Tanks

- .13 CAN/ULC-S675.1-[14], Standard for Volumetric Leak Detection Devices for Underground and Aboveground Storage Tanks for Flammable and Combustible Liquids
- .14 CAN/ULC-S675.2-[14], Standard for Nonvolumetric Precision Leak Detection Devices for Underground and Aboveground Storage Tanks and Piping for Flammable and Combustible Liquids

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Indicate details of construction, appurtenances, [installation,] and leak detection system.
 - .2 Shop drawings to detail and indicate the following as applicable to project requirements. Submit manufacturer's product data to supplement shop drawings. Indicate the following:
 - .1 Size, materials and locations of ladders, ladder cages, catwalks and lifting lugs.
 - .2 Tanks capacity.
 - .3 Size and location of fittings.
 - .4 Environmental compliance package accessories.
 - .5 Decals: type, size, and location.
 - .6 Accessories: Submit details and manufacturer's product data.
 - .7 Size, material, and location of manholes.
 - .8 Size, materials and locations of railings, stairs, ladders, and walkways.
 - .9 Finishes.
 - .10 Electronic accessories: Submit details and manufacturer's product data.
 - .11 Insulation types, locations, and RSI values.
 - .12 Name, address, and phone numbers of corrosion expert where applicable. Grading drawings to be stamped by licenced corrosion expert.
 - .13 Piping, valves, and fittings: Liquid- and vapour-tight connections. Type, materials, sizes, piping connection details, valve shut-off type and location, cathodic protection system complete with stamp of corrosion expert indicating that design complies with standards, Federal and Provincial regulations.
 - .14 Spill containment: Description of method(s) and show sizes, materials and locations for collecting spills at connection point between storage tank system and delivery truck, rail car, or vessel.

- .15 Tank heaters: Details and manufacturer's product data.
- .16 Thermometers: Details and manufacturer's product data.
- .17 Anchors: Description, material, size, and locations.
- .18 Concrete: Type, composition, and strength.
- .19 Size and location of site pads.
- .20 Level gauging: Type and locations, including:
 - .1 Reporting systems, types of reports and report frequency.
 - .2 Maximum number of tanks to be monitored.
 - .3 Number of probes required and sizes.
 - .4 Submit details and manufacturer's product data.
- .21 Ancillary devices: Submit details and manufacturer's product data.
- .22 Leak detection system, type and locations, and alarm system.
- .23 Grounding and bonding: Submit details of design, type, materials, and locations.
- .24 Corrosion protection: Submit details of design, type, materials, and locations.
- .25 Site-erected AST (above ground storage tank) overflow-protection systems: Submit details of design, type, materials, and locations.
- .26 Containment system for spills, overfills and storm runoff water: Submit details, materials proposed for use, and locations.
- .3 Certificates:
 - .1 Submit certifications for Coating Application Specialist(s) to demonstrate compliance to the requirements of ANSI/NACE No.13.

1.05 CLOSEOUT SUBMITTALS

- .1 Submit maintenance data for tank appurtenances and leak detection system and incorporate into manual specified in Section 01 78 00 - Closeout Submittals.
- .2 Submit as-built drawings of all above ground fuel storage tank systems, describing the following:
 - .1 the outline of all tanks;
 - .2 the centre line of all piping;
 - .3 the centre line of all underground electrical power and monitor sensor conduits;
 - .4 the building foundation outlines;
 - .5 the property lines; and
 - .6 the secondary containment systems.

- .3 Before the first transfer products to the storage tank system(s), submit an emergency plan complying with SOR/2008-197.

1.06 QUALITY ASSURANCE

.1 Qualifications:

- .1 Installer: Systems installed by a person designated under the applicable regulations. Person approved to install systems by the [province] [territory] in which the system will be installed must perform the installation [or a professional engineer must supervise the installation if there is no person approved to do so].
- .2 [Industrial Coating] [Lining] Application Specialists: Ensure that [50]% of [industrial coating] [lining applications] specialists [persons], who perform concrete and steel surfaces preparation and coating applications are certified by a recognized Applicator Certification Agency, in accordance with NACE 13 /SSPC ASC-1, Application Specialist Certification (ASC).
 - .1 Maintain a current and valid ASC during the Contract.
 - .2 Application specialists who perform surface preparation and coating application work on this project must have a current ASC.
 - .3 Notify [Departmental Representative] [DCC Representative] [Consultant] of any change in application specialist certification status.
 - .4 Delays to Project completion due to invalid certifications will not be accepted.

2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- .1 All components of a storage tank system must carry a certification mark showing that they meet the standards set out in Section 14 of the regulations [SOR/2008-197].

2.02 TANKS: CONVENTIONAL STEEL

- .1 [_____] tank[s] of [_____] L capacity [each], [dimensions as indicated on Drawings] [single wall, single bottom] [single wall, double bottom] [self- containing].
- .2 Horizontal Tanks: To [CAN/ULC-S601] [_____] , complete with [one] external coat of red oxide primer to [MPI product #23]
- .3 Vertical Tanks: To [CAN/ULC-S601] [_____] , complete with [one] external coat of [red oxide primer to [MPI product #23]] [_____] .
- .4 Tanks Inside Buildings: To [CAN/ULC-S602] [_____] .
- .5 Large Site Erected Tanks: To [ANSI/API 650].

- .6 Connections: Minimum of [5] with sizes [as indicated on Drawings] [_____], and liquid- and vapour-tight connections.
- .7 Maintenance Holes: [As indicated on Drawings] [_____].
- .8 Railings, Stairs, Ladders, and Walkways: [As indicated on Drawings].
- .9 Finishes:
 - .1 Exterior of tank: [_____].
 - .2 Interior of tank: [_____].

2.03 TANKS: STEEL DYKED

- .1 ULC approved.
 - .1 Horizontal Tanks: To [CAN/ULC-S601] [_____], factory prime painted [and site painted].
 - .2 Fittings: [Three] 100 mm diameter, plugged for service connections and venting, with liquid- and vapour-tight connections.
 - .3 Capacity: [_____] L.
 - .4 [Manway: [500] [600] mm diameter x 150 mm high].
- .2 Tanks with integral formed dyke:
 - .1 Welded steel construction, factory primed [and painted].
 - .1 [Open around tank] [Enclosed around tank] [with lockable access opening for viewing interior], with [100]-mm sealed valved opening for draining purposes.
 - .2 Designed to contain [110]% of capacity of storage tank.
 - .3 Tank saddles: Integral with dyke and welded to base.
 - .4 Skids: [100] [150]-mm flanged steel, welded to dyke base.
- .3 Accessories:
 - .1 Ladder [with cage], designed to [_____].
 - .2 [Catwalk.]
 - .3 Lifting lugs.

2.04 TANKS: STEEL INSULATED AND LINED CONCRETE ENCLOSED

- .1 Complete Unit: ULC approved and labelled.
- .2 Construction
 - .1 Rectangular: 3.4-mm-thick [steel] [stainless steel] tank, [single] [double] wall, [_____] L capacity.
 - .2 Insulation: 6.4-mm-thick rigid insulation.
 - .3 Liner: [30 mil to completely enclose insulation] [_____].
 - .4 Wire mesh: 3.4-mm-thick to completely enclose liner.
 - .5 Concrete: Seamless, 150 mm thick with bevelled corners.
 - .6 Unit supports: Unitized concrete as supplied by manufacturer of unit.

- .3 Standard Fittings:
 - .1 Four - 50-mm diameter steel nipples, one in each corner, plugged.
 - .2 One - 100-mm diameter steel nipple.
 - .3 One - 150-mm diameter steel nipple.
 - .4 Leak detector nipple.
 - .5 Overfill containment device with internal drain and positive seal.
- .4 Environmental Compliance Package Accessories:
 - .1 50 mm x 2.4 m vent riser.
 - .2 100-mm [iron] [brass], [lockable] fill cap.
 - .3 150-mm emergency vent.
 - .4 1.2-m gauge stick.
 - .5 Float gauge.
 - .6 Decal package:
 - .1 [_____].
 - .7 50-mm diameter vent cap.
 - .8 25-mm diameter suction tube and double tap fitting.
 - .9 100-mm diameter drop tube.
 - .10 [Steps] [Catwalk] [Handrail].
- .5 Options for [gasoline] [diesel] vehicle fueling facility with vapour recovery.
 - .1 Fuel pump: [Manual] [Submersible], [card system] [56 L/h], [high speed] with [fuel filter].
 - .2 Fittings:
 - .1 50-mm pressure vent cap.
 - .2 100-mm coaxial cap.
 - .3 100-mm coaxial drop tube and adapter fitting.
 - .3 Hose: 20-mm diameter coaxial hose, [4] m long.
 - .4 Nozzle: Coaxial [auto shut-off].
 - .5 Accessories:
 - .1 High hang retractor
 - .2 Hood and hook
 - .3 Retractor base stand
 - .4 Flow restrictor
- .6 Electronic accessories:
 - .1 Overfill warning
 - .2 Leak detector
- .7 Site Concrete Pads:
 - .1 Concrete: In accordance with Section [03 10 00 - Concrete Forming

and Accessories], Section [03 20 00 - Concrete Reinforcing], and Section [03 30 00 - Cast-in-Place Concrete].

- .2 [Dimensions as indicated on Drawings] [[_____] mm long x [_____] mm wide x [_____] mm thick].

2.05 TANKS: SECONDARY CONTAINMENT

- .1 [Single-wall, single-bottom storage tank placed entirely within dyked area, complete with impermeable barrier in floor of containment area and in dyke walls] [Single-wall, double-bottom storage tank placed entirely within dyked area, complete with impermeable barrier in floor of containment around storage tank and in dyke walls, but not underneath storage tank].
- .2 Secondary containment impermeable barriers:
 - .1 To [CAN/ULC S668, Type [A] [B] [C] [_____]], using material compatible with product being stored and installed so that the
 - .1 product entering interstitial space flows to containment sump, and
 - .2 liner is sealed to perimeter of storage tanks or pad when not installed under tank.
 - .2 Sustained permeability to water less than [1×10^{-6}] [_____] cm/s under hydraulic head of [3] m.
 - .3 Concrete Barriers:
 - .1 Expansion joints every 6 m.
 - .2 Expansion joints sealed with sealant compatible with product being stored.
 - .3 Graded to collect liquids in interstitial space.
 - .4 Clay Barriers:
 - .1 Minimum thickness of [300] mm.
 - .2 Chemically compatible with native or cover soil.
 - .3 Minimum cover of [300] mm of material to prevent dryout.
 - .4 Graded to collect liquid in interstitial space.
 - .5 Steel Barriers:
 - .1 Minimum [4.5] mm thickness.
 - .2 Corrosion protection designed by and installed under direction of a corrosion expert.
 - .3 Graded to collect liquid in interstitial space.

2.06 ANCHORAGE

- .1 [_____] .

2.07 CONCRETE

- .1 In accordance with Section [03 30 00 - Cast-in-Place Concrete].

2.08 PIPING, VALVES, AND FITTINGS

- .1 In accordance with Section [23 11 13 - Facility Fuel Oil Piping].
- .2 Fibreglass-reinforced plastic pipe and fittings used for primary pipe in underground service designed and constructed to [CAN/ULC-S660].
- .3 Flexible pipe and fittings used for primary pipe in underground service designed, constructed and certified to [CAN/ULC-S660].
- .4 Mechanical joints on buried primary piping is not permitted.
- .5 Piping located below product level equipped with either manual or automatic shut-off at storage tank.
- .6 Steel underground piping to have cathodic protection system designed by corrosion expert and in accordance with Section [26 42 00 - Cathodic Protection].
- .7 Provide means for collecting spills at connection point between storage tank system and delivery truck, rail car, or vessel.
- .8 Underground piping with up to [75]-mm nominal pipe diameter to have secondary containment.
- .9 Underground piping larger than [75]-mm nominal diameter to have:
 - .1 Secondary containment with interstitial space leak detection.
 - .2 Precision leak tested in conformance with National Fire Code of Canada every two years beginning in fifth year of operation.
 - .3 Leak detection in conformance with [ULC/ORD-C58.12] [ULC/ORD-C58.14] [CAN/ULC-S675.1] [CAN/ULC-S675.2].
- .10 Secondary containment piping:
 - .1 Constructed and installed to [CAN/ULC-S660].
 - .2 Consist of single-wall piping contained within synthetic membrane liner manufactured and installed to [_____].
 - .3 Consist of single-wall fibreglass-reinforced plastic, or single-wall steel piping contained within duct designed, constructed and installed to [ULC/ORD-C107.19].

2.09 TANK HEATERS

- .1 [_____].

2.10 THERMOMETERS

- .1 [_____].

2.11 LEVEL GAUGING

- .1 Tank Gauging Stick: To manufacturer's standard.
- .2 Tank Level Gauging and Indicator:

- .1 [Mechanical] [Magnetic] [Hydraulic] [Hydrostatic], [remote] [direct] reading device with [_____] -mm dial.
- .2 Gauge and gauge openings: Protected against liquid overflow and possible liquid and vapour release.
- .3 Electronic solid state combination tank level sensor and leak detector: Console containing visual LED display [and printer] algorithms to automatically compute required operations. System to be programmable for:
 - .1 Inventory reporting with the following features:
 - .1 Amount of fuel remaining in litres
 - .2 Temperature of fuel
 - .3 Amount of water in bottom of tank in millimetres
 - .4 Amount of fuel in tank in millimetres
 - .2 Fuel delivery report.
 - .3 [Single tank installation] [Multiple tank installation], [interstitial space] leak detection.
 - .4 Visual and [audible] alarm for:
 - .1 [Overfill]
 - .2 Low product
 - .3 High water
 - .4 Theft
 - .5 Leaks
 - .5 Probe diagnostics.
 - .6 Leak tests.
 - .7 Probe[s] and sensor[s]: Factory calibrated and pre-set, [_____] mm long, to suit diameter of tank.
 - .8 Ancillary devices:
 - .1 Interface capability with [central] [remote facility] for monitoring and inventory reconciliation.
 - .2 Security [key] lock system to select normal operation, setup to enter or change system and tank parameters or operation, or diagnostics to check systems hardware and software.

2.12 LEAK DETECTION SYSTEM

- .1 To [NFPA 329] [_____] .
- .2 Leak Detector: Cable system.
 - .1 Monitoring instrument:
 - .1 Temperature compensated solid state circuitry to continuously monitor leak detection circuits for open circuit or alarm condition. Alarm condition to be indicated by [visual indicator light] [audible alarm] and operation of isolated relay to allow interface with other equipment.

- .2 Supply voltage: 120 VAC.
- .3 Module: Complete with power-on lamp, alarm lamp, test switch and reset switch.
- .2 Leak detection cable: Twisted pair of 20 AWG (American wire gauge) woven conductors insulated with hydrocarbon degradable dielectric with loose interlocking aluminum alloy armour.
- .3 Control cable: Twisted pair of 20 AWG woven conductors with 300 V insulation and PVC jacket.
- .3 Underground Piping:
 - .1 To [ULC/ORD-C58.14].
 - .2 To [ULC/ORD-C58.12] and provide a minimum level 3 or level 4 leak detection.
 - .3 To specifications of authority having jurisdiction (AHJ).
- .4 Vertical Groundwater Monitoring Wells:
 - .1 Product stored in tank to have specific gravity less than 1.0.
 - .2 Monitoring wells:
 - .1 Hydraulic conductivity of soil between storage tank system and monitoring well not less than [0.01] cm/s.
 - .2 Minimum of [50]-mm diameter.
 - .3 Surround area around screened portion by filter pack.
 - .4 Seal outside from ground surface to top of filter pack with [bentonite] in accordance with Section [_____].
 - .5 Installed with cap at bottom of screened section of well.
 - .6 Do not allow liner penetration when installed within interstitial space.
 - .7 Detection of at least 3 mm of free product on top of groundwater surface in the monitoring well by continuous monitoring devices or manual methods.
 - .8 [Flush joint], [threaded], [bell and spigot] Schedule 40 PVC, or other brands of PVC with equivalent or greater wall thickness.
 - .9 Secured to prevent unauthorized access or tampering.
 - .3 Screened portion:
 - .1 Minimum [3.0] m in length and factory slotted with slot size of [0.25] mm.
 - .4 Future use as recovery well:
 - .1 Screened zone to extend [1.5] m into water table and minimum [1.5] m above groundwater surface at time of installation.
- .5 Vapour Monitoring:
 - .1 Vapour phase detector:
 - .1 Product stored, or tracer compound placed in storage tank

system sufficiently volatile to result in vapour level that is detectable by monitoring device.

- .2 Operative in groundwater, rainfall, soil moisture, and other interferences so that leaks are detected in less than 30 days.
 - .3 Leak detection from storage tank system not disturbed by background contamination.
 - .4 Designed to detect any significant increase in concentration above background level of product stored, and component(s) of product stored, or a tracer compound placed in tank system.
- .2 Vapour Monitoring Wells:
- .1 Equipped with liquid-proof caps.
 - .2 Secured to prevent unauthorized access and tampering.
 - .3 Do not allow liner penetration when installed within interstitial space.

2.13 GROUNDING AND BONDING

- .1 To Section [26 05 00 - Common Work Results for Electrical] [_____].

2.14 CORROSION PROTECTION

- .1 Underground Piping:
 - .1 In accordance with Section [26 42 00.01 - Telethermics - Cathodic Protection] [CAN/ULC-S603.1] [_____].
- .2 Steel storage tank systems:
 - .1 Cathodic protection installed [to API RP 651], [designed by a corrosion expert].

2.15 USED OIL TANKS

- .1 Manually filled tanks to [CAN/ULC-S652] [_____].
- .2 Non-manually filled tanks to [CAN/ULC-S652] [_____].
- .3 Suction tubes.

2.16 DAMAGED/REPAIRED TANKS

- .1 Repair done in conformance with [API STD 653], [special acceptance procedures of ULC].

2.17 RELOCATED TANKS

- .1 Shop-fabricated AST (for use aboveground for storing of petroleum products):
 - .1 Inspection and testing.
 - .1 [_____].
 - .2 To special acceptance procedures of ULC.

- .2 Site-erected storage tanks (reconstructed or relocated).
 - .1 Erection and testing:
 - .1 Endorsed by a professional engineer as meeting requirements of [API STD 653] [_____].

2.18 TANK INSULATION

- .1 In accordance with Section [23 07 16 - HVAC Equipment Insulation].

2.19 OVERFILL AND SPILL CONTAINMENT

- .1 Site-erected AST overfill-protection systems:
 - .1 Pipeline delivery:
 - .1 Automatic alert to pipeline or terminal personnel so that action can be taken to prevent storage tank from being overfilled.
 - .2 Truck, rail ship or barge delivery:
 - .1 Visual and audible alarm system for detecting fluid level that will activate and alert personnel in enough time to terminate product flow to storage tank and prevent overfill.
- .2 Shop-fabricated AST overfill protection:
 - .1 Automatic valve closure on product supply line, or automatic pump shut-off to terminate petroleum product flow upon detection of high levels in the storage tank.
 - .2 Overfill protection device: To [CAN/ULC-S661], compatible with intended method of filling designed, [with positive shut-off action].
 - .3 Audible and visual alarm located where care personnel constantly on duty during transfer process and can promptly stop or divert flow when detected levels are too high.
 - .4 Storage tanks with capacity of 50 000 L or less:
 - .1 Level gauge located on storage tank for frequent monitoring throughout transfer process permitting personnel to promptly shut down flow, or communicate immediately with person controlling delivery for shut down.
 - .5 Storage tanks with capacity of 4000 L or less:
 - .1 Visual monitoring and gauging for frequent monitoring throughout transfer process permitting personnel to promptly shut down flow, or communicate immediately with person controlling delivery for shut down.
- .3 Spill Containment Devices: To [CAN/ULC-S663], bearing a certification mark.

2.20 PRODUCT TRANSFER

- .1 ASTs with normal vent and separate emergency vent:

- .1 Liquid- and vapour-tight connections on fill pipes for flammable products.
- .2 Coupling at end of storage tank suction tube for connection to transfer used oil, with liquid- and vapour-tight connections.

2.21 LINER PENETRATION

- .1 At high point or raised part of dyke floor.
- .2 Sealed.

2.22 TANK BOTTOM WATER

- .1 Segregated from rainwater.
- .2 Disposed of in accordance with applicable provincial or territorial regulations, guidelines and policies.

2.23 SPILLS, OVERFILLS, AND STORMWATER RUNOFF

- .1 Contained, treated, and disposed of in accordance with applicable provincial or territorial regulations, guidelines and policies.
- .2 Oil/water separator (for stormwater runoff from product transfer area).
 - .1 Designed to produce discharge water with [15] mg/L, or less, of oil and grease.
 - .2 Sized for hydraulic flow rate of [10] year return, [1] hour storm event.
 - .3 Designed for oil with specific gravity of [0.90].
 - .4 Designed to capture spill of petroleum product of volume equal to amount of petroleum product transferred in [2] minutes at highest pumping rate normally used within area that drains to oil/water separator.
 - .5 Designed with hydraulic retention time required to separate oil with particle droplet size of [60] microns from stormwater.

3 EXECUTION

3.01 INSTALLATION

- .1 Install tank[s] in accordance with [CSA-B139 Series] [_____], National Fire Code of Canada and manufacturer's recommendations [and CCME PN1326].
- .2 Position tank[s] using lifting lugs and hooks, and where necessary use spreader bars. Do not use chains in contact with tank walls.
- .3 Install tanks using [licensed] [trained] [certified] installers.
- .4 Submit certification of installation to [Departmental Representative] [DCC Representative] [Consultant].

3.02 INSTALLATION - LEVEL GAUGE SYSTEM

- .1 Provide liquid- and vapour-impermeable sealant at connections.
- .2 Shield capillary and tubing connections in heavy duty 50 mm polyethylene pipe.
- .3 Calibrate system.

3.03 INSTALLATION - LEAK DETECTION SYSTEM

- .1 Install in accordance with manufacturer's recommendations.

3.04 SITE QUALITY CONTROL

- .1 Test tank[s] for leaks to requirements of [_____] and in presence of [AHJ].

3.05 ADJUSTING

- .1 Where coating is damaged, touch-up with original coating material.

3.06 WASTE MANAGEMENT AND DISPOSAL

- .1 Perform in accordance with Section 01 74 19 - Waste Management and Disposal.
- .2 Ensure emptied containers are sealed and stored safely.
- .3 Dispose of unused paint or coating material at an official hazardous material collections site. Do not dispose unused [paint] material into sewer system, into streams or lakes, onto ground, or in other location where it might pose a health or environmental hazard.

END OF SECTION

APPENDIX A

Liquid Fuel Tank Removals and Installations

Township of Esquimalt Public Works Yard

Card Reader example of required printouts

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account : Engineering and PW

Engineering and PW

	Pump	DateTime	Transaction	Misc1	Qty.
Operator Number:	1110		Bob Horsley		Vehicle/U
DIESEL					
	2	2023-01-03 08:10	2	0	53.00
	2	2023-01-04 07:29	2	0	58.90
	2	2023-01-05 07:32	11	0	75.30
	2	2023-01-10 13:02	27	0	64.10
	2	2023-01-12 10:24	10	0	55.10
	2	2023-01-16 07:37	20	0	48.90
	2	2023-01-17 10:10	30	0	62.10
	2	2023-01-24 07:27	57	0	69.50
	2	2023-01-27 07:45	12	0	56.30
	2	2023-01-31 08:09	24	0	108.80
Total :	DIESEL				652.00
UNLEADED					
	1	2023-01-18 07:19	34	0	70.40
	1	2023-01-20 07:08	43	0	69.20
Total :	UNLEADED				139.60
		Total Operator:	1110		791.60

Operator Number:	1175		Brent Kauffman		Vehicle/U
UNLEADED					
	1	2023-01-10 10:55	25	0	128.50
	1	2023-01-17 07:19	28	0	98.90
	1	2023-01-20 12:48	47	0	113.50
Total :	UNLEADED				340.90
		Total Operator:	1175		340.90

Operator Number:	1221		Craig Stewart		Vehicle/U
UNLEADED					
	1	2023-01-04 10:23	6	0	100.10
	1	2023-01-11 07:49	30	0	100.10
	1	2023-01-12 09:57	9	0	41.60
Total :	UNLEADED				241.80
		Total Operator:	1221		241.80

Operator Number:	1320		Darryll Walmsley		Vehicle/U
DIESEL					
	2	2023-01-17 11:50	31	0	91.10
Total :	DIESEL				91.10
UNLEADED					
	1	2023-01-09 11:11	19	0	98.60
	1	2023-01-20 11:42	45	0	96.60
Total :	UNLEADED				195.20
		Total Operator:	1320		286.30

Operator Number:	1326		Greg Taberner		Vehicle/U
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Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account : Engineering and PW

Engineering and PW

	Pump	DateTime	Transaction	Misc1	Qty.
UNLEADED					
	1	2023-01-13 13:45	16	0	124.60
	1	2023-01-25 13:49	1	0	120.50
	1	2023-01-26 09:49	8	0	5.50
Total :	UNLEADED				250.60
Total Operator:				1326	250.60

Operator Number: 1426 John McNaughton Vehicle/U

DIESEL

	2	2023-01-16 07:46	21	0	100.10
Total :	DIESEL				100.10
Total Operator:				1426	100.10

Operator Number: 1427 Josh Lloyd Vehicle/U

UNLEADED

	1	2023-01-09 15:03	22	0	89.10
	1	2023-01-18 11:26	35	0	105.60
	1	2023-01-30 15:05	20	0	64.90
Total :	UNLEADED				259.60
Total Operator:				1427	259.60

Operator Number: 1451 Kevin Smith Vehicle/U

DIESEL

	2	2023-01-03 06:50	1	0	79.60
	2	2023-01-04 06:47	1	0	82.40
	2	2023-01-05 06:49	10	0	93.10
	2	2023-01-05 14:31	14	0	73.30
	2	2023-01-06 14:53	16	0	67.30
	2	2023-01-09 14:32	21	0	84.00
	2	2023-01-10 14:36	29	0	88.90
	2	2023-01-12 06:43	4	0	89.40
	2	2023-01-13 06:47	13	0	84.70
	2	2023-01-16 06:45	19	0	79.90
	2	2023-01-17 06:41	27	0	74.60
	2	2023-01-18 06:45	33	0	76.60
	2	2023-01-19 06:46	37	0	73.60
	2	2023-01-20 06:46	42	0	63.20
	2	2023-01-23 06:47	51	0	65.10
	2	2023-01-24 06:49	56	0	79.10
	2	2023-01-25 06:48	61	0	75.80
	2	2023-01-26 06:42	4	0	85.20
	2	2023-01-27 06:51	11	0	79.60
	2	2023-01-31 06:44	21	0	65.10
Total :	DIESEL				1,560.50
Total Operator:				1451	1,560.50

Operator Number: 1453 Kevin Rankin Vehicle/U

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account :	Engineering and PW	Engineering and PW				
	Pump	DateTime	Transaction	Misc1	Qty.	
UNLEADED						
	1	2023-01-10 11:00	26	0	84.20	
	1	2023-01-25 14:31	3	0	76.20	
	1	2023-01-31 14:47	27	0	71.10	
Total :	UNLEADED				231.50	
Total Operator:				1453	231.50	

Operator Number:	1454	Kevin Taylor			Vehicle/U
DIESEL					
	2	2023-01-19 10:22	39	0	93.60
Total :	DIESEL				93.60
UNLEADED					
	1	2023-01-04 08:59	4	0	79.90
	1	2023-01-11 15:06	3	0	80.00
	1	2023-01-16 13:26	24	0	63.20
	1	2023-01-23 10:46	53	0	96.30
	1	2023-01-31 07:36	22	0	82.90
Total :	UNLEADED				402.30
Total Operator:				1454	495.90

Operator Number:	1604	Larry Wilson			Vehicle/U
DIESEL					
	2	2023-01-04 07:33	3	0	90.00
	2	2023-01-12 07:20	5	0	74.20
	2	2023-01-16 14:52	26	0	135.60
	2	2023-01-20 11:42	46	0	40.50
	2	2023-01-25 07:26	62	0	71.80
Total :	DIESEL				412.10
Total Operator:				1604	412.10

Operator Number:	1620	Newton Delpesche			Vehicle/U
UNLEADED					
	1	2023-01-06 15:36	17	0	100.50
Total :	UNLEADED				100.50
Total Operator:				1620	100.50

Operator Number:	1765	Richard Nute			Vehicle/U
DIESEL					
	2	2023-01-23 12:52	55	0	108.70
	2	2023-01-31 08:05	23	0	125.70
Total :	DIESEL				234.40
Total Operator:				1765	234.40

Operator Number:	1770	Simone Manchip			Vehicle/U
UNLEADED					

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account :	Engineering and PW					Engineering and PW	
	Pump	DateTime	Transaction	Misc1		Qty.	
Total :	1	2023-01-04 13:43	8	0		46.30	
	UNLEADED					46.30	
	Total Operator:				1770	46.30	
Operator Number:	1822	Steve Migliarese				Vehicle/U	
DIESEL							
Total :	2	2023-01-27 16:13	15	0		88.20	
	DIESEL					88.20	
	Total Operator:				1822	88.20	
Operator Number:	1824	Thierry Fitaire				Vehicle/U	
UNLEADED							
	1	2023-01-20 12:52	48	0		100.10	
	1	2023-01-29 05:31	17	0		54.30	
	1	2023-01-30 07:30	18	0		100.10	
Total :	UNLEADED					254.50	
	Total Operator:				1824	254.50	
Operator Number:	3096	Wayne Giesbrecht				Vehicle/U	
UNLEADED							
	1	2023-01-05 12:46	12	0		47.00	
	1	2023-01-16 10:27	22	0		51.80	
	1	2023-01-24 12:23	60	0		55.30	
	1	2023-01-25 09:39	64	0		60.20	
Total :	UNLEADED					214.30	
	Total Operator:				3096	214.30	
Account (Engineering and PW) Total	5,909.10	

Account :	Fire Rescue					Fire Rescue	
	Pump	DateTime	Transaction	Misc1		Qty.	
Operator Number:	4738	Morgan Williams				Vehicle/U	
DIESEL							
	2	2023-01-04 14:02	9	0		125.30	
	2	2023-01-06 14:41	15	0		28.90	
	2	2023-01-07 14:15	18	0		63.10	
	2	2023-01-09 11:59	20	0		46.30	
	2	2023-01-11 14:44	2	0		81.70	
	2	2023-01-12 14:49	12	0		52.20	
	2	2023-01-15 17:14	18	0		61.20	
	2	2023-01-15 12:02	17	0		65.70	
	2	2023-01-19 12:08	41	0		79.60	
	2	2023-01-20 14:59	49	0		44.10	
	2	2023-01-20 15:25	50	0		67.60	
	2	2023-01-24 11:08	59	0		74.80	

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account :	Fire Rescue	Fire Rescue				
	Pump	DateTime	Transaction	Misc1	Qty.	
	2	2023-01-25 13:55	2	0	55.80	
	2	2023-01-28 15:53	16	0	67.10	
	2	2023-01-30 09:18	19	0	85.60	
	2	2023-01-31 15:10	28	0	39.00	
Total :	DIESEL				1,038.00	
					UNLEADED	
	1	2023-01-12 08:17	8	0	89.10	
Total :	UNLEADED				89.10	
			Total Operator:	4738	1,127.10	
Operator Number:	4740		Neil Widdifield		Vehicle/U	
					UNLEADED	
	1	2023-01-16 14:34	25	0	74.40	
	1	2023-01-27 12:57	13	0	69.60	
Total :	UNLEADED				144.00	
			Total Operator:	4740	144.00	
Operator Number:	4810		Steve Serbic		Vehicle/U	
					UNLEADED	
	1	2023-01-04 10:31	7	0	56.70	
	1	2023-01-12 07:50	6	0	57.80	
	1	2023-01-17 07:45	29	0	42.90	
	1	2023-01-25 07:32	63	0	68.50	
Total :	UNLEADED				225.90	
			Total Operator:	4810	225.90	
Account (Fire Rescue) Total		1,497.00	

Account :	Parks and Recreation	Parks and Recreation				
	Pump	DateTime	Transaction	Misc1	Qty.	
Operator Number:	2075		Daniel Sellers		Vehicle/U	
					DIESEL	
	2	2023-01-11 14:15	1	0	12.50	
	2	2023-01-26 08:15	5	0	20.80	
Total :	DIESEL				33.30	
					UNLEADED	
	1	2023-01-10 07:49	23	0	91.40	
Total :	UNLEADED				91.40	
			Total Operator:	2075	124.70	
Operator Number:	2080		Joe Sousa		Vehicle/U	
					UNLEADED	
	1	2023-01-13 09:11	14	0	63.40	

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account :	Parks and Recreation		Parks and Recreation			
	Pump	DateTime	Transaction	Misc1		Qty.
Total :	1	2023-01-26 11:58	9	0		65.30
	UNLEADED					128.70
	Total Operator:				2080	128.70
Operator Number:	2115	Jake Williams				Vehicle/U
	UNLEADED					
Total :	1	2023-01-11 10:12	31	0		94.00
	UNLEADED					94.00
	Total Operator:				2115	94.00
Operator Number:	2136	Rebecca Manson				Vehicle/U
	UNLEADED					
Total :	1	2023-01-05 13:21	13	0		77.00
	1	2023-01-20 08:13	44	0		83.40
	UNLEADED					160.40
	Total Operator:				2136	160.40
Operator Number:	2451	Larry Braes				Vehicle/U
	UNLEADED					
Total :	1	2023-01-17 13:03	32	0		60.00
	1	2023-01-27 13:26	14	0		18.80
	UNLEADED					78.80
	Total Operator:				2451	78.80
Operator Number:	2457	Matt Robertson				Vehicle/U
	UNLEADED					
Total :	1	2023-01-23 08:59	52	0		78.10
	UNLEADED					78.10
	Total Operator:				2457	78.10
Operator Number:	2469	Monique Warnock				Vehicle/U
	UNLEADED					
Total :	1	2023-01-10 13:53	28	0		61.20
	UNLEADED					61.20
	Total Operator:				2469	61.20
Operator Number:	2473	Marie Schamhart				Vehicle/U
	UNLEADED					
Total :	1	2023-01-19 10:53	40	0		77.40
	1	2023-01-31 14:10	26	0		70.20
	UNLEADED					147.60
	Total Operator:				2473	147.60
Operator Number:	2773	Noah Alexander				Vehicle/U
	UNLEADED					

Operator Activity Report

Wednesday, February 1, 2023 7:24.22

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Account :	Parks and Recreation		Parks and Recreation			
	Pump	DateTime	Transaction	Misc1		Qty.
	1	2023-01-04 10:17	5	0		67.40
	1	2023-01-31 10:38	25	0		69.80
Total :	UNLEADED					137.20
	Total Operator:			2773		137.20
Operator Number:	2933	Robbie Young				Vehicle/U
	UNLEADED					
	1	2023-01-26 08:44	6	0		94.00
Total :	UNLEADED					94.00
	Total Operator:			2933		94.00
Operator Number:	2977	Shawn Davis				Vehicle/U
	DIESEL					
	2	2023-01-10 08:07	24	0		22.80
	2	2023-01-12 13:23	11	0		39.10
Total :	DIESEL					61.90
	UNLEADED					
	1	2023-01-12 08:04	7	0		112.30
	1	2023-01-19 07:46	38	0		59.00
	1	2023-01-26 13:05	10	0		82.00
Total :	UNLEADED					253.30
	Total Operator:			2977		315.20
Operator Number:	2978	Steve Barwick				Vehicle/U
	UNLEADED					
	1	2023-01-13 11:21	15	0		100.10
	1	2023-01-16 11:03	23	0		91.40
	1	2023-01-24 10:50	58	0		98.50
Total :	UNLEADED					290.00
	Total Operator:			2978		290.00
Account (Parks and Recreation) Total			1,709.90

PCU Summary Report

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, February 1, 2023 7:13:20AM

Location : Public Works Yard

PCU : 1

Pump	Product	PTD (L)	Total (\$)	Cost (\$)
1	UNLEADED	4,865.00	8,802.13	8,802.13
2	DIESEL	4,365.20	8,486.67	8,486.67

Product Usage Report (Vehicle)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:25:55AM

Account : 10.15.153.071.UXXX.5320

Public Works Department

	DateTime	Fuel
DIESEL		
Card : 20036364	192 : 2005 Brush Bandit Chipper	
	2023-01-11 14:15	12.50
	2023-01-26 08:15	20.80
Card : 20036377	165 : 2001 International Dump truck	
	2023-01-16 07:46	100.10
Card : 20036384	207 : 2008 Case 580 Backhoe	
	2023-01-04 07:33	90.00
	2023-01-12 07:20	74.20
	2023-01-20 11:42	40.50
	2023-01-25 07:26	71.80
Card : 20036400	210 : 2009 Elgin Crosswind Sweeper	
	2023-01-03 08:10	53.00
	2023-01-04 07:29	58.90
	2023-01-05 07:32	75.30
	2023-01-10 13:02	64.10
	2023-01-12 10:24	55.10
	2023-01-16 07:37	48.90
	2023-01-17 10:10	62.10
	2023-01-24 07:27	69.50
	2023-01-27 07:45	56.30
Card : 20036411	214 : 2011 International Thermolay	
	2023-01-19 10:22	93.60
Card : 20036421	224 : 2013 Int'l Model 7400 garbage compactor	
	2023-01-05 06:49	93.10
	2023-01-05 14:31	73.30
	2023-01-06 14:53	67.30
	2023-01-10 14:36	88.90
	2023-01-13 06:47	84.70
	2023-01-16 06:45	79.90
	2023-01-17 06:41	74.60
	2023-01-18 06:45	76.60
	2023-01-19 06:46	73.60
	2023-01-20 06:46	63.20
	2023-01-23 06:47	65.10
	2023-01-24 06:49	79.10
	2023-01-25 06:48	75.80
	2023-01-26 06:42	85.20
	2023-01-27 16:13	88.20
	2023-01-27 06:51	79.60
	2023-01-31 06:44	65.10
Card : 20036424	226 : 2014 Mack t/a dump truck	
	2023-01-16 14:52	135.60
	2023-01-31 08:09	108.80
Card : 20036431	218 : Parks Mower	
	2023-01-10 08:07	22.80
Card : 20036440	208 : 2008Case 580 Super M backhoe	
	2023-01-23 12:52	108.70
	2023-01-31 08:05	125.70
Card : 20036442	225 : 2013 Int'l Model 7400 garbage packer	
	2023-01-03 06:50	79.60
	2023-01-04 06:47	82.40
	2023-01-09 14:32	84.00

Product Usage Report (Vehicle)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:25:55AM

Card : 20036443

209 : 2012 Ford 550 Giraffe	2023-01-12 06:43	89.40
	2023-01-17 11:50	91.10
Card 20036443	Total :	3,288.10
	DIESEL Total :	3,288.10

UNLEADED

Card : 20036351

212 : 2009 Ford F250	2023-01-09 15:03	89.10
	2023-01-18 11:26	105.60
	2023-01-30 15:05	64.90

Card : 20036358

183 : 2004 Chevrolet 3/4 Ton Crew Cab Pickup	2023-01-04 08:59	79.90
	2023-01-11 15:06	80.00
	2023-01-16 13:26	63.20
	2023-01-23 10:46	96.30
	2023-01-31 07:36	82.90

Card : 20036362

185 : 2004 Chev 3/4 Ton Pickup	2023-01-04 10:23	100.10
	2023-01-11 07:49	100.10
	2023-01-12 09:57	41.60
	2023-01-20 12:52	100.10
	2023-01-30 07:30	100.10

Card : 20036371

184 : 2004 Chevrolet 3/4 ton pickup	2023-01-09 11:11	98.60
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Card : 20036375

133 : 1993 Chev 3/4 Ton Pickup	2023-01-26 08:44	94.00
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Card : 20036378

200 : 2007 Ford Ranger P/U	2023-01-04 13:43	46.30
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Card : 20036386

238 : 2019 Ford F250 pick-up	2023-01-13 11:21	100.10
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Card : 20036388

236 : 2019 Ford Transit van	2023-01-13 09:11	63.40
	2023-01-26 11:58	65.30

Card : 20036389

203 : 2008 Ford 550XL	2023-01-10 10:55	128.50
	2023-01-17 07:19	98.90
	2023-01-20 12:48	113.50

Card : 20036394

204 : Parks - Ford F450XL P/U	2023-01-10 07:49	91.40
	2023-01-23 08:59	78.10

Card : 20036405

247 : 2022 Ford F250 SD XL	2023-01-20 11:42	96.60
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Card : 20036410

231 : 2015 Ford F250	2023-01-04 10:17	67.40
	2023-01-31 10:38	69.80

Card : 20036434

170 : Parks vehicle	2023-01-16 11:03	91.40
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Card : 20036444

243 : 2021 Ford Ranger	2023-01-05 12:46	47.00
	2023-01-16 10:27	51.80
	2023-01-24 12:23	55.30
	2023-01-25 09:39	60.20

Product Usage Report (Vehicle)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:25:55AM

Card : 20036449

234 : 2017 Ford Utility truck

2023-01-13 13:45 124.60
 2023-01-25 13:49 120.50
 2023-01-26 09:49 5.50

Card : 20036451

237 : 2019 Ford F250 pick-up

2023-01-06 15:36 100.50
 2023-01-10 11:00 84.20
 2023-01-18 07:19 70.40
 2023-01-20 07:08 69.20
 2023-01-25 14:31 76.20
 2023-01-31 14:47 71.10

Card : 20036452

186 : 2004 Chev 3/4 Ton Pickup

2023-01-18 14:32 40.20
 2023-01-26 09:42 74.00

Card : 20036453

242 : 2020 Ford F550 Mini-Dump

2023-01-29 05:31 54.30

Card : 20036454

241 : 2020 Ford F450 crew cab mini-dump

2023-01-12 08:04 112.30
 2023-01-19 07:46 59.00
 2023-01-26 13:05 82.00

Card : 20036456

195 : 2006 Dodge Ram crew cab

2023-01-05 13:21 77.00
 2023-01-20 08:13 83.40

Card : 20036457

177 : 2003 Chev Pickup

2023-01-11 10:12 94.00
 2023-01-24 10:50 98.50

Card : 20036459

223 : 2013 Ford 1 ton flatdeck

2023-01-17 13:03 60.00

Card : 20036463

156 : 1997 Chev 3/4 ton PU

2023-01-10 13:53 61.20
 2023-01-19 10:53 77.40
 2023-01-31 14:10 70.20

Card 20036463

Total :

4,387.20

UNLEADED Total :

4,387.20

Account (

10.15.153.071.UXXX.5320

) Total

7,675.30

Account : 10.22.224.248.F999.5320

Fire Department

DateTime

Fuel

DIESEL

Card : 20036404

0 : Misc Fire Small Tools - Gasoline/Diesel

2023-01-20 15:25 67.60

Card 20036404

Total :

67.60

DIESEL Total :

67.60

Account (

10.22.224.248.F999.5320

) Total

67.60

Product Usage Report (Vehicle)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:25:55AM

Account : 10.22.224.248.FXXX.5320

Fire Department

	DateTime	Fuel
DIESEL		
Card : 20036392	F6 : 2007 Smeal Fire truck	
	2023-01-12 14:49	52.20
	2023-01-31 15:10	39.00
Card : 20036395	F801 : 2014 Rosenbauer fire truck	
	2023-01-04 14:02	125.30
	2023-01-07 14:15	63.10
	2023-01-11 14:44	81.70
	2023-01-15 12:02	65.70
	2023-01-19 12:08	79.60
	2023-01-24 11:08	74.80
	2023-01-25 13:55	55.80
	2023-01-30 09:18	85.60
Card : 20036419	F800 : 2010 Smeal fire truck	
	2023-01-06 14:41	28.90
	2023-01-09 11:59	46.30
	2023-01-15 17:14	61.20
	2023-01-20 14:59	44.10
	2023-01-28 15:53	67.10
Card 20036419	Total :	970.40
	DIESEL Total :	970.40
UNLEADED		
Card : 20036403	F401 : 2016 Chevrolet Tahoe	
	2023-01-04 10:31	56.70
	2023-01-12 07:50	57.80
	2023-01-17 07:45	42.90
	2023-01-25 07:32	68.50
Card : 20036455	F804 : 2017 GMC 3500HD	
	2023-01-12 08:17	89.10
Card : 20036460	F701 : 2012 Chevrolet Tahoe	
	2023-01-16 14:34	74.40
	2023-01-27 12:57	69.60
Card 20036460	Total :	459.00
	UNLEADED Total :	459.00
Account (10.22.224.248.FXXX.5320) Total		1,429.40

Account : 10.27.278.732.0000.5320

Parks Small Tools

	DateTime	Fuel
DIESEL		
Card : 20036391	0 : Parks Small Tools - Gasoline/Diesel	
	2023-01-12 13:23	39.10
Card 20036391	Total :	39.10
	DIESEL Total :	39.10
UNLEADED		

Product Usage Report (Vehicle)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:25:55AM

Card : 20036391

0 : Parks Small Tools - Gasoline/Diesel

	2023-01-27 13:26	18.80
Card 20036391	Total :	<u>18.80</u>
	UNLEADED Total :	<u>18.80</u>
Account (10.27.278.732.0000.5320) Total	<u>57.90</u>

Product Usage Summary Report

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:23:03

Account No.	Department	Location	Effect. Date	Cost	Price	Qty.	Sales Total	CostTotal	Diff.
DIESEL									
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-10	1.933600	1.933600	932.70	1,803.46	1,803.46	0.00
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-25	1.906300	1.906300	1,725.70	3,289.69	3,289.69	0.00
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-31	2.057500	2.057500	629.70	1,295.62	1,295.62	0.00
	PCU Total	PCU_1					6,388.77	6,388.77	0.00
				Account Total		3,288.10	6,388.77	6,388.77	0.00
10.22.224.248.F999.5320	Fire Department	Public Works Yard	2023-01-20	1.906300	1.906300	67.60	128.87	128.87	0.00
	PCU Total	PCU_1					128.87	128.87	0.00
				Account Total		67.60	128.87	128.87	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-09	1.933600	1.933600	263.60	509.70	509.70	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-24	1.906300	1.906300	459.30	875.56	875.56	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-31	2.057500	2.057500	247.50	509.23	509.23	0.00
	PCU Total	PCU_1					1,894.49	1,894.49	0.00
				Account Total		970.40	1,894.49	1,894.49	0.00
10.27.278.732.0000.5320	Parks Small Tools	Public Works Yard	2023-01-12	1.906300	1.906300	39.10	74.54	74.54	0.00
	PCU Total	PCU_1					74.54	74.54	0.00
				Account Total		39.10	74.54	74.54	0.00
Total : DIESEL						4,365.20	8,486.67	8,486.67	0.00

Product Usage Summary Report

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:23:03

Account No.	Department	Location	Effect. Date	Cost	Price	Qty.	Sales Total	CostTotal	Diff.
UNLEADED									
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-11	1.762500	1.762500	1,265.30	2,230.09	2,230.09	0.00
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-25	1.785600	1.785600	2,091.10	3,733.88	3,733.88	0.00
10.15.153.071.UXXX.5320	Public Works Department	Public Works Yard	2023-01-31	1.915800	1.915800	1,030.80	1,974.81	1,974.81	0.00
	PCU Total	PCU_1					7,938.78	7,938.78	0.00
				Account Total		4,387.20	7,938.78	7,938.78	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-04	1.762500	1.762500	56.70	99.93	99.93	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-25	1.785600	1.785600	332.70	594.07	594.07	0.00
10.22.224.248.FXXX.5320	Fire Department	Public Works Yard	2023-01-27	1.915800	1.915800	69.60	133.34	133.34	0.00
	PCU Total	PCU_1					827.34	827.34	0.00
				Account Total		459.00	827.34	827.34	0.00
10.27.278.732.0000.5320	Parks Small Tools	Public Works Yard	2023-01-27	1.915800	1.915800	18.80	36.02	36.02	0.00
	PCU Total	PCU_1					36.02	36.02	0.00
				Account Total		18.80	36.02	36.02	0.00
Total : UNLEADED						4,865.00	8,802.14	8,802.14	0.00

Tank Activity Report

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:18:45AM

Tank 1	UNLEADED	DateTime	Fuel Issued	Fuel Received	Balance
		2023-01-04 13:43:45	350.40	0.00	3,105.90
		2023-01-05 13:21:51	124.00	0.00	2,981.90
		2023-01-06 15:36:09	100.50	0.00	2,881.40
		2023-01-09 15:03:03	187.70	0.00	2,693.70
		2023-01-10 13:53:47	365.30	0.00	2,328.40
		2023-01-11 15:06:47	274.10	1,700.20	3,754.50
		2023-01-12 09:57:38	300.80	0.00	3,453.70
		2023-01-13 13:45:57	288.10	0.00	3,165.60
		2023-01-16 14:34:42	280.80	0.00	2,884.80
		2023-01-17 13:03:28	201.80	0.00	2,683.00
		2023-01-18 14:32:07	216.20	0.00	2,466.80
		2023-01-19 10:53:35	136.40	0.00	2,330.40
		2023-01-20 12:52:05	462.80	0.00	1,867.60
		2023-01-23 10:46:15	174.40	0.00	1,693.20
		2023-01-24 12:23:58	153.80	0.00	1,539.40
		2023-01-25 14:31:27	325.40	2,172.00	3,386.00
		2023-01-26 13:05:47	320.80	0.00	3,065.20
		2023-01-27 13:26:46	88.40	0.00	2,976.80
		2023-01-29 05:31:41	54.30	0.00	2,922.50
		2023-01-30 15:05:57	165.00	0.00	2,757.50
		2023-01-31 14:47:45	294.00	0.00	2,463.50
		Opening Balance :			Closing Balance :
	Tank 1	3,456.30	4,865.00	3,872.20	2,463.50

Tank 2	DIESEL	DateTime	Fuel Issued	Fuel Received	Balance
		2023-01-03 08:10:32	132.60	0.00	3,033.60
		2023-01-04 14:02:22	356.60	0.00	2,677.00
		2023-01-05 14:31:33	241.70	0.00	2,435.30
		2023-01-06 14:53:25	96.20	0.00	2,339.10
		2023-01-07 14:15:06	63.10	0.00	2,276.00
		2023-01-09 14:32:33	130.30	0.00	2,145.70
		2023-01-10 14:36:04	175.80	0.00	1,969.90
		2023-01-11 14:44:35	94.20	1,900.10	3,775.80
		2023-01-12 14:49:52	310.00	0.00	3,465.80
		2023-01-13 06:47:30	84.70	0.00	3,381.10
		2023-01-15 17:14:08	126.90	0.00	3,254.20
		2023-01-16 14:52:12	364.50	0.00	2,889.70
		2023-01-17 11:50:32	227.80	0.00	2,661.90
		2023-01-18 06:45:57	76.60	0.00	2,585.30
		2023-01-19 12:08:16	246.80	0.00	2,338.50
		2023-01-20 15:25:44	215.40	0.00	2,123.10
		2023-01-23 12:52:02	173.80	0.00	1,949.30
		2023-01-24 11:08:27	223.40	0.00	1,725.90
		2023-01-25 13:55:38	203.40	2,150.00	3,672.50
		2023-01-26 08:15:48	106.00	0.00	3,566.50
		2023-01-27 16:13:49	224.10	0.00	3,342.40
		2023-01-28 15:53:11	67.10	0.00	3,275.30
		2023-01-30 09:18:11	85.60	0.00	3,189.70
		2023-01-31 15:10:57	338.60	0.00	2,851.10
		Opening Balance :			Closing Balance :
	Tank 2	3,166.20	4,365.20	4,050.10	2,851.10

Tank Activity Report

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:18:45AM

Vehicle Performance Report (Odometer)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:20:05AM

Account : 10.15.153.071.UXXX.5320

Public Works Department

			Odometer (km)			Volume (L)	L/100 km
			Start	End	Distance		
20036351	212	2009 Ford F250	12,190	92,906	80,716	170.50	0.2112
20036358	183	2004 Chevrolet 3/4 Ton Crew Cab Picku	136,833	137,850	1,017	322.40	31.7011
20036362	185	2004 Chev 3/4 Ton Pickup	220,965	183,400	-37,565	341.90	0.0000
20036364	192	2005 Brush Bandit Chipper	1,693	1,697	4	20.80	520.0000
20036371	184	2004 Chevrolet 3/4 ton pickup	149,782	149,782	0	0.00	0.0000
20036375	133	1993 Chev 3/4 Ton Pickup	231,351	231,351	0	0.00	0.0000
20036377	165	2001 International Dump truck	131,626	131,626	0	0.00	0.0000
20036378	200	2007 Ford Ranger P/U	87,650	87,650	0	0.00	0.0000
20036384	207	2008 Case 580 Backhoe	6,881	6,905	24	186.50	777.0833
20036386	238	2019 Ford F250 pick-up	17,266	17,266	0	0.00	0.0000
20036388	236	2019 Ford Transit van	20,694	20,959	265	65.30	24.6415
20036389	203	2008 Ford 550XL	106,465	106,932	467	212.40	45.4818
20036394	204	Parks - Ford F450XL P/U	87,593	87,760	167	78.10	46.7665
20036400	210	2009 Elgin Crosswind Sweeper	39,828	4,072	-35,756	490.20	0.0000
20036405	247	2022 Ford F250 SD XL	2,576	2,576	0	0.00	0.0000
20036410	231	2015 Ford F250	46,423	46,715	292	69.80	23.9041
20036411	214	2011 International Thermolay	38,735	38,735	0	0.00	0.0000
20036421	224	2013 Int'l Model 7400 garbage compacto	83,653	84,692	1,039	1,220.20	117.4398
20036424	226	2014 Mack t/a dump truck	59,466	59,625	159	108.80	68.4277
20036431	218	Parks Mower	0	0	0	0.00	0.0000
20036434	170	Parks vehicle	189,905	189,905	0	0.00	0.0000
20036440	208	2008Case 580 Super M backhoe	6,250	6,265	15	125.70	838.0000
20036442	225	2013 Int'l Model 7400 garbage packer	84,620	84,827	207	255.80	123.5749
20036443	209	2012 Ford 550 Giraffe	39,180	39,180	0	0.00	0.0000
20036444	243	2021 Ford Ranger	14,118	15,000	882	167.30	18.9683
20036449	234	2017 Ford Utility truck	41,227	4,266	-36,961	126.00	0.0000
20036451	237	2019 Ford F250 pick-up	48,274	49,880	1,606	371.10	23.1071
20036452	186	2004 Chev 3/4 Ton Pickup	0	0	0	74.00	0.0000
20036453	242	2020 Ford F550 Mini-Dump	6,235	6,235	0	0.00	0.0000
20036454	241	2020 Ford F450 crew cab mini-dump	6,578	6,881	303	141.00	46.5347
20036456	195	2006 Dodge Ram crew cab	138,859	139,129	270	83.40	30.8889
20036457	177	2003 Chev Pickup	160,595	160,902	307	98.50	32.0847
20036459	223	2013 Ford 1 ton flatdeck	25,598	25,598	0	0.00	0.0000
20036463	156	1997 Chev 3/4 ton PU	220,575	221,091	516	147.60	28.6047

Account : 10.22.224.248.F999.5320

Fire Department

			Odometer (km)			Volume (L)	L/100 km
			Start	End	Distance		
20036404	0	Misc Fire Small Tools - Gasoline/Diesel	999	999	0	0.00	0.0000

Account : 10.22.224.248.FXXX.5320

Fire Department

			Odometer (km)			Volume (L)	L/100 km
			Start	End	Distance		
20036392	F6	2007 Smeal Fire truck	103,703	103,803	100	39.00	39.0000
20036395	F801	2014 Rosenbauer fire truck	66,489	67,935	1,446	506.30	35.0138
20036403	F401	2016 Chevrolet Tahoe	80,838	81,844	1,006	169.20	16.8191
20036419	F800	2010 Smeal fire truck	48,992	49,170	178	218.70	122.8652
20036455	F804	2017 GMC 3500HD	255,707	255,707	0	0.00	0.0000
20036460	F701	2012 Chevrolet Tahoe	115,738	116,029	291	69.60	23.9175

Vehicle Performance Report (Odometer)

(January 1, 2023 00:00 - January 31, 2023 23:59:59)

Wednesday, 1 February, 2023 7:20:05AM

Account : 10.27.278.732.0000.5320

Parks Small Tools

			Odometer (km)			Volume (L)	L/100 km
			Start	End	Distance		
20036391	0	Parks Small Tools - Gasoline/Diesel	0	0	0	18.80	0.0000

APPENDIX B

Liquid Fuel Tank Removals and Installations Township of Esquimalt Public Works Yard

Site Photos

CLIENT:	Town of Esquimalt Public Works
PROJECT No.:	1271-01
DATE:	2023 10 14

SITE OBSERVATION REPORT

CONTRACT TITLE:	FUEL TANK INSTALLATION	CONTRACTOR:	TBD
B4 Representative:	Darryl Brizan P.Eng.	SUPERINTENDENT:	TBD
WEATHER:	Sunny	TEMPERATURE:	Warm

REPORT OF WORK PERFORMED: Site meeting and visit

PHOTOS:

Site meeting to review project scope and take Photos of Public Works Yard Site in the location of the existing tanks and pumps to be removed. Also photos of the proposed location for the new above ground tank, pumps, and controls.

CONSTRUCTION PHOTOS:



Figure 1 Existing fuel pumps and concrete apron to be removed



Figure 2 Proposed location for new above ground fuel tank 3m from lock block wall



Figure 3 Emergency Generator suction pipe through floor connected to the suction pump that filles the day tank



Figure 4 Generator day tank and alarm panel



Figure 5 Existing fuel pump shut off to be replaced with a new one for the new fuel tank



Figure 6 Existing fuel pump shut off on building wall.



Figure 7 Existing card reader to be removed once new card reader has been commissioned.



Figure 8 Electrical panel near emergency shut off switch with spare capacity for power to new fuel pumps and controls.

WORKS
3 Wire: 4
TRICAL 388-5756 AMPS: 225

Panel No. 'E'

▲ ▲ ▲
A B C - PH

Circuit			Description
▲			2a 20A FUEL PUMP
	▲		4b 20A FUEL PUMP
		▲	6c 15A SPARE
▲			8a 15A RECEPTACLES
	▲		10b 15A RECEPTACLES
		▲	12c 15A KITCHEN RECEPTACLES
▲			14a 15A KITCHEN RECEPTACLES
	▲		16b 15A KITCHEN RECEPTACLES
		▲	18c 15A KITCHEN RECEPTACLES
▲			20a 20A LUNCH ROOM 3000W
	▲		22b 20A LUNCH ROOM 3000W
		▲	24c 20A GEN. OFF. HEATING 3250W
▲			26a 20A GEN. OFF. HEATING 3250W
	▲		28b 15A SPARE DISHWASHER
		▲	30c 15A SPARE

▲ ▲ ▲
A B C - PH

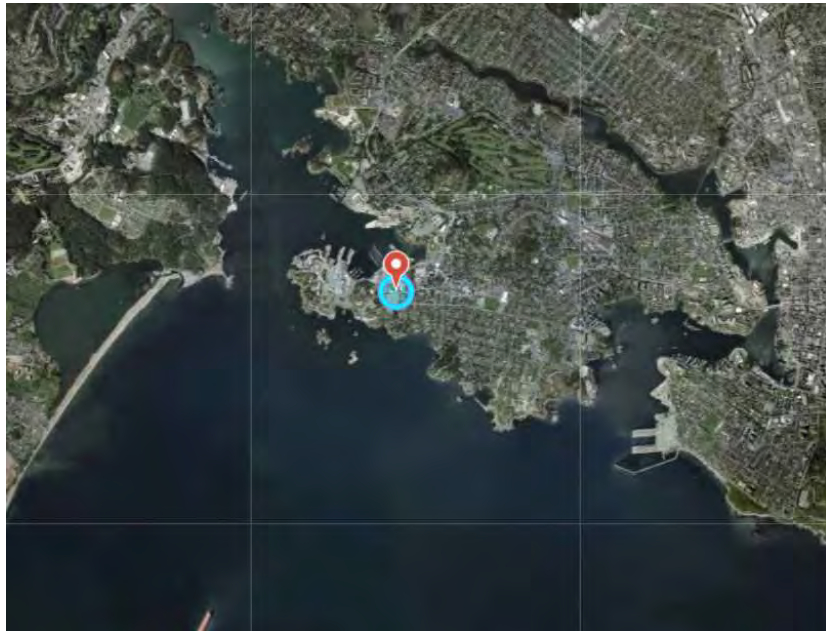
Figure 9 Electrical panel spare circuit information

APPENDIX C

Liquid Fuel Tank Removals and Installations

Township of Esquimalt Public Works Yard

Design Drawings



LOCATION MAP

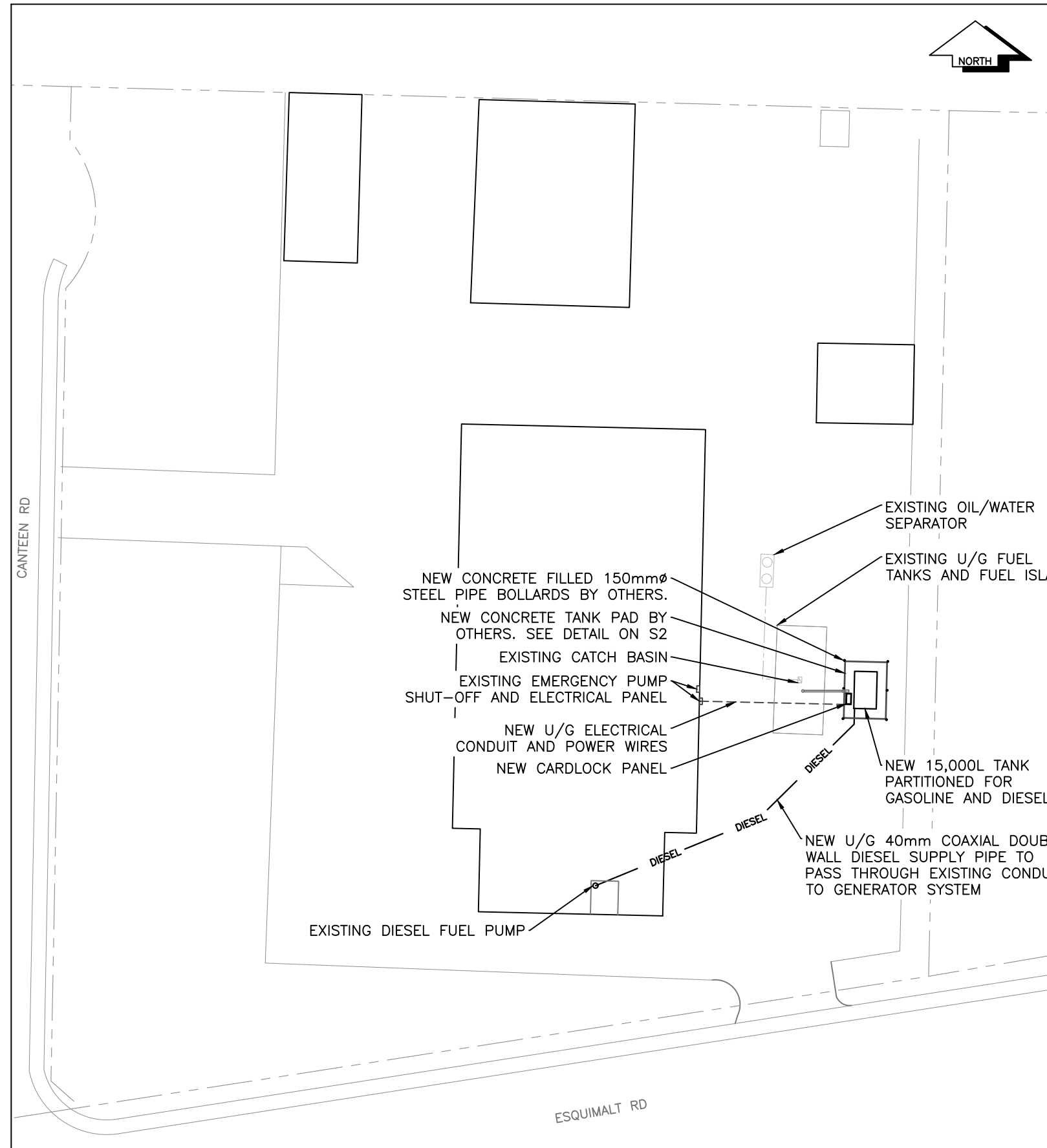
SCALE. NTS

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- 2.

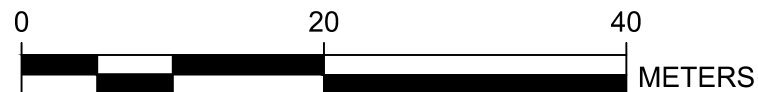
LEGAL DESCRIPTION

LOT: 1
 PID: 023-447-028
 PLAN: VP63502
 SUBURBAN LOT 26, ESQUIMALT LAND DISTRICT
 AREA-JURISDICTION-ROLL: 01-307-3936.000
 LATITUDE: 48° 25' 47"
 LONGITUDE: -123° 25' 26"



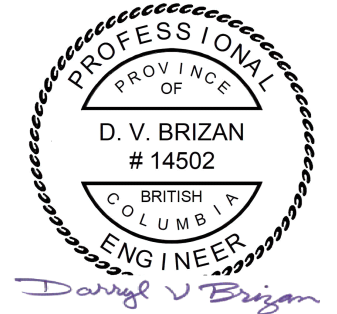
SITE PLAN

SCALE. 1:500 11x17



8598 Bourne Terrace
 Victoria, BC V8L 1M1
 Phone 250-961-5208

Professional Engineer Seal



2024-01-09
 EGBC Permit Number 1001087

REVISIONS / ISSUE

NO.	DATE	DESCRIPTION
V1	JAN 08/24	FOR REVIEW

NOTES:

ENGINEER: DARRYL BRIZAN P.Eng.

DRAWN BY: TJP

DATE DRAWN: OCTOBER 10/2023

DRAWING FILE: B4 1271-01-V1

PROJECT ADDRESS:

601 CANTEEN RD
 ESQUIMALT, BC
 PID: 023-447-028

PROJECT NUMBER:

1271-1

DRAWING TITLE:

OVERALL PLAN

SHEET

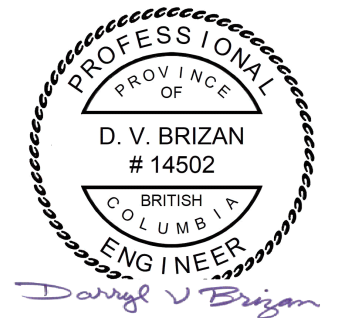
S1

C:\Users\jbrizan\Documents\B4 1271-01-V1\1271-01-V1.dwg - 01/08/24 10:00 AM

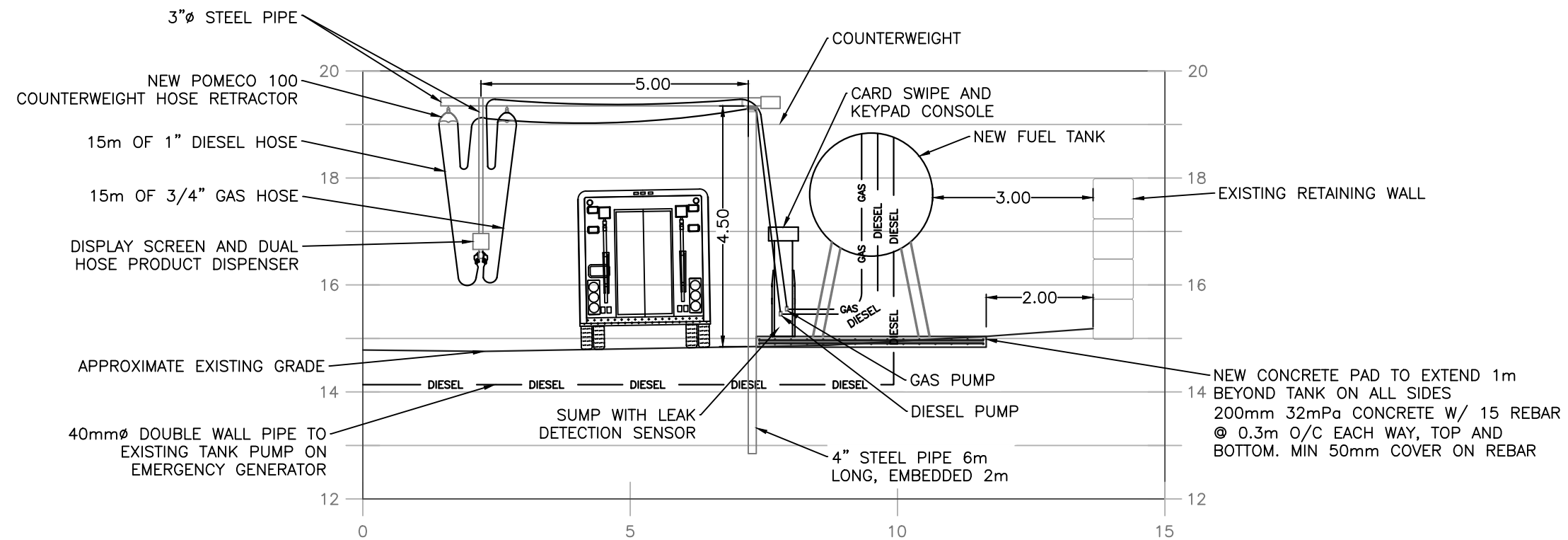


8598 Bourne Terrace
 Victoria, BC V8L 1M1
 Phone 250-961-5208

Professional Engineer Seal



2024-01-09
 EGBC Permit Number 1001087



FUELLING STATION CROSS SECTION

SCALE: NTS

REVISIONS / ISSUE

NO.	DATE	DESCRIPTION
V1	JAN 08/24	FOR REVIEW

NOTES:

ENGINEER: DARRYL BRIZAN P.Eng.

DRAWN BY: TJP

DATE DRAWN: OCTOBER 10/2023

DRAWING FILE: B4 1271-01-V1

PROJECT ADDRESS:

601 CANTEEN RD
 ESQUIMALT, BC
 PID: 023-447-028

PROJECT NUMBER:

1271-1

DRAWING TITLE:
 DETAILS

SHEET

S2

ERROR: undefined
OFFENDING COMMAND: eexec

STACK:

/quit
-dictionary-
-mark-

Stipulated Price Contract

CCDC 2 — 2020

Name of the Work

Apply a CCDC 2 copyright seal here.

The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 2 — 2020 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CCDC 2 STIPULATED PRICE CONTRACT

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- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

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- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Other Contractor
- Payment Legislation
- Place of the Work
- Product
- Project
- Ready-for-Takeover
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Value Added Taxes
- Work
- Working Day

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CCDC 2 is the product of a consensus-building process aimed at balancing the interests of all parties on the construction project. It reflects recommended industry practices. The CCDC and its constituent member organizations do not accept any responsibility or liability for loss or damage which may be suffered as a result of the use or interpretation of CCDC 2.

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when a stipulated price is the basis of payment.

This Agreement made on _____ day of _____ in the year _____ .
by and between the parties

Township of Esquimalt

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The *Owner* and the *Contractor* agree as follows:

ARTICLE A-1 THE WORK

The *Contractor* shall:

- 1.1 perform the *Work* required by the *Contract Documents* for *(insert below the description or title of the Work)*
Above Ground Fuel Storage Tank

located at *(insert below the Place of the Work)*
601 Canteen Road, Esquimalt, BC

for which the Agreement has been signed by the parties, and for which *(insert below the name of the Consultant)*

B4 Engineering Inc. (Darryl Brizan P.Eng.)
is acting as and is hereinafter called the "*Consultant*" and

- 1.2 do and fulfill everything indicated by the *Contract Documents*, and
- 1.3 commence the *Work* by the _____ day of _____ in the year _____ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the _____ day of _____ in the year _____ .

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

- 2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bid documents that are not expressly listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS.
- 2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement – THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- General Conditions

*

** (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; Division 01 of the Specifications – GENERAL REQUIREMENTS; Project information that the Contractor may rely upon; technical Specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; Drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date; time schedule)*

ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

/100 dollars \$

4.2 *Value Added Taxes* (of _____ %) payable by the *Owner* to the *Contractor* are:

/100 dollars \$

4.3 Total amount payable by the *Owner* to the *Contractor* for the *Work* is:

/100 dollars \$

4.4 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.5 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents* and *Payment Legislation*, and in accordance with legislation and statutory regulations respecting holdback percentages, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* unless otherwise prescribed by *Payment Legislation* together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by adjudication, arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:
 - (1) 2% per annum above the prime rate for the first 60 days.
 - (2) 4% per annum above the prime rate after the first 60 days.

Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by
(Insert name of chartered lending institution whose prime rate is to be used)

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.2.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below.

6.2 The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.

6.3 A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it will be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* will be deemed to have been received on the *Working Day* next following such day.

6.4 A *Notice in Writing* sent by any form of electronic communication will be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof.

6.5 An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

Township of Esquimalt

*name of Owner**

601 Canteen Road, Esquimalt, BC.

address

Ken.Gawryluk@esquimalt.ca

email address

Contractor

*name of Contractor**

address

email address

Consultant

B4 Engineering Inc. (Darryl Brizan P.Eng.)

*name of Consultant**

4735 Sooke Road, Victoria, BC, V9C4C1

address

darrylbrizan@b4engineering.com

email address

** If it is intended that a specific individual must receive the notice, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / French # language shall prevail.
Complete this statement by striking out inapplicable term.
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

- 8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED
in the presence of:

WITNESS

OWNER

Township of Esquimalt

name of Owner

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

- N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:*
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or*
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.*

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the amount stipulated in Article A-4 of the Agreement – CONTRACT PRICE.

Contract Time

The *Contract Time* is the time from commencement of the *Work* to the date of *Ready-for-Takeover* as stipulated in paragraph 1.3 of Article A-1 of the Agreement – THE WORK .

Contractor

The *Contractor* is the person or entity identified as such in the Agreement.

Drawings

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement.

Other Contractor

Other Contractor means a contractor, other than the *Contractor* or a *Subcontractor*, engaged by the *Owner* for the *Project*.

Payment Legislation

Payment Legislation means such legislation in effect at the *Place of the Work* which governs payment under construction contracts.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or Products means material, machinery, equipment, and fixtures forming part of the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Ready-for-Takeover

Ready-for-Takeover shall have been attained when the conditions set out in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER have been met, as verified by the *Consultant* pursuant to paragraph 12.1.4.2 of GC 12.1 – READY-FOR-TAKEOVER.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models, or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 The *Contract Documents* are complementary, and what is required by one shall be as binding as if required by all. Performance by the *Contractor* shall be required only to the extent consistent with the *Contract Documents*.
- 1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating co-ordination and execution of the *Work* by the *Contractor*.
- 1.1.4 The *Contractor* is not responsible for errors, omissions or inconsistencies in the *Contract Documents*. If there are perceived errors, omissions or inconsistencies discovered by or made known to the *Contractor*, the *Contractor* shall promptly report to the *Consultant* and shall not proceed with the work affected until the *Contractor* has received corrected or additional information from the *Consultant*.
- 1.1.5 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between *Owner* and *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 01 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 amended or later dated documents shall govern over earlier documents of the same type.
 - .5 noted materials and annotations shall govern over graphic indications.
- 1.1.6 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.7 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.8 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.9 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.10 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.11 Physical models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, the *Consultant* or the *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Consultant* and the *Contractor*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement – PAYMENT, GC 5.3 – PAYMENT and GC 5.5 – FINAL PAYMENT.
- 2.2.5 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to perform the *Work* in accordance with the *Contract Documents*.
- 2.2.6 Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.7 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.8 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.9 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.10 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.11 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.
- 2.2.12 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.13 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other submittals by the *Contractor*, in accordance with the *Contract Documents*.

- 2.2.14 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 2.2.15 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* and verify that *Ready-for-Takeover* has been attained.
- 2.2.16 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.17 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.
- 2.2.18 If the *Consultant's* engagement is terminated, the *Owner* shall immediately engage a *Consultant* against whom the *Contractor* makes no reasonable objection and whose duties and responsibilities under the *Contract Documents* will be that of the former *Consultant*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is required by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by others if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work was incorporated in the *Work* or the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly *Other Contractors'* work destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a finding.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.

3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY THE OWNER OR OTHER CONTRACTORS

3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to *Other Contractors* and to perform work with own forces.

3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:

- .1 provide for the co-ordination of the activities and work of *Other Contractors* and the *Owner's* own forces with the *Work* of the *Contract*;
- .2 enter into separate contracts with *Other Contractors* under conditions of contract which are compatible with the conditions of the *Contract*;
- .3 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 – INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
- .4 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of *Other Contractors* or the *Owner's* own forces.

3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:

- .1 afford the *Owner* and *Other Contractors* reasonable opportunity to store their products and execute their work;
- .2 co-ordinate and schedule the *Work* with the work of *Other Contractors* or the *Owner's* own forces that are identified in the *Contract Documents*;
- .3 participate with *Other Contractors* and the *Owner* in reviewing their construction schedules when directed to do so; and
- .4 report promptly to the *Consultant* in writing any apparent deficiencies in the work of *Other Contractors* or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.

3.2.4 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of *Other Contractors* or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

3.2.5 Disputes and other matters in question between the *Contractor* and *Other Contractors* shall be dealt with as provided in Part 8 of the General Conditions – DISPUTE RESOLUTION provided the *Other Contractors* have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any *Other Contractor* whose contract with the *Owner* contains a similar agreement to arbitrate. In the absence of *Other Contractors* having reciprocal obligations, disputes and other matters in question initiated by the *Contractor* against *Other Contractors* will be considered disputes and other matters in question between the *Contractor* and the *Owner*.

3.2.6 Should the *Owner*, the *Consultant*, *Other Contractors*, or anyone employed by them directly or indirectly be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 3.3 TEMPORARY WORK

3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work* unless otherwise specified in the *Contract Documents*.

3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

3.3.3 Notwithstanding the provisions of GC 3.1 – CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 CONSTRUCTION SCHEDULE

3.4.1 The *Contractor* shall:

- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
- .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
- .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions – CHANGES IN THE WORK.

GC 3.5 SUPERVISION

3.5.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while the *Work* is being performed. The appointed representative shall not be changed except for valid reason.

3.5.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor*'s appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

3.6.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:

- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
- .2 incorporate the applicable terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
- .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.

3.6.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.

3.6.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.

3.6.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the difference occasioned by such required change.

3.6.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.

3.6.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor*'s or *Supplier*'s work which has been certified for payment.

GC 3.7 LABOUR AND PRODUCTS

3.7.1 The *Contractor* shall maintain good order and discipline among the *Contractor*'s employees engaged on the *Work* and employ only workers that are skilled in the tasks assigned.

3.7.2 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

3.7.3 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

GC 3.8 SHOP DRAWINGS

3.8.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.

3.8.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in accordance with an agreed schedule, or in the absence of an agreed schedule, in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of *Other Contractors* or the *Owner*'s own forces.

- 3.8.3 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- 1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - 2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.8.4 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.8.5 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.8.6 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.8.7 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of the *Work* or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.
- 4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.
- 4.1.6 The value of the *Work* performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement – PAYMENT shall be submitted monthly to the *Owner* and the *Consultant* simultaneously as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 The amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed and *Products* delivered to the *Place of the Work* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values shall be made out in such form as specified in the *Contract* and supported by such evidence as the *Consultant* may reasonably require.
- 5.2.6 Applications for payment shall be based on the schedule of values accepted by the *Consultant* and shall comply with the provisions of *Payment Legislation*.
- 5.2.7 Each application for payment shall include evidence of compliance with workers' compensation legislation at the *Place of the Work* and after the first payment, a declaration by the *Contractor* as to the distribution made of the amounts previously received using document CCDC 9A 'Statutory Declaration'.
- 5.2.8 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PAYMENT

- 5.3.1 After receipt by the *Consultant* and the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:
 - .1 The *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* certifies a different amount, or rejects the application or part thereof, the *Owner* shall promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
 - .2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment, and in any event, in compliance with *Payment Legislation*.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 The *Consultant* will review the *Work* to certify or verify the validity of the application for *Substantial Performance of the Work* and will promptly, and in any event, no later than 20 calendar days after receipt of the *Contractors* application:
 - .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.2 Where the holdback amount required by the applicable lien legislation has not been placed in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.4.3 Subject to the requirements of any *Payment Legislation*, all holdback amount prescribed by the applicable lien legislation for the *Work* shall become due and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.4.4 The *Contractor* shall submit an application for payment of the lien holdback amount in accordance with GC 5.3 – PAYMENT.
- 5.4.5 Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release, such portion to the *Contractor* in accordance with such legislation.

5.4.6 Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

- 5.5.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.5.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and when the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment to the *Owner*, with a copy to the *Contractor*.
- 5.5.3 If the *Consultant* rejects the application or part thereof, the *Owner* will promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
- 5.5.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with *Payment Legislation*.

GC 5.6 DEFERRED WORK

- 5.6.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, or if the *Owner* and the *Contractor* agree that, there are items of work that must be deferred, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such deferred *Work*.

GC 5.7 NON-CONFORMING WORK

- 5.7.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present to the *Consultant*, in a form that can be reasonably evaluated, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and the *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the applications for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.

- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- 1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - 2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - 3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following in as much as it contributes directly to the implementation of the *Change Directive*:

Labour

- 1 rates that are listed in the schedule or as agreed by the *Owner* and the *Contractor* including wages, benefits, compensation, contributions, assessments, or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan for:
 - (1) trade labour in the direct employ of the *Contractor*;
 - (2) the *Contractor's* personnel when stationed at the field office;
 - (3) the *Contractor's* personnel engaged at shops or on the road, in expediting the production or transportation of materials or equipment; and
 - (4) the *Contractor's* office personnel engaged in a technical capacity, or other personnel identified in Article A-3 of the Agreement – CONTRACT DOCUMENTS for the time spent in the performance of the *Work*;

Products, Construction Equipment and Temporary Work

- 2 cost of all *Products* including cost of transportation thereof;
- 3 in the absence of agreed rates, cost less salvage value of *Construction Equipment, Temporary Work* and tools, exclusive of hand tools under \$1,000 owned by the *Contractor*;
- 4 rental cost of *Construction Equipment, Temporary Work* and tools, exclusive of hand tools under \$1,000;
- 5 cost of all equipment and services required for the *Contractor's* field office;

Subcontract

- 6 subcontract amounts of Subcontractor with pricing mechanism approved by the *Owner*;

Others

- 7 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7.1;
- 8 deposits lost provided that they are not caused by negligent acts or omissions of the *Contractor*;
- 9 cost of quality assurance such as independent inspection and testing services;
- 10 charges levied by authorities having jurisdiction at the *Place of the Work*;
- 11 royalties, patent license fees, and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 – PATENT FEES;
- 12 premium for all contract securities and insurance for which the *Contractor* is required, by the *Contract Documents*, to provide, maintain and pay in relation to the performance of the *Work*;
- 13 losses and expenses sustained by the *Contractor* for matters which are the subject of insurance under the policies prescribed in GC 11.1 – INSURANCE when such losses and expenses are not recoverable because the amounts are in excess of collectible amounts or within the deductible amounts;
- 14 taxes and duties, other than *Value Added Taxes*, income, capital, or property taxes, relating to the *Work* for which the *Contractor* is liable;
- 15 charges for voice and data communications, courier services, expressage, transmittal and reproduction of documents, and petty cash items;
- 16 cost for removal and disposal of waste products and debris;
- 17 legal costs, incurred by the *Contractor*, in relation to the performance of the *Work* provided that they are not:
 - (1) relating to a dispute between the *Owner* and the *Contractor* unless such costs are part of a settlement or awarded by arbitration or court,
 - (2) the result of the negligent acts or omissions of the *Contractor*, or
 - (3) the result of a breach of this *Contract* by the *Contractor*;
- 18 cost of auditing when requested by the *Owner*; and
- 19 cost of *Project* specific information technology in accordance with the method determined by the parties.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* performance of the *Work* attributable to the *Change Directive* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for a finding.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* and differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will promptly inform the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, GC 9.3 – ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by the *Owner*, the *Consultant*, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 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 providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, resulting in the failure of the *Contractor* to attain *Ready-for-Takeover* by the date stipulated in Article A-1 of the Agreement – THE WORK, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or

.4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, the *Consultant* or anyone employed or engaged by them directly or indirectly.

6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.

6.5.5 If no schedule is made under paragraph 2.2.12 of GC 2.2 – ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.

6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:

- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
- .2 keep such records as may be necessary to support the claim.

6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based and the *Consultant* will make a finding upon such claim.

6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.

6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.

6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.

7.1.2 If the *Contractor* neglects to perform the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* which provides the detail of such neglect to perform the *Work* properly or such failure to comply with the requirements of the *Contract* to a substantial degree, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing*, containing particulars of the default including references to applicable provisions of the *Contract*, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.

7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:

- .1 commences the correction of the default within the specified time,
- .2 provides the *Owner* with an acceptable schedule for such correction, and
- .3 corrects the default in accordance with the *Contract* terms and with such schedule.

- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may by giving *Notice in Writing*:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* for the *Work* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor*'s right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor*'s right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense,
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued,
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant*'s additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 – WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor*'s work under GC 12.3 – WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor*'s obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue in force after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner*'s insolvency, or if a receiver is appointed because of the *Owner*'s insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner*'s contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner*'s obligations under the *Contract*,
 - .2 the *Consultant* fails to issue a certificate as provided in Part 5 of the General Conditions – PAYMENT,
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by adjudication, arbitration or court, or
 - .4 the *Owner* fails to comply with the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, gives a written statement to the *Owner* and the *Contractor* that provides detail of such failure to comply with the requirements of the *Contract* to a substantial degree.
- 7.2.4 The *Contractor*'s *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* by giving a *Notice in Writing* to the *Owner* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved

in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION.

8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.3.3 to 8.3.8 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.4 – RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.

8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 ADJUDICATION

8.2.1 Nothing in this *Contract* shall be deemed to affect the rights of the parties to resolve any dispute by adjudication as may be prescribed by applicable legislation.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

8.3.1 In accordance with the rules for mediation as provided in CCDC 40 ‘Rules for Mediation and Arbitration of Construction Industry Disputes’ in effect at the time of bid closing, the parties shall appoint a Project Mediator

- .1 within 20 *Working Days* after the *Contract* was awarded, or
- .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.

8.3.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 – ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.

8.3.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid, and timely disclosure of relevant facts, information and documents to facilitate these negotiations.

8.3.4 After a period of 10 *Working Days* following receipt of a responding party’s *Notice in Writing* of reply under paragraph 8.3.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the rules for mediation as provided in CCDC 40 in effect at the time of bid closing.

8.3.5 If the dispute has not been resolved at the mediation or within such further period as is agreed by the parties, the Project Mediator will terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.

8.3.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.3.5, either party may refer the dispute to be finally resolved by arbitration under the rules of arbitration as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.

8.3.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.3.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.3.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.

8.3.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.3.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.3.6 shall be:

- .1 held in abeyance until:
 - (1) *Ready-for-Takeover*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and

.2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.3.6.

GC 8.4 RETENTION OF RIGHTS

- 8.4.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions – DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.4.2 Nothing in Part 8 of the General Conditions – DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.3.6 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work*, the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors or omissions in the *Contract Documents*; or
 - .2 acts or omissions by the *Owner*, the *Consultant*, *Other Contractors*, or their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or the *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substance exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless any toxic or hazardous substance which was present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substance exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.

- 9.2.6 If the *Owner* and the *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.8 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 The *Contractor* shall be responsible for establishing, initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the *Work* in accordance with the applicable health and safety legislation.
- 9.4.2 The *Owner* and the *Contractor* shall comply with all health and safety precautions and programs established at the *Place of the Work*.
- 9.4.3 The *Owner* and the *Contractor* shall comply with the rules, regulations and practices required by the applicable health and safety legislation.
- 9.4.4 The *Owner* shall cause the *Consultant*, *Other Contractors* and the *Owner's* own forces to comply with all health and safety precautions and programs established by the *Contractor* at the *Place of the Work*.
- 9.4.5 Nothing in this *Contract* shall affect the determination of liability under the applicable health and safety legislation.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or the *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing,
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and

- .3 if the *Owner* and the *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.5.2 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor*'s operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 make good any damage to the *Work*, the *Owner*'s property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.3 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 – MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will issue the changes required to the *Contract Documents* as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against 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 a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against 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 a patent of invention in executing anything for the purpose of the *Contract*, the physical model, plan or design of which was supplied to the *Contractor* as part of the *Contract*.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, and again with the *Contractor*'s applications for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*.

PART 11 INSURANCE

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 13.1 – INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the requirements of which are specified in CCDC 41 'CCDC Insurance Requirements' in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover* on an ongoing basis for a period of 6 years following *Ready-for-Takeover*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
 - .3 Unmanned aerial vehicle aircraft, manned aircraft or watercraft Liability Insurance when owned or non-owned manned or unmanned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 - .4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Ready-for-Takeover*;
 - (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*; and
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
 - .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Ready-for-Takeover*.
 - .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except

that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or *Other Contractors*, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by the *Owner* or *Other Contractors*, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

- .7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
- .8 *Contractors' Pollution Liability Insurance* from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.

11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.

11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.

11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

11.1.6 If a revised version of CCDC 41 is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.

11.1.7 If a revised version of CCDC 41 is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.

11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41.

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

12.1.1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are limited to the following:

- .1 The *Consultant* has certified or verified the *Substantial Performance of the Work*.
- .2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having jurisdiction.
- .3 Final cleaning and waste removal at the time of applying for *Ready-for-Takeover*, as required by the *Contract Documents*.
- .4 The delivery to the *Owner* of such operations and maintenance documents reasonably necessary for immediate operation and maintenance, as required by the *Contract Documents*.
- .5 Make available a copy of the as-built drawings completed to date on site.
- .6 Startup, testing required for immediate occupancy, as required by the *Contract Documents*.
- .7 Ability to secure access to the *Work* has been provided to the *Owner*, if required by the *Contract Documents*.
- .8 Demonstration and training, as required by the *Contract Documents*, is scheduled by the *Contractor* acting reasonably.

12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 must be deferred because of conditions reasonably beyond the control of the *Contractor*, or by agreement between the *Owner* and the *Contractor* to do so, *Ready-for-Takeover* shall not be delayed.

12.1.3 When the *Contractor* considers that the *Work* is *Ready-for-Takeover*, the *Contractor* shall deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for *Ready-for-Takeover* for review. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.

12.1.4 The *Consultant* will review the *Work* to verify the validity of the application and will promptly, and in any event, no later than 10 calendar days after receipt of the *Contractor's* list and application:

- .1 advise the *Contractor* in writing that the *Work* is not *Ready-for-Takeover* and give reasons why, or
- .2 confirm the date of *Ready-for-Takeover* in writing to each of the *Owner* and the *Contractor*.

12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

12.1.6 The provision of GC 12.1 – READY-FOR-TAKEOVER shall be subject to GC 12.2 – EARLY OCCUPANCY BY THE OWNER.

GC 12.2 EARLY OCCUPANCY BY THE OWNER

12.2.1 The *Owner* may take occupancy of a part or the entirety of the *Work* before *Ready-for-Takeover* has been attained only as agreed by the *Contractor* which agreement shall not be unreasonably withheld.

12.2.2 The *Owner* shall not occupy a part or the entirety of the *Work* without prior approval by authorities having jurisdiction.

12.2.3 If the *Owner* takes occupancy of a part of the *Work* before *Ready-for-Takeover* has been attained:

- .1 The part of the *Work* which is occupied shall be deemed to have been taken over by the *Owner* as from the date on which it is occupied.
- .2 The *Contractor* shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the *Owner*.
- .3 The warranty period specified in paragraph 12.3.1 of GC 12.3 – WARRANTY for that part of the *Work* shall start from the date on which it is occupied.

12.2.4 If the *Owner* takes occupancy of the entirety of the *Work* before all the prerequisites are met as described in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER, the *Work* shall, subject to the requirements of the applicable lien legislation, be deemed to achieve *Ready-for-Takeover*. This shall not relieve the *Contractor*'s responsibility to complete the *Work* in a timely manner.

GC 12.3 WARRANTY

12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date when *Ready-for-Takeover* has been attained.

12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.

12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.

12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor*'s expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.

12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.

12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor*'s responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

13.1.1 Without restricting the parties' obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in paragraphs 13.1.4 and 13.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose negligent acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

- 13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:
- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the minimum liability insurance limit for one occurrence, of the applicable insurance policy, as referred to in CCDC 41 in effect at the time of bid closing.
 - .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
 - .3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss and damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.
 - .4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.
- 13.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 13.1.1 and 13.1.2 shall be inclusive of interest and all legal costs.
- 13.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.
- 13.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:
- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
 - .2 arising out of the *Contractor*'s performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 13.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:
- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based become known; and
 - .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 13.2 WAIVER OF CLAIMS

- 13.2.1 Subject to any lien legislation applicable to the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than 5 calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work* or 20 calendar days following the *Ready-for-Takeover* date, whichever is later;
 - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances, patent fees and defect in title matters for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 13.1.4 or 13.1.5 of GC 13.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.2 The *Contractor* waives and releases the *Owner* from all claims resulting from acts or omissions which occurred after the *Ready-for-Takeover* date except for:
- .1 indemnification respecting third party claims, and claims respecting toxic and hazardous substances, patent fees and defect in title matters, all as referred in paragraphs 13.2.1.2 and 13.2.1.3; and
 - .2 claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.3 Subject to any lien legislation applicable to the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than 20 calendar days following the *Ready-for-Takeover* date;

- .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 13.1.4 of GC 13.1 – INDEMNIFICATION;
 - .4 damages arising from the *Contractor*'s actions which result in substantial defects or deficiencies in the *Work*. “Substantial defects or deficiencies” mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 – WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.4 Respecting claims arising upon substantial defects and deficiencies in the *Work*, as referenced in paragraph 13.2.3.4, and notwithstanding paragraph 13.2.3.5, the *Owner* waives and releases the *Contractor* from all claims except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the *Ready-for-Takeover* date, provided that any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, the time within which any such claim may be brought shall be such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- 13.2.5 The *Owner* waives and releases the *Contractor* from all claims arising from acts or omissions which occur after the *Ready-for-Takeover* date, except for:
- .1 indemnification for claims advanced against the *Owner* by third parties, as referenced in paragraph 13.2.3.2;
 - .2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor*, as referenced in paragraph 13.2.3.3;
 - .3 claims arising under GC 12.3 – WARRANTY; and
 - .4 claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.6 “*Notice in Writing* of claim” as provided for in GC 13.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 13.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of an intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 13.2.7 A claim for lien asserted under the lien legislation prevailing at the *Place of the Work* shall qualify as notice of claim for the purposes of this *Contract*.
- 13.2.8 The party giving the *Notice in Writing* of claim as provided for in GC 13.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 13.2.9 Where the event or series of events giving rise to a claim made under paragraphs 13.2.1 or 13.2.3 has a continuing effect, the detailed account submitted under paragraph 13.2.8 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which such claim is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 13.2.10 Nothing in GC 13.2 – WAIVER OF CLAIMS shall be deemed to affect the rights of the parties under any lien legislation or limitations legislation prevailing at the *Place of the Work*.

CCDC 41 CCDC INSURANCE REQUIREMENTS

PUBLICATION DATE: December 14, 2020

1. General liability insurance shall be with limits of not less than \$10,000,000 per occurrence, an aggregate limit of not less than \$10,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$10,000. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 (including an extension for a standard provincial and territorial form of non-owned automobile liability policy) and IBC Form 2320. To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
2. Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property, covering all vehicles owned or leased by the *Contractor*. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.
3. Manned Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft (if used directly or indirectly in the performance of the *Work*), including use of additional premises, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$10,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*.
4. Unmanned aerial vehicle liability insurance with respect to owned or non-owned aircraft (if used directly or indirectly in the performance of the *Work*), shall have limits of not less than \$5,000,000 per occurrence or accident for bodily injury, death and damage to property or such amounts as required by any applicable law or regulation.
5. "Broad form" property insurance shall have limits of not less than the sum of 1.1 times *Contract Price* and the full value, as stated in the *Contract*, of *Products* and design services that are specified to be provided by the *Owner* for incorporation into the *Work*, with a deductible not exceeding \$10,000. The insurance coverage shall not be less than the insurance provided by IBC Forms 4042 and 4047 or their equivalent replacement. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
6. Boiler and machinery insurance shall have limits of not less than the replacement value of the permanent or temporary boilers and pressure vessels, and other insurable objects forming part of the *Work*. The insurance coverage shall not be less than the insurance provided by a comprehensive boiler and machinery policy including hot testing and commissioning.
7. Contractors' equipment insurance coverage written on an "all risks" basis covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* may agree to waive the equipment insurance requirement.
8. Contractors' Pollution liability insurance shall have limits of not less than \$5,000,000 per occurrence for bodily injury, death and damage to property.

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