

REQUEST FOR PROPOSALS No. 24-014

Wellington Pump Station Upgrade – Wastewater Pump Procurement

ISSUED: February 13, 2024

CLOSING DATE AND TIME:

Submissions must be received on or before:

3:00 PM (15:00 hrs) Local Time on March 14, 2024

Submissions and Questions are to be directed to:

Chris Mathie, Project Engineer, cmathie@rdn.bc.ca

Questions are requested at least five (5) business days before the closing date.

Proponent's Information Meeting:

"No Proponent's meeting will be held"

Proposals will not be opened in public



1. Instructions to Proponents

1.1. Closing Date/Time/Submission Method

Submissions must be received on or before 3:00 PM (15:00 hrs), Local Time, on March 14, 2024.

Submission By Email: In PDF format with "24-014 Wellington Pump Station Upgrade – Wastewater Pump Procurement" as the subject line at this electronic address:

CMATHIE@RDN.BC.CA

Please note: Maximum email file size limit is 20MB, or less. The RDN will not be liable for any technological delays of submissions. Submissions received in any other manner will not be accepted.

1.2. Amendment to Proposals

Proposals may be amended in writing and sent via email to the RDN contact person identified on the cover page on or before the closing. Such amendments should be signed by the authorized signatory of the Proponent.

1.3. Addenda and Questions & Answers

If the RDN determines that an amendment or questions & answers are required for this RFP, the RDN will post the Addendum on the RDN (https://www.rdn.bc.ca/current-bid-opportunities) and BC Bid (https://bcbid.gov.bc.ca/) websites. Each addendum will be incorporated into and become part of the RFP. No amendment of any kind to the RFP is effective unless it is contained in a written addendum issued by the RDN. It is the sole responsibility of the Proponent to check and ensure all amendments are included prior to submitting their final Proposal submission.

1.4. Withdrawal of Proposals

The Proponent may withdraw their Proposal at any time by submitting a written withdrawal email to the RDN contact person identified on the cover page on or before the closing.

1.5. Unsuccessful Vendors

The Regional District will offer debriefings to unsuccessful Proponents, on request, at a mutually agreeable time.

2. INTRODUCTION

The purpose of this Request for Proposal is to solicit submissions from qualified suppliers to provide a pump equipment package that meets the specifications outlined in Appendix A.

Installation is anticipated for Summer 2025. Delivery to the specified location is requested within 18 weeks of a fully executed contract. Suppliers are to provide lead times with their submissions.



3. BACKGROUND

The Wellington Pump Station (WPS), operated by the Regional District of Nanaimo (RDN), is located within the City of Nanaimo on Vancouver Island. The WPS features a cylindrical concrete structure and currently houses two 105 hp NP 3301 HT 458 and one 88 hp CP 3300 464 Flygt submersible sewage pumps, operating in a two duty, one standby configuration. Although the wet well currently houses three pumps, the station was sized to allow for the addition of two future pumps in an ultimate five pump build out scenario. Due to the station's construction in 1980, an upgrade is now required to accommodate the existing and future demand flows.

The WPS Upgrade Project objective is to expand capacity by adding two new pumps to work in combination with two existing 105 hp submersible pumps. The required operating point of the new pumps is outlined in Appendix A. A fifth and final pump will be added to the station in the future. The supply and delivery of this pump is outside the scope of this procurement package.

4. SCOPE OF SERVICES

The scope shall include but not necessarily be limited to the supply, fabrication, shipping, and delivery of two (2) submersible sewage pumps complete with an integral electric motor, factory installed flexible power and control cable, housing moisture detection and bearing temperature sensors. As well, the supply and delivery of the following pump accessories:

- Epoxy coated cast iron quick disconnect pump base/discharge fittings to suit the two(2) new pumps and one(1) future pump (3 total).
- Epoxy coated cast iron quick disconnect pump base/discharge fittings to suit the two(2) existing NP 3301 HT 458 pumps (2 total).
- 316 stainless steel lifting chains for the two(2) new, two(2) existing and one(1) future pumps. (5 total).
- 316 stainless steel guide rails and upper and mid guide rail holder for the two(2) new, two(2) existing and one(1) future pumps. (5 total).

Refer to Appendix A for the general requirements and a detailed description of the technical requirements.

5. DELIVERABLES AND OUTCOMES

The desired outcome is to receive two(2) submersible sewage pumps that are reliable, low maintenance, suitable for the electrical classification area, and meet the general and technical requirements outlined in Appendix A, as well as the pump accessories outlined in Section 4.

The deliverables shall include but not necessarily be limited to the supply, fabrication, shipping, and delivery of two(2) submersible sewage pumps:

Manufacturer, make, model and place of manufacture of pumps and motors;



- List of the standard material specifications to which the principal parts of the pump will comply;
- Total net assembled weight of the principal components of the pumping equipment;
- Specific technical data listed in Appendix B for the pumping units and electric motors;
- Pump characteristic curves showing head, capacity, efficiency, net positive suction head required, and brake horsepower at the rated speed, all throughout the entire operating range including the shut-off head;
- Pump/motor assembly shall have CSA approval as one unit, per CSA standard C22.2-108;
- Pump/motor unit shall also be approved by CSA for service in a Class 1, Zone 1 location;
- Scaled shop drawings showing the construction, principal dimensions, operation, and special
 features of the pumps, and listing the materials to be used for the principal parts and the
 material specifications with which these comply;

Prepared fully indexed, illustrated operation and maintenance manuals covering the submersible pumping unit and all associated accessories. The operation and maintenance manuals shall include but not be limited to the following items:

- Title page and table of contents;
- Certified factory performance test data for pumping units and motors;
- Detailed parts lists for the pumping units and associated appurtenances including parts numbers, current prices, anticipated delivery times and maintenance instructions;
- Dimensioned drawings of all pumping units and associated appurtenances including the weights of each component;
- Complete electrical information on all motors supplied under this contract;
- Schedule of maintenance for the warranty period; and
- Detailed installation, operating and maintenance instructions.

Provide a qualified representative to inspect the pump installation immediately prior to the acceptance tests; and

Delivery of the two(2) pumping units and accessories to the Greater Nanaimo Pollution Control Centre located at 4600 Hammond Bay Rd, Nanaimo, BC V9T 5A8.

6. REFERENCE/BACKGROUND INFORMATION

See attached for the pump specifications (Appendix A) and the data sheet (Appendix B).

7. PROPOSAL SUBMISSION AND EVALUATION

Proposals will be evaluated based 65% on technical aspects and 35% on financial aspects. "Technical" aspects of proposals are considered to be any aspects that relate to fully meeting all stated requirements of the Work. "Financial" aspects of proposals are considered to be any aspects that relate to the expected completed costs, or timing of those costs, for the Work.



Proposals submitted should be in enough detail to allow the RDN to determine the Proponent's qualifications and capabilities from the documents received. The selection committee, formed at the RDN's sole discretion, will score the Proposals in accordance with the criteria provided.

| Criteria | Points | | |
|--|--------|--|--|
| Technical | | | |
| Technical Specifications – Proposal demonstrates adequate understanding of specifications to the project documentation in Appendix A and are as good or better. | 35 | | |
| Datasheet Completed – Information requested in Appendix B is provided and provides adequate detail and are as good or better. | 10 | | |
| References – Proposed equipment has an extensive installed base. At least 3 client references are provided and can be contacted. | 5 | | |
| Quality – Proposal demonstrates an understanding of the critical project quality requirements and outlines measures the Contractor will take to ensure they are met. | 5 | | |
| Schedule – Proposal demonstrates a thorough understanding of the preparation and onsite workflow required for accomplishment of the key work tasks, as well as clearly indicates completion within the RDN's stated work window. Please advise anticipated lead time to the specified delivery location. | 5 | | |
| Service/Warantee – Please advise the location of your nearest authorized service centre and standard service response times to minimize disruption to the operation of RDN infrastructure. Advise availability of replacement parts. Provide details of available factory warrantee and any extended waratee programs. | 5 | | |
| Financial | | | |
| Firm Price Quote – Total, including all potential add-on scope. Lowest aggregate lump sum price submitted is awarded 35 points. Other proposals will receive reduced scores in this category based on the proportion higher than the lowest price. i.e. score = lowest price/other price x 35 | 35 | | |
| Grand Total Points | 100 | | |

The RDN may evaluate proposals on a comparative basis by comparing one proponent's proposal to another proponent's proposal. The RDN reserves the right to not complete a detailed evaluation if the RDN concludes the proposal is materially incomplete or, irregular or contain any financial or commercial terms that are unacceptable to the RDN.

The selection committee may proceed with an award recommendation or the RDN may proceed to negotiate with the highest evaluated proponent with the intent of developing an agreement. If the parties after having bargained in good faith are unable to conclude a formal agreement, the RDN and the Proponent will be released without penalty or further obligations other than any surviving obligations regarding confidentiality and the RDN may, at its discretion, contact the



Proponent of the next best rated Proposal and attempt to conclude a formal agreement with it, and so on until a contract is concluded or the proposal process is cancelled.

The RDN reserves the right to award the assignment in whole or in part or to add or delete any portion of the work. Throughout the evaluation process, the evaluation committee may seek additional clarification on any aspect of the Proposal to verify or clarify the information provided and conduct any background investigation and/or seek any additional information it considers necessary.

8. PROPOSED PURCHASE CONTRACT

The RDN's preferred form of Contract is attached herein. Proponents should carefully review this form of Contract. Should any vendors request that RDN consider revisions to the form of Contract, Proponents should include any clauses of concern in their proposal submission and suggest replacement language.

9. GENERAL CONDITIONS

9.1. No Contract

By submitting a Request for Proposal and participating in the process as outlined in this RFP, proponents expressly agree that no contract of any kind is formed until a fully executed contract is in place.

9.2. Privilege Clause

The lowest or any proposal may not necessarily be accepted.

9.3. Acceptance and Rejection of Submissions

This RFP does not commit the RDN, in any way to select a preferred Proponent, or to proceed to negotiate a contract, or to award any contract. The RDN reserves the right in its sole discretion cancel this RFP, up until award, for any reason whatsoever.

The RDN may accept or waive a minor and inconsequential irregularity, or where applicable to do so, the RDN may, as a condition of acceptance of the Submission, request a Proponent to correct a minor or inconsequential irregularity with no change in the Submission.

9.4. Conflict of Interest

Proponents shall disclose in their Proposals any actual or potential Conflict of Interest and existing business relationships it may have with the RDN, its elected officials, appointed officials or employees.



9.5. Solicitation of Board Members and RDN Staff

Proponents and their agents will not contact any member of the RDN Board or RDN Staff with respect to this RFP, other than the RDN Contact named in this document.

9.6. Litigation Clause

The RDN may, in its absolute discretion, reject a Proposal submitted by Proponent, if the Proponent, or any officer or director of the Proponent is or has been engaged either directly or indirectly through another corporation in legal action against the RDN, its elected or appointed officers and employees in relation to:

Any other contract for works or services; or

Any matter arising from the RDN's exercise of its powers, duties, or functions under the Local Government Act, Community Charter or another enactment within five years of the date of this Call for Proposals.

In determining whether to reject a Proposal under this clause, the RDN will consider whether the litigation is likely to affect the Proponent's ability to work with the RDN, its consultants and representatives and whether the RDN's experience with the Proponent indicates that the RDN is likely to incur increased staff and legal costs in the administration of this Contract if it is awarded to the Proponent.

9.7. Exclusion of Liability

Proponents are solely responsible for their own expenses in preparing and submitting a Proposal and for any meetings, negotiations, or discussions with the RDN. The RDN will not be liable to any Proponent for any claims, whether for costs, expense, losses or damages, or loss of anticipated profits, or for any other matter whatsoever, incurred by the Proponent in preparing and submitting a Proposal, or participating in negotiations for a Contract, or other activity related to or arising out of this RFP. Except as expressly and specifically permitted in these Instructions to Proponents, no Proponent shall have any claim for compensation of any kind whatsoever, as a result of participating in this RFP, and by submitting a Proposal each Proponent shall be deemed to have agreed that it has no claim.

9.8. Ownership of Proposals

All Proposals, including attachments and any documentation, submitted to and accepted by the RDN in response to this RFP become the property of the RDN.

9.9. Freedom of Information

All submissions will be held in confidence by the RDN. The RDN is bound by the Freedom of Information and Protection of Privacy Act (British Columbia) and all documents submitted to the RDN will be subject to provisions of this legislation. The successful vendor and value of the award is routinely released.

Appendix A: Pump Specifications

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Part 1 General

- .1 Scope of Work
- .2 The Regional District of Nanaimo, hereinafter referred to as 'the District' is upgrading the Wellington Pump Station. The scope of this contract for the supply of the pumping units is outlined below.
 - a. Supply and delivery of two submersible sewage pumps complete with integral electric motor and factory installed power and control cable and conductors for moisture and bearing temperature sensors.
 - b. Supply and delivery of the following pump accessories:
 - Epoxy coated cast iron quick disconnect pump base/discharge fittings to suit the two new pumps and one future pump (3 total).
 - Epoxy coated cast iron quick disconnect pump base/discharge fittings to suit the two existing NP 3301 HT 458 pumps (2 total).
 - 316 stainless steel lifting chains for the two new, two existing and one future pumps. (5 total).
 - 316 stainless steel guide rails and upper and mid guide rail holder for the two new, two existing and one future pumps. (5 total).
- .3 Supply and delivery of specified spare parts.
- .4 Non-witnessed factory tests.
- .5 Inspection of final installation and witnessing of acceptance tests.
- .6 All components with be stored by the RDN and installed in 2025.

1.2 Design Coordination - Variable Frequency Drives

- .1 The pumping units to be supplied under this Contract will be powered from variable frequency drive controllers (VFD's), which are under a separate contract. Specific information regarding the manufacturer and model of the drives will not be available prior to the close of this tender. The Supplier shall supply all pertinent information that could affect the design of the VFD's under the "special notes" section of Appendix B to enable the drive supplier to provide equipment compatible with the pumping units.
- .2 The Supplier shall provide motor information to the District, or the Variable Frequency Drive vendor as required to ensure compatibility between all system components. Information shall be provided within 72 hours of such a request.

1.3 Information to Accompany Proposals

- .1 Submit with each proposal sufficient detail to show that the pumping equipment and accessories will conform to the requirements of this contract.
- .2 To facilitate the assessment and comparison of proposals, provide the information required under the following items (a) through (d) by completing the data sheets given in Appendix B.
 - a. Manufacturer, make, model and place of manufacture of pumps and motors.
 - b. List of the standard material specifications to which the principal parts of the pump will comply.
 - c. Total net assembled weight of the principal components of the pumping equipment.

- d. Specific technical data listed in Appendix B for the pumping units and electric motors.
- .3 Clearly mark the information covering the following items (a) through (c) which may be enclosed separately with each proposal.
 - a. Drawings and/or illustrated literature showing the principal design features of the equipment.
 - b. Complete outline dimensions of the pumping equipment in plan and side views.
 - c. Pump characteristic curves showing head, capacity, efficiency, net positive suction head required, and brake horsepower at the rated speed, all throughout the entire operating range including the shut-off head.
- .4 Attach to the proposal and number any alternative proposals.

1.4 Reference Standards

.1 All standards referenced in this section shall be the most recent adopted edition in the province of British Columbia.

1.5 Standard Specifications

- .1 The pumps supplied under this contract shall meet Part 1 of the Hydraulic Institute Standards. A copy of these standards may be obtained online from the Hydraulic Institute website: http://www.pumps.org/
- .2 The pump/motor assembly shall have CSA approval as one unit, per CSA standard C22.2-108. The pump/motor unit shall also be approved by CSA for service in a Class 1, Zone 1 location.

1.6 Shop Drawings

- .1 The Supplier shall prepare certified detailed scale drawings showing the construction, principal dimensions, operation, and special features of the pumps, and listing the materials to be used for the principal parts and the material specifications with which these comply.
- .2 The shop drawings shall show the dimension from the center of gravity of the pump to its lifting point.
- .3 Shop drawings submittal shall also include CSA approval per standard C22.2-108.
- .4 An electronic copy (PDF) of these drawings shall be delivered to the Contract Administrator within ten days after receipt of notice to proceed with the work.
- .5 The Contract Administrator will approve these drawings or mark them with such corrections as are deemed necessary by the Contract Administrator and will return an electronic copy (PDF) to the Supplier. Copies of the corrected drawings shall be resubmitted by the Supplier in the same manner as above.
- Any manufacturing completed before approval of drawings by the Contract Administrator will be at the Supplier's risk. The Contract Administrator shall have the right to require the Supplier to make any changes in the Supplier's drawings which may be necessary, in the opinion of the Contract Administrator, to make the finished product conform to the requirements and intent of the specifications, without additional cost to the Owner.
- .7 Approval by the Contract Administrator of the Supplier's drawings shall not relieve the Supplier of any part of the Supplier's responsibility for the correctness of the drawings.

1.7 Operation and Maintenance Manuals

- .1 The Supplier shall prepare fully indexed, illustrated operation and maintenance manuals covering the submersible pumping unit and all associated accessories. An electronic copy (PDF) version of the manuals and two hardcopy sets of these manuals shall be delivered to the Contract Administrator after the non-witnessed factory pump tests are completed but before the date on which delivery of the equipment is made.
- .2 The hardcopies of the manuals shall be indexed with heavy plastic dividers and each section shall be labeled as to the contents.
- .3 The manuals shall be specific to the equipment supplied. Any portion of the manuals that apply to options or equipment not supplied under this contract shall be deleted.
- .4 Provide a schedule of maintenance for the warranty period including adjustments and lubrication (type and frequency) required. List all items which require inspection and adjustment and lubrication and reference these to the indexed operations and maintenance manuals.
- .5 The operation and maintenance manuals shall include but not be limited to the following items:
 - a. Title page and table of contents.
 - b. Certified factory performance test data for pumping units and motors.
 - Detailed parts lists for the pumping units and associated appurtenances including parts numbers, current prices, anticipated delivery times and maintenance Instructions.
 - d. scale dimensioned drawings of all pumping units and associated appurtenances including the weights of each component.
 - e. Complete electrical information on all motors supplied under this contract.
 - f. Schedule of maintenance for the warranty period.
 - g. Detailed installation, operating and maintenance instructions.

1.8 Attendance by Vendor

- .1 The pumping units will be installed under another contract, henceforth referred to as the 'installation contract'.
- .2 The Vendor shall provide a qualified representative to inspect the pump installation immediately prior to the acceptance tests. The representative shall be qualified in all aspects of pumping unit installation and testing. Allow in the tendered price for the cost of one trip including one full eight-hour shift at the site for the above personnel.
- .3 It is anticipated the inspection of the pumping installation and acceptance tests specified in Section 1.7 will be carried out in one day.
- .4 The Vendor shall include a one day operating/ training session with the Owner and their O&M staff.
- .5 The Owner will pay for any additional trips necessitated by circumstances which are not the responsibility of the Vendor at the per diem rates provided in the RDN Fee Schedule.

1.9 Acceptance Tests

- .1 The Supplier shall assist the installation supplier in the testing of the pumping units. Subject to poor installation or unforeseen circumstances, the acceptance tests will be conducted immediately following inspection of the installation.
- .2 A program for the field acceptance tests will be drafted by the Contract Administrator prior to commissioning. Where practicable, testing will be carried out in accordance with the Hydraulic Institute Standards. Field acceptance tests will generally include the following:
 - a. Operation of each pump at one or more speeds, using wet well level or magnetic flow meter to record discharge and pressure gauges to record discharge head in order to verify key operating conditions on the certified pump curves.
 - b. Recording of electric current, voltage, and other data to confirm the horsepower requirements and the motor service factor.
 - c. The cost of any changes, adjustments, or replacements which in the opinion of the Contract Administrator are due to error or omissions by the Supplier, and as determined by the Contract Administrator shall be charged to the Supplier.
- .3 The Contract Administrator anticipates that the acceptance test will likely be completed in the summer of 2025.

1.10 Delivery and Storage

- .1 The equipment should be delivered within 18 weeks of a fully executed Contract. If this date cannot be met, the Supplier may quote alternate delivery dates. The acceptance of the alternate delivery date will be at the sole discretion of the Contract Administrator.
- .2 The delivery date shall be the date when the pumping unit and accessories are delivered to the Greater Nanaimo Pollution Control Centre. Base the delivery date on a thorough investigation of the availability of equipment and material to complete this Contract. The Contract Administrator anticipates that the pump station will be ready for pump installation during the summer of 2025.
- .3 If the RDN is not ready to receive the pumps, the Supplier shall store the pumps until such time when the pumps can be installed. The rate for extended storage shall include:
 - a. All services and inspection required to ensure the warranty on the equipment.
 - b. Any financial or other costs which may result from delay in installation and commissioning.
- .4 The Supplier shall be responsible for the delivery of the pumping equipment and accessories. Make good any damage which may occur in handling, shipping, or in any other way prior to acceptance at the point of delivery.
- .5 The following shall be carried out as part of the crating and shipment of the equipment:
 - a. All inlet and outlet connectors to the pump shall be covered to prevent foreign objects from entering the pump.
 - b. All nuts, bolts, fasteners, and other small items shall be packaged in sturdy boxes and clearly marked as to the contents.
 - c. All spare parts and special tools including, but not limited to, bearings, wear rings and impellers shall be wrapped and packaged to eliminate damage from dust and moisture. The parts shall be crated separately from the pumping equipment in sturdy wooden boxes and clearly marked as to the application and contents. The spare parts shall be delivered to the Greater Nanaimo Pollution Control Centre.



- d. All equipment and parts supplied in crates shall be clearly marked as to the 'top' and safe 'point of lift'.
- The pumping units and accessories shall be delivered to the Greater Nanaimo Pollution Control Centre located at 4600 Hammond Bay Rd, Nanaimo, BC V9T 5A8.
- .7 Provide the Contract Administrator with a minimum 1 week notice of the time of delivery to allow coordination with the installation supplier.
- .8 The installation supplier will unload the pumping units and associated equipment at the Greater Nanaimo Pollution Control Centre. Complete delivery during the normal working hours (i.e., 8:00 a.m. to 4:00 p.m.). Allow a minimum of two hours for unloading the pumping units and accessories.

1.11 Spare Parts and Special Tools

.1 The Supplier shall submit to the Contract Administrator with their proposal a list of recommended running spare parts (in addition to those specified in Part 2 herein) with individual prices for individual items specifying the nearest location of the authorized service and parts depot from which replacement parts may be obtained in necessary quantities at any time.

1.12 Warranty and Guarantee

- .1 The equipment shall be warranted to be correctly assembled and free of defects and guaranteed by the Supplier for a period of one year from the date of commencement of operation or eighteen months after the date of delivery, whichever period shall first expire. On receipt of notice in writing from the Contract Administrator, the Supplier shall promptly make all repairs arising out of defective materials, workmanship, or equipment.
- .2 The Warranty and Guarantee shall be delivered to the Contract Administrator on or before the date on which delivery of equipment is made.
- .3 The Owner is hereby authorized to make such repairs if 10 days after giving of such notice to the Supplier, the Supplier has failed to make or undertake with due diligence said repairs; provided however, that in the case of an emergency, where, in the opinion of the Owner, delay would cause serious loss or damage, repairs may be made without notice being sent to the Supplier, and all expense in connection therewith shall be charged to the Supplier.

1.13 Service Organization

- .1 The Supplier shall be prepared to demonstrate to the Owner the service organization which is available to back up the pumping units. In particular the service organization shall:
 - a. have been in existence a sufficient length of time to have established a reputation which can be backed up with references.
 - b. have a number of qualified employees whose major commitment is to carry out service calls.
 - c. have a well-equipped local maintenance shop.
- .2 The Supplier shall also be prepared to demonstrate the availability of commonly required spare parts. If these are not kept in stock locally, the anticipated delivery period must be clearly indicated in the proposal.
- .3 Information regarding the service organization shall be provided in Appendix B. Additional information can be provided and attached to the end of the Data Sheet in Appendix B.

Part 2 Technical Requirements



2.1 General

- .1 The District is upgrading the Wellington Pump Station.
- .2 Two identical submersible sewage pumps shall be provided under this contract, each complete with integral electric motor driver, quick disconnect discharge fitting, lifting chain, guide bar holders, guide rails, factory installed power and control cables.
- .3 The pumps will be powered by means of variable frequency drives.
- .4 The proposed pumping unit arrangement is shown in Figure 2.

2.2 Design Parameters

- .1 The pumps for this station will be required to operate over a wide range of conditions due to the following variables:
 - a. There will be 4 pumps in the station (2 existing 105 hp pumps, and 2 new pumps).
 - b. Operating points will vary based on the combination of pumps and speeds.
 - c. There will be a minimum of 1 pump running a maximum of 3.
 - d. The normal range of wet well levels:
 - Pump off Elev. = 4.23 m (-14 ft.)
 - HWLA Elev. = 2.44 m (-8 ft.)
 - e. The normal range of the HGL is between elevation 40.33 m (132.3 ft.) (obvert of pipe at downstream interceptor manhole) and elevation 39.88 m (130.8 ft.) (invert of pipe at downstream interceptor manhole).
- .2 Each pump shall satisfy the following ultimate condition, anticipated when:
 - a. 3 units are operating in parallel.
 - b. The wet well is near the upper limit of its control range.
 - c. The trunk sewer is full and the HGL is at elevation 40.33 m (132.2 ft.)

| Design Flow | Design Head |
|-----------------------|----------------|
| 103 L/s (1,633 USgpm) | 54 m (177 ft.) |

- .3 The pumping units shall also meet the following criteria:
 - a. Preference will be given to a Best Efficiency Point to the 'right' of the above 'ultimate condition' since the pumps will commonly run at less than the design head (during moderate flows).
 - b. One pumping unit shall be capable of pumping at 155 L/s or less at a TDH of 40.0 m without operating beyond the normal operating curve (i.e., running out). Preference will be given to pump selections with the lowest possible run-out.
 - c. The pump impeller trim shall be coordinated with the rating of the motor to ensure that the motor is non-overloading over its entire curve.
 - d. Motors rated to include a 15 per cent service factor. Ratings and service factor shall take into account the proposed variable speed drive. Motors rated at 130 hp or less will be given preference.
- .4 The system curve for the station is shown in Figure 1.



.5 NPSHA is 10.1 m. The maximum NPSHR shall be less than 6.7 m. NPSH margin shall be no less than 1.5*(NPSHA-NPSHR), or 1.5 m, whichever is greater.

2.3 Pumps

- .1 The pumps shall be totally submersible, non-clog centrifugal sewage pumps, driven with a direct connected, vertical solid shaft electrical induction motor in sealed and watertight casing, mounted on the pump housing.
- .2 The pumps shall have passive cathodic protection. Provide shop drawings for the passive cathodic protection system.
- .3 Pump/Motor casings shall be:
 - a. Heavy construction gray iron.
 - b. Epoxy coated inside and out, or an approved equal coating.
 - c. Constructed with O-ring type seals and machined mating faces between casing components where a watertight seal is required.
 - d. Capable of operating continuously, without leakage into the motor or seal chamber, at a depth of 20 m.
 - e. Components shall be joined at machined surfaces complete with O-rings where a watertight joint is required.
 - f. Fastened with 316 stainless steel bolts and washers.
- .4 Impellers shall be:
 - a. Close grained gray iron.
 - b. Hydraulically and dynamically balanced.
 - c. Keyed to shaft and readily removable.
 - d. Capable of handling 110 mm diameter solids, fibrous materials, and other materials normally found in sewage systems.
- .5 The motor/pump shaft shall be:
 - A single shaft.
 - b. 316 Stainless steel.
 - c. Dynamically balanced with rotor.
 - d. Mounted on permanently lubricated ball or roller bearings above and below the motor housing; sleeve bearings are not acceptable.
 - e. The bearing arrangement shall have a minimum B-10 bearing life of 100,000 hours.
 - f. Provide rotating shaft seals as follows:
 - Tandem rotating shaft seals, each with individual spring.
 - The upper seal unit located beneath the motor housing shall operate in an oil bath in a sealed oil chamber.
 - Shaft sealing systems without positively driven rotating members, or which
 require a pressure differential to effect sealing, will not be accepted.
- .6 Shaft seal faces shall be Tungsten carbide or approved equal.



- a. Provide wear rings as follows:
 - End seal (axial) type wear rings on the impeller and volute inlet.
 - · Hardened stainless steel.
 - Nominal wear ring clearance shall not exceed 0.64 mm (0.025").

2.4 Motors

.1 General:

- Motors shall be suitable for duty on a close coupled submersible sewage pump.
 Motors shall be vertical, solid shaft, squirrel cage induction, shell type, housed in a liquid-filled, water-tight chamber.
- b. Motor shall be capable of continuous submergence up to 20 m under water without loss of watertight integrity.
- Preference will be given to premium efficiency design motors during assessment of tenders.

.2 Performance:

- a. Motor shall be suitable for operation with a Variable Frequency Drive Controller.
- b. Motor shall be suitable for operation from 20 to 66 Hz and shall have adequate cooling at all speeds down to 20 Hz for all wet well levels down to the top of the pump volute. Clearly state alternate minimum conditions in the proposal if applicable.
- c. Motor shall be designed for continuous operation up to 40 °C ambient sewage temperature with a temperature not to exceed 155 °C.
- d. Motor full load power factor with sinusoidal power shall be 0.85 or greater.
- e. The maximum synchronous motor speed shall be 1800 rpm.
- f. The motor horsepower rating shall be sufficient to be non-overloading over the entire pump performance curve, at synchronous speed, from shut-off to run-out, without using any of the Service Factor.
- g. Motor torque characteristic shall be Nema design B. The motor shall have 15 per cent more torque at 90 per cent voltage than is required at all speeds on the pump torque speed curve.
- h. Motor starting inrush, locked rotor current and full load current shall be such as to allow up to 4 evenly spaced full voltage starts per hour.
- i. The motor cooling system shall allow the pump to operate continuously with the sewage level depressed to the top of the volute.

.3 Insulation:

- a. The stator winding and leads shall be insulated with non-hygroscopic moisture resistant Class F insulation rated for 155 °C. The stator shall be dipped and baked three times in Class F varnish and shall be heat shrink fitted into the stator housing. The use of bolts, pins, or other fastening devices requiring penetration of the stator housing will not be acceptable.
- b. The motor stator winding shall be designed to withstand a 1,600 volt peak and a rise time greater than or equal to 1 micro second.

.4 Cooling System:



a. The pumping unit shall be provided with a cooling water jacket to provide heat dissipation for the motor when sewage levels are as low as the pump volute for sustained periods. Cooling channels and ports shall be designed not to clog in raw sewage cooling media.

.5 Voltage:

a. The motor shall be rated for 575 volts, 3 phase, 60 Hz nominal AC power. The motor shall have a voltage tolerance of plus or minus 10 per cent.

.6 Cables:

- a. Provide power cable and control cable suitable for submersible pump application for each pump as follows:
 - Sized in accordance with the CEC and CSA standards.
 - 48 m (150 ft.) minimum of power and control cable with each pump.
 - CSA approved cable suitable for use in a sewage wet well.
- b. Control conductors in a single composite cable with the power supply will be preferred, however, separate cables from the power conductors will be permitted if appropriate composite cables are not available.
- c. Cable entry design shall incorporate the following:
 - The cable entry design shall prevent leakage into the motor chamber around the cable or through the wire insulation.
 - The cable entry shall be made in such a manner that the cable cannot be dislodged if for any reason the pump is inadvertently supported from the cable. Each lead shall be potted at the cable entry.
 - Connections shall be made in a junction chamber sealed from the motor housing.
 - The cable entry arrangement shall allow simple removal and replacement of the cable when necessary. This may include removal of the junction chamber provided that the junction chamber is connected at with a machined face and waterproof O-ring seal.
- d. Seal cable ends for shipping with a high-quality protective covering to make them impervious to moisture or water seepage prior to electrical installation.
- .7 Leakage and temperature detectors:
 - a. Thermal sensors shall be used to monitor stator temperatures. The stator shall be equipped with three thermal sensors, embedded in the end coils of the stator winding (one sensor in each stator phase). These shall be used in conjunction with and supplemental to external motor over-current protection and wired to the control panel.
 - b. Provide moisture sensors in the oil chamber between the motor and the pump volute to detect any leakage past the lower seal.
 - The lower bearing housing shall include an independent thermal sensor to monitor lower bearing temperature.
 - d. Provide remote relay or diagnostic controller for mounting by others in the pump control panel.

2.5 Quick Disconnect Discharge Fittings and Slide Rails



- .1 Each pump shall be provided with an epoxy coated cast iron discharge fitting which will support the entire pump assembly. The discharge fitting shall include the following:
 - a. A horizontal pump connection designed to allow easy removal of the pump from above the wet well hatch. The connection must be designed to seal without significant recirculation or leakage after repeated cycles of pump removal and replacement.
 - b. A standard ANSI flange on the vertical discharge for connection to the discharge piping.
 - c. Means for anchoring of the discharge fitting to the reinforced concrete base of the wet well. The Supplier is to advise the Contract Administrator of the anchor bolt requirements for the discharge fitting. (Anchor bolts will be provided by the installation supplier.)
- .2 Two vertical guide bars shall be provided for each pump to assure correct alignment of pump with discharge connection.
 - a. Guide bars shall be Sch. 40 stainless steel pipe and shall be securely fixed at both ends and at an intermediate point.
 - b. Guide bars shall be approximately 8 m long (to be confirmed on shop drawings)
 - c. The Supplier shall supply stainless upper and mid guide bar holders to be attached by others to the wet well hatches.

2.6 Lifting Chain

.1 Each pump is to be supplied with 8.5 m of 316 stainless steel hoist chain complete with a stainless-steel shackle compatible with the Owner's pump hoist.

2.7 Special Tools for All Pumping Units

- .1 The Supplier shall provide one set of all special tools necessary for the maintenance and operation of the pumping units.
- .2 Tools shall be of top quality and all wrenches shall be case hardened steel forging, with bright finish and working faces properly dressed to fit nuts.
- .3 Special tools are defined as those tools not normally found in a tool supplier's or manufacturer's catalogue, and which are normally used on tendered or similar pumps.

2.8 Nameplate

- .1 Each pumping unit shall have three stainless steel nameplates. One nameplate shall be located on the pumping unit, and two nameplates shall be turned over to the District with the O&M Manuals. The nameplate shall include at least the following data:
 - a. Pump and motor model, manufacturer.
 - b. Performance and suitability for use on VFD power.
 - c. RPM.
 - d. Pump design condition (head and flow).
 - e. Pump shut-off head.
 - f. Motor model.
 - g. Motor voltage, amperage.



- h. Motor horsepower.
- i. Motor service factor applicable with VFD power.
- j. Motor efficiency.
- k. Motor power factor.

2.9 Spare Parts

- .1 Provide the following spare parts:
 - a. Two sets of mechanical seals.
 - b. Two sets of wear rings (impeller and casing).
 - c. Two complete sets of gaskets and grease seals.
 - d. Two spare impellers (trimmed to the specified condition).
 - e. Two complete sets of motor bearings.
 - f. One complete power and control cable set complete with the required compression fittings.

2.10 Factory Performance Tests

- .1 Each pump supplied shall be given non-witnessed certified factory tests in accordance with ANSI/HI 14.6 Rotodynamic Pumps for Hydraulic Performance Acceptance Tests (2022). Performance tolerance shall be in accordance with level 2B based on the 'Contract Efficiency' submitted with the Tender. Tests shall record all information as listed in the standard as well as current, voltage, and power factor.
- .2 The complete pump shall be subject to a hydrostatic test in the manufacturer's shop. This test shall be made at a pressure equivalent to not less than one and one-half times the shut-off head of the pump, as indicated by the head capacity curve. Under this pressure, the casing shall show no undue deflection or signs of weakness at any point and shall be free from sweating through porous metal or leakage through cracks or other defects.
- .3 The motor shall be tested to IEEE 112.
 - a. The Owner reserves the right to witness the test.
 - b. Test results shall conform to predicted values in the manufacturer's data.
 - c. At least the following tests are specifically required:
 - Stator insulation power factor.
 - Stator resistance between phases.
 - Stator resistance between each phase and frame.
 - Current, voltage, and power factor under full load.
 - A vibration test of the complete operating unit.
- .4 Six copies of all test data and certified field performance curves shall be provided to the Contract Administrator within 3 weeks of completion of the tests. Performance curves shall show pump bowl capacity, head, current draw, and power factor.
 - a. Also provide six certified copies of motor and cable insulation tests.
- .5 The Contract Administrator reserves the right to inspect and test any material to be supplied under this specification at the manufacturer's plant or after arrival at the location specified for



delivery. All material, components, or parts which do not meet these specifications, the standards, or are defective, shall be replaced by the Supplier at their expense to the satisfaction of the Contract Administrator. If the materials are deemed satisfactory, the cost of this inspection will be borne by the Owner otherwise the Supplier shall bear the cost.

2.11 Installation

- .1 The Supplier shall provide the services of a factory-trained representative to visit the site during pump installation and check final alignment and general installation of the pumping units to ensure that all conditions of the warranty are valid, and to put the unit into initial operation. A written certification to this effect shall be provided prior to acceptance of the installation by the Contract Administrator.
- .2 The inspection and witnessing of start-up shall be coordinated with the installation supplier.

Revision History

| Rev. No. | Date | Ву | Checked By | Issued For | Comment |
|----------|---------------|-----|------------|------------|---------|
| 0 | February 2024 | SKH | KM | Proposal | |
| | | | | | |

End of Section



MANUFACTURING AND TECHNICAL DATA

A. PUMP

| Manufacturer | |
|---|-------|
| Model No. | |
| Overall dimensions (LxWxH) | |
| Location of fabricating shop | |
| Location of maintenance facility | |
| Style – submersible (yes or no) | |
| Mounting discharge elbow (yes or no) | |
| Discharge guide rails (yes or no) | |
| Discharge diameter | mm |
| Discharge connection type | |
| Discharge quick release (yes or no) | |
| Impeller diameter | mm |
| Inlet diameter (characteristic length "d" per HI definitions | mm |
| Maximum operating speed | rpm |
| Number of vanes | |
| Maximum solid diameter | mm |
| Max. fluid temp | °C |
| pH range of fluid | |
| Liquid density | kg/m³ |
| Nameplate capacity | L/s |
| Nameplate TDH | m |
| Maximum BHP in the operating range (including all losses) | bhp |
| Weight of bare pump | kg |
| Net Positive Suction Head Required over entire operating range (NPSHr3) | m |
| NPSH margin per HI std 9.6.1 | |
| Upper mechanical seal (yes or no) | |
| Lower mechanical seal (yes or no) | |
| Type of upper mechanical seal | |
| Type of lower mechanical seal | |
| Oil bath fluid between upper and lower mechanical seal | |
| Leakage sensor type between upper and lower seal | |
| Casing wear ring (yes or no) | |
| Impeller wear ring (yes or no) | |

| Materials of principal parts | |
|--|-------------------------------|
| Casing | |
| Std Coating | |
| Option for enhanced coating (yes or no) | |
| Type of enhanced coating | |
| Cost of enhanced coating (LS) | Insert in form of tender only |
| Discharge guide rails | |
| Impeller | |
| Bearings | |
| Insert rings | |
| Upper mechanical sealing faces | |
| Lower mechanical sealing faces | |
| Mechanical seal body material | |
| Cooling jacket, inner | |
| Cooling jacket, outer | |
| Lifting handle | |
| Lifting chain | |
| Casing wear ring material & Brinell hardness | |
| Impeller wear ring material & Brinell hardness | |
| Shaft | |
| O-rings | |
| Cooling fluid (pumped media not allowed) | |

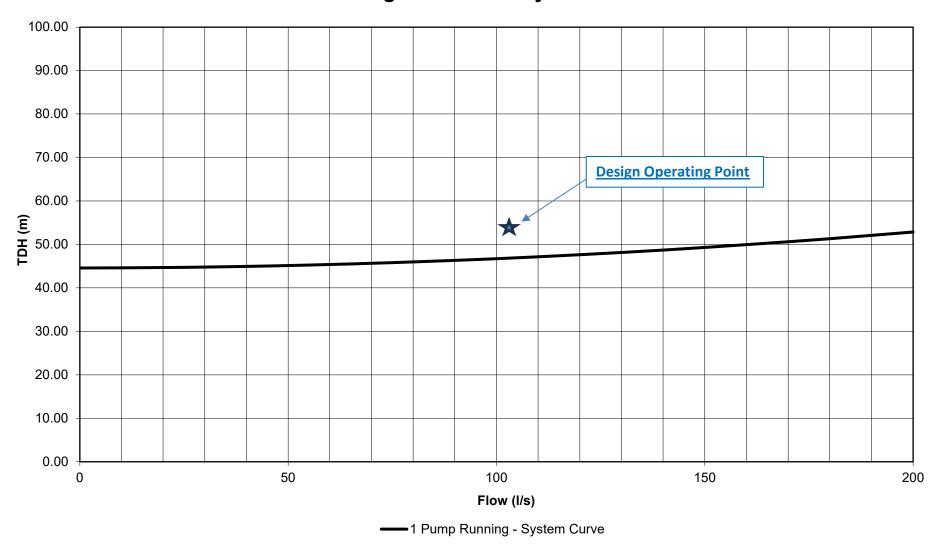
B. MOTOR

| Manufacturer | |
|--------------------------------------|--------|
| Model No. | |
| Location of fabricating shop | |
| Enclosure material | |
| Motor submergence rating | |
| Weight | kg |
| Rated horsepower | HP |
| Service factor | |
| Full load speed | RPM |
| Class of insulation/temperature rise | |
| Nameplate voltage | V |
| Nameplate frequency | Hz |
| Full load current | Α |
| Starting current, direct start | Α |
| Total Moment of inertia | lb ft² |
| Locked rotor current | Α |
| Locked rotor kVA | kVA |
| Locked rotor torque | N-m |

| Breakaway torque | | | |
|--|--|--|--|
| Operating torque | | | |
| tion (class #, zone #) | | | |
| ses) | | | |
| | | | |
| | | | |
| ves or no) | | | |
| Full Load | | | |
| 75% Load | | | |
| 50% Load | | | |
| Full Load | | | |
| 75% Load | | | |
| 50% Load | | | |
| ended number of starts per hour | | | |
| | | | |
| | hours | | |
| Electrical cable is CSA approved (yes or no) | | | |
| Electrical cable type/ material | | | |
| | res or no) Full Load 75% Load 50% Load Full Load 75% Load 50% Load ended number of starts per hour | | |

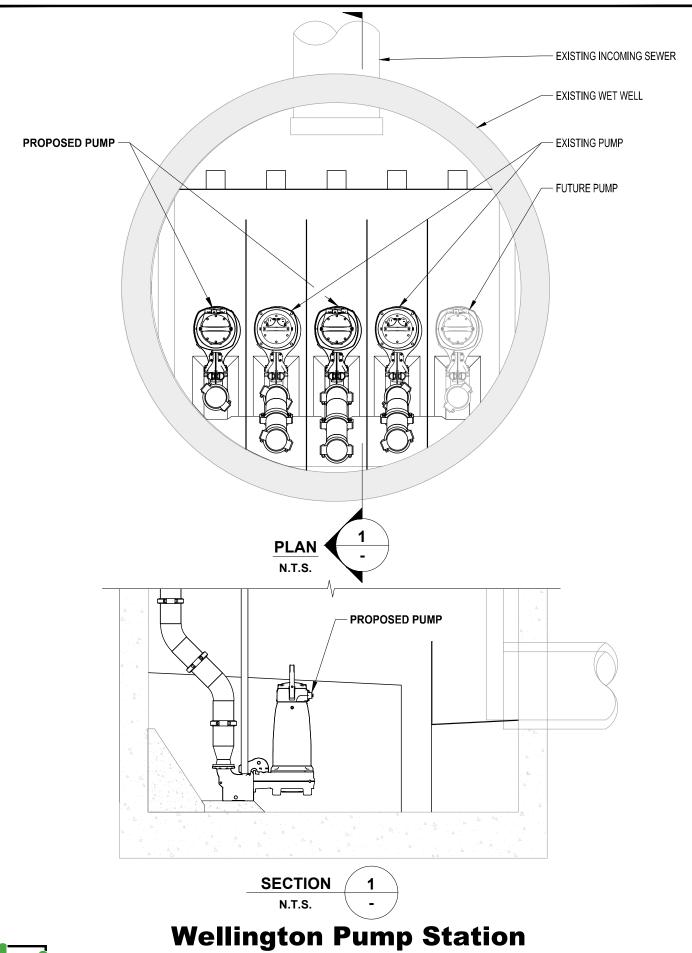
| <u>C.</u> | Service Organization | |
|-----------|----------------------|--|
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Figure 1 - WPS System Cruve











Contract Documents.

| INEGIO | TWIE DISTRICT OF TWITTING | | 1 486 ± 01 3 |
|--------|--|-----------------------------------|---------------|
| BETW | EEN: | (the "Supply Contractor") | |
| AND: | Regional District of Nanaimo | (the "Corporation") | |
| THIS A | GREEMENT WITNESSES that the Supply Co | ntractor and the Corporation agre | e as follows: |
| 1. | The Supply Contractor shall provide all lal and materials required to supply the Goo | | |

- 2. The Corporation shall pay the Supply Contractor the Contract Price, as required by the Contract Documents.
- 3. The Contract Price shall be the sum in Canadian Dollars of the following:
 - (a) \$______, and
 - (b) any payments made on account of changes, as may be required by the Contract Documents.

The Contract Price shall be the entire compensation owing to the Supply Contractor by the Corporation for the Goods and shall cover and include necessary costs including but not limited to all supervision, labour, materials, Supply Contractor's Plant and Equipment, overhead, profit, financing costs, duty, shipping charges, fabrication and finishing, conveyance and delivery, packing, crating, freight, cartage, off-loading, drafting charges, tariffs, warranty and all other costs and expenses whatsoever incurred in performing the Contract.

Except for the amounts which the RDN in good faith is disputing and except for any set off which the RDN may in good faith claim and except for invoices (or portions of invoices) in respect of which the RDN has requested and not received supporting evidence, the RDN shall pay invoices submitted to it for the Services within 30 days' receipt thereof.

- 4. The Supply Contractor shall supply all Goods to the Delivery Point no later than < XX weeks from receipt of order>.
- 5. The Contract Documents shall form a part of this Agreement as though recited in full.
- 6. The Contract supersedes all prior negotiations, representations, or agreements, whether written or oral and is the entire agreement between the Corporation and the Supply Contractor with respect to the subject matter of this Agreement. For the avoidance of

REGIONAL DISTRICT OF NANAIMO

doubt, any commercial conditions included by the Supply Contractor in its proposal submitted to the Corporation in relation to the Goods are superseded by this Agreement and are void.

- 7. The Supply Contractor shall not assign the Contract, or any portion of the Contract, or any payments due or to become due under the Contract, without the express written consent of the Corporation.
- 8. No action or failure to act by the Corporation or an authorized representative of the Corporation shall constitute a waiver of any right or duty afforded any of them under the Contract or constitute an approval or acquiescence in any breach thereunder, except as may be specifically agreed in writing.
- 9. This Agreement shall enure to the benefit of and be binding upon the Corporation and the Supply Contractor and their respective heirs, executors, legal representatives, successors and permitted assigns. In the event of more than one person being the Supply Contractor, the grants, covenants, provisos and claims, rights, powers, privileges, and liabilities shall be construed and held to be several as well as joint.
- 10. Time shall be of the essence of this Agreement.
- 11. This Agreement may be executed in any number of counterparts, each of which will be deemed to be an original and all of which taken together will be deemed to constitute one and the same instrument. Delivery by electronic transmission in portable document format (PDF) of an executed counterpart of this Agreement is as effective as delivery of an originally executed counterpart of this Agreement.

REGIONAL DISTRICT OF NANAIMO Page 3 of 3 IN WITNESS WHEREOF the parties hereto have executed this Agreement as follows: REGIONAL DISTRICT OF NANAIMO by its authorized signatory on _____ day of _____, 20__ (the date of Agreement): SIGNED on behalf of the Corporation by: Signature: _____ Title: _____ [SUPPLY CONTRACTOR'S NAME] by its authorized signatory on _____ day of _ _____, 20___: SIGNED on behalf of the Supply Contractor by: Signature: Name: _____ Title: Signature:

Title: _____

END OF SECTION

GENERAL

1.1 DEFINITIONS

The following words and terms, unless the context otherwise requires, in all Contract Documents, shall have the meanings set out below. Words importing the male gender include the female gender and either includes the neuter and vice versa and words importing the singular number includes the plural number and vice versa.

"Addenda" means any addition, deletion, clarification, or corrections issued with respect to the Original Solicitation Documents prior to execution of the Agreement;

"Agreement" means the Standard Form Supply Contract Form of Agreement executed by the Corporation and the Supply Contractor;

"Contract" means the contractual relationship formed between the Corporation and the Supply Contractor by each party's execution of the Agreement;

"Contract Documents" means the following documents:

- (1) the executed Agreement;
- (2) these General Conditions;
- (3) any Addenda;
- (4) the Original Solicitation Documents;
- (5) the Proposal; and
- (6) other relevant documents such as but not limited to letters of clarification and any reports, standards or the like included by reference in the Original Solicitation Documents or Addenda;

"Delivery Date" means the date set out in the Agreement as the latest date by which the Supply Contractor is required to supply Goods to the Delivery Point;

"Delivery Point" means the Greater Nanaimo Pollution Control Centre located at 4600 Hammond Bay Rd, Nanaimo, BC V9T 5A8 as per Incoterms 2020 Delivery Duty Paid (DDP) with title transferring at the named place;

[&]quot;Contract Price" has the meaning set out in the Agreement;

[&]quot;Corporation" means the Regional District of Nanaimo;

[&]quot;Day" means calendar day;

"Goods" means moveable property that the Supply Contractor is required to deliver to the Corporation pursuant to the Contract Documents and includes materials, products, equipment, and other physical objects of every kind and description whether in solid, liquid, gaseous, or electronic form;

"Inspector" means a person appointed by the Corporation having the authority set out in Clause 2.1.2.1 of these General Conditions.

"Original Solicitation Documents" means the request for proposals, invitation to tender or comparable form of solicitation posted by the Corporation which resulted in the Agreement being executed;

"Proposal" means the Supply Contractor's written submission to the Corporation in response to the Original Solicitation Documents;

"Specifications" means that part of the Contract Documents consisting of general requirements and written descriptions of the technical features of materials, equipment, construction systems, standards, and workmanship;

"Supply Contractor" means the person identified as such in the Agreement.; and

"Warranty Period" has the meaning set forth in Clause 3.4.1 of these General Conditions.

CONTRACT REQUIREMENTS

1.1.1 Successors' Obligations

The Contract shall enure to the benefit of and is binding upon not only the parties hereto but also their respective successors and permitted assigns.

1.1.2 Assignment of Contract

The Supply Contractor shall not assign the Contract in whole or in part, nor any payments due or to become due under the Contract without the prior written consent of the Corporation. No assignment of the Contract shall relieve the Supply Contractor from any obligation under the Contract or impose any liability on the Corporation. Involuntary assignment of the Contract because of bankruptcy, assignment of the Contract for the benefit of creditors or appointment of a receiver, or insolvency shall be deemed default under the Contract entitling the Corporation to terminate the Contract as hereinafter provided.

1.1.3 Waiver of Rights

Except as herein provided, no act or failure to act by the Supply Contractor or the Corporation at any time with respect to the exercise of any right or remedies conferred upon them under this Contract shall be deemed to be a waiver on the part of the Supply Contractor or the Corporation of any of their rights or remedies. No waiver shall be effective except in writing. No waiver of one right or remedy shall act as a waiver of any other right or remedy or as a subsequent waiver of the same right or remedy.

1.1.4 Amendment of Contract Documents

The Contract Documents shall not be amended except as specifically agreed in writing signed by both the Corporation and the Supply Contractor.

1.2 LAWS, REGULATIONS AND PERMITS

- 1.2.1 The Contract shall be construed under and according to the laws of the Province of British Columbia and subject to an agreement to refer a dispute to mediation as per Clause 2.3 of these General Conditions. The parties agree to irrevocably attorn to the jurisdiction of the Courts of the Province of British Columbia.
- 1.2.2 The Supply Contractor shall give all notices required by law and shall comply with all laws, acts, ordinances, rules, and regulations relating to or affecting the Goods. If any permits, authorizations, approvals or licences from any government or governmental agencies are necessary or desirable for the prosecution of the work they shall be obtained by the Supply Contractor at its expense, provided that the Supply Contractor shall not make application for any such permit, authorization, approval, or licence without first obtaining the written consent of the Corporation.

1.2.3 Patents, Royalties and Copyright

The Supply Contractor shall pay all fees, royalties or claims for any patented invention, article, process, or method that may be used upon or in a manner connected with the Goods or with the use of the Goods by the Corporation. Before final payment is made on the account of this Contract, the Supply Contractor shall, if requested by the Corporation, furnish acceptable proof of a proper release from all such fees or claims.

1.2.4 All references to money in the Contract Documents shall be interpreted as meaning lawful currency of Canada.

PART 2 CORPORATION-SUPPLY CONTRACTOR RELATIONS

2.1 AUTHORITY OF CORPORATION

2.1.1 Acceptability of Goods

The Corporation shall make the final determination of the acceptability of the Goods.

2.1.2 Appointment and Authority of Inspector

- 2.1.2.1 The Corporation may appoint an Inspector at any time before or after award of the Contract. If the Corporation appoints an Inspector, the Inspector shall represent the Corporation at the Delivery Point. The Inspector shall have the authority set out in the Contract Documents and such other authority as may be delegated in writing by the Corporation including but not limited to the following:
 - (a) to make determinations regarding the Goods; and
 - (b) to make determinations regarding the Supply Contractor's performance of its obligations under the Contract.

2.2 RESPONSIBILITIES OF THE SUPPLY CONTRACTOR

2.2.1 Attention to the Goods

The Supply Contractor shall diligently attend to the supply of the Goods so that they are delivered faithfully, expeditiously and in accordance with the Contract Documents.

2.2.2 Authorized Representative

The Supply Contractor shall advise the Corporation in writing of the name of the Supply Contractor's authorized representative.

2.2.3 Off-loading of Goods

The Supply Contractor shall provide all necessary instructions to ensure satisfactory off-loading of the Goods.

2.2.4 Shipment

The Supply Contractor shall properly package all Goods for safe shipment to the Delivery Point and a notice of shipment shall be sent by the Supply Contractor to the Corporation in advance of final delivery. The notice of shipment shall state the Delivery Date, the applicable purchase order number, description of the Goods, the Supply Contractor's name and the carrier by which the shipment is being made. Clear title to the Goods, free of all charges, liens and encumbrances shall pass to the Corporation when the Goods are received, inspected, deficiencies rectified, and accepted by the Corporation at the Delivery Point. Until such time as title of the Goods is accepted by the Corporation, all risk related to the Goods shall remain with the Supply Contractor. Except for the transfer of risk, the passing of title to the Corporation shall not affect any of the Supply Contractor's obligations.

2.2.5 Errors and Omissions

If the Supply Contractor discovers that there are any errors or omissions in the Contract Documents, it shall immediately notify the Corporation in writing. The Corporation will review the matter and if it concludes that there is an error or omission, it shall determine the corrective actions to be taken and will advise the Supply Contractor accordingly. If the corrective work associated with an error or omission increases or decreases the amount of work called for in the Contract, the Corporation shall issue an appropriate change order. After discovery by the Supply Contractor of an error or omission in the Contract Documents any work thereafter performed by the Supply Contractor shall be done at its risk unless otherwise agreed by the Corporation.

2.3 DISPUTE RESOLUTION

2.3.1 Disputes

A dispute occurs between the Corporation and the Supply Contractor where there is a difference between the parties as to the interpretation, application or administration of the Contract.

2.3.2 Dispute/Claim Resolution

(1) Any matters in dispute under this Contract which is not first resolved between the parties acting reasonably may, with the concurrence of both the Corporation and the Supply Contractor be submitted to mediation to a single mediator appointed jointly by them.

- (2) No one shall be nominated to act as a mediator who is in any way financially interested in the business affairs of either the Corporation or the Supply Contractor.
- (3) If the parties cannot agree on the choice of a mediator, each party shall select a nominee and the nominees shall jointly appoint a mediator.
- (4) The mediation shall take place in Nanaimo, British Columbia, unless agreed otherwise. Parties will be responsible for their own costs.

PART 3 MATERIAL, EQUIPMENT AND WORKMANSHIP

3.1 GENERAL

The Goods shall be of the quality specified in the Contract Documents or better. All work related to the Contract Documents shall be done with equipment and workmanship of the best quality and description and by employment of properly skilled workers and in strict conformity with and as required by the Contract Documents. Materials and equipment shall be the product of suppliers or manufacturers of established good reputation, regularly engaged in the supply or manufacture of such materials or equipment.

3.2 DEMONSTRATION OF COMPLIANCE WITH CONTRACT REQUIREMENTS

3.2.1 Inspection

Inspections and testing shall not in any way relieve the Supply Contractor from any of its obligations or responsibilities under the Contract Documents, and shall not in any way prejudice or constitute a waiver of any rights or remedies of the Corporation or any guarantees, warranties or covenants in favour of the Corporation, and the Corporation shall be entitled to rely on the expertise and obligations of the Supply Contractor and its subcontractors and their consultants and engineers to the same extent as if such inspections and testing by the Corporation or any Inspector or agent had not taken place.

If the Contract Documents, laws, ordinances, or any public regulatory authority requires parts of the Goods to be specially inspected, tested or approved, the Supply Contractor agrees that the Goods shall comply.

The Goods are subject to inspection and acceptance by the Corporation within a reasonable time after receipt. The Corporation will notify the Supply Contractor in writing of the rejection of any of the Goods which are not in accordance with the Contract Documents, and the Goods will be held subject to disposition by the Supply Contractor at the Supply Contractor's risk and subject to all charges accruing because of such rejection.

Notwithstanding any prior payment therefor, all Goods are subject to inspection and testing by the Corporation at the Delivery Point.

3.2.2 Certification

The equipment must be certified by the Supply Contractor in accordance with the local authorities with jurisdiction. Where compliance of Goods with the Contract Documents is not readily determinable through inspection and tests, the Corporation may require that the Supply Contractor provide, at the Supply Contractor's expense, properly authenticated documents, certificates, or other satisfactory proof of compliance. These documents, certificates or other proof shall include performance characteristics, materials of construction and the physical or chemical characteristics of materials.

3.2.3 Electrical

Electrical products that plug into an electrical outlet must meet Canadian national safety standards and be certified by an accredited certification body such as CSA, cUL or cETL.

3.3 DEFECTIVE OR IMPROPER GOODS

3.3.1 Correction of Defective Goods

If upon inspection, testing or otherwise the Goods or any portion thereof are found to be non-conforming, unsatisfactory, defective, or inferior quality or workmanship, or fail to meet any guarantee of operating or other Specifications contained herein, or any other requirements of the Contract Documents, then without prejudice to any other rights or remedies, the Corporation may give notice of its dissatisfaction to the Supply Contractor in writing and the Supply Contractor shall immediately upon receipt of such notice do all things that are required to satisfy the Corporation. If the Supply Contractor refuses or neglects to do all things that are required to satisfy the Corporation within one week from the receipt of notice, the Corporation may employ some other person to do so and all expenses and costs consequent thereon or incidental thereto shall be charged to the Supply Contractor. The employment of such other person or the doing of the said work by the Corporation itself shall not affect the Supply Contractor's duties and liabilities hereunder or relieve the Supply Contractor from the performance and fulfilment of any or all of the Supply Contractor's warranties, covenants, undertakings, obligations and duties under the Contract.

3.3.2 If upon inspection, testing or otherwise the Goods or any portion thereof are found to be non-conforming, unsatisfactory, defective, or inferior quality or workmanship, or fail to meet any guarantee of operating or other Specifications contained herein, or any other requirements of the Contract Documents, then without prejudice to any other rights or remedies, the Corporation may return the Goods or any part thereof to the Supply Contractor at the Supply Contractor's sole cost and all amounts theretofore paid by the Corporation to the Supply Contractor on account of the Contract Price of such returned Goods, shall be repaid to the Corporation by the Supply Contractor. The Supply Contractor shall advise the Corporation in writing, where to return the Goods, and failing such advice from the Supply Contractor, the Supply Contractor agrees to accept the returned Goods at the Supply Contractor's registered office. Neither the inspection nor failure to make inspection, nor acceptance of Goods shall release the Supply Contractor from any warranties or other provisions of this Contract nor impair the

Corporation's right to reject non-conforming Goods. The Corporation reserves the right even after it has paid for and accepted Goods to make a claim against the Supply Contractor on account of any Goods which do not prove to be satisfactory or are defective irrespective of the Corporation's failure to notify the Supply Contractor of a rejection of non-conforming Goods or revocation of acceptance thereof, or to specify with particularity any defect in non-conforming Goods after rejection or acceptance thereof.

3.3.3 Retention of Defective Goods

If in the opinion of the Corporation any portion of the Goods supplied under the Contract is defective or not in accordance with the Contract Documents and if the defect or imperfection in the same is not of sufficient magnitude or importance to make the Goods dangerous or undesirable, or if the removal of such Goods is impracticable, or will create conditions which are dangerous or undesirable, the Corporation shall have the right and authority to retain such Goods instead of requiring the defective or imperfect Goods to be removed and reconstructed, but the Corporation shall be entitled to make such deductions from the payments due or to become due to the Supply Contractor as are just and reasonable.

3.3.4 No Implied Approval

The fact that the Corporation has not disapproved of or rejected any part of the Goods shall not be deemed or be construed to be an acceptance of any such part of the Goods or any such materials.

3.4 WARRANTY AND GUARANTEE

- 3.4.1 The Supply Contractor agrees that the warranty provisions outlined in the Proposal are to the benefit of the Corporation and that the Goods are free from all defects arising from faulty construction, manufacturing, materials, equipment or workmanship for the period which is twelve (12) months ("Warranty Period") commencing on the earliest of the following dates: (i) the date Corporation accepts clear title to the Goods, or (ii) the date that is six (6) months from the delivery date of the Goods at the Delivery Point.
- 3.4.2 During the Warranty Period, the Supply Contractor, upon the receipt of notice in writing from the Corporation, shall promptly make all repairs arising out of defects in the Goods. The Corporation shall be entitled to make such repairs, if 10 Days after the giving of such notice to the Supply Contractor, the Supply Contractor has failed to make or undertake with due diligence the repairs. In case of an emergency, where, in the opinion of the Corporation, delay could cause serious loss or damage, or inconvenience to the public, repairs may be

made without notice being sent to the Supply Contractor, only after all reasonable attempts have been made to contact the Supply Contractor. The costs of any repair made by the Corporation in connection with this clause shall be charged to the Supply Contractor and the Supply Contractor shall reimburse the Corporation for such costs. All covenants and agreements shall continue to be binding on the Supply Contractor until they have been fulfilled.

- 3.4.3 The Corporation is relying on Supply Contractor's skill and judgment in selecting and providing the proper Goods and any applicable services for the Corporation's particular use. The Supply Contractor warrants to the Corporation and its successors in interest that the Goods and any services covered hereby will correspond with the description of the same in the Contract Documents, will conform to all applicable Specifications, will be of the best quality and, unless otherwise specified, will be fit for the purpose for which they are to be used and will conform in all aspects, both in the manufacture and use thereof, with all applicable safety orders or regulations of the Province of British Columbia. The Supply Contractor also warrants that the Goods are free and clear of all liens and encumbrances whatsoever and that the Supply Contractor has a good and marketable title to the same.
- 3.4.4 The Supply Contractor warrants and guarantees that the Goods are free from all defects arising at any time from faulty design in any part of the Goods.
- 3.4.5 The Supply Contractor represents that it has read the Contract Documents and, particularly, the Specifications and has satisfied itself that the Goods can be supplied in accordance with the Contract Documents, free of defects and fit for the purpose for which they are to be used.
- 3.4.6 The warranty should be made out to the Regional District of Nanaimo, 6300 Hammond Bay Road, Nanaimo, B.C. V9T 6N2

PART 4 INDEMNIFICATION AND INSURANCE

4.1 INDEMNIFICATION AND RELEASE

- 4.1.1 The Supply Contractor shall save harmless and indemnify the Corporation and its directors, officers, servants, employees and agents (the "Indemnified Parties") from and against all actions, claims, demands, proceedings, suits, losses, damages, costs and expenses of whatsoever kind or nature (including but not limiting the generality of the foregoing, in respect of death, injury, loss or damage to any person or property) arising in any way out of or connected with negligent acts, omission, willful misconduct or breach of this Contract by the Supply Contractor, except to the proportionate extent that such actions, claims, demands, proceedings, suits, losses, damages, costs and expenses were caused by the Indemnified Parties or any of them.
- 4.1.2 Unless otherwise specified in the Contract, the Supply Contractor shall save harmless and indemnify the Indemnified Parties from and against all actions, claims, demands, proceedings, suits, losses, damages, costs and expenses of whatsoever kind or nature arising in any way from liability of any nature or kind for or on account of any copyrighted or uncopyrighted composition, secret or other process, patented or unpatented invention, articles or appliances manufactured, supplied or used in the Goods, and/or used or to be used by the Corporation before or after supply of the Goods as a result of work performed by the Supply Contractor, and if the Supply Contractor shall fail to save harmless and indemnify in manner aforesaid, any money collected from the Indemnified Parties shall be charged to the Supply Contractor.
- 4.1.3 The Supply Contractor shall release and discharge the Corporation and its directors, officers, servants, employees and agents (the "Released Parties") from and against all actions, claims, demands, proceedings, suits, losses, damages, costs and expenses of whatsoever kind or nature (including but not limiting the generality of the foregoing, in respect of death, injury, loss or damage to any person or property) which the Supply Contractor or its servants or employees might have in any manner arising in any way out of or connected negligent acts, omission, willful misconduct or breach of this Contract by the Supply Contractor except to the proportionate extent that such actions, claims, demands, proceedings, suits, losses, damages, costs and expenses were caused by the Released Parties or any of them.
- 4.1.4 The indemnity provided in this clause by the Supply Contractor to the Indemnified Parties shall not in any way be limited or restricted by any insurance or by limitations on the amount or type of damages, compensation or benefits payable under the Workers' Compensation Act or any other similar statute.

4.2 INSURANCE

4.2.1 General

The Supply Contractor and subcontractors shall provide at their own cost any insurance which they are required by law to provide or which they consider necessary to protect their own interests.

4.3 PATENT, TRADEMARK OR COPYRIGHT

4.3.1 The Supply Contractor represents that it has fully investigated all Specifications, including any furnished by the Corporation, in connection with the Goods and based on such investigation and its experience and superior knowledge with respect to such Goods has determined that the production and supply thereof will not infringe any patent, trademark or copyright.

PART 5 SHIPMENT OF GOODS/DAMAGE TO GOODS

5.1 SHIPMENT OF GOODS

5.1.1 Delivery of Goods

The Supply Contractor must deliver the Goods to the Delivery Point DDP (Incoterms 2020). Delivery of the Goods to a carrier for transmission to the Delivery Point does not constitute delivery of the Goods to the Corporation. Any such carrier is deemed to be the Supply Contractor's agent and not the Corporation's agent.

5.1.2 Delivery Costs

The Supply Contractor is responsible for all costs and expenses whatsoever in relation to the supply and delivery of the Goods to the Delivery Point, including without limitations, all shipping, carrier, transportation, freight, insurance, storage, handling, and off-loading costs, as well as any customs or excise charges or duties.

5.1.3 Supply Contractor to Bear Risk

The Supply Contractor shall bear all risks and shall assume all responsibility for the Goods, including, without limitation, any loss or damage to the Goods from any cause whatsoever, up to acceptance of the Goods by the Corporation.

5.1.4 Loss or Damage

If loss or damage to the Goods occurs for which the Supply Contractor is responsible, the Supply Contractor shall immediately effect repairs or replace any property as necessary to make good any such loss or damage. If the Supply Contractor refuses or neglects to do so, the Corporation may make good any such loss or damage, either by itself or by employing some other person, and the expense of doing so shall be charged to the Supply Contractor. If any repair or replacement of property is performed on the Goods because of loss or damage to the Goods for which the Supply Contractor is responsible the Supply Contractor represents and warrants that the warranty provided shall not be affected or changed to any manner or respect whatsoever.

5.1.5 Acceptance of Delivery of Goods by Corporation

Notwithstanding any other provision in the Contract Documents, the Corporation is not deemed to have accepted the Goods until the Goods have been delivered to and off-loaded at the Delivery Point and the Corporation has had a reasonable opportunity of examining them for the purpose of ascertaining whether they are in conformity with the Contract. The Corporation's acceptance or deemed acceptance of the Goods shall not prejudice any rights or remedies the Corporation may have hereunder relating to Goods that are found to be non-conforming, unsatisfactory, defective, of inferior quality or workmanship, or which fail to meet any Specifications or requirements of the Contract Documents.

PART 6 PROGRESS AND COMPLETION

6.1 CONTRACT TIME

6.1.1 Prosecution of the Goods

Time shall be strictly of the essence. The Supply Contractor shall supply the Goods in accordance with the Contract Documents. The Supply Contractor acknowledges that the schedule for supply of the Goods as set out in the Contract Documents is reasonable.

6.1.2 Schedule

The Supply Contractor shall provide a schedule and periodic updates coordinating the supply of Goods within the prescribed time. Contract time extensions, if any, shall be incorporated into updated schedules. The failure of the Supply Contractor to comply with this requirement may entitle the Corporation to terminate the Supply Contractor's right to continue with the supply of Goods or to delay progress payments.

6.2 TERMINATION

- 6.2.1 The Corporation may terminate the Contract if the Supply Contractor at any time becomes bankrupt, makes an assignment of his property for the benefit of his creditors, or if a receiver or liquidator should be appointed. Such termination shall be effective upon the Corporation giving notice thereof.
- 6.2.2 If at any time the Corporation reasonably forms the opinion that the Supply Contractor is in default under this Contract because the Supply Contractor:
 - (1) has breached a fundamental term of the Contract or is in substantial breach of the terms of the Contract;
 - (2) has failed to supply the Goods, within the time specified in the Contract Documents or extensions mutually agreed between the parties in writing;
 - (3) has failed or is failing to furnish or to maintain a detailed schedule;
 - (4) has become in any way unable to supply the Goods or any part thereof; or
 - (5) has repeatedly failed to make prompt payments to subcontractors, suppliers or others for labour, materials, or equipment; then the Corporation may give notice in writing to the Supply Contractor of such opinion and require that such default or defaults be remedied forthwith. If, within five Days of such notice, such default or defaults are not remedied to
 - If, within five Days of such notice, such default or defaults are not remedied to the satisfaction of the Corporation or the Supply Contractor has not taken reasonable measures to commence remedying the default(s), the Corporation may terminate the Contract. Such termination shall be effective immediately.
- 6.2.3 The Corporation may terminate the Contract, without any cost or penalty or consequence whatsoever, if it concludes, acting reasonably on the information available to it, that the Supply Contractor is in material non-compliance with, or has been convicted of a material offence or violation of, health, safety, labour, or environmental laws.

6.3 NO CLAIM

Except as herein before provided, the Supply Contractor shall have no claim against the Corporation for any reason whatsoever by reason of the termination of the Contract.

PART 7 PAYMENT

7.1 PAYMENTS TO SUPPLY CONTRACTOR

- 7.1.1 Payments to the Supply Contractor will be made as per the Agreement and set forth otherwise in the Contract Documents.
- 7.1.2 Notwithstanding Clause 7.1.1 the Corporation may withhold from payment:
 - (1) Such reasonable amount as the Corporation determines appropriate with respect to any part of the Goods not in compliance with the Contract Documents;
 - (2) Statutory holdback if the supply of Goods is of a nature that creates an obligation on the Corporation to retain a holdback under the Builders Lien Act;
 - (3) The amount of any bona fide builder's lien claim asserted against the Corporation or which the Corporation acting reasonably anticipates will be made against the Corporation; or
 - (4) Any deduction or set-off the Corporation may otherwise be entitled to under the Contract.
- 7.1.3 Payments may be withheld until the relevant operating manuals and all operating and maintenance materials together with all warranties have been delivered to the Corporation.
- 7.1.4 In addition to any other remedy the Corporation may have in the Contract or law, the Corporation may refuse to make payment because of subsequently discovered evidence or test results, and shall be compensated for any payment previously made to the Supply Contractor to such extent as may be necessary to protect the Corporation from loss because of:
 - (1) Defective or damaged Goods;
 - (2) A deductive change order;
 - (3) Failure of the Supply Contractor to supply the Goods in accordance with the Contract Documents, including failure to maintain the supply of the Goods in accordance with the schedule; or

(4) Disregard by the Supply Contractor of the authority of the laws of any public body having jurisdiction.

The Corporation may refuse to make payment of the full amount because of claims made against the Corporation on account of the Supply Contractor's performance or supply of Goods. In such case, the Corporation shall give the Supply Contractor prompt written notice stating the reasons for each action.

7.1.5 Prior to payment to the Supply Contractor, if requested by the Corporation, the Supply Contractor shall deliver to the Corporation a statutory declaration in form satisfactory to the Corporation declaring that all subcontractors, labour and accounts for material and equipment have been paid and that no persons, firms or corporations have any lien against the lands comprising the Delivery Point or the work together with such other documentation as the Corporation, acting reasonably, determines is necessary or desirable.