

**FORM A: PROPOSAL**  
(See B9)

1. Contract Title SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT

2. Bidder

Name of Bidder

Usual Business Name of Bidder as it appears on Invoice (if different from above)

Street

(Mailing address if different)

City

Province

Postal Code

Email Address of Bidder

Facsimile Number

Street or P.O. Box

City

Province

Postal Code

(Choose one)

GST Registration Number (if applicable)

The Bidder is:

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Proposal.

Contact Person

Title

Telephone Number

Facsimile Number

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.

5. Offer The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.
6. Execution of Contract The Bidder agrees to execute and return the Contract no later than seven (7) Calendar Days after receipt of the Contract, in the manner specified in C4.3.01.
7. Commencement of the Work The Bidder agrees that no Work shall commence until he/she is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.
8. Contract The Bidder agrees that the Request for Proposal in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Proposal.
9. Addenda The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:
- |     |       |       |       |
|-----|-------|-------|-------|
| No. | _____ | Dated | _____ |
|     | _____ |       | _____ |
|     | _____ |       | _____ |
10. Time This offer shall be open for acceptance, binding and irrevocable for a period of one hundred and twenty (120) Calendar Days following the Submission Deadline
11. Signatures In witness whereof the Bidder or the Bidder's authorized official or officials have signed this
- \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Signature of Bidder or  
Bidder's Authorized Official or Officials

\_\_\_\_\_

(Print here name and official capacity of individual whose signature appears above)

\_\_\_\_\_

(Print here name and official capacity of individual whose signature appears above)

**FORM B: PRICES**  
(See B10)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

**BREAKDOWN OF TOTAL BID PRICE**

<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>SPEC. OR RFP REF.</b>	<b>PRICE</b>
1.	High Rate Clarification Equipment <i>Including all specified components and delivery</i>	46 43 80	\$
2.	Design Support and Programming Validation <i>Including all process engineering and design support, design coordination and validation meetings, programming coordination and validation meetings, and factory acceptance test attendance</i>	46 43 80	\$
3.	Submittals	01 33 00	\$
4.	Site Services, Commissioning of Equipment, and Field Testing <i>Including delivery inspection, installation contractor training, installation assistance and inspection, facility startup meeting, and functional and performance testing</i>	01 43 33 46 43 80	\$
5.	Operations and Maintenance Manuals	01 78 23	\$
6.	Training of City's Personnel	01 43 33 46 43 80	\$
7.	Spare Parts	46 43 80	\$
8.	General Requirements <i>Including insurances, performance securities and warranty</i>	D8, D10, D17	\$
<b>TOTAL BID PRICE (Sum of Items 1 to 8) (GST and MRST extra)</b>			
9.	Cost per Day for Additional Services (Commissioning, Training, Testing, etc.) by One (1) Contractor Representative at a location in Winnipeg, Manitoba designated by the Contract Administrator	B10.2	\$
10.	Cost per Return Trip for Travel by One (1) Contractor Representative to Winnipeg, Manitoba	B10.3	\$
11.	Cost for Additional Spare Ballast, \$/kg	B10.5	\$

\_\_\_\_\_  
Name of Bidder

**FORM C: PROJECT REFERENCES**  
(See B13)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

Provide three (3) project references of previously completed work, in sufficient detail to demonstrate the Bidder's qualification to undertake the Work.

Reference projects shall meet the following minimum criteria:

- Full-scale installation (not a pilot demonstration) for municipal wastewater treatment;
- Two years of operation;
- Peak flow capacity of 50,000 m<sup>3</sup>/day or greater;
- SOR the same or higher than proposed for SEWPCC.

Provide the following information for each of three (3) qualified project references:

<p><b>Application (circle one):</b> CSO/SSO, primary</p> <p><b>Date of Becoming Fully Operational:</b></p> <p><b>Rated Peak Flow Capacity (m<sup>3</sup>/day):</b></p> <p><b>Bidder's Contract Value in Canadian dollars:</b></p> <p><b>Owner:</b></p> <p><b>Location:</b></p> <p><b>Owner Contact Name:</b></p> <p><b>Owner Contact Position:</b></p> <p><b>Owner Contact Telephone No.:</b></p> <p><b>Owner Contact Email:</b></p> <p><b>Design SOR at Rated Peak Flow Capacity (m<sup>3</sup>/m<sup>2</sup>/day):</b></p> <p><b>Design TSS Removal Efficiency or Effluent TSS Concentration:</b></p> <p><b>Actual TSS Removal Efficiency or Effluent TSS Concentration Based on Historical Performance:</b></p> <p><b>Type and Number of Units:</b></p> <p><b>Coagulant and Polymer Types:</b></p> <p><b>Design Coagulant and Polymer Doses:</b></p> <p><b>Actual Coagulant and Polymers Doses:</b></p> <p><b>Design Ballast Loss (if applicable):</b></p> <p><b>Actual Ballast Loss (if applicable):</b></p> <p><b>Description of Contract (such as scope of supply, other HRC design parameters, etc.):</b></p>
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*Note: Bidder may make three (3) copies of this sheet to fill out legibly by hand or typed, or Bidder may use own sheet that includes all required information above. Attach additional sheets as required and label as Form C.*



**FORM E: SUMMARY OF SYSTEM CHARACTERISTICS**  
(See B15)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

Complete the following summary tables for the proposed HRC system. Data submitted in this form will be used by the Contract Administrator to estimate the construction cost adjustment for the Bidder's proposed HRC facility (including civil, structural, mechanical, and electrical and instrumentation cost adjustments) as part of the life-cycle cost calculation in Form F (R1). Provide data in METRIC units.

<b>Item</b>	<b>Particulars</b>
<b>Utility Requirements</b>	
Effluent Water Requirements	
Potable Water Requirements	
<b>Coagulation Tank</b>	
Tank inside dimensions, L x W x H	
Mixer Installed kW	
Mixer Running kW <sup>(a)</sup>	
VFD required for process control ?	
Impeller description	
Anti-vortex baffles ?	
Materials of construction	
<b>Polymer &amp; Ballast Tank</b>	
Tank inside dimensions, L x W x H	
Mixer Installed kW	
Mixer Running kW <sup>(a)</sup>	
VFD required for process control ?	
Impeller description	
Anti-vortex baffles ?	
Materials of construction	
Recommended type of polymer	
<b>Flocculation Tank</b>	
Tank inside dimensions, L x W x H	
Mixer Installed kW	
Mixer Running kW <sup>(a)</sup>	
VFD required for process control ?	
Impeller description	
Anti-vortex baffles ?	
Materials of construction	
<b>Clarifier</b>	
Type (Circular / Rectangular)	
Tank inside dimensions, L x W x H	
Motor(s) Installed kW	
Motor(s) Running kW <sup>(a)</sup>	
VFD required for process control ?	
Materials of construction	
<b>Lamella System</b>	
Type	
Angle	
Material	
Weir Type	
Air Scour Blower Installed kW	
Air Scour Blower Running kW <sup>(a)</sup>	

**FORM E: SUMMARY OF SYSTEM CHARACTERISTICS – CONTINUED**  
(SEE B15)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

<b>Recirculation Pumps</b>	
Recirculation pump type	
Flow capacity per pump, L/s	
Quantity (duty / standby) per train	
Pump Installed kW	
Pump Running kW <sup>(a)</sup>	
VFD required for process control ?	
Materials of construction	
<b>Ballast Addition System (if applicable)</b>	
Ballast type	
Method of addition (slurry or dry)	
Capacity, kg/h	
Quantity	
Installed kW	
Running kW <sup>(a)</sup>	
VFD required for process control ?	
Materials of construction	
<b>Ballast Recovery System (if applicable)</b>	
Description of system	
Ballast Recovery Performance	
Quantity	
Installed kW	
Running kW <sup>(a)</sup>	
VFD required for process control ?	
Materials of construction	
<b>Ancillaries</b>	
Summary of ancillaries	
<b>Instrumentation</b>	
Influent turbidity analyzer make & model	
Effluent turbidity analyzer make & model	
pH analyzer make & model	
Sludge blanket level analyzer make & model	
<b>Other – Bidder to enter items as necessary</b>	

Note (a) - For running kW, use the conditions stated under Design Requirements (Clause 2.2) stated in the Specification Section 46 43 80, High Rate Clarification System.

**FORM E: SUMMARY OF SYSTEM CHARACTERISTICS – CONTINUED**  
(SEE B15)

SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT

**Drawings, Sketches and Information**

Please list the drawing, sketches and data that have been provided in accordance with B8.

List of Drawings, Sketches and Data:

List of Drawings Sketches and Data	Particulars
<b>Drawings</b>	
<b>Sketches</b>	
<b>Product Data and Other Data</b>	





**FORM F (R1): LIFE CYCLE COST EVALUATION – CONTINUED**  
(SEE B16)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

**Recommended Maintenance Schedule**

Complete the following with recommended maintenance activities and frequencies at which these are to be performed in order to maintain optimum performance of the equipment supplied.

Item	Description of Activity	Labour Time per Activity	Activity Frequency Per Year	Activity Annual Hours
1.				
2.				
3.				
4.				
<b>TOTAL ANNUAL MAINTENANCE HOURS (sum of all activity annual hours):</b>				

**Life Cycle Cost Evaluation**

<b>1) Capital Cost</b>	
A) Total Bid Price (from Form B)	\$
B) Construction Cost Adjustment: Relative differences in capital costs required to accommodate the equipment and achieve a fully-functioning HRC system including but not limited to construction costs for piling, concrete, site preparation, civil works, galleries and buildings, mechanical and electrical infrastructure, odour control and sludge management.	Estimate to be determined by the Contract Administrator.
<b>C) TOTAL CAPITAL COST (1A + 1B)</b>	<b>\$</b>
<b>2) Annual Power Cost</b>	
A) Total Annual Power Draw, kWh (From Operating Data)	
B) Power Cost	\$0.05 / kWh
<b>C) TOTAL ANNUAL POWER COST (2A x 2B)</b>	<b>\$</b>
<b>3) Annual Ballast Cost (if applicable)</b>	
A) Annual Ballast Consumption, kg/year (From Consumables)	
B) Cost of Ballast, \$/kg (From Form B)	\$
<b>C) TOTAL ANNUAL BALLAST COST (3A x 3B)</b>	<b>\$</b>
<b>4) Annual Chemical Cost</b>	
A) Annual Coagulant, kg/year as Fe (From Consumables)	
B) Cost of Coagulant	\$ 2.00 / kg Fe
C) Annual Polymer, kg/year as active polymer (From Consumables)	
D) Cost of Polymer	\$ 5.00 / kg active polymer
E) Annual Alkalinity Supplement, kg/year (From Consumables)	
F) Cost of Alkalinity Supplement	\$ 0.65 / kg as CaCO <sub>3</sub>
<b>G) TOTAL ANNUAL CHEMICALS COST (4Ax4B + 4Cx4D + 4Ex4F)</b>	<b>\$</b>

**FORM F (R1): LIFE CYCLE COST EVALUATION – CONTINUED**  
(SEE B16)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING / EXPANSION PROJECT**

<b>5) Annual Maintenance</b>	
A) Total Annual Maintenance Hours from Recommended Maintenance Schedule, hours	
B) Labour Rate, \$ per hour	\$ 70.00
<b>C) TOTAL ANNUAL MAINTENANCE COST (5A x 5B)</b>	<b>\$</b>
<b>6) Other Facility Operations and Maintenance Costs</b>	
A) Relative differences in operations and maintenance costs required to accommodate the equipment and achieve a fully-functioning HRC system within the SEWPCC, including but not limited to operations and maintenance costs for building heating and ventilation, odour control, sludge pumping, sludge thickening, sludge trucking, plant effluent water and potable water.	Estimate to be determined by the Contract Administrator.
<b>B) TOTAL OTHER FACILITY OPERATIONS AND MAINTENANCE COSTS (6A)</b>	<b>\$</b>
<b>7) Calculated O&amp;M Cost</b>	
<b>A) LIFE CYCLE OPERATING COST ADJUSTMENT (2C + 3C + 4G + 5C + 6B)</b>	<b>\$</b>
<b>8) EVALUATED BID PRICE = 1C + Net Present Value of 7A<sup>1</sup></b>	<b>\$</b>

Notes:

- 1) Net Present Value is calculated over a period of 30 years at a Discount Rate of 6% and an Inflation Rate of 5%.
- 2) Annual values reflect costs in year 1 of the 30 year LCC period.

**FORM G: GUARANTEED PERFORMANCE**  
(See B17)

**SUPPLY AND DELIVERY OF HIGH RATE CLARIFICATION EQUIPMENT FOR THE SOUTH END  
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Bidder to enter guarantee values for performance parameters listed below. Refer to High Rate Clarification technical specification (Section 46 43 80) for design requirements and field testing protocol for validating guarantee values.

Higher maximum SOR can be proposed upon approval in accordance with the Bidding Procedures (B.7 Substitutes).

Item	Value
Surface Overflow Rate (m <sup>3</sup> /m <sup>2</sup> •day)	With Ballast: 100 Without Ballast: 67
Guaranteed TSS Removal:	At least 85% Removal Efficiency or effluent TSS concentration less than 25 mg/L
Guaranteed Maximum Ballast Loss, kg per ML: <sup>(a)</sup>	
Guaranteed Maximum Ferric Chloride Dose, mg/L as Fe <sup>(b)</sup>	
Guaranteed Maximum Alum Dose, mg/L as Al <sup>(b)</sup>	
Guaranteed Maximum Polymer Dose, mg/L as active polymer	

<sup>(a)</sup> Enter N/A if Bidder's HRC equipment does not use Ballast

<sup>(b)</sup> The Bidder is advised the preferred coagulant has not yet been selected, One coagulant, either ferric chloride or alum, will be selected by the City and used for HRC operation. For the life cycle cost evaluation for this RFP, ferric chloride will be assumed as the coagulant.