



**NEWPCC - SUPPLY AND DELIVERY OF CIRCULAR  
PRIMARY CLARIFIER EQUIPMENT**

**URGENT**

**PLEASE FORWARD THIS DOCUMENT TO  
WHOEVER IS IN POSSESSION OF THE BID  
OPPORTUNITY**

ISSUED: June 26, 2007  
BY: Rudy Derksen, P.Eng.  
TELEPHONE NO. (204) 896-1209

**THIS ADDENDUM SHALL BE INCORPORATED  
INTO THE BID OPPORTUNITY AND SHALL  
FORM A PART OF THE CONTRACT  
DOCUMENTS**

Template Version: A20060821

---

**Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid non-responsive.**

---

**PART B – BIDDING PROCEDURES**

Revise: B2.1 to read: The submission deadline is 4:00 pm. Winnipeg time, July 11, 2007.

Revise: B11.1 (c) to read:

- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least one hundred percent (100%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

**PART D – SUPPLEMENTAL CONDITIONS**

Replace: D17.1 (c) with the following:

Clarifier 1 – Documentation and Performance Testing Accepted – 10%

Replace: D17.1 (f) with the following:

Clarifier 2 – Documentation and Performance Testing Accepted – 10%

Replace: D17.1 (i) with the following:

Clarifier 3 – Documentation and Performance Testing Accepted – 10%

Replace: D16.1 with the following:

If the Contractor fails to achieve delivery to site one week after agreed on Ready for Shipment dates listed in D13.1 for each clarifier, or delays placing a clarifier back in operation by more than two weeks due to Contractor deficiencies, then the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day during which such failure continues for each clarifier:

- (a) Clarifier 1, 2 or 3 – One thousand dollars (\$1,000.00);

## **PART E – SPECIFICATIONS**

Replace: E1.3 – First Paragraph with the following:

The following existing clarifier drawings are provided as reference. Before fabricating any part of the new clarifier system, field check dimensions as required to ensure systems will fit. Final operating water levels will be provided by the Contract Administrator.

Replace: Section 11000, Table of Contents, Section 2.13 up to 2.13.1.7, with the following:

- 2.13 Painting and Protective Coating
  - 2.13.1 Part 1 – General
    - 2.13.1.1 References
    - 2.13.1.2 Spare – Not Used
    - 2.13.1.3 Definitions
    - 2.13.1.4 Submittals
    - 2.13.1.5 Quality Assurance
    - 2.13.1.6 Delivery, Storage, and Handling
    - 2.13.1.7 Environmental Requirements
    - 2.13.1.8 Special Guarantee

Replace: Section 11000, Item 1.1.4 with the following:

Provide appurtenances or services not specifically mentioned or included in the Contract Documents but which are necessary as part of the Work to ensure that the equipment is fully operational when installed.

Add: Section 11000, Item 1.4.3.6 to 15 as follows;

6. Design Details:
  - 1) Running, alarm, cut-out, and Ultimate Torque ratings of drive unit assembly.
  - 2) Ultimate Torque load capabilities of drive unit assembly, torque cage, and, rotating rake arm trusswork.
7. Hydraulic Calculations: Minimum average, normal maximum, and instantaneous flows and data.
8. Certification of Structural Calculations: Letter of certification for structural design of mechanism, shall be signed and sealed by Registered Professional Engineer. Copies of detailed structural design calculations shall not be submitted for review. If submitted, calculations will be returned without review.
9. Structural Loads: Static, dynamic, and torque reaction loads to be transferred into structure at center column and access bridge support locations.
10. Details of torque sensing and load indication devices.
11. External utility requirements such as power, drain, etc., for each component.
12. Functional description of internal and external instrumentation and controls to be supplied including list of parameters monitored, controlled, or alarmed.
13. Power and control wiring diagrams, including terminals and numbers.

- Add:
14. Painting/Coating System(s): Include manufacturer's descriptive technical catalogue literature and specifications.
  15. Material necessary to confirm specifications.

Replace: Section 11000, Item 1.6.6 with the following:

- .6 There is little room on-site for material storage. Therefore store clarifier systems until delivery is requested by the Install Contractor. As necessary meet with the Install Contractor and co-ordinate the sequence and timing of material deliveries with the Install Contractor. Material lists and installation drawings provided by the Contractor would be used as guidelines to assist in planning the delivery schedule.

Replace: Section 11000, Item 1.7.2 to 1.7.5 with the following:

- .2 Prior to completing installation, the Contract Administrator will inform the Contractor and arrange for his attendance at the Site to review successful installation.
- .3 Conduct a detailed inspection of the installation including wiring, electrical connections, controls and instrumentation, rotation direction, running clearances, lubrication, workmanship, and all other items as required to ensure successful operation of the equipment.
- .4 Identify outstanding deficiencies in the installation and provide a written report to the Contract Administrator describing such deficiencies.
- .5 The Contract Administrator will make arrangements to resolve deficiencies and the Contractor shall then re-inspect and provide written confirmation each clarifier has been correctly installed and is ready for commissioning. This final inspection would include running the clarifier dry and monitoring the dry torque tests.
- .6 Furnish temporary bolts required for assembly.

Replace: Section 11000, Item 2.1.4 with the following:

- .4 The equipment furnished for each clarifier mechanism shall include but not be limited to:
  - center drive assembly,
  - center support column with inlet openings,
  - energy dissipating inlet (EDI),
  - feedwell
  - center cage,
  - sludge collection arms with rake blades,
  - rotating scum weir and ducking skimmers,
  - effluent weir plates and scum baffle,
  - anchorage parts
  - anchorage parts, anchor bolts, gaskets and assembly fasteners.

Replace: Section 11000, Item 2.2.3 with the following:

- .3 Unless noted otherwise all anchor bolts and other fasteners including skimmer, and rake blade squeegee fasteners shall be 316 stainless steel. Apply an NSF approved anti-seize compound to all threads in mechanical connections.

Add: Section 11000, Item 2.2.8 & .9

- .8 Isolate dissimilar metals or connectors to prevent direct contact and electrical conductivity.
- .9 Use insulated washer and Teflon sleeves at bolted connections.

Replace: Section 11000, Item 2.6.3 with the following:

- .3 The complete package shall be of sufficient strength to sweep in 50mm grout on the tank bottom under its own power if required.

Replace: Section 11000, Item 2.6.10 with the following:

- .10 The full voltage non-reversing starter for the rake drive motor will be supplied and installed remotely in the City's motor control centre by the Install contractor.

Replace: Section 11000, Item 2.6.16 with the following:

- .16 The motor and primary speed reducer shall drive a secondary worm gear reducer through a #60 roller chain and steel sprockets enclosed in a fibreglass, moulded polyethylene, or approved equal. Sprockets and chain shall be designed to ASME B29.1M and for the connected horsepower of the drive with a minimum service factor of 4.0. Provision shall be made for adjustment of chain tension.

Replace: Section 11000, Item 2.6.18 with the following:

- .18 Load carrying balls: Minimum diameter 25mm (1"), chrome alloy hardened to 60-65 Rockwell C.

Replace: Section 11000, Item 2.6.20 with the following:

- .20 The main gear and bearing shall be completely enclosed in a ductile (nodular) iron: to ASTM A536 or cast iron: grey to ASTM A48, Class 40 minimum, or steel to ASTM A36, 9.5mm (3/8") thick housing provided with neoprene dust seals. In order to ensure the maximum possible base rigidity and vibration dampening the gear housing shall be of full sidewall construction, integral with the base. If requested, shop inspection reports shall be made available for review.

Replace: Section 11000, Item 2.6.21 with the following:

- .21 The ductile iron housings shall be cast as a single piece to provide a leak proof enclosure. Seals or gaskets located below the oil level will not be acceptable. The base of the housing shall be mounted on the top flange of the stationary center column and designed to support the internal spur gear, and the rotating clarifier mechanism. The housing shall be complete with seals, oil level dipstick, oil fill, and valved oil and condensation drains. A positive means of removing condensation and contaminant from the lower pinion-bearing pocket shall be provided.

Replace: Section 11000, Item 2.6.24, last paragraph, with the following:

All drive control components shall be mounted in a waterproof NEMA 250, Type 4X, Type 316 stainless steel with a gasket sealed, removable cover. Cover the pointer with a clear plastic enclosure and install above the platform surface for visibility from the platform. The indicating pointer is to indicate relative load on a graduated scale up to Ultimate Torque.

Replace: Section 11000, Item 2.8.6 with the following:

The cage and rake arms shall be designed such that calculated stresses do not exceed the AISC allowable stress at twice the drive design rating. Design with sufficient strength and rigidity such that with 60/40 percent load imbalance at Ultimate Torque load, no member will be stressed to a level beyond allowable maximums set forth in AISC Specifications.

Replace: Section 11000, Item 2.10 Section Title with the following:

2.10 Feedwell and Energy Dissipating Inlet

Replace: Section 11000, Item 2.11.1 with the following:

Provide a floating scum collection system that discharges into a rotating scum pipe for removal. The skimming system shall consist of skimmer assemblies, a rotating scum pipe assembly and additional devices specified and required for proper operation. The sludge collector arms shall support the skimmer assemblies. Designs that rely on the scum baffle for support will not be acceptable. The scum pipe shall be supported from the walkway. Each skimmer assembly shall be furnished with 316 SS pivot supports that allow the skimmer blade to pass under the scum pipe without interfering with the operation of the scum pipe. The scum pipe dipping cycle shall begin as a skimmer assembly approaches the scum pipe, by rotating the scum pipe to receive scum and flushing water and shall be completed by returning the scum pipe to the closed position as the skimmer assembly passes. The scum pipe shall connect to and discharge scum by gravity flow into an existing scum pipe connection at the clarifier/effluent launder interface inside the main clarifier area. See Photo 2-1. The skimmer blade shall effectively move scum past the walkway enclosure rubber skirt.

Replace: Section 11000 Item 2.12.1 with the following:

The Supplier shall select effluent weir plates to suite the elevations of the existing clarifiers. The effluent plates shall consist of 6 mm thick, 316ss sections. The Supplier shall establish the number or spacing and their depth to provide a peak flow at 13mm (1/2") below the top edge of the weir plate. The weir sections shall be fastened to the tank wall using 316 stainless steel cinch anchor bolts, hex nuts, and stainless steel clamps, allowing for vertical adjustment.

- A. The following elevations are taken from drawing NEP-94 (Provided within the bid opportunity) :
  - 1. Top Water Level = 30.827' (9.396 m)
  - 2. Top of Launder = 30.271' (9.227 m)
  - 3. Bottom Water Level (Clarifier 1 & 2) = 30.607' (9.329 m)
  - 4. Bottom Water Level (Clarifier 3) = 30.271' (9.227 m)
- B. The Supplier shall field confirm the elevations prior to supplying Shop Drawings.
- C. The weir plates shall have vertical and radial adjustment capabilities of a minimum of 25mm (1") in either direction.

Clarification: Section 11000, Item 2.13

Where "Equipment Supplier" is used, it means "Contractor".

Replace: Section 11000, Item 2.13.3.3 C. 6. With the following:

- 6. Protect all surfaces adjacent to or downwind of work area from overspray. Contractor shall be responsible for any damage resulting from overspray.

Replace: Section 11000, Item 2.13.3.4 A 7.e., with the following:

Meet applicable federal, provincial, and local air pollution and environmental control regulations for blast cleaning, confined space entry, and disposition of spent aggregate and debris.

Replace: Section 11000, Item 3.1.1 with the following:

Provide a service representative properly trained in inspection and operation of the mechanism to inspect and certify proper installation, that the torque settings of the drive overload protection device are correct, review the torque test, and instruct the City's personnel on maintenance and operation.

Replace: Section 11000, Item 3.2 Title with the following:

3.2 Equipment Performance Test

Replace: Section 11000, Item 3.3.1 with the following:

After the installation has been verified, torque test completed, and any identified deficiencies have been remedied, equipment will be subjected to a running test, and equipment performance test.

Replace: Section 11000, Item 3.3.3 with the following:

Running Test – Each clarifier will be filled with wastewater and placed in operation for up to 3 days. At any time during this period, the Contract Administrator will accept the performance test. The next clarifier will then be shut-down to permit installation of the next new clarifier system. Operating problems noted during this performance test shall be resolved and the system retested before the performance test can be accepted.