

FORM N: DETAILED SPECIFICATIONS

SUPPLY, DELIVERY AND ON-SITE INSPECTIONS OF METCALFE LIFT STATION PUMPING EQUIPMENT

1. INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 1.1 All items in these specifications should be answered indicating compliance or non-compliance.
- 1.2 **Bidder/Proponents shall fill in specifications and state “yes” where indicated for compliance or state “deviation”,** or give a reply where requested to do so. Deviations and/or equivalents shall be clearly stated and fully detailed. Deviations and/or equivalents will be considered subject to evaluation. In every instance where a brand name or design specifications is used, the City will also consider deviations and/or equivalents.
- 1.3 Lengthy explanations of deviations may be included in a separate document and must reference the appropriate Detailed Specification.
- 1.4 Each Bidder/Proponent is required to fill in every blank. Failure to do so may be used as a basis for rejection of bid/proposal.
- 1.5 It will be the responsibility of the Bidder/Proponent to inform the City of any errors or omissions in these Detailed Specifications, for under this Contract, the Contractor shall be held responsible to ensure that the manufacturer will be responsible for the design, performance, reliability and satisfactory operational function of the unit.

2. DESCRIPTION OF EQUIPMENT

- 2.1 These specifications describe the pumping equipment, instruments and other equipment and features as specified herein.
- 2.2 The pumping equipment and instruments shall be new. Refurbished equipment will not be acceptable.
- 2.3 The pumping equipment and all other items/components shall be the manufacturer's latest model. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment and associated attachments in successful operation shall be furnished as though specifically mentioned in these specifications. The equipment and associated attachments, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 2.4 The ratings specified herein merely state the minimum values acceptable to the City, not implying that those values are sufficient for the design of the particular equipment being bid/Proposed.

3. REFERENCES

Bidder to provide three (3) references where this equipment is used in a working wastewater environment. State the application, model type of pump used, how long pump has been in service, customer and contact information (names, phone numbers and email)

- 3.1 Reference 1:

- 3.2 Reference 2:

3.3 Reference 3:

4. MAKE & MODEL [Specification Ref E17.2.1(n)]

4.1 Pump Manufacturer Being Bid State _____

4.2 Pump Full Model Number Being Bid State _____

5. PUMP DETAILS [Specification Ref E17.2.1a]

5.1 Flow Rate Design @ 19.6 m head (Bidder to fill in) _____ L/s

5.2 Flow Rate Runout @ 15.0 m head (Bidder to fill in) _____ L/s

5.3 Rotation (CW or CCW viewed from above) (Bidder to fill in) _____

5.4 Type of Impeller (Bidder to fill in) _____

5.5 Solid Passing Capability (sphere diameter) (Bidder to fill in) _____ mm

5.6 Nominal Diameter of Pump Suction (Bidder to fill in) _____ mm (inch)

5.7 Nominal Diameter of Pump Discharge (Bidder to fill in) _____ mm (inch)

5.8 Pump Efficiency at Design Point (Bidder to fill in) _____

5.9 Pump Approval for Canada (Bidder to answer CSA / cUL / NO) _____

5.10 Certified Canada Service Shop (Bidder to list City & Province) _____

5.11 Wastewater Operation Compatible (Bidder to answer YES / NO) _____

5.12 Provide Explanation on Any Deviations Required:

6. MOTOR DETAILS [Specification Ref E17.2.2(a)]

6.1 Power Supply (Bidder to fill in) _____ VAC ___ Ph ___ Hz

6.2 Power Rating (Bidder to fill in) _____ HP

6.3 Approximate Full Load Amps (Bidder to fill in) _____ A

6.4 Approximate Efficiency (Bidder to fill in) _____ %

6.5 Nominal Speed (Bidder to fill in) _____ RPM

6.6 Starts per Hour Compatible (Bidder to fill in) _____

6.7 VFD Operation Compatible (Bidder to answer YES / NO) _____

6.8 Provide Explanation on Any Deviations Required:

7. INSTRUMENT DETAILS [Specification Ref E17.2.1(j) / E17.2.2(j)(k)]

7.1 Bearing Vibration Sensors (Motor) (Bidder to fill in) _____

7.2 Bearing Vibration Sensors (Pump) (Bidder to fill in) _____

7.3 Bearing Temperature Sensors (Motor) (Bidder to fill in) _____

7.4 Bearing Temperature Sensors (Pump) (Bidder to fill in) _____

7.5 Provide Explanation on Any Deviations Required:

8. TOOLS, ACCESSORIES & SPARE PARTS [Specification Ref E20]

8.1 Special Tools (list) _____ (Bidder to indicate total quantity) _____

8.2 Spare Impellers _____ (Bidder to indicate total quantity) _____

8.3 Spare Wear Rings / Plates _____ (Bidder to indicate total quantity) _____

8.4 Spare Mechanical Seals _____ (Bidder to indicate total quantity) _____

8.5 Spare Pump Shaft _____ (Bidder to indicate total quantity) _____

8.6 Spare Pump Volute and Casing Gaskets _____ (Bidder to indicate total quantity) _____

8.7 Spare Bearings (Pump Side) _____ (Bidder to indicate total quantity) _____

8.8 Spare Bearings (Motor Side) _____ (Bidder to indicate total quantity) _____

8.9 Other Spare Parts (list) _____ (Bidder to indicate total quantity) _____

8.10 Provide Explanation on any Deviations Required:

9. MANUFACTURER PARTS WARRANTY

9.1 The Supplier shall provide all detailed published Warranty information (including all exclusions) at the time of bid of the equipment. State the following [example. Replacement – 18 or 12 Months]:

9.2 Wear Rings State _____

9.3 Mechanical Seals State _____

9.4 Impellers State _____

9.5 Bearings (Motor) State _____

9.6 Bearings (Pump) State _____

9.7 Bearing Vibration Sensors (Motor) State _____

9.8 Bearing Vibration Sensors (Pump) State _____

9.9 Bearing Temperature Sensors (Motor) State _____

9.10 Bearing Temperature Sensors (Pump) State _____

9.11 Provide any additional manufacturer parts warranty information:

10. MANUFACTURER PUMPS WARRANTY

10.1 The Supplier shall provide all detailed published Warranty information (including all exclusions) at the time of bid of the equipment. State the following [example Replacement – 18 or 12 Months]:

10.2 Electric Motors State _____

10.3 Mechanical Pumps State _____

10.4 Mechanical Pump Shafts State _____

10.5 Provide any additional manufacturer pumps warranty information:
