

PART A

BID SUBMISSION

FORM A: BID
(See B7)

1. Project Title SUPPLY & INSTALLATION OF A CRANE AND DUMP BODY

2. Bidder

Name of Bidder

Street

City

Province

Postal Code

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

The Bidder is:

(Choose one)

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 Bid.

Contact Person

Title

Telephone Number

Facsimile Number

e-mail address

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.1 unless the context otherwise requires.

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. Commencement of the Work

The Bidder agrees that no Work shall commence until he is in receipt of a Purchase Order authorizing the commencement of the Work.

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7. Contract

The Bidder agrees that the Bid Opportunity 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 Bid Submission.

8. 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	_____
	_____		_____
	_____		_____

9. Time

This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

10. 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 B8)

SUPPLY & INSTALLATION OF A CRANE AND DUMP BODY

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX QTY	UNIT PRICE	AMOUNT
1	S & I of an Articulating Crane	07026	Each	1	\$ _____	\$ _____
2	S & I of 13' x 8' Dump Body	07026	Each	1	\$ _____	\$ _____
TOTAL BID PRICE (GST and PST extra) (in figures) \$ _____ (in words) _____ _____ _____						

 Name of Bidder

FORM N: DETAILED SPECIFICATIONS 07026

30,000 lb-ft CRANE AND DUMP BODY

(Water & Waste)

1.0 SCOPE

- 1.1 These specifications describe the supply and installation of a 41 kN-m (30,240 lb-ft) capacity articulated crane and a 13' x 8' dump body to be installed by the supplier on a City owned cab & chassis. See 18.0 Installation for chassis description.
- 1.2 The unit shall be furnished complete and ready for use. All parts not specifically mentioned, but which are required to complete and place the unit in successful operation, shall be furnished as though specifically mentioned in these specifications. The complete unit, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.3 It will be the responsibility of the Bidder to inform the City of any deficiencies in these specifications, for under this Contract the Contractor shall be held responsible for the design, performance, reliability and satisfactory operational function of the unit.
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City. There is no intent of implying that these values are sufficient for the design of the equipment being bid.

2.0 STANDARDS

- 2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 All welding shall conform to the CSA/CWB Standards W47.1-03 and W59-03.
- 2.3 The completed unit and all its components shall comply with all C.M.V.S.S. and Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker.

3.0 QUALIFICATIONS OF MANUFACTURER / CONTRACTOR

- 3.1 The manufacturer of the dump body shall have demonstrated experience manufacturing bodies of the type being offered.
- 3.2 The Contractor shall be a manufacturer or authorized distributor/supplier of crane and dump body equipment.
- 3.3 For the purpose of warranty repairs, the Contractor shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience on cranes and dump bodies, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.

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3.4 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facilities. Any work performed by City of Winnipeg Repair Facilities shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2007: \$80.00/hr regular time, \$105.00/hr overtime and callout).

3.5 The manufacturer/installer shall be a certified vehicle completer and must affix their National Safety Mark (NSM) certification sticker on each unit.

3.5.1 State NSM number: _____

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation, or give a reply where requested to do so.** Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

5.0 PERFORMANCE

5.1 The articulated crane shall be capable of consistent top performance for lifting, winching and other miscellaneous material handling functions during the summer and winter environments which are normal to the City of Winnipeg.

5.2 The dump body shall be capable of consistent top performance for hauling and dumping during the summer and winter environments which are normal to the City of Winnipeg.

6.0 HYDRAULIC CRANE

6.1 Type – hydraulic, articulated crane, centre mounted immediately behind chassis cab, HIAB XS 055 D-2 CL or equal.

6.1.1 State make and model being bid.

6.2 Crane rating – 41 000 N-m (30,240 lb-ft) min., state.

6.3 Mounting space required – 86 cm (34 in.) approx., state dimension.

6.3.1 Overall width, outriggers retracted – state.

6.3.2 Overall width, outriggers extended – state.

6.4 Installed weight – state.

6.5 Stowed height above truck frame – state.

6.6 Horizontal reach, from centreline of rotation – hydraulically extendable to 7.0 m (23 ft.) min., state.

- 6.7 Vertical lift above ground – state. _____
- 6.8 Rotation – power, 360° min. _____
- 6.9 Outriggers – manually extendable out, hydraulically extendable down. _____
- 6.10 Crane controls – complete control station on each side of vehicle. _____
- 6.10.1 Control levers – horizontally positioned, self-centering, mounted at truck frame height. _____
- 6.10.2 Individual outrigger controls – required. _____
- 6.10.3 All crane controls to be labelled with permanent type labels. _____
- 6.11 Boom hook – required at boom tip, capacity to meet or exceed maximum lifting capacity of crane, complete with safety latch. _____
- 6.12 Crane hydraulic cylinders shall be equipped with holding and/or counterbalance valves. _____
- 6.13 The crane shall be installed with frame spacers and additional cross members as required. _____

7.0 DUMP BODY – DIMENSIONS

- 7.1 Length, outside – nominal 4.0 m (13 ft.). _____
- 7.1.1 Length, inside – 3.8 m (12' 6") approx. _____
- 7.2 Width, outside – to match chassis track width, nominal 244 cm (8 ft.). _____
- 7.2.1 Width, inside – 229 cm (7' 6") approx. _____
- 7.3 Height of sides – 46 cm (18 in.) approx. measured from the floor, state. _____
- 7.4 Height of tailgate – 61 cm (24 in.) approx. measured from the floor, state. _____
- 7.5 Height of front – 106 cm (42 in.) approx., measured from the frame, state. _____

8.0 DUMP BODY – MATERIAL

- 8.1 All material used in construction to be minimum 10 ga. steel, minimum 50,000 psi yield except where otherwise noted. _____

9.0 FRONT

- 9.1 Construction – 10 ga. steel continuously welded to sides and floor. _____
- 9.2 The front section shall be constructed without a cab shield and shall have vertical and/or horizontal reinforcement ribs. _____

9.3 Top rail – structural or formed top reinforcement rail. _____

10.0 SIDES

10.1 Type – two (2) fold-down sides per side, 12 ga. steel c/w front, middle and rear corner pillars. _____

10.2 Sides shall be able to fold-down for ease of access to payload from the side of the body. _____

10.3 Construction – sides shall have vertical or horizontal formed reinforcement ribs, a heavy duty formed top rail and a self-cleaning bottom rail. _____

10.4 Fold-down sides shall be operated by a single lever per section. _____

10.5 Corner pillars – 15 cm x 10 cm (6" x 4") min., heavy duty formed or structural steel. _____

10.6 Each side section shall have a double latch design, latching on each side of the section. _____

10.7 Plank gussets – for 5 cm x 15 cm (2" x 6") planks with 13 mm diameter bolt holes. _____

10.7.1 Planks – 5 cm x 15 cm (2" x 6") black composite planks on all side panels, installed in gussets. _____

11.0 FLOOR

11.1 Material – 4.75 mm (³/₁₆ in.) AR200 or equal, state material. _____

11.2 Long sills – 18-25 cm (7-10 in.) formed long sills, tapered hat section design, continuously welded to the floor. _____

12.0 TAILGATE

12.1 Shall be a two-way tailgate able to open from the top and bottom. _____

12.1.1 Tailgate shall not protrude above floor in horizontal or full down position. _____

12.1.2 There shall be no gap between tailgate and the floor and sides when tailgate is in the closed or horizontal position. _____

12.2 Construction – formed construction with one or two equally spaced horizontal rib(s), and a self-cleaning bottom rail. _____

12.3 Tailgate shall be reinforced as required with either heavy duty (min. ³/₈ in.) end plates, or 6.35 mm (¹/₄ in.) steel tubing. _____

12.4 Lower tailgate locking mechanism – 32 mm (1¹/₄ in.) diameter anchor pins, in-cab control, air operated with air brake pot operated trip. _____

12.4.1 The locking mechanism shall be adjustable to ensure adequate lock-up with tailgate closed. _____

12.5 Support and spreader chains – 3/8 in. transport grade 70, adequately fastened c/w chain storage and two (2) removable links per chain. _____

12.5.1 Support and spreader chains shall be equipped with a protective cover. _____

12.6 Top tailgate anchor pins – 32 mm (1 1/4 in.) diameter min. _____

12.6.1 Top tailgate anchor pin release – one (1) manually actuated release lever releasing both upper pins. _____

13.0 HOIST

13.1 Type – double acting, hydraulic scissor lift hoist, capable of dumping a payload of 9100 kg (20,062 lbs.) min. State make and model being bid. _____

13.2 Dumping angle – 45° min. from horizontal. _____

13.3 Grease fittings – required on all pivot pins. _____

14.0 IN-CAB DUMP CONTROLS

14.1 Type – dash mounted single switch dump control, return to centre, electrically actuated International OEM switch preferred. State details of in-cab controls. _____

14.2 Dump control shall be permanently labelled “up” and “down”. _____

15.0 HYDRAULICS

15.1 The hydraulic system shall be designed to accommodate the crane, the dump body and an auxiliary tool circuit as specified herein. _____

15.2 PTO – Muncie electric/hydraulic power shift. _____

15.2.1 Electric/hydraulic power shift operable from a normal driving position. _____

15.2.2 Warning light to show PTO engaged. _____

15.3 Hydraulic pump – sufficient capacity to operate all crane functions, dump body hoist and the auxiliary hydraulic tool circuit (not simultaneously). _____

15.3.1 State make and model being bid including gpm and pressure rating. _____

- 15.3.2 Pump drive – close coupled or drive shaft driven, state. _____
- 15.4 Hoist control valve – 4-way, 3-position, spring centred. _____
- 15.5 Dump body/crane selector valve – required to divert oil from crane to dump body. _____
- 15.5.1 Selector valve control – located adjacent to driver’s side crane controls, labelled for crane and dump with permanent type, engraved style labels. _____
- 15.6 Dump body and crane circuit return line to be connected with a high pressure T-fitting, ahead of return line filter. _____
- 15.7 Hydraulic oil reservoir – steel construction, baffled as required, state capacity. _____
- 15.7.1 Location – chassis frame mounted, state location. _____
- 15.7.2 Level gauge – glass sight type, mounted in readily visible location. _____
- 15.7.3 Suction strainer – 100 micron, replaceable, in tank mounted. _____
- 15.7.4 Oil filler – top mounted with steel strainer and snap-ring retainer. _____
- 15.7.5 Filler cap – breather type with filter. _____
- 15.7.6 Drain plug – 13 mm (½ in.) diameter min. _____
- 15.7.7 Reservoir shall be clearly labelled “Hydraulic Oil” with a permanent type, engraved style label. _____
- 15.8 Relief valve – state pressure setting. _____
- 15.9 Oil filter – 10 micron, spin-on type return line filter, serviceable without oil loss, sized to match hydraulic requirements of crane and dump body. _____
- 15.10 Shut-off valve – ball type, located between reservoir and pump, secured in open position with a bracket and bolt. _____
- 15.11 Auxiliary tool circuit – 7-9 gpm @ 1500-2000 psi, two (2) outlets, one (1) on each side of the body, directly underneath floor at centre posts, steel hydraulic lines with quick coupler connectors, suitable for use with a Stanley BR45 Pavement Breaker and a Stanley CO25 Concrete Saw (not simultaneously). _____
- 15.12 Hydraulic hoses – wire braid reinforced, rated for system operating pressure with 4 to 1 safety factor for burst pressure. _____
- 15.12.1 Hydraulic hoses to be protected at wear and scuff location. _____
- 15.12.2 Hose fittings – hydraulic full flow, crimp-on (non-reusable) type. _____

- 15.13 Hydraulic oil – supplied in accordance with crane and hoist manufacturer’s recommendations and requirements. _____
- 16.0 ELECTRICAL & LIGHTING**
- 16.1 All lighting to conform to C.M.V.S.S. and Manitoba Highway Traffic Act. _____
- 16.2 Supplier installed lighting and lighting equipment shall be Truck-Lite (except where otherwise noted) and shall include the following components:
- 16.2.1 Combination turn/stop and taillights – P/N 44302R, one (1) per side with 40700 mounting grommets, flash rate 70-90 fpm. _____
- 16.2.2 Back-up lights – P/N 44206C, one (1) per side with 40700 mounting grommets. _____
- 16.2.3 Light cluster – three (3) only P/N 10250R with P/N 10700 mounting grommets, located to be protected from damage. _____
- 16.2.4 Rear light mounting location – taillights, back-up lights, 3-light cluster and rear-corner mounted clearance lights shall be mounted in the rear sill of the dump body. The lights shall be situated so that no debris contacts the lights while dumping. _____
- 16.2.5 Clearance lamps – P/N 10250R and 10250Y with P/N 10700 mounting grommets. _____
- 16.2.6 Clearance lamp mounting locations:
- i) Front – two (2), located one on each bottom corner. _____
 - ii) Sides – two (2) per side, located on front and rear bottom corners. _____
 - iii) Rear – two (2), located one on each bottom corner. _____
- 16.3 No clearance light shall protrude beyond the dump body. _____
- 16.4 Taillights and back-up lights shall be fully visible when tailgate is lowered to horizontal position. _____
- 16.5 Licence plate lamp – P/N 15040, complete with licence plate bracket. _____
- 16.6 Harnesses – Truck-Lite 50 Series Harness system, properly routed and secured. _____
- 16.6.1 All harnesses shall be internally grounded, no exceptions. _____
- 16.7 Junction box – P/N 50400, complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame. _____

- 16.8 All plug-in connectors shall be coated with Truck-Lite NYK compound prior to assembly. _____
- 16.10 Mini light bar – Grote 77163, cab-mounted on a Stealth by Carr roof rack. _____
- 16.10.2 Amber strobe lights – two (2) oval LED strobe lights, Grote 77363, rear facing in rear corner pillars, one per side. _____
- 16.10.4 Mini light bar and amber strobe lights shall be wired through the ignition, wired through a single OEM dash mounted switch, labelled with a permanent type, engraved style label. _____
- 16.11 Trailer connector – 6-pole, Grote 82-1068 or equal, wired through chassis manufacturer’s OEM auxiliary circuit, and installed in rear trailer hitch plate. _____
- 16.12 All wiring for warning lights, strobes and trailer connector shall be colour coded, loomed and properly secured. _____
- 16.12.1 All electrical connectors shall be crimped and soldered, then sealed using heat shrink tubing. _____
- 16.12.2 All joining of wires shall be soldered and sealed using heat shrink tubing or approved OEM weathertight connections (crimp on electrical connectors for joining wires are not acceptable). _____
- 16.12.3 Any holes required to run wires through shall be drilled (not punched), grommeted and sealed as required. _____
- 17.0 WELDING**
- 17.1 All welds shall be continuous welds. _____
- 17.2 All welding performed shall conform to CSA Standard W47.1-03 and W59-03. _____
- Note: All welds are subject to inspection by a City of Winnipeg Qualified Inspector.
- 18.0 INSTALLATION**
- 18.1 Any holes required in the chassis frame web must be drilled and reamed to fit bolts. _____
- 18.1.1 Drilling on chassis frame flanges is not permitted. _____
- 18.1.2 Welding on the chassis frame is not permitted, with the exception of installation of dump body pivot support. _____
- 18.2 Tire clearance – min. 8 cm (3-1/8 in.) with rear suspension air bags lowered. _____

18.3 Clearance between back of truck cab to crane and crane to front of dump body shall be (15 cm) 6 in. min.

18.4 The crane and dump body shall be installed on the following cab & chassis vehicle:

2008 International 4300 Crew Cab

- 13 154 kg (29,000 lbs.) GVWR
- 366 cm (144 in.) CA
- 1,000,000 in-lb RBM double rail frame, outside frame clear
- DT466 in-line 6 cyl. diesel engine, 7.6 L
- Allison 2500 RDS Series automatic transmission
- Vertical discharge exhaust
- Hydraulic brake system with air provision
- Air ride suspension
- Low Profile Tires

18.4.1 The chassis will be available for pick-up on or before July 3, 2007. The Contractor is responsible for pick-up and delivery of the unit as stated in Section 22.0 below.

19.0 MISCELLANEOUS

19.1 Rear hitch plate – 12.7 mm (½ in.) thick solid steel, (laminated plates unacceptable) installed to chassis frame.

19.1.1 "A" frame hitch reinforcement – 7.6 cm x 7.6 cm x 9.5 cm (3" x 3" x ¾") angle iron, welded to back of hitch plate and bolted to chassis frame web.

19.2 Pintle hitch – Premier 240 or approved equal, installed on hitch plate at a 61 cm (24 in.) height.

19.3 Lunette eyes for trailer safety chains – one (1) each side of hitch, Buyers Products B48 or equal.

19.4 Access ladder – required, bolt-on design, one (1) located for access to deck, exact location to be determined at time of installation.

19.4.1 Ladder rungs – one or two traction type rungs, 13-gauge steel, 5.7 mm (2¼ in.) width, 2 or 4-hole design, Traction Tread Products or equal.

19.4.2 First rung to be 46-56 cm (18-22 in.) from ground level.

19.5 Grab handles – chrome plated, located for ergonomic access to top of box.

19.6 Tie down rings, pillar mounted – four (4) required, one (1) mounted on each centre and rear corner pillar on the inside of the dump body Buyers Products B35 or equal.

- 19.6.1 Tie down rings, floor mounted – four (4) required on surface of floor, Buyers Products B901 or equal. _____
- 19.7 Mudflaps – black rubber, no-name, required front and rear of back tires c/w anti-sail bracket on each mud-flap. _____
- 19.7.1 Rear mudflaps shall not contact the ground when the dump body is at maximum dump angle. _____
- 19.8 Dump body prop – double prop design, steel tubing construction, to support dump body in raised position and permit servicing of hoist, operable by a single person, designed so as not to interfere with hoist cylinder or surroundings. _____
- 19.8.1 Dump body prop to be complete with receiving bracket. _____
- 19.9 Grease fittings – required on side and tailgate hinge pins, side and tailgate release mechanisms and pivot points. _____
- 19.10 Toolbox, driver’s side – frame mounted, underbody, 152cm W x 51cm H x 51cm D (60"W x 20"H x 20"D) approx., 4.76 mm (³/₁₆ in.) aluminum checkerplate construction c/w two (2) 76 cm (30 in.) width lockable doors with paddle style chrome or nickel plated latches. Toolbox shall be outfitted with two (2) drain holes and lined with dry deck material or equivalent. _____
- 19.10.1 Toolbox, passenger’s side – identical to driver’s side toolbox with the exception of 76 cm (30 in.) width and one (1) only door. _____
- 19.11 Isolators – all interfaces between aluminum and steel shall be separated by a minimum of 1.6 mm (¹/₁₆ in.) thick rubber or neoprene sheet and shall be bolted through with stainless steel bolts and non-conductive bushings. _____
- 19.12 Automatic greasing system – complete dump body and chassis shall be supplied with a Groeneveld/CPL Systems Inc. automatic greasing system including all required grease points on dump body, approx. twenty-six (26) points on cab & chassis, and automatic low level shut-off with in-cab red light indicator. _____
- 20.0 FINISH**
- 20.1 Complete dump body, hitch plates, reservoirs, steel brackets, etc. (with the exception of aluminum checkerplate and inside of the floor) shall be sandblasted, properly cleaned, primed and finished with the Endura paint process as follows:
 - 20.1.1 Primer – Endura EP32 Intermix Epoxy Primer. _____
 - 20.1.2 Paint – 3-5 mils of Endura EX-2C Topcoat, black. _____
- 21.0 PICK-UP AND DELIVERY**
- 21.1 Pick-up – the Contractor shall be responsible for picking-up the cab

& chassis vehicles from the City upon commencement of the Contract. The vehicles will be available for pick-up at the Winnipeg Fleet Management Agency, 185 Tecumseh St., Winnipeg, Manitoba. Pick-up times will be between 8:00 am and 3:00 pm on any business day. The Contractor shall be responsible for any related fuel and insurance costs to and from their facility.

21.2 Delivery – the unit shall be serviced, ready for operation, fully fuelled and delivered F.O.B. with the freight prepaid to the Winnipeg Fleet Management Agency, 185 Tecumseh Street, Winnipeg, Manitoba within **eighteen (18) calendar weeks** from the date of official notification of award of Contract. The Contractor shall contact the Contract Administrator prior to delivery of the equipment. Equipment shall be delivered within 8:00 am and 3:00 pm on Business Days.

21.3 A pre-delivery inspection shall be performed by the Contractor on all equipment.

22.0 TRAINING

22.1 Operator training – the Contractor shall be required to provide **one (1) Business Day** of training, in Winnipeg by qualified staff, for City of Winnipeg operating personnel. All costs associated with the training shall be at the Contractor's expense. The training sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor one (1) week prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.

22.2 Mechanical training – the Contractor shall be required to provide **one (1) Business Day** of training, in Winnipeg by qualified staff, for City of Winnipeg mechanical personnel. All costs associated with the training shall be at the Contractor's expense. The training sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor one (1) week prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.

23.0 PERFORMANCE RELIABILITY

23.1 The responsibility for the design of the complete crane and dump body vehicle, it's performance and reliability shall rest upon the Contractor.

23.2 The term "*repeated failures*" as used herein is defined to mean that the same component, assembly, or sub-assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit inoperative, or requiring repeated shop correction, service and/or replacement

during the warranty period applicable for said component, assembly, or sub-assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of “repeated failures”, as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer’s preventative maintenance schedules.

23.3 Where the unit develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.

24.0 WARRANTY

24.1 The warranty on the complete vehicle (excluding the chassis) shall include 100% replacement parts and labour at no cost to the City and shall cover the complete equipment and all parts thereof against defects of workmanship, construction and materials for **two (2) years** from the date the equipment is put into service by the City of Winnipeg.

Note: See Supplemental Conditions for additional Warranties.

24.2 A new two (2) year warranty period shall be provided for any article that is repaired or replaced under the terms of the “repeated failures” clause (Section 23.0 Performance Reliability). The new warranty period shall be effective from the date of acceptance of the repaired or replaced article.
