

**FORM A: BID**  
(See B8)

1. Contract Title SUPPLY & DELIVERY OF A TRUCK MOUNTED ASPHALT TRANSPORTER

2. Bidder

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

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

\_\_\_\_\_  
Street

\_\_\_\_\_  
City

\_\_\_\_\_  
Province

\_\_\_\_\_  
Postal Code

\_\_\_\_\_  
Email Address of Bidder

\_\_\_\_\_  
Facsimile Number

(Mailing address if different)

\_\_\_\_\_  
Street or P.O. Box

\_\_\_\_\_  
City

\_\_\_\_\_  
Province

\_\_\_\_\_  
Postal Code

\_\_\_\_\_  
GST Registration Number (if applicable)

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

\_\_\_\_\_  
Email Address

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. 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.

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.

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 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 B9)

SUPPLY & DELIVERY OF A TRUCK MOUNTED ASPHALT TRANSPORTER

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	Truck Mounted Asphalt Transporter	16031	Each	1	

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

## FORM N: DETAILED SPECIFICATIONS 16031

### TRUCK MOUNTED ASPHALT TRANSPORTER

#### **1.0 DESCRIPTION OF EQUIPMENT-**

- 1.1 These specifications describe a **Truck Mounted Asphalt Transporter** and other equipment and features as specified herein.
- 1.2 The **Truck Mounted Asphalt Transporter** shall be a new 2016 model year or newer.
- 1.3 The **Truck Mounted Asphalt Transporter** 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.
- 1.4 **It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the equipment.**

#### **2.0 OTHER SPECIFICATIONS AND 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 The **Truck Mounted Asphalt Transporter** shall comply with the applicable regulations:
- National Safety Mark, NSM = <http://www.tc.gc.ca/eng/acts-regulations/acts-road.htm>
  - Manitoba Safety and Health Act, Parts 12, 22 = <http://web2.gov.mb.ca/laws/statutes/ccsm/w210e.php> and <http://www.gov.mb.ca/labour/safety/>
  - Canadian Standards Association, CSA = <http://www.csa.ca/about/Default.asp?language=english>
  - Under Writers of Canada, U/L = <http://www.ulc.ca/>
  - Society of Automotive Engineers, SAE = <http://www.sae.org/>
  - City of Winnipeg Lighting Visibility Standard=<http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf>.
  - C.M.V.S.S.
  - Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker.

#### **3.0 SERVICE FACILITY**

- 3.1 For the purpose of warranty repairs, the Bidder 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 type equipment being offered. Further to B11.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

#### 4.0 **REFERENCES**

- 4.1 Provide five (5) Canadian references where this equipment is used in a working environment where climatic conditions are similar to the City of Winnipeg.

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#### 5.0 **MAKE & MODEL**

- 5.1 **State** make and model of the equipment bid- \_\_\_\_\_

#### 6.0 **INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS**

- 6.1 Each bid will be evaluated based on adherence to all terms, conditions and requirements outlined in the Bid Opportunity package.
- 6.2 All items in these specifications must be answered indicating compliance or non-compliance. **BIDDERS SHALL STATE "YES" FOR COMPLIANCE OR STATE DEVIATION**, or give reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.
- 6.3 **EACH BIDDER IS REQUIRED TO FILL IN EVERY BLANK. FAILURE TO DO SO MAY BE USED AS A BASIS FOR REJECTION OF BID**

#### 7.0 **PERFORMANCE RELIABILITY**

- 7.1 Shall be capable of consistent top performance for transporting, heating and dispensing asphalt material, and making permanent asphalt repairs during the spring, summer and fall environments which are normal to the City of Winnipeg.
- 7.2 The machine shall be capable of continuously heating both liquid emulsion and asphalt 24-hours per day, 7-days a week if so desired, i.e., capable of heating asphalt material to a temperature of 150°C (300°F) and heating liquid asphalt to a temperature of 121°C (250°F) in both working/transport mode and off-hours/storage mode.
- 7.3 The responsibility for the design of the **Truck Mounted Asphalt Transporter**, its performance and reliability shall rest upon the Contractor.
- 7.4 The term "repeated failures" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the equipment inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of 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 schedule.
- 7.5 Where the **Truck Mounted Asphalt Transporter** develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.
- 7.6 The equipment shall be capable of consistent top performance in City of Winnipeg Environment. Note: The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C)

**8.0 FUEL**

8.1 All equipment must be fully fuelled upon delivery (**no exceptions**).

**9.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR**

9.1 The manufacturer of the **Truck Mounted Asphalt Transporter** shall have five (5) years continuous experience manufacturing the equipment.

9.2 The manufacturer shall have in effect a documented quality control program ensuring that the quality of materials and workmanship, including welding, conforms to the best standards and engineering practice of the industry.

9.3 The Contractor shall have five (5) years continuous experience servicing, repairing and maintaining **Truck Mounted Asphalt Transporter** of the type being offered.

**10.0 MAKE AND MODEL**

10.1 **State make and model of unit being bid.** \_\_\_\_\_

**11.0 WEIGHT AND DIMENSIONS**

11.1 Weight – **state** weight of completed unit, less asphalt and tack oil. \_\_\_\_\_

11.2 Weight – **state** weight of completed unit with full load of asphalt, full full tack oil tank, plate compactor, fully fuelled with two (2) operators. \_\_\_\_\_

11.3 Overall length – **state**- \_\_\_\_\_

11.3 Overall width – **state**- \_\_\_\_\_

11.4 Overall height – **state**- \_\_\_\_\_

**12.0 WEIGHT DISTRIBUTION**

12.1 The completed vehicle shall not exceed the City of Winnipeg's limit for gross vehicle weight, axle and tire loads with the unit (including the chassis) fully fuelled and operational, two (2) operators, full liquid asphalt tank, heat transfer oil (if applicable), and including a full payload (struck capacity) of hot asphalt.

**Note: The City of Winnipeg and the Province of Manitoba limits the gross vehicle weight and axle and tire loads to:**

- **Front axle (steering axle) – 7300 kg (16,094 lbs.).**
- **Rear axle (single axle) – 9100 kg (20,062 lbs.).**
- **Tire load – 9 kilograms for each millimetre width of tire (approx. 500 lbs. per inch of tire width).**

12.2 **State** weight distribution of the complete vehicle with the unit fully fuelled, with two (2) operators, full liquid asphalt tank, heat-transfer oil (if applicable), plate compactor and full payload (struck capacity) of hot asphalt @ 721 kg/m<sup>3</sup> (1,215 lbs/yd<sup>3</sup>):

i) Front axle weight – **state** weight (lbs.). \_\_\_\_\_

ii) Rear axle weight – **state** weight (lbs.).

12.3 Weigh scale ticket – the Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit. The scale ticket shall include front and rear axle weights including one (1) operator and a full tank of fuel.

**13.0 SPECIFICATIONS**

**GVWR-**

13.1 Total 37,000 lbs.

13.2 Front 14,000 lbs.

13.3 Rear 23,000 lbs.

13.4 GCWR Gross Combined Weight Rating State-

**DIMENSIONS-**

13.5 Wheelbase As required for nominal 5 yd<sup>3</sup> asphalt hopper body and equipment, **state-**

13.6 Cab to Axle As required for nominal 5 yd<sup>3</sup> asphalt hopper body and equipment, 120 in. effective approx., **state-**

**ENGINE-**

13.7 Engine Diesel, inline 6-cylinder, **state** make, model and displacement-

13.8 Horsepower 300 HP gross

13.9 Torque 800 lb-ft

13.10 Air intake restriction indicator Dash mounted restriction indicator

13.11 Oil drain plug Magnetic type

13.12 Oil filter Full flow, spin-on or cartridge type

13.13 Fuel filter Spin-on or cartridge type

13.14 Fuel/water separator Heated, drainable, mounted under hood, located to be protected from road spray

13.15 Block heater Immersion type, 1000 Watt with plastic, covered recessed male plug, located under driver's side door

13.16 Coolant Extended life coolant, antifreeze to -35°F (-37°C)

13.17 Coolant hoses Silicone type, Gates Blue Stripe or Premium type hoses

13.18	Fan Drive	Thermostatically controlled, automatic type	_____
13.19	Air compressor	Water cooled, pressure lubricated, 18 cfm	_____

**ELECTRICAL SYSTEM-**

13.20	Chassis wiring	Multiplexed wiring	_____
13.21	Alternator	Delco Remy 34-SI, 135 Amp	_____
13.22	Starter	Delco Remy 41-MT/OCP 450 Series with thermal protection	_____
13.23	Circuit breakers	Auto-reset, readily accessible	_____
13.24	Batteries	Three (3), 12-volt, group 31, 2250 CCA combined capacity, all exposed connectors shall be sealed with a dielectric grease	_____
13.25	Battery Box	Under cab or frame mounted c/w enclosure, readily accessible, <b>state</b> location-	_____
13.26	Battery disconnect	In-cab mounted, <b>state</b> location	_____
13.27	Remote boost terminal	Remote battery boost terminal(s), protected from road spray, covered, <b>state</b> location-	_____
13.28	Cab marker lights	LED	_____
13.29	Trailer plug wiring	Routed to end of frame plus 3 extra feet of wiring, c/w 6-pole plastic socket. Wiring shall be circuit breaker protected, wired separately from main truck lighting	_____
13.30	Back-up alarm	97 dBA, located on inside-rear of frame rails	_____
13.31	2-way radio circuit	Independent 20 Amp circuit	_____
13.32	Accessory switches	Six (6) required, dash mounted for "PTO", "Beacon" and additional switch labelled "Aux". All switches wired through ignition and Acc. circuit, complete and wired for body installation, labeled and backlit	_____

**EXHAUST SYSTEM-**

13.33	Configuration	Stationary extreme outboard single right hand, chrome vertical discharge on passenger side, under-frame routing, vertical portion cab mounted. Discharge tip shall have a backslash type end	_____
13.34	Overall exhaust height	Approx. 12 in. higher than body	_____
13.35	Heat shield	Chrome, required over exhaust next to cab door	_____



**TRANSMISSION-**

13.36	Model	Allison 3500 RDS Series with load management	_____
13.37	Shift selector	Digital push-button type, dash mounted	_____
13.38	Cooling capacity	Water to oil transmission cooler, as per manufacturer's recommendation for severe duty cycle	_____
13.39	Oil level dipstick	Bayonet type with high and low level markings	_____
13.40	Trans. drain plug	Magnetic type	_____
13.41	Fluid	Fully Synthetic	_____

**FRONT AXLE-**

13.42	Capacity	14,000 lbs.	_____
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**REAR AXLE-**

13.43	Capacity	23,000 lbs.	_____
13.44	Ratio	For 110 km/hr top speed, <b>state</b> ratio-	_____
13.45	Differential lock	Required w/dash mtd. switch	_____

**FRONT SUSPENSION-**

13.46	Type	Taper-leaf spring suspension, 14,000 lbs. capacity	_____
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**REAR SUSPENSION-**

13.47	Type	Air ride suspension, 23,000 lbs. capacity, <b>state</b> make and model of suspension being bid-	_____
13.48	Susp. control valve	Manual dump valve for air suspension c/w dash mtd. Switch	_____

**RIMS, WHEELS, HUBS-**

13.49	Front	22.5 x 9.00 Aluminum, 10-bolt, hub piloted	_____
13.50	Rear	22.5 x 8.25 Aluminum, 10-bolt, hub piloted	_____
13.51	Hubs	Aluminum hubs, front and rear	_____
13.52	Hub seals	Oil lubricated front and rear	_____
13.53	Wheel nut indicators	Required on all wheel nuts, front and rear	_____

**FRONT TIRES-**

13.54	Make & Model	Michelin XZY-3 tires	_____
13.55	Size	315/80R 22.5J	_____

**REAR TIRES-**

13.56	Make & model	Michelin XDE M/S tires	_____
13.57	Size	11R 22.5G	_____

**FRAME-**

13.58	Type	Single rail, to match GVWR	_____
13.59	Application	Suitable for asphalt hopper body installation	_____
13.60	Chassis fasteners	Grade-8 threaded hex headed frame fasteners or Huck-spin fasteners	_____
13.61	After-frame	As required for asphalt hopper body installation	_____

**STEERING-**

13.62	Type-	Heavy Duty Power Steering	_____
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**BRAKES-**

13.63	Type-	Air, ABS	_____
13.64	Slack adjusters	Haldex/Eaton (clearance sensing), automatic type with greasable slack adjuster pins	_____
13.65	Parking brake	Spring set, four (4) chamber system	_____
13.66	Dust shields	Required, front and rear	_____
13.67	Moisture ejector	Bendix DV-2, heated, required in wet tank	_____
13.68	Air Tanks	Aluminum	_____
13.69	Drain valves	Manual, cable operated, required on each air tank except wet tank	_____
13.70	Air Dryer	WABCO 1200, heated	_____

**FUEL TANKS-**

13.71	Type	Aluminium, 189 L capacity, fully fuelled upon delivery	_____
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13.72	Tank straps	Steel straps with <sup>1</sup> / <sub>16</sub> in. rubber or neoprene isolators to prevent galvanic corrosion	_____
13.73	Fuel separator	Heated, drainable	_____
	<b><u>CAB-</u></b>		
13.74	Type	Conventional, aluminum or steel w/corrosion	_____
13.75	Hood	Fibreglass tilt	_____
13.76	Cab mounts	Air suspension	_____
13.77	Cab interior / trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
13.78	Cab silencer package	Required for minimal decibel level	_____
13.79	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
13.80	Floor covering	Rubber mat with under-padding	_____
13.81	Floor mats	Two (2), rubber	_____
13.82	Driver's seat	High back, air suspension w/foldable right hand armrest, seat belt, heavy-duty cloth upholstery	_____
13.83	Passenger seat	High back, air suspension w/foldable right hand armrest, seat belt, heavy-duty cloth upholstery	_____
13.84	Sun visors	Dual flip-up type	_____
13.85	Steering wheel	Tilt and telescopic type	_____
13.86	12-Volt power outlet	Two (2) required	_____
13.87	Radio	Factory installed AM/FM with blue tooth hands free cell phone capability	_____
13.88	Starter switch	Key operated c/w three (3) sets of keys	_____
13.89	Interior light	Dome light with driver and passenger door switches	_____
13.90	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
13.91	Air conditioning	Required	_____
13.92	Door locks	Power on both driver and passenger doors	_____
13.93	Remote keyless entry	Two (2) remotes	_____
13.94	Brake and accel. pedals	Hanging type brake preferred or Floor Monted and accelerator pedals	_____

13.95	Horn	Dual electric	_____
13.96	Exterior mirrors	Dual polycarbonate unpainted aerodynamic mirrors, heated, electrically adjustable with integral convex mirrors	_____
13.97	Downview mirror	Required over passenger door, 5" x 4" approx.	_____
13.98	Windows & windshield	Tinted	_____
13.99	Windshield wipers	Electric, intermittent, arctic type blades	_____
13.100	Windshield washers	Electric	_____
13.101	Grab handles	Dual exterior	_____
13.102	Entrance steps	Dual each side, open grate / grip type	_____
13.103	Winter front	Heavy-duty vinyl w/twist lock or snap type fasteners	_____

**INSTRUMENTATION-**

13.104	Oil pressure	Gauge	_____
13.105	Coolant temperature	Gauge	_____
13.106	Transmission oil temperature	Gauge	_____
13.107	LOP/HWT	Warning light and buzzer	_____
13.108	Voltmeter	Gauge	_____
13.109	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
13.110	Engine hour-meter	Required, non-resetable type	_____

**TOW HOOKS-**

13.111	Location	Front and Rear Tow Hooks	_____
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**FRONT BUMPER-**

13.112	Type	Chrome steel, full width c/w license plate bracket	_____
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**CAB COLOUR-**

13.113	Exterior	White	_____
13.114	Interior	Grey	_____
13.115	Frame & suspension	Primed and finished with black Imron 5000 paint or equivalent	_____

**SAFETY-**

13.116	Flare kit	Three (3) triangular reflectors, CVSA approved	_____
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13.117	Fire extinguisher	5 lb. ABC type, required in cab with mounting bracket	_____
13.118	First aid kit	Required, Provincial 1 approved kit	_____

**BODY SPECIFICATIONS-**

13.119	Hopper	Type – steel construction, fully insulated.	_____
13.120	Hopper Dimensions	Approximately 284cm L x 137cm H x 198cm W (112"L x 54"H x 78"W) approx., <b>state-</b>	_____
13.121	Hopper Capacity	Capacity – 3.8 m <sup>3</sup> , 6.4 tonne (5 yd <sup>3</sup> , 7.0-ton) capacity approx., <b>state-</b>	_____
13.122	Hopper Insulation	Insulation – fully insulated with 5 cm (2 in.) of high temperature, 12R factor insulation encased in a double steel jacket.	_____
13.123	Hopper doors	Dual top doors, hinged in centre of each door, fully insulated with 5 cm (2 in.) of insulation, hydraulically operated with controls located in-cab, ergonomically located and accessible from a normal driving position.	_____
13.124	Auger	Approximately 2.7m L x 15 cm diameter (9' L x 6" diameter) progressive screw type conveyor, hard surfaced flights, continuously welded, reversible with control at operator's work station	_____
13.125	Delivery chute	designed for ergonomic shovelling of patching mix, 90° of pivoting.	_____
13.126	Agitator	Full hopper length, hydraulically driven, reversible with control at operator's station.	_____

**LIQUID ASPHALT-**

13.127	Tank capacity	400 L (105 US Gal) approx., <b>state</b> capacity-	_____
13.128	Construction	Double steel jacket with 5 cm (2 in.) of R12 insulation.	_____
13.129	Liquid asphalt pump	Liquid asphalt pump and all lines shall be in an insulated, heated area with a hot well for storing spray wand in cold weather	_____
13.130	Liquid asphalt hand sprayer	1.5m x 9.5mm (5' x 3/8") wand, equipped with fan nozzle and dead-man control valve, 4.6m x 12.7mm (15' x 1/2") hose, reversible pump and diesel flush system for cleaning pump and lines.	_____
13.131	Hose reel	Spring loaded, auto-retractable, mounted at rear of unit.	_____

### HEATING SYSTEM

13.132	Heating	The unit shall be thermostatically controlled, capable of continuous heating of asphalt material to a temperature of 0-150°C (0-300°F)	_____
13.133	Transport/operating mode	The hopper body and the tack oil tank shall be heated either by:  Heat transfer oil system including a nominal 900 L (238 US Gal) tank, propane fired burner(s), two (2) horizontally mounted 190 L (50 US Gal) propane bottles, an electronic ignitor w/safety shut-off on loss of flame, and a thermostatically controlled circulating pump OR electrically powered by an on-board, 230 V electric generator. <b>State</b> details of working hours (transport mode) heating method-	_____
13.134	After hours power source	230 V heating elements or 230 V immersion heater, capable of keeping the asphalt material heated during non-working hours.	_____
13.135	Tack oil thermostat	Tack oil thermostat, 0-120°C (0-248°F). All thermostats shall have built in high limit safety shut down switches.	_____
13.136	Temperature gauges	Two (2) stainless steel gauges that constantly monitor the temperature of the asphalt hopper and road oil tank	_____

### HYDRAULICS-

13.137	PTO	Constant mesh, Muncie Powerclutch or Chelsea equivalent. <b>State</b> make and model-	_____
13.138	Power Shift	Electric/Hydraulic power shift, operable from a normal driving position.	_____
13.139	Warning Light	Warning light to show PTO engaged.	_____
13.140	Hydraulic Pump	Sufficient capacity to operate all machine hydraulics. <b>State</b> make and model being bid including gpm and pressure rating-	_____
13.141	Pump Drive	Close coupled or drive shaft driven, <b>state-</b>	_____
13.142	Hydraulic oil reservoir	Steel construction, baffled as required, complete with breather type filler cap with filter, filler strainer, sight gauge (or dipstick) and drain plug. Shall state on the tank what type of fluid recommended.	_____
13.143	Drain plug valve	Ball-type shut-off valve required on drain plug	_____
13.144	Suction strainer	100 micron with magnetic suction separator, in-tank mounted, flow capacity of 2-times pump capacity.	_____

13.145	Shut-off valve	Ball-type, located between reservoir and pump, secured in open position with bracket and bolt.	_____
13.146	Return line filter	10 micron, spin-on type, serviceable without oil loss.	_____
13.147	Relief valve	Provided to adequately protect the system and provide hydraulic overload protection to all functions	_____
13.148	Control valve(s)	Rated for system pressure, suitable for controlling hydraulic screw conveyor/auger, hydraulic doors, asphalt agitator, and liquid asphalt pump. Valve shall have an internal safety design that will not allow the screw conveyor or asphalt agitator to operate when the doors are open.	_____
13.149	Auxiliary tool circuit/Pavement Breaker	Auxiliary tool circuit – 7-9 gpm @ 1500-2000 psi, outlet at rear of body, suitable for use with a Stanley BR45125S. Vehicle must come with a Pavement breaker – Stanley BR45125S c/w suitable storage compartment.	_____
13.150	Hydraulic hoses and fittings	8000 psi burst pressure. All hydraulic hoses shall be neatly routed and secured with plastic tie wraps where necessary.	_____

**OPERATOR CONTROLS-**

13.151	Operator controls	Ergonomically located for all machine functions, labelled with permanent type, engraved style labels. <b>State</b> details of controls including locations and type of controls-	_____
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**ELECTRICAL AND LIGHTING**

13.152	Standards	All vehicle lighting shall conform to CMVSS (latest revision) and Manitoba Highway Traffic Act requirements.	_____
13.153	LED	Supplier installed lighting shall be LED Truck Lite or Grote (except where otherwise noted)	_____
13.154	Combination stop, turn and taillights	One (1) per side with 40700 mounting grommets, fully enclosed in steel module box enclosures. <b>State</b> part # -	_____
13.155	Turn signal flash rate	70-90 flashes per minute	_____

13.156	Back-up lights	One (1) per side with mounting grommets, fully enclosed at rear. <b>State</b> part # -	_____
13.157	Light cluster	Three (3) with mounting grommets, located to be protected from damage, fully enclosed at rear. <b>State</b> part # -	_____
13.158	Clearance lamps	With mounting grommets. <b>State</b> part # -	_____
13.159	Licence plate lamp	Complete with licence plate bracket	_____
13.160	Harnesses	Harness system, properly routed and secured, protected from damage. All harnesses shall be internally grounded, no exceptions. <b>State</b> part # -	_____
13.161	Junction box	Complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame, protected from road debris including all harness connections. <b>State</b> part # -	_____
13.162	Connectors	All plug-in connectors shall be coated with NYK compound prior to assembly.	_____
13.163	Mini Light Bar	Must be Class 1 Make Whelen, Pedestal mount, 360° visibility and must come with a heavy duty branch guard constructed of 5/8 in. Round-bar.	_____
13.164	Oval LED warning lights	Two (2) rear mounted, exact mounting location to be determined at time of installation. <b>State</b> part # -	_____
13.165	Mini light bar and oval LED wiring	Mini light bar and oval LED warning lights shall be wired through the ignition and accessory circuit, wired through a single, chassis manufacturer's OEM dash mounted switch, labelled "Beacon" with a permanent type label.	_____
13.166	Light board	Whelen model TA1652L c/w backboard, mounted to back of unit with in-cab controller.	_____
13.167	Power take-off engagement	Power take-off engagement switch – truck manufacturer's OEM dash mounted switch c/w warning light, labelled.	_____
13.168	Hour-meter	Dash mounted, energized by engagement of PTO. PTO hour-meter to be labelled with a permanent type, engraved style label	_____
13.169	Switches	All switches and warning lights shall be identified with permanent engraved type labels or chassis manufacturer's OEM labels. No labels allowed on upper surface of dash.	_____



13.170	Wiring Colour Coding	All wiring installed by body manufacturer/installer (including accessories, etc.) shall be colour coded, loomed, properly secured and protected from damage	_____
13.171	electrical connectors	Shall be crimped and soldered, then sealed with heat shrink tubing.	_____
13.172	Soldering	All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable).	_____
13.173	Drilling	Any holes required to run wires through body, cab, steel sections, etc. shall be drilled (not punched), grommeted and sealed.	_____
13.174	Rear Work Lights	Two (2) Rear Work Lights at rear of body, adjustable, exact location to be determined upon pre-production meeting.	_____
13.175	Rear Camera	Rear camera, operator controlled, exact location to be determined upon pre-production meeting.	_____

**INSTALLATION-**

13.176	Mounting	Mounting of the body and equipment shall be in accordance with the chassis manufacturer's guidelines for body mounting including, but not limited to, guidelines for tire and suspension clearance.	_____
13.177	Not Permitted	Welding to truck chassis frame is not permitted	_____
13.178	Mounting Brackets	Mounting brackets shall be bolted to chassis frame using Grade-8 fasteners.	_____
13.179	Mounting Standards	Any holes required in chassis frame web must be drilled and reamed to fit bolts.	_____
13.180	Mounting Standards	All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant.	_____
13.181	Departure angle	Departure angle of completed unit – 12° approx. <b>State</b> angle-	_____
13.182	Overall height decal	Overall height decal – engraved type, installed in chassis cab	_____

**MISCELLANEOUS-**

13.183	Spoils bin	Located behind cab, <b>state</b> dimensions-	_____
13.184	Hand torch	200,000 BTU with shut-off valve and 3m (10 ft.) of hose c/w torch hose reel.	_____
13.185	Compactor lift platform	Hydraulically operated lift platform for loading or unloading a City owned compactor. The platform shall be c/w a safety latch in the "up" position for use with compactor holding brackets. Controls shall be rear mounted, easily accessible by operator.	_____
13.186	Air compressor	Hydraulically driven, self-contained, 25 CFM @ 125 psi c/w quick couplers, 6.1m (20 ft.) of air hose, blow gun with dead-man control valve, min. 5-gallon air tank, relief valve, and spring loaded, auto retractable hose reel.	_____
13.187	Diesel fuel / releasing agent storage Tank	Approximately 69 L (18-gallon) capacity tank, equipped with a pump, 1 in. drain and hand sprayer for cleaning tools and unit. Shall utilize a connector valve for flushing road oil pump and lines.	_____
13.188	Diesel fuel hose reel	Spring loaded, auto retractable reel c/w 6.1m (20 ft.) of hose and spray wand.	_____
13.189	Tack oil hose reel	Spring loaded, auto retractable reel c/w 4.6m (15 ft.) of hose.	_____
13.190	Drip pan	38 L (10-gallon) approximately, mounted at rear of unit, suitable for collecting used waste oil.	_____
13.191	Water tank	Frame mounted, approximately 30 L (8-gallon) tank with valve and hose. Required to provide water supply for asphalt compactor plate.	_____
13.192	Body Fire extinguisher	Ten (10) lb. ABC type with mounting bracket and cover, located near rear of body, readily accessible in an ergonomic location. Exact mounting location to be confirmed at time of installation.	_____
13.193	Controls	All machine controls to be ergonomically located at the rear-passenger side of the unit.	_____
13.194	Reflective tape	Installed on sides and rear of unit.	_____

**PAINT AND FINISH-**

- |        |                |   |       |
|--------|----------------|---|-------|
| 13.195 | Sand Blasting- | All steel components (with the exception of inside of hopper) shall be <u>sandblasted</u> , properly cleaned, primed and finished as follows: | _____ |
| 13.196 | Paint          | Primer – Endura EP32 Intermix Epoxy Primer.<br>Paint – 3-5 mils of Endura EX-2C Topcoat, black.   | _____ |

**WARRANTY**

- |        |          |  |       |
|--------|----------|--|-------|
| 13.197 | Warranty | All warranty information shall be detailed and include all exclusions. The successful bidder shall provide all published warranty information upon delivery of the equipment. Bidder shall state all warranty information. | _____ |
|--------|----------|--|-------|

**DELIVERY**

- |        |                               |   |       |
|--------|-------------------------------|---|-------|
| 13.198 | Delivery Point                | Delivery Point: The complete unit shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB. The successful bidder shall be notified by the Contractor Administrator the delivery address prior to issuance of the purchase order | _____ |
| 13.199 | Delivery Time                 | <b><u>Twenty Four to Twenty Five (24-25) calendar weeks</u></b> from the date of award.<br>Equipment shall be delivered between 8:00 am and 3:00 pm on Business Days.   | _____ |
| 13.200 | Delivery Contact              | The Contractor shall contact the Contract Administrator prior to delivery of the equipment.   | _____ |
| 13.201 | Pre-Delivery Inspection (PDI) | A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list   | _____ |

**MANUALS**

13.202 Manuals- Manuals supplied under this contract. The manuals shall cover the complete equipment including all components thereof, CD is preferred where available. \_\_\_\_\_

The following manuals shall be supplied with the units when delivered:

a) Operator's manual – Two (2) per unit (one operator manual shall be sent to the Equipment Operator Training Branch

b) Parts and service manuals – one (1) complete sets including preventative maintenance schedules. CDs are preferred.

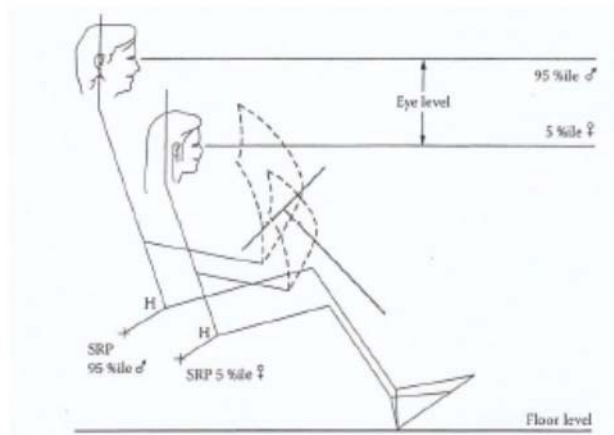
**PARTS/LABOUR PRICING**

13.203 Parts Discount % Bidder to provide City of Winnipeg Parts Discount % Pricing from retail parts pricing. **State percentage discount-** \_\_\_\_\_

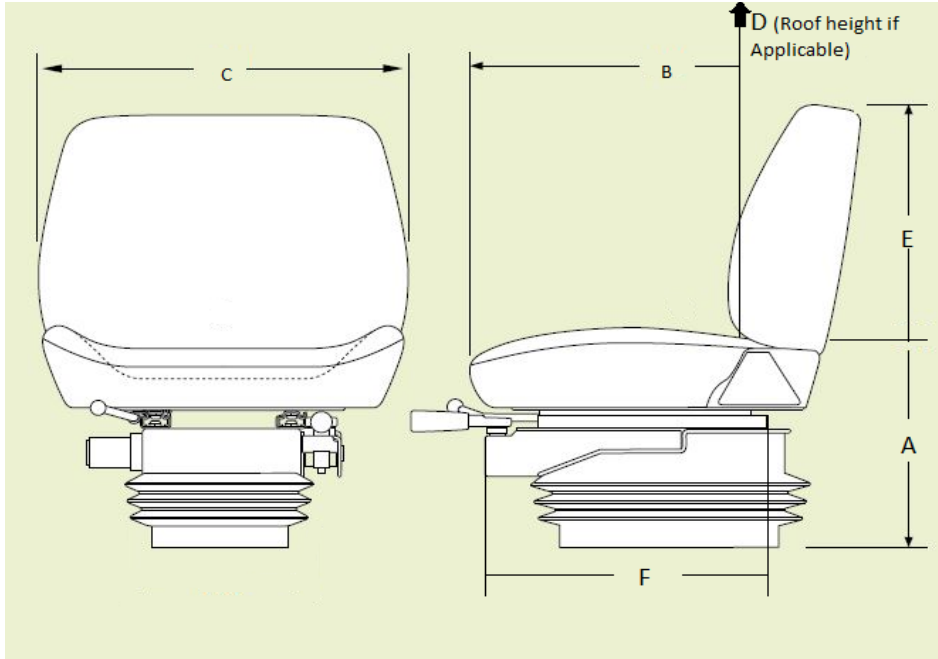
13.204 Labor Discount Bidder to provide City of Winnipeg Labor Discount % Pricing from Retail shop labor rate. **State percentage discount-** \_\_\_\_\_

**14.0 OPERATOR STATION ERGONOMICS**

14.1 Cab or station layout should provide a comfortable seating position for the 5<sup>th</sup> to the 95<sup>th</sup> percentile of personnel. Figure 1 below illustrates the variance between a 5<sup>th</sup> to a 95<sup>th</sup> percentile of North American males and females when seated.



14.2 Figure 2: Use the below diagram to answer the specifications for Operator Station Ergonomics.



14.3	Sitting height range from floor (where feet rest) (A)	<b>State</b> , seat height range in inches	_____
14.4	Seat length/depth (B)	<b>State</b> , seat length/depth in inches	_____
14.5	Seat width (C)	<b>State</b> , seat width in inches	_____
14.6	Cab height from seat to roof (if applicable) (D)	<b>State</b> , cab height range in inches	_____
14.7	Back rest height (E)	<b>State</b> , back rest height in inches	_____
14.8	Seat travel range (F)	<b>State</b> , seat travel in inches	_____
14.9	Include any other relevant ergonomic specifications and applicable range of adjustment		_____