

**FORM A: BID**  
(See B7)

1. Contract Title SUPPLY & DELIVERY COMBINATION SEWER & CATCH BASIN  
CLEANER VEHICLES

2. Bidder

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

\_\_\_\_\_  
Street

\_\_\_\_\_  
City

\_\_\_\_\_  
Province

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

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

(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.

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 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 (R1)**  
 (See B8)

**SUPPLY & DELIVERY COMBINATION SEWER & CATCH BASIN CLEANER VEHICLES**

**ALTERNATIVE #1 PURCHASE OPTION**  
**WITH FULL MAINTENANCE & GUARRANTEED BUYBACK**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT PRICE PER VEHICLE (A) EACH	QUANTITY OF VEHICLES (B)	EXTENDED AMOUNT (A x B)
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1	Combination Sewer and Catch Basin Cleaner Vehicle	1002	\$ _____	(5)	\$ _____
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**Guaranteed Buyback (based on 150 hours per month for 3 years)** \$ \_\_\_\_\_

**Guaranteed Buyback (based on 170 hours per month for 3 years)** \$ \_\_\_\_\_

**Guaranteed Buyback (based on 190 hours per month for 3 years)** \$ \_\_\_\_\_

<b>Maintenance Agreement Price (for 36 months) based upon 170 hours per month</b>	\$ _____
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\_\_\_\_\_  
 Name of Bidder

**FORM B: PRICES(R1)**

**(See B8)**

**SUPPLY & DELIVERY COMBINATION SEWER & CATCH BASIN CLEANER VEHICLES**

**ALTERNATIVE #2 LEASE OPTION  
 WITH FULL MAINTENANCE**

**ALTERNATIVE #2 OPTION**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT PRICE PER MONTH PER VEHICLE (A) EACH	QUANTITY OF VEHICLES (B)	EXTENDED AMOUNT TERM OF LEASE (C)	EXTENDED AMOUNT (A X B X C)
1.	Combination Sewer and Catch Basin Cleaner Vehicle	1002	\$ _____	(5)	60 Months	\$ _____

Charge per hour in excess of 10,200 hours after 60 months Ref: 5.3	\$ _____ /hr
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\_\_\_\_\_  
 Name of Bidder

**FORM N: DETAILED SPECIFICATIONS 1002 (R1)  
COMBINATION SEWER AND CATCH BASIN CLEANER  
(9 yd.3 Debris Body)**

**1.0 INTENT-**

- 1.1 The combination sewer and catch basin cleaner vehicles, including the cab and chassis, shall be the manufacturer's latest model as may be modified by these specifications. The vehicles shall be furnished complete and ready for use. Any parts not specifically mentioned but which are required to complete and place the units in successful operation shall be furnished as though specifically mentioned in these specifications. The complete units, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.2 The ratings specified herein state the minimum values acceptable to the City, not implying that these values are sufficient for the design of the particular unit being bid.

**2.0 STANDARDS-**

- 2.1 All applicable SAE Standards form and integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 The completed vehicle with the sewer and catch basin cleaning machine mounted on the cab and chassis shall comply with the applicable regulations:

Highway Traffic Act = <http://web2.gov.mb.ca/laws/statutes/ccsm/h060e.php>

Manitoba Motor Vehicle Act = <http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/menu.htm>

Canadian Motor Vehicle Safety Standards, CMVSS = <http://www.gnb.ca/0062/regs/83-163.htm>

Transport Canada = <http://laws.justice.gc.ca/en/notice/index.html?redirect=%2Fen%2FM-10.01%2F250448.html>

National Safety Mark, NSM = <http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/regulations/mvsrg/001/mvsr3-5.html>

Manitoba/Winnipeg Safety and Health Act = <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://en.wikipedia.org/wiki/Society\\_of\\_Automotive\\_Engineers](http://en.wikipedia.org/wiki/Society_of_Automotive_Engineers)

- 2.3 In Canada, Modification to new vehicles can only be done at facilities that are recognized by Transport Canada. All of these facilities must have a National Safety Mark from Transport Canada. Transport Canada National Safety Mark is a label that indicates that the modifications are compliant with all current Canadian Motor Vehicle Safety Standards (CMVSS)

**STATE (NSM) #- \_\_\_\_\_**

- 2.4 The vehicle shall be complete with a current Manitoba Safety Sticker affixed to the driver's side window. The certification shall be renewed by the Contractor throughout the duration of the Contract as required by Province of Manitoba safety regulations.

### **3.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR-**

- 3.1 The manufacturer of the Combination Sewer and Catch Basin Cleaner shall have five (5) years continuous experience manufacturing sewer and catch basin cleaners of the type being offered.
- 3.2 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.
- 3.3.1 The Contractor shall have five (5) years continuous experience servicing, repairing and maintaining sewer and catch basin cleaners of the type being offered.
- 3.3.2 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. 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 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 state the information requested. All deviations shall be clearly stated and fully detailed.
- 4.2 Bidders shall fill in every blank. Failure to do so may be used as a basis for rejection of bid.

### **GENERAL**

- 4.3 For equipment purchased or leased under this Contract, the Contractor shall repair or rectify any defects in workmanship, construction and materials, and shall repair or replace without additional cost to the City, any component that has become defective and not proven to have been caused by negligence on the part of the user throughout the entire duration of the Contract.
- 4.4 The Combination Sewer and Catch Basin Cleaner is of vital importance to the City in providing essential services and, accordingly, all repair items brought to the attention of the Contractor by the City shall be rectified expediently. The City reserves the right to effect repairs to the vehicle, at full cost to the Contractor, should the Contractor fail to perform in a timely manner. All damage repairs require authorization by WFMA and the customer before repairs are initiated
- 4.5 Should the Contractor dispute the City's decision on repair work required (as stated in Section 4.4) the Contractor shall contact the Contract Administrator. Details of the unit's defects or damage shall be provided to the Contract Administrator, who shall investigate the Contractor's claims. The unit shall remain as is until the claim has been resolved. The Contract Administrator shall have the final decision in disputes regarding repair work. The Contractor shall have no claim against the City for any costs to rectify defects or damage where defects or damage was rectified without the consent of the Contract Administrator.
- 4.6 Upon initial delivery of the equipment, the combination sewer and catch basin cleaners shall be a new 2010 model or newer.
- 4.7 **Under the full maintenance lease** the City shall be responsible for the following items for equipment under this Contract:
- Licensing and insurance coverage for the equipment;
  - Repair of damage to the equipment where damage has proven to have been caused by negligence on the part of the City;
  - Repair or replacement of tires damaged due to road hazards;

- Fuel and other normal operating and maintenance supplies including daily and weekly maintenance such as greasing, cleaning, drainage of water.
- Replacement of high pressure water hose;
- Vacuum hose
- Nozzle replacement
- Aluminum vacuum extensions
- Windshield wipers
- **Daily greasing**

4.8 **Under the full maintenance lease** the Contractor shall be responsible for the following items for equipment under this Contract:

- All scheduled maintenance including (but not limited to) oil and filter changes, and regular service adjustments as recommended by the equipment and chassis manufacturers;
- **All preventative and predictive maintenance**
- All repairs due to mechanical failure or malfunction;
- Towing costs (if unit is immobile);
- All parts and labour costs (excluding items listed in Section 4.6);
- Tires due to normal wear;

## 5.0 **TERMS OF LEASE – FOR ALTERNATIVE 2-**

5.1 The City may negotiate the extension option with the Contractor within fifteen (15) calendar days prior to the expiry date of the Contract. The City shall incur no liability to the Contractor as a result of such negotiations.

5.2 The estimated utilization of the combination sewer and catch basin cleaner vehicle is 170 hours per month. If the vehicle is returned by the City with an excess of 170 hours per month (i.e., 10,200 hours total after 60 months) the Contractor may charge an hourly rate for the machine over and above the lease rate. If applicable, the hourly charge per hour shall be stated on Form B: PRICES.

5.3 Bidders shall state the lease cost per month, as indicated on Form B: PRICES - Alternative 2. The monthly rate shall include the cost of a full maintenance and service Contract. The Contractor shall be responsible for maintenance of the complete machine including replacement of any components that fail during normal operation of the machine.

5.4 Upon initial delivery of the equipment, the combination sewer and catch basin cleaners shall be a new 2010 model or newer.

5.5 Throughout the remainder of the Contract, the combination sewer and catch basin cleaners shall be no more than three (3) model years old and shall have less than 6000 hours on the entire machine (for example, during the calendar year 2013 the oldest machine acceptable shall be a 2010 model year). If a machine exceeds the aforementioned model years or operating hours at any time throughout the lease period, the Contractor shall provide a new current model year unit with less than 500 hours operating hours on the entire unit. All machines leased under this Contract shall be in excellent operating condition. The WFMA (WFMA) will evaluate the condition of used machines bid as required.

5.6 The Contractor shall authorize the City of Winnipeg Repair Facilities to perform minor repairs and breakdowns during evenings, nights and weekends as required. The extent of the repairs shall be limited to a maximum of 4-hours per unit per breakdown. For all other repairs, or repairs requiring more than 4-hours labour, the City shall contact the Contractor the following business day. Any work performed by the City shall be charged to the Contractor at the Repair Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2010 : \$ 82.00 /hour and \$112.00 overtime rate).

5.7 The Contractor shall strive to minimize downtime – the time that the sewer and catch basin cleaner is not available for use by the City. Downtime shall include the time that the machine is

required by the Contractor, during regular working hours, for regular scheduled servicing or for maintenance of the machine required to correct failures not proven to have been caused by negligence of the user.

- 5.8 If the machine is unavailable for use due to warranty, repair or maintenance for more than three (3) working days, the Contractor shall provide (upon request of the Contract Administrator) a replacement unit at no additional cost to the City. The requirement for a replacement unit is not applicable in the case of an insurance claim or due to damage caused by misuse or negligence on the part of the user.
- 5.9 The equipment shall be delivered, serviced and ready for operation, Destination Freight Prepaid F.O.B. to the Fleet Management Services Inspection Office, 770 Ross Avenue, Winnipeg, Manitoba, no later than 9:00 am on the lease commencement date.
- 5.10 Bidder shall acknowledge compliance with the specifications and requirements of Items 4.3 to 5.9 inclusive.

**State yes or no-** \_\_\_\_\_

**6.0 BODY TYPE-**

6.1 Shall be a combination sewer and catch basin cleaning machine equipped with a high pressure water system, a self-contained water supply, a vacuum debris loading system and a debris storage tank, and a hydro-excavation ("soft dig") system complete with a hot water boiler, mounted on a tandem rear axle, conventional cab truck chassis.

6.1.1 **State year, make, model and operating hours of machine being bid:** \_\_\_\_\_

**7.0 PERFORMANCE-**

7.1 The combination sewer and catch basin cleaner shall be capable of consistent top performance for the following functions while being safely and efficiently controlled by one (1) operator:

a) Removing and simultaneously loading debris from catch basin culverts, manholes and wet wells at rates up to 25,000 lbs. (11 340 kg) per hour from depths to 60 ft. (18.3 m), **state-** \_\_\_\_\_

b) High pressure flushing of 6 in. (152 mm) to 24 in. (610 mm) diameter sewer lines, **state-** \_\_\_\_\_

c) High pressure flushing of sewer lines and simultaneous removal and loading of debris from the manhole while operating within the confines of one(1) traffic lane at all times utilizing the truck protect the operator from traffic. \_\_\_\_\_

7.2 The unit shall be capable of consistent top performance for the functions stated in Section 7.1 during the summer and winter environments which is normal to the City of Winnipeg. \_\_\_\_\_

**Note: The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-4 0°C).**

7.3 Shall be capable of transporting all payloads without exceeding the weight limits as listed below: \_\_\_\_\_  
- Front axle (steering axle) – 7300 kg (16,094 lbs.).  
- Rear axle (tandem axle) – 16 000 kg (35,274 lbs.)



**7.4 NOTE: THE CITY OF WINNIPEG AND THE PROVINCE OF MANITOBA LIMITS THE GROSS VEHICLE WEIGHT AND AXLE AND TIRE LOADS TO:**

The completed unit including any and all customization i.e. boiler and all associated components 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 with full water tank, one (1) operator and debris.

State weight distribution of the complete vehicle with the unit fully fuelled, with one (1) operator (200 lbs.), full pre-wet tanks and full payload (struck capacity) of dry sand (debris).

**8.0 CAB & CHASSIS-**

- 8.1 The cab and chassis shall be a conventional cab, tandem rear axle unit. \_\_\_\_\_
  
- 8.2 The Contractor shall ensure that the cab and chassis is properly serviced prior to any road transportation, in accordance with the manufacturer's recommendations. A pre-delivery inspection sticker shall be affixed under the hood of the vehicle. \_\_\_\_\_
  
- 8.3 The Contractor shall ensure that the entire vehicle contains a current Manitoba Safety sticker in accordance with the Province of Manitoba. The Manitoba Safety sticker shall be affixed on the driver's side window and shall be kept current throughout the duration of the lease. \_\_\_\_\_
  
- 8.4 GVWR Total                      58,000 lbs. \_\_\_\_\_
- 8.5 Front                              18,000 lbs. \_\_\_\_\_
- 8.6 Rear                                40,000 lbs. \_\_\_\_\_
- 8.7 Wheelbase                      As required for body installation, **state-** \_\_\_\_\_
  
- 8.8 Cab to Axle                      As required for body installation, **state-** \_\_\_\_\_
- 8.9 Turning radius                State- \_\_\_\_\_
  
- 8.10 Engine Type                    Tier III or Tier IV Diesel, inline 6-cylinder (SCR- Selective Catalytic Reduction not acceptable). Engines shall be warranted to use biodiesel at a B10 blend level (10% biodiesel to 90% ultra low sulphur diesel), where the biodiesel will meet product specification ASTM D 6751 to ensure fuel quality, **state-** \_\_\_\_\_
  
- 8.11 Horsepower                    330 HP gross \_\_\_\_\_
- 8.12 Torque                            1150 lb-ft \_\_\_\_\_
- 8.13 Engine shut down            Low oil pressure / high water temperature \_\_\_\_\_
- 8.14 Anti-idling programming Programming to be determined upon \_\_\_\_\_

		pre-production meet.	_____
8.15	Starting Aid	Cold weather starting aid required, <b>state type-</b>	_____
8.16	Fuel Shut-off	Electric solenoid type	_____
8.17	Air intake	Dual element air cleaner	_____
8.18	Air cleaner	Dry type, suitable for application	_____
8.19	Air intake restriction ind.	Restriction indicator dash mounted	_____
8.20	Oil drain plug	Magnetic type	_____
8.21	Oil filter	Full flow, spin-on type	_____
8.22	Fuel filter	Spin-on type	_____
8.23	Fuel/water separator	Heated, drainable, mounted under hood, located to be protected from road spray	_____
8.24	Fuel line primer pump	Required	_____
8.25	Block heater	Immersion type, 1000 Watt with covered recessed male plug, located under driver's side door	_____
8.26	Coolant	Extended Life coolant, antifreeze to -40°F (-40°C)	_____
8.27	Coolant filter	<b>State-</b>	_____
8.28	Coolant hoses	Premium hoses	_____
8.29	Fan Drive	Thermostatically controlled, automatic type	_____
8.30	Air compressor	Water cooled, pressure lubricated, 16 cfm	_____
8.31	PTO Provision	Front engine PTO with adapter plate, under Radiator preferred, <b>state-</b>	_____
8.32	Engine Oil Fluid	Must be synthetic	_____
8.33	Electrical System	Multiplexed wiring system	_____
8.34	Alternator	Brushless 160 amp	_____
8.35	Starter	Delco Remy with thermal over crank protection	_____
8.36	Circuit breakers	Auto-reset, readily accessible	_____
8.37	Batteries	Three (3) maintenance free (12)-volt, group 31, 2775 CCA combined capacity	_____
8.38	Battery Box	Under cab or frame mounted c/w enclosure, not to Impede with body installation, <b>state location-</b>	_____
8.39	Battery disconnect	In-cab mounted, <b>state exact location-</b>	_____
8.40	Remote boost terminal	Remote battery boost terminal(s), protected from	_____

		road spray, covered, <b>state location-</b>	_____
8.41	Cab marker lights	LED located in exterior sun shade or visor	_____
8.42	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, <b>state optional price-</b>	_____
8.43	2-way radio circuit	Independent 20 Amp circuit, ignition powered, wired under dash loose, labelled	_____
8.44	Accessory switches	Six (6) required, dash mtd. labelled and backlit .All switches complete and wired for body installation. Exact designation shall be determined upon a pre-production meet.	_____
8.45	Exhaust Configuration	Single horizontal, after treatment frame mounted Right hand side under cab with vertical tail pipe. Exhaust tip height to be determined upon a Pre-production meet.	_____
8.46	Heat shield	Required over exhaust next to cab door	_____
8.47	Transmission Model	Allison 3000 RDS with 6-speed programming	_____
8.48	Shift selector	Digital push-button type, dash mounted	_____
8.49	Fluid	Synthetic	_____
8.50	Cooling capacity	As per manufacturer's recommendation for severe duty cycle	_____
8.51	Oil level dipstick	Bayonet type with high and low level markings	_____
8.52	Trans. drain plug	Magnetic type	_____
8.53	Ground speed signal	Ground speed signal provision required	_____
8.54	Front Axle Type	Meritor 18,000 lbs. capacity	_____
8.55	Fluid	Synthetic	_____
8.56	Rear Type	Meritor 40,000 lbs. capacity	_____
8.57	Ratio	As per in city usage and for 110 km/hr top speed, state ratio-	_____
8.58	Differential lock	Required for both drive axles w/dash mtd. Switch	_____
8.59	Fluid	Synthetic	_____
8.60	Hub seals	Oil lubricated front and rear	_____
8.61	Hubs	Aluminum front & rear hubs, <b>state weight savings-</b>	_____
8.62	Front Suspension-	Taper leaf spring suspension 18,000 lbs. capacity	_____
8.63	Rear Suspension-	Primaax Air ride suspension, 46,000 lbs.	_____

		capacity, <b>state make and model of suspension being bid-</b>	_____
8.64	Susp. control valve	Manual dump valve for air suspension c/w dash mtd. switch, indicator light, gauge and buzzer	_____
8.65	Front Wheels	22.5 x 12.25 aluminum wheels, steel hub Piloted <b>state weight savings-</b>	_____
8.66	Rear Wheels	22.5 x 8.25 aluminum wheels, aluminum hub piloted <b>state weight savings-</b>	_____
8.67	Front Tires-	Make & Model Michelin or Bridgestone (Mud & Snow). Front steer tires must be suitable for application and Province of Manitoba weather conditions, <b>state make &amp; model of tires-</b>	_____
8.68	Size Front	385/65R 22.5, 18-ply Load range J	_____
8.69	Rear Tires-	Make & Model Michelin or Bridgestone (Mud & Snow). Rear Drive tires must be suitable for application and Province of Manitoba weather conditions, <b>state make &amp; model of tires-</b>	_____
8.70	Size	11R 22.5, 16-ply	_____
8.71	Frame	Rail, suitable for request GVWR and application and length	_____
8.72	Application	Suitable for sewer & catch basis body	_____
8.73	Chassis fasteners	Grade-8 threaded hex headed frame fasteners	_____
8.74	Front frame extension	Integral type, 20 in., <b>state length-</b>	_____
8.75	After-frame	As required body specifications	_____
8.76	Steering-	Heavy-duty power, synthetic oil preferred	_____
8.77	Brakes	Air, ABS, S-cam drum brakes, front & rear	_____
8.78	Slack adjusters	Meritor (clearance sensing), automatic type	_____
8.79	Parking brake	Spring set, four (4) chamber system	_____
8.80	Brake pots	Vented type	_____
8.81	Dust shields	Required, front and rear	_____
8.82	Moisture ejector	Bendix DV-2, heated, required in all air tanks	_____
8.83	Drain valves	Manual, chain or cable operated, required on each air tank	_____
8.84	Air dryer	Wabco System Saver 1200, heated, state location-	_____
8.85	Air Tanks	Must be aluminum, <b>state weight savings-</b>	_____
8.86	Fuel Tank	Aluminium, Approx. 370 L capacity, fully fuelled	_____

		upon delivery, <b>state location, state weight savings-</b>	_____
8.87	Tank straps	Stainless steel or aluminum straps with 1/16 in. rubber or neoprene isolators to prevent galvanic corrosion	_____
8.88	Fuel separator	Heated, drainable	_____
8.89	Cab-	Conventional w/corrosion inhibitor	_____
8.90	Cab Construction	<b>State material-</b>	_____
8.91	Front axle to BOC	<b>State-</b>	_____
8.92	Cab mounts	Air suspension	_____
8.93	Front grille	Stationary type	_____
8.94	Cab interior / trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
8.95	Cab silencer package	Required for minimal decibel level	_____
8.96	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
8.97	Floor covering	Rubber mat with under-padding	_____
8.98	Floor mats	Two (2) heavy-duty rubber	_____
8.99	Driver's seat	High back, air suspension w/foldable armrests, lumbar support, heavy-duty cloth upholstery, complete with seat covers.	_____
8.100	Passenger seat	High back, air suspension w/foldable armrests, lumbar support, heavy-duty cloth upholstery, complete with seat covers.	_____
8.101	Sun visors	Dual flip-up type	_____
8.102	Steering wheel	Tilt and telescopic type	_____
8.103	12-Volt power outlet	(2) Required	_____
8.104	Radio	Factory installed AM/FM/CD	_____
8.105	Starter switch	Key operated c/w three (3) sets of keys	_____
8.106	Interior light	Dome light with driver and passenger door switches	_____
8.107	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C )	_____
8.108	Air conditioning	Required	_____
8.109	Brake & accel. pedals	Hanging type brake and accelerator pedals	_____
8.110	Horn	Dual electric	_____
8.111	Exterior mirrors	Dual heated, lighted exterior mirrors. Shall come	_____

		with convex mirrors. Suitable for 102 in. equipment width	_____
8.112	Down view mirror	Required over passenger door, <b>state size-</b>	_____
8.113	Windows & windshield	Factory Tint	_____
8.114	Power windows	Required on driver and passenger side. Controls for both windows required on driver side	_____
8.115	Windshield wipers	Electric, intermittent	_____
8.116	Wiper blades	Snow type	_____
8.117	Windshield washers	Electric, required with spray nozzles on wiper blades	_____
8.118	Grab handles	Dual exterior	_____
8.119	Entrance steps	Dual each side, open grate / grip type	_____
8.120	Winter front	Heavy-duty vinyl w/twist lock or snap type fasteners	_____
8.121	Fender extensions	Front Fender extensions required	_____
8.122	Exterior Visor	Exterior sun visor required	_____
8.123	Dash	Wing type dash for operator convenience	_____
8.124	Fender Mtd. Mirrors	OEM lights, heated	_____
8.125	Flare kit	Required, state location	_____
8.126	Fire Extinguisher	(10) lbs. required, <b>state location</b>	_____
8.127	First aid kit	Required, state location	_____
8.128	Oil pressure	Gauge	_____
8.129	Coolant temperature	Gauge	_____
8.130	Transmission oil temp.	Gauge	_____
8.131	LOP/HWT	Warning light and buzzer	_____
8.132	Voltmeter	Gauge	_____
8.133	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
8.134	Engine hour-meter	Required, non-resetable type	_____
8.135	Tow Hooks	(2) front inside frame rail, (2) rear mounted	_____
8.136	Front Bumper	Front bumper delete, see body spec. for configuration	_____
8.137	Exterior Color	White	_____

- 8.138 Interior Color Blue or grey \_\_\_\_\_
- 8.139 Frame & suspension Primed and finished with black Imron 5000 paint \_\_\_\_\_
- 8.140 Flare kit Three (3) triangular reflectors, CVSA approved \_\_\_\_\_
- 8.141 Fire Extinguisher (10) lbs. fire extinguisher required \_\_\_\_\_
- 8.142 First Aid Kit Required \_\_\_\_\_

**9.0 DIMENSIONS AND TURNING RADIUS-**

- 9.1 State the following dimensions of the complete combination sewer and catch basin cleaner:
  - a) Overall length, **state-** \_\_\_\_\_
  - b) Wheelbase, **state-** \_\_\_\_\_
  - c) Overall width – 96 in (2438 mm) \_\_\_\_\_
  - d) Overall height, with boom in stored position – 150 in. (3810 mm) \_\_\_\_\_

9.2 **State** the vehicle turning radius, to curb, measured as per SAE J695-

**10.0 WEIGHT DISTRIBUTION-**

10.1 The combination sewer and catch basin cleaner shall not exceed the Maximum permissible axle loads in Section 7.3 PERFORMANCE, with the unit. \_\_\_\_\_

10.1.1 **State** the weight distribution of the vehicle with the following payloads:

- a) Water tank and debris tank empty
  - Front axle weight: \_\_\_\_\_
  - Rear axle weight: \_\_\_\_\_

- b) Water tank filled to capacity and debris tank empty
  - Front axle weight: \_\_\_\_\_
  - Rear axle weight: \_\_\_\_\_
  - State** water capacity (gal)- \_\_\_\_\_

- c) Water tank filled to capacity, and 12,500 lbs. (5670 kg) debris in the debris tank
  - Front axle weight: \_\_\_\_\_
  - Rear axle weight: \_\_\_\_\_
  - State** water capacity (gal) \_\_\_\_\_

10.2 The combination sewer and catch basin cleaner shall comply with the chassis manufacturer's recommendations for vertical and horizontal centre of gravity with the payloads listed in Section 10.1.1. Proof of documentation shall be provide within this bid submission.

---

**11.0 DEBRIS BODY-**

11.1 Body design – dumping type, cylindrical, **state-**

---

11.2.1 Body construction – 3/16 in (4.8 mm), 50,000 psi yield strength, corrosion and abrasion resistant Ex-Ten Steel or equivalent, **state-**

---

11.3 Useable capacity – 9.0 yd.3 (6.9 m3), **state capacity-**

---

11.3.1 Level indicator – external type with internal float mechanism.

---

11.4 Rear door – full size, heavy duty, steel construction, continuously welded.

---

**- State details of the rear door including construction.**

---

11.4.1 Rear door hinges – top mounted, heavy duty.

---

11.4.2 Rear door seal – neoprene, full perimeter, replaceable.

---

11.4.3 Rear door controls – hydraulic controls for power up, power down, lock and unlock rear door, located adjacent to hoist controls, operable from driver's position, protected from accidental actuation. With operators safety in mind, no manual door locks will be allowed.

---

**Give description of the locking system-**

---

11.4.4 Safety support struts – capable of holding the rear door in a raised position to provide a 48 in. (1219 mm) opening at the bottom of the door.

---

11.5 Drain – required in rear door with 6 in.(150 mm) diameter manual butterfly valve. Drain shall be designed to expel excess liquid while retaining solids in debris body.

---

11.5.1 Drain hose – Approx. 10 ft. (3 m), lay-flat type, pre-connected, complete with storage bracket.

---

11.5.2 An 450 gpm submersible trash pump external mounted on the rear door with a 3" x 25' drain hose and drain storage bracket.

---

**-State type dimensions being offered-**

---

11.6 Debris deflector – positioned to prevent incoming debris from plugging Rear door mounted drain.

---



11.7 Debris washout system – high pressure system designed to undermine and free heavy material. \_\_\_\_\_

**Give description of the washout system-**

---

11.8 Debris body to have a debris deflector plate below the door to prevent debris from covering the back of the truck when dumping. \_\_\_\_\_

11.9 Hoist – hydraulic, heavy duty, double acting. \_\_\_\_\_

**- State make, model and hoist capacity.**

---

11.9.1 Hoist controls – centre locking valve with spring return to neutral position, located to right of driver and operable from a normal driving position. \_\_\_\_\_

**- State type of controls.**

---

11.9.2 Dumping angle – 50° \_\_\_\_\_

11.9.3 Dumping height - 60 inches \_\_\_\_\_

11.10 Safety prop – tubular steel construction, easily accessible, designed to Support debris body in raised position and permit servicing of hoist. \_\_\_\_\_

11.10.1 Debris body to be reinforced at point of contact with prop. \_\_\_\_\_

**12.0 VACUUM SYSTEM-**

12.1 Vacuum created by a dual centrifugal compressor fan system capable of air flows from 0 to 8,000 cfm (3776 L/sec). \_\_\_\_\_

12.2 Centrifugal compressor – 38 in. (965 mm) diameter, statically and dynamically balanced, manufactured from non-corrosive materials. \_\_\_\_\_

12.2.1 Compressor housing – ¼ in. (6.4 mm) spun steel construction. \_\_\_\_\_

12.3 Capable of vacuuming wet or dry material without damage to Vacuum/equipment systems. \_\_\_\_\_

12.4 Vacuum system designed for minimal material discharge to atmosphere. \_\_\_\_\_

**- State details of material separation and/or filtration system-**

---

12.5 Vacuum system shall be designed to minimize noise levels. \_\_\_\_\_

12.6 For operator safety, Compressor housings shall be equipped with a

drain not exceeding 2" diameter.

---

**13.0 COMPRESSOR DRIVE SYSTEM-**

13.1 Auxiliary engine – 6 -cylinder, liquid cooled industrial diesel, 185 hp, or equal. (SCR- Selective Catalytic Reduction not acceptable). Engines shall be warranted to use biodiesel at a B10 blend level (10% biodiesel to 90% ultra low sulphur diesel), where the biodiesel will meet product specification ASTM D 6751 to ensure fuel quality, **state-**

---

**State make and model being bid-**

---

13.1.1 Engine equipment shall include the following:

- a) 12-volt electric starter with power from main vehicle batteries.
  - b) Drainable fuel filter/water separator.
  - c) Fuel supply from main vehicle fuel tank.
  - d) Heavy duty air filter with pre-cleaner and service indicator.
  - e) Full flow, spin-on oil filter.
  - f) Electric solenoid fuel shut-off.
  - g) Pressurized cooling system with antifreeze to -35°F (-37°C).
  - h) Automatic engine protection system with a low oil pressure/ high water temperature alarm and shutoff system.
- 

13.2 Compressor drive transmission – helical gear type, fully lubricated, single speed, with a step of ratio of 2 to 1, coupled to the compressor via a fluid coupler.

---

13.3 The gear shall attach directly to the rotor shaft without the use of belt drives of any kind. The drive shaft shall be supported via tapered roller bearings and gears.

---

13.3.1 Steel enclosure – lockable, required to fully enclose auxiliary engine and compressor drive transmission. The enclosure shall be preferably on roller tracks allowing the enclosure to be easily pulled away from the engine, providing complete engine access for maintenance at all times.

---

13.4.1 Full width platform allowing operator safe access to the auxiliary engine must be supplied.

---

13.4.2 Enclosure shall be fully insulated for sound suppression.

---

13.5 Auxiliary engine control panel – located on the front-mounted hose reel

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13.5.1 Controls shall be shielded against damage.

---

13.5.2 Auxiliary engine controls shall include the following:

- a) Keyed ignition start / stop switch.
  - b) Tachometer.
  - c) Hour-meter.
  - d) Water temperature gauge.
  - e) Oil pressure gauge.
-

**14.0 VACUUM PICK-UP HOSE AND BOOM-**

14.1 Pick-up hose and boom shall be designed for front end operation. \_\_\_\_\_

14.2 Vacuum hose – heavy-duty, 8 in. (203 mm) diameter. \_\_\_\_\_

14.2.1 Flexible section of upper vacuum hose shall be attached with over centre type quick clamp connectors at each end. \_\_\_\_\_

14.3 Vacuum hose and boom shall remain stationary when dumping debris body. \_\_\_\_\_

14.4 Hose storage – front mounted with locking clamp. \_\_\_\_\_

14.5 Vacuum hose extensions – aluminum construction, complete with a catch basin nozzle with a steel reinforced tip, for a working depth of 26 ft. (7.9 m) \_\_\_\_\_

14.5.1 Extensions shall utilize over centre type quick clamp connectors. \_\_\_\_\_

14.5.2 Extension storage racks shall be located on the right (curb) side of the truck and on the rear door – tubular steel construction, suitable for storage of three (3) lengths of debris tubing. Rack shall be a spring-activated, fold down design, able to facilitate convenient removal/replacement of debris tubes. State- \_\_\_\_\_

**- State location of storage rack and give description. Note: Street-side located storage rack not acceptable.**

---

14.6 Boom rotation – hydraulic, cylinder actuated 90° to each side (180° total). \_\_\_\_\_

14.6.1 Rotation mechanism – heavy duty with self-locking feature to lock boom in any working position. \_\_\_\_\_

14.7 Boom extension – hydraulically extendable with 8 ft. (2.4 m) extension, state- \_\_\_\_\_

14.7.1 Working radius – 23 ft. (7.0 m) with boom extended, **state-** \_\_\_\_\_

14.8 Boom raise and lower – hydraulic. \_\_\_\_\_

14.9 Boom controls – electric over hydraulic with controls for left/right rotation, raise/lower, extend/retract, emergency vacuum breaker, and emergency stop. \_\_\_\_\_

14.9.1 Pendant control box – portable type with a heavy duty, water proof housing and a 25 ft. (7.6 m) control cable. Remote pendant shall include all controls specified in Section 14.9. \_\_\_\_\_

Note: See Section 19.0 FRONT CONTROL STATIONS for location of boom controls and pendant control cable receptacles.

14.10 Boom support – tubular steel construction, designed to support boom in stored position. \_\_\_\_\_

**15.0 WATER TANKS-** \_\_\_\_\_

15.1 Cylindrical aluminum construction internally baffled. \_\_\_\_\_

15.2 Certified, metered capacity – 1,000 US Gallons \_\_\_\_\_

15.3 Tanks shall be positioned to provide optimal weight distribution and lowest centre of gravity. \_\_\_\_\_

**- State number of water tanks and mounting location.**

---

15.4 Interconnected tanks shall have aluminium piped connections with Intermediate or end mounted flexible rubber sleeves. \_\_\_\_\_

15.5 Water level gauge – sight type, located on right (curb) side water tank, protected from damage. \_\_\_\_\_

15.6 Low water level sensor – required with warning light and alarm, activated at approx. 200 Imp. Gallons (910 L), located at the front control stations and right (curb) side water tank. \_\_\_\_\_

15.7 Tank filler – anti-siphon, air gap type. Air gap shall be twice inlet diameter. \_\_\_\_\_

15.8 Strainer – “Y” type with stainless steel cartridge in tank fill line, **state size-** \_\_\_\_\_

15.8.1 Spare strainer cartridge – stainless steel, one (1) per unit.

15.9 Filler hose – 25 ft. (7.6 m) long with 2½ in. (64 mm) female Western Canada thread hydrant coupling, pre-connected to tank filler line. \_\_\_\_\_

15.9.1 Hose storage – basket type, expanded metal construction, easily accessible. \_\_\_\_\_

**16.0 WATER PUMP-**

16.1 Single piston water pump, double acting, designed and constructed for its intended use as a high pressure sewer flusher pump. \_\_\_\_\_

16.1.1 Capable of providing a pulse (jack hammer) type action and a non-pulse (surge-free flow) type action. \_\_\_\_\_

**- State location of pump action selector switch.**

---

16.2 Water pump output – hydraulically controlled, pressure adjustable from 250-2500 psi (1724-17 240 kPa) via a control panel mounted dial. Flow shall be adjustable from 0 to 80 gpm (5 L/sec) through the

- cleaning nozzle. \_\_\_\_\_
- 16.3 Relief valve or pressure regulator – factory set to regulate pressure  
Output of pump. \_\_\_\_\_
- 16.4 Water pump location shall be mounted low enough to allow gravity to  
provide a flooded suction inlet at all times and shall permit easy  
accessibility for pump maintenance. **State location-** \_\_\_\_\_
- 16.5 The water pump location shall be certified by the pump manufacturer  
and be provided to the City of Winnipeg. Any components of the pump  
requiring regular servicing shall be serviceable from the exterior of the  
pump without removal or dismantling of the pump.
- 16.6 Water pump capable of purging residual water from system by pumping  
Air through entire water system. Water pump shall be designed so that  
no damage will occur if run at normal operating pressure without water  
for 20- 30 minutes. \_\_\_\_\_
- 16.7 Drive system – hydraulically driven via transmission power take-off  
(PTO) driven hydraulic pump, designed and constructed for continuous  
duty operation.(See Section 23.1 for hydraulic pump details). \_\_\_\_\_
- 16.7.1 Capacity for continuous duty operation, water pump and drive system  
80 gpm (5 L/sec) at 2500 psi (13 790 kPa) water pressure. \_\_\_\_\_
- 17.0 HOSE REEL-**
- 17.1 Front mounted, hydraulically extendable with hose reel carrier frame bolted  
to chassis frame. \_\_\_\_\_
- 17.2 Hose reel extension – sufficient to allow full opening of tilt hood.  
  
**- State details of hydraulically extendable hose reel including maximum  
available extension.**  
\_\_\_\_\_
- 17.3 Hose reel shall be located to provide sufficient airflow to chassis  
radiator and engine compartment, as recommended by the chassis  
manufacturer, when stored in the fully retracted position. \_\_\_\_\_
- 17.4 Hose reel shall be capable of swivelling approximately 270° with the hose  
reel carrier in the fully extended position. For operator safety, the reel  
shall not extend beyond the chassis width in any position. \_\_\_\_\_
- 17.4.1 Swivel bearing – large diameter, heavy-duty ball type, grease-able. \_\_\_\_\_
- 17.4.2 Swivel lock – spring applied, air released. \_\_\_\_\_

- 17.5 Hydraulic drive system for wind/rewind and speed control of hose reel. \_\_\_\_\_
- 17.5.1 All drive components shall be readily accessible for servicing. \_\_\_\_\_
- 17.6 All hose reel controls shall be mounted at the front control stations. \_\_\_\_\_  
(See Section 19.0 FRONT CONTROL STATIONS for details).
- 17.7 Hose reel rotation bearings – heavy duty pillow block type, grease-able. \_\_\_\_\_
- 17.8 Hose reel rotation counter – required with reading in meters. \_\_\_\_\_
- 17.9 Hose – 600 ft. (183 m) long, 1 in. (25.4 mm) interior diameter sewer hose with 2500 psi (17 238 kPa) operating pressure and 3000 psi (20 685 kPa) burst pressure rating. \_\_\_\_\_

**-State make and model supplied.**

---

- 17.10 Hose guide – an automatic hose level wind scroll device shall be supplied. An air-cylinder actuated pinch-roller shall exert downward pressure across full width of reel to retain hose on reel when encountering nozzle blockages. \_\_\_\_\_
- 17.11 Hose area to be free of any obstructions which may damage hose. \_\_\_\_\_

**18.0 SEWER FLUSHING ACCESSORIES-**

- 18.1 One (1) each rubber covered, steel braid leader hose, approximately 4' x 1" ID (1.2 m x 25.4 mm ID). \_\_\_\_\_
- 18.2 One (1) each rigid finned guide assembly for leader hose, designed to stabilize nozzle and absorb impact of debris immediately behind nozzle. \_\_\_\_\_
- 18.3 One (1) each flexible hose guide with retaining rope. \_\_\_\_\_
- 18.4 One (1) each 15° sand nozzle with 6 rearward jets, 2 forward jets and tungsten carbide orifices. \_\_\_\_\_
- 18.5 One (1) each 30° sanitary nozzle with 6 rearward jets and tungsten carbide orifices. \_\_\_\_\_

**19.0 FRONT CONTROL STATIONS-**

- 19.1 A complete control station shall be located, state **exact location-** \_\_\_\_\_
- 19.1.1 The station shall be equipped with a complete set of controls and gauges including the following:
- a) Chassis engine throttle control.

- b) Water pump on/off switch.
  - c) Water pressure control
  - d) Water pressure gauge – oil dampened 0-3000 psi display.
  - e) Low water level warning
  - f) Hose reel wind/unwind control.
  - g) Hose reel speed control.
  - h) Hose reel telescopic extension control.
  - i) Boom elevation, rotation and extension controls.
  - j) Aux engine tachometer with hour meter
  - k) Aux engine voltmeter
  - l) Aux engine oil pressure gauge
  - m) Aux engine water temperature gauge
  - n) Electronic emergency stop
  - o) Digital flow meter
  - p) Digital colour diagnostic control panel
  - q) Weather proof plug-in for remote pendant control \_\_\_\_\_
- 19.2 All controls shall be identified with permanent, engraved type labels. \_\_\_\_\_
- 19.3 All controls shall be protected from damage or accidental actuation. \_\_\_\_\_
- 19.4 Remote spotlight – hand held type with impact resistant, water proof Housing and 25 ft. (7.6 m) cord. Spotlight storage provision required at front control station. \_\_\_\_\_
- 19.4.1 Cord reel – spring return type, installed adjacent to spotlight. \_\_\_\_\_
- 20.0 WASH DOWN GUN CLEANING SYSTEM-**
- 20.1 Water supply to handgun from high pressure water pump. \_\_\_\_\_
- 20.2 Factory set relief valve to protect wash down system – operating pressure not to exceed 1,000 psi \_\_\_\_\_
- 20.3 Quick connect couplers – located mid-ship on right (curb) side. \_\_\_\_\_
- 20.4 Handgun – pistol grip type with 25 ft. (7.6 m) of ½ in. (13 mm) diameter, wire braid reinforced hose with quick connect coupler. \_\_\_\_\_
- 20.4.1 Spray pattern – trigger controlled, adjustable from fine mist to steady stream. \_\_\_\_\_
- 21.0 HYDRO EXCAVATION SYSTEM-**
- 21.1 Boiler – 400,000 btu boiler system. System shall be approved by the Manitoba Department of Labour. State make model and details of Hydro excavation system. Proof of shall be given to the Contract Administrator prior to delivery. \_\_\_\_\_

21.2 Hose reel – retractable hose reel with 50 ft. of ¼ in. ID high pressure hose and hydro excavation lance. \_\_\_\_\_

**22.0 COLD WEATHER OPERATING SYSTEM-**

22.1 Water lines – insulated, including, but not limited to, pump suction line, pressure line to hose reel, and hand-held gun line. \_\_\_\_\_

22.2. Water re-circulation system – 20 gpm, designed to prevent freeze-up while driving to and from work sights, operable at all vehicle road speeds, **state gpm-** \_\_\_\_\_

22.2.1 Water to circulate through entire system including hose reel and pump. \_\_\_\_\_

22.3 Air purge system – required to remove water from pump and water lines. \_\_\_\_\_

22.3 Ball valves or drain valves shall be provided in the bottom section of the water pump for cold weather draining and daily flushing. \_\_\_\_\_

**23.0 HYDRAULIC SYSTEM-**

23.1 Hydraulic oil reservoir – steel reservoir with internal baffles, sized to meet system requirements. \_\_\_\_\_

- **State location and capacity-**
- 

23.2 Oil level gauge – sight type. \_\_\_\_\_

23.3 Drain plug – required at bottom of tank. \_\_\_\_\_

23.4 Reservoir filler – top mounted filler with strainer and breather cap with filter. \_\_\_\_\_

23.5 Sealed clean-out/inspection cover. \_\_\_\_\_

23.6 The oil reservoir shall be clearly labelled “Hydraulic Oil”. \_\_\_\_\_

23.7 Suction filter – nominal 100 micron filter, located in the oil reservoir, serviceable. \_\_\_\_\_

23.8 Shut-off valve – ball type, located between the oil reservoir and the pump, fastened in open position with a bracket and bolt. \_\_\_\_\_

23.9 Return line filter – nominal 10 micron, spin-on type, serviceable



without oil loss.

---

23.10 High pressure relief valve(s) – located to protect the entire hydraulic system.

---

23.11 Hydraulic lines – plated seamless steel tubing wherever possible and high pressure hydraulic hose where flexibility is required.

---

23.12 Hydraulic hoses – wire braid reinforced hoses rated for system operating pressure with 4 to 1 safety factor for burst pressure.

---

23.13 Hose fittings – full flow, crimp-on (non-reusable) type.

---

23.14 Hoses and tubing shall be properly routed and secured, and protected at wear and scuff locations. Tubing shall be shock-mounted.

---

23.15 Hydraulic valves – sized to meet system flow requirements without causing restrictions. All valves shall be individually serviceable and shall be located for easy accessibility for servicing.

---

23.16 The hydraulic system shall be designed for cold weather operation.

---

**24.0 ELECTRICAL SYSTEMS, GENERAL-**

24.1 Electrical wiring for all 12-volt circuits shall be in accordance with SAE Standards and all applicable standards as stated in item 2.2.

---

24.1.1 All wiring shall be in pre-engineered harnesses with weather proof, guided pin snap-together connectors. Each circuit shall be colour coded and marked the entire length of the wire with easily read numbers and/or letters for identification.

---

24.1.2 Where crimp-on type electrical connectors are necessary, the connectors shall be crimped and soldered to the wiring, then sealed using heat shrink tubing.

---

24.1.3 All wiring shall be properly secured, routed and protected. All holes Required for routing shall be drilled, grommetted and sealed as required.

---

24.2 Circuit breakers shall be used in lieu of fuses for all circuits requiring overload protection (reset type circuit breakers are preferred).

---

24.3 All circuit breakers and relays shall be located behind quick removable panels, located to be readily accessible for servicing. All circuit breakers and relays shall be permanently labelled to indicate their function.

---

**25.0 LIGHTING EQUIPMENT-**

25.1 The combination sewer and catch basin cleaner shall be equipped with all vehicle lighting equipment required under the Canada Motor Vehicle Safety Act and the Manitoba Highway Traffic Act.

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- 25.2 Supplier installed lighting shall include the following components:  
(All lighting shall be LED)
- a) Combination stop, turn and taillights – LED.
  - b) Back-up lights – LED.
  - c) Light cluster – three (3) lights LED protected to avoid damage.
  - d) Clearance lights – LED.
  - e) License plate lamp – LED, complete with license plate bracket, located to be protected from damage.
  - f) Lighting harnesses – properly routed and secured.
  - g) All plug-in connectors shall be coated with di-electric silicone prior to assembly.
  - h) Warning lights – LEC two (2) mini light bars located for 360° visibility, complete with in-cab switch wired through chassis ignition circuit. Steel guards shall be provided. Exact mounting locations to be determined at time of installation.

**26.0 MISCELLANEOUS EQUIPMENT-**

26.1 Back-up alarm – Grote 73040-5 or equivalent, installed at the rear of the unit, located to be protected from damage. \_\_\_\_\_

26.2 Mud-flaps – black rubber mud-flaps mounted fore and aft of rear wheels with anti-sail brackets. \_\_\_\_\_

26.3 Aluminum storage compartments – Three (3) required with a combined storage capacity of approx. 15 ft.3 (425 L). \_\_\_\_\_

- **State quantity, location and dimensions.**

---

26.4 Access step(s) – grip strut construction, located on right (curb) side adjacent to the auxiliary engine to permit safe access to auxiliary engine, hoist, boom etc. by operator, or mechanical personnel. \_\_\_\_\_

26.4.1 Grab handles – supplied as required. \_\_\_\_\_

26.5 LED Sequential rear-mounted horizontal arrow board \_\_\_\_\_

**-State make and model being bid-**

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26.5.1 Arrow board control console – mounted in chassis cab, accessible from a normal driving position, wired through the chassis ignition circuit. \_\_\_\_\_

26.6 Boom-mounted work light, and front control station work light. \_\_\_\_\_

26.7 Reflective safety tape where applicable \_\_\_\_\_

**27.0 LUBRICATION AND SERVICE-**

27.1 Groeneveld Twin Automatic Greasing System, state quantity of grease points- \_\_\_\_\_

27.2 All components of the combination sewer and catch basin cleaner requiring regular scheduled servicing or lubrication shall be easily accessible. \_\_\_\_\_

27.3 All pivot and friction points requiring lubrication including, but not limited to, all hydraulic cylinder pivot pins and tailgate hinge pins, shall have high pressure zerk fittings for lubrication. \_\_\_\_\_

27.4 Zerk fittings shall be easily accessible with a standard hand held grease gun. \_\_\_\_\_

27.5 Remote grease lines with zerk fittings shall be provided for grease points that are not accessible from ground level. \_\_\_\_\_

27.6 A permanent lubrication chart showing lube points and intervals shall be installed in a visible location. \_\_\_\_\_

**28.0 INSTALLATION-**

28.1 Installation of the combination sewer and catch basin cleaning machine on the cab and chassis shall be in accordance with the chassis manufacturer's recommendations. \_\_\_\_\_

28.1.1 The installation shall allow for proper access to all chassis components requiring regular scheduled maintenance. \_\_\_\_\_

28.2 Any holes required in the chassis frame web shall be drilled to fit the bolts. Drilling on chassis frame flanges is not permitted. \_\_\_\_\_

28.3 Welding on the chassis frame is not permitted. \_\_\_\_\_

28.4 Tire clearance –3 in. (76 mm) plus full suspension travel. \_\_\_\_\_

**29.0 COLOUR-**

29.1 The combination sewer and catch basin cleaning machine shall be Painted white using polyurethane enamel paint to match the chassis cab colour. \_\_\_\_\_

29.2 Paint shall be applied in accordance with the paint manufacturer's recommendations. All surfaces shall be properly cleaned, prepared and primed with a suitable primer prior to painting. Painting shall be

performed in an atmosphere controlled spray booth.

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**30.0 NOISE LEVELS-**

Note: The attention of the bidders is drawn to the desirability of low noise levels under normal operation of the equipment.

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30.1 dB(A) rating:

- Front work station jetting sewer line and vacuuming, 80- 90dB  
Rear of truck = 80- 90dB, **state**
- 

30.2 Front work station just jetting = 78dB, **state-**

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**31.0 MANUALS-**

31.1 Manuals supplied under this Contract shall be in English and shall be specifically for the sewer and catch basin cleaning machine supplied. General purpose manuals are not acceptable. The manuals shall cover the complete equipment including all components thereof.

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31.2 The following manuals shall be supplied under this Contract. The manuals shall be supplied at the time of delivery of the equipment:

- a) Operator's manual for the cab and chassis – one (1) set per unit.
  - b) Operator's manual for the combination sewer and catch basin cleaning machine – two (2) sets per unit.
- 

**32.0 TRAINING-**

32.1 The Contractor shall be required to provide training (at the Contractor's expense) for the City of Winnipeg maintenance and operating personnel. The training shall be divided into two separate sessions, one for maintenance personnel and one for operating personnel. The training shall be conducted in separate or combined sessions for each group of personnel.

The duration of the sessions shall be as long as required for adequate familiarization and orientation of the equipment to the satisfaction of the Contract Administrator.

The training shall be conducted within two (2) calendar weeks from the date of delivery and shall be coordinated through the Contract Administrator.

The training shall be conducted in Winnipeg at a time and location designated by the Contract Administrator.

Pricing should be based on **four (4) Business days** for maintenance personnel and **four (4) Business days** for operating personnel.

Note: The first payment of the Contract on the equipment will not be issued until successful completion of training has been

conducted to the satisfaction of the Contract Administrator.

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32.2 Training Aides:

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32.2.1 Training aids to be included.

a) On the type of equipment being offered, **state**  
if VHS videotape or CD Rom training aides  
are available-

---

32.2.2 **State if other training aides are available and state type-**

---

32.3 What is the recommended minimum training duration for:

Primary unit:

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For major attachments (if applicable):

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32.4 **State what other training aids are available (videos, CDs).**

For the primary unit:

---

For major attachments (if applicable):

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32.5 Training Materials and applicable manuals or on-line training material information must be provided to the Operator Training Branch of Public Works at the earliest possible opportunity, no later than (4) weeks prior to delivery, when supplying vehicles, equipment and related attachments. Send these materials, preferably in both electronic format and hard copy (training videos are to be supplied on either CD or DVD) to:

**Attn: Equipment Training Coordinator - Pending Equipment Delivery**  
**Public Works Safety and Operator Training Division**  
**Operator Training Branch**  
**2nd Floor, Building "B", 1500 Plessis Road**  
**R2C 5G6**

**E-mail: [pwd-opertrain@winnipeg.ca](mailto:pwd-opertrain@winnipeg.ca)**

32.6 **State acknowledgement of item 32.5-**

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32.7 **State** manufacturer's accreditation or certification for training

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**33.0 PERFORMANCE RELIABILITY-**

33.1 The responsibility for the design of the complete sewer and catch basin cleaner, its performance and reliability shall rest upon the Contractor.

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33.2 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 vehicle 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.

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33.2.1 Where the combination sewer and catch basin cleaning machine develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.

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**34.0 LITERATURE-**

34.1 Bidders shall submit current, descriptive, detailed literature of the sewer & catch basin cleaner with their bid.

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**35.0 WARRANTY-**

35.1 Chassis Warranty- **State** standard warranty coverage-

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35.2 Chassis Warranty- **State** available extended warranty coverage's-

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35.3 Body Warranty- **State** standard warranty coverage-

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35.4 Body Warranty- **State** available extended warranty coverage's-

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**36.0 DELIVERY FOR PURCHASE OPTION**

36.1 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 **twelve (12) 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.

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

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36.3 The delivery time specified above shall include the Contractor’s time to rectify any deficiencies documented in the inspection process (see D7. Inspection). Final delivery will be considered complete when the unit(s) has been delivered free of deficiencies.

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**37.0 DELIVERY FOR LEASE OPTION**

**37.1 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 twelve (12) 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.**

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

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**37.3 The delivery time specified above shall include the Contractor’s time to rectify any deficiencies documented in the inspection process (see D7. Inspection). Final delivery will be considered complete when the unit(s) has been delivered free of deficiencies.**

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