

Township of Edwardsburgh Cardinal

Public Works Department



**Request for Tenders;
Tandem Diesel Truck Cab & Chassis
Plus, related Snow Plow and Sanding Equipment**

Tender No. EC-PW-24-05

**Closing Date: April 2, 2024
Closing Time: 2:00 pm Local Time**

Township of Edwardsburgh/Cardinal
18 Centre Street, P.O. Box 129
Spencerville ON. K0E 1X0
Tel No. (613) 658-3055

Township of Edwardsburgh Cardinal

**Tender for the SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB, CHASSIS, SNOW
PLOW, WING & SANDING EQUIPMENT
Tender No. EC-PW-24-05**

Tender Announcement

Sealed Tenders on forms supplied by the Township will be received in envelopes clearly marked as to contents by the Township office **(18 Centre Street, Spencerville, Ontario)** until **2:00 pm local time on Tuesday April 2nd, 2024** for:

The supply of One (1), 5 tonne Tandem Diesel Truck Cab, Chassis, Snow Plow and Sanding Equipment. The truck cab, chassis, snow plowing and sanding equipment to be supplied shall be as detailed in the Tender Specifications.

Tender Documents may be obtained from the Township Office located at 18 Centre St. in Spencerville from Monday to Friday between the hours of 8:30 a.m. and 4:30 p.m. or from the Township's Website under Bids and Tenders.

The lowest or any tender will not necessarily be accepted.

Important Dates/Schedule

Deadline for Questions: 3:30 pm Friday March 22nd, 2024

Tender Closing: 2:00pm local time on Tuesday April 2nd, 2024

Anticipated Tender Award: Monday April 29th, 2024

Project Completion: 45 weeks from issuance of award letter or as agreed to by both parties.

Irrevocability Period: 60 days.

**Tender for the SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB, CHASSIS, SNOW
PLOW, WING & SANDING EQUIPMENT
Tender No. EC-PW-24-05**

INFORMATION TO BIDDERS

1. Tender Closing

SEALED TENDERS clearly marked as to contents, will be received by the undersigned or his designated representative until **2:00 p.m. on Tuesday, April, 2nd, 2024** at the Township of Edwardsburgh Cardinal's Administration Office. Bids received after closing time will not be considered.

Tenders will be opened, in public, upstairs at the Township Administration Offices at 2:00 p.m., on **Tuesday, April, 2nd, 2024**.

2. Tender Inquiries

All questions pertaining to this contract shall be submitted in writing and addressed to:

Mr. Chris LeBlanc,
EC Public Works Manager
Phone: 613-658-3055 x 203
E-mail: cleblanc@twpec.ca

Questions will be answered in the form of an addendum and posted on the Township's web page under the tender.

Questions will be accepted until 3:30 pm Friday, March 22nd, 2024.

3. Tender Submission

Tenders shall be delivered by hand delivered or courier only in a sealed envelope before the closing time of 2:00 pm on Tuesday April 2nd, 2024. No emailed or Faxed submissions will be accepted.

Fully completed forms of Tender are to be provided on original Form of Tender documents without additions or deletions.

Tenders shall be clearly addressed to:

The Township of Edwardsburgh Cardinal
Township's Administration Offices,
18 Centre Street, Spencerville, ON K0E 1X0

Tender No. EC-PW-23-05 – 5 Tonne Snow Plow Truck and attachments.

All information shall be shown in the spaces provided including the signature of the Bidder with his/her address, telephone number and email.

Tender Forms must be properly signed and witnessed, or signed and sealed if the bidder is a corporation. Any Tender offer sent by email or fax will be disqualified.

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The Tender must be legible, written in ink or typewritten, where stipulated, with the unit price for every item clearly shown.

Tenders which are incomplete, conditional or obscure, or which contain erasures or alterations not properly initialled, or irregularities of any kind, may be rejected.

Submissions must not be restricted by a statement added to the Township form or by a covering letter, or by alterations to the form supplied, unless otherwise provided in the Special Provisions.

The contract documents shall consist of all pages of the Tender documents issued by the Township, the Contractor's submission and all addenda.

Do not remove any pages from the Township form(s).

4. Clarification of Documents

Any clarification of the Townships documents required by the Bidder prior to submission shall be requested in writing through the Township of Edwardsburgh Cardinal.

Any such clarifications so given shall not in any way alter the Townships documents and the Contractor and Township agree that in no case shall verbal arrangements be considered.

No officer, agent or employee of the Township is authorized to alter verbally any portion of these documents.

During the period prior to submissions, alterations will be issued to Bidders as written addenda. In the submission, the Bidder shall enclose all addenda that were considered when the submission was prepared.

5. Right to Accept or Reject Tenders

The Owner reserves the right to reject or cancel any or all tenders or to accept any tender should it be deemed to be in the Township's best interest to do so. No liability shall accrue to the Township for its decision in this regard.

Tenders which are incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations, or irregularities of any kind, may be rejected as informal.

The acceptance of any Submission is subject to the approval of the Council of the Township of Edwardsburgh Cardinal.

The placing in the mail or delivery of a notice of award to the Company address given in the Submission, shall constitute notice of acceptance of the contract.

6. Unacceptable Tenders

Each item in the Tender Form shall be a reasonable price for such item. Under no circumstances will an unbalanced Tender be considered. The Owner will be the sole judges of such matters, and should any Tender appear to be unbalanced, then it may be rejected by the Owner.

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7. Discrepancies

All mathematical calculations shall be reviewed by the Owner for verification of the total tender sum, and corrections, if and where needed, shall be made by the Owner to arrive at the correct total tender sum.

Where any numerical discrepancies have been made in the transferring of an amount from one part of the tender to another, the amount shown before transfer shall be used as the correct amount and the total sum shall be corrected accordingly.

Where the tender item price does not agree with the extension of the tender quantity and the tender unit price, the unit price shall be used, the tender item price and total tender sum adjusted accordingly.

8. Tender Results

The names of the Bidders and total bid prices will be made available at the Public Opening. After the Public Opening, requests may be submitted to the Township for the results, and only the names of the Bidders and total bid prices as read out at the Public Opening will be given in reply. Bid results will be forwarded in written format to all Contractors who submitted a tender.

9. Execute Contracts

Unless otherwise specified in these documents, this tender constitutes an irrevocable offer to provide the goods and/or service described herein for a period of 60 days from the closing date of the receipt of tender. After this time, the Tender may only be accepted with the consent of the successful bidder.

10. Ability and Experience of Bidder

The Owner reserves the right to reject the Tender of any bidder who does not furnish satisfactory evidence of sufficient capital, plant and experience to successfully prosecute and complete the work in the specified time.

11. Definition of Owner and Contract Administrator

Wherever the word "Corporation", "Authority" or "Owner" appears in this Contract, it shall be interpreted as meaning the "Corporation of the Township of Edwardsburgh Cardinal".

Wherever the word "Contract Administrator" appears in this Contract, it shall be deemed to mean the "Director of Operations of the Township of Edwardsburgh Cardinal, or his designate".

12. Bids Irrevocable after Submission Deadline

All bids shall be irrevocable for a period of 60 calendar days from the closing date for this tender.

**Tender for the SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB, CHASSIS, SNOW
PLOW, WING & SANDING EQUIPMENT
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Bidders Information

Name of Firm (The Contractor)

Address

Telephone Number Fax Number

Email

Name and Position of Person Signing for Contractor

**TENDER FOR: SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB,
CHASSIS, SNOW PLOW, WING & SANDING EQUIPMENT**

TENDER CLOSING DATE: 2:00 p.m. on Tuesday, April, 2nd, 2024

ITEMIZED BID SHEET

The undersigned has carefully examined the attached Information to Bidders and specifications and is fully informed as to the Township' requirements:

We hereby offer to supply the specified truck, attachments, modifications and equipment for the following price:

Supply and installation of one (1) tandem axle diesel cab and chassis 60,000 lbs. GVWR,

Unit Price = \$ _____

Supply and installation of one (1) one-way snow plow (9') and harness, Viking model VCL120HSE9 or approved equivalent,

Model: _____

Unit Price = \$ _____

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Supply and installation of one (1) snow leveling wing (12') tower, Viking model VCL 144 WHD or approved equivalent,

Model: _____

Unit Price = \$ _____

Supply and installation of one (1) heavy weight sander dump box, Viking model PL1415HW II or approved equivalent,

Model: _____

Unit Price = \$ _____

Supply and installation of one (1) automated spreader controls with automated closed loop ground-oriented spreader controller,

Model: _____

Unit Price = \$ _____

H.S.T. = \$ _____

TOTAL TENDERED PRICE: = \$ _____

Delivery of all components of tender: # of weeks from award _____ wks

Dated at _____ this ____ day of _____, 2024

Witness or Seal Signature: _____

Position: _____

Company: _____

Address: _____

Telephone: _____

Email: _____

**Tender for the SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB, CHASSIS, SNOW
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SIGNED STATEMENT BY BIDDER

Members of the Council of the Township of Edwardsburgh Cardinal:

The Bidder has carefully examined the Provisions, Specifications and Conditions described herein, as part of the work to be done under this Contract.

The Bidder understands and accepts the said Provisions, Specifications and Conditions and, for the prices set forth in this Tender, hereby offers to furnish all materials, except as otherwise specified in the Contract, and to complete the work in strict accordance with the said Provisions, Specifications and Conditions.

Part or whole of this Contract is contingent upon the approved budget of the Corporation Township of Edwardsburgh Cardinal and the bidder understands that the Owner reserves the right to delete from the contract the item(s) or quantity that are deemed to exceed the township funding.

Dated at _____ this ____ day of _____, 2024

Signature

Position

**Tender for the SUPPLY OF ONE 5 TONNE TANDEM DIESEL TRUCK CAB, CHASSIS, SNOW
PLOW, WING & SANDING EQUIPMENT
Tender No. EC-PW-24-05**

SPECIFICATIONS – GENERAL

1. The Total Tendered Bid Price shall be for the supply of One (1), 5 tonne Tandem Diesel Truck Cab, Chassis, Snow Plow and Sanding Equipment. The truck cab, chassis, snow plowing and sanding equipment to be supplied shall be as detailed in the attached specifications. Modifications or use of equivalents contrary to the stipulated specifications must be approved by the Corporation.

The Total Tendered Price shall include delivery to the Townships' Pittston Garage located at 4145 CR #22 within 45 weeks of receipt of purchase order or as otherwise arranged, and shall include HST, freight, license, service and all preparatory charges.

2. The unit shall have a C.A. of 120" approximately.
3. Arrangements will be made for Township staff to inspect the vehicle prior to acceptance. The Unit supplied shall be complete and operational at the time of delivery.

The successful tender shall supply any equipment not specifically mentioned herein necessary for the successful operation of the equipment.

4. The successful tenderer shall **not** deliver the said vehicle to an alternate vendor for installation of plow equipment without prior approval from the Contract Administrator.
5. Prices bid shall remain firm and open to acceptance for 60 days after the closing date unless otherwise stated.
6. The successful tenderer shall supply fully executed manufacturer's warranties on the vehicle and equipment as well as one copy of a shop manual for service and parts c.o.
7. Warranty one-year parts and labour on all components minimum.
8. The truck shall be new 2024 or 2025 model.
9. Payment in full will be made within thirty (30) days of receipt and acceptance of the fully equipped vehicle specified herein.

10. Lowest or any tender not necessarily accepted. In particular, consideration will be given to local availability of spare parts, warranty service and normal service in addition to the price. The Corporation reserves the right to choose the tender which in its sole opinion provides the best value. All contracts are conditional on approval of the 2024 Public Works Budget.

11. Tender Information;

Chris Leblanc
EC Public Works Manager
(613) 658-3055 x 203
cleblanc@twpec.ca

**SPECIFICATION AND CONFIRMATION
DIESEL TRUCK – CHASSIS AND CAB SPECIFICATIONS**

1. GENERAL

This specification covers a diesel truck cab and chassis to be used for heavy duty snow plowing, sanding and removal. Vehicle must be supplied with suitable components to comply with the following specifications in all aspects.

The vehicle shall meet or surpass the mandatory requirements of the Canada Motor Vehicle Safety Act and its regulations, which are in effect on date of manufacturing. The vehicle must also bear the National Safety Mark.

SPECIFICATION

CONFIRMATION

Current Model Year.

YES: ____ NO: ____

MAKE:

MODEL:

ENGINE MODEL:

2. VEHICLE WEIGHT RATINGS

SPECIFY:

G.V.W. (Gross Vehicle Weight Rating)
30,844kg (68,000 lbs.) minimum.

YES: ____ NO: ____

GAWR (Gross Axle Weight Rating) front
10,000kg (22,000 lbs) minimum.

YES: ____ NO: ____

GAWR (Gross Axle Weight Rating) rear
18,144kg (40,000 lbs).

YES: ____ NO: ____

The allowable G.V.W. as supplied will be shown
on a metal tag.

YES: ____ NO: ____

3. ENGINE

Engine gross H.P. – 325 H.P. minimum, diesel,
within governed RPM (SAR J 1349).

YES: ____ NO: ____

Approved Engines: Paccar PX-9, Cummins L-9
and Detroit DD8.

YES: ____ NO: ____

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Minimum net Torque will be 1050 lbs minimum. **YES: ____ NO: ____**

Engine will be set at 105 (Ministry Speed). **YES: ____ NO: ____**

**Note: Required engine ratings must be set at time of engine manufacture.
Engines with locally altered ratings are not acceptable.**

4. ENGINE EQUIPMENT

Splashguards will be supplied to protect engine compartment from road spray. **YES: ____ NO: ____**

Engine hood will be forward tilting with adequate side access panels for easy engine access. **YES: ____ NO: ____**

Heavy duty, two stage dry type air cleaner with dash mounted restriction indicator cooled preferred will be supplied. **YES: ____ NO: ____**

A heavy duty, fuel, oil/water separator with heater and sight glass, mounted outside the left frame rail, behind the cab, will be supplied. Fuel Pro 382 Danco with electric heater. **YES: ____ NO: ____**
SPECIFY:

Corrosion resistor (spin on water filter) for engine coolant shall be supplied. **YES: ____ NO: ____**

Fuel filter to be supplied. **YES: ____ NO: ____**

Alternator shall be 160-amp capacity, minimum with built-in diode rectifiers, and shielded slip rings and brushes or be brushless. **SPECIFY MAKE:**
MODEL:

The alternator capacity at idle will be at least 25 amp. **NORMAL CAPACITY:**

Maintenance free batteries will be provided. **IDLE CAPACITY:**
SPECIFY CCA:

The SAE rating will be combined 12 Volt, 3 batteries minimum. **YES: ____ NO: ____**

Fully sealed and enclosed battery disconnect on the negative leads, within 1,200mm (48-inch) of the battery box. **YES: ____ NO: ____**

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Heavy duty batteries and battery box will be frame mounted on the right side of unit outside of cab and easily accessible for service and not interfere with dump box or sander installation. **YES: ____ NO: ____**

Radiator will be provided with a gravel guard to cover front radiator opening. **YES: ____ NO: ____**

Block heater to be supplied. **YES: ____ NO: ____**

Governor – engine governor, built-in type. **YES: ____ NO: ____**

Engine fuel heater will I be supplied. **YES: ____ NO: ____**

A crank shaft will be located low enough to allow the front-mounted pump to operate with sufficient clearance below the radiator. **YES: ____ NO: ____**

High temperature and low oil pressure engine protection alarm bell or buzzer device will be installed. Automatic engine shut down is not acceptable. **YES: ____ NO: ____**

The muffler will be horizontal and located beneath the cab. It will have 500mm (15-inch) ground clearance and the exhaust pipe shall be vertical. The whole installation shall not interfere with the mounting of a snow plow wing or underbody scraper. **YES: ____ NO: ____**

5. TRANSMISSION

The transmission will I be an Allison 3500 RDS Automatic transmission, or equivalent automated Transmission, with a 4th Generation Electronic Lever shifter. All transmission computer components will be located in the cab. **YES: ____ NO: ____**

SPECIFY:

Pull Tee handle shifter (if not available, bidder to State shifter location and type i.e., push button) **SHIFTER TYPE:**

SHIFTER LOCATION:

The transmission will be supplied with 100% Synthetic lubrication oil. **YES: ____ NO: ____**

Backup alarm will be supplied. **YES: ____ NO: ____**

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6. FRAME

Single Frame. (Dual frame rails will not be accepted). **YES: ____ NO: ____**

Resisting bending moment (section modulus x yield strength) will be 3,000,000 lbs./in. minimum. **SPECIFY:
FRAME SIZE:**

Frame yield strength will be 120,000 psi minimum. **YES: ____ NO: ____**

Section modulus will be 25 cubic inches minimum. **REINFORCING
SIZE:**

Specify frame dimensions (depth x width x thickness). **SPECIFY:**

The After Frame (AF) dimension will be a minimum of 1,905 mm (75 inch). **SPECIFY:**

A clear and useable CA of 120" maximum is required. **SPECIFY:**

Specify dimensions of reinforcement if equipped. **SPECIFY:**

Mounting of snow plow cheek plates will be possible. **YES: ____ NO: ____**

Provision shall be supplied to prevent diamond shaping of the frame. The frame shall be bridged or a cross-member will be supplied within 10" of the cab in order to transfer snowplow wing push to each frame rail. This cross-member will be gusseted fore and aft. **SPECIFY:**

Mounting of pintle hook will be 24 inches from the Ground (Holland PH410RA or approved equivalent) including 25mm (1 inch) thick pintle plate and hardware. **YES: ____ NO: ____**

Frame will be supplied as per outlined requirements. **YES: ____ NO: ____**

Battery box mounted to frame on right hand side 60 inches from the cab. **YES: ____ NO: ____**

Frame and under carriage components will be epoxy primed prior to application of finish paint. **YES: ____ NO: ____**

Frame will be black polyurethane painted with polymer primer and paint. **YES: ____ NO: ____**

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7. AXLES

Front axles will be 10,000 kg (22,00 lbs) minimum capacity.

SPECIFY:

Type of front axle – set back.

SPECIFY:

Rear tandem axles will be 18,144 kg (40,00lbs) Minimum capacity, dual drive with interaxle differential and driver controlled interaxle differential lockout.

SPECIFY:

Rear axle ratio: 4.89 or equivalent.

SPECIFY:

Bidder to state type of axles supplied:

**SPECIFY:
SPECIFY:**

Stemco/CR front wheel seals will be supplied or Equivalent.

YES: ___ NO: ___

SPECIFY:

Road speed at rated rpm in top gear, will be 100 km/hr, Approximately.

SPECIFY:

A three (3) wheel lock-up system operated from the cab will be supplied.

YES: ___ NO: ___

Full limited slip-type silent air lock-up differential will be supplied with the control to engage and disengage axle mounted on dash.

YES: ___ NO: ___

8. CAB

Conventional cab shall be supplied.

YES: ___ NO: ___

Supplementary cab insulation to suppress engine noise will be supplied.

YES: ___ NO: ___

The instrument cluster will be upgraded to a “wrap” around design to put controls closer to the operator, and allows for an ergonomic design.

YES: ___ NO: ___

Seats – separate driver’s and passenger’s seats will be supplied. Driver’s seats to be a Bostrom “T” series premium style seat, with high back design, four position cushion tilt, dual air lumbar support. Double arm rest, and 9-inch slide adjustment and shall be cloth.

YES: ___ NO: ___

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Passenger seat will be fixed (bench seat) or equivalent. YES: ___ NO: ___

Both seats will be fully padded and of heavy-duty construction. YES: ___ NO: ___

Arm rests shall be supplied. YES: ___ NO: ___

Heated Windshield will be supplied. YES: ___ NO: ___

Air Conditioning will be supplied. YES: ___ NO: ___

Tilt Steering will be supplied. YES: ___ NO: ___

Power operated windows on right & left sides with a switch accessible by the driver and passenger will be supplied. YES: ___ NO: ___

Rubber floor mat will be supplied. YES: ___ NO: ___

Dual seat belts, will be supplied. YES: ___ NO: ___

Outside sun visor package will be supplied, painted same colour as truck. YES: ___ NO: ___

Dual inside sun visors will be supplied. YES: ___ NO: ___

Safety glass throughout with tinted windshield and side windows will be supplied. YES: ___ NO: ___

Mirrors – two outside 177mm x 406mm (7-inch x 16 inch) West Coast type mirrors, complete with built in heaters and clearance lights, will be supplied. YES: ___ NO: ___
Mirrors electrically adjusted from the driver's position. YES: ___ NO: ___

Conventional fender mounted mirror assembly Grote number 121172, with 11-inch right side mirror or equivalent. YES: ___ NO: ___

High output fresh air deluxe heater and defroster will be supplied. YES: ___ NO: ___

In cab, dash displayed, outside temperature gauge, will be supplied. YES: ___ NO: ___

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Air gauges – mounted on dash, will be supplied. **YES: ___ NO: ___**

Tachometer – mechanical type will be supplied. **YES: ___ NO: ___**

PTO Hour meter – with anti-vibration mount Hobbs-type (M3888 dampener) or approved equivalent will be supplied. **YES: ___ NO: ___**

Single air horn with snow shields/caps will be supplied. **YES: ___ NO: ___**

Heavy-duty custom-built AM/FM radio to be supplied. c/w hands free Bluetooth, USB connection for cell phones **YES: ___ NO: ___**

Windshield wipers – dual two-speed electric, complete with intermittent cycle with heavy duty motor and arms. Blades will be artic wiper blades. Two jet type windshield wipers to be supplied. **YES: ___ NO: ___**

Externally mounted grab bars on each side, to assist entry and exit to the cab will be supplied. **YES: ___ NO: ___**

Lower & intermediate foot steps both sides will be supplied. Three-point entry and egress. **YES: ___ NO: ___**

A terminal panel will be incorporated into the wiring system to access the following wiring circuits, to add additional lighting for the body installation:
Left and right turn lights
Parking lights
Back-up lights
Independent brake light **YES: ___ NO: ___**

The terminal panel will be located inside the cab, preferably on the rear cab panel. **YES: ___ NO: ___**

Provide wiring for two-way radio in ceiling, direct to fuse panel. **YES: ___ NO: ___**

Electronic throttle control will be supplied. **YES: ___ NO: ___**

Engine hood will be fibreglass forward-tilting and accessible without removing the plow harness. **YES: ___ NO: ___**

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9. LIGHTS

Two, 2-way combination fender-mounted, 100 mm (4-inch) amber directional lights, facing front will be supplied. YES: ____ NO: ____

Halogen head lights will be supplied. YES: ____ NO: ____

Three-way combination rear directional lights will be supplied. YES: ____ NO: ____

Combination stop and tail light will be supplied. YES: ____ NO: ____

Pedestal mounted deluxe blue flasher with separate switch and fuse (to be seen 360°). This light will be supplied c/w extra amber lens, Model LED type or similar. YES: ____ NO: ____

Heavy duty 4-way flasher will be supplied. YES: ____ NO: ____

A separate backup light will be supplied with guard-mounted in a safe, convenient place with separate switch and fuse. YES: ____ NO: ____

Parking lights will be supplied. YES: ____ NO: ____

Five (5) cab identification clearance lights will be supplied. YES: ____ NO: ____

All clearance lights, signal lights and stop lights will be LED type. MTO approved. YES: ____ NO: ____

10. BRAKES

Service Brakes - Full air brakes. "S" cam drum type will be supplied. YES: ____ NO: ____

Brake indicators will be installed on all wheels. YES: ____ NO: ____

Positive, rear wheel spring-loaded parking brake, Gunite air reservoir and instrument panel control switch will be supplied on each rear wheel. YES: ____ NO: ____

Means will be provided to release the brakes with no air pressure in the main reservoir. YES: ____ NO: ____

Low pressure indicator will be supplied. YES: ____ NO: ____

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Front wheel limiting valve will be supplied. YES: ____ NO: ____

Automatic drain valves will be supplied to drain moisture from the air tank. Tank will have manual drain included. YES: ____ NO: ____

SPECIFY MODEL:

Air tanks will have quick couplers to attach a auxiliary air hose. To be supplied c/w pull cords. YES: ____ NO: ____

Front brakes size - 406 mm x 152 mm (16-inch x 6-inch) minimum or 419mm x 127mm (16.5-inch x 5-inch) drum type minimum, will be supplied. YES: ____ NO: ____

Rear brakes size – 419 mm x 177 mm (16.5-inch x 7-inch) minimum, will be supplied. YES: ____ NO: ____

Front and rear dust shields front and rear will be supplied. YES: ____ NO: ____

Protection boot for air chamber push rod will be supplied. YES: ____ NO: ____

Air compressor – 6.23 l/s (13.2 cfm) minimum capacity complete with all necessary tanks, gauges and safety valves (Cummins or BW-750 or approved equivalent) will be supplied. YES: ____ NO: ____

SPECIFY:

Air dryer with heater (Bendix AD-9) or equivalent will be supplied. YES: ____ NO: ____

SPECIFY:

Automatic slack adjusters will be supplied for front and rear axles. YES: ____ NO: ____

11. WHEELS AND TIRES

Wheels will be all disk type. YES: ____ NO: ____

Dual rear wheels will be supplied. YES: ____ NO: ____

Hub pilot bud wheels and wheel nut torque indicators, will be supplied. YES: ____ NO: ____

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Special spacers, clips and studs will be supplied, if necessary. YES: ____ NO: ____

The rims must have a load capacity and pressure rating equal to or exceeding the ratings of the tires. YES: ____ NO: ____

Spare rim will be supplied with spare tire (tubeless) equivalent to the rear tires. YES: ____ NO: ____

Two (2) front, first-line steel belted radial, tubeless tires – 425/65R-22.5 load range “L” shall be supplied. YES: ____ NO: ____

Eight (8) rear, first line, steel belted radial tubeless tires 11R-22.5 load range “H”, shall be supplied. YES: ____ NO: ____

Tread design: Front – 425/65R 22.5
Acceptable tires – Michelin XZY3 YES: ____ NO: ____

Rear – traction tread 11R 22.5
Acceptable tires – Michelin XDS2 YES: ____ NO: ____

Two (2) Alcoa LVL One 82462X 22.5X12.25
10-Hub Pilot 4.68 inset 10-Hand Aluminum Disc
Front Wheels. YES: ____ NO: ____

Eight (8) Alcoa LVL One 82462X 22.5X 8.25
10-Hub Pilot Aluminum Disc Rear Wheels. YES: ____ NO: ____

12. ATTACHMENTS

Back up sound alarm that meets SAE standards will be supplied. YES: ____ NO: ____

Radiator – heavy duty type will be supplied. YES: ____ NO: ____

Magnetic drain plugs on all oil and grease compartments will be supplied. YES: ____ NO: ____

Front bumper will be supplied. YES: ____ NO: ____

Anti-freeze will be supplied to -30°F. YES: ____ NO: ____

Grab bars will be supplied on each side of cab to assist entry to the cab. YES: ____ NO: ____

A roadside emergency kit with a fire extinguisher will be supplied. YES: ____ NO: ____

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A first aid kit will be supplied YES: ____ NO: ____

Shock absorbers will be heavy duty double acting on front only will be supplied. YES: ____ NO: ____

Pintle hook – Holland model PH410RA rigid type complete with air cushion and in-cab switch, rated at 100,000 MGTW be attached to rear end of truck frame. Cross-member will be modified and braced to accommodate Strength of Pintle Hook PH410RA. YES: ____ NO: ____

Seven prong trailer outlets will be supplied and wired in and be done in a corrosion-proof manner at rear of truck. YES: ____ NO: ____

Cab and chassis will be undercoated by Krown Rust Control. YES: ____ NO: ____

Front and Rear wheel mud flaps will be supplied and mounted. YES: ____ NO: ____

13. FUEL TANK

Single, 180 Litre aluminum full-step tank to be supplied on left-hand side (driver's side) of truck - minimum. YES: ____ NO: ____

Fuel Tank will not extend beyond the cab more than 15cm (6-inch) or interfere with the installation of Salting/sanding equipment. YES: ____ NO: ____

Fuel gauges will be supplied. YES: ____ NO: ____

14. STEERING

Power steering will be supplied. YES: ____ NO: ____

Steering will be no more than 5 complete turns from lock to lock. YES: ____ NO: ____

15. PAINT

Vehicle will be painted Highway Yellow or a approved equivalent. Frame, under carriage, and steps are to be painted black with polyurethane primer and paint. YES: ____ NO: ____

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Inside paint shall be non-glare type.

YES: _____ NO: _____

16. WARRANTY

The truck shall be covered by the standard manufacturers warranty with a signed copy and a description of which will be included with the tender documents

YES: _____ NO: _____

The supplier will provide warranty service, including service calls and towing for the warranty period.

YES: _____ NO: _____

SPECIFY:

17. BOOKS

Operator's line ticket will be supplied.

YES: _____ NO: _____

Maintenance and Electrical Service Manuals will be supplied in hardcopy and electronic format.

YES: _____ NO: _____

**18. PREVENTION MAINTENANCE COMPULSORY VEHICLE
INSPECTION (PMCVI) STICKER**

The vehicle will be supplied with a valid PMCVI sticker.

YES: _____ NO: _____

SPECIFICATION CONFIRMATION

ALL SEASON COMBINATION DUMPBODY/SPREADER – TANDEM AXLE TRUCK

1. GENERAL

These specifications describe an all-season combination dump body and sand/salt spreader. The dump box will remain stationary on the chassis frame while spreading. Rear discharge shall be front hoist tilt action as per conventional dump bodies. The unit will be oval shaped to permit gravity flow unloading. The main conveyor will be centered and recessed along the length of the box. The cross conveyor will be chassis frame mounted with spreader discharge on the front, left, side (drivers) of dump box.

YES: _____ NO: _____

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Viking model PL1213HW II or approved equivalent. **SPECIFY:**

MAKE: _____

MODEL: _____

2. DIMENSIONS

To provide optimum combination of legal payload and capacity all dimensions below are maximum/minimum and will be exactly as specified.

YES: _____ NO: _____

Body will be oval shaped, permitting materials to unload by gravity flow into spreading position.

YES: _____ NO: _____

Total weight of the complete body assembly in ready to work condition including hoist, tarp, tailgate, cross conveyor, main conveyor, and all other required components not to exceed 5,600 lbs.

YES: _____ NO: _____

SPECIFY LBS: _____

Water level capacity - 10.5 cubic yards minimum.

SPECIFY: _____

Water level capacity with 10" sideboards will be:

13.1 cubic yards minimum

YES: _____ NO: _____

Outside length – 13 ft. maximum

SPECIFY: _____

Inside Length – 12 ft. maximum

SPECIFY: _____

Overall width - 102"

SPECIFY: _____

All body welds will be 100% continuous inside and outside.

YES: _____ NO: _____

Dump box access ladder will be 15" wide located on driver's side & at front of box.

YES: _____ NO: _____

3. HOIST

Hoist will be front mounted; three (3) stage telescopic.

YES: _____ NO: _____

Hoist to be top lift.

YES: _____ NO: _____

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Hoist class will be 80/30 ton. **YES: _____ NO: _____**

Cylinder stroke will be 330 CM (130") minimum. **YES: _____ NO: _____**

Dump box tipping angel will be 50 degrees. **YES: _____ NO: _____**

The front head of the body will be completely clean and clear of any type of recess or protrusions into the body including hoist dog houses, bulkheads, etc. **YES: _____ NO: _____**

Hinge dia. shall be 2.5". **YES: _____ NO: _____**

Hoist control valve will be air operated. **YES: _____ NO: _____**

4. TAILGATE

Tailgate will be double acting. **YES: _____ NO: _____**

Tailgate height will be 55" from conveyor floor. **YES: _____ NO: _____**

Tailgate will be rectangle shaped to allow use of asphalt or stone chip spreaders. **YES: _____ NO: _____**

Latch mechanism for the tailgate will be air trip using two air pot boosters – air pot boosters to be protected by bolt-on steel covers. **YES: _____ NO: _____**

Spreader chains and brackets will be supplied on tailgate and rear apron. Chains shall be grade 70-coil proof 5/16" minimum. **YES: _____ NO: _____**

Coal gate 34" x 17" will be supplied. **YES: _____ NO: _____**

5. MAIN CONVEYOR

The main conveyor will be recessed along the length of dump box floor. **YES: _____ NO: _____**

The conveyor chain will be a minimum of 30,000 lbs. Tensile Strength self-cleaning pintle chain. **YES: _____ NO: _____**

Main conveyor drive will be a single 25:1 high efficiency Planetary gearbox with high torque low speed motor. **YES: _____ NO: _____**

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This drive will deliver 50000 IN/LB torque intermittent with 34000 IN/LB constant. **YES: _____ NO: _____**

Planetary gearbox close coupled to main conveyor shaft. **YES: _____ NO: _____**

The flow control gate between main and cross conveyor will be screw adjustable by hand crank from driver's side of dump body. **YES: _____ NO: _____**

The main conveyor flow control gate, will be flush and even with the front of the body, without any type of recess. **YES: _____ NO: _____**

The cross conveyor will be hydraulic direct drive. **YES: _____ NO: _____**

The main conveyor will be a minimum of 32" in width measured from the outside to the outside of the conveyor chain links. **YES: _____ NO: _____**

The unit must be capable of spreading and discharging "A" gravel via the main conveyor, cross conveyor and spinner chute, without clogging, jamming or other such problems and the manufacturer will warranty the unit as suitable for this operation and application. **YES: _____ NO: _____**

The main conveyor chain links will be permanently covered and protected in all operating modes by 3/8" and poly respectively. **YES: _____ NO: _____**

The main conveyor cover will be Hardox 450 hi-tensile Steel Type. **YES: _____ NO: _____**

The main conveyor cover will self-feed into place allowing fast and simple installation. **YES: _____ NO: _____**

The conveyor floor will be 1/4" Hardox 450 hi-tensile steel plate. **YES: _____ NO: _____**

6. BI-DIRECTIONAL RUBBER BELT CROSS-CONVEYOR

The cross conveyor shall be hydraulic direct drive via a single reversible 11.9 cu. in. hydraulic motor controlled by a 12V solenoid valve with in cab toggle switch. **YES: _____ NO: _____**

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The cross-conveyor assembly will be used to discharge material from main conveyor to the either the left or right side of chassis. **YES: ____ NO: ____**

An external electric solenoid complete with in-cab switch to be provided to control the direction of the rubber belt cross conveyor. **YES: ____ NO: ____**

Cross-conveyor assembly to mount on chassis frame independent from and in front of main combination spreader unit. **YES: ____ NO: ____**

Cross-conveyor unit will be removable design to reduce added weight in non-spreading applications. **YES: ____ NO: ____**

Cross-conveyor weldment will be fabricated from a minimum 3/16" thick Cor-Ten A corrosion resistant material. **YES: ____ NO: ____**

Cross-conveyor belt will be fabricated from 3/8" thick, 2 ply, 12" wide by 121" long molded, seamless conveyor belting. **YES: ____ NO: ____**

Belt will be positive drive to eliminate slippage. **YES: ____ NO: ____**

The cross-conveyor belt will be high temperature asphalt rated. **YES: ____ NO: ____**

Cross-conveyor assembly will include replaceable steel guards to prevent material from entering under belt or spilling off conveyor. **YES: ____ NO: ____**

Cross conveyor assembly will include 4 poly runners to maintain an even belt surface, preventing material from getting under belt. **YES: ____ NO: ____**

Cross-conveyor assembly will have snub rollers constructed with high temperature, low stick, 2.5" diameter by 2.0" poly rollers, to reduce material build up under conveyor. **YES: ____ NO: ____**

Cross-conveyor assembly will come with external, quick coupler washout connection. **YES: ____ NO: ____**

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Cross-conveyor assembly will include 5 external, greaseable flange bearings and 2 externals, greaseable take up bearings. YES: ____ NO: ____

Cross-conveyor assembly will include 8 external grease fittings for application of grease to all bearings. YES: ____ NO: ____

Cross-conveyor assembly will provide provisions for mounting of material sand/salt chutes and spinner units. YES: ____ NO: ____

7. SINGLE SPINNER

A polyurethane spinner will be installed on left hand side (driver side) to spread ahead of rear wheels. YES: ____ NO: ____

Spinner disc will be hydraulic direct drive. YES: ____ NO: ____

Spinner height will be adjusted to accommodate various chassis heights and capable of discharge rate from 100 lbs./lane mile to 2500 lbs./lane mile. YES: ____ NO: ____

8. SANDER CONTROLS

Trackmatics – Smart Spread RX system or equivalent will be installed with valves, external-mounted. YES: ____ NO: ____

9. FENDERS

Integral steel fenders will be supplied. YES: ____ NO: ____

10. PAINT

The dump body will be shot blasted and epoxy primed prior To application of finish paint. YES: ____ NO: ____

Finish paint will be Dupont Imron 5000 Elite polyurethane with Baked-on finish and coloured to match cab. YES: ____ NO: ____

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11. LOAD COVER

An air tarp will be standard equipment with fabricated aluminum tarp arms dimensions of 1 ½" X 2 ½" tubing, 1/8" mesh tarp and 14" stroke air cylinder mounted under right hand side of body. Body mounting brackets for tarp arms will be manufactured from Stainless steel.

YES: ____ NO: ____

12. LIGHTS AND WIRING

Grote Ultra Blue Seal LED rear stop, tail, directional and back-up lights and wiring will be completely sealed with corrosion and vapor proof lamps and junction box.

YES: ____ NO: ____

For improved rear visibility rear lamps, stops, tails and directional to be rectangular mounted in rear corner posts within 3" of the outside of the tailgate.

YES: ____ NO: ____

All lights and wiring will be supplied, including 4.5" heated spinner light.

YES: ____ NO: ____

Raised rear LED reds, readily demountable, will be supplied, and mounted on lightweight aluminum pedestal stands.

YES: ____ NO: ____

13. HYDRAULICS

The body operation will be powered by the existing hydraulics of the Snow plow truck harness.

YES: ____ NO: ____

All fittings, valves, hoses and drive shaft will be supplied and installed. All hoses shall be equipped with swivels on both ends.

YES: ____ NO: ____

The hydraulic reservoir will be of sufficient capacity to supply necessary oil supply. Reservoir must **NOT** interfere with the box installation.

YES: ____ NO: ____

A sight gauge to allow easy checking of the hydraulic oil level in the reservoir will be supplied.

YES: ____ NO: ____

Holland PH410RA Pintle Hook with air cushion and Plate will be supplied, complete with 7-Pin trailer plug wired to cab.

YES: ____ NO: ____

A coal/asphalt gate shall be located at the bottom centre of tailgate with dimensions 34" wide x 17" high with lever type

YES: ____ NO: ____

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opening device.

All hydraulic hoses to be completely protected with urethane hose wrap.

YES: ___ NO: ___

14. OPTIONAL

The raised detachable light bar will include stop, tails and directional, blue flasher, plug-in and sealed junction box.

YES: ___ NO: ___

Extra Price \$_____

SPECIFICATION CONFIRMATION

PUMP – TYRONE TANDEM – DRY MODE

1. The hydraulic pump supplied will be a Tyrone Model VDVT 1150180AFJ Tandem Dry Mode with air shaft. or equivalent. YES: ___ NO: ___

2. The first stage will produce 24.5 GPM at 1,500 RPM and 2,000 PSI. YES: ___ NO: ___

3. The second stage will produce 29.2 GPM at 1,500 RPM and 2,000 PSI. YES: ___ NO: ___

4. Pump mounting plate and splined drive shaft will be supplied. YES: ___ NO: ___

5. The pump will be driven from the crankshaft. YES: ___ NO: ___

6. The pump will have a manufacturer's RPM rating equivalent or higher than that of the truck engine at governed speed. YES: ___ NO: ___

7. Hydraulic hoses to connect pump will be supplied. Their size shall be adequate for quick operation of all Hydraulic operations and shall be 2-ply, braided steel SAE100RS, with swivels on both ends. YES: ___ NO: ___

8. The drive shaft will be supplied with spline long enough to allow telescopic retraction of the shaft in

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- order to change fan belt without removing the pump. YES:___ NO:___
9. The hydraulic system will be set up so all other hydraulic functions do not “rob” the sander equipment. YES:___ NO:___
10. A parts manual will be supplied with each unit. YES:___ NO:___

SPECIFICATION CONFIRMATION

SNOW PLOW EQUIPMENT

**11’ STEEL FULL TRIP
REVERSIBLE SNOW PLOW**

1. Viking Model VCL 36-11-45C steel full trip reversible snow plow or equivalent in compliance with the following specification and approved by the municipality. YES:___ NO:___
- MAKE:**
MODEL:
2. The overall length shall be 11’.
Minimum weight of 2250lbs. YES:___ NO:___
3. The moldboard height will be 40” maximum. YES:___ NO:___
- SPECIFY HEIGHT/TYPE:** _____
4. The path cleared in the bulldozing position will be 11’.
at a 35-degree angle, the path cleared shall be 9’. YES:___ NO:___
5. A hydraulically adjustable moldboard tilt brace system will be provided. YES:___ NO:___
- SPECIFY:** _____
6. Hydraulic moldboard tilt braces will connect the back of the moldboard to the plow drive-frame. YES:___ NO:___
7. The plow will be equipped with a hydraulically adjustable cutting edge adjustment brace assembly, complete with

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in-cab control. The operator shall be able to hydraulically adjust the plow cutting edge attack angle from 45 to 60 degrees through a proportional air joystick control installed inside the cab. Standard manual cutting edge adjustment braces will not be acceptable.

YES:_____ NO:_____

8. Set at a 50-deg. attack angle, the overhang from the cutting edge to the front of the moldboard will be 20" minimum – no exceptions.

YES:_____ NO:_____

SPECIFY: _____

9. Set at a 60-deg. attack angle, the overhang from the cutting edge to the front of the moldboard will be 25" minimum – no exceptions.

YES:_____ NO:_____

SPECIFY: _____

10. Set at a 50-deg. attack angle, the height from the ground to the front of the moldboard will be 28" maximum – no exceptions.

YES:_____ NO:_____

SPECIFY: _____

11. Set at a **60-deg.** attack angle, the height from the ground to the front of the moldboard will be 24" maximum – no exceptions.

YES:_____ NO:_____

SPECIFY: _____

12. The moldboard will be fabricated from 10 ga. steel.

YES:_____ NO:_____

13. There will be a minimum of 10 x 3/8" thick reinforcing ribs 100% welded to the moldboard.

YES:_____ NO:_____

SPECIFY: # OF RIBS AND THICKNES _____

15. The safety trip mechanism will consist of two compressions coil springs incorporated into the drive frame. Upon encountering a road obstruction, the moldboard will raise vertically through the 2 compression springs. Note that reversible plows whereby the moldboard tilts forward through extension springs, will not be accepted by the Township.

YES:_____ NO:_____

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SPECIFY: _____

16. The two compression trip springs will be 5/8" wire, 5 1/4" O.D., 14" free length with a total of 8 active coils. YES: _____ NO: _____

SPECIFY: _____

17. Height adjustable "**Mushroom style**" skid shoes will be fitted on the drive frame. YES: _____ NO: _____

18. Shoes shall carry the weight of the plow when the moldboard trips. YES: _____ NO: _____

19. The bottom of the moldboard **will** be reinforced with a 1/2" x 6" x 4" backer angle. YES: _____ NO: _____

SPECIFY: _____

20. A second angle 3/8" x 3" x 2" **will** be welded above for added strength and rigidity. YES: _____ NO: _____

SPECIFY: _____

21. The drive frame will be of A frame and sector design. YES: _____ NO: _____

22. The A frame will be constructed of 3 1/2" x 3 1/2" x 1/4" square tubing with two 3/4" thick pivot plates. YES: _____ NO: _____

SPECIFY: _____

23. Sector frame constructed of 4" x 4" x 3/8" square tube. YES: _____ NO: _____

SPECIFY: _____

24. The sector angle **will** provide a 30° radius and be constructed of 1/2" x 3 1/2" x 2 1/2" steel. YES: _____ NO: _____

SPECIFY: _____

25. To prevent wear, the sector will glide between two low friction replaceable polymer bearings bolted on the A frame. YES: _____ NO: _____

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26. There **will** be two 3" diameter x 14" stroke double acting hydraulic cylinders to reverse the plow to a maximum of 35 right or left.
Cylinder rods must be hard chrome plated. **YES:_____ NO:_____**
- SPECIFY DIAMETER: _____**
- SPECIFY STROKE: _____**
27. Moldboard will be fitted with 2 moldboard shoes and scuff shoes will be supplied on each end. **YES:_____ NO:_____**
28. A standard steel cutting edge will be supplied and bolted to the moldboard backer angle. **YES:_____ NO:_____**
29. Three 3/8" lift chains shall be provided to lift the plow to the carrying position. **YES:_____ NO:_____**
30. These chains must be as wide spread as possible in order to make the plow stable, and the plow must remain level when carried. **YES:_____ NO:_____**
31. It will be possible to perform the power angle function with the plow in both the lowered working position and the raised carrying position. **YES:_____ NO:_____**
32. Four hinge points will be provided to connect the moldboard to the push frame, spanning a minimum distance of 80". **YES:_____ NO:_____**
33. To prevent damage to the reversing cylinders a cross-over relief valve will be supplied. **YES:_____ NO:_____**
34. Drive frame will be completed with height adjustable parking stand. **YES:_____ NO:_____**
35. All steel will be epoxy primed prior to application of finish paint. **YES:_____ NO:_____**
36. All paint finishes will be top quality, rust resistant black. **YES:_____ NO:_____**
37. Quick tack oscillating beam will be supplied. **YES:_____ NO:_____**
38. Standard steel cutting edge will be provided. **YES:_____ NO:_____**

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39. Fluorescent markers will be fitted on each end of the plow moldboard. YES: ____ NO: ____
40. 3/8" x 12' rubber deflector will be provided. YES: ____ NO: ____
41. Plow shall be equipped with a safety cable connecting the plow to the front harness – cable will be provided with urethane cover wrap. YES: ____ NO: ____
42. A spare parts manual will be supplied. YES: ____ NO: ____
43. A signed manufacturers warranty will be supplied. YES: ____ NO: ____

SPECIFICATION CONFIRMATION

HYDRAULIC POWER TILT

SNOW PLOW TRUCK HARNESS

Viking VCL 500 T or equivalent approved by the Municipality **SPECIFY:**

MAKE: _____

MODEL: _____

1. The design and construction of the truck harness will be in compliance with MTO Standard ES-401, or be of equivalent design approved by MTO. YES: ____ NO: ____
2. The harness will be mounted at the front end of the frame and shall be bolted to the cheek plate. YES: ____ NO: ____
3. The lifting frame will be bolted to the push plate and shall be braced to conform with MTO Standards. YES: ____ NO: ____
4. Lifting ram dia. – 4" DA minimum. YES: ____ NO: ____
5. Lifting ram stroke – 10" minimum. YES: ____ NO: ____
6. The cylinder rod will be fully chrome-plated. YES: ____ NO: ____
7. Lift of grab link for nose chain will be 18" minimum. YES: ____ NO: ____

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8. Drive ears will be 30 ½” centre to centre. YES: _____ NO: _____
9. Height to lower drive connection will be 19” when mounted, truck empty. YES: _____ NO: _____
10. Quick Tach pockets and pins will be supplied. YES: _____ NO: _____
11. Cheek plates to match truck frame will be supplied and shall be compatible for plow. YES: _____ NO: _____
12. Three grab links will be supplied. YES: _____ NO: _____
13. Two Grote heated LED headlamps and directionals, With high and low beam will be supplied. YES: _____ NO: _____
14. Spacing and height of headlamps will be in compliance with ES-401. YES: _____ NO: _____
15. Right front helper spring will be provided, 16,000 lb. capacity Aeon rubber (2 spools) shall be used and shall be easily removable. YES: _____ NO: _____
16. Two new turn signals will be installed in the location shown in ES-401 and the wires from the truck turn signal will be connected to these lights. These wires will be well protected in looms. YES: _____ NO: _____
17. The plow lights and signals will be equipped with “Quick-Tack” ends. YES: _____ NO: _____
18. All hydraulic hoses and wiring will be adequately supported to ensure that wear and sag is completely eliminated. YES: _____ NO: _____
19. The front plow harness will tilt forward to allow the hood to tilt over centre of its pivots and stay open without the need for any additional supports. YES: _____ NO: _____
20. The harness will be supplied with two double acting hydraulic cylinders, one cylinder to perform the plow lift function and a second separate cylinder used to perform the tilt function exclusively. YES: _____ NO: _____
21. The tilt cylinder will be 2 ½” with a 6” stroke and the cylinder rod shall be fully chromed. YES: _____ NO: _____

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22. Hydraulic power tilt function will be controlled by in-cab feature joystick air control. YES: _____ NO: _____
23. Front plate will be complete with Quick Tach hitch pockets. YES: _____ NO: _____
24. The truck harness will be painted Industrial Black. YES: _____ NO: _____
25. A parts manual will be supplied with each unit. YES: _____ NO: _____

SPECIFICATION CONFIRMATION

SNOW PLOW EQUIPMENT

12' SNOW LEVELLING WING

- 12` snow levelling wing Viking VCL144WHD or Equivalent YES: _____ NO: _____
1. The snow leveling wing will comply with the provisions of MTO ES-406, except for the length which is designated by the specification. MAKE:
MODEL:
2. The inside height of the wing will be 29" minimum. SPECIFY:
3. The outside height of the wing will be 39" minimum. SPECIFY:
4. Overall length of the wing will be 12". SPECIFY:
5. The thickness of the moldboard will be 10 USS Ga (0.1345) minimum. SPECIFY:
6. Two drive ribs for connecting the wing braces will be provided. YES: _____ NO: _____
7. The drive ribs will be located approximately 8'6" and 10'10" from the nose end of the wing. YES: _____ NO: _____
8. The plate for mounting the wing to the post will be 1" thick. The mounting hole will be far enough from the edge of the plate to avoid failure in this area. SPECIFY:
9. The mounting of the nose end of the wing to the wing post will be by means of a hinge and retractable

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- spring, to allow tipping over the wing. **YES:_____ NO:_____**
10. Two adjustable wing braces will be supplied. **YES:_____ NO:_____**
11. The upper brace will be of a shock release type, including a spring retraction. The spring shall provide adequate stability of the wing in normal operating conditions, and will retract the wing from tip-over position. **YES:_____ NO:_____**
12. The distance between the centre of the mounting holes of the wing braces will be as follows:
- Upper brace - Extended 90" C.C. **SPECIFY:**
 - Collapsed 60" C.C. **SPECIFY:**
- Extended distance will be measured with Spring fully retracted.
- Lower brace - Extended 88" C.C. **SPECIFY:**
 - Collapsed 58" C.C. **SPECIFY:**
13. One spare pin for adjusting the wing braces will be supplied with each brace. **SPECIFY:**
14. The wing will be fitted with the following:
- One snow plow blade MTO ES-504. **YES:_____ NO:_____**
One wing shoe MTO ES-509. **YES:_____ NO:_____**
15. The top edge of the wing will be boxed in and welded 100% to the ribs and moldboard so as to avoid all pockets. **YES:_____ NO:_____**
16. The wing will be painted black. **YES:_____ NO:_____**
17. The wing braces will be painted black. **YES:_____ NO:_____**
18. A parts manual will be supplied with each unit. **YES:_____ NO:_____**

SPECIFICATION CONFIRMATION

FULL HYDRAULIC SNOW PLOW

WING TOWER

Model - Viking VCL350SCL or equivalent **YES:_____ NO:_____**

SPECIFY: MAKE:_____

MODEL:_____

1. The harness assembly will be of heavy construction to sustain snow plowing operations under severe conditions. **YES:_____ NO:_____**

2. A reservoir of adequate capacity will be supplied, but must not interfere with the operation of the box. Valves shall be installed on outlet lines at the reservoir. **YES:_____ NO:_____**

3. Bottom of wing tower will be protected by shoe, and have a ground clearance of 14" minimum, truck empty. **YES:_____ NO:_____**

4. The spacing of the holes in the slides for connecting the wing braces will be approximately 17". **YES:_____ NO:_____**

5. Approved size of ram controlling the front end of wing will be 3" dia. x 30" stroke approximately with a cable and sheave assembly. **YES:_____ NO:_____**

6. Approved size of ram controlling the rear end of wing will be 3" dia. x 30" stroke approximately with a cable and sheave assembly. **YES:_____ NO:_____**

7. Approved size of ram controlling wing brace will be 3" dia. x 36" stroke approximately and shall be double acting. **YES:_____ NO:_____**

8. 4.5" heated LED front and rear post wing lights will be provided. **YES:_____ NO:_____**

9. Wing tower will be painted black. **YES:_____ NO:_____**

10. The wing tower will be of a heavy construction and bolted to the right side of the truck chassis. **YES:_____ NO:_____**

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11. Wing tower will be of 10" channel construction with a 25° offset and its mountings will be sufficient to sustain snow plowing operations under severe conditions. **YES:_____ NO:_____**

12. One pipe brace 2 ¾" dia. will connect the bottom of the wing tower and the truck chassis near the forward mount of the right rear springs to reduce the shock of the truck frame. **YES:_____ NO:_____**

13. The rear wing tower will be heavily braced and gusseted to the frame cheek plate. **YES:_____ NO:_____**

14. For maximum strength, two channels will be used to form a triangular support integral with the rear post. **YES:_____ NO:_____**

15. The first channel will be 4" x 66 ½", 13.8 lb./ft sloping diagonal brace. **YES:_____ NO:_____**

16. The second channel will be 4" x 40", 13.8 lbs./ft. horizontal brace bolted to the chassis rails and welded to the brace box. **YES:_____ NO:_____**

17. Two triangular stiffeners will be incorporated into the assembly. **YES:_____ NO:_____**

18. To provide additional support the oil reservoir will act as an auxiliary support post. **YES:_____ NO:_____**

19. The oil reservoir will be connected at the top to the rear post through two 4" x 4" x 3/8" angles, and will be mounted in a vertical position directly along the side of the rear post. **YES:_____ NO:_____**

20. The bottom of the oil reservoir will also incorporate two 4" x 3" x 3/8" angles, one welded to the oil reservoir and the other welded to the brace box. **YES:_____ NO:_____**

21. Hydraulic hoses will connect the rams of the tower with the valves in the control box. Hoses will be two-ply braded steel, SAE100R2 with swivels on both ends. **YES:_____ NO:_____**

22. All sheave pins will be provided with oil impregnated bronze bearings and grease fitting. **YES:_____ NO:_____**

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23. A safety chain will be provided for securing wing when not in use. YES: _____ NO: _____
24. Guide bars to contain the rear wing slide will be welded 100% from the bottom, up 2'. YES: _____ NO: _____
25. Parts manual will be supplied with each unit. YES: _____ NO: _____
26. One blue and one amber strobe, Star Model 200A cab shield-mounted. YES: _____ NO: _____
27. Right front rubber helper spring will be supplied. YES: _____ NO: _____
28. MTO Cross-member will be supplied, 10" behind back of cab. YES: _____ NO: _____

HYDRAULIC CONTROLS

29. Hydraulic control valves will be stackable, sectional Type – Walvoil model SDS-180 with air shift. YES: _____ NO: _____
30. To prevent corrosion, the air shifters will have a bronze sleeve. YES: _____ NO: _____
31. The control valve will include the following sections:
1 DA Plow Lift DA Wing Brace
1 DA Tilt Harness SA Body Hoist
1 DA Front of Wing 1 DA Rear Wing Slide
DA hydraulic moldboard tilt
YES: _____ NO: _____
32. The hydraulic control valves will be operated by proportional featherable in-cab air controls. YES: _____ NO: _____
33. The control panel assembly will be of a remote design, pedestal-mounted and adjustable. YES: _____ NO: _____
34. An oil reservoir of adequate capacity will be supplied complete with oil filter oil level sight gauge, breather type filler cap, drain plug and oil shut-off valve. YES: _____ NO: _____
35. A high pressure filter, as well as an in-line filter at the Oil reservoir, will be provided. YES: _____ NO: _____

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36. The complete valve stack assembly will be mounted vertically on a ¼” mounting plate, integral with the rear wing tower assembly. YES:____ NO:____
37. The valve mounting plate will be manufactured from stainless steel, and welded to the horizontal channel and sloping diagonal brace. YES:____ NO:____
38. The valve assembly will be completely open and easily accessible from the driver’s side of the chassis for washing and maintenance. YES:____ NO:____

The bidder must be able to demonstrate a solid history of use of the combination U-body/spreader offered in this tender by Ontario Municipalities, for a minimum period of one year, and references must be supplied as specified below.

List five (5) Ontario Municipalities who have been using the combination U-body/spreader offered in this tender for a minimum period of one (1) year.

Name of Municipality	Contact Name	Position	Phone #