



Township of South West Oxford
312915 Dereham Line
R. R. # 1, Mt Elgin, N0J 1N0
Office: 519-877-2702 or 519-485-0477
Works: 519-877-2953

QUOTATION FORM

ONE NEW – TANDEM DUMP

Quotations must be submitted in sealed envelopes and on the forms provided, plainly marked as to contents, will be received by the undersigned:

Chassis specifications and equipment specifications are to be considered together to form the complete truck to be delivered.

Results will be reviewed by Council on February 16, 2010.

Each bid, consisting of a signed quotation and accompanying specification sheets, is to be submitted in a marked sealed envelope to the undersigned by **11:00 A.M., Thursday, February 11, 2010.**

The lowest or any quotation will not necessarily be accepted. The Township of South-West Oxford reserves the right to award the contract in any manner it may choose.

I/WE agree to deliver this equipped truck _____days after the purchase order has been signed.

Chassis complete with snow equipment shall be delivered F.O.B. Dereham Center

Vehicle Safety Inspection shall be included and provided by bidder.

Licensing shall be done by Township.

Note: Payment for the chassis portion will be paid less 10% before taxes on confirmation of its arrival at the body manufacturer and that it meets specifications. The remaining portion of the chassis payment will be included with the equipment portion when the Township receives the fully equipped truck and ensures it meets all Tender specifications.

Bill Freeman
Works Superintendent
Township of South-West Oxford,
312915 Dereham Line
Dereham Center, Ontario. N0J 1N0
519-877-2953
Fax 519-877-0495
[email bfreeman@swox.org](mailto:bfreeman@swox.org)

Bidder: _____

Date: _____

Chassis Requirements For Installation Of Snow & Ice Control Equipment

Requirements	Specifications	Conform	
		Yes	No
	Front chassis axle must be 22,000 lbs. set forward for tandem axle chassis minimum with a 40,000 lbs. combined rear axles minimum, with suspension to suite axle rating.		
	Some chassis makes & models require O.E.M frame extensions to allow installation of plow harness, if frame extension is required by snow plow harness installer then it is to be included in the bid price.		
	Chassis frame and front extension must be full frame 12" minimum with section modulus and yield strength sufficient for mounting snow control equipment.		
	Room to install an MTO specified frame cross member without interference from truck auxiliary mounts must be provided back of chassis cab.		
	Provision for front mount hydraulic pump must include front crank adapter and front grill and radiator clearance for pump drive shaft		
	Passenger side muffler configuration and exhaust stack must be routed to avoid interference with wing harness installation and must allow installation of a standard 12' wing as requested in the specification.		
	Fuel tank protrusion behind cab must avoid interference with sander spinner and wing harness.		
	Battery box location must be installed to avoid interference with sander spinner and wing harness.No splices in battery cables are accepted.		
	Air dryer, air tanks, fuel and oil coolers must be located in a position to avoid interference with sander spinner and wing harness		
	Front grill must be stationary with no hood mould running under the grill to avoid interference with hydraulic tilt front plow harness.		
	Minimum after frame shall be 75"		
	Interior cab space and seat configuration must provide sufficient room for floor console and pedestal stand for sander and harness controls.		
	Body builders access point must be provided at rear of cab for auxiliary body lighting		
	Separate headlight wiring harness with separate switch in cab dash must be provided for auxiliary plow harness lights.		
	Clear and usable cab to axle and or cab to trunion dimension must be sufficient for snow & ice control equipment specified.		
	Other requirements and recommendations may be applicable to equipment specified, a review of specifications with a qualified factory representative prior to placing order is recommended		

TOWNSHIP OF SOUTH-WEST OXFORD

Specifications and Confirmation

Cab and Chassis Diesel – Std. Tandem – C.A. 3,708 MM @ 146”

26,364 KG @ 60,000 LBS. G.V.W.

	SPECIFICATIONS	CONFIRMATION								
1.	<p>General:</p> <p>This specification covers a 6 – ton diesel snow plow truck. Vehicle must be supplied with suitable components to comply with the following specifications in all aspects.</p>	YES: ____; NO: ____								
2.	<p>Detailed Specifications:</p> <table border="1"> <tr> <td>Make:</td> <td>Model:</td> </tr> <tr> <td>Western Star</td> <td>4900SA</td> </tr> <tr> <td>Volvo</td> <td>VH064F200</td> </tr> <tr> <td>International</td> <td>7600 6X4</td> </tr> </table>	Make:	Model:	Western Star	4900SA	Volvo	VH064F200	International	7600 6X4	<p>SPECIFY:</p> <p>Make: _____</p> <p>Model: _____</p>
Make:	Model:									
Western Star	4900SA									
Volvo	VH064F200									
International	7600 6X4									
3.	<p>Engine:</p> <p>Diesel, In Line 12 Litre Minimum</p> <p>Engine Displacement Cu.In. Or Equivalent.</p> <p>Engine Net H.P. 410 H.P. Min</p> <p>1450 Lb.-Ft Torque</p>	<p>YES: ____; NO: ____</p> <p>SPECIFY: _____</p> <p>SPECIFY: _____</p>								
4.	<p>Vehicle Weight:</p> <p>G.V.W. 60,000 Lbs. Min.</p> <p>The Allowable G.V.W. As Supplied Shall Be Shown On A Metal Or Mylar Tag.</p> <p>Chassis Weight 0 5,660 Kg/12,500 Lbs. Min.</p>	<p>SPECIFY: _____</p> <p>YES: ____; NO: ____</p>								
5.	<p>Axles:</p> <p>Front axles shall be 22,000 Lbs. Capacity Min.</p> <p>Wheel Seals Front Wet Type</p> <p>Set Forward Front Axle</p> <p>Dual Power Steering Shall Be Supplied With Tilt Steering Column</p> <p>Rear Axle Shall Be Tandem 18,140 Kg/40,000 Lbs. Capacity Min., Dual Drive With Interaxle Differential And Driver Controlled 4 Way Interaxle Differential Lockout With Min. Spread Of 1,372 Mm/60 Inches.</p> <p>Rear Axle Shall Be Single Speed.</p> <p>Following Is A List Of Approved Axles: Meritol – Rt-40-145p 4.63:1</p> <p>Max. Travel Speed 110 Km/h Transverse Torque Rods Shall Be Supplied</p>	<p>SPECIFY: MAKE: _____</p> <p>MODEL: _____</p> <p>CAPACITY: _____</p> <p>YES: ____; NO: ____</p> <p>YES: ____; NO: ____</p> <p>YES: ____; NO: ____</p> <p>SPECIFY: MAKE: _____</p> <p>MODEL: _____</p> <p>CAPACITY: _____</p> <p>YES: ____; NO: ____</p> <p>YES: ____; NO: ____</p> <p>AXLE RATIO: SPECIFY: _____</p> <p>YES: ____; NO: ____</p>								

	SPECIFICATIONS	CONFIRMATION
6.	Brakes:	
	Service Brakes – Full Abs Air Brakes	YES: ____ ; NO: ____
	Front Brakes Size – 501 Mm X 152 Mm/16.5” X 6” Or 91mm/3.62” Pad Disc Type, Min. Shall Be “S” Cam Type	YES: ____ ; NO: ____
	Rear Brake Size – 419mm X 17mm/16.5” X 7” Min.	YES: ____ ; NO: ____
	Rear Brakes Shall Be “S” Cam Type.	YES: ____ ; NO: ____
	Dust Shields Front And Rear.	YES: ____ ; NO: ____
	Meritor-Auto Slack Adjusters Or Equivalent	YES: ____ ; NO: ____
	Positive Rear Wheel Spring Loaded Parking Brake, Air Reservoir And Instrument Panel Control Switch.	YES: ____ ; NO: ____
	Low Pressure Indicator Supplied.	YES: ____ ; NO: ____
	Tank To Have A Separate Manual Drain Included.	YES: ____ ; NO: ____
	Air Compressor, 5.6 Dm/S (13.2 C.F.M.) Capacity With Dry Type Air Cleaner On Intake.	YES: ____ ; NO: ____
	Asbestos-Free Brake Linings Shall Be Supplied.	YES: ____ ; NO: ____
Bendix AD9 Air Dryer Or Equivalent	YES: ____ ; NO: ____	
7	Frame	
	Resisting Bending Moment (Section Modulus X Yield Strength) Shall Be 3,200,000 Lbs. In Min.	SPECIFY: _____
	Section Modulus Shall Be 26.50 Min.	SPECIFY: _____
	Note: Trucks With Trunnion Type Motors Require Frame Reinforcing.	Section Modulus: _____ Frame Yield Strength: _____
	MTO Cross Member Consisting Of Structure Extending Across Both Chassis Side Rails And Along The Right Side To Provide Distribution Of Wing Load Under Heavy Duty Operation.	YES: ____ ; NO: ____
Rear Tow Hooks (2) To Be Supplied	YES: ____ ; NO: ____	
8	Suspension	
	C.A. Shall be 3,708 MM/146” APPROX. To suit all equipment specified including pavement edger.	SPECIFY: _____
	Wheel Base Shall Be To Suit Above C.A.	SPECIFY: _____
	Front Spring Capacity At The Ground 3,620 Kg/11,500 Lbs., L.H. ;11,500 Lbs. Rh.	SPECIFY: _____
	Rear Spring Capacity At The Ground 9,072 Kg/20,000 Lbs. Each Min.	SPECIFY: _____
REAR SUSPENSION SHALL BE (HENDRICKSON HMX-460-60) Walking Beam Type 60” Axle Spacing; 46,000-Lb Capacity, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers.	SPECIFY: _____	

	SPECIFICATIONS	CONFIRMATION
9	<u>Wheels & Tires</u>	
	Dual Rear Tires.	YES: ____; NO: ____
	Two (2) Front First Line Steel Belted Tires Tubeless Type Tires 4.25-65r22.5 20 Ply Rating Shall Be Supplied.	YES: ____; NO: ____ SPECIFY SIZE: _____ SPECIFY PLY RATING: _____
	Eight (8) Rear First Line Steel Belted Tires Tubeless Type Tires 11.00 R 22.5 – 16 Ply Rating Shall Be Supplied.	YES: ____; NO: ____ SPECIFY SIZE: _____ SPECIFY PLY RATING: _____
	Rear Spare Tire & Rim.	YES: ____; NO: ____
	Tread Design: Front – Standard Highway Tread - Michelin Xzy3	YES: ____; NO: ____
	Rear - Traction – Tread As Per Spec. - Michelin Xdy3	YES: ____; NO: ____
	Two (2) Wheel Rims 571 Mm X 228 Mm/22.5" X 13.00 Shall Be Supplied.	YES: ____; NO: ____
	Eight (8) Wheel Rims 571 Mm X 209 Mm/22.5" X 8.25" Shall Be Supplied.	YES: ____; NO: ____
	Rims Shall Have Load And Pressure Ratings Equal To Or Greater Than Those Of Tires.	YES: ____; NO: ____ SPECIFY SIZE: _____ SPECIFY PLY RATING: _____
	Ten (10) Steel Disc Hubpilot Wheels Shall Be Supplied Accuride Only, Off Shore Wheels Will Not Be Accepted	YES: ____; NO: ____
	Nylon Wheel Guards Front & Rear.	YES: ____; NO: ____
10	<u>Transmission</u>	
	(ALLISON 4500-RDS-P) 4 TH GENERATION CONTROLS WIDE RATIO, 6-SPEED, WITH DOUBLE OVERDRIVE' ON/OFF HWY, INCLUDES OIL LEVEL SENSOR, WITH PTO PROVISION, LESS RETARDER	YES: ____; NO: ____ SPECIFY Make: _____ Model: _____
11	<u>Clutch</u>	
	OMIT ITEM (CLUTCH & CONTROL	SPECIFY: _____ YES: ____; NO: ____

	SPECIFICATIONS	CONFIRMATION
12	ENGINE EQUIPMENT	
	Alternator Shall Be 130 Amp. Capacity Minimum With Built-In Diode, Rectifiers, And Shielded Slip Rings And Brushes.	YES: ____; NO: ____ SPECIFY MAKE: _____ MODEL: _____ CAPACITY NORMAL AT IDLE: _____
	3 Batteries – Maintenance Free Type. SAE Rating Combined 12 Volt, 1,900 CCA Minimum. If The Batteries Are Mounted Behind The Cab, They Shall Be On The Right-Hand Side behind the wing harness. Batteries Shall Be Easily Accessible For Service.	YES: ____; NO: ____ SPECIFY: _____
	Jumper Start Terminals	YES: ____; NO: ____
	Jacobs Engine/Exhaust Brake Or Equivalent To Be Supplied	YES: ____; NO: ____ SPECIFY:
	Governor – Engine Governor Built-In Type	YES: ____; NO: ____
	High Temperature And Low Oil Pressure Engine Protection Alarm Bell Or Buzzer Device Shall Be Installed. Automatic Engine Shut Down Not Acceptable.	YES: ____; NO: ____ SPECIFY: _____
	A Heavy-Duty Dry Type Air Cleaner Shall Be Supplied.	YES: ____; NO: ____
	An Automatic, Temperature Controlled Fan Clutch Shall Be Supplied.	YES: ____; NO: ____
	Air Restriction Indicator Shall Be Supplied And Mounted On Dash.	YES: ____; NO: ____
	Air Intake Control Inside/Outside Air.	YES: ____; NO: ____
	Oil Filter – Full Flow Type.	YES: ____; NO: ____
	A Heavy Duty Fuel Oil Water Separator With Sight Glass, Mounted Outside Left Frame Rail Behind Cab, Comment Cmi-650 Or Equivalent.	YES: ____; NO: ____ SPECIFY: _____
	An Engine Block Heater Shall Be Supplied – Receptacle Under Door.	YES: ____; NO: ____
	Exhaust – The Exhaust Pipe To Be Vertical, The After Treatment Muffler Must Be Horizontal, And The Complete System Must Not Interfere With The Snow Plow Wing Tower Mounting + Turn-Out Elbow.	YES: ____; NO: ____
	Off/On Switch That Inhibits Diesel Particulate Filter Regeneration When Switch Is On.	YES: ____; NO: ____
	For Snow Plowing Purposes, A Minimum 101 Mm/3 ½” Diameter Opening Through The Radiator Shall Be Provided Centred With The Crankshaft Of The Engine To Allow Adequate Clearance Of The P.T.O. Shaft. Crankshaft Shall Be Provided With An Adaptor For P.T.O. Drive.	YES: ____; NO: ____

	SPECIFICATIONS	CONFIRMATION
12	Engine Equipment Cont'd.	
	<u>Note</u> Optimal Permco P30-B Tandam 2 Stage Gear Pump Close Coupled To Chelsea Hot Shift PTO mounted on transmission will be accepted.	YES: ____; NO: ____
	Engine Hood Shall Be Butterfly, Forward Tilting Acceptable With Stationary Grill.	YES: ____; NO: ____
	Bug Screen Behind Grille.	YES: ____; NO: ____
	Oil Dipstick Must Be Accessible Through Access Door In Hood.	YES: ____; NO: ____
	Windshield Washer Fill Must Be Accessible Through Access Door In Hood.	YES: ____; NO: ____
	Under Hood Insulation And Engine Splash Panels For Sound Abatement.	YES: ____; NO: ____
13	Cab	
	Air Ride Cab	YES: ____; NO: ____
	Cab To Include Any Optional Sound Insulation Available.	YES: ____; NO: ____
	Conventional High Level Cab With The Following Equipment Shall Be Supplied. Prestige Trim.	YES: ____; NO: ____
	Seats – Separate Driver And A Single Passenger Seat Shall Be Supplied.	YES: ____; NO: ____
	Driver's Seat To Be Hiback – "Air Ride"	YES: ____; NO: ____
	Both Seats Shall Be Fully Padded And Of Heavy Duty Cloth And Vinyl Upholstery Construction With Foam Rubber Seat Cushions. Driver's Seat Shall Be Adjustable Fore And Aft, Passenger's Seat Fixed, With Arm Rests.	YES: ____; NO: ____ SPECIFY: MAKE: _____ MODEL: _____
	Sun Visors – Dual.	YES: ____; NO: ____
	Windshield Wipers – Dual, Air and/or Electric Intermittent With Heavy Duty Motors.	YES: ____; NO: ____
	Heavy Duty Fresh Air Heater And Defroster.	YES: ____; NO: ____
	Air Conditioning.	YES: ____; NO: ____
	Tachometer With Speed/Cruise Control Shall Be Supplied.	YES: ____; NO: ____ SPECIFY: _____
	Hour Meter With Anti vibration Mount, Hobbs Type (M3888) Damper) Or Equipment Equivalent.	YES: ____; NO: ____
	Cigar Lighter	YES: ____; NO: ____
	Alternative Power Source/Point To Accommodated Electronic Charges	YES: ____; NO: ____
	Seat Belts – Two (2) With Retractors	YES: ____; NO: ____
	Floor Mat – Rubber	YES: ____; NO: ____
	Air Ride Cab	YES: ____; NO: ____
	Exterior Windshield Sunshade To Be Provided	YES: ____; NO: ____
	Lower Right Door Window	YES: ____; NO: ____
	Mirrors Two (2) Outside 152 mm X 406 mm 6" X 16" West Coast Type Mirrors Complete With Built-In Lights And Heaters, Dominion Auto #77-4431 Or Equivalent. 102 mm Mirror Arms, With 8" Convex. Both Mirrors To Be Powered.	YES: ____; NO: ____

	SPECIFICATIONS	CONFIRMATION
13	Cab (cont'd)	
	Grab Bars On Each Side To Assist Easy Entry And Exit Shall Be Supplied.	YES: ____; NO: ____
	Rain Gutters Or Drip Moulding Shall Be Supplied.	YES: ____; NO: ____
	Air Horns With Snow Shield Shall Be Supplied.	YES: ____; NO: ____
	First Aid Kit And Triangle Type Safety Reflectors Shall Be Supplied.	YES: ____; NO: ____
	A.M. /F.M. Radio Shall Be Supplied & Radio Hot Post & Ground.	YES: ____; NO: ____
	Right & Left Side Power Windows To Be Supplied.	YES: ____; NO: ____
	Mud Flaps – Front	YES: ____; NO: ____
	Valance Panels Under Both Doors.	YES: ____; NO: ____
14	Fuel Tanks	
	Single 70 Gallon 264/Litre Minimum Aluminum Cylinder Tank On Left Side With Step Side Mounted. With 2 Stainless Steel Straps. If Tank is suspended it requires 4 Stainless Steel Straps.	YES: ____; NO: ____ SPECIFY CAP: ____ IMP. GAL: ____ LOCATION: ____
	A Fuel Gauge Must Be Supplied.	YES: ____; NO: ____
15	Lights	
	The Following Lights Shall Be Supplied.	YES: ____; NO: ____
	Two (2) Fender Mounted 100mm/4" Diameter Amber Or Combo Lights.	YES: ____; NO: ____
	Directional Lights, Facing Front. Combo Lights.	YES: ____; NO: ____
	Rear Red Directional Lights.	YES: ____; NO: ____
	Self Cancelling Turn Signal	YES: ____; NO: ____
	Stop Lights	YES: ____; NO: ____
	Five (5) Identification Streamlined Led Cab Lights.	YES: ____; NO: ____
16	Paint	
	COLOUR – RED	YES: ____; NO: ____
17	Attachments	
	ANTI-FREEZE TO -35° C.	YES: ____; NO: ____
	Cup Holders	YES: ____; NO: ____
	Standard Vehicle Speed Sensor With Speed Signal At Fuse Panel.	YES: ____; NO: ____
	Switch & Wiring For Plow Lamps	YES: ____; NO: ____
	Wiring Access Box MTD. EOF/With Fuse Panel Wire.	YES: ____; NO: ____

	SPECIFICATIONS	CONFIRMATION
18	Warranty	
	Signed Manufacturer's Factory Warranty Shall Be Supplied.	YES: ____; NO: ____
	Where Minimums Are Called For, The Vehicle Must Meet Or Exceed The Capacity, Size Or Performance Specified.	YES: ____; NO: ____
	This Specification Lists Only The Major Details Of A Unit; Therefore, It Is The Supplier's Responsibility To Deliver A Fully Equipped Vehicle With Compatible Components To Provide Dependable Efficient Service.	YES: ____; NO: ____
	Vehicle Shall Meet Or Surpass The Mandatory Requirements Of The "Canadian Motor Vehicle Safety Regulations" (SOR 70-487) As Amended, And Must Bear The National Safety Mark, Outlined In Those Regulations	YES: ____; NO: ____
	Warranty/In Service Date To Commence When Township Takes Delivery Of Fully Equipped Truck From Snow Equipment Provider.	YES: ____; NO: ____
19	Vehicle Shall Meet Or Surpass The Mandatory Requirements Of The "Canadian Motor Vehicle Safety Regulations" (SOR 70-487) As Amended, And Must Bear The National Safety Mark, Outlined In Those Regulations.	YES: ____; NO: ____
	Bidder Is An Authorized Servicing Provider For All Components Of The Truck Chassis.	YES: ____; NO: ____
	If No, Please State Which Components Must Be Serviced By Others.	SPECIFY: _____

SNOW AND ICE CONTROL EQUIPMENT

Description	Requirements	Conform	
		Yes	No
General Specifications:			
	The snow and ice control equipment supplied under this specification shall be the manufacturer's latest model standard commercial product and shall have demonstrated industry acceptance by having been manufactured and sold in significant numbers to Ontario Municipalities, and shall have been proven in service for the application for at least one year prior to issuing of this tender document		
Demonstration:			
	A demonstration of equipment bid may be required, if requested it will be the responsibility of the bidder to arrange this demonstration at the Municipalities location within 5 working days of written notification, all equipment demonstrated will be the exact models offered by the bidder on this tender document.		
References:			
	Where references are requested in this tender document the information must be completed in full and all references supplied are to be for the models of equipment offered by the bidder in the answered specification.		

Installation:

The company that shall install the snow & ice control equipment on to the truck chassis shall be currently actively engaged in the business of snow & ice control equipment installations and shall provide proof of demonstrated ability by providing the following information

Specify:

Registered National Safety Mark Number of Equipment Installer: _____

Name & Address of Equipment Installer: _____

List the last 5 installations completed for Ontario Municipality's, provide name of municipality, contact name & phone number

1) Municipality: _____

Contact Name: _____

Phone #: _____

2) Municipality: _____

Contact Name: _____

Phone #: _____

3) Municipality: _____

Contact Name: _____

Phone #: _____

4) Municipality: _____

Contact Name: _____

Phone #: _____

5) Municipality: _____

Contact Name: _____

Phone #: _____

Requirements:		
	Items noted in the specification as shall be, will be, to be, must be, maximum, minimum are mandatory requirements no deviations will be accepted	
Modifications:		
	Any modifications and or alterations made by the bidder to this tender document will result in disqualification of the bidders submission	
Safety:		
	The design and operation must incorporate safety devices and attachments necessary to ensure that the equipment provided is capable of being operated with maximum safety	
Inspection:		
	The vendee reserves the right to inspect the equipment at any stage of manufacturing and/or installation of equipment on to the truck chassis and to have any deviations corrected upon request; a final inspection will be completed by the consignee at the time of delivery.	
Address:		
	State address of facility where completed equipment will be installed on to the truck chassis & Company name of installer Specify: _____ _____ _____ _____	
Parts:		
	O.E.M. spare replacement parts must be stocked in inventory by the successful bidder in sufficient quantity to provide adequate product support and to ensure timely delivery of spare parts orders and if requested the bidder must be able to provide supporting documentation Specify: Address of Parts Warehouse: _____ _____	
Warranty:		
	Warranty coverage will be for a minimum of one year from the date of delivery, manufacturer's warranty statement will be included with the bid submission	
Manuals:		
	One copy of an operation, parts and service manual shall be provided for each unit	

After Sales:		
	It is a requirement of this tender that the bidder maintains an after sales service facility and employees staff qualified to perform after sales service work and that the bidder is also capable of providing in field mobile field service at our location, the bidder if requested must be prepared to provide a tour of this facility.	
	Enclose brochure or photo of company service vehicle with the bid submission	
Prep:		
	All steel components will be shot blasted prior to application of primer.	
Primer:		
	Two coats of a high quality Epoxy Primer minimum 4 ml. dry thickness, applied to all steel components.	
Paint:		
	Finish body paint shall be DuPont Imron 5000 Elite two coats 2 ml. dry thickness, baked on finish or equivalent. Specify: Make: _____ Model: _____	
	Finish paint balance of steel components medium gloss alkyd enamel on syncoat anticorrosive primer wet on wet application with 4 to 5 ml application thickness	
	There will be no bare steel-to steel contact of any components; all steel surfaces will be painted as per above specifications before final assembly	
Paint Color:		
	Spreader body yellow.	
	Plow and wing black	
Hydraulic Hoses:		
	All hydraulic hoses will be properly routed and secured to eliminate abrasion; protective covering will be applied at all potential wear points. Only Parker and Gates manufactured hoses and fittings accepted.	
	All hydraulic hoses must be SAE 100 R16 performance rated Specify; Make: _____ Model: _____	
	The bend radius will be 1/2 of the standard SAE 100R2 bend radius	
	Specify bend radius for 1/2" hydraulic hose Specify: _____	
	All hydraulic hose performance rated for negative 40°	
	Hose cover ISO6945 to withstand minimum 6000,000 cycle test	

C.A. Requirements:		
	All equipment specified including spreader body and pavement edger shall fit on the truck chassis specified with a clear and usable cab to axle maximum dimension of 146" Specify: _____ C.A.	
Chain:		
	All lift chain; tailgate chain and safety chain will be 1/2" grade 70 proof coil plated with yellow zinc Dichromate. Specify: _____	
Hydraulic Quick Disconnect:		
	Quick disconnect hydraulic couplers for plow harness & plow functions shall be one hand connect or disconnect under full system pressure Safeway Flow Master series 70 quick disconnects Specify: Make: _____ Model: _____	
National Safety Mark:		
	As required by law under the Motor Vehicle Safety Act the intermediate or final stage manufacturer(s) that shall install the combination spreader/dump body and snow plow equipment onto the incomplete truck chassis posses a valid National Safety Mark registered with Transport Canada and will affix their registered National Safety Mark sticker onto the chassis thus certifying the unit as complete. Specify the name of the company that will affix the registered National Safety Mark number thus certifying the vehicle as complete and the company's registered number. Specify: Company Name: _____ Specify: Registered National Safety Mark Number: _____	
	Enclose copy of National Safety Mark registration with bid submission.	

Hydraulic Pump:		
Tandem two stage front mount, dry mode engine crankshaft driven.		
Dowty model 2PL1582PL220DVTP		
Specify		
Make: _____		
Model: _____		
Transmission mount tandem pump and hot shift PTO is acceptable, if the hydraulic pump will be transmission mount in lieu of front mount. Specify make, model of pump and PTO		
Specify		
Make: _____		
Model: _____		
Oil Reservoir:		
Chassis frame mounted oil reservoir of 29 U.S gallon capacity, 3/16" pickled and oiled steel, welded oil tight		
Specify:		
Capacity: _____ U.S. Gl.		
Reservoir to have a weather proof screw down filler / breather cap with fine mesh screen and provisions for clean out by hand.		
A removable magnetic trap shall be supplied.		
The oil return port shall be fitted with a diffuser to prevent turbulence and foaming of oil on the inside of the reservoir.		
Oil level and temperature gauge shall be supplied with this unit.		
Hydraulic filter element for return line spin on filter assembly will be 10 micron absolute.		
Oil shut off gate valve to be installed.		
Low oil level indicator with in cab warning light		

Hydraulic Valve:		
	Hydraulic valves will be sectional stackable	
	Make Hydro Control Model HCD-6 with bronze sleeve shifters.	
	SPECIFY:	
	Make: _____	
	Model: _____	
	The HCD valve stack will include the following seven individual working sections:	
	1 D.A. Plow Lift	
	1 D.A. Plow Moldboard Tilt	
	1 D.A. Plow Harness Tilt	
	1 D.A. Front of Wing	
	1 D.A. Rear of Wing	
	1 D.A. Wing Extension	
	1 S.A. Body Hoist	
	All valve sections will be dedicated to one individual function only and no individual vane shall be used for more than one single function	
	An additional two spool double acting valve shall be mounted on the driver's side of the front plow harness and enclosed in weather tight enclosure with vertical hinged access door for operation of the two front harness lock and unlock hydraulic cylinders	
Hydraulic Cylinders:		
	All hydraulic cylinders with the exception of the body hoist cylinder shall be in compliance with the following specifications	
	Rated at 3000 psi minimum working pressure	
	Rod material Stelmi 200 HR .001 thick chrome layer induction hardened to 1045ksi	
	Cylinder seals shall be Hallite	
	All porting shall be SAE O-Ring ports	
	Part number and date code to be stamped into the outside of the barrel	
Cab Controls:		
	Proportional feather able air controls shall be supplied one individual joystick for each of the seven valve sections	
	An air dryer lubricator and air protection valve shall be installed in the air control system.	
	The air control mounting stand will be fully adjustable and located between the driver and passenger seat within easy view and reach of either occupant.	
	Air control shall be made of brushed aluminum and the light switch console shall be an integral part of the air control console	
	All air lines and electrical wiring shall be concealed inside the vertical tube of the air control pedestal stand	

Electronics:		
	Plow lights shall be direct plug in to the OEM chassis plow light connection or a relay and separate harness shall be installed	
	Under no circumstances there shall be no cutting of or splicing into the OEM chassis wiring harness by the installer of the snow & ice control equipment	
	All connections shall be either direct plug in to chassis OEM supplied connection or a relay board shall be installed & a entire separate circuit run	
	Lighting switches shall be illuminated function labelled two position paddle switches	
	Switches mounted in brushed aluminon enclosure integral with printed circuit board.	
	Total number of switches 9 with capability to control 12 separate functions	
	The switch enclosure shall be complete with manual reset circuit breakers	
	The entire electrical system shall be free of fuses	
	Electrical connection to the switch consul shall be one connection direct plug in	
	The entire switch counsel including the printed circuit board shall be easily removable as a complete assembly	
	All junction boxes shall be located behind the chassis cab in a raised position	
Spreader Body:		
	These specifications describe an all season combination dump body and sand/salt spreader. The dump box shall 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 centred and recessed along the length of the box. The cross conveyor will be bi-directional rubber belt chassis frame mounted with spreader discharge on the front, left, side of dump box and right side gravel chute	
	Viking Pro Line 1415LW or equivalent in compliance with the following specifications Specify: Make: _____ Model: _____	
Dimensions:		
	14' inside overall, 15' outside, 60" front head, 45" sides & 53" tailgate Specify: _____ _____ _____	
	Inside width at top rails 85-3/4" outside overall width 100" Specify: _____ _____	
	Cab shield 15" Specify: _____	

Capacity:		
10.7y3 @ water level 13.7y3 struck with 10" sideboards		
Specify: _____ _____		
Construction:		
All body welds will be 100% continuous inside and outside.		
Floor, sides, front head and tailgate all constructed of Hardox 450 high tensile steel		
Specify: _____		
Minimum yield strength 175,000 PSI		
Specify: _____		
Minimum tensile strength 205,000 PSI		
Specify: _____		
Brinell hardness minimum 425 to 475		
Specify: _____		
Hardwood side boards 2" x 10" with black painted finish.		
Top rail 4" x 4" x 3/8" square tube.		
Front head sloped design continuous from top rearward to the bottom at 22 degrees from vertical		
Specify: _____		
Front head must be flat with nothing protruding into the body such as a hoist doghouse		
Rear vertical corner posts tied to radius side panels and horizontal top rails and welded 100 percent		
Rear vertical corner-posts to be connected to main conveyor via a rear horizontal 3" X 8" X 3/8" wall HSS tube spanning the full body width		
Fenders shall be full length from front to rear of body one fender right side one fender left side, integral with body		
Fenders shall be flush mounted directly against the body sides		
Fenders shall be 100% welded to the body sides for the full horizontal length of the fender		
Integral fenders to be sloped away from unit to prevent any excess material spilled during loading from building/piling up		

Construction (cont'd):		
Body sides shall be smooth roll formed with no breaks or if the sides are break formed the maximum distance between each brake shall be one inch		
Specify:		
Smooth Roll Formed Sides: _____		
<u>OR</u>		
Brake Formed: _____		
If Brake Formed Specify Distance Between Each Brake: _____		
_____ Inches		
Side panel radius shall be 32-3/4"		
Specify: _____		
All fasteners used for body assembly shall be stainless steel except in location were tensile strength requirements are prohibitive		
Dump box access ladder shall be 15 inches wide, two piece fold-up ladder located at the rear curb side of body		
Hoist:		
Hoist shall be top lift design with no hoist doghouse		
Mailhot CS series rod sealed 3 stage telescopic model CS-130-5-3		
Specify:		
Make: _____		
Model: _____		
Hoist capacity shall be 30 ton @ 2,000 P.S.I.		
Dump box angle variable to 50 degree		
Rear dump hinge diameter shall be 2 1/2" inches		
The body to be equipped with a twin positive locking support brace, right and left side incorporated in to the rear body dump hinge		
The twin support brace shall support the weight of the empty body in the raised position		
Hoist control valve shall be feather air over hydraulic with lift to lock detent position operated from inside cab		

Tailgate:		
Rectangular shaped air actuated with in cab control		
Double acting		
Air trip via two 30/30 brake chambers one right side at rear and one left side at rear		
The two brake pots shall be enclosed and protected by the integral body fenders		
The two brake pots shall be directly coupled to ½ inch thick flame cut 44W steel latches		
Brake chambers one right side one left side enclosed and protected by integral body fenders		
Total air trip stroke movement will occur within a maximum of 5 seconds from activation		
Tailgate latches will be double acting with both constant air pressure and spring pressure on the latches in the closed position		
The tailgate air trip pilot valve and air quick release valve will be enclosed in a weather tight protective enclosure with safety vent		
Asphalt gate located in tailgate, with lever type operating mechanism offset to the curb side of body		
Spreader chains and brackets shall be supplied on tailgate and rear apron. Chains shall be grade 70-coil proof minimum.		
Tailgate chains enclosed in protective sleeve		
Main Conveyor:		
The main conveyor shall be centered and recessed along the length of dump box floor.		
Three-piece formed construction minimum 25 inches wide		
Conveyor floor ¼ inch AR235		
Specify: _____		
Permanent non-removable built in protective main conveyor chain link covers.		
The protective covers will run from the front to the rear of the body right and left side of the main conveyor integral with body floor.		
The protective non-removable main conveyor link covers will cover and protect the main conveyor chain links from damage by impact at all times in all operation modes.		
In addition to the permanent non-removable main conveyor chain link covers a second quick removable conveyor chain cover will be supplied.		
The removable cover will protect the main conveyor floor and conveyor chain cross flights from damage by impact when installed		
The removable main conveyor cover will be manufactured from 3/16" Hardox 450 high tensile steel with a wood cushion		
Specify: _____		
Yield: _____		
Tensile Strength: _____		
Brinell Hardness: _____		

Main Conveyor (cont'd):		
The removable main conveyor cover will be held in place by friction		
Conveyor chain to be self-cleaning D667 pintle type with a minimum tensile strength of 30,000 PSI, spaced apart 21 inches on center.		
1/2" X 1 1/2" cross flights welded to every 2 nd . Link (approx. 4.5" spacing)		
All conveyor flights shall be 100% fully welded to the chain links		
Drive and idler shafts to be two (2) inch diameter minimum		
Drive and idler shafts manufactured from high-resistance stress proofed SAMSON 100. Specify: _____		
Drive and idler sprockets to be minimum eight-tooth cast steel		
All drive and idler sprockets to be minimum C1030 cast steel Specify: _____		
Planetary drive for main conveyor.		
Main conveyor drive shall be a single 25:1 high efficiency planetary drive with high torque low speed motor.		
The drive motor shall be complete with integral built in speed sensor fully immersed in hydraulic oil		
The planetary drive shall deliver 50000 IN/LB torque intermittent with 34000 IN/LB constant.		
Planetary drive close coupled to main conveyor shaft		
Specify make and model of planetary MAKE: _____ MODEL: _____		
Connection of the planetary drive shaft to the main conveyor shaft shall be accomplished via a split two piece coupler assembly		
The upper and lower half of the coupler assembly will be bolted together by (3) 5/8" x 4 1/2" N.C. Grade 2 Hex Head bolts.		
The coupler shall provide mechanical sheer point protection.		
Removal of the (3) coupling bolts will allow simple disassembly of the planetary drive shaft from the main conveyor shaft, for ease of maintenance		
The flow control gate between main and cross conveyor shall be screw adjustable by hand crank from driver's side of dump body.		
The main conveyor flow control gate, will be flush and even with the front of the body, without any type of recess		
Flow control gate complete with position indicator		
Underside of main conveyor to be complete with full length guard with wash out opening to prevent material spillage on to chassis components and frame rails		
Material scraper's to clean chain flights prior to return on underside two one located at drive end of conveyor system a second one located at the idler end.		

Main Conveyor (cont'd):			
	Idler end of main conveyor system will include built in provision for future addition of planetary drive to provide reversible conveyor direction from inside cab.		
	Main conveyor motor 6 cu. inch displacement		
	Specify: _____		
Automated Main Conveyor Chain Tensioning System:			
	Conveyor chain tension to be regulated via a fully automatic chain tensioning system. This tensioning system will provide appropriate chain tension for the main conveyor chain at all times and under all normal operating conditions.		
	The fully automated chain tensioner will eliminate the requirement for any manual chain tension adjusting mechanisms such as conventional threaded rod and nut tensioners or hydraulic grease ram tensioners.		
	The chain tensioner idler roller shaft shall float via springs in vertical slots flame cut in the right and left side body long members		
	One chain tensioner idler roller shaft 1.50" x 32.5" 303 stainless steel		
	Chain tensioner idler roller shaft fitted with two cast polyurethane 90A Durometer 4" O.D. x 1.5" I.D. idler rollers		
	One chain tensioner idler shaft 1.50" x 32.5" 1144 stress proof steel		
	Two chain tensioner shafts 1.50" x 30" 1144 stress proofed steel each fitted with two 8 tooth 1.5" bore cast sprockets		
	Two automated chain tensioner springs attached to 5/8" x 10" eye bolts and at the other end to the spring arm weldment		
	The two right and left side automated chain tensioner spring arm weldments shall attach to the idler roller shaft and to the idler shaft		
	The bearings for the automated tensioning system shall have remote mount grease points located on the spreader body front head for easy access		
	Removable bolt on cover plate integral with right and left side body long members shall allow access to the extension springs and spring arm weldments.		
	Access to automated conveyor chain tensioning system shall be from the side(s) of the body, after removal of the protective cover plate.		

Cross Conveyor:		
	The cross conveyor shall be hydraulic direct drive.	
	The cross conveyor shall be bi-directional & the operator from inside the chassis cab shall be able to reverse the direction of travel of the conveyor from right to left or from left to right.	
	The cross conveyor assembly shall be used to discharge material from main conveyor to the left side spinner and or the right side material discharge chute	
	Cross conveyor assembly to mount on chassis frame independent from and in front of main combination spreader unit.	
	Cross conveyor unit shall be removable design to reduce added weight in non-spreading applications.	
	The cross conveyor shall be a seamless endless rubber belt	
	There shall be no conveyor or pintle chains used in the cross conveyor assembly	
	The belt shall be cogged design and driven by a positive drive system with drive and idler wheels	
	Friction drive design shall not be acceptable.	
	Left side gravel chute and right side gravel chute to be complete with 3/8" polymer linear	
Spinner Assembly:		
	Polyurethane spinner shall be installed on left side to spread ahead of rear wheels	
	Spinner vanes shall be curved design	
	A 3.0 cubic inch hydraulic motor shall drive the spinner assembly	
	The spinner height shall be adjustable from 20 to 28 inches below the mounting surface of the body.	
	The spinner shall be capable of spreading evenly up to a 20 FT radius with a main operating range of 0 to 15 FT radius.	
	Spinner assembly capable of discharge rate from 100 lbs./lane mile to 2500 lbs./lane mile.	
	Spinner position adjustable fore and aft horizontal along chassis frame rail	
	The spinner disc shall be complete with anti caking device that shall prevent material build up on the spinner disc	
	Hydraulic hoses to the spinner motors are to be complete with quick disconnect automatic sealing breakaway couplers and are to be assembled so that the male end may plug into the female end on the spinner motor and the hoist frame when the spinner assembly is disconnected.	

Spreader Control:		
	Latest generation Dickey-john Control Point or equivalent	
	Specify:	
	Make: _____	
	Model: _____	
	Two section Vickers pulse width modulated valve	
	In addition to the return line filter there shall also be a second spin on filter assembly on the pressure side of the hydraulic system with 3 micron element	
Mud Flaps:		
	Mud flaps shall be provided fore and aft of rear wheels, frame mounted via full width steel flat bar	
	Mud flap brackets shall be anti sail design	
Load Cover:		
	An air tarp shall be standard equipment with fabricated tarp arms dimensions of 1 ½" X 2 ½" steel tubing and 1/8" mesh tarp	
	Specify: _____ Arm Dimensions	
	The load cover shall be powered by twin air cylinders one each, mounted right & left side of body	
	Specify:	
	Cylinder Stroke: _____	
	Cylinder Diameter: _____	
	Tarp actuated via in cab control	
	Tarp arms shall be offset dog leg design	
	Exhaust from air cylinders shall be exhausted into chassis cab, to prevent salt damage to the cylinders.	
Pintle Hook:		
	Pintle plate braced and rated for up to 30,000 Lb. MGTW	
	Holland T60 swivel mount pintle hook with safety eyes on pintle plate	
	Seven wire trailer plug located in pintle plate with, relay board, and separate circuit, no splice connection to chassis wiring	

Lights & Wiring:		
	Lights and wiring shall be completely sealed with corrosion and vapor proof lamps Grote Ultra Blue Seal	
	Grote mini bar model 9200H blue and amber strobe, mounted on body cab shield, to be wired so they can be operated seperatly	
	Rear 4" oval Grote LED strobes one blue & one amber mounted in stainless steel enclosures on end of chassis frame rails to be wired so they can be operated separately.	
	LED 6" oval tail lights in rear body corner posts stop/tails/directional's	
	Spinner spot light 5" round	
	Quick detachable raised rear light bars one on right side and one on left side corner posts	
	Electrical plug in receptacle one in right side corner post and one in left side corner post for electrical connection of raised light bars	
	Lighting for raised upper light bars shall include two 4" red LED, two 7" red LED and one 4" blue strobe	
	LED 3-in-a-row and LED front and rear clearance lights	
Hydraulic Power Tilt Power Detach Plow Harness:		
	Viking model VCL 500HD or equivalent in compliance with the following specifications Specify: MAKE: _____ MODEL: _____	
	The front plow harness shall tilt forward to allow the chassis hood to tilt forward over centre of its pivots and stay open without the need of any additional supports	
	The harness tilt and return function shall be performed by the operator from inside the chassis cab via feather air over hydraulic control.	
	The plow and wing front harness to be easily and quickly hydraulic attachable or detachable as one unit (cheek plate). The assembly remains permanently with the vehicle even after the female coupler has been detached	
	The removable portion of the front harness shall attach or detach with the plow and wing all as one integral assembly	
	Swing arm: The male swing arm to be rotated on the shaft, and the hub ends are to be guided by four anti-friction polymer discs in the mounting bracket.	
	The swing arm is to be operated by two double acting hydraulic cylinders with the following specifications:	
	Piston diameter 2 1/2"	
	Piston rod diameter 1-1/18"	
	Stroke 6"	
	These cylinders shall permit the front harness to tilt forward by disengaging the top and engaging the bottom hydraulic operated lock pins.	
	The truck hood (cab) can be tilted forward for easy access to the engine without detaching the front harness from the truck.	
	Hydraulic locking shall be achieved by two double acting, hydraulic cylinders with chrome piston rods.	

Hydraulic Power Tilt Power Detach Plow Harness (cont'd):

One cylinder shall provide upper locking and the other cylinder shall perform the lower locking function.		
The lock cylinder control valve shall be a double acting two-spool mono block valve.		
The control valve shall be located inside a weather tight enclosure with vertical hinged opening lid and latch assembly located at the front driver side of the plow harness		
Two independent in cab feather joystick air controls will be pedestal mounted inside the chassis cab, one control will operate exclusively the plow lift function and the second control will operate exclusively the hydraulic power tilt function.		
Single valves & controls operating multiple functions will not be acceptable.		
The front plate will be one solid piece of 3/8 inch steel plate with cut out of sufficient size to allow cooling of the chassis radiator.		
Front plate minimum 44W steel plate Specify: Minimum Yield: _____ P.S.I. Minimum Tensile: _____ P.S.I.		
Overall height of the front plate will be 49 inches with a 5.25 inch 90° degree bend at the bottom.		
Overall width of the front plate will be 57.5 inches at the top and 40 inches at the bottom.		
Upper cross channel 6" by 52" 13 lbs./ft. welded to the right and left side plate		
End plate located on upper cross channel 1/2" material 12" x 6" to provide upper mounting location for wing front post		
Cheek plates will be specified to suite chassis frame rails, 1/2" steel plate and will extend back along the chassis frame rails as far as possible.		
Cheek plates minimum 44W steel plate Specify: Minimum Yield: _____ P.S.I. Minimum Tensile: _____ P.S.I.		
Fasteners attaching cheek plates to the chassis frame rails will be minimum grade 8 N.C. hex head bolts		
Two pairs of drive ears 100% welded to the front plate spaced at standard 30 1/2" centers		
Three sets of plow drive bar connection holes located in drive ears height to lower drive connection 19" mounted with truck empty		
Lift or grab link for nose chain shall be 18" minimum		
Hydraulic plow lift cylinder, double acting 4" diameter with 10" stroke, cylinder rod chrome plated		

Hydraulic Power Tilt Power Detach Plow Harness (cont'd):		
	Plow lift yoke 3/4" steel plate, braced with two 1/4" x 2" flat bar diagonal braces.	
	Two mounting locations in lift yoke to provide location for mounting of plow hydraulic lift cylinder in winter operating position and stored summer position	
	Mounting plates for plow lift cylinder lift yoke and lift yoke braces all 1/2" steel plate 100% welded to front plate.	
	Lift yoke brace mounting plates positioned to provide minimum 23.5" span.	
	Two sealed beam halogen plow lights with high and low beam and built in integral directional's	
	Right and left side plow light mounting brackets extending 7" up from top of front plate with light mounting positions on 55" centers	
	Vapor proof wiring for plow lights, with direct no splice plug in connection to OEM chassis wiring connection	
All Hydraulic Wing Harness:		
	These specifications describe an all hydraulic, single push arm tower less wing harness, with the ability to perform a high winging shelving operation and hydraulically extend and or retract the wing from inside the chassis cab to increase or decrease the cleared path.	
	Viking Model AHW001 or equivalent in compliance with the following specifications	
	Specify:	
	Make: _____	
	Model: _____	
	The wing operation shall be fully hydraulic, without the use of any sheaves, pulleys or cables	
	With the wing raised to the high wing working position the distance from the bottom of the cutting edge to ground level shall be 38" minimum	
	The wing, when attached shall have a fixed non-adjustable attack angle of 75° at all times and in all operating modes	
	The rear harness will incorporate one only single push arm assembly.	
	The push arm will be of telescopic design, outer tube 4" X 38 1/2" extra heavy pipe, inner tube 3 1/2" O.D. x 2 1/2" I.D. x 38 1/2" tubing.	
	The push arm assembly will incorporate a 3" x 23" double acting hydraulic extension cylinder.	
	The operator will be able to change the cleared path instantly from inside the cab from 7' to 9'.	
	The push arm lift cylinder will be 3 1/2" x 26" double acting.	
	When the wing is in the normal carrying position the push arm extension cylinder will be in the collapsed position, extending the extension cylinder will then push the wing forward allowing it to be carried in a position that will provide improved visibility from the right side chassis window.	
	The push arm will incorporate a safety compression style trip spring, 5/8" wire, 3 3/4" O.D. x 2 1/2" I.D., free length.	

All Hydraulic Wing Harness (cont'd):		
Safety prop to be provided, to secure wing in transport position, permanently attached to push arm outer tube, 24" long, 4.1 lb. ft. channel		
Extension cylinder oscillation will be achieved through two 3/4" I.D.X 2 1/8" O.D. spherical bushings press fitted and welded to 1/2" steel plate mounting lugs.		
The rear harness, when installed, shall not use up any cab to axle space and will allow the dump/sander body to be mounted directly behind the chassis cab, with minimum clearance.		
A rigid load carrying enclosure shall be provided to support the single wing brace and hydraulic lift cylinder.		
The rear supporting structure shall extend across both chassis side rails and along the right side to provide a distribution of the wing load under heavy-duty operation.		
The portion of the rear supporting structure that extends across the chassis side rails will be 1" thick steel plate.		
Further support shall be provided by a diagonal pipe brace running back and attaching to the chassis side rail.		
For fast and simple installation of the wing brace and hydraulic cylinder, to the rear harness, there will be a maximum of one only connection point with one single removable lock shaft.		
The front post shall be fabricated of 8" I Beam 18.4 lbs/ft minimum.		
The front post will be a minimum of 48" in height.		
Guide bars will be provided for the slide assembly running, for the full height of the wing post.		
To lift the front of the wing a 3" X 48" double acting hydraulic cylinder will be mounted in the rear inside of the front post.		
The main supporting member for the front post will be 4" O.D. x 2 3/4" I.D. x 5/8" wall tube cross member running through both cheek plates, reinforced with a 1/2" steel plate between the cheek plate and front post.		
Front slide to be provided, with a safety trip hinge assembly, the wing will return to the normal position after it has tripped.		
Front slide shall be minimum 7" in width		
The safety trip block will be vertically mounted on the trip hinge above the inner and outer trip blocks connected by a .75" x 24.5" stud bolt.		
The hinge is designed to lift the wing as it trips through a trapezoidal design.		
Trip block will be rubber with a triple convolution and a 55 density rating composition.		
Wing slide 3/4" thick steel plate, 72" overall length by 6 3/4" wide.		
Slide travel 60" minimum with provision for 14" minimum float.		
The rear of the wing shall have a hydraulic built in float position		
The operator from inside the chassis cab shall be able to select either the rear wing float operation mode or non float operation mode via the detent position supplied in the rear of wing feather joystick air control		
Wing spot light supplied and installed		
Convex mirror 12" mounted on front wing post.		
Aeon rubber helper installed right side front to prevent chassis sag to right with wing installed		

All Hydraulic Wing Harness (cont'd):		
	Chassis reinforcement located approximately 10" behind cab between chassis frame rails, designed to with stand forces exerted during a winging operation	
	Consisting of two cross members 8" with 3" 90o bend at top and bottom, 30" wide	
	Four frame plates two top side and two bottom side 22" long by 12" wide with 3" 90o bend	
	Frame plates 100% welded to cross members, cross members welded 100% back to back and assembly bolted to chassis frame rails with grade 8 Hex head bolts	
	All fabricated from structural steel plate 44W 65-90 KSI tensile strength, 44 KSI minimum yield point	
One Way Snow Plow With Power Tilt Mould Board:		
	Viking Model VCL 135HSE9 or equivalent in compliance with the following specifications	
	Specify: Make: _____	
	Model: _____	
	Shall be constructed to prevent the accumulation of water in any area.	
	The plow shall have a hood extending 18" past the vertical center line, in normal operating positions	
	All ribs shall be of one-piece construction 100% welded both sides to the moldboard.	
	The top edge of the moldboard shall be welded 100% to the ribs.	
	The top rail of the moldboard shall be manufactured of 2 1/2" X 2 1/2" angle iron and welded 100% to the ribs and moldboard with a continuous bead.	
	All other welds must also be 100%.	
	The thickness of the moldboard and hood shall be of 10 U.S.S. ga. (.1345).	
	The moldboard shall be pivoted to allow tilting in different positions.	
	Moldboard attack angle shall be adjustable from with inside the chassis cab via feather air control an additional double acting valve section shall be incorporated in the main valve stack for this function	
	Attack angle indicator visible to the operator from inside the chassis cab	
	Male end of adjusting brace assembly to be solid steel.	
	Both male and female ends shall have 5/8" mounting pins.	
	The female end shall be at the top to prevent the accumulation of water	
	The distance from the centerline of the holes to the end of the drive bar shall be 1 1/2".	
	The distance from the centerline of the holes to the end of the drive bar shall be 1 1/2".	

Wing:		
	These specifications describe a 12' snow plow wing, with rear side completely enclosed and smooth paneled the moldboard contour is designed to provide a superior cast over traditional wings, provision supplied for attachment of one only single hydraulic wing brace.	
	Fitted with oscillating beam to suite Quick-Tach hitch.	
	Viking model VCL AHW 12 or equivalent in compliance with the following specification Specify; Make: _____ Model: _____	
	Overall length 12 feet.	
	Inside intake height 28".	
	Outside discharge height 34".	
	Moldboard thickness 3/16" minimum.	
	Moldboard smooth rolled formed	
	The rear side of the wing moldboard will be completely enclosed and smooth paneled.	
	Rear of wing enclosure two piece assembly consisting of moldboard channel 3/16" plate 12 5/8 X 143 5/16" top angle 3/16" plate 9 7/16" at intake end 18 1/16" at discharge end 143 5/16" overall length.	
	The three discharge end caps are 3/16" plate all welded 100% to the mould board face the rear upper moldboard top angle and the rear lower moldboard channel.	
	Moldboard will be reinforced without the use of vertical ribs, horizontal internal reinforcement supplied.	
	One knuckle weldment for connecting the single push arm.	
	Lower wing angle shall be 5/8" X 4" X 4".	
	Backer angle reinforced with 4 gussets 1/2" X 3" X 3" and 8 angle stiffeners 3/16" X 4".	
	Fold out adjustable link arm to support wing brace when attaching or detaching wing from harness attached to rear of wing	
	Wing shall be complete with height adjustable parking stand	
	Valley Blades three piece high wear wing blade	
	One curb shoe	
Pavement Edger		
	AMI Attachments Pavement Edger to be supplied and installed on passenger (right side) of chassis frame rail behind cab	
	The bi-directional spreader cross conveyor shall feed material to the edger	
	The edger shall be modified to allow installation on a maximum clean and clear CA of 146" along with all other equipment specified in this tender document	
	Installation layout drawing showing dimensions and positioning of pavement edger shall be included with the tender submission	
	The two hydraulic functions for the edger, gate and lower/lift shall be operated by the existing wing extension and wing lift valves and in cab controls	
	Hydraulic quick disconnect couplers shall be installed on the hydraulic hose for edger gate and edger raise lower	

THE CORPORATION OF THE TOWNSHIP OF SOUTH-WEST OXFORD

Bidder: _____

Address: _____

Telephone: _____; Fax: _____

E-Mail: _____

Chassis

Delivery Date: _____

Name: _____; Title: _____

Signature: _____

Signature Date: _____

Truck _____

Make: _____

Model: _____; Year: _____

Sander/Dump Box & Snow Equipment

Make: _____

Delivery from Receipt of Chassis (# of weeks) _____

Price as per Specification:

Truck Chassis \$ _____

Sander/Dump Box & Snow Equipment \$ _____

Subtotal \$ _____

G.S.T. \$ _____

P.S.T. \$ _____

Total Tendered Price \$ =====