

COUNTY OF MIDDLESEX

SPECIFICATION AND CONFIRMATION FOR TWO TRUCKS WITH COMBINATION DUMP & SPREADER BODY, SNOWPLOW HARNESS, AND WING G.V.W. 68,000 LB

UNITS REQUIRED: **T-16 and T-25**
TWO New 2015 Trucks with Combination Body,
Snow Plow Harness, Metro Wing Tower, Snow Wing
and Pintle Hook Package

SUBMISSION OF QUOTATIONS:

Sealed Quotations, plainly marked as to contents, addressed to:

Chris Traini, P.Eng.
County Engineer
County of Middlesex,
399 Ridout Street North,
LONDON, ONTARIO
N6A 2P1

will be received until 12 o'clock noon, local time on

WEDNESDAY OCTOBER 22, 2014

SPECIFICATIONS:

The units offered by the Bidder should meet the following County specifications. The Bidder shall indicate opposite each paragraph in the space provided the actual specification of his unit.

The vehicle shall meet or surpass the mandatory requirements of the "Canadian Motor Vehicle Safety Regulations (S.O.R. 70-487) amended".

The County of Middlesex reserves the right to accept or reject any or all quotations in whole or in part for any reason or concern without any claim whatsoever because of cancellation. The County reserves the right to accept or reject any of the options listed as they see fit.

SPECIFICATIONS

CONFIRMATION

(n)	Batteries shall be mounted in-cab under passenger seat – or in such a way as to not interfere with body builder equipment and close enough to cab to prevent voltage loss to ECM. SPECIFY LOCATION:	YES		NO	
(o)	For the hydraulic pump, a minimum 4 in. diameter opening through the radiator shall be provided centered with the crankshaft of the engine to allow adequate clearance of the P.T.O. shaft. Crankshaft shall be provided with an adapter for P.T.O drive	YES		NO	
NOTE:	Where a crankshaft is located low enough to allow the front mounted pump to operate with sufficient clearance below the radiator, the 4 in. opening in the radiator is not required.				
(p)	Anti-freeze shall be Extended life and supplied to - 35°C	YES		NO	
(q)	Fan clutch - shall be an air controlled Horton Drivemaster automatic with on/off control model and 2-speed hub model Type:	YES		NO	
(r)	High temperature and low oil pressure engine protection alarm bell or buzzer device shall be installed.	YES		NO	
(s)	All coolant hoses shall be silicone	YES		NO	
(t)	Air Compressor - Cummins 18.7 cfm min Type:	YES		NO	
(u)	Coolant filter/conditioner shall be installed.	YES		NO	
(v)	The radiator shall be Aluminum	YES		NO	
(w)	Engine shall be programmed that engine idle time does not exceed 10 minutes	YES		NO	

4. TRANSMISSION:

(a)	Transmission shall be a 13 speed Fuller RTLO- 16913A	YES		NO	
(b)	Transmission input shaft shall have heavy duty roller bearing 2 inch spline with 1.18 inch pilot option.	SPECIFY			
(c)	Transmission shall be equipped with an oil cooler	SPECIFY			
(d)	Transmission shall be filled with synthetic oil	SPECIFY			
(e)	Clutch - 15.5 in .dia. dual plate Ceramic Faced Spicer Easy Pedal Clutch	SPECIFY			
(f)	Clutch complete with a clutch brake shall be supplied	YES		NO	
(g)	Clutch pedal shall be grate type	YES		NO	
(h)	All pedals shall be suspended, not floor mounted	YES		NO	
(i)	Remote grease fittings for clutch cross shaft shall be supplied	YES		NO	
(j)	TCM to be in-cab	YES		NO	

5. CHASSIS

(a)	Clean C.A. - 138 in. approx., no obstruction of SCR/DPF. MUST CONFIRM WITH BODY BUILDER	SPECIFY	in
(b)	Front spring capacity, at the ground - 11,000 lb each minimum	SPECIFY	lb
(c)	Rear Suspension capacity, at the ground - 23,000 lb each	SPECIFY	lb

SPECIFICATIONS

CONFIRMATION

(d)	Base Length (centre of front axle to centre of rear drive axle) 210 in. approximately	SPECIFY in		
(e)	Rear Suspension shall be Hendrickson Haulmaxx HMX-460-54 with shocks for both axles.	YES	NO	
(f)	Front Springs shall be heavy duty multileaf	YES	NO	
(g)	Front rubber auxiliary springs shall be installed on each side	YES	NO	
(h)	Bidders to submit schematics of related O.E.M 2014 emissions with bid submission, i.e. DPF/ SCR and urea tank location, exhaust routing.	YES	NO	

6. CAB:

(a)	Conventional Cab with PREMIUM DELUXE INTERIOR PACKAGE. Full front tilt hood (complete with chrome stationary grille separate from hood, fixed in front of rad) that will not interfere with a front mounted P.T.O. Hydraulic Pump. A bug screen and rock guard shall protect rad and any other front mounted coolers	YES	NO	
(a1)	Engine service hood hatches shall be provided on tilt hood for access to oil dipstick, filler tube and rad check. Enhanced dipstick located for checking oil when hatch is opened. (Note: dipstick locate not to be at back of engine where you have to tilt hood to check oil level	YES	NO	
(a2)	Cab shall have air ride suspension	YES	NO	
(b)	For sound (Max 80 D.B.A. interior cab noise) and heat protection, deluxe interior insulation with padded door trim panels / map pockets are required on each door, padded insulated cloth headliner and complete back panel. Heavy duty under floor insulation with heavy duty rubber floor matting. Overhead console with netting for storage pockets.	YES	NO	
(c)	Heavy duty, high back, DARK GREY colour, 100% CLOTH seats with foam rubber cushions.	SPECIFY		
(d)	The driver's seat shall be a NATIONAL 2000 Model (or equivalent) with arm rests, and must have a fully adjustable air ride suspension, with fore/aft leg reach setting, front seat cushion height adjustment for leg support and manually adjustable lumbar supports	SPECIFY		
(e)	The passenger's seat shall be fully padded and of heavy duty construction and non-air ride if batteries located under seat. SPECIFY: _____	YES	NO	
(f)	Power windows and doors locks shall be supplied with controls on both doors and controls for both doors on drivers door	YES	NO	
(g)	Floor mats – Heavy duty rubber for driver and passenger side	YES	NO	
(h)	Sun Visors - Dual adjustable plus fold down for side window on drivers side.	YES	NO	
(i)	Windshield Wipers - shall be Heavy Duty with intermittent feature Winter wiper blades shall be winter/snow type. Shall also include O.E.M. cowl tray at bottom of windshield to protect wipers from snow buildup.	YES	NO	

SPECIFICATIONS

CONFIRMATION

(j)	Mirrors - two outside, shall be supplied and shall be 6" x 16" minimum, chrome or stainless steel HEATED POWERED BOTH SIDES West Coast type with LED clearance lights. Also two matching 6 in. HEATED convex mirrors shall be supplied. Chrome look down mirror on passenger side	YES	NO	
(k)	All mirrors shall be electrically heated to prevent fogging and ice build up	YES	NO	
(l)	Fresh air heater and defroster with 5 speed fan and side windows defroster	YES	NO	
(m)	Factory installed, cab pressurizing air conditioning shall be supplied	YES	NO	
(n)	Electronic engine hand throttle cruise control shall be supplied	YES	NO	
(o)	Fuel, engine temperature and voltmeter gauges shall be supplied	YES	NO	
(p)	Electronic reading oil pressure gauge shall be supplied complete with an automatic low oil pressure engine kill switch.	YES	NO	
(q)	Tachometer and engine hour meter shall be supplied	YES	NO	
(r)	Air filter restriction DIAL gauge shall be mounted in the dash	YES	NO	
(s)	Two in dash cup holders shall be supplied	YES	NO	
(t)	18" tilt/telescoping steering wheel with steering column tilting	YES	NO	
(u)	The complete unit shall have an application of Krown Rust Control. This includes removing lights on rear of box and spraying inside areas	YES	NO	
(v)	Exterior towel bar and interior yellow grab handles on each side to assist easy entry and exit	YES	NO	
(w)	2 air horns - shall be supplied complete with snow shields. Dual electric horns.	YES	NO	
(x)	The chrome vertical exhaust stack shall have a heat guard for burn protection	YES	NO	
(y)	AM - FM clock radio shall be supplied	YES	NO	
(z)	Bluetooth compatible for mobile phones	YES	NO	
(aa)	O.E.M. electric heated windshield shall be supplied	YES	NO	
(bb)	O.E.M. tinted windows shall be supplied	YES	NO	
(cc)	Front fender rubber extensions on each wheel opening to help check road spray complete with full width lower extended splash guards	YES	NO	
(dd)	Full inner fender splash guards designed to keep engine area free of snow/sand	YES	NO	
(ee)	The electrical system shall be supplied with circuit breakers where possible. Also in dash 12 volt power outlet supply shall be included	YES	NO	
(ff)	All electrical connections shall be waterproofed with Glyptol or equivalent	YES	NO	
(gg)	An inter vehicle interfacing electrical junction block for body builders lighting connect shall be mounted in cab behind drivers seat	YES	NO	
(hh)	If programmable safety features are available, such as pre-trip exterior light inspection etc., they shall be included	YES	NO	
(ii)	Exterior aerodynamic sunshade (sunvisor) painted to match cab colour, sunvisor to have recessed LED clearance lights	YES	NO	

SPECIFICATIONS**CONFIRMATION**

(jj)	5 lb fire extinguisher mounted beside driver's seat and accessible when door opened	YES	NO	
(kk)	Triangle reflector and first aid kit shall be supplied and installed	YES	NO	
(ll)	Wiring in the center of the header console for two-way radio	YES	NO	
(mm)	Lower cab skirting under cab door entry – both sides	YES	NO	

7. FRAME:

(a)	Axle to rear of frame distance to be 62 in. min.	SPECIFY			
(b)	Frame shall be supplied as follows:				
MAKE	FRAME	REINFORCING	MATERIAL YIELD STRENGTH	SECTION MODULUS	RESISTANCE BENDING MOMENT
Freightliner and Western Star	11 1/8" x 3 9/16" x 7 1/16"	1/4" 'C' channel	120,000 PSI	30.0	3,840,000
NAVISTAR	10.125" x 3.580" x 0.312"	'C' channel 10.83" x 3.892" x 0.312"	120,000 PSI	31.10	3,421,000
Resisting bending moment (Section Modulus x yield strength) shall be 3,100,000 lb. in. min. Section Modulus shall be 28.0 minimum.					
SPECIFY MAKE					
FRAME SIZE					
REINFORCING SIZE					
MATERIAL YIELD STRENGTH					
SECTION MODULUS					
RESISTANCE BENDING MOMENT					
(c)	A MTO bridged cross member shall be installed within 10 in. of rear of cab to transfer snow plow wing push to each frame rail.	YES	NO		
(d)	Left side of frame shall be kept clear 90 in. forward of centre of rear axles for the sander spinner	YES	NO		
(e)	Minimum 24" integral front frame extensions with 1/4" frame insert shall be supplied FOR Western Star and Freightliner	YES	NO		

8. STEERING

(a)	Power steering shall be supplied with dual steering boxes	YES	NO	
(b)	There shall be a filter for the steering fluid and it shall be serviceable without dismantling any power steering components	SPECIFY		

9. AXLES

(a)	SET BACK front axle shall be 22,000 lb. capacity minimum with 11,000 lb. spring rating each side.	CAPACITY			lbs.
(b)	Rear axle shall be 46,000 lb. with HENDRICKSON Haulmaax HMX-460-54 46,000 lb. suspension capacity min.	CAPACITY			lbs.
(c)	Front axle shall be SET BACK and have Oil Bath wheel bearings and front shock absorbers.	YES	NO		
(d)	Rear axle shall have a oil pump and filter	YES	NO		
(e)	Rear axle spacing shall be 54 in. between the axle centres	SPREAD			in

SPECIFICATIONS

CONFIRMATION

(f)	Rear axle shall be single speed	YES	NO	
(g)	Rear axles shall have power divider full locking differentials with driver control on dash – axles lock in forward rear and rear to rear axle.	YES	NO	
(h)	Rear axles shall be filled with synthetic oil	YES	NO	
(i)	A driveline analysis shall be provided	YES	NO	
(j)	Road speed at rated RPM in top gear shall be 105 km/hr approximately	SPECIFY SPEED km/hr		
(k)	State axle ratio for best startability and gradability	SPECIFY		
(l)	Following is a list of approved axles:-			
	Dana Spicer	D46-170P/R46-170		
	Rockwell	RT-46-164PEH		
	MAKE	MODEL		

10. BRAKES

(a)	Service Brakes - full air brakes shall be supplied with ABS	YES	NO	
(b)	Rockwell front brakes, size 16.5 x 6 in. min. shall be supplied. S Cam type	SPECIFY TYPE: SIZE mm		
(c)	Rockwell rear brakes, size 16.5 x 7 in., min. shall be supplied. S. Cam type with four Anchorlok Life Seal 3030 brake chambers	SPECIFY TYPE SIZE mm		
(d)	Brakes shall be in accordance with MVS 121 U.S. Standards	YES	NO	
(e)	Bendix Westinghouse AD-9 air dryer to be supplied SPECIFY	YES	NO	
(f)	Brake chambers on rear drive axle shall not extend beyond rear tires	YES	NO	
(g)	Slack Adjusters - shall be equipped with Gunite slack adjusters	YES	NO	
(h)	Truck to trailer brake package with 7 wire trailer plug and glad hands to rear of chassis frame. In-cab 'spike' hand brake control on steering column and trailer maxi brake in-dash control.	YES	NO	

11. WHEELS AND TIRES

(a)	Front rims and hubs shall have a load rating of 12,500 lbs each Front rims shall be Accuride ALUMINUM disc # 29374 ANP - 22.5 X 12.25 with 4.75 inset, hub pilot. Specify rim type, Accuride #, load rating	YES	NO	
(a1)	Rear rims and SPARE rim shall be Accuride ALUMINUM disc #29644ANP - 22.5 x 8.25 Specify rim type, Accuride #, load rating	YES	NO	
(a2)	Specify hub type, make, part #, load rating			
(b)	Front tire size shall be 425/65R x 22.5 - 20 ply steel belted radials	SPECIFY		
(c)	Front tires shall be Michelin XZY-3	SPECIFY		
(d)	Dual rear wheels for rear axles shall be supplied	YES	NO	
(e)	Two wheel guard nylon rings per wheel shall be installed	YES	NO	

SPECIFICATIONS**CONFIRMATION**

(f)	Rear wheel rim size shall be 22.5 x 8.5 in	SPECIFY
(g)	Rear tires shall be Michelin XDS2-16 ply	SPECIFY
(h)	One spare tire Michelin XDS2 16 ply mounted on ALUMINUM rim shall be supplied	SPECIFY

12. PAINT

(a)	Paint shall be C.I.L. Morency Orange or equivalent Omaha Orange	YES	NO
(b)	Chassis frame, axles and hubs O.E.M. Imron 5000 BLACK	YES	NO
(c)	Door Lettering	NOT REQUIRED	

13. FUEL TANK

(a)	80 U.S. gallon / 302L tank shall be supplied. Tank shall not extend beyond rear of cab. This area may be needed for spinner modifications SPECIFY: _____ gallons/ B.O.C w/DPF tank _____”	YES	NO
(b)	Tank shall be mounted on left hand side and shall include a helper step fastened to bottom of tank	YES	NO
(c)	Cab entry steps to be expanded aluminum ‘BUSTIN’ style in lieu of standard steel	YES	NO
(d)	The tank shall be constructed of non polished aluminum	YES	NO
(e)	Fuel tank straps and helper step shall be stainless steel to protect aluminum fuel tank from rusting.	YES	NO
(f)	The urea tank shall have a minimum of 6 gallons capacity. Specify location: _____	YES	NO

14. LIGHTS & WARNING DEVICES

(a)	Two, fender mounted 4 in. diameter amber directional lights, facing front	YES	NO
(b)	Rear red directional lights shall be supplied	YES	NO
(c)	Stop/tail lights shall be supplied	YES	NO
(d)	Five identification streamlined cab clearance lights mounted in exterior colour coded cab deflector shall be supplied	YES	NO
(e)	Four-way flashers shall be supplied	YES	NO
(f)	Back-up lights shall be supplied	YES	NO
(g)	102 dba back-up alarm with volume control shall be supplied	YES	NO
(h)	All rear and clearance lights shall be LED where available SPECIFY:	YES	NO
(i)	An O.E.M. auxiliary plow light wiring harness with dash switch shall be supplied	YES	NO
(j)	O.E.M. wiring junction box behind driver’s seat for body builders plug in of body lights	YES	NO
(k)	Turn signals shall be self cancelling	YES	NO

15. WARRANTY AND SERVICE LITERATURE

(a)	Signed Manufacturer’s factory warranty shall be supplied	YES	NO
(b)	Shop Manual and Parts Book shall be supplied including Shop Manual for Engine	YES	NO
(c)	The price for a OPTIONAL five year Drivetrain Warranty which includes (transmission and rear ends) and a 7 - Year 250,000 mile vocational internal protection extended engine	YES	NO

SPECIFICATIONS

CONFIRMATION

	warranty. This warranty will also cover all genuine engine parts and the after treatment support system. OPTIONAL warranties shall be included but separate from quotation bid price.			
(d)	OPTIONAL: Allison 4500RDS-P 6 speed automatic transmission with keypad on dash, transmission cooler with in-dash temperature gauge, synthetic transmission fluid. Include literature and standard warranty with bid submission. OPTION shall be included but separate from quotation bid price.			
(e)	The dealer pre-delivery inspection will not be performed until after the completed truck is returned from body installer and ready for delivery. All warranties to start and go into affect once completed unit put into service by the County.	YES	NO	
(f)	Upon delivery a <u>DETAILED LIST</u> shall be supplied stating filter and belt numbers, all types of fluids required and their drain intervals, and all time frames for regular maintenance work	YES	NO	
(g)	A qualified technician shall provide 2 hours of training per unit to County employees when each unit is delivered and 2 additional hours for first maintenance procedure	YES	NO	

<u>NOTE:</u>	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. This also includes all items associated with the new DPF/SCR system
---------------------	--

16.

TRADE-IN	NO COUNTY TRADE-IN
-----------------	---------------------------

17. DELIVERY DATE:

(a)	Number of weeks after receipt of purchase order	SPECIFY: _____ weeks
-----	---	----------------------

<u>NOTE:</u>	Complete manufacturer's literature and specifications shall accompany each quotation
	These specification sheets shall be completed and returned with the quotation form along with a copy of detailed chassis line setting ticket specifications
	The unit shall be delivered to the County Garage 5 km. west of Hyde Park on County Road #17
	Licencing shall be done by the County. Annual Inspection Sticker supplied by truck dealer.

18. BODY MANUFACTURE: Only approved equipment supplier accepted: VIKING-CIVES LTD.

ISO9001 – 2008 REGISTERED

Transport National Safety Mark #

(B) GENERAL REQUIREMENTS FOR COMBINATION DUMP SPREADER BODY AND HOIST

(a)	MAKE: Viking	MODEL: Proline 1415HW 'U' body		
(b)	The box shall be mounted within 19 in. of the rear of the cab	SPECIFY		
(c)	Body weight including hoist must not exceed 7,200 lbs	SPECIFY		lbs
(d)	Body shall be smooth U shaped allowing unloading by gravity flow in spreading position. No breaks or forming of sides	YES	NO	
(e)	Body sides shall be 3/16 Cor-Ten A corrosion resistant steel. All welds will be 100% continuous inside and outside	YES	NO	
(f)	Floor, front panel and tailgate shall be 3/16 Cor-Ten A steel	YES	NO	
(g)	The top longitudinal rail of body shall be 6" x 4" x 3/8" rectangular tubing	YES	NO	
(h)	Tailgate shall not be any higher than 62 inches SPECIFY	YES	NO	
(i)	Tailgate shall be constructed of 3/16" Cor Ten A steel with 3/16 formed cross bracing	YES	NO	
(j)	Tailgate shall be supplied with coal gate with adjustable lever to curbside	YES	NO	
(k)	Tailgate latch mechanism shall be air trip using two 30/30 air brake chambers complete with steel bolt on chamber covers	YES	NO	
(l)	Spreader chains and brackets shall be supplied and chains shall be grade 70 5/16"	YES	NO	
(m)	Hoist shall be three stage telescopic with a 5 1/2 inch bore. Each stage shall be completely sealed. Hoist to be nitrated.	YES	NO	
(n)	Hoist class shall be minimum 80/30 ton Mailhot Specify:	YES	NO	
(o)	The dump box tipping angle shall be 50 degrees	YES	NO	
(p)	The hinge diameter shall be 2 1/2 inches and the centre of hinge pin shall be 53" behind centre of rear axles. Hinge to have grease fittings.	YES	NO	
(q)	The dump body shall operate from a double locking air control connected to the snowplow hydraulics	YES	NO	
(r)	Body length shall be 15 feet. – SPECIFY _____	YES	NO	
(s)	Height of sides shall be not any higher than 53 inches from floor SPECIFY	YES	NO	
(t)	Distance from floor of box to ground shall be 50 inches. If required a 4 inch sub frame shall be installed constructed of 4 inch structural tubing and braced sufficiently	YES	NO	
(u)	Water level capacity 14 cubic yards	SPECIFY		
	Water level capacity 17 cubic yards with 8" boards	SPECIFY		
(v)	The tarp shall be a 90 in. wide durable mesh type	YES	NO	
(w)	Covering and uncovering of the box shall be by means of a front mounted tarp spring / roller and side mounted aluminum swing arms air operated by two outboard air operated tarp cylinders	YES	NO	
(x)	Dog legged 1 1/2" x 1 1/2" tubular aluminum tarp arms	YES	NO	

SPECIFICATIONS

CONFIRMATION

(aa)	The system shall be driver controlled by means of a in-cab control device mounted on floor pedestal beside drivers seat	YES	NO	
(bb)	There shall be an override that will allow manual operation of the system if the power operator fails	YES	NO	
(cc)	The main conveyor shall be recessed along the center length of the dump box floor. Main conveyor floor is ¼” HARDOX 450. Conveyor width 25.75”. Rear cleanout screen to be pinned.	YES	NO	
(dd)	The main conveyor shall be 25:1 50,000 lb. planetary hydraulic direct drive with a minimum of 38,000 lbs torque	YES	NO	
(ee)	The main conveyor chain shall be #30,000 minimum tensile strength pintle chain with 1/2" x 1 1/2" crosses welded every 9"	YES	NO	
(ff)	The cross conveyor shall be hydraulic direct drive and consist of #17,000 pintle chain with 1/2" x 1 1/2" crossers every 4". Cross conveyor to bolt to chassis and be easily removed for off season. Cross conveyor table and spinner assembly prepped and painted Imron 5000 Elite SS Medium Gloss Black.	YES YES	NO NO	
(gg)	The discharge gate shall be adjustable by hand crank from drivers side with calibration / gate height sticker.	YES	NO	
(hh)	An adjustable polyurethane spinner shall be provided on the drivers side ahead of rear wheels with quick attach dripless hydraulic couplers. Anti coning device for spinner. Fold down sand and salt chute - poly lined.	YES	NO	
(ii)	A system shall be provided to lay salt down in a narrow strip, shall be hinged to swing up when not in use, and must not plug due to snow or slush on the highway	YES	NO	
(jj)	The body operation shall be powered by snowplow harness hydraulics	YES	NO	
(kk)	The hydraulic reservoir shall be equipped with above tank top mount low oil level indicator with gauge part# 0560116 with in cab warning light and buzzer. Standard side mount oil gauge not required because of above tank top mount level indicator.	YES	NO	
(ll)	The hydraulic reservoir shall be of sufficient capacity to operate plow, wing, sander and dump body. Equipped with sight / temperature gauge and ball valve shut offs.	YES	NO	
(mm)	The hydraulic reservoir shall be combined with the valve body enclosure similar to Bosch Rexroth # CS-VTM-160-RFM-100-R-L-B-S-T-F-XX SPECIFY:	YES	NO	
(nn)	Fenders fully enclosed are required to run continuous length of dump body and shall be 100 % welded.	YES	NO	
(nn1)	Aluminum fenders over rear tandems pinned and bracketed to underside of box that are easily removable, fenders to fit 54” spread. Front mud flaps to be chassis mounted	YES	NO	
(oo)	Mud flaps shall be mounted fore and aft of rear tandems	YES	NO	
(pp)	A completely sealed Grote Ultra Blue body wiring harness package shall be supplied	YES	NO	
(qq)	The light system shall include dual stop and tail lights, backup lights, clearance and identification lights to conform to current CMVSS All lights shall be LED where possible.	YES	NO	
(rr)	An amber and blue strobe light (Star# 16884) shall be installed on a adjustable height pedestal behind cab, with separate in cab	YES	NO	

SPECIFICATIONS

CONFIRMATION

	switches. Also one Grote amber and one blue strobe shall be mounted each side of the tailgate			
(ss)	Two upper aluminum M.T.O. rear light posts complete with 2 six inch brake lights, 2 six inch turn signal light/stop lights. Grote upper LED blue strobe on drivers MTO pole-amber on curbside, 2-six inch Grote back-up lights- L.H./ R.H. aimed @ ground and hooked into O.E.M. reverse switch: 2 power cords complete with seven prong trailer plugs. Grote 6” back-up light bracket-lower drivers side of gate-hooked into O.E.M. reverse switch. Grote 6” spot light B.O.C. for conveyor-switch in cab.	YES	NO	
(tt)	The body shall be shot blasted, zinc primed and painted with DuPont Imron 5000 Elite SS baked finish ORANGE to match cab of truck. Top of integral steel body fenders including the rubrails and forward face of rear body posts to be Line X’d., colour coded to body.	YES	NO	
(uu)	Underside of body fenders and whole floor structure shall be covered with Line X in BLACK. Top of body rails where steel sideboards install including the sideboard pockets to be Line X’d. colour coded to body - before boards get installed.	YES	NO	
(vv)	A dump body MTO fold-up aluminum access ladder with fold up step shall be recessed flush with dump body rail and located on driver’s side front corner	YES	NO	
(ww)	A steel cover for the main conveyor shall be supplied	YES	NO	
(xx)	Provision for County to add Screens for winter use shall be Supplied- SCREENS NOT REQUIRED	YES	NO	
(yy)	Eight inch steel side boards Line X’ black prior to install and shall be installed as to not affect screens	YES	NO	
(zz)	Parts and shop manual shall be supplied	YES	NO	
(aaa)	Provisions shall be made to keep main conveyor chain from dumping sand on undercarriage via polyliner.	YES	NO	
(bbb)	Red and silver reflective tape full length on both sides and rear of box	YES	NO	
(ccc)	Shovel holder installed left side front of box	YES	NO	
(ddd)	A MP Filtri high pressure filter assembly with 10 micron absolute return line filter assembly shall be supplied.	YES	NO	

(C) GENERAL REQUIREMENTS FOR HYDRAULIC PUMP

1	The hydraulic front mount pump shall be a Bosch Rexroth 100 cc #A10V0100DFR/31L SPECIFY - MAKE _____ MODEL _____	YES	NO	
2.	The front mounted pump shall have a capacity of 48 G.P.M.	YES	NO	
3.	Supplier and manufacturer to warrant the pump to operate the spinner and conveyor at the maximum level of performance with enough capacity to operate one other function	YES	NO	
4.	Pump mounting plate complete with machined tubed balanced drive shaft with grease fittings shall be supplied. Pump drive shaft to have safety guard over it for protection.	YES	NO	

SPECIFICATIONS**CONFIRMATION**

5.	The pump assembly shall be driven directly from the crankshaft of the truck engine	YES	NO	
6.	The pump shall have an RPM rating equivalent or higher than that of the truck engine at governed speed	YES	NO	
7.	The drive shaft shall be supplied with spline long enough to allow telescopic retraction of the shaft in order to change fan belt without removing the pump	YES	NO	
8.	Hydraulic hoses to connect pump shall be supplied. Their size shall be adequate for quick operation of all hydraulic operations and shall be 2 wire braided steel -70 degree + 260 degree rated with 3 1/2 "bend radius SAE100R16, with swivels on both ends. HOSES SHALL NOT INTERFERE WITH OIL OR FUEL FILTERS ALL HYDRAULIC HOSES TO BE WRAPPED IN PARTEC KEVLAR HOSE WRAP	YES YES YES	NO NO NO	
9.	All pressure lines must have minimum rating of 4,000 PSI	YES	NO	
10.	Hydraulic valves to be Bosch-Rexroth M4.	YES	NO	
11.	Main hydraulic valve sections to be split: One section @ front of chassis in behind the plow harness on passenger side for plow up/down: tilt harness and front wing functions-bolt on protecto cover plate for valves. Second section of valves B.C. above frame in an enclosed steel cabinet for: rear wing, body hoist and conveyors	YES	NO	
12.	A spare parts manual shall be supplied with each unit	YES	NO	
13.	The pump shall have a two year warranty	YES	NO	

(D) GENERAL REQUIREMENTS FOR ALL HYDRAULIC WING HARNESS

(a)	Front post shall be a Viking model VCL225 METRO hydraulic with no cable or sheaves	YES	NO	
(b)	The post shall be a 8" I Beam at 18.4 lbs/ft.	YES	NO	
(c)	The post shall be designed for heavy duty service and incorporate a double acting hydraulic ram to operate the front of the wing	YES	NO	
(d)	The main supporting member for the front post shall be 4" OD x 2 3/4" ID 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	YES	NO	
(e)	The auxiliary support shall be a 6 x 13 lb/ft channel running across the top of both cheek plates	YES	NO	
(f)	Aeon 5,000 lb. capacity rubber helper spring kit shall be installed to the right hand O.E.M. front springs to support wing function.	YES	NO	
(g)	The slide and hinge assembly shall be equipped with a torsion spring which will allow the spring to trip over obstacles and return to its normal position.	YES	NO	
(h)	The front post shall be reinforced with a diagonal brace of heavy pipe running back to the chassis side rails	YES	NO	
(i)	Rear wing high post structure above frame rails shall allow for high winging and be Viking model VCL350 SCL/ Metro all hydraulic-no cables or sheaves. Adjustable needle valves B.O.C. in hydraulics to allow operator to change speed of wing up/ down mode.	YES	NO	

SPECIFICATIONS

CONFIRMATION

(j)	The rear structure shall attach directly to the right side of the chassis close behind the cab	YES	NO	
(k)	The weldmount shall be fastened in such a way for easy removal if necessary.	YES	NO	
(l)	The 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	YES	NO	
(m)	A rigid load carrying enclosure shall be provided to support the wing braces and hydraulic cylinder for the rear of the wing	YES	NO	
(n)	The hydraulic valves shall be Bosch M-4 operated by featherable air controls	YES	NO	
(o)	The wing operation shall be fully hydraulic	YES	NO	
(p)	The control assembly shall include three double acting (front & rear of wing, tilt front harness) and two single acting (plow & box) valves This valve bank shall be situated so that it is easily serviceable and washable and above frame.	YES	NO	
(q)	<p>The controls for the box (double locking) shall be mounted right of the driver's seat and the others on a pedestal in this order:</p> <ol style="list-style-type: none"> 1. plow (single locking) 2. front of wing 3. rear of wing 4. tilt front harness <p>Shall have a 2 way adjustable floor pedestal between seats with under cab floor plate for rigidity. Pedestal platform where lever control functions for plow and wing are installed - to have an adjustable control to allow pedestal to be able to be tilted for driver ergonomics.</p>	YES	NO	
		YES	NO	
(r)	A water trap/lubricator and protection valve shall be installed in the system	YES	NO	
(s)	A reservoir as indicated in dump body spec shall be supplied including oil filter assembly with restriction gauge	YES	NO	
(t)	All provisions for the wing shall be included (i.e. push arms, cylinder, hoses)	YES	NO	
(u)	A parts manual shall be supplied	YES	NO	
(v)	All hydraulic hoses shall be Eaton 2 wire braided steel SAE100R16 minimum 4,500 PSI for ½” hosing, swivels both ends and be protected where wear might occur.	YES	NO	
(w)	2 Grote 6” front post spot lights on 18” adjustable pedestal with separate in cab switches.	YES	NO	
(x)	1 Grote 6” rear wing with separate in-cab switch	YES	NO	
(y)	Front AND rear wing assemblies including hydraulic oil reservoir and above frame mount for hydraulic valves and electrical boxes, x-conveyor table to be prepped and painted Imron 5000 Elite SS Medium Gloss Black	YES	NO	

(E) SPECIFICATIONS FOR HYDRAULIC TILT SNOW PLOW TRUCK HARNESS

1	The design and construction of truck harness shall be in compliance with M.T.O. Standard ES-401005, or be of equivalent design approved by M.T.O.	YES	NO	
2	This harness shall be suitable for use with Standard 9' One Way Snow Plow	YES	NO	
3	The harness shall be mounted at the front end of the frame, and shall be bolted to the cheek plates. Single lock pin	YES	NO	
4	The vertical angles of the lifting device shall be 3 X .35 in. steel	YES	NO	
5	The lifting frame shall be bolted to the push plate	YES	NO	
6	Lifting Ram Diameter - 4 in. minimum	SPECIFY		
7	Lifting Ram Stroke - shall be 10 in. min. Tilt Harness Cylinder Stroke-shall be 6 in. min	SPECIFY		
8	Both cylinder rods shall be fully hardened chrome plated	YES	NO	
9	Lift of grab link for nose chain shall be 18 in. min. (1 required)	SPECIFY		
10	Drive ears shall be 30.5 in centre to centre	YES	NO	
11	Height to lower drive connection shall be 19 in. when mounted, truck empty.	YES	NO	
12	Location heights (mounted) shall be provided at 21 and 23 in. also	YES	NO	
13	Cheek plates to match truck frame, shall be supplied. Cheek plates shall be 1/2 in. thick mild steel and bolted directly to the truck frame, where possible.	YES	NO	
14	Cheek plates shall be gusseted on the bottom	YES	NO	
15	There shall be a 1/2 in. thick push plate bolted to the front end of the cheek plates.	YES	NO	
16	Two sealed beam headlamps, with shockproof mounts 6 in. diameter minimum, with high and low beam shall be supplied and wired	YES	NO	
17	All harness wiring shall be protected in loom and secured	YES	NO	
18	Spacing and height of headlamps shall be in compliance with ES-4010005	YES	NO	
19	Two extra male plugs shall be wired in to front light harness for the installation of fog or auxiliary lights. They shall have their own separate switch and include loose female plugs for County installation at a later date(See 15 (k) in truck section)	YES	NO	
20	These wires shall be well protected in looms	YES	NO	
21	Spare parts manual shall be supplied, with each unit	YES	NO	
22	The truck harness shall be painted Imron 5000 Elite SS Medium Gloss Black	YES	NO	
23	The plow harness shall have one cylinder solely designed for tilting harness	YES	NO	
24	Plow harness to have quick attach pockets with drop in pins for one way plow hook-up	YES	NO	
25	The O.E.M. front truck bumper shall be cut and fabricated to re-install to each side of plow harness/chassis.	YES	NO	
26	MAKE	MODEL		

(F) SPECIFICATIONS FOR 12' SNOW LEVELLING WING FOR A TRUCK:

MAKE		MODEL			
1	The snow leveling wing shall comply with the provisions of M.T.O. Standard ES-4060011 except for the length which is designated by the specification.	YES:		NO:	
2	The inside height of the wing shall be 29" min.	SPECIFY			
3	The outside height of the wing shall be 39" minimum	SPECIFY:			
4	Overall length of the wing shall be 144" – or 156" wing is required due to chassis layout then it shall be supplied at no extra charge.	SPECIFY:			
5	The thickness of the mouldboard shall be 10 U.S.S. Ga. (.1345), minimum, and shall be welded 100% to all ribs and support members	SPECIFY:			
6	Two drive ribs for connecting the wing braces shall be provided, having a 100% weld on both sides.	YES:		NO:	
7	The drive ribs shall be located 100 in. and 118 in. from the outer end of the wing	YES:		NO:	
8	The plate for mounting the wing to the wing post shall be 1 in. thick. The mounting hole shall be far enough from the edge of the plate to avoid failure in this area.	SPECIFY:			
9	Two full length adjustable wing braces shall be supplied.	YES:		NO:	
10	The upper brace shall be of a shock release type, including a spring retraction. The spring shall provide adequate stability of the wing in normal operating conditions, and shall retract the wing from tip-over position.	YES:		NO:	
11	The distance between the centre of the mounting holes of the wing braces shall be as follows:-				
a	Upper Brace - Extended 88.5 in C.C. - Collapsed 59 in. CC Extended distance shall be measured with spring fully retracted.	SPECIFY: SPECIFY			
b	Lower Brace - Extended 88.5 in. C.C. - Collapsed 59 in. CC	SPECIFY: SPECIFY			
12	One spare pin for adjusting the wing braces shall be supplied with each brace.	YES:		NO:	
13	The wing shall be fitted with a high wear wing blade				
14	The top edge of the wing shall be boxed in and welded 100% to the ribs mouldboard so as to avoid all pockets.	YES:		NO:	
15	A spare parts manual shall be supplied with each unit	YES:		NO:	
16	The wing and braces shall be painted black Conspicuity safety reflective tape on wing braces arms and on rear edge of wing shall be supplied.	YES:		NO:	
17	There shall be a safety chain eye formed from 1 in. stock that extends forward from the front end of the wing, with a 1 in. diameter hole 4 in. from the front end of the wing	YES:		NO:	
18	Wing storage stand, pinned on for ease of removal shall be supplied.	YES		NO	
19	Wing to be prepped and painted Imron 5000 Elite SS Medium Gloss BLACK	YES		NO	

(G) ELECTRONIC SPREADER CONTROLS

1	The sander controls shall be Bosch-Rexroth CS-550 Lite with 3 section valve (spinner, conveyor, and 3 rd section capped for future pre-wet) Electronic spreader controller to be mounted on bottom of swivel Pedestal between seats. Bosch Rexroth desktop CD; RED and Black memory sticks Main conveyor sensor motor and adaptor cable MP Filtri HP 10 micron absolute filter assembly	YES	NO	
2	The truck ground speed shall be obtained by the use of a speed sensor attached to the trucks transmission	YES	NO	
3	The speed sensor shall be supplied	YES	NO	
4	One day of training in calibration and operation shall be provided at the County Central Garage.	YES	NO	
5	Operating and parts manuals shall be supplied	YES	NO	
6	County spread rates and data shall be entered in controller	YES	NO	
7	Controller situated for ease of operation and shall not impede operator vision	YES	NO	

(H) PINTLE HOOK PACKAGE

Units will be required to tow and operate a 20 or 14 tonne tag along trailer. NO hydraulic wet line to rear of chassis required. YES___ NO___

(a)	The pintle hook shall have an in cab control on floor pedestal beside drivers seat for plunger operation of PH410RA11 (100,000 lb. M.G.T.W. rated) ‘AIR’ cushioned hook at ___” lunette height (level ground to center of hook)	YES	NO	
(b)	The heavy duty pintle plate shall be 30,000 lb. M.G.T.W. rated and be of sufficient strength to pull a 20 tonne tag along trailer.	YES	NO	
(c)	Re-install O.E.M. 7 wire trailer receptacle into face of pintle plate	YES	NO	
(d)	Re-install O.E.M. Trailer connection socket 7 way round RV plug (electronic brake controller)	YES	NO	
(e)	Two tow eye hooks will be installed on mounting bracket for trailer safety chains.	YES	NO	
(f)	Body builder to switch out OEM glad hands with Traction Tec #9311/12 swing away glad hands.	YES	NO	
(g)	Tekonshu electric brake control with circuit breaker and mounting bracket	YES	NO	
(h)	<u>NOTE:</u> Pintle plate must be recessed a further one inch for dumping into County shouldering machine.	YES	NO	
(i)	Angle iron bracket over top of pintle hook with small rubber flap bolted to bracket to keep dirt off of hook.	YES	NO	
(k)	Pintle plate assembly prepped and painted Imron 5000 Elite SS Medium Gloss Black	YES	NO	

(I) WARRANTY

1	A two year warranty shall be included by the body builder / installer. This warranty shall include service truck repairs at the truck's home base by a certified technician with equipped service vehicle. SPECIFY: _____	YES		NO	
---	--	-----	--	----	--

SPECIAL INSTRUCTIONS

(a)	When this truck is being built all components and accessories must be placed so they will not interfere with each other and situated for operators ergonomics.	SPECIFY
(b)	The dump body shall be mounted so that is fully compatible with the County shouldering machine.	SPECIFY

COUNTY OF MIDDLESEX

FORM OF QUOTATION

This quotation for the supply of TWO (2) new 2015 production Model Trucks complete with body, plow equipment, wing and pintle hook package.

SUBMITTED BY -

TRUCK DEALER: _____
in accordance with the accompanying specifications.

I/We hereby propose and agree to supply these units for the following quotation price:-

	TRUCK T-16	TRUCK-25
QUOTATION PRICE for units with plow equipment (less items A15(c) and 15 (d))	\$	\$
ADD: AIR CONDITIONING TAX	\$	\$
ADD: TIRE STEWARD SHIP TAX	\$	\$
ADD: Delivery charge of units to County yard	\$	\$
SUBTOTAL	\$	\$
ADD: 13% HST	\$	\$
TOTAL QUOTATION PRICE	\$	\$

OPTIONAL: 7 year extended engine and 5 year drive train warranty (Item A15(c) page 8 and 9 in chassis portion) + HST	\$	\$
OPTIONAL: Allison 4500RDS-P 6 speed automatic transmission (Item 15 (d) page 9 in chassis portion) + HST	\$	\$

DATED AT _____ **this** _____ **day of** _____, 2014

Witness to Bidder's Signature

Signature of Bidder

or

S E A L

B I D D E R (Please Print)

Full Address

Postal Code

Telephone Number