

**THE CORPORATION OF THE
TOWNSHIP OF ZORRA**



TENDER 2017-04

**TENDER FOR
ONE (1) 2017 MOTOR GRADER
ARTICULATED HEAVY DUTY**



Township of Zorra

274620 27th Line
P.O. Box 306
Ingersoll, Ontario, N5C 3K5

Phone: 519-485-2490
Fax: 519-485-2520
Web: www.zorra.on.ca

INFORMATION TO BIDDERS

Tenders will be received at the Township of Zorra Office until:

12:00 NOON. on Tuesday, February 7, 2017.

Tenders will be opened at the Township of Zorra Municipal Office at 12:05 P.M. on February 7, 2017.

It is our anticipation that a recommendation will be available for Township of Zorra Council approval at their February 14, 2017 Council meeting.

Descriptive literature must be attached. Where any model number is specified, an approved equal will be considered.

All tenders must be on Township Forms, clearly marked and addressed to the undersigned.

Tender prices must be valid for acceptance for 60 days following the closing date of this tender. Lowest or any tender not necessarily accepted.

It is the responsibility of the proponent to monitor the Township of Zorra Website for any addenda that may arise. Should any addenda be necessary, they will be posted on the website on or before 12:00 noon on Thursday, February 2, 2017.

Aden Corcoran, C.E.T.
Director of Public Works,
Township of Zorra
P.O. Box 306, 274620 27th Line
Ingersoll, ON N5C 3K5
519-485-2490 or 1-888-699-3868
acorcoran@zorra.on.ca

**NEW 2017 - MOTOR GRADER – ARTICULATED
HEAVY DUTY**

SPECIFICATION AND CONFIRMATION

MOTOR GRADER - ARTICULATED

GENERAL

This specification covers a four wheel drive motor grader used in the maintenance of highways and municipal roads.

This specification covers only the major details of a unit. It is the supplier's responsibility to deliver a fully equipped unit with compatible components to provide dependable efficient service.

Nomenclature shall be to SAE Standard J870 unless otherwise stated.

Units shall be supplied only with graders' standard or advertised optional engine. Graders with non-advertised or altered engine horsepower settings will not be accepted. Only currently advertised and factory approved engine and drive train combinations are acceptable.

PROPOSED UNITS MUST COMPLY WITH THE FOLLOWING SPECIFICATIONS IN ALL ASPECTS. ALTERNATIVE COMPONENTS, WHICH MEET THE REQUIREMENT OF THIS SPECIFICATION BUT ARE NOT IDENTIFIED IN THE SPECIFICATION, MUST BE APPROVED BY THE PURCHASER PRIOR TO TENDER CLOSING.

SPECIFICATION:

CONFIRMATION:

1. MAKE & MODEL

Specify the make and model of unit being proposed.

New 2017 current production model

Specify:

Make:

Model:

Yes:

No:

2. WEIGHT

Includes all fluids, full fuel tank and 175lb Operator

The basic weight excluding the weight of any attachments shall be a minimum of 16,747 kg. (36,920 lb.)

Weight on the rear tandem wheels of the grader shall be a minimum of 11,857 kg. (26,140 lb.)

Specify:

Yes:

Specify:

3. ENGINE

The engine shall be 6 cylinder diesel, 4 stroke cycle, turbo-charged.

Yes:
Specify:
Engine Make:
Model:

Net flywheel power: as per SAEJ1349, shall be 250 advertised hp min in 8th Gear

Yes: No:

Specify:

Gear 1	_____	_____
Gear 2	_____	_____
Gear 3	_____	_____
Gear 4	_____	_____
Gear 5	_____	_____
Gear 6	_____	_____
Gear 7	_____	_____
Gear 8	_____	_____

Engine shall be wet sleeve – Design Tier 3 or Tier 4 certified Engine
The engine peak torque output within the rated R.P.M.

Yes: No:
Specify:
Specify:
Torque @ RPM:

Engine displacement shall be 9.0 litre minimum.

Specify:

4. PERFORMANCE

Maximum net blade pull shall be developed at a road speed less than 2 m.p.h. @ 0.9 coefficient of traction.

Specify:
Bladepull:
Speed:

5. ENGINE EQUIPMENT

The following equipment shall be supplied:

A removable element oil filter.

Yes: No:

Fuel water separator to be supplied.

Yes: No:

Air Filter - two-stage, dry element, ejector, and a restriction indicator which is clearly visible from the cab.

Yes: No:

Spin on Type Filters.

Specify:

Centrifugal type air pre-cleaner

Yes: No:

Battery(s) - maintenance free, 12 volt, combined Yes: No:

CCA rating of 2800 minimum. Specify Capacity:

System for cold weather starting. Yes: No:
Specify:

Block Heater, 1500 watt, minimum. Specify:

Safety Isolation switch to be supplied. Yes: No:

A brushless alternator with a minimum output of 130 Amperes for a 24 volt system, or a minimum output of 90 Amperes for a 12 volt system. Specify Charging: Voltage: Ampere Output:

- Ground level fueling Yes: No:

- Fuel tank shall be full on delivery Yes: No:

- Anti-freeze to -45° Yes: No:

- Automatic reversing cooling fan Yes: No:

- Swing out rear fan access door Yes: No:

6. TRANSMISSION

Shall be designed to match the engine. Yes: No:

A direct drive powershift transmission with eight forward speeds and six reverse speeds, minimum. Specify:

Transmission temperature and pressure warning system shall be supplied. Yes: No:

State component used to control inching movement. Specify:

Factory installed Transmission guard and side shields to be included. Yes: No:

Auto shift transmission to be included. Yes: No:

Transmission shall have shuttle shift feature. Yes: No:

Transmission shall have "Anti-Stall" protection. Yes: No:

Transmission shall have built in self diagnostic capability. Yes: No:

7. AXLES

Rear axles - tandem drive, oscillating type rear axle. Yes: No:

Differential with lock-up feature and in-cab control. Yes: No:

Differential shall have lock/unlock capability under full load. Yes: No:

Front axles - shall be provided with hydraulically powered leaning wheels. Yes: No:

Leaning wheel cylinders to be included. Yes: No:

Bottom Guards complete with removable inspection plates. Yes: No:

8. TIRES

Tires shall be tubeless type. Yes: No:

6 Tires and Rims to be supplied, plus 1 spare for each drive type front & back. Yes: No:

Front and rear tires and rims must be interchangeable. Yes: No:

(Note: If not interchangeable a spare tire and rim must be supplied for each. Specify:

Michelin XSnow Plus Specify:

Size - 17.5 25 – 12 ply rating Yes: No:

Load Rating Specify:

17.5” 3 piece bolt on rims Specify:

9. STEERING

Steering system shall be hydraulic power assisted. Yes: No:
Specify Type:

The steering valve shall be mounted outside of the operator’s enclosure. Yes: No:

The steering system must provide steering control in case of engine failure. Yes: No:
Specify:

10. FRAME

Frame shall be articulated behind the cab. Yes: No:

The frame shall be constructed of welded steel members of either box or tubular section, or a combination of these two types. Specify:

Articulation shall have twin 4.5" hydraulic cylinder, with articulation of 20° each way minimum, complete with anti-drift lock.	Specify:	
Minimum vertical section modulus of the front frame.	Specify:	
State Frame Warranty.	Specify:	
Remote mounted lube manifold for articulation cylinders and tandem sleeves.	Yes:	No:
The articulation joint shall have a mechanical locking Device to prevent frame articulation while servicing or transporting machine and shall be located behind the cab.	Yes:	No:
11. <u>R.O.P.S. CAB</u> R.O.P.S. cab shall meet ISO 3471 - 2008 standard.	Yes:	No:
All metal construction, weather proof cab with two operator access doors.	Yes:	No:
The cab shall be a low-profile style	Yes:	No:
An air suspension six way adjustable deluxe bucket seat with armrests.	Yes:	No:
Seat belt as per SAE J386.	Yes:	No:
Upholstery - cloth	Yes:	No:
Safety Glass - tinted safety glass throughout.	Yes:	No:
Heavy duty intermittent windshield wipers with washer - front, rear, and two front lower level window wipers.	Yes:	No:
Right side windshield wiper on separate switch.	Yes:	No:
Heater - a fresh air heater to maintain a temperature of 21°C inside the cab with temperature of -45°C outside, shall be supplied. The air intake to the heater must filtered and be outside the cab. 31,500 BTU minimum.	Yes:	No:
Cab air precleaner to be supplied.	Yes:	No:
Defroster fan front and rear to be supplied.	Yes:	No:
		Specify: HEATER B.T.U./HR:

Glass embedded electric rear window defroster to be supplied.	Yes:	No:
Factory air conditioning with cab pressurizer. Minimum 28,000 BTU.	Yes: Specify: Min. BTU/HR	No:
Mirrors - 2 outside heated mirrors on fold away brackets to be supplied. 6" x 16" (157 mm x 406 mm) approximately to be mounted left side, plus right side - 2 convex - 6" x 6", plus interior convex mirror - 6" x 16".	Yes:	No:
Cab Lighting - instrument panel lights and dome light with separate switch.	Yes:	No:
Visibility - dashboard, cab and control panel shall be such as to afford the operator, a clear view of the front wheels and blade assembly in all operating positions.	Yes:	No:
Factory installed MP3 Compatible AM - FM Radio – shall be supplied, mounted in cab, c/w separate 24 to 12 volt converter.	Yes:	No:
2 additional 12 volt power points.	Yes:	No:
Left and Right cab access steps.	Yes:	No:
Grab handles for cab entry.	Yes:	No:
3 Points of contact on all areas for mounting and Dismounting.	Yes:	No:
Slow moving vehicle sign.	Yes:	No:
Opening Side Windows:	Yes:	No:
Toolbox:	Yes:	No:
Electric Horn:	Yes:	No:
Two sliding side cab windows and 2 lower front Opening windows.	Yes:	No:
Lunch box holder.	Yes:	No:
Cup Holder:	Yes:	No:
Coat hook with hold back strap.	Yes:	No:

Bracket or Holder for two (2) way radio installation c/w separate 24 to 12 volt converter, continuous 30 amp output.	Yes:	No:
Slope meter to be installed in the cab, clearly visible.	Yes:	No:
5 IB ABC Fire Extinguisher mounted in Cab.	Yes:	No:
Front Sun Visor	Yes:	No:
Rear retractable sunscreen	Yes:	No:
Rear View Camera	Yes:	No:
A Safety, Maintenance and Operation DVD.	Yes:	No:

12. NOISE SUPPRESSION

The sound level in the cab shall not exceed 74 dBA as per ISO 6394:1998 (enclosed cab)	Yes: Specify:	No:
Factory installed sound absorption package.	Yes:	No:

13. CONTROLS

Controls shall be easily operated and shall be conveniently located for operating from sitting position.	Yes:	No:
The entire Control Console, with steering wheel & Control levers shall be infinitely adjustable for and Aft if applicable.	Yes:	No:
Controls shall be so designed as to enable the operator to impart two or more co-ordinate motions to the blade simultaneously.	Yes:	No:
Electric over hydraulic control levers shall be supplied	Yes:	No:
Rests or joysticks shall be supplied. A diagram/schematic shall be enclosed the bid showing the proposed layout pattern.	Yes:	No:
The grader shall be equipped with an automatic blade control system capable of controlling the cross slope automatically from the right or left side. This may be accomplished using a Trimble, TopCon or a factory designed system with literature.	Yes: Specify:	No:
Minimum of four, inlet/outlet hydraulic banks shall be available at the rear of the machine.	Yes:	No:

	Foot accelerator, and hand throttle, shall be supplied.	Yes:	No:
14.	<u>BRAKES</u>		
	Braking system shall be ISO 3450 compliant.	Yes:	No:
	Service Brakes - wet disc type on all four wheels of the tandem drive and shall be air or hydraulic power boosted.	Yes:	No:
	Back up system to provide power braking if engine fails.	Yes:	No:
	Parking Brakes - shall operate independently of the service brake system.	Yes:	No:
15.	<u>MOLDBOARD</u>		
	Operating mechanism - moldboard operating mechanism shall be power operated. (fixed point not acceptable).	Yes:	No:
	It shall be capable of lifting and lowering (bank sloping 90°) side shifting and revolving of the moldboard.	Specify:	
	Powered, forward tilt moldboard shall be supplied.	Yes:	No:
	It shall be possible to side shift the moldboard hydraulically with reference to the blade circle.	Yes:	No:
	Stability - the mechanism shall be capable of holding the moldboard rigidly in any selected position without chatter, deflection or drift. Circle to the protected via overload cushion valve or slip clutch.	Yes:	No:
	Heavy duty circle support system with a minimum of 5 guide and clamp plates	Yes: Specify:	No:
	Moldboard Impact Absorption System with accumulators.	Yes: Specify:	No:
	Heavy duty wear inserts for circle and moldboard	Yes: Specify:	No:
	Length - shall be 4.27m (14 feet)	Specify:	
	Thickness - 25 mm/1" minimum.	Specify:	
	Height - 686 mm/27" minimum	Specify:	

Cutting edge and bolts shall consist of 3 – 3' x 7/8 x 5
 Serrated AHT and 1 – 4' x 7/8 x 5 serrated AHT
 Valley Carbide Blades with 3/4" holes and bolts.
 Part # (3') = 1141233CTSGBHA
 Part # (4') = 141243CTSGBHA

Yes: No:

The moldboard operating mechanism supplied shall include all equipment necessary to allow the moldboard to float when plowing snow. This set up must have been proven in operation and must be such that the moldboard is still fastened to the grader.

SPECIFY SET UP FOR
 FLOATING MOLDBOARD

Moldboard drilled 5/8" on 6" centres. Additional holes drilled to accept 3 ft. and 4 ft. carbide blades in any configuration.

Yes: No:

16. LIGHTING & WIRING

All lighting shall be LED Lighting

Yes: No;

Double beam head lights, tail lights and identification lights shall conform with Provincial Highway Traffic Act.

Yes: No:

All exterior wiring shall be enclosed in some manner to protect it from environmental damage and all connections should be made in a sealed enclosure.

Yes: No:

Two (2) seal beam, dual beam with dimmer,

Yes: No:

360 Degree visibility Amber and Blue Light Bar SWS 16884 mounted on a fold down bracket on top of cab

Yes: No:

Two (2) Moldboard lights shall be supplied.

Yes: No:

Two (2) Back-up Flood Lights shall be supplied.

Yes: No:

Two (2) Cab mounted working lights.

Yes: No:

Two (2) Cab mounted wing lights.

Yes: No:

Two (2) Rear Flashing Lights, 1 amber, 1 blue mounted on opposite sides of the grader.

Yes: No:

Two (2) back up lights to work when grader is reversed.

Yes: No:

Four (4) plow lights with signals on low mounting Brakes.

Yes: No:

	High mounting bar for plow lights to be supplied.	Yes:	No:
17.	<u>IN-CAB INSTRUMENTATION</u>		
	Odometer	Yes:	No:
	Hourmeter	Yes:	No:
	Tachometer	Yes:	No:
	Fuel Gauge	Yes:	No:
	Slope meter in cab	Yes:	No:
	Engine temperature warning system with audible alarm and light indicator, and gauge.	Yes:	No:
	Engine low oil pressure warning system with audible alarm and light indicator and gauge.	Yes:	No:
	Volt or amp meter.	Yes:	No:
	Three level machine monitor to be included.	Yes:	No:
18.	<u>FENDERS</u>		
	Fenders with mudguards shall be installed on front and rear easily removable and not interfere with the operation of the grader or access to engine.	Yes:	No:
		Specify:	
	Fenders shall be black or grey	Yes:	No:
19.	<u>ENGINE COVER</u>		
	The engine is to be completely enclosed by cowling having hinged panels to provide easy access to all parts for service.	Yes:	No:
20.	<u>WEATHER GUARDS</u>		
	All vertical intake, exhaust stacks and auxiliary hydraulic valve banks shall be supplied with weather guards	Yes:	No:
	45° exhaust elbow to be included.	Yes:	No:
21.	<u>EQUIPMENT</u>		
	Back-up Alarm – minimum 100dBA	Yes:	No:

Electric Horn	Yes:	No:
Front & Rear Tow Hitch to be supplied.	Yes:	No:
Tool Box	Yes:	No:
Slow moving vehicle sign.	Yes:	No:
Rear counter weight with hitch, min. 1600 lb. Bolt on style and removable.	Yes: Specify:	No:
Operator's handbook, shop manual, and spare parts list shall be supplied with each grader.	Yes:	No:

22. VANDALISM PROTECTION

A lock or locked cover shall be provided to protect the: fuel cap, cab doors, engine side panels, hydraulic oil reservoir cap, and the radiator cap.	Yes:	No:
All locks to be keyed alike.	Yes:	No:

23. ENVIRONMENTAL:

Environmental drain provisions shall be provided for the following:

Engine fuel	Yes:	No:
Hydraulic oil	Yes:	No:
Engine oil	Yes:	No:
Engine coolant	Yes:	No:
Transmission oil	Yes:	No:
Differential oil	Yes:	No:
Fuel tank	Yes:	No:
Colour-coded fluid sampling valves/ports	Yes:	No:
Bio diesel compatible	Yes:	No:

Specify percent:

Service frequency (hours)

Specify type of fluid/oil used in:	Capacity L/GAL	for fluid/oil	for filter
Engine _____	_____	_____	_____
Transmission _____	_____	_____	_____
Hydraulics _____	_____	_____	_____
Tandems _____	_____	_____	_____
Differential _____	_____	_____	_____
Coolant _____	_____	_____	_____

24. The 1st engine service shall be performed at NO charge to TWP including oil, filter, labor, and full machine inspection at Township of Zorra Kintore Shop.. Yes: No:

25. PAINT

Shall be manufacturer's standard color. Yes: No:

26. WARRANTY

The equipment shall include the standard manufacturer's warranty, a copy of which shall be included with the tender documents. Yes: No:

Warranty shall be effective from Customers in service date. Yes: No:

12 Months - Total Grader Parts & Labor Yes: No:

60 Months - Power Train Parts & Labor Yes: No:

FOB – Township of Zorra PW Yard, Embro, Ontario Yes: No:

Signature of Bidder: _____

Date Signed: _____

ATTACHMENTS

The following to be supplied and installed prior to delivery and ready for use. Where any brand name is shown, an equal approved by the Director of Public Works for the Township of Zorra will be considered. All attachments shall be painted the same color as the grader.

Craig Manufacturing One Way Plow Model 683-10 with drop blocks, 13 ft. VBL Highwear three piece cutting edge; 2 wear shoes & hydraulic tilt including additional valve to attach to Quick Hitch. Yes: No:
Specify:

Henke Manufacturing Parallel Quick Hitch Model LG11 to match the machine tendered c/w double acting hydraulic cylinder and in cab controls. Hitch must mount to dozer blade and one-way plow quoted. Yes: No:
Specify:

Craig Manufacturing All-Hydraulic Rear Mounted 13 RM High Lift Wing Model 302-13 RM, c/w Bell Swivel shall be hydraulically extendable and four piece VBL Highwear Cutting Edge. Wing must be drilled to accommodate any install combination of the four piece cutting edge. Yes: No:
Specify:

The wing shall have Hydraulic Float on front and rear of wing with separate switches, 2 functions. Yes: No:

Straight Fixed Dozer Blade Craig 850, Series 2.74m, 9' with Quick Attach Lift with drop blocks and hydraulic float capability on separate switch. Yes: No:
Specify:

Lubecor Twin Greasing System or equivalent Yes: No:
Specify:

SIGNATURE OF BIDDER: _____

DATE SIGNED: _____

FORM OF TENDER

FOR GRADER COMPLETE WITH PLOW HARNESS, SNOW PLOW, WING AND DOZER BLADE.

MODEL & YEAR: _____

PRICE (as per specifications) _____

SUB-TOTAL _____

TOTAL PRICE _____

H.S.T. _____

TOTAL TENDERED PRICE _____

SPECIFY DELIVERY DATE FOR TOWNSHIP OF ZORRA, EMBRO YARD FOR AN ORDER PLACED ON OR BEFORE FEBRUARY 17, 2017.

NAME OF FIRM: _____

ADDRESS: _____

SIGNATURE: _____

TITLE: _____

DATE OF SUBMISSION: _____

DATE OF DELIVERY: _____

**ATTACH THIS SHEET TO THE FRONT OF YOUR TENDER
ENVELOPE/PACKAGE SUBMISSION**

**TENDER
TO BE RETURNED TO:**

**THE CORPORATION OF THE TOWNSHIP OF ZORRA
274620 27TH LINE, P.O. BOX 306
INGERSOLL, ON N5C 3K5**

**TENDER 2017-04
TENDER FOR ONE (1) 2017 MOTOR GRADER ARTICULATED
HEAVY DUTY**

Bidder's Name: _____

Address: _____

For Township Use Only	
Date Stamp	
_____	_____
Time Received	Employee Signature

NOTE: This address label/sheet must be affixed to the front of your sealed tender envelope/package submission. The Township will not be held responsible for envelopes or packages that are not labeled.