BIDDER'S PACKAGE

CASCADE COUNTY

SOLICITATION FOR BIDS FOR
ONE (1) OR MORE 2014 ALL-WHEEL DRIVE MOTOR GRADER(S)

(Preapproved Models: Caterpillar 160M2AWD, John Deere 872GP, or Equivalent)

OCTOBER 2014

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INVITATION TO BIDDERS

NOTICE IS HEREBY GIVEN, that the Cascade County Board of Commissioners will receive sealed bids for the purchase over time of one (1) or more 2014, diesel powered, articulated frame all-wheel drive motor grader(s). Specifications for the equipment may be obtained by contacting Brian K. Clifton, Director, Cascade County Public Works, 279 Vaughn S. Frontage Road, Great Falls, MT 59404; Phone (406) 454-6920.

Bids will be opened on the 16th day of October 2014, at the time of 1:00 o'clock p.m. in the office of the Board of Commissioners, in the Cascade County Courthouse Annex, 325 2nd Ave North, Room 111, Great Falls, Montana.

Each bid must be accompanied by a Certified Check, Cashier's Check, or Bid bond payable to Cascade County in the amount of ten percent (10%) of the total amount of the bid for the motor graders without deduction for the value of the possible trade in equipment. The successful bidder shall forfeit to Cascade County their bid security if they fail or refuse to enter into a contract within the time specified. Bid security of unsuccessful bidders shall be returned upon acceptance of the successful bid.

All bids shall remain effective for a period of thirty (30) days from the date of opening. Cascade County reserves the right to consider or reject any and all bids, and further to waive any defects or irregularities. All bidders must use the bid form supplied with the specifications. A contract will be awarded to the lowest and most responsible bidder.

All bidders are expected to be aware of and to abide by all state and federal statutes, rules, and regulations governing the solicitation and acceptance of public contracts, including any such statute, rule or regulation relating to non-discrimination.

The Board of Commissioners reserves the right to reject any or all bids, to waive irregularities, or to accept any bid they deem to be in the best interest of Cascade County.

DATED this 24th September 2014

Bill Salina, Chairman
Cascade County Board of Commissioners

(Publish September 28th, October 5th, October 12th)

GENERAL INFORMATION FOR BIDDERS

1. Bid Opening. The Cascade County Commissioners will receive bids from persons or entities capable of supplying one (1) or more 2014, diesel powered, articulated frame all-wheel drive motor graders as described in the specifications included herein. Bids shall be opened and read aloud at a meeting of the Commissioners to take place on the 16th day of October, 2014, at the time of 1:00 o'clock p.m. at the Commissioners Office, in the Cascade County Courthouse Annex Room 111. All bids must be received no later than the start of the meeting.

2. Notice. Notice is being published in the Great Falls Tribune, (a copy of the notice is included with this package) with publication dates of September 28th, October 5th, 12th. All interested and capable persons or entities are invited to submit bids on the bid form included with this package.

3. Bid Security. Pursuant to Section 18-1-201, Montana Code Annotated, the Board of Commissioners must require a bid security. Each bid must be accompanied by security in a form specified below, and in an amount equal to ten percent (10%) of the bid of the bidder, and payable to Cascade County.

According to the above cited statute, bid security is required "as a condition precedent to considering any such bids, as evidence of good faith on the part of the bidder, and as indemnity for the benefit of such public authority against the failure or refusal of any bidder to enter into any written contract that may be awarded upon and following acceptance of (a) bid..." Thus, if a bidder is selected and requested to enter into the contract, and the bidder refuses to enter into the contract, the bid security shall be forfeited in its entirety to Cascade County.

The form of the bid security is specified in Section 18-1202, Montana Code Annotated, as follows;

> "(1) In all cases under 18-1202 (1), the bidder, offeror, or tenderer shall accompany and bid with either:
>
> (a) lawful money of the United States;
>
> (b) a cashier's check, certified check, bank money order, or bank draft, in any case drawn and issued by a federally chartered or state-chartered bank insured by the federal deposit insurance corporation; or
>
> (c) a bid bond, guaranty bond, or surety bond executed by a surety corporation authorized to do business in the state of Montana. If a financial guaranty bond or surety bond is provided to secure the purchase of indebtedness, the long-term indebtedness of the company

executing the financial guaranty bond or surety bond must carry an investment grade rating of one or more nationally recognized independent rating agencies.

(2) The money or, in lieu of money, the bank instruments or bid bonds, financial guaranty bonds, or surety bonds must be payable directly to the public authority soliciting or advertising for bids."

The successful bidder's bid security shall be returned upon the parties entering into a contract. Also, at such time, the bid security of unsuccessful bidders shall be returned.

4. Contract. The successful bidder will be expected to enter into a contract with Cascade County. The form of the contract is included within this package. However, Cascade County reserves the right to make changes to the contract which do not affect the substantial rights of the parties.

All bids shall remain effective for a period of thirty (30) days from the date of opening at some time during said thirty (30) day period, the successful bidder will be expected to enter into the contract.

5. Waiver of irregularities and informalities. Cascade County reserves the right to waive any irregularity or informality in any bid. Further, Cascade County reserves the right to reject any and all bids for any reason.

6. Basis of Award. Shall be dependent on the most responsible bid submitted. Consideration will be given, but is not limited to, cash flow, purchase price, delivery date, equipment service guarantees, parts and service availability, parts and service facilities locations, analysis and comparison of equipment specification details, and past experience of Cascade County with similar or related equipment.

7. Resident Bidder Preference. Pursuant to Section 18-1-102, Montana Code Annotated, Cascade County will award the contract "to the lowest responsible bidder without regard to residency. However, a resident must be allowed a preference on a contract against the bid of a nonresident if the state or country of the nonresident enforces a preference for residents. The preference must be equal to the preference given in the other state or country."

According to Section 18-1-113, Montana Code Annotated, any bidder seeking a preference shall be required to file, along with the bid, an affidavit, specifying in detail, the basis upon which the bidder claims a preference.

8. Non-Discrimination. The successful bidder shall be expected to abide by a all provisions of state and federal law regarding discrimination. One such provision, in Montana law is Section 49-3-207, Montana Code Annotated, which states Non-Discrimination; "(e)very state or local contract or subcontract for construction of public buildings or for other public work or for goods or services must contain a provision that all hiring must be on the basis of merit and qualifications, and a provision that there may not be discrimination on the basis or race, color

religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

9. Laws and Regulations. Each bidder is expected to be familiar with and abide by all laws of the federal, state and local governments regarding their obligations in bidding and performing public contracts.

10. Trade-in. Each bidder will be expected to state a value for two pieces of equipment that Cascade County may wish to trade in, and which will reduce the purchase price. The two items of equipment are a used 2005 CAT 160H Motor Grader, Serial # ASD00535, and a 2008 CAT 140M Serial # B9D00544. The value stated by the bidder for each piece of equipment must be stated separately on the Bid Form. In accepting the bid from the successful bidder, Cascade County may elect to trade any, all or none of the used equipment, and if Cascade County elects to trade in any such item or items, the successful bidder shall receive such equipment at the time of delivery of the motor graders. The successful bidder will be responsible for transporting any such equipment from Cascade County. Any items to be traded in shall be accepted by the bidder "as is", with no warranties and/or representations whatsoever. Upon reasonable advance notice, any bidder may inspect any of the items proposed for trade-in by contacting the Public Works Director, Brian K. Clifton. The transfer of any such item of equipment shall be by bill of sale delivered to the successful bidder at the time of delivery of the motor graders.

11. Warranty. In order to guarantee the cost of repairs and minimize downtime for Cascade County, all bidders shall include with their bid a total machine warranty, for a period of four (4) years or four thousand (4,000) hours of operation from date of delivery, whichever occurs first.

12. Questions. Should any bidder have any questions about the specifications, or any provision or other information contained in the bidder's package, they may direct inquires to Brian K. Clifton, Director, Cascade County Public Works, 279 Vaughn S. Frontage Road, Great Falls, MT 59404; phone 406-454-6920. Any clarification information, or any changes made to any information in the bidder's package shall be provided to all potential bidders who have obtained a copy of the specifications from Cascade County.

BIDDER'S SUBMISSION REQUIREMENTS

Sealed bids shall be submitted by each bidder. Sealed bids must be received by Cascade County no later than 1:00 o'clock p.m., October 16th, 2014, which is the time of commencement of the meeting to open bids. Bidders are expected to abide by the following requirements.

Each bid and accompanying documents shall be submitted in a standard 8 1/2 x 12, or larger manila envelope. The manila envelope shall be sealed, and the following information shall be written or typed on the outside of the envelope: (1) the name, address, and telephone number of the bidder: (2) the words "Bid to Cascade County for Motor Grader(s)".

The following documents shall be included in the manila envelope, in the following order:

1. Bid Forms. The Bid Form shall be completely filled out and signed by an authorized agent of the bidding company.

2. Bid Bond. A bid bond must be enclosed and must be in the form as specified in this package. The bid bond must be in the amount bid for the motor graders, without deduction for the value bid for any of the proposed trade-in items.

3. Warranty Information. All warranty information for the equipment must be included.

4. Delivery Date. Bidder must specify delivery date. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana.

5. Other Information. Bidders are encouraged, but not required, to include other information about their business and about the equipment in the bid.

BID FORM

The undersigned Bidder hereby covenants and agrees to provide one (1) or more, 2014, diesel powered, articulated frame all-wheel drive motor graders, as described in the Specifications, for the price stated. The bidder understands that this bid is effective for thirty (30) days from the date of opening. All lines on the Bid Form *must* be completed.

Motor Grader Manufacturer_____ Model & Year_____

Net purchase price (without trade) including warranty costs,
F.O.B. Cascade County Shop at Great Falls, Montana (each) $_____

Less trade in for:

Used 2008 CAT 140M Motor Grader, Serial # B9D00544 $_____

Used 2005 CAT 160H Motor Grader, Serial # ASD00535 $_____

5 Yr / 5,000 Hr total machine warranty $_____

6 Yr / 6,000 Hr total machine warranty $_____

7 Yr / 7,000 Hr total machine warranty $_____

Proposed delivery date:_____

Current Governmental Fixed Interest Rate:_____%.

NOTE: CASCADE COUNTY RESERVES THE RIGHT TO KEEP ANY OR ALL OF THE PIECES OF EQUIPMENT FOR PROPOSED TRADE-IN, AND IN SUCH EVENT, THE BALANCE AMOUNT WILL BE INCRESED IN A LIKE AMOUNT, OR AMOUNTS. THE BID BOND SUBMITTED WITH THIS FORM SHALL BE BASED ON THE FULL AMOUNT BID FOR THE MOTOR GRADER, AND MAY NOT BE REBUCED FOR THE VALUE OF ANY OF THE PROPOSED EQUIPMENT FOR TRADE-IN.

Bidder's Name _____

Bidder's Address _____

_____

Bidder's Phone No. _____

_____

Bidder's Signature

AGREEMENT

THIS AGREEMENT is made this_____day of _____,2014, by and between Cascade County, and _____, hereinafter referred to as the seller, and is meant to describe the terms and conditions for the sale by seller and the purchase over time by Cascade County of _____, diesel powered, articulated frame all-wheel drive motor graders as described in the specifications.

THE PARTIES COVENANT AND AGREE AS FOLLOWS:

1. Item Purchased. The seller agrees to sell and provide, and Cascade County agrees to purchase the _____ certain motor graders with associated equipment, for the sale price of $_____.

The specific equipment to be purchased over time is more specifically described as follows:

_____

_____

_____

2. Payment Terms. Cascade County shall make annual payments for the equipment in the amount of $_____for_____years to the seller. The first payment will be made within 30 days of delivery by the seller, and all subsequent payments shall be due annually on or before the anniversary date of the first payment. The seller shall be required annually to submit a claim form pursuant to Cascade County policy, with the claim form having been submitted prior the 25th day of the month prior to the month in which the payment is due.

3. Delivery Date. Time is of the essence in this agreement. The seller shall deliver the motor graders and associated equipment to Cascade County no later than _____. If full delivery is not made by such date, the parties hereby agree that Cascade County shall be entitled to liquidated damages in the amount of $50.00 for each day past such deliver date until full delivery takes place. Cascade County may choose to waive its receipt of liquidated damages.

4. Contract Documents. The parties understand and agree that there are various documents which are an integral part of this contract, and by this reference are fully incorporated herein: to include all of the documents which are part of the Bidder's Package.

5. Insurance. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana. The seller shall be responsible for insuring the motor graders until they are both delivered and off- loaded to Cascade County. Cascade County shall not be responsible for loss until such time, and then upon unloading the equipment the obligation for insurance shall be the responsibility of Cascade County.

6. Venue for Disputes. Should any dispute arise regarding this contract, proper venue shall be in the District Court of the Eighth Judicial District, in and for Cascade County, Montana.

7. Binding Effect. This contract shall bind and inure to the benefit of the heirs, successors, and assigns of the parties.

Dated this_____day of _____,2014.

CASCADE COUNTY:

_____
Chairman

ATTEST:

_____
Rina Fontana Moore, Clerk and Recorder

_____
Successful Bidder

SPECIFICATIONS

Please describe all warranties, guarantees, and extended coverage's of the motor graders, including an extended service plan.

Pursuant to the Invitation to Bidders, requesting bids for one (1) or more, 2014, diesel powered, articulated frame, tandem drive motor graders, the following minimum requirements, or substantially similar equivalents, shall be met:

A. Motor grader(s) shall meet **OSHA** requirements and specifications on the date of the bid opening.

B. No bid will be considered unless accompanied by a bid bond, bank draft, money order, or certified or cashiers check, in the amount of not less than ten percent (10%) of the total amount for the total number of machines bid, as further described in paragraph 3 of the General Information for Bidders in the Bidder's Package.

C. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana.

D. Upon delivery, the successful bidder shall include all operating, service, parts and technical repair manuals.

E. Bidder must specify delivery date.

F. All machines shall be the current advertised and produced model, with all the latest changes and features offered as standard, whether or not called for in the bid specifications.

PLEASE INDICATE IN THE FOLLOWING IF THE MACHINES OFFERED CAN MEET THE FOLLOWING MINIMUM DESIRED CONFIGURATIONS. ANY "NO" MUST BE CLARIFIED ON A SEPARATE SHEET IF THE BIDDER DESIRES SUPPORT FOR AND ALTERNATE OR SUBSTANTIALLY SIMILAR SPECIFICATION.

BASIC SPECIFICATIONS

Y____ N____	Machine shall be designed and built by the manufacturer.
Y____ N____	Base Machine Weight shall not be less than 40,979 lbs (18,588 kg). Weight shall include standard machine configuration, lubricants, coolants, full fuel tank and operator of 200 lbs (91 kg).
Y____ N____	Machine height to top of the cab shall not exceed 130 in (3,287 mm).
Y____ N____	Machine length from the front outside edge tire to end of tow hitch shall not be less than 350.3 in (8,898 mm).
Y____ N____	Machine Wheel Base (distance from front axle to mid tandem) shall not be greater than 241 in (6,126 mm).

Y____ N____ The rear frame shall have two box section channels with an integrated bumper as standard.

Y____ N____ A toolbox shall be provided.

Y____ N____ Machine shall have vandal protection standard including locks for cab doors, engine side shields (4), top tank radiator access door, engine coolant surge tank, hydraulic reservoir cap, fuel tank cap and tool box.

Y____ N____ Machine length from counterweight to ripper shall not exceed 399.4 in (10,140 mm).

Y____ N____ Fuel tank guards equivalent to CAT part number 331-1080 and 331-1081

ENGINE

Y____ N____ Engine shall be designed and built by the manufacturer.

Y____ N____ Engine shall be a turbo-charged, direct injection, four stroke, 6-cylinder diesel engine.

Y____ N____ Engine shall be certified EPA Tier 4 Interim and European Union Stage IIIb

Y____ N____ Engine shall be electronically controlled for more efficient fuel injection and fuel burn.

Y____ N____ Engine shall achieve rated power requirement with engine displacement not less than 9.3L (568 in^3) for better performance and fuel economy.

Y____ N____ Engine shall develop as standard while AWD is ON a rated net flywheel of at least 233 HP (174 kW) in 1st gear, 253 HP (189 kW) in 2nd gear, 258 HP (192 kW) in 3rd gear, 263 HP (196 kW) in 4th gear, and 283 HP (211 kW) in gears 5 through 8.

Y____ N____ Engine will increase its low idle speed to 1,000 rpm when the battery voltage is below 24.5 volts for more than 5 minutes to ensure adequate system voltage and battery reliability.

Y____ N____ Altitude deration will not occur at altitudes less than 10,000 ft (3048 m). The deration rate above 10,000 ft (3048 m) shall be 1.5% per 1000 ft (305 m).

Y____ N____ Peak engine power shall not be achieved at an engine speed greater than 1800 rpm.

Y____ N____ Rated engine power shall not be achieved at an engine speed greater than 2100 rpm.

Y____ N____ Engine will have a minimum torque rise of 60% from 2100 rpm to peak torque following SAE J1349 (net power with max fan).

Y____ N____ Engine enclosure and daily service points shall be accessible from ground level and grouped on the left side of the machine.

Y____ N____ Engine fan shall automatically adjust fan speed via a variable hydraulic fan pump to meet engine cooling requirements thus reducing demand on the engine, putting more horsepower to the ground, reducing noise, improving fuel economy, and reducing heat.

Y____ N____ Engine shall allow for at least 500 hours of operation between oil changes.

Y____ N____ Engine shall be isolation/resilient mounted to minimize sound and vibration.

Y____ N____ Engine compartment doors shall be lockable without the use of external locks.

Y____ N____ Engine shall automatically lower engine torque and alert the operator if critical conditions are detected.

Y____ N____ Engine shall have an air-to-air after cooler for superior engine performance.

Y____ N____ Engine oil cooler shall be a water to oil shell and tube cooler system.

Y____ N____ Engine shall not require DEF (diesel exhaust fluid) **No Exception**

Y____ N____ The cooling package air intake shall have 2.8 mm perforated inlet screen.

Y____ N____ The charged air cooler (ATAAC) shall have 9 fins per inch.

Y____ N____ A 120V engine coolant heater shall be provided to assist in cold weather starting.

Y____ N____ Ether starting aid shall be available and must automatically meter ether injection to prevent engine damage.

Y____N____ Precleaner designed to handle large debris fields, including snow shall be provided.

POWERTRAIN/TRANSMISSION

Y____ N____ Transmission shall be designed and built by the machine manufacturer.

Y____ N____ Transmission shall be a direct drive, power shift, countershaft type.

Y____ N____ Transmission shall be equipped with built-in self-diagnostic capability.

Y____ N____ Transmission shall have no less than 8 forward speeds and 6 reverse speeds(for added safety).

Y____ N____ Transmission shall have 5 working gears between 0-10.8 mph (0-17.4 km/h), for dirt applications.

Y____ N____ Transmission shall be isolated/resilient mounted to reduce sound and vibration.

Y____ N____ A controlled throttle shifting system shall be standard to smooth directional gear changes without use of the inching pedal.

Y____ N____ Electronic Throttle Control (cruise control) shall be standard and shall be controlled by a push button, located on a 3-axis joystick as standard on the right joystick control for resuming and decreasing throttle set.

Y____ N____ Electronic Throttle Control modes, set and accelerate functions, shall be located on the right control column for easy access.

Y____ N____ A load compensating system for the transmission shall be standard to ensure consistent shift quality in all applications.

Y____ N____ Automatic Differential Lock/Unlock feature shall be standard and shall not have speed, shuttle shifting or tandem spinning restrictions for engaging/disengaging. System must be load-sensing for optimal performance. .

Y____ N____ Automatic mode shall not be overridden via manual intervention for optimal performance and to prevent unintended differential engagement

Y____ N____ Differential Lock/Unlock shall be electro-hydraulically controlled, as a standard feature.

Y____ N____ Differential Lock/Unlock shall be a multi-disc design.

Y____ N____ Final drive shall be a planetary design.

Y____ N____ The rear axle shall be a bolt-on modular design offering easy access to differential components, improving serviceability and contamination control.

Y____ N____ The total surface area of all the transmission clutch packs shall not be less than 1831 in^2 (11,812cm^2).

Y____ N____ Diameter at the output end of the transmission shaft shall be no less than 2.29 in (58.1 mm).

Y____ N____ Machine shall be equipped with an electronic inching pedal for improved modulation and machine control.

Y____ N____ Machine shall be equipped with electronic over-speed protection to prevent the engine and transmission from over speeding, as a standard feature.

Y____ N____ Machine shall have no drive shafts that cross over the articulation hitch.

Y____ N____ An autoshift transmission option shall be provided on all forward and reverse gears.

STEERING & IMPLEMENT CONTROLS

Y____ N____ Steering wheel shall not be required to operate machine.

Y____ N____ Joystick Steering capabilities shall be ISO 5010:1992.

Y____ N____ Machine shall employ a friction pack style steering mechanism (not spring-loaded), utilizing the follow steer concept.

Y____ N____ The left 3-axis joystick shall control wheel lean with individual left and right wheel lean buttons as standard.

Y____ N____ Primary steering shall be achieved via a left-hand, multifunction, 3-axis joystick as standard, using an intuitive steering control system that automatically adjusts steering sensitivity as machine ground speed increases.

Y____ N____

Articulation to the right or left shall be achieved by a multifunction, 3-axis left joystick with the twist of such to the right or left by the left-hand, multifunction, 3-axis joystick.

Y____ N____ An articulation return-to-center button on the left-hand, multifunction, 3-axis joystick shall return the machine to a straight frame position from ANY articulation angle with the touch of a single button.

Y____ N____ The right 3 axis joystick shall primarily control the Drawbar, Circle, and Moldboard.

Y____ N____ Machine, Drawbar, Circle, and Moldboard shall be control shall be achieved via a right hand multifunction, 3-axis, joystick, including moldboard slide and tip, drawbar center shift through a 4 way hat switch and circle turn by a left or right twist intuitively.

Y____ N____ Blade lift cylinders shall be individually controlled by the multifunction, 3 axis joysticks; Lift and drop of cylinders shall be achieved by the forward and back motion of the respective joystick. Forward (left joystick) lowers left lift cylinder, back(left joystick)raises the left lift cylinder, forward(right joystick) lowers the right right lift cylinder, back(right joystick) raises the right lift cylinder.

Y____ N____ Joystick controls shall be mounted to electronically adjustable pedestals, which are hard mounted to the cab floor, independent of the operator seat.

Y____ N____ Secondary steering shall have a primary and secondary power supply in the event the primary source is lost.

Y____ N____ Transmission direction control shall be a 3-position rocker switch for selecting forward, neutral, and reverse incorporated into a single, 3-axis, multi-function, left-hand joystick control.

Y____ N____ Transmission gear selection shall be controlled by dual push buttons for up shifting and downshifting and shall be incorporated into a single, 3-axis, multi-function, left-hand joystick control.

Y____ N____ Manual Differential Lock/Unlock shall be operator controlled, via a push-button, located on a single, 3-axis, multi-function, right-hand joystick control.

Y____ N____ The machine shall have two redundant articulation sensors.

Y____ N____ Two redundant sensors shall be standard in the steering cylinders (one in each).

Y____ N____

Three redundant sensors shall be provided in the steering joystick for additional safety.

BRAKES

Y____ N____ Machine shall have primary and secondary service brakes.

Y____ N____ Entire braking system shall meet all requirements of ISO 3450: 1996.

Y____ N____ Two separate left and right hydraulic brake accumulators shall be standard for safety. For use with low ambient temperatures below -18C.

Y____ N____ Parking brake shall be multi-disc, oil-cooled, spring-applied, hydraulically released, sealed, adjustment-free, and integrated into the transmission. Park brake shall not be externally located.

Y____ N____ Parking brake shall be serviceable without removing the transmission.

Y____ N____ Service brakes shall be multi-disc, oil-cooled and completely sealed; they will also provide access to check and determine brake wear without removing or disassembling the brake assembly.

Y____ N____ Service brake disc surfaces shall be grooved and carry oil between discs and plates with brakes fully applied.

Y____ N____ Service brakes shall be hydraulically actuated, utilizing dual independent brake circuits.

Y____ N____ Brakes shall be continuously pressurized, filtered, oil cooled.

Y____ N____ Machine shall have individual brake pods for each rear wheel, located at each rear wheel inside the tandem box, independent of tandem chains.

Y____ N____ Compensation components shall be required at all four tandem brake pods in addition to the brake wear indicator.

Y____ N____ Brake line protection, including tandem walkways and hydraulic brake line guarding, shall be required to prevent line damage.

Y____ N____ Service brakes shall provide a minimum of 3,565 in^2 (23,000 cm^2) of total friction material surface area used at each of the four tandem wheels to eliminate braking loads on the power train.

HYDRAULIC SYSTEM

Y____ N____ A standard triple-redundant hydraulic relief system shall protect machine hydraulic components.

Y____ N____ Hydraulic implement pump shall produce between 0 and 55.5 gallon/min (210 L/min) of oil flow at high idle.

Y____ N____ Hydraulics system shall be a closed center, load sensing type with a variable displacement, axial piston-type pump.

Y____ N____ Hydraulic system shall be fully sealed, using Duo-cone and O-ring face seals to prevent leaks, contamination, and spillage.

Y____ N____ The hydraulic tank shall have a baffling system to reduce potential pump cavitation.

Y____ N____ The maximum hydraulic system pressure shall be no less than 3,500 psi (24,150 kPa).

Y____ N____ Implement valves shall be electro-hydraulic, designed and built by the machine manufacturer.

Y____ N____ Implement pump shall not be mounted under cab floor, minimizing sound and vibration.

Y____ N____ Implement valves shall be proportional priority pressure compensating for consistent response when multi-functioning any combination of implement controls and independent of engine speed.

Y____ N____ Implement pump shall be solely dedicated to implement controls and not shared with any other components.

Y____ N____ Lock valves shall be integrated into the main implement valve to prevent cylinder drift.

Y____ N____ The hydraulic stand-by pressure shall be no more than 609 psi (4200 kPa).

Y____ N____ There shall be a provision to install up to 15 modulating hydraulic valves, controlled by two multifunction, 3-axis joystick controls and auxiliary controls inside the cab.

Y____ N____ Hydraulic valves shall not be mounted under the cab floor, minimizing sound and vibration.

Y____ N____ Left and right blade lift cylinders shall have independent float capability, actuated by two multifunction, 3-axis joystick controls inside the cab, as a standard feature.

Y____ N____ 0W Hydraulic Oil shall be provided. **No Exception**

Y____ N____ Two hydraulic valves for the snow wing and one hydraulic valve for the front lift group shall be provided.

Y____ N____ Hydraulic system shall have a separate oil tank solely dedicated to the implement pump.

FRONT AXLE AND TANDEMS

Y____ N____ Front axle oscillation shall be no less than 32 degrees total, per side 16 degrees up and 16 degrees down.

Y____ N____ Front axle shall be an arched design for maximum ground clearance.

Y____ N____ Wheel spindle shall be a "live" spindle design and rotate inside a sealed (with Duo-Cone seals) compartment with lightweight oil for lubrication of the bearings.

Y____ N____ Front spindle shall be heat induction hardened.

Y____ N____ Front wheel spindle bearings shall be a double-tapered design with the larger diameter bearing mounted closest to the centerline of the front tire.

Y____ N____ Front wheel spindle maintenance intervals shall be no less than 2000 hrs.

Y____ N____ Front wheel steering angle shall be no less than 47.5 degrees left or right.

Y____ N____ Maximum front wheel lean shall be no less than 18 degrees left or right.

Y____ N____ Machine minimum turning radius shall not exceed 24.10 ft (7.6 m) using front steering, full articulation, full wheel lean and unlocked differential.

Y____ N____ Distance between center of tandem wheels shall be no greater than 60 in (1523 mm) for optimum clearance and mobility.

Y____ N____ Tandem chain pitch shall not be less than 2.0 in (50.8 mm).

Y____ N____ Tandems shall be capable of oscillating 15 degrees front tandem up and 25 degrees front tandem down, with full machine articulation and having no interference between tandem wheel and machine structure.

Y____ N____ Electronic and mechanical steering stops located at each wheel and steering cylinder relief valves shall be present to prevent steering system damage during normal operation.

Y____ N____ Steering tie rod ends shall be heat induction hardened.

Y____ N____ Machine shall provide 2 steering cylinders for maximum steering force.

Y____ N____ When equipped with a ripper, the machine shall have a minimum ramp angle of 15 degrees.

TIRES AND RIMS

Y____ N____ 17.5R 25 MX XSNO+ 1* MP tires mounted on 14" x 25" multi-piece rims shall be provided.

Y____N____ One (1) spare rear tire mounted on a rim assembly shall be provided.

Y____N____ One (1) spare front tire mounted on a rim assembly shall be provided.

OPERATORS STATION

Y____ N____ A 42,075 BTU/h (12.3 kW) heater shall have an integral pressurizer and four-speed fan along with A/C.

Y____ N____ Cab shall have angled floor design allowing direct visibility to moldboard.

Y____ N____ Seat shall be a cloth-covered suspension seat with 3 in (76 mm) retractable seat belts, with adjustments for fore-aft position, seat height, seat back angle, thigh support, and lumbar support.

Y____ N____ An enclosed cab with ROPS (Rollover Protective Structure) according to ISO 3471: 1986-1997shall be provided.

Y____ N____ Cab doors shall have a hold-open clasp with a ground-level release in addition to a release in the cab.

Y____ N____ Cab shall be isolation-mounted to the front frame section of the machine.

Y____ N____ Cab shall have fixed front window of laminated glass with intermittent wiper.

Y____ N____ FOPS (Falling Object Protective Structure) shall be provided according to ISO 3449.

Y____ N____ Machine shall have no less than 17 adjustable vents, positioned to direct air to front windows and operator.

Y____ N____ AM / FM / Weatherband radio arrangement including 24V to 12V converter, two speakers, antenna and wiring shall be provided.

Y____ N____ An instrument cluster shall be provided that includes a speedometer, tachometer, coolant temperature, fuel and articulation angle gauge.

Y____ N____ Operator cab fresh air-filter shall be accessible for clean out and replacement, from outside of the cab at ground level.

Y____ N____ A real-time information system shall monitor all system data and alert the operator of any faults through a digital text display. This performance and diagnostic information system shall be programmable for multiple languages .

Y____ N____ Left and right side cab doors shall be provided.

Y____ N____ Wipers shall be provided on side and rear windows.

Y____ N____ Digital machine hour meter shall be provided.

Y____ N____ An electronic message system shall provide real-time machine performance and diagnostic data.

Y____ N____ The forward visibility shall be continuous and unobstructed glass from roofline to floor providing visibility of the blade, heel and toe, back of the cutting edge, and front tires.

Y____ N____ Access to cab shall be three anti-skid steps.

Y____ N____ Cab shall have cup holder, personal cooler holder/storage compartment for operator's manual, with a molded floor mat.

Y____ N____ Window washer fluid bottle refill spout shall be located external of the cab.

Y____ N____ An auxiliary control pod, with implement float control capability, shall be provided.

Y____ N____ Auxiliary controls shall be available for control of attachment implements and/or work tools and shall be programmable via computer software.

Y____ N____ Auxiliary controls shall be a finger-tip control type and located beside the right-hand joystick control.

Y____ N____ An auxiliary, 2-axis joystick shall be available for control of a snow wing.

Y____ N____ Integrated display and rear vision camera shall be provided with capability to view at all times without interfering with the gauge and diagnostic display.

Y____ N____ A rear sun shade shall be available.

Y____ N____ A rear defroster fan shall be available.

CIRCLE & MOLDBOARD

Y____ N____ Drawbar, circle, and moldboard shall be controlled with a maximum of two multifunction, 3-axis joysticks, as standard.

Y____ N____ Drawbar wear strips shall be replaceable drop-in inserts made from nylon composite material, replaceable and adjustable from the top of the drawbar plate via removable cover plates.

Y____ N____ The drawbar shall feature welded protective wear plates to prevent lift group contact with the primary drawbar structure.

Y____ N____ The standard moldboard shall be at least 14 ft (4267 mm) long, 27 in (686 mm) high and no less than 1 in (25 mm) thick.

Y____ N____ Moldboard shall have a bank slope angle capability of at least 90 degrees to both sides.

Y____ N____ Moldboard side-shift cylinder shall be installed on the left-hand side to prevent snow wing interference with the cylinder rod.

Y____ N____ Moldboard shall have no less than 16.3 in (413 mm) arc radius (blade curvature) for optimum productivity.

Y____ N____ The moldboard retention system shall have no more than two retention points located on the left and right side of the moldboard. The surface area shall not be less than 50408 mm^2 (78.13 in^2).

Y____ N____ Moldboard shall have a hydraulic tip control through a range of 40 degrees fore and 5 degrees aft.

Y____ N____ Moldboard wear strips shall be adjusted with lock screws, providing shim-less adjustment capability both vertical & horizontal.

Y____ N____ The moldboard shall be pre-stressed during manufacturing for superior strength and durability.

Y____ N____ Moldboard slide rails shall be constructed of a heat-treated, high carbon steel and have replaceable bronze alloy wear inserts on top and bottom.

Y____ N____ Circle shall be a single piece, rolled-ring forging with raised wear surfaces on the top and bottom.

Y____ N____ Circle shall be rotated by a hydraulically driven motor (pinion gear) with a minimum circle pinion torque capability of 44253 ft-lb (60,000 N-m).

Y____ N____ Circle teeth contact surfaces shall be induction-hardened on the front 240 degrees of the circle.

Y____ N____ Blade lift and center shift cylinders shall have replaceable bronze-alloy wear inserts in the ball sockets with removable shims to insure the ability to remove free play throughout the useful wear insert life.

Y____ N____ The lift cylinder casting shall be welded to the front frame for added strength and structural integrity.

Y____ N____ The standard mounting hardware for cutting edges and end bits shall be 3/4 in (19 mm).

Y____ N____ All 7 Link Bar positions have replaceable bushings.

Y____ N____ Linkbar pin shall be separate from pin pulling mechanism for easier service and lower O&O costs.

Y____ N____ The draft frame pivot connection shall have a single ball stud with grease zerk. Ball stud shall be bolt-on, shimable and adjustable to allow for quick and easy field serviceable design.

Y____ N____ There shall be 3 sideshift anchor positions shall be provided for extended reach capability as standard.

Y____ N____ Pinion Gear shall be separate from the Pinion Shaft to allow for a quick and easy serviceable design.

Y____ N____ Circle outside diameter shall be no less than 61.4 in (1553 mm).

Y____ N____ Throat clearance with standard moldboard shall be at least 131.4 mm.

Y____ N____ There will be no more than 6 replaceable wear inserts between the circle and drawbar providing at least 163 in^2 (1051 cm^2) of wear surface area.

Y____ N____ Blade lift accumulators shall be provided, protecting cutting edge and other components from damage from shock loads.

Y____N____ A two (2) ft right hand side blade extension shall be installed.

ELECTRICAL

Y____ N____ Machine shall have 1400 CCA heavy-duty batteries.

Y____ N____ Machine shall have a minimum 150-amp alternator at 24 volts provided which is brushless for increased life and durability.

Y____ N____ Six 3 x 3 in (76 x 76 mm) halogen mounted cab lights shall be provided.

Y____ N____ Starting system shall be a 24V direct electric type.

Y____ N____ Incandescent white reversing lamps and LED stop lamps shall be provided.

Y____ N____ Electrical system shall have a master disconnect switch with a removable key (in addition to the ignition switch), accessible from the ground level.

Y____ N____ All core machine systems shall be electronically connected, optimizing performance and preventing machine damage.

Y____ N____ All wiring shall be arranged and located so as to facilitate regular visual inspections, not be in contact with hot surfaces and not routed with other services lines (e.g. fuel, oil, etc.).

Y____ N____ All harnesses / cabling are secured with clipping clamps providing a gap between the conduit/harness and the mounting surface preventing material build-up.

Y____ N____ Machine shall have 200 amp-hour, 1400 CCA extra heavy-duty batteries available.

Y____ N____ Machine shall have a 280-amp alternator at 24 volts available which is brushless for increased life and durability.

Y____ N____ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mounted on the right-hand side of car roof bar to illuminate a snow wing shall be provided.

Y____ N____ There will be 2 (3 x 3 in)(76 x 76 mm) halogen heel work lamps mounted underneath the cab shall be provided.

Y____ N____ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mid-frame toe lamps shall be provided to illuminate moldboard and surrounding area as an option.

Y____ N____ There will be 2 (3 x 3 in) (76 x 76 mm) halogen ripper work lamps shall be provided.

Y____ N____ High and low bar headlights with front turn signals shall be provided.

Y____ N____ An amber LED high-speed strobe beacon shall be provided.

Y____ N____ A 24V to 12V converter with 25-amp capacity shall be provided.

SERVICEABILITY

Y____ N____ Access to engine will be open from both sides with hinged engine side shields and full access service doors.

Y____ N____ Machine shall have a lockable swing-out cooling fan housing featuring a latch-style mechanism (shall not be of a bolted design), allowing easy access to cores. Ability to open/close shall be ground level accessible, eliminating need to climb on machine.

Y____ N____ The dip stick for checking transmission fluid shall be at ground level.

Y____ N____ Hydraulic tank site gauge shall be readable from the ground.

Y____ N____ Hydraulic tank filter shall be a cartridge style filter providing a separate filter element, housing, and drain valve for quick and clean servicing.

Y____ N____ Ability for g round level fueling shall be provided.

Y____ N____ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports.

Y____ N____ A two-way communication tool shall give service technicians easy access to stored diagnostic data and allow configuration of machine parameters.

Y____ N____ Machine shall provide 3 points of contact on all areas of the machine, for mounting and dismounting.

Y____ N____ The articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine.

Y____ N____ Left and right side tandem case assemblies shall be covered with punched steel plate to provide an adequate platform for standing and walking.

Y____ N____ Engine oil filter shall be a 500 hour, vertical spin-on

Y____ N____ Engine primary and final fuel filters shall have 500 hour service replacement interval.

Y____ N____ Engine shall have primary fuel filter with fuel water separator and electronic sensor, quick release dual stage filter and primer pump.

Y____ N____ The centralized lube bank shall be at the articulation joint to give access to difficult zerks.

Y____ N____ Transmission filter restriction indicator shall be displayed in the cab.

Y____ N____ Lock out Tag out capabilities shall be provided standard and increase the safety levels during down time. This ensures that an energy isolating device and the machine which are being worked on and cannot be operated

MINIMUM SERVICE FILL CAPACITIES

Y____ N____ Standard fuel tank capacity shall not be less than 110 gallons (416 L).

Y____ N____ Standard cooling system capacity shall not be less than 14.8 gallons (56 L).

Y____ N____ Standard hydraulic tank capacity shall not be less than 16.9 gallons (64 L).

Y____ N____ Standard engine oil capacity shall not be less than 7.9 gallons (30 L).

Y____ N____ Standard tandem housing capacity shall not be less than 16.9 gallons (64 L) each.

Y____ N____ Standard front wheel spindle bearing housing capacity shall not be less than 0.13 gallons (0.5 L)

Y____ N____ Standard circle drive housing capacity shall not be less than 1.8 gallons (7 L)

SAFETY AND ENVIRONMENTAL

Y____ N____ A circle drive slip clutch shall be provided to reduce horizontal moldboard impact damage.

Y____ N____ Black glare-reducing paint shall be used on the front frame and engine enclosure to decrease glare from other equipment lights and reflection from the sun and snow.

Y____ N____ Operator not present monitoring system will lockout implements, shall not allow gear shift out of neutral, and lock parking brake if system detects operator not present for increased safety.

Y____ N____ Hydraulic implement lockout shall be achieved by actuating a single electrical switch within the operator station.

Y____ N____ An external emergency kill switch shall be available for ground level engine shut down.

Y____ N____ Secondary, electric steering pump with redundant wiring shall be provided as a backup to the primary implement hydraulic pump.

Y____ N____ Machine shall have laminated glass for the front windows and doors, to protect the operator from shattered glass.

Y____ N____ Machine shall provide dual exits allowing for emergency egress should one side become obstructed.

Y____ N____ Electrical system shall have a master disconnect switch with a removable key and lock for added safety.(in addition to the ignition switch).

Y____ N____ Machine shall have a steering software system shall automatically reduce steering sensitivity as the ground speed increases.

Y____ N____ Machine shall have back-up lights and sounding alarm when reverse gears are selected.

Y____ N____ Environmentally friendly drain valves shall be provided for the hydraulic oil, engine oil, engine coolant, transmission, differential and fuel tank.

Y____ N____ Cooling fan shall have both a shroud and rear grill for protection during service.

Y____ N____ Machine shall allow cab interior and exterior lights to remain on separate from ignition switch, for safe exit of the machine during night operation.

Y____ N____ Engine and transmission shall be rubber isolation mounted to reduce noise and vibration.

Y____ N____ Drop down rear lights (stop/turn signal lights) shall be available to span the profile of the machine for increased safety

Y____ N____ Two outside mounted heated mirrors shall be provided.

OPTIONAL ATTACHMENTS

Y____ N____ Rear ripper shall have five ripper shank holders with three ripper shanks and nine scarifier shank holders with nine scarifier shanks.

Y____ N____ Rear ripper shall have a working penetration of maximum 16.8 in (428 mm) and a penetration force of at least 20,693 lb (9386 kg).

Y____ N____ Front & rear fenders shall meet ISO-3457 requirements and shall not interfere with the ability to fully open any cab/engine enclosure or service access doors shall be provided.

Y____ N____ All core machine systems shall be electronically connected optimizing performance and preventing machine damage.

Y____ N____ Machine shall have no drive shafts that cross over the articulation hitch.

Y____ N____ An integrated communication tool providing flow of vital machine data and location shall be available. This system shall give automatic updates on machine parameters such as machine hours, machine condition, location, fault codes and alarms.

Y____ N____ Machine shall have a transmission solenoid valve guard provided.

Y____N____ Henke or equivalent 12 ft All Hydraulic Postless Snow Wing Installed.

Y____N____ Articulation guard shall be provided.

Y____N____ Additional hydraulic lines from the ripper valve to the back of the machine shall be provided.

ALL WHEEL DRIVE SYSTEM

Y____ N____ All Wheel Drive system shall be useable in 1F thru 7F and 1R thru 5R gears.

Y____ N____ All Wheel Drive (AWD) system shall be provided and provide a constant net power to the Tandems by increasing up to 60 HP (45 kW) when AWD is engaged.

Y____ N____ All Wheel Drive system – Each front wheel shall be powered utilizing a dedicated variable axial piston pump and variable axial piston motor. Both pumps and motors shall be infinitely variable to provide up to maximum torque in every gear.

Y____ N____ All Wheel Drive system shall automatically vary individual front wheel speeds by up to 50% during a turn, improving front wheel traction and reducing turning radius.

Y____ N____ All Wheel Drive system shall produce a max torque of no less than 1,000 lb ft. (1355 Nm).

Y____ N____ All Wheel Drive system shall provide a hydrostatic front wheel drive only mode neutralizing the transmission for precise low-speed performance. The ground speed shall be infinitely variable between 0 and 5 mph (8 km/h)

LIST EXPLANATIONS FOR ANY "NO" ANSWERS BELOW IF CONSIDERATION IS DESIRED.

MACHINE FUEL CONSUMPTION DATA

Fuel consumption. . . . . _____gal/hr.

(Please do not enter in a range)

Machine fuel consumption gal/hr figure must be backed up by providing written regional fuel consumption results data from a minimum of 100 like machines. Data must be actual numbers / results retrieved from a minimum of 100 like machines via a gps or cellular data link. Data will be based on average fuel of consumption at least one-hundred like machines. Reports must indicate fuel consumption at idol and while machine is operating under a full load. Vendors must provide a copy of the data used.

WARRANTY & AVAILABILITY GUARANTEE

In order to guarantee the cost of repairs and minimize downtime for the County, all bidders shall include with their bid:

A total machine warranty, including parts and labor for required repairs, for a period of four (4) years four thousand (4,000) hours, whichever occurs first, from date of delivery. Warranty repairs will be provided during regular working hours. If the County requests that work be done outside of regular working hours, which results in overtime, the County will pay the differential between regular time and overtime wage. Lodging, meals, travel time, parts, freight and any transportation of units between County and seller will be at seller's expense.

County will provide seller with Scheduled Oil Sampling for analysis from date of delivery. Seller will provide the oil sample bottles & the expense of the processing the oil samples.

Annual machine inspections and adjustments, as prescribed in the maintance guides, shall be performed in the field (County's location), unless prior more convenient arrangements are made.

95% Guaranteed Machine Availability. Bidder guarantees that the machine shall be operable and available for use by the County for at least 95% of the County's work year, which shall be calculated based on a 2080 hour work year. After any continuous downtime, which exceeds 40 work week hours, Seller shall provide County with a replacement machine that is comparable to the motor grader purchased under this bid proposal. If seller fails to provide County with a comparable replacement machine, County shall charge seller with an hourly assessment of $60.00 per hour for any downtime in excess of 5% of the work year; such assessment shall be made on the anniversary date of delivery.

County shall make the machines available for repairs and inspection upon reasonable request and notice by the successful bidder.

AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

AFFIDAVIT OF NON-COLLUSION

I hereby swear (or affirm) under the penalty; for perjury;

(1) That I am the bidder (if bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);

(2) That the attached bid or bids have been arrived at by the bidder independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;

(3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and \

(4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

SIGNED:_____ **FIRM NAME:**_____

DATE:_____ **ADDRESS:**_____

SUBSCRIBED AND SWORN TO BEFORE ME

THIS_____**DAY OF** _____**,20**____**.**

NOTARY PUBLIC

_____

Print name:

My commission expires:_____

BIDDER'S E.I NUMBER:_____

(Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941)

BIDDER'S CHECKLIST

Please be sure you have completed the following prior to submitting your bid:

1. Read and understood the specifications.

2. Enclosed all documents listed in the Bidder's Submission Requirements (p.7 of Bid Package).

3. Made yourself familiar with any State laws that pertain to this bid.

4. Asked any questions, and received answers, regarding the bid procedure, specifications, or general information.

*** **NOTE:** **Any bid that is not properly addressed (including bidders phone no.), or that is delivered past the date and time indicated on the invitation to bid, will be invalid and will not be opened or considered.*****