

City of Waterville  
DEPARTMENT OF PUBLIC WORKS  
6 Wentworth Court  
Waterville, Maine 04901-4892

TEL (207) 680-4744 FAX (207) 877-7532

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**REQUEST FOR BIDS**  
**WING / PLOW – WHEEL LOADER PATROL PACKAGE**

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**DATE: August 22, 2019**

**INSTRUCTIONS TO BIDDERS**

- 1. GENERAL:** The City of Waterville is accepting bids for a Wing & Plow Patrol Package Assembly to be furnished and installed on a 2003 John Deere 644K front-end loader and meeting the specifications accompanying this document.
- 2. BID SUBMITTAL:** Sealed bids will be accepted by the Office of the Director of Public Works, 6 Wentworth Court, Waterville, Maine 04901 up to and including 10:00 AM local time, September 24<sup>th</sup>, 2019 at which time they will be publicly opened and read. All bids will be placed in a sealed envelope clearly marked "Bid – Wing & Plow Assembly" in the center with the bidder's name and address in the upper left-hand corner. Bids not dated and time stamped by the Office of the Director of Public Works prior to the specified date and time stated above will be returned unopened.
- 3. WITHDRAWAL OR REVISION OF BID:** A bidder may withdraw or revise a bid after it has been received by the Office of the Director of Public Works, provided the request is made in writing or in person before the time set for bid opening.
- 4. BID AWARD:** Bid award, if the City determines to award, will be made within thirty (30) calendar days after bid opening, to the lowest responsible bidder whose bid fully complies with all the requirements specified contingent upon approval by the City Council. The City reserves the right to reject any and/or all bids without absorbing any liability against the City.
- 5. Evaluation of Bids:** For purposes of evaluating the bids, in the event of any discrepancies on a proposal between an amount written out in words verses the same amount expressed in numbers, the amount written in words shall govern (if applicable). Similarly, unit prices shall prevail over extended totals. In the event of Additive Bid Items, the "low bid" shall be based upon the least total for the highest combination of bid items which may be awarded within the control amount (i.e. a predetermined budget amount to be disclosed at the time of bid opening). In the event all base bids exceed the control amount, the "low bid" shall be based solely upon the lowest base bid submitted. Bidders shall examine and familiarize themselves with the specifications and bid documents. The bidder shall in no way be relieved of any obligation to provide the product, service and/or equipment specified through error, mistake or omission.

## Request for Bids

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**6. INTERPRETATION OF ADDENDA:** It shall be the bidder's responsibility to make inquiry as to any interpretation of the specifications or requirements of the participants. Any changes in the specifications shall be by written addenda.

**7. SPECIFIED QUANTITY:** One (1) Unit Each (Wing & Plow)

**8. INVOICES AND PAYMENT:** Invoices shall be transmitted to the City of Waterville, 1 Common Street, Waterville, Maine 04901-6699. It is the practice of the City of Waterville to pay invoices within thirty (30) days of receipt. The City is exempt from State of Maine Sales Tax.

**9. PENALTY CLAUSE:** N/A

**10. INSURANCE:** N/A

**11. PERFORMANCE BOND:** N/A

**12. CANCELLATION:** The City reserves the right to cancel any unfulfilled portion of the Contract if, in the opinion of the City, the services or materials supplied are unsatisfactory or are not in compliance with the terms and conditions of the Specifications. Cancellation shall be effective following ten (10)-calendar days written notice to the Bidder

**13. EXCEPTIONS TO SPECIFICATIONS:** These instructions to Bidders and General Paragraphs are an integral part of the Specifications for a Wing & plow and will be binding on the Bidder. Bidders are advised that they shall be bound to the requirements of the Specifications, Instructions to Bidders and General Paragraphs unless exceptions are otherwise clearly noted in the Proposal. Any exceptions shall be considered, however, in determining the most acceptable proposal.

**14. INQUIRIES:** Any questions concerning this bid request should be directed to Fred Dechaine, Fleet Maintenance Supervisor, Department of Public Works, 6 Wentworth Court, Waterville, Maine 04901. Telephone inquiries can be made by calling (207) 680-4746 between the hours of 7:00 AM & 3:00 PM Monday thru Friday.

**15. GENERAL PARAGRAPHS:** See attached **Bid Specifications**

**BID SPECIFICATIONS**  
**WING / PLOW – WHEEL LOADER PATROL PACKAGE**

**(\*\*Note – Portions of requested specifications may already be installed on existing equipment)**

**WING TOWER** – The hydraulic control valves shall be cable operated.

The hydraulic assembly shall be of the sectional balanced spool type, with an integral relief valve of a capacity suitable for use with the pump and load sensing capability. The valve spools shall be of polished chrome and the valves shall be those of a recognized manufacturer – Commercial or approved equal.

Location of all valves and control levers shall be approved by the City of Waterville before installation.

All high-pressure oil lines shall be of heavy-duty hose and fittings. High pressure hose equipment shall have a minimum bursting pressure of 6.000 PSI. Hose shall be of a recognized manufacturer. All lines to have swivel connectors on all ends.

Heavy duty gusseted cross members shall be provided at all points of stress from wing bracing are to frame.

**PLOW** – Must be American Coupler Systems quick self-aligning, single point pick-up with hydraulic shift pins.

**MOLDBOARD ASSEMBLY:**

The moldboard shall be not less than 39” high nor less than 11’ long. The moldboard sheet shall be formed from not less than #8 USS gauge steel and shall be paneled for additional rigidity. It shall be welded to a framework which includes: Not less than ten (10) steel reinforcing ribs at least 3/8” thick x 3 1/2” wide and a lower moldboard reinforcement from not less than 4” x 3” x 1/2” steel angle so as to form a rigid structure. The upper portion of the moldboard shall project over the cutting edge so as to form a continuous, solid, integral snow shield and shall include an upper reinforcement form not less then 3” x 2 1/2” x 3/8” steel angle.

**CUTTING EDGE:**

Shall be one (1) in number and shall be from 5/8” x 8” C1090 steel, punched to AASHO standards on 12” centers and supported by a reinforcement from not less then 4” x 4” x 3/4” steel angle. The cutting edge shall be reversible for double wear.

**CURB SHOES:**

The moldboard shall have two (2) fabricated steel curb shoes (one at each outside end of the moldboard). Each curb shoe shall be not less then 1 3/8” thick and shall offer not less than 14 sq. in. of bearing surface.

**TRIPPING EDGE MECHANISM:**

Shall be of the single edge design, which shall activate whenever the cutting edge comes into contact with an obstruction on the pavement. Trip activation shall be achieved through six (6) torsion springs from not less than  $\frac{3}{4}$ " wire, having a  $3\frac{3}{4}$ " O.D., with sixteen (16) active coils each. Each spring shall be pinned in place in a horizontal position and shall butt to the lower moldboard reinforcement and to the cutting-edge reinforcement. Spring adjustment shall be provided so as to alter the precharge of springs for varying plowing conditions.

**DRIVE FRAME & REVERSING MECHANISM:**

The drive frame and reversing mechanism shall consist of an "A" frame, a truss frame and two single acting hydraulic cylinders with  $3\frac{1}{2}$ " diameter x 16" stroke.

The "A" frame shall be a triangular weldment with  $\frac{3}{8}$ " thick steel plates (top & bottom), a rear member from not less than 1" thick steel plate and two (2) center reinforcements from not less than  $\frac{3}{8}$ " thick steel plate, so to form a boxed center section.

The truss frame shall include a main drive member from  $4\frac{1}{2}$ " O.D. pipe fitted with gusseted top and bottom semi-circles from not less than  $\frac{5}{8}$ " thick steel plate.

The truss frame shall pin to the moldboard at not less than 4 points over a span of not less than 100" and shall include two (2) moldboard braces which allow for alternate moldboard positioning.

Moldboard and truss frame shall pivot about the "A" frame on a lubricated pin, not less than 3" in diameter, up to  $37^\circ$  either side of the chassis centerline.

Each cylinder shall have  $3\frac{1}{2}$ " diameter pistons, which terminate with  $2\frac{1}{2}$ " diameter connection lugs. Both the rods and lugs shall be from case hardened, chrome plated steel and shall be protected by a hydraulic cushion valve.

The "A" frame shall be fitted with a three (3) point lift chain arrangement, which shall accommodate plow reversing operations with the plow either on the ground or at the carry position. This arrangement shall be of a design which prohibits plow list, when the moldboard is angled in the carry position.

**PLOW COUPLING BAR:**

Shall consist of a  $\frac{3}{4}$ " thick x 5" wide oscillating bar, fitted with two (2)  $\frac{3}{4}$ " thick drive ears on 31" centers. The oscillating bar shall pivot about a  $1\frac{3}{8}$ " diameter Grade 5 hex head bolt at the rear of the drive frame, so to allow the plow to follow uneven surface contours.

**DRIVE FRAME DEPTH:**

In the interest of front axle loading, the drive frame depth from the chassis drive points to the centerline of the main drive frame tube member, shall not exceed 37 ½” with the plow at the 0° setting.

**SPRAY GUARD:**

Shall bolt to the top moldboard flange of reinforcement. It shall consist of a 12” wide x ¼” thick rubber belt, metal retaining strap and necessary mounting hardware.

**MOLDBOARD SHOES:**

The cutting edge shall be fitted with two (2) fabricated steel moldboard shoes. Each moldboard shoe shall offer a minimum of 26 sq. in. of bearing surface and shall attach to the underside of the cutting-edge reinforcement.

**LEVELING WING:**

Shall be not less than 10’ long overall, 29” high at the front ends, 38” high at the rear ends and shall have a 5/8” x 6” AASHO punched renewable cutting edge each. The wing shall be constructed with a series of holes in the horizontal reinforcements to allow proper adjustment of the wing braces to an adjustable drive rib at the back of the wing. The wing shall be completely boxed for greater strength. The wing shall be installed on the right side of the loader. Wing moldboard shall be paneled.

**FRONT OF WING ATTACHMENTS:**

Patrol Wing Posts: The wing shall be supported at the front of the loader by not less than a 7” beam, complete with self-contained 2 ¼” bore x 19” stroke double acting hydraulic cylinder for raising and lowering the front of the wing. This post in turn shall be attached to the plow push frame assembly by not less than a 6” reinforced ship channel and extra heavy pipe bracing.

**REAR OF WING ATTACHMENTS:**

The rear of the leveling wing shall be supported by extra heavy telescoping braces which are attached to a double acting wing brace hoist, mounted integrally with the rear support beam. Wing shall have a minimum 48” shelving capacity and shall be lifted by use of rear lift ram (no cables).

**FULL TRIPPING KIT:**

Shall consist of a special spring-loaded front dee and a special set of parallel wing brace braces which provide a safety trip actuation whenever the wing encounters an obstruction on the plowing surface. Provision for locking out the tripping mechanisms shall be supplied for operating conditions requiring a rigid wing. Tripping actuation shall be

## **Bid Specifications**

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on the plowing surface. Provision for locking out the tripping mechanisms shall be supplied for operating conditions requiring a rigid wing. Tripping actuation shall be accomplished through a 7/8" diameter wire torsion spring at the front dee and a tension spring at the top rear parallel brace or by trip wing arms and lift cylinder. This shall be adjustable and shall automatically return the wing to its normal operating position after trip actuation.

**Options** – 2 cutting edges for plow  
2 cutting edges for wing  
2 each shoes (as required)

**Color** – To match loader

Installation to be done by vendor/supplier. This will include all transport costs to and from the vendor's assembly facility.

### **SPECIAL CONDITIONS –**

Vendor to furnish Public Works Department with O.E.M. parts and service manual. Manufacturer's descriptive literature to be furnished with bid. Any changes in the specifications shall be set forth in the proposal. Guaranteed delivery date to be specified in proposal.

The City of Waterville reserves the right to reject any and all bids that it deems in the best interest of the City.

***\*\*NOTE – If necessary, bidder is responsible for all costs associated with transporting the loader to and from their installation facility.***

**BID FORM**

**DATE:** \_\_\_\_\_

To the Director of Public Works for the City of Waterville, Maine:

Please accept this bid submission from

\_\_\_\_\_  
(Hereinafter called "Bidder"), a corporation\* organized under the laws of the  
State of \_\_\_\_\_ or a partnership/individual\*\* doing business as

\_\_\_\_\_  
This bid is being submitted for a **WING / PLOW – WHEEL LOADER PATROL  
PACKAGE** in compliance with your invitation for bids, having examined the specifications  
and conditions contained therein. Alternatives/Substitutions are as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Attach Additional Comments, As Necessary)

**The Bidder proposes to supply the following:**

**Bid Option #1:** (Per Specifications) \$ \_\_\_\_\_

**Trade-In Allowance:** N/A \$ \_\_\_\_\_

**Extended Warranty:** Provide Description Summary

\*\*Delivery Guaranteed within \_\_\_\_\_ days of contract award and not beyond sixty  
60 days of contract award.

**NAME OF BIDDER:** \_\_\_\_\_

**BY:** \_\_\_\_\_  
(Signature)

**NAME AND TITLE:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_

**TAX ID#** \_\_\_\_\_