August 18, 2015

The City of Norwalk is soliciting bids for an Articulating Tractor with additional equipment/accessories/attachments for the Department of Public Works. Below is an outline of some of the requirements that apply to this item.

<table>
<thead>
<tr>
<th>PROJECT #</th>
<th>3608</th>
<th>Document length – 31 pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEADLINE</td>
<td>2:00 PM</td>
<td>September 8, 2015</td>
</tr>
<tr>
<td>PROJECT TITLE</td>
<td>Articulating Tractor</td>
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</table>

Candidates will be required to provide:

1. 10% bid bond, cashier's or certified check with your response (see Section 3.1 C).
2. Copies of current certifications as applicable.
3. Include Original bid package, plus three (3) copies.

All questions concerning these specifications should be directed, in writing, to David Carroll, Purchasing Officer, via email to dcarroll@norwalkct.org. The deadline for the submission of questions for this project is 12:00 p.m., August 28, 2015.

BID DOCUMENTS are available upon receipt of this invitation over the Internet at [http://www.norwalkct.org](http://www.norwalkct.org). Adobe Acrobat reader is required to view this document. If you do not have this software you may down load it for free from Adobe.

Businesses, without fax or Internet access equipment, may contact the Purchasing Department at 203-854-7712 for any Bid information. Our fax number is 203-854-7817.

If, after review of the Bid document materials, your firm is interested in providing the products specified herein, provide the information requested, sign and return your bid submission materials to the City of Norwalk Purchasing Department by the due date listed above.

Yours truly,

David Carroll
Purchasing Officer
dcarroll@norwalkct.org

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SECTION 1 - RESPONSE FORMS

SPECIAL NOTES ON RESPONDING:

ADDENDA information is available over the Internet at http://www.norwalkct.org. Adobe Acrobat reader is required to view this document. If you do not have this software you may download it for free from Adobe. We strongly suggest that you check for any addenda a minimum of forty eight hours in advance of the bid deadline.

SUMMARIES will be available any time after 5:00 PM on the day of the bid opening over the Internet at http://www.norwalkct.org. The document number to request will be the same as the project number indicated in the invitation to bid. Bid results will not be provided over the phone.

AWARD NOTIFICATION will be issued by mail.

BUSINESSES WITHOUT Fax Equipment or Internet access may contact the Purchasing Department at 203-854-7712 for this information.

BID RESPONSES Original + three (3) copies are to be delivered to:

   City of Norwalk
   Purchasing Department, Room 103
   125 East Avenue
   P.O. Box 5125
   Norwalk, CT 06856-5125

See section 3 for information on delivering bids by fax.
1.1 PRICING SHEET: #3608 – Articulating Tractor

<table>
<thead>
<tr>
<th>Vendor Name:</th>
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<tr>
<td>Address:</td>
</tr>
<tr>
<td>City: State: Zip Code:</td>
</tr>
<tr>
<td>Phone: Email:</td>
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<tr>
<td>Manager - Fed ID#</td>
</tr>
</tbody>
</table>

The undersigned hereby declares that he/she or they are thoroughly familiar with the specifications, the various sites, the City's requirements, and the objectives for each element of the project item or service and understands that in signing this proposal all right to plead any misunderstanding regarding the same is waived.

The undersigned further understands and agrees that he will furnish and provide all the necessary material, machinery, implements, tools, labor, services, and other items of whatever nature, and to do and perform all the work necessary under the aforesaid conditions, to carry out the contract and to accept in full compensation therefore the amount of the contract as agreed to by the Contractor and the City.

1. **Articulating Tractor** (with additional equipment/accessories/attachments)

<table>
<thead>
<tr>
<th>Lump Sum Price $</th>
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<td>Lump Sum Price in Words</td>
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Delivery time: _______ calendar days after receipt of order.

Warranty: ____________________________________________

_____________________________________________________

_____________________________________________________
1.1 PRICING SHEET: #3608 – Articulating Tractor

<table>
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<th>Vendor Name:</th>
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Bid Security in the form of a (check one) is attached.

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<tr>
<th>Bond</th>
<th>Certified Check</th>
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<tr>
<th>Insurance Agency Name -</th>
<th>Tel.:</th>
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<tr>
<th>Agency Address -</th>
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Submitted by:

<table>
<thead>
<tr>
<th>Authorized Agent of Company – Printed Name</th>
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<table>
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<tr>
<th>Authorized Agent of Company - Signature</th>
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<th>Date</th>
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The above signatory acknowledges receipt of the following addenda issued during the bidding period and understands that they are a part of the bidding documents (if applicable):

<table>
<thead>
<tr>
<th>Addendum #1, Dated -</th>
<th>Addendum #2, Dated -</th>
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<table>
<thead>
<tr>
<th>Addendum #3, Dated -</th>
<th>Addendum #4, Dated -</th>
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</table>
1.2 BIDDER’S QUALIFICATIONS

If a qualification statement is not on file with Purchasing, or is over one year old, please answer the following questions. Attach a financial statement or other supportive documentation.

1. Number of years in business - _________

2. Number of personnel employed Part time - _____, Full time- _____,

3. List six contracts of this type/size your firm has completed within the last three years:

<table>
<thead>
<tr>
<th>Project</th>
<th>Date</th>
<th>Contact Person</th>
<th>Phone No.</th>
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</table>

SERVICE -

4. Location of service center - __________________________________________________

5. Size of service center (sq. ft.) - _______________________

6. Dollar value of parts relating to this bid in inventory $ ________________

7. Number of full time mechanics employed, qualified to handle this equipment: _____

Attach any additional information which demonstrates your qualification for this work including appropriate certifications.
SECTION 2 - PROJECT SPECIFICATIONS

The City of Norwalk intends to purchase for an Articulating Tractor with additional equipment/accessories/attachments as described in the following specifications to be utilized by the Department of Public Works.

The City of Norwalk is inviting quotes from authorized dealers of Articulating Tractors. Only submissions from authorized dealers will be considered for an award.

All products to be purchased as a result of this bid solicitation shall be new, unused Articulating Tractors, equipment, accessories, and attachments.

Provide complete detailed warranty information with your bid submission.

Articulating Tractor shall be delivered to:

Public Works Center
Attention: Joel Grant, Fleet Manager
15 South Street
Norwalk, CT 06854

All questions concerning this project must be directed in writing via e-mail to David Carroll, Purchasing Officer, dcarroll@norwalkct.org. The deadline for submission of questions is 12:00 p.m., August 28, 2015.
SPECIFICATIONS FOR A MUNICIPAL ARTICULATING TRACTOR

BID QUALIFICATION:

To ensure that only those tractors that are of sufficient power, are not too large for operating on municipal sidewalks and qualify as market proven commercial production vehicles, the following four mandatory specifications have been established.

The following five basic bid qualification specifications must be met in order to submit a bid. Bids will be rejected if these five mandatory specifications are not met.

1. A four wheel drive articulating, oscillating, Rubber-tired, diesel powered multi-purpose tractor, designed for year round work, utilizing various attachments shall be supplied.

   MAKE ___________________________
   MODEL ___________________________
   YEAR ___________________________

2. Tractor shall be no wider than 50-1/2" (1.3 m), including fenders and no higher than 80" (2.03 m) to top of roof.

   COMPLY __________________
   DO NOT COMPLY ____________

3. Engine shall be a water cooled diesel with 115 hp @ 2500 rpm and producing torque of 360 lbs-ft @ 1500 rpm.

   COMPLY __________________
   DO NOT COMPLY ____________

4. Tractor shall have sufficient hydraulic capability to power manufacturers own hydraulically driven angle sweeper, cold planer, 14 ft wide rotary mower, etc.

   COMPLY __________________
   DO NOT COMPLY ____________

5. Tractor shall have a mechanically driven front PTO with a dynamometer rating of no less than 95 hp.

   COMPLY __________________
   DO NOT COMPLY ____________
1. **COMMERCIAL PRODUCTION VEHICLE:**

Model being offered must have been in "Commercial Production" for not less than 3 years with a minimum of 250 units produced and delivered to end users. This is not required if the same manufacturer has produced a minimum of 500 prior model units.

YES ______ NO _________

STATE TOTAL NUMBER OF UNITS PRODUCED INCLUDING PRIOR MODELS AND NUMBER OF YEARS MANUFACTURING UNITS MEETING THE FOLLOWING SPECIFICATIONS.

UNITS PRODUCED _________

NUMBER OF YRS PRODUCED _____

2. **CUSTOMER REFERENCES:**

Bidder must submit a list of at least six (6) different customers in the State of CT with contact names and telephone numbers, who currently own and operate one (1) or more of the model being offered.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
3. **FUTURE ATTACHMENT AVAILABILITY:**

The City of Norwalk may require one or more of the following attachments within 30 – 60 days following the initial purchase order. Please answer yes or no for availability. Also state the number of days notice that is required to have the attachment demonstrated at the location of our choice.

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Number of Days Notice for Demo</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 14 ft rotary mower, front mounted.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>B 10 ft rotary mower, front mounted.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>C 6 ft rotary mower, front mounted.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>D Sickle bar mower.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>E Under guard rail mower.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>F Asphalt cold planer.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>G Concrete planer w/Ranjo drum.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>H Leaf shredder / loader.</td>
<td>____</td>
<td>____</td>
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<tr>
<td>I 45 kw generator &amp; security fencing.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>J Electric infrared asphalt heater.</td>
<td>____</td>
<td>____</td>
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<tr>
<td>K 3, 4, 5, 6, 7, or 8 ft. wide hydraulically driven angle sweeper.</td>
<td>____</td>
<td>____</td>
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<tr>
<td>L 50&quot;, 60&quot;, or 72&quot; V plow.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>M 5, 6, 7, or 8 ft. angle snow plow.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>N 5 ft double trip snow plow.</td>
<td>____</td>
<td>____</td>
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<tr>
<td>O 5 position folding V plow.</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>P 51&quot;, 60&quot;, 70&quot;, or 80&quot; snowblower.</td>
<td>____</td>
<td>____</td>
</tr>
</tbody>
</table>
Q  rear salt & sand spreader.
R  front sander and plow combination.
S  51" boom flail with dual tire option
   for increased stability.
T  48" pickup sweeper.
U  Water tank & pump system.
V  Front mounted flail mower.
W  Front mounted aerator.
X  Front mounted loader with
    49" or 72" bucket.
Y  Line & symbol painter.

4. FACTORY TRAINING:
A factory training school at the manufacturer’s location for up to 12 technicians shall be
available at no charge. The school shall include classroom sessions, hands on repair
techniques and diagnostic training. The training school is also to be available several times
per year at no charge for re-training or new technicians.

5. LABELLING and WARNING DECALS:
The following labels and decals must be present on tractor upon delivery:

- Pinch point decals.
- Danger – rotating shaft decal.
- Danger – Fan decal.
- Joystick function / operation decal.
- Diesel fuel only decal on fuel reservoir (minimum .75" high letters).
- Hydraulic oil only decal on oil reservoir (minimum .75" high letters).
- Decals for adjustment procedures.
- Grease chart decal approx. 11" x 12" under top hood. Decal must include illustrations for showing grease points.
- Metal tag - ROPS Certification.
- Metal tag - Serial number / model / model year.
6. MANUALS:

The following manuals and CDs must be furnished at no extra charge at the time of delivery. If these manuals do not comply to the specifications as stated below, or are not supplied at time of delivery, 10% of the total purchase order amount will be withheld until all manuals and CDs meeting specification are delivered.

An operators manual of approximately 170 pages must be supplied in the tractor cab. The cab must have a pocket for the manual to be kept at all times. The manual will provide all information required to operate the tractor. It must also include basic maintenance information, safety precautions, lubrication diagrams, etc. All pictures must be in full colour.

A tractor parts manual including maintenance and operators instructions shall be supplied. The manual shall be no less than 280 pages and include approximately 80 detailed parts illustrations. The manual must also include exploded view illustrations of the differentials, pto clutch, gear reduction box, mechanical transmission, brake system and all driveshaft assemblies. Wiring and hydraulic schematics must be in full colour. All wiring harness illustrations must also be in full colour. The manual must have detailed information regarding controls, operating tips, safety precautions, attachment mounting, attachment hose hook up colour coding, grease point illustrations, lubrication chart, etc. The manual must include a CD copy inserted into a protective sleeve in the manual cover.

A tractor service manual shall be supplied at time of delivery. It shall consist of approximately 265 pages with a detailed index. The manual must include diagnostic, repair and adjustment information for main drivetrain components. All photo pictures that assist in overhaul procedures must be in full colour. Wiring and hydraulic schematics must be in full colour. Other items required include a torque specification page, fault logic trouble shooting, lifting point and jack stand placement illustrations. The above information for attachments including those which may be ordered at a later date must also be included. The manual must include a CD copy inserted into a plastic protective sleeve in the manual cover.

Attachment manual must also be provided for all attachments order.
7. SAFETY FEATURE REQUIREMENTS:

A neutral safety start system shall prevent the engine from starting unless shifted into neutral.  

YES ______  NO ______

A seat safety switch must automatically shut down the PTO shaft and shut off any hydraulically powered attachment if the operator leaves the drivers seat. (no exception allowed)

If the operator leaves the seat without placing the shifter into neutral, the engine will shut down. (no exception allowed)

Shift lever must have a spring loaded lock-out button.  

YES ______  NO ______

The hydraulic circuits which power the hydraulic driven mower wings must kick off automatically when wings are raised to a pre-determined angle. When lowered, they must be re-started. This feature must be designed into the tractor for future additional attachment purchases.

YES ______  NO ______

Tractor must have a hydraulic brake at each wheel. There must also be a mechanical parking brake that can be applied if hydraulic brakes fail. 

SPECIFY ____________________

___________________________

Cab must be ROPS certified and have a certification tag attached to the structure. (no exception allowed)

A wire protection guard must enclose the engine fan.  

YES ______  NO _____
The tractor shall have reflective striping on both sides of cab and rear side hoods, as well as on the rear hood below the tail lights.

YES ______  NO ______

Tractor shall have a backup alarm activated by the forward / neutral / reverse lever.

YES ______  NO ______

The cab shall have easy access for operator entry/exit. There must be a step at no higher than 14 inches above the ground. The step shall be approximately 11” long and must be behind the front wheel.

YES ______  NO ______

The tractor shall have Safety, Danger, Caution and Pinch Point decals as described in the labelling Section of this specification. (no exception allowed)

Access to the PTO shaft shear bolt shall be from inside the cab. This is also where the PTO shaft is connected when attaching an implement. Having to reach down in front of the tractor to connect the PTO shaft or change a shear bolt will not be accepted.

YES ______  NO ______

8. DIMENSIONS and WEIGHTS:

Dimensions are not to exceed the following:

- Overall length including rear bumper: 146.5 inches SPECIFY __________
- Height of top of cab: 80.0 inches SPECIFY __________
- Track width with winter tires: 49.5 inches SPECIFY __________
- Overall width including fenders: 50.5 inches SPECIFY __________
- Inside turning radius: 90.0 inches SPECIFY __________
- Weight of tractor is to be no less than 5,700 lbs and is not to exceed 6,500 lbs. STATE WEIGHT ____________ Lbs ____________ Kgs

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9. CHASSIS:

The tractor shall consist of 4 main structures, front cab / frame, centre frame, mid frame and rear frame.  

YES _____  NO ______
STATE NUMBER OF FRAME SECTIONS ______

Two greaseable pivot pins shall connect the mid-frame to the centre frame through hardened greaseable spherical bearings.

DESCRIBE SYSTEM:

________________________
________________________

The mid frame must be removable from the rear frame to allow easier removal of drivetrain components such as apto clutch or pump drive assembly from the bell housing.

YES _____  NO ______

Frame rails are to be of sufficient strength to withstand rough road impact at 32 km/hr with loaded sander on the rear and the heaviest front mounted attachment supplied or offered for future purchase.

STATE FRAME RAIL TUBING DIMENSIONS:

___" x ___" x ___” wall thickness

STATE:

ARTICULATION ANGLE _____
OSCILLATION ANGLE _____

10. ENGINE ACCESS PANELS:

Each side hood shall have 2 hinged access doors
The top hood shall open independently. It must be hinged and be held open by a support rod.

SPECIFY __________________

Engine oil dipstick shall be accessible without removing and engine compartment panels.

YES _____  NO ______
All hoods and panels must be either 14 or 16 gauge steel to withstand rough operation and contact with tree branches, signs and other obstructions encountered. Plastic, fiberglass or any other non-metallic material is unacceptable.

STEEL HOODS: YES ____ NO ____

Complete rear grill shall hinge open for easy access to clean coolers and radiator. A brush shall be supplied and secured beside the coolers and radiator.

YES ____ NO ____

The overall width of the rear grill / hood, behind the rear Axle shall not exceed 39 inches.

YES ____ NO ______

SPECIFY _______ inches

There shall be a hinged door for access to the radiator fill spout.

YES ____ NO ____

11. COOLING:

Engine shall be water cooled by means of an 18 inch diameter fan and a radiator.

YES ____ NO ____

A three in one cooler is to be supplied for cooling Charge air, hydraulic oil and engine coolant.

YES ____ NO ____

The hydraulic system shall have a thermostatically controlled bypass valve for cold weather operation.

YES ____ NO ____

STATE BYPASS TEMP

SETTING _______ DEGREES

An electric reversing engine fan shall be supplied which automatically reverses air flow to keep grass clippings from accumulating on the rear grills and prevents plugging of the radiator, oil cooler and charge air cooler.

YES ____ NO ____
Total area of cooling air intake grills must be approximately 1300 sq inches and perforations must be small enough to prevent grass clippings from entering coolers. Convoluted ribs may be used to achieve required area.

Total grill area for exhaust air from engine compartment must be approximately 1.25 times intake air grill area.

12. P.T.O.

PTO drive system to be mechanical by way of a clutch. 11-1/2” over-centre type preferred. Must be electric over hydraulic actuation with indicator light. Actuation by lever is not acceptable.

The front PTO is to be 1-3/8 inch diameter, 6 spline. 540 pto rpm @ 2160 engine rpm. Minimum 95 pto hp required.

See options page if rear pto is required.

13. IMPLEMENT HITCHES:

Tractor shall be supplied with a front quick hitch system. Implement height shall be controlled by two double acting hydraulic cylinders which are operated from the joystick. Spring load lift latches hold the implement frame in place.
Must be capable of attaching existing Trackless attachments already owned by the municipality. To satisfy legal and safety concerns, bidder must submit 3 copies of a letter from Trackless Vehicles Ltd. approving the attachments already owned can be safely mounted and operated on the tractor and will not in any way effect their product liability coverage of the attachments in question.

14. TRANSMISSIONS:

The tractor shall be propelled by a hydrostatic transmission and controlled by a single electronic foot pedal. The electronic pedal controls the hydrostatic transmission and the engine RPM when in FUEL SAVER mode. If switched to work mode, a throttle lever over-rides the pedal control of the engine RPM allowing full RPM to power the PTO shaft to run the attachment.

The tractor shall consume no more than 105 litres of fuel to plow sidewalks for 15 – 18 hours in fuel saver mode.

A forward / neutral / reverse shifter with a detent locking button shall be supplied. The shifter must be located as close as possible to, and to the right of the joystick.

The tractor shall have a 2 speed mechanical transmission which provides speed ranges of:

LOW RANGE 0 - 12 km / hr
HIGH RANGE 0 - 32 km / hr

The transmission SHIFT LEVER inside the cab must have a neutral position allowing the tractor to be towed, without danger of damaging the hydrostatic transmission. Shut off taps, screws, etc located in the rear frame area will not be accepted. Tractor may be towed several miles without damage.
Additional switch on the joystick will allow the operator to shift between forward, neutral and reverse.

YES _____  NO ____

15. AXLES:

Shall be Dana model 60 full float with track-lok differentials front and rear.

YES _____  NO _____

SPECIFY __________________

Axles assemblies must be manufactured in North America with local parts availability.

COUNTRY OF MANUFACTURE

___________________________

There shall be no less than 8 - ½ inch dia. bolts securing each axle housing to the chassis.

YES _____  NO _____

Each axle shaft shall have a minimum of 8 wheel studs.

YES _____  NO _____

See options page if locking differentials are required

16. BRAKING SYSTEMS:

Tractor shall have no less than 3 braking systems, hydrostatic dynamic braking, hydraulic service brakes, and mechanically actuated emergency / parking brakes. Service brakes must consist of brakes at all 4 wheels.

YES _____  NO _____

SPECIFY __________________

State total brake surface area for all 4 wheels

______________ SQ. INCHES.

Parking brake is to be applied by way of an adjustable parking brake lever. It must be able to apply the brakes mechanically in the event that the hydraulic system for applying the service brakes fail.

YES _____  NO _____

SPECIFY __________________

The parking brake must sound a warning buzzer when applied.

YES _____  NO _____
17. WHEELS / TIRES:

Tires shall be 10.00 x 16.5 loader lug winter tread mounted on heavy duty wheels with no less than 8 studs. 

YES _______ NO _______

MAKE OF TIRE: ____________

STATE NUMBER OF STUDS

PER WHEEL _____________

See options page for tire and wheel options if required.

18. HYDRAULIC SYSTEMS:

The hydraulic gear pump shall be driven by the engine and produce a minimum of 20 gpm. 

SPECIFY __________________

Additional hydraulic pump shall provide 14 gpm. The hydraulic pump will only be powered if the PTO clutch is engaged.

YES _______ NO _______

SPECIFY _________________

Tractor shall be supplied with a electronic joystick. (no exception permitted)

All attachment functions are to be controlled by a single joystick. The joystick must have 8 back lit membrane switches. 3 float position switches to have additional LED indicator lights. Joystick allows lifting & lowering of attachment while 2 other function controls remain live.

6 front hydraulic couplers (3 pair) are to be supplied for operating the control features on various attachments.

IF ANY DEVIATION, ATTACH A SEPARATE DESCRIPTION OF JOYSTICK CONTROL OFFERED.

YES _______ NO _______

In addition to the 6 couplers for operational controls, there shall be 1 pair of HIGH VOLUME front couplers to power attachments requiring approximately 16 gpm.

YES _______ NO _______

STATE ACTUAL FLOW:

_____ GPM @ 2,000 rpm
If higher than 16 gpm please describe on a separate sheet how you intend to regulate operating speed for each Trackless hydraulically driven attachment already owned by the municipality.

There shall also be 2 additional ports located in front of cab for addition of optional 2nd high flow circuit. YES _______ NO _______

Rear of tractor shall have 1 pair of hydraulic couplers with an output of 16 gpm. YES _______ NO _______

Hydraulic couplers must be colour coded, matching joystick colour coded membrane switches. YES _______ NO _______

All hydraulic hoses to have NPT, SAE straight thread or SAE split flange fittings. (no metric) YES _______ NO _______

Hydraulic oil filter shall be cartridge type, mounted at highest point in hydraulic system for dry changes. Spin on filters not accepted. YES _______ NO _______

19. ELECTRICAL:

Tractor shall have a 12 V, neg ground system with a 950 – 1000 CCA group 31 battery, 100 amp alternator, and main breaker switch protection. YES _______ NO _______

<table>
<thead>
<tr>
<th>BATTERY</th>
<th>CCA</th>
<th>ALTERNATOR</th>
<th>AMP</th>
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</table>

There shall be an illuminated electric gauge for the following. Warning lights are acceptable only if in addition to a gauge.

Tachometer and hourmeter / speedometer YES _______ NO _______
Coolant temperature YES _______ NO _______
Engine oil pressure YES _______ NO _______
Hydraulic oil temperature YES _______ NO _______
Voltmeter YES _______ NO _______
Fuel level YES _______ NO _______

A speedometer must be supplied. No exception is permitted. The tractor must have a speedometer. Systems that only indicate top speed are not acceptable.
Due to the complexity of the wiring systems in tractors with Tier 3 engine management systems and other electronic management systems, the following specifications have to be complied with to assist in efficient diagnostic and electrical repairs over the life of the tractor.

Wiring harnesses must be professionally manufactured with terminals which are machine crimped to ISO standards. YES _____  NO ______

On both ends of all harness wires there must be letter location codes and wire numbers printed permanently on the wire insulation. Codes and numbers must be shown on all parts manual exploded views and wiring schematic drawings and charts. YES _____  NO ______

All single wires which are not part of a harness must have a part number permanently printed on the insulation. YES _____  NO ______

All fuses are to be mini blade type and must be contained within an IP67 watertight enclosure. YES _____  NO ______

All harness plug connectors shall be standard Packard weatherproof. Bulkhead connectors must be twist lock type. YES _____  NO ______

20. LIGHTING:

There shall be 4 headlights and 1 backup light. All lights are to be adjustable, halogen and identical. YES _____  NO ______

There shall be signal lights, 4 way flashers, an interior dome light and shock proof rubber mounted tail lights. YES _____  NO ______

8 LED strobes, 2 on each side of the branch guard on the cab mounted AC unit YES _____  NO ______

Signal lights must self cancel. YES _____  NO ______
21. CAB:

The cab shall have the following:

3 speed heater defroster YES ______  NO _______

Heater must include a minimum of 2 outlets no higher than 16 inches above floor level directed at operators feet YES ______  NO _______

Front intermittent wiper and washer YES ______  NO _______

The cab shall have a rear wiper and a second washer YES ______  NO _______

Inside rear view mirror YES ______  NO _______

2 outside vibration free mirrors. When approaching an obstacle such as a sign post or when working in a narrow section next to a wall the operator must be able to fold mirrors in and back out again without exiting cab. YES ______  NO _______

3 point seat belt including should harness. YES ______  NO _______
(must be retractable type) (must be orange )

AM / FM / CD stereo with MP3 jack and dual speakers YES ______  NO _______

Internal or exterior mounted aerial YES ______  NO _______

Steel door. All glass door not acceptable. YES ______  NO _______

Flush mounted door handle YES ______  NO _______

Gas strut door closer YES ______  NO _______

Door safety strap YES ______  NO _______

Rear license plate bracket and light YES ______  NO _______

Tilt steering column YES ______  NO _______

In the upper most position the column must be approximately 80 degrees to the floor for easy entry and exit of cab. ___ DEGREES IN UPPER POS. ___ DEGREES IN LOWER POS.
The cab shall have a roof mounted air conditioner with cab pressurizer and extra heat. The AC and heat temperatures shall be adjustable by way of an LED screen where the desired temperature can be set.

Steel fenders - 10 gauge or heavier.  

DOT approved, tinted, tempered safety glass for all windows.

ALL glass must be FLAT for convenience of local replacement in emergency situation.

Side windows shall be slider type contained within an aluminum frame.

1 and 2 inch thick open cell conasorb with perforated vinyl facing for sound deadening.

Sound barrier floor matting with 2 lb/sq ft heavy duty vinyl wear surface and 3/8 inch thick closed cell PVC/nitrile rubber foam layer.

STATE SPECIFICATIONS OF MATTING

Sound level in cab under full engine rpm shall not exceed 72 – 75 DBA

STATE DBA at full rpm ______.

Hinged overhead switch panel

The cab shall be "ROPS certified" and bear a certification label so stating. An engineering ROPS test report is required for verification.

The cab must be constructed of steel sheet, plate, HSS tubing and ROPS tubing.
Due to the type of operation this vehicle will be subject to, all panels and roof must be steel. Plastic, Fiberglass or any other non-metallic material will not be accepted.

(No exceptions allowed)

Steel roof with steel rain gutters

Cab and front frame are to be one structure for additional strength.

Cab to have tapered sides. (narrower at top) to allow tractor to work in tight narrow areas where sidewalks are not perfectly level

Shall have a high back fabric covered seat with adjustable armrests and lumbar support.

(SEAT MUST BE AIR RIDE, no exception)

Seat must contain a safety switch which automatically shuts down the engine if the operator leaves the seat without disengaging the PTO, shutting off any hydraulically powered attachment and has placed the shifter into neutral.

Right arm rest must pivot freely with arm movement when operating the joystick.

There shall be a horn button which must be mounted in the centre of the steering wheel.

(No other location acceptable)

**22. WATER / CHEMICAL PUMP**

All hoses, wiring, switch and quick coupler shall be installed for future optional water / chemical pump.

YES ______   NO ______
23. FUEL TANK:

The fuel tank capacity shall be not less 105 LT

YES ______  NO ______

Single fuel tank only. Add on auxiliary tanks not acceptable.

YES ______  NO ______

An independent engineering report shall be included with the tender verifying that the tractor is equipped with a fuel saver mode. The report shall also include the fuel saving statistics. This report is mandatory.

YES ______  NO ______

24. PAINT and FINISH:

All steel fabricated parts including the cab and all frames are to be prepped in a 4 stage phosphate wash prior to paint. All parts are to receive a 2 part epoxy primer with rust inhibitor. The top coat is to be a 2 part poly urethane automotive quality finish which is oven baked.

YES ______  NO ______

Paint color shall be highway yellow with black trim.

YES ______  NO ______

The following parts shall be zinc plated:

- Lift latches, lift latch levers, linkages and secondary
- Battery hold down straps and bolts
- Hood support rod
- Fender / side hood mounting brackets
- Door striker plate
- Hi / low range shifter gate
- Misc. small mounting brackets.

25. WARRANTY:

Manufacturers warranty

YES ______  NO ______
### SPECIFICATIONS FOR A 51” WIDE RIBBON SNOW BLOWER

<table>
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<tr>
<th></th>
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<th>YES</th>
<th>NO</th>
<th>SPECIFY</th>
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<tbody>
<tr>
<td>1.</td>
<td>Shall be manufactured complete by the same company as the tractor.</td>
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<td>2.</td>
<td>Raising/lowering, chute rotation, and chute deflector controlled hydraulically from single electronic joystick inside tractor cab</td>
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<td>3.</td>
<td>The snow blower shall be driven mechanically through a shear pin protected P.T.O. and a shear pin protected auger drive.</td>
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<td>4.</td>
<td>Throat opening shall be 51” wide with end plates which are not less than 3/8” thick steel.</td>
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<td>5.</td>
<td>The gearbox shall weight approximately 95 lbs and have a 2 inch diameter impeller output shaft.</td>
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<td>6.</td>
<td>There shall be one 28” dia. ribbon type auger driven by a #80 chain.</td>
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<td>7.</td>
<td>The impeller shall be 7.5” x 24” dia. with not less than 5 scoop type blades.</td>
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<td><strong>8.</strong></td>
<td>The impeller housing shall have a replaceable, 2 piece liner.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<td><strong>9.</strong></td>
<td>The chute must rotate on a 15&quot; diameter ball bearing. Systems without a bearing not acceptable.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<td><strong>10.</strong></td>
<td>The skid shoes shall be free pivoting with 1-1/2&quot; thick hardened wear pads.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<tr>
<td><strong>11.</strong></td>
<td>The cutting edge shall be ½&quot; x 6&quot; hardened steel and reversible.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<tr>
<td><strong>12.</strong></td>
<td>The cutting edge height shall be adjustable by shoe brackets.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<tr>
<td><strong>13.</strong></td>
<td>The sidewalk chute shall have a minimum throat clearance of 87&quot;.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<tr>
<td><strong>14.</strong></td>
<td>Truck loading chute to have a throat clearance of 11 feet.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<td><strong>15.</strong></td>
<td>Net weight of the blower shall be approximately 1530 lbs.</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<td></td>
<td>Specification</td>
<td>YES</td>
<td>NO</td>
<td>SPECIFY</td>
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<td>16.</td>
<td>Dimension from centre of front axle to front of body sideplates not to exceed 77”.</td>
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**SPECIFICATIONS FOR A FOLDING 5 POSITION PLOW**

1. The plow shall be capable of operating in one of 5 positions: angled left, angled right, straight, V-plow or scoop forward.  

2. The overall length of the plow shall be 57 inches.  

3. The plow shall angle 30° left or right.  

4. The plow shall be 47 inches wide in the scoop position and 53 inches wide in the V position.  

5. The height shall be 26 inches.  

6. Weight shall be approximately 785 pounds.  

7. There shall be 3 hardened skid shoes, 5” dia by 1½” thick.  

8. There shall be a centre soft shoe in front of the centre steel shoe.  

9. There shall be 2 double acting hydraulic cylinders and 2 trip return springs.  

10. The plow must have a full mouldboard trip mechanism.  

11. The mouldboard skin shall be no less than 3/16” thick steel.
### The Plow Pushframe

- **12.** The plow pushframe shall be manufactured using 2 x 3 x ¼ and 5 x 2½ x ¼ inch HSS steel tubing.

- **13.** The plow shall be fitted with 2 – 6” x 5/8” thick hardened steel cutting edge.

- **14.** The plow pushframe shall have an adjustable height stand to ease installation of plow to tractor. Plow shall also have 4 lift points.

- **15.** The plow shall be painted using 2 part epoxy primer and 2 part polyurethane yellow top coat. Paint MUST be oven baked.

### Specifications for a 72” Rotary Mower

1. The mower shall be front mounted and have 4 pneumatic 4 ply 4"x10" tires.

2. The mower shall provide a 72" wide cut and be rear discharge.

3. Shall have 3 - 25" x 2½" x ¼" highlift blades.

4. The deck shall be 3/16" thick and have 3 skid shoes; 1 at the nose and one on each side.
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<tr>
<td>5. Shall have a flexible link rear pushframe to allow mower to raise 9” on either side independent of tractor.</td>
<td>YES</td>
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<td>6. All spindles shall be greaseable without removal of any covers.</td>
<td>YES</td>
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<td>7. Shall be P.T.O. driven to gearbox and belt driven to spindles by 2 V-belts of the same length.</td>
<td>YES</td>
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<td>8. Shall have 1 spring-loaded idler to maintain tension belt system.</td>
<td>YES</td>
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<tr>
<td>9. Belt system must be designed so that no tools are required to remove or install V belts once the belt cover has been removed.</td>
<td>YES</td>
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<td>10. Cutting height adjustment shall allow adjustment from 1½” to 4” in ½” increments.</td>
<td>YES</td>
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<td>SPECIFY</td>
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<tr>
<td>11. Shall be manufactured by the same company as the tractor.</td>
<td>YES</td>
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<td></td>
<td>SPECIFY</td>
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<tr>
<td>12. Shall be painted same colour as the tractor.</td>
<td>YES</td>
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<td></td>
<td>SPECIFY</td>
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</tbody>
</table>
SECTION 3 - GENERAL INFORMATION

NOTE: SECTION 3 - GENERAL INFORMATION contains the City's Standard Terms and Conditions. You are responsible for obtaining a copy prior to bidding. If you do not have a revision dated 08082013, or later on file you may obtain a copy over the Internet at http://www.norwalkct.org. Adobe Acrobat reader is required to view this document. If you do not have this software you may download it for free from Adobe. Request document number 1002. http://www.norwalkct.org/documentcenter/view/868