FINANCE DEPARTMENT

GREGORY N. L'HEUREUX
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Invitation to Bid

Bid #09-16

SKID STEER WITH STANDARD BUCKET FOR PUBLIC WORKS

Sealed bid for furnishing a new Skid Steer with a Standard Bucket for the City of South Portland Public Works Department as specified below, in the attached specifications and proposal, will be received by the City Purchasing Agent, Room 105, City Hall, 25 Cottage Road, South Portland, Maine 04106, until 2:00 p.m., Wednesday, September 9, 2015 at which time, they will be publicly opened and read aloud. Proposals received after the above stated day and time will not be considered.

Bids shall be submitted on the attached bid form in sealed envelopes, plainly marked "Bid #09-16 Skid Steer" and shall be addressed to the Purchasing Agent at the above address.

Delivery to be made upon receipt of purchase order and shall be F.O.B., Public Works Department, 42 O'Neil Street, South Portland, Maine.

All equipment offered on this bid shall be brand-new and the latest type available. Bidder will state in his bid the name and model number of the equipment he is offering and will include with his bid a catalog or brochure marked to indicate the standard factory equipment of the model on which he is bidding. Bidder must attach a separate sheet to his bid listing any deviation from the minimum specifications shown. If no attachment is provided, it will be assumed that the item being bid meets the minimum specifications.

If the equipment offered by a bidder under the attached specifications meets the specifications except for minor factors or reasonably small amounts in dimensions, and if it shall be determined by the City that these minor variations from the specifications do not prevent the equipment being bid from performing as satisfactorily or from being as good as equipment fully meeting these specifications, then these minor variations from the specifications may be waived by the City, if it deems it to be to its advantage, and the equipment with the waived variations in specifications will be accepted as fully meeting these specifications.

Since a prompt delivery is required, delivery time, as well as price, may be a factor in determining the award of this bid.

The City of South Portland's Ford Fleet Identification Number is QF391.

Price shall include a 14-day plate and State of Maine Certificate of Title or Certificate of Origin, which shall be made out to the City of South Portland, Maine and mailed to the Purchasing Agent, P.O. Box 9422, and South Portland, Me 04116-9422. A copy of the title application is to be delivered with each vehicle. There shall be, within the Greater Portland area, a repair service which shall maintain a stock of spare parts for any make and model of any vehicle that a bidder offers in the proposal.

It is the custom of the City of South Portland to pay its bills within 20 to 30 days following delivery of and receipt of bills for all items covered by the purchase order. In submitting bids under attached specifications, bidders should take into consideration all discounts, both trade and time, allowed in accordance with the above payment policy. All bidders should quote net prices, therefore, exclusive of all Federal Excise Taxes and Sales Taxes.

The City of South Portland reserves the right to waive all informalities in bids, to accept any bid or any portion thereof, or to reject any or all bids should it be deemed in its best interest to do so. Except as otherwise required by law or as specifically provided to the contrary herein, the City shall govern the award of this bid's purchasing ordinance.

Colleen C. Selberg
Purchasing Agent

City Of South Portland
PUBLIC WORKS DEPARTMENT

Solicitation of Bids

Skid-Steer Loader with Standard Bucket

This specification is intended to describe a Skid-Steer Loader with standard bucket with 3350 lbs. rated operating capacity. The Skid-Steer Loader will be regular production model for which published specifications are available. Modifications of the Skid-Steer Loader to meet operational requirements of this specification shall be limited to the manufacturers published and optional standards.

Bidders shall list and explain in writing any and all deviations from these specifications. Bidders shall provide sufficient detail and proof needed to assist the city in fully evaluating compliance with detailed specifications. Failure to do so may result in rejection of the bid in its entirety.

GENERAL SPECIFICATION

The Skid-Steer Loader shall be a new manufacturer's current production model and shall conform to all DOT and EPA regulations in effect at the time of delivery. The unit shall be equipped with all standard equipment and components necessary for operation and normally supplied, even if not identified in specifications. The equipment shall have full manufacturer's preparation and be ready for service when delivered. The Skid- Steer Loader shall be able to accept current Skid-Steer Loader attachments that are owned by the City of South Portland Public Works without modification.

DIMENSIONAL SPECIFICATIONS

Angle of Departure	25.1°
Dump Angle at Max Height	42°
Reach at Max Height	31.5″
Ground Clearance	8.1″
Height to Hinge Pin	132″
Cab Height	81.3″
Length without Attachment	114.3″
Length with Standard Bucket	141.6″
Overall Operating Height	166.6″
Carry Position	9.4″
Rollback Angle at Carry Position	31.9°
Turning Radius with Standard Bucket	85.8″
Wheelbase	48.3″
Width with Standard Bucket	74″
Overall width with 12-16.5, 12 PR, Heavy Duty Tires	72.1″
Overall width with 12-16.5, 12 PR, Heavy Duty Tires Offset Rims	69.1″
Overall width with 33x15.5-16.5, PR Super Float Tires	77.3″

PERFORMANCE

Rated Operating Capacity	3350 lbs
Tipping Load	6700 lbs
Operating Weight (SAE J732)	9314 lbs
Travel Speed	7.1 mph
Travel Speed-2 speed Option	
Low Range	7.1 mph
High Range	12.3 mph
Lift Breakout Force	7006 lbs
Tilt Breakout Force	6643 lbs
Push Force	7325 lbs

ENGINE/ELECTRICAL

- Loader shall have a 4 cylinder liquid cooled diesel engine (68,6 kW) at 2400 RPM
- Loader engine shall have minimum torque of 258.1 lbf-ft (350N-m) at 1600 RPM
- Loader engine shall be turbo charged
- Loader shall be equipped with a hydraulically driven, variable speed cooling fan
- Engine must meet all EPA Tier 4 emission compliance without the aid of a diesel particulate filter
- Dual element air cleaner and air intake cold weather assist shall be provided as standard equipment
    - Cold air assist shall be automatically activated
    - Air cleaner shall be a dry replaceable cartridge with safety element
    - Air intake pre cleaner shall be located in the air cleaner housing
- Air intake pre cleaner shall be standard equipment
- Engine coolant shall include propylene glycol anti freeze with freeze protection to -34°F
- Loader shall be equipped with a Diesel Oxidation Catalyst (DOC)
- Engine shall utilize an Exhaust Gas Recirculation (EGR)
- Loader shall be equipped with a Selective Catalytic Reduction (SCR) system
- Loader shall require Diesel Exhaust Fluid (DEF)
- Loader shall indicate when the SCR system is in Desox
- An SCR DeSox inhibit switch shall be available
- Loader shall be equipped with an Engine Control Unit to electronically monitor and control the performance of the engine
- Loader shall be equipped with Dosing Control Unit to electronically monitor and control the performance of the SCR system
- The loader’s fuel injection system shall include a High Pressure Common Rail (HPCR)
- Loader shall use an electromagnet fuel pump

- Fuel filter shall have a 4 micron C rating at 99.6% efficiency
- Loader shall be equipped with a dual path cooling system which brings cool, clean air from above the machine for engine and hydraulic system cooling while at the same time removing hot air from the engine and hydrostatic area.
- Battery shall be a 12 volt with a minimum 950 cold cranking amps
- Alternator shall be a minimum 120 amp
- Starter shall be a 12 volt, 3.62 HP (2.7kW) gear type
- Engine accessory belt shall not require any adjustments
- Engine shut down shall be provided as standard equipment and shall monitor engine coolant temperature, engine oil pressure and engine RPM to help prevent damage to engine
- Engine block heater shall be provided for easier starting during cold weather operations

DRIVE SYSTEM

- Shall have a fully hydrostatic four wheel drive
- Transmission shall be infinitely variable tandem hydrostatic piston pumps, driving two fully reversing hydrostatic drive motors
- Hydrostatic piston pumps shall be belt driven from the engine
    - Drive belt shall not require any adjustments
- Final drive chains shall be pre-stressed #120 HSOC endless roller chain (no master link)
- Two chains per each side of the loader with no idler sprocket
    - Chains shall not require periodic adjustments
- Final drive chains and sprockets shall be sealed in a chaincase with oil lubrication
- Chaincase shall be center mounted to allow for a keel shaped undercarriage
- Axel seals shall be protected by the wheel hub and shall never require greasing
- Final drive axels shall be a minimum of 2.7″ in diameter
- Parking brake shall be a positive engagement wedge and lobe for standard single speed
- Parking brake shall be a spring applied, pressure release multi disk brake for optional 2-speed
- Wheels shall be fixed to the axel hubs with eight (8) 9/16″ wheel bolts
- Tires: 12-16.5 ,12 ply Severe duty tires

HYDRAULIC SYSTEM

- Pump type shall be gear type pump for standard and high flow hydraulics
- Hydraulic pump capacity for standard flow shall be capable of providing 23 gpm for bucket, lift arm and attachment operation
- Hydraulic pump capacity for high flow shall be capable of providing 36.6 gpm for high flow attachment operation

- System pressure at the quick couplers shall be 3500 psi
- Variable flow auxiliary hydraulics shall be standard equipment
    - Shall include flush-face pressure release quick couplers
    - Shall include dual direction detent
- Control valve shall be three spool, open center, series type
    - Lift spool shall include detent position for lift arm float function
    - Front auxiliary hydraulic spool shall include a detent function in both forward and reverse directions
- Cylinders shall be double acting type. Dual tilt cylinders shall have a cushioning feature on dump and roll back
- Hydraulic system shutdown shall be provided as standard equipment and shall monitor hydraulic oil temperature and hydrostatic charge pressure
- Hydraulic oil cooler shall be standard equipment
- Auxiliary hydraulic hoses shall be routed inside the lift arm
- Auxiliary quick coupler block shall be mounted to the lift arm front and must be protected with steel guarding
- Shall have inertia welded rods and bases at the ends of the cylinders
- Shall have rear auxiliary hydraulics as an option and include
    - Electric finger controls on left joystick
- Hydraulic bucket positioning shall be available
    - Shall include on/off switch inside the operator cab
    - Ride control shall be available as an option
- Shall Ride Control
- Lift arm down cylinder cushioning shall be standard equipment
- Lift circuit board relief valve shall be standard equipment
- Auxiliary hydraulics circuit port relief shall be available as an option
- A feature for draining pressure from the auxiliary hydraulics circuit shall be provided by pressing and holding quick couplers
- Cylinders shall meet the following specifications
    - Lift: 2 cylinders, Bore diameter: 3.25″, Rod Diameter: 2.0″ Stroke: 26.09″
    - Tilt: 2 Cylinders, Bore Diameter: 3.0″, Rod Diameter: 1.5″, Stroke: 13.97″

OPERATOR CONTROLS

- Loader direction, steering, and travel speed shall be controlled by two independent steering levers
- Loader lift and tilt functions
    - Standard: Shall be controlled by separate foot pedals
    - Optional: Shall be selectable between foot pedals and hand level controls
- Selectable Joystick Control (SJC) system shall be available to allow operator to switch between ISP control pattern (Loader direction, steering and travel speed on left hand joystick; loader lift and tilt functions on right joystick) or H pattern (Left hand joystick

controls lift function and left side drive function; right hand joystick controls tilt functions and right side drive function)
    - Speed management shall be available on SJC equipped loaders to allow the loader to be maneuvered at a slower travel speed, even during maximum movement of joysticks
    - Drive response shall be available on SJC equipped loader to change how responsive the loader's drive and steering systems are when the operator moves the joystick
    - Steering Drift Compensation shall be available on SJC equipped loaders to be used to reduce steering drift to maintain a desired travel path both forward and reverse directions
    - Horse Power Management shall be available on SJC equipped loaders to allow the engine to operate at maximum horsepower and torque
    - Optional Auto Idle shall be available on SJC equipped loaders to automatically reduce the engine speed to idle at a set time interval of loader drive and/or hydraulic inactivity
        - Auto idle shall be turned on or off at the press of a button
        - The time interval before the engine speed reduces to idle shall be adjustable from 4 to 250 seconds on loaders equipped with deluxe loader instrumentation
- Standard front auxiliary hydraulics shall be controlled by electric switches located on the right steering lever or right hand joystick
- Optional rear hydraulics controlled by electrical switches on the left steering lever handle or the left hand joystick
- Engine speed will be controlled by a rotary knob mounted on the right hand cab post
- Engine speed shall be controlled by a foot pedal with optional SJC
- Parking brake shall be controlled by a finger operated rocker switch on left hand cab post
- Engine starting and shutdown functions shall be controlled with a key switch or optional keyless start
- An optional radio control kit shall be available for SJC equipped loaders

OPERATOR COMFORT

- Shall have an enclosed cab
- Shall have Air conditioning without changing the loader profile
- Cab heating shall be available as an option without changing the loader profile
- Front door shall be one piece design and curved
- Enclosed cab shall be pressurized
- An adjustable seat shall be available as a standard option
- An air ride seat shall be available
- A mechanical suspension seat shall be available as an option
- Engine throttle shall be located directly in front of operator

- The optional SJC system shall be mounted to the seat and shall be able to be adjust independently of the seat
- Sound reduction its shall be available as an optioin
- Top and rear windows shall be standard
- Front and rear windows wipers shall be available as an option
- Dome lights shall be available as an option
- Front and rear operating lights shall be standard equipment
- Side windows shall be mounted on the outside of the cab
- Side and rear window defrost shall be provided in the heat or air conditioning options
- AM FM radio shall be included
- 12 volt power ports shall be available
- Clean out holes in the foot well shall be standard equipment

CAPACITIES

- Fuel tank shall have a minimum capacity of 23.9 gal.
- Diesel Exhaust Fluid (DEF) shall have a minimum capacity of 4.7 gal.
- Cooling system without heater shall have a minimum capacity of 3.6 gal.
- Cooling system with heater shall have a minimum capacity of3.8 gal.
- Hydraulic reservoir shall have a minimum capacity of 2.5 gal
- Hydrostatic system shall have a minimum capacity of 9.5 gal.

STANDARD LOADER INSTRUMENTATION

- The loader conditions shall be monitored by a combination of gauges and warning lights in the operator's line of sight that monitor the following functions. The system shall alert the operator of loader malfunctions by way of audible alarms and visual warning lights
- Gauges
    - Engine coolant temp
    - Fuel level
    - Diesel Exhaust Fluid level
- Warning lights
    - Engine coolant temp
    - Engine malfunction
    - Fuel level
    - General warning
    - Hydraulic malfunction
- Indicators
    - Seat bar
    - Lift and tilt valve
    - Parking brake
    - 2-speed
    - Seat belt

    - 3-point shoulder belt
    - Turn signals
- Data Display Screen
    - Battery voltage
    - Drive response setting
    - Engine preheat
    - Engine RPM
    - Maintenance clock
    - Hourmeter
    - Service codes
    - Speed management
    - Steering drift

ATTACHMENTS

- All attachments shall be mounted on a quick-change mechanism
- The quick change mechanism shall incorporate two handles that drive spring loaded, wear compensating wedges into the attachment ensuring a tight attachment fit up.
- The quick change mechanism shall be driven by hydraulics

SERVICEABILTY

- Engine shall be transversely mounted to provide easy access to daily maintenance items
- Access shall be available to the following through the rear door/tailgate and rear screen or cover
    - Air cleaner
    - Alternator
    - Battery
    - Cooling system (engine oil and hydraulic oil coolers) for cleaning
    - Engine oil and fuel filters
    - Engine oil drain and dipstick
    - Starter
    - DOC/SCR catalyst housing
- Axle hubs shall provide protection for axle seals
- Easy access shall be provided to al lift arm and grease points
    - Lift arm pins and connecting points shall be of single plane design
- Quick-Tach pivots shall have replaceable wear bushings
- Rod end of the tilt cylinder shall have a replaceable bushing
- Tailgate shall be constructed from a ¼ ″ thick solid steel door
- Tailgate shall have a lock to prevent vandalism
- Tailgate shall be equipped with door stop to hold door open while servicing
- Tip –up operator cab shall give access to certain hydraulic system components

SAFETY EQUIPMENT

- Shall have enclosable operator cab with side screens
- Cab shall meet SAE standards J1040 and J1030 for rollover protective structure and falling object protective structure
- Shall have a 3 point seat belt
- Shall have electric switch operated parking brake
- Additional operator protection shall be provided by a seat bar or similar device which restricts lift arm while not in use
- A lift arm support device shall assist in servicing the loader
- Shall have grab handles to assist the operator in and out of the cab
- Loader shall be equipped with an interlock control system which requires which requires that the operator be seated in the loader with the seat bar down in place and the engine running before the hydraulic lift, tilt, and the traction drive can be operated
- Shall have lift arm by-pass control should the engine not start or there is a problem with the lift arm raised
- Shall have operational instructions and warning decals with pictorials and international symbols
- Shall have operator handbook attached to the loader
- Loader shall include an alarm package including a horn and backup alarm
- Shall have strobe light or rotating beacons
- Shall have 4 way flashers
- Shall have FOPS level II
- Shall have fire extinguisher kit

PROPOSAL

The UNDERSIGNED hereby proposes to furnish a new Skid Steer with a Standard Bucket to the South Portland Public Works Department, in accordance with the attached Invitation to Bid, the attached specifications, and at the following price, warranty, and delivery time:

Price $_____

Add/Alt Extended Warranty $_____

Year Make & Model # _____

Color _____ Odometer Reading _____

Warranty _____

_____

Delivery Time _____

Signed: _____
(Corporation, Firm or Company)

By:_____
(Officer, Authorized Individual or Owner)

Title: _____
Mailing
Address:_____

_____

Zip Code: _____ Date: _____

Telephone: _____ Fax: _____

E-Mail: _____

Note: Bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid.