

City of Portsmouth  
Portsmouth, New Hampshire  
Public Works Department

**INVITATION TO BID**

**Sealed** bid proposals, **plainly marked** "PUBLIC WORKS DEPARTMENT EQUIPMENT HIGHWAY LOADER BID#19-07" **on the outside of the envelope**, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until 2:00 p.m. April 23, 2007 at which time all bids will be publicly opened and read aloud.

Scope: The Portsmouth Public Works Department is seeking to purchase a diesel driven, articulated, 4 wheel-drive, heavy-duty, rubber tired loader with a 2.5 cubic yard bucket.

Specifications and Proposal forms may be obtained from the Finance/Purchasing Department on the third floor at the above address, on-line at **www.cityofportsmouth.com**, or by calling the Purchasing Clerk at 603-610-7227. **Please continue below for the complete bid document.**

The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, and to accept any bid that it may deem to be in the best interest of the City.

Questions may be directed to the Purchasing Clerk at 603-610-7227.

## INSTRUCTION TO BIDDERS

### I. Preparation of Bid Proposal

- A. The Bidder shall submit its proposal upon the form furnished by the City (attached). Prices shall be given in both in words and figures.
- B. Corrections made to amounts or information requested on the bid form should be made by crossing out the error and entering the new price or information above or below it. The correction must be initialed. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.
- C. The bidder's proposal must be signed by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, or by an agent of the contractor legally qualified and acceptable to the owner, If the proposal is made by an individual, his name and post office address must be shown, by a partnership the name and post office address if each partnership member must be shown; as a joint venture, the name and post office address of each must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles, and business addresses of the President, Secretary, and Treasurer.
- D. All words, figures, corrections shall be in ink or typed. All signatures shall be in ink.

### II. Delivery of Bid Proposals

When sent by mail, the sealed proposal shall be addressed to the owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened. Faxed bid proposals are not acceptable.

### III. Withdrawal of Bid Proposals

A bidder will be permitted to withdraw his proposal unopened after it has been deposited if such request is received in writing prior to the time specified for opening the proposals.

### IV. Public Opening of Bid Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

V. Irregular Proposals and Disqualification of Bidders

Bid proposals that are irregular may be rejected. Irregular bid proposals include the following:

- A. Failure to use the bid form provided or alteration of the form.
- B. Unauthorized additions, conditional or alternated bids, incomplete bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- C. The addition of any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

Bidders may be disqualified and the bid proposal rejected for the following reasons:

- D. More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- E. Evidence of collusion among bidders;
- F. Failure to submit all required information requested in bid specifications;
- G. Bidder is not qualified or able to provide the provide the services or product(s) described in the bid specifications; or
- H. Disqualification is in the best interest of the City of Portsmouth.

AWARD

I. Consideration of Proposals and Award

After the proposals are opened and read, bid results will be available to the public. In case of discrepancy between the prices written in words and those written figures, the prices written in words shall govern.

Within 30 calendar days after the opening of proposals, if an award is made, it will be made to the lowest, responsible, qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by mail at the address indicated on the proposal.

III. Reservation of Rights

The City reserves the right to cancel the award at any time before final notification of the successful bidder without any liability against the City. The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, and to accept any bid that it may deem to be in the best interest of the City.

**City of Portsmouth, New Hampshire  
Public Works Department**

**Specifications for a Diesel driven, articulated, 4 wheel drive, heavy-duty, rubber tired loader with a 2.5 cubic yard bucket**

**MINIMUM SPECIFICATIONS**

4 Wheel Drive Articulated Loader  
**For Highway Division**

**SCOPE**

It is the intent of this specification to describe a diesel driven, articulated, 4 wheel drive, heavy-duty, rubber tired loader with a 2.5 cubic yard bucket with the following minimum specifications considered necessary to perform the function indicated. The unit shall be new, unused, of current production, design and source from an established, recognizable, manufacturer. Standard items in the manufacturers published literature, furnished by the bidder, shall be included in the bid. A copy of the specifications for the unit being proposed shall be included with the bid. Any exceptions variations, and/or deletions must be noted or the bid may be rejected.

**4 Wheel drive Articulated Loader**

**WEIGHT:**

1. The unit shall have, with other items specified, without including optional counter weights and tire ballast, a minimum operating weight of 25,130.

**ENGINE:**

1. 139 SAE net H.P.
2. 6 cylinder, 4 stroke, inline turbo charged, high torque, low emission, electronically controlled engine and with air to air intercooler
3. indicator glass for coolant level
4. three stage air filter with service indicator lamp on instrument panel
5. double fuel filter system with water separator and easy drainage access
6. full flow oil filter system
7. engine block heater-120 volt ac
8. engine shall meet current EPA federal off-road regulations

**DRIVE TRAIN:**

1. The Transmission shall be OEM design and manufactured by the loader manufacturer and matched to the specific loader.
2. The transmission shall be 4 speeds forward & 4 speeds reverse, 4 wheel drive and produce a maximum speed of not less than 26 mph in forward and reverse.
3. The unit must be equipped with a fully automatic, computer controlled, countershaft type transmission with single lever control for directional and gear change.
4. Transmission shall have an operator controlled kick down to first gear which automatically returns to second gear when rimpull requires diminished or direction is changed.
5. The torque converter shall be of single stage type.
6. The unit must have, outboard mounted, planetary final drives with full floating axle shafts.
7. The unit will have fixed front axle with a hydraulically operated differential lock manually actuated by the operator inside the cab. The rear axle must be able to oscillate plus or minus 13 degrees of center pivot.

**TIRES:**

1. The unit shall be equipped with 20.5R25 L-2 tires.
2. Shall include spare rim and tire.

**BRAKES:**

1. The unit shall be equipped with hydraulic wet disc, oil immersed and self-adjusting. SAE J1473.
2. The unit shall be equipped with secondary parking brake with a spring actuated, hydraulically released fully sealed, wet multi-disk parking brake system.
3. The unit shall be equipped with dual service pedals and brake wear indicators on each brake. Dynamic brake system deceleration shall also be possible to check and results indicated on the vehicle display.
4. The service brake system must have two separate circuits, for the front and rear axle, that are able to operate independently in case of malfunction.

**HYDRAULIC SYSTEM:**

1. The unit must be equipped with a load sensing main hydraulic system with a variable displacement piston pump and a pilot operated main valve.
2. The hydraulic shall have a common tank for steering, working and brake hydraulic oil, located so it provides gravity oil feed to the pump.
3. The hydraulic tank shall have a minimum capacity of 25 gallons.
4. All return oil from hydraulics, steering hydraulics and brake hydraulics must be filtered through a maximum 20 micron full flow filter before returning to the tank.
5. The system reservoir must include a sight glass for fluid level check.
6. The lift circuit will be capable of four functions; raise, hold, lower, and float; as well as an automatic, adjustable boom kickout with lever detent.

7. The tilt circuit will be capable of three functions; rollback, hold and dump; as well as an automatic, adjustable, bucket leveling with lever detent.
8. Hydraulic cycle time according to SAE J818 shall be no more than; raise = 4.5s, dump = 2.3s, lower = 2.9s, total = 9.7s.

**STEERING:**

1. The unit shall be equipped with load-sensing, hydrostatic, priority feed, piston pump driven steering system, capable of 40 degrees of articulation in both left and right directions of the center of pivot.
2. Steering cylinders must be double acting and the center hinge must be located so that the rear wheels track the front wheels. The clearance circle to the outside of the bucket corner will not exceed 19 feet turning radius.
3. The lower position of the center hinge will consist of a double tapered roller bearing with a minimum service interval of a 1000 hours and the upper portion of the center hinge will be a spherical self-aligning bearing with a minimum service interval of a 250 hours.

**ELECTRICAL SYSTEM:**

1. The unit shall be equipped with a computer controlled monitoring and diagnostics system.
2. Machine operation data must be recorded and downloadable for service and diagnostic work.
3. The electronic system shall alert the operator when scheduled service work is to be performed.
4. The system must have warning and indicator lights for the following functions; charging, oil pressure engine, oil pressure transmission, brake pressure, parking brake, hydraulic oil level, primary steering, secondary steering, high beam, turn signals, work lights, rotating beacon, preheat coil, differential lock, coolant temperature, transmission oil temperature, low fuel level, brake system pressure, coolant level, hydraulic oil level and window washer fluid level.
5. The computer system shall be possible to be by-passed in the event of failure so machine operation can continue.
6. The unit shall be equipped with alternator capable of 24Volt and 55 amp rated.
7. The unit must be equipped with exterior lighting which will include two front 70 watt halogen driving lights with high and low beam. Parking lights, two rear combination stop and taillights turn signals with hazards warning flashers, and two front and two rear 70 watt work lights.
8. Wiring must be enclosed in a sealed, non-cloth protective casing.

**LOADER:**

1. 2.5 cubic yard SAE heaping capacity.
2. Bolt on cutting edge, plus spare edge and bolts.

3. The unit shall have a full turn tip load of 14,660.
4. Breakout force shall be a minimum of 18,000 pounds as defined in SAE J732.
5. Dump clearance at full height shall be a minimum of 9'2" at maximum dump angle of bucket as defined in SAE J732.
6. Loader shall be equipped with automatic bucket leveler, bucket level position indicator and adjustable boom kickout.
7. Unit shall be equipped with loader linkage, a torque parallel design allowing the use of various attachments with minimum loss of performance.
8. The linkage must not lose more than 20% of breakout force when rolled from leveled to fully back position.
9. The linkage shall provide parallel attachment movement through whole lifting cycle.
10. All pin points of the linkage must be double.
11. Bucket edge width shall exceed tire width.
12. Unit shall have boom suspension.
13. Quick coupler that shall fit existing equipment (snow blower with Craig coupler as on L90D).
14. Will be piped and valved for front end optional equipment.
15. Hydraulic quick disconnects for coupler, for implement change.

**CAB:**

1. The unit must be equipped with a fully enclosed cab meeting ROPS and FOPS standards per SAE J1040, J231 and J386.
2. The cab must be equipped with an air circulation system capable of heating, defrosting, air conditioning and pressuring the cab with a minimum 4-speed fan and an output level of 37,600 Btu/h. The defroster must affect all windows.
3. The cab shall also include an adjustable, heated, and spring suspended operators seat with retractable seat belts in accordance to SAE J 386.
4. Interior sound level will not exceed 69 db(A) in accordance to SAE J2105.
5. The cab filtration system will have an efficiency of >98% with SAE fine dust test.
6. Single key door lock and start.
7. Lockable doors.
8. 4 rear view mirrors 2 interior rear view and 2 exterior review mirrors.
9. Tinted safety Glass all windows with right window can open.
10. Front and rear wipers with washers front and rear, interval function for front and rear windshield.
11. Cab doors, both sides tinted safety glass.
12. Directional lights.
13. Rotating beacon with collapsible bracket.
14. AM/FM radio with CD player.
15. Left hand arm rest.
16. Working lights.
17. Sun visor.
18. Beverage holder.
19. Service platforms with anti-slip surfaces on rear fenders.
20. Speedometer.
21. Front and rear fenders will be provided.

**OTHER EQUIPMENT:**

1. Fire extinguishers
2. First aid kit
3. Floor mats

**TWO-WAY RADIO:**

A two-way radio, antenna, wiring and noise filter shall be installed. The bidder shall obtain frequency and rapidcall programming information from the city of Portsmouth, Public Works Department once the bid has been awarded. The radio shall be, with no exceptions, a Motorola Radius GM-300, VHF, model series M43GMC, 45 watt RF output, 16-channel capacity, 20/25/30 kHz channel spacing with MDC-1200 rapidcall. ASP 7450 antenna.

**MANUALS:**

One complete set of repair, parts, electrical wiring manual and operating manuals. (CD ROM is acceptable).

**TRAINING and SERVICE:**

Operator and service training to include service call after 250 hours of use.

**DELIVERY:**

Bidder must state approximate date from receipt of order delivery will be made. Delivery must be no later than 120 days from date of order, but earlier date preferred.

**WARRANTY:**

Warranty shall have 1 year full machine warranty.

**PROVIDE OPTIONAL PRICES FOR THE FOLLOWING:**

- Extended warranty
- Forks w/59" frame and 57" tines
- Diagnostic software and test equipment including cabling

**TRADE :**

**All trades are in as is, as seen condition**

1986 caterpillar IT12 serial #2YC00397

Sidewalk tractor SWF48FA 002780397 no plow not running

Sidewalk tractor SWF48FA 002780419 with plow not running





**BID PROPOSAL FORM**  
**Page 2 of 2**

Submitted by Authorized Agent:

\_\_\_\_\_

(Print Name & Title)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: