

### OPERATIONS BIDDING CHECKLIST

Please complete the following information and attach necessary documents:

- 1) Name of Contract: Joe Bullis
- 2) Department Contact Name and Phone Number: Joe Bullis (740) 263-1801
- 3) Cost Estimate: \$ 65,000
- 4) Fund Number: 550 \* 5520 \* 5500
- 5) Is this Project Budgeted? Yes
- 6) Prevailing Wage: N/A
- 7) Desired Bid Opening Date (on or before): 4/26/18 *Must allow a minimum of 3 weeks after received by the Assistant to the City Manager.*
- 8) Attach a list of Vendors, which you would like to receive a copy of the bid packet. All of the following information must be included:
  - Name of Vendor
  - Contact Name
  - Street Address, City, State and Zip code
  - Phone Number including Area Code
  - Fax Number including Area Code
- 9) Scope of Services to be bid. Attach a hard copy and email the digital file to the Assistant to the City Manager.
- 10) Additional Notes and Directions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Approval:

Department Head:

Wm Ferrigno

Date:

4/5/18

Completed form and attachments received by Assistant to the City Manager: Date: \_\_\_\_\_

## List of Vendors for Refuse Rear Load

K-Pac  
Josh Iser  
101 State St.  
Scranton, Iowa 51462  
800-831-1858  
712-652-3399 fax

Raymond Holtz  
Holtz Industries Inc.  
200 S. Terrace Court  
Newark Ohio 43055  
740-366-4002 Office main  
740-522-7202 Direct line  
740-366-4001 Fax

Best Equipment Co., Inc.  
George Luce  
5550 Poindexter Drive  
Indianapolis, Indiana 46235  
1-800-372-2378  
317-823-3060 fax

Loadmaster  
100 W. 9<sup>th</sup> Ave.  
Norway, Michigan 49870  
800-433-2768

TCS Sales  
Eric Coates  
1133 Wyckoff Circle  
Dayton, Ohio 45458  
417-829-6700  
417-736-9218 fax  
906-221-3080 cell

## Rear loading Refuse Collection Truck Body

### Bid Specifications

SCOPE: It is the intent of this specification to describe a hydraulically actuated packer body of the rear loading type with the following minimum specifications considered necessary to perform the work assigned. The body shall be capable of compacting and transporting refuse to a landfill or transfer station and dispensing the load by means of hydraulic ejection. The body shall not be required to be tilted, lifted, or otherwise displaced from the chassis in order to eject the load. The highest point on the body to include reeving winch shall not exceed 12 feet 6 inches after being mounted on a tandem Freightliner 6x4 chassis purchased by the City of Delaware off of the State Contract with 12R22.5 Michelin 16 ply rear tires. Cab and Chassis Specifications can be requested if needed.

GENERAL: All equipment furnished under this contract shall be new and unused, and the same as the manufacturers current production model. Accessories not specifically mentioned, but necessary to furnish a complete unit ready for use shall also be included. The equipment furnished shall conform to all ANSI Safety Standards A245.1-1984 or above.

### SUGGESTED BID SPECIFICATIONS

Bidder Shall Complete the Following  
If No, State Specifically the Item being offered  
On a separate page with an explanation.

#### A. Capacity

1. The body shall have a minimum capacity of:  
20 Cubic Yards
2. The body shall have an average compaction rate of  
1000 pounds per cubic yard or higher.

#### B. Body dimensions

1. Maximum overall width not to exceed 96".
2. Maximum overall length and height (*with tailgate in locked position*) above the chassis frame not to exceed:

Capacity	Length	Height CT
20 Cu./Yd.	251.5"	99.5" 160"

3. Body weight (exclusive of options) shall not exceed:

Capacity	Weight
20 Cu./Yd.	17,500 pounds

Rear loading Refuse collection Truck Body  
(Continued)

### C. BODY CONSTRUCTION

1. The body shall be constructed entirely of 10 gauge 80,000 PSI steel or stronger.
2. All pivot points shall be provided with grease zerks.
3. Body sides, roof shall be curve shell design without the need of side bracing. Continuous operation at maximum loads without harmful deformation or wear.
4. The roof shall be constructed of 10 gauge 80,000 PSI steel or stronger.
5. The body sides shall be constructed of 10 gauge, 80,000 PSI steel or stronger. Sides shall be braced along the bottom 3 1/2" x 12" from tailgate tapered to a point at the front of the body. Longitudinal braces shall be interconnected with floor gussets and continuously welded.
6. The body floor shall be 7 gauge 80,000 PSI steel with 7 gauge supports or stronger. *(Trough floors not acceptable)*
7. Side access door shall be located on the street side of the body side wall. The door shall be securely fastened to the body side wall by stainless steel hinges.

### D. TAILGATE DIMENSIONS

1. Hopper opening width shall not be less than 74" wide and 55" high.
2. Hopper capacity shall not be less than 3.0 cubic Yards.
3. Hopper cycle time with the standard PTO and pump shall not exceed an average of 25-28 seconds.
4. The entire hopper floor shall be a minimum of 3/16" 100,000-PSI steel or stronger and adequately braced to withstand maximum loading pressures.
5. The hopper sides shall be constructed of 1/4" 100,000 PSI steel or stronger.
6. The outside wing and Lip and Latch Kit must be able to accept our 84" trunion that is utilized on all of our dumpsters. This must be approved by City of Delaware and meet or exceed all ANSI Standards.

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7. The hopper wall braces shall be 7 gauge 80,000 PSI high strength steel or stronger.
8. The hopper tracks are to be 8.5" X 3.5" X 3/8" 50,000 PSI steel, and the track rails are to be 1/2" X 3".

#### E. TAILGATE CONSTRUCTION

1. Tailgate is to be attached by (2), 1 1/2" 50,000 PSI heavy-duty hinges.
2. The tailgate shall have a water tight sealing height of 54".
3. The slide blade guide track shall be constructed of 1/2" x 3" AR400 steel. (*Free-floating design is not acceptable*).
4. The tailgate shall be equipped with a turnbuckle style lock incorporating a 7/8" diameter threaded rod or larger.
5. The tailgate shall be raised by two 3 1/2" x 42" double acting cylinders equipped with restrictors to prevent precipitous tailgate decent in the event of a broken hydraulic line.
6. The tailgate perimeter edge shall be reinforced by 3" x 2" x 1/4" wall structural tube steel.
7. Tailgate shall be equipped with a chemically inert seal to provide a watertight seal.
8. Hopper floor shall remain stationary during the packing cycle and shall be equipped with a 1 1/2" drain plug.
9. The hopper load sill shall be constructed from a 3/8" plate welded to a 1/4" wall formed structure and be 3.5" below the chassis frame height.
10. Self cleaning grip strut steps and grab handles shall be required on both sides of the tailgate. The steps shall be bolted on for easy repair or removal.

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#### F. PACKING MECHANISM CONSTRUCTION

1. The sweep blade shall be of the backhoe packing type, and designed to have a minimum clearance to thoroughly clean the hopper bottom during cycling.
2. The sweep blade face plate shall be constructed of 1/4" 100,000 PSI steel or stronger and shall be reinforced with internal braces constructed of 3/8" thick steel. It shall be equipped with 3/4" thick high strength cylinder supports, 3/8" 50,000 PSI steel braces and 1/4" 50,000 PSI gussets.
3. The sweep blade shall be powered by two 5"x 25 5/8" double acting cushioned cylinders equipped with bronze bushings.
4. The sweep pivot bearings are to be 4 1/2" ID x 5" OD bronze bushings.
5. The sweep blade cutting edge is to be 5/8" AR200 steel.
6. The slide blade face plate shall be constructed of 7 gauge 100,000 PSI steel or stronger with 3/4" 50,000 PSI steel side frames and 3/16" 80,000 PSI steel or stronger center support braces.
7. The slide blade shall be powered by two 5 1/2" x 38 5/8" stroke cushioned double acting cylinders.
8. The linear slide movement of the blade shall be accomplished on two high strength rectangular tubing with each having an upper and lower UHMW pad that measures 4" x 14"
9. The pivotal rotation of the sweep blade shall be accomplished through the sweep blade cylinder pivot which shall consist of two 2" diameter stress proof pivot pins.
10. The slide, sweep and option cycles will be positive and automatic and be operated from the right hand side of the tailgate at the rear; all levers to be clearly identified that allow the operator to start, stop and reverse the direction of any function, at any time throughout the packing cycle.

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11. UHMW slide pads shall be easily replaced without removing the slide blade through easy access ports.

#### G. EJECTION BLADE CONSTRUCTION

1. Ejection blade shall form the front of the body and be hydraulically operated and designed to have a minimum clearance to thoroughly clean the body during cycling.
2. The load shall be discharged by means of a center mounted positive ejection system. A double acting, 8" telescopic cylinder shall extend and retract the full length of the body.
3. The ejection blade face plate shall be constructed of 10 gauge 50,000 PSI sheet steel and reinforced with trapezoidal cross members of 3" x 3" and 4" x 4" 1/4" wall structural tube.
4. The ejection blade shall slide on four 1" x 4" x 48" UHMW high density slide bearing blocks.
5. The ejection panel shall extend and retract without the assistance of clamp bars.
6. The ejection panel will be automatically retracted during the operation mode by a hydraulic pressure relief system.
7. The ejector panel and tailgate raise controls to be positive type, manually activated and shall be mounted inside the body on the front left-handed side of the body.
8. The telescopic cylinder shall not lay in a horizontal position on the floor of the packer. It shall be mounted at an angle so as to prevent trash at the floor level accumulating on it.

Rear loading Refuse collection Truck Body  
(Continued)

## H. CONTROLS

1. The packing mechanism controls shall be located curbside and incorporate direct linkage to the valve spool. The valve sections will be located within the side frame of the tailgate and be easily accessible without removing hoods or covers. The speed up sensor for the packing mechanism shall be a whisker style switch adequately protected from limbs and debris.
2. An electrical device shall be supplied to automatically raise the engine speed to the proper RPM during the packing cycle.
3. An additional throttle advance switch shall be mounted at the front left hand side of the body near the tailgate raise control handle and at the rear right hand side near the packing blade control.
4. A Back Pack Valve shall be required to automatically advance the ejector panel when packing against it.
5. The packing blade control shall be designed to accomplish the normal packing cycle in two steps and shall be reversible or stopped at any time during the cycle.
6. The packing blade control shall be a two handle design and located at the rear of the tailgate on the curbside.

## I. HYDRAULIC SYSTEM

1. A power takeoff/pump combination shall be used to power the hydraulic system.
2. All hydraulic valving shall be mechanically operated and use direct link controls.
3. The hydraulic pump shall provide a delivery of 36 GPM at 1200 RPM.
4. Normal maximum operating pressures shall not exceed 2450 PSI.



5. The hydraulic system shall incorporate a relief valve and a hydraulic pressure gauge to protect all components from excess pressures.
6. All hydraulic hoses shall conform to S.A.E. Standards. No flat spots in hoses will be acceptable.
7. Hydraulic tank shall not be less than 60 gallons and must be equipped with a sight and temperature gauge. The tank shall be frame mounted.
8. A replaceable 10 micron in tank immersed filter with by-pass valve and visual indicator shall be furnished in the return line of the hydraulic system.
9. A shut-off valve shall be mounted on the suction line near the oil tank.
10. All cylinder rods shall be chrome plated.
11. All cylinders shall incorporate nylon wear rings on the piston and rods to prevent metal to metal contact, and an "O" ring is to be used to pre-load the seal.
12. All cylinder rod end pin lugs shall be inertia welded to the cylinder rod.
13. Steel piping shall be used whenever possible.
14. All hydraulic tubes shall be securely clamped to prevent abrasion and excessive noise.
15. All hydraulic hoses and pipes, wherever they are exposed to limb, ground obstructions, or debris damage, shall be properly shielded or guarded .
16. All hydraulic hoses shall have a 4:1 burst safety factor and use hose ends of 37-degrees JIC fittings wherever possible.

#### J. ELECTRICAL

1. All body wiring shall be loomed and/or in conduit with heat shrunk connectors.

Rear loading Refuse collection Truck Body  
(Continued)

2. The body shall be equipped with approved clearance, warning, tail, license, stop and turn signals in compliance with the national safety standards utilizing LED's.
3. The body shall be equipped with an external audio back up alarm activated when the chassis is in reverse.
4. Driver alert buzzer shall be installed at the rear of the tailgate located by the packing controls.
5. A light shall illuminate in the cab when the tailgate is open and an audible alarm will sound when the vehicle is placed in reverse while the tailgate is open.
6. A light bar shall be mounted on the upper section of the tailgate and consist of 4" stop, turn and three clearance lights, in accordance to the national safety standards utilizing LED's.
7. A rear vision camera shall be installed with a 7" monitor mounted in the cab.

#### **K. PAINT**

1. The body shall be properly cleaned with a chemical etching solution to remove all dirt, oil, and prepare surface for good paint adhesion. All surfaces shall be clean of welding slag. Two coats of self etching, lead-free primer with rust inhibitors shall be applied.
2. PPG paint shall be applied.

Specify paint code 197550 DEL Fleet Essential

Specify paint color: Or City approved equivalent

#### **L. MOUNTING**

1. Body shall be mounted in accordance to industry standards. No welding shall be performed on the chassis frame in the mounting process.

**M. WARRANTY**

1. Manufacturer's limited warranty shall apply for a period of two years after date of acceptance of the unit.
2. Manufacturer shall warranty in full all cylinders for a Five year period after date of acceptance of the unit.

**N. ADDITIONAL EQUIPMENT**

1. **Hopper Lights** Two white led lights shall be mounted on the upper half of the tailgate. The lights shall be capable of illuminating the hopper of the tailgate. The lights will be activated by a switch in the cab of the chassis.
2. **Strobe Light LED-** A strobe light shall be mounted on the upper half of the tailgate. The light shall be activated by a switch located inside the cab of the chassis and be LED.

**Cart Flipper** - All associated hydraulic components shall be supplied and operational. The cart flipper must be compatible with Toter brand carts.

3. **Reeving Cylinder-**A cylinder winch shall be mounted on top of roof of body. The reeving cylinder shall be capable of handling commercial containers. All associated hydraulic components shall be supplied. Capacity of reeving cylinder shall be no less than 12,000 lbs. The highest point on Reeving Cylinder or pulley's shall not be over 12'6" mounted on above chassis.

**O. MISCELLANEOUS**

1. Unit shall be completely installed on our supplied cab and chassis and delivered to the City of Delaware no later than 120 calendar days upon the delivery of the cab and chassis to the manufacturer. If project is not completed within the time frame a \$250 a day reduction from the awarded bid will be imposed on the billing of this unit.