



**2007 Approved  
MUNICIPAL BID SPECIFICATIONS  
for  
60,000 Lbs Outside Rail  
Tandem Axle Roll-Off Hoist**

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## **GENERAL**

These specifications are intended to describe the minimum requirements necessary to furnish (1) one tandem axle, truck mounted Roll-Off Hoist compatible with 18' - 22' Roll-Off Containers. The hoist shall be a new, current, standard production model and carry a one year warranty by the manufacturer. The bidder must be a factory authorized dealer capable of supplying service, factory guarantee, and parts from stock with a minimum of delay. Along with compliance with the following specifications, the bid shall be accompanied by a users list of the equipment submitted for bid. Bidder must submit proof of manufacturers "Product Liability Insurance". Deviation from the specifications must be listed on a separate sheet along with substitutions and may result in rejection of the bid.

## OPERATING SPECIFICATIONS

		COMPLY	
		YES	NO
1.	<b>Manufacturers Rated Capacity: 60,000#</b>	_____	_____
2.	<b>* Manufacturers Factory Tested Lifting and Pull-On Capacity: 60,000#</b>	_____	_____
3.	<b>Recommended container Lengths: 18-22 Ft.</b>	_____	_____
4.	<b>Working Hydraulic Pressure: 1850 P.S.I.</b>	_____	_____
5.	<b>Approximate Operating Times:</b>		
	<b>Hoist Up = 30 seconds</b>	_____	_____
	<b>Hoist Down = 15 seconds</b>	_____	_____
	<b>Container On = 46 seconds</b>	_____	_____
	<b>Container Off = 37 seconds</b>	_____	_____
6.	<b>Raised Dump Angle: 48°</b>	_____	_____
7.	<b>Lever Arm: 49"</b>	_____	_____
 <b>*NOTE: Factory tested with a 22 ft. container on a hard level surface and a water level load in the container.</b>			

## STRUCTURAL SPECIFICATIONS

		COMPLY	
		YES	NO
1.	<b>Main Frame: (2) 8" x 4" x 1/2" A500 Grade "C" Rectangular Tubing Main Rails Joined in Parallel By:</b> - (2) 8" x 4" x 3/8" Rectangular Tubing Crossmembers - (1) 3/8" x 6" Plate Winch Cylinder Support - (1) 1/2" x 11-1/2" x 35" A36 Plate – Front Plate - container guide rail from the rear to the second roller	_____ _____ _____ _____	_____ _____ _____ _____
2.	<b>Sub Frame: (2) 3" x 2" x 205" x 3/16" A500 Grade "C" Rectangular Tubing Rails Joined in Parallel By:</b> - (4) 3/8" x 6" A36 Plate Crossmembers - (1) Rear Pivot Plate Formed From 3/8" A36 Plate	_____ _____	_____ _____
3.	<b>Lower Lift Cylinder Mounting Bracket: 3/8" A36 Plate with 1" HR Plate Bracket Welded on to Support the 2-1/2" Diameter 1018 CFRD Lower Lift Cylinder Shaft.</b>	_____	_____
4.	<b>Upper Lift Cylinder Mounting Bracket: 3/4" HR Anchor Plate Welded to the Main Frame and Bearing a 4" O.D. x 2-1/2" I.D. 1035 CFRD Tubing Collar and a 2-1/2" Diameter 1018 CFRD Shaft.</b>	_____	_____
5.	<b>Front Container Stops: 1-1/2" HR Plate Steel</b>	_____	_____
6.	<b>Front Container Safety Lock: 1" A36 Plate Steel Latch That is Pushed Up By a Tempered Spring When the Hoist is Completely Lowered.</b>	_____	_____
7.	<b>Rear Hold Down: 3/4" HR Plate Steel</b>	_____	_____
8.	<b>Winch Rail: Constructed of 4" Structural Channel. 3/8" &amp; 1/2" Steel Plate: - Helps Tie Main Frame Rails Together, Acts as Guide for Winch Cylinder Rod Ends and Protects Winch Cylinder Rods When Extended.</b>	_____	_____
9.	<b>Rear Hinge Assembly:</b> a). Four 1-1/4" HR Rear Hinge Plates Welded to the Hoist Sub-Frame b). Two 4-1/4" Wide Rear Hinge Castings Welded to the Hoist Main Frame c). Two 2-1/2" 1018 CFRD Pins <b>NOTE: The hinge assembly is fabricated with grease zerks to maintain a free floating in grease condition.</b>	_____ _____ _____ _____	_____ _____ _____ _____

**STRUCTURAL SPECIFICATIONS - CONTINUED**

		<b>COMPLY</b>	
		<b>YES</b>	<b>NO</b>
<b>10.</b>	<b>Rear Ground Roller Assembly:</b>		
	a). 6-5/8" Diameter x 23" Long Greasable Roller	_____	_____
	b). 2" 1018 CFRD Roller Shaft	_____	_____
	c). Two 2" HR Plate Brackets for Roller Shaft	_____	_____
<b>11.</b>	<b>Side Roller Assembly:</b>		
	Five Per Side (4" O.D. x 2" I.D.) Outside.		
	a). Roller is a 4" O.D. x 2-1/2" I.D. 1026 CFRD Tubing with a 2-1/2" O.D. x 2" I.D. 660 Bronze Bushing	_____	_____
	b). The Roller Shaft is 2" 1018 CFRD Supported By a 1/2" x 3" x 5" HR Base Plate Welded to the Main Frame Rail. NOTE: The roller shaft is machined and equipped with a grease zerk to provide grease flow to two points on the shaft.	_____	_____
	c). The roller is secured on the shaft by a 10 Gauge Washer and a 3/8" x 3" Cotter Pin.	_____	_____
	d). The last (2) rollers to have "U" shaped roller bracket.	_____	_____
<b>12.</b>	<b>Cable Sheave: Sheaves are a 10" Ductile Iron Casting (Tensile &amp; Compression 50,000 to 60,000 P.S.I./Yield 45,000 P.S.I. min) with a 2-7/8" O.D. x 2-1/2" I.D. 660 Bronze Bearing. Total of 5 Sheaves.</b>	_____	_____
	<b>*Sheave groove should support the cable over 135 - 150 degrees of cable circumference.</b>		
<b>13.</b>	<b>Cable Sheave Shafts: 2-1/2" Diameter 1018 CFRD, Machined &amp; Equipped with Grease Zerk to Provide Grease Flow to Sheaves.</b>	_____	_____
<b>14.</b>	<b>Cable Sheave Guides: 4" Structural Channel</b>	_____	_____
<b>15.</b>	<b>Winch Cylinder Rod Guards: 3/8" x 3" HR Flat Plate</b>	_____	_____
<b>16.</b>	<b>Oil Reservoir: 10 Gauge and 12 Gauge HR Sheet Steel Body Mounted to the Truck with two 1/4" HR Plate Brackets and two 2" Sch 80 Seamless Black Pipe.</b>	_____	_____

**STRUCTURAL SPECIFICATIONS - CONTINUED**

		<b>COMPLY</b>	
		<b>YES</b>	<b>NO</b>
17.	<b>ICC Bumper: Fabricated Design consisting of a 4" x 3" x 1/4" Rectangular Tubing welded to two 1" A36 Bumper Connecting Arms Hinged to a Fabricated Hinge Assembly consisting of two 1" A36 Hinge Plates per side with a Hinge Pin made from 1 1/2" CR 1018 material with Minimum of 64,000 PSI Tensile Strength and the bumper can be Folded Up to Bottom of Hoist Frame and Pinned in Place to allow for Towing Trailers (Bumper must also have <u>Optional</u> Linkage available to Automatically Fold Up the ICC Bumper.)</b>	_____	_____
18.	<b>Bumper: 5" x 7 9/16" x 95 7/8" Fabricated Bumper that consists of 1/4" x 7 9/16" x 95 7/8" Formed Outer Steel Channel with 5" Legs and 12 Ga. x 7" x 95 5/8" Formed Inner Steel Channel with 3 1/2" Legs Engineered Specifically to Hold Clearance, Tail, Brake, Backup, Marker, License Plate and Turn Signal Lights.</b>	_____	_____
19.	<b>Cable: 7/8" diameter x 71' Long, 6 x 37 EXTWRC Regular Right Lay, Core Color Coded and of Domestic Origin; - with a Manufacturers Rated Capacity of 39 Tons. Line Pull on Cable at 1850 P.S.I.: 35,594#.</b>	_____	_____
20.	<b>Cable Pick Up End: Cast Steel Swivel Cable Eye - Tested to 78,000#, and Secured by Cold Flowing Swaged Fittings.</b>	_____	_____
21.	<b>Cable Anchor: (4) 7/8" Forged Cable Clamps, Hot Galvanized and of Domestic Origin.</b>	_____	_____
22.	<b>All main frames, subframes, and manufactured components shall be jigged when fabricated to assure interchangeability of parts.</b>	_____	_____
23.	<b>A secondary winch style container hold down to be provided.</b>	_____	_____
24.	<b>O.E.M. gull wing style fenders supported with 2 1/2" square Tubing as recommended by tarper mfg.</b>	_____	_____
25.	<b>O.E.M. factory sealed wiring harness to be supplied.</b>	_____	_____
26.	<b>L.E.D. light package to be supplied including reverse light.</b>	_____	_____

## HYDRAULIC SPECIFICATIONS

		<b>COMPLY</b>	
		<b>YES</b>	<b>NO</b>
1.	<b>Pump: Gear Type, 35 G.P.M. @ 1500 RPM</b>	_____	_____
2.	<b>Valve: 2 Spool, Sectional, 35 G.P.M. with Port Relief's</b>	_____	_____
3.	<b>Oil Filter: 60 G.P.M., 100 Wire Mesh, 25 Micron, Replaceable</b>	_____	_____
4.	<b>Oil Reservoir: 50 Gallon Capacity with Window Type Sight Gauge and Temperature Gauge.</b>	_____	_____
5.	<b>Internal Filter: 200 Wire Mesh Suction Strainer and 10 Micron Fill Port - Replaceable Filter with Built in Bypass</b>	_____	_____
6.	<b>System Total Oil Capacity: 72 Gallons</b>	_____	_____
7.	<b>Shutoff Valves: 2" Ball Valve</b>	_____	_____
8.	<b>Hydraulic Fittings: JIC, O-Ring Fittings of Domestic Origin.</b>	_____	_____
9.	<b>Hydraulic Hoses: SAE 100-R2, 5000 P.S.I. Max.</b>	_____	_____
10.	<b>Lift Cylinders: (2) 6" x 72" D.A. with 4-1/2" O.D. Ground, Polished, and Chrome Plated Rod Tube.</b>	_____	_____
11.	<b>Winch Cylinders: (2) 6" x 80" D.A. with 3" O.D. Ground, Polished, and Chrome Plated Rod - Solid.</b>	_____	_____
12.	<b>Main hydraulic valve system to have (2) additional valve sections for tarper system. (No Priory Valve Accepted)</b>	_____	_____
13.	<b>Genuine O.E.M. air operator control tower to be accepted.</b>	_____	_____

**Optional Equipment (price to include installation)**

- **Removal of Current Body** \_\_\_\_\_
- **Front Mount Pump (Muncie MLS)** \_\_\_\_\_
- **Auxiliary Fold Down Stops (Outside Rail Style)** \_\_\_\_\_
- **Auxiliary Fold Down Stops (In Rail)** \_\_\_\_\_
- **Rear Frame Enclosure (1/4" Diamond Plate Steel)** \_\_\_\_\_
- **Pintle Hook Package** \_\_\_\_\_
- **Auxiliary Axle (Does Not Included Wheels or Tires)** \_\_\_\_\_
- **Plastic Fenders (Tandem)** \_\_\_\_\_
- **Full Length Frame Wear Strip** \_\_\_\_\_
- **Heavy Duty "U" Shaped Roller Brackets (10)** \_\_\_\_\_
- **Pioneer RP4500 Strong Arm with Stationary Gantry** \_\_\_\_\_
- **Pioneer RG4500 Strong Arm with Hyd Gantry** \_\_\_\_\_
- **O'Brian Magnum Tarp System** \_\_\_\_\_
- **Donovan Hy-Tower (Single Leg 15')** \_\_\_\_\_
- **Auxiliary Hydraulic (Double Acting to Rear of Hoist)** \_\_\_\_\_
- **35 Gallon Wash Out System wit Aluminum Tank and 50' retractable hose reel** \_\_\_\_\_
- **48" Steel Tool Box – Lockable** \_\_\_\_\_
- **Box Locks (Mechanical Secondary Lock)** \_\_\_\_\_

## **MANUFACTURERS RECOMMENDED** **TRUCK CHASSIS SPECIFICATIONS**

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1. **Minimum Front Axle Capacity: 18,000# min.  
Power Steering**
2. **Minimum Rear Axle Capacity: 44,000# Tandem with  
Walking Beam Suspension.**
3. **Truck Frame:  
36,000 P.S.I. Chassis Frame - Min. Section Modulus  
32 in.<sup>3</sup>  
55,000 P.S.I. or More Chassis Frame - Min. Section  
Modulus 24 in.<sup>3</sup>**
4. **Required Truck CT: 174" (186" with Tarper) from  
the first unobstructed point behind the cab to the center  
of the tandem axles.**
5. **Maximum Distance From Ground Level to Top of  
Frame: 43"**
6. **Maximum Outside Tire Spread of Tandem: 96"**
7. **Minimum Required After Frame: 12" back from the  
center of the rear most axle.**