



CITY OF KNOXVILLE
 OFFICE OF THE PURCHASING AGENT
 P.O. BOX 1631
 400 MAIN ST., ROOM 667
 KNOXVILLE, TN 37901

SEALED BID

THIS IS NOT AN ORDER

DATE: 04/19/2017 PAGE 1 Of 1

DOCUMENT NUMBER: **438658**

READ ALL INSTRUCTIONS AND CONDITIONS ON ATTACHED PAGES BEFORE BIDDING. BID ON THIS FORM ONLY. BID PRICE ON ITEMS LISTED OR EQUAL. NO BID RECEIVED AFTER CLOSING HOUR WILL BE ACCEPTED.

****ALL PRICES TO INCLUDE TRANSPORTATION CHARGES & NET TERMS UNLESS STATED OTHERWISE ****

Merchandise to be delivered to : See delivery instructions

BID will be received at: Office of the Purchasing Agent, Room 667, 400 Main St., Knoxville, TN 37902, until **05/04/2017 11:00:00 AM**

ENVELOPE TO BE SEALED AND MARKED: **KNUCKLEBOOM LOADER-4WD**

Special Instructions:
 Direct all questions to jtucker@knoxvilletn.gov.

No.	Quantity	Description	Brand	Unit	Unit Price	Total	Applicable Discount
1	1 Each	One (1) 4-wheel drive straight boom truck, per attached bid specs.					

IMPORTANT - State Merchandise

Delivery Date Here: _____

Buyer Name: Tucker, James
 Phone: 865-215-2064
 Fax: (865) 215-2277
 Email: jtucker@knoxvilletn.gov

 (Company Name)

 (Authorized Signature)

 (Print Signed Name)

 (Phone Number)

 (Email Address)

**City of Knoxville
Fleet Services
Heavy Duty Knuckleboom Loader,
Bulk Trash Body,
4WD Cab and Chassis**

This specification describes a Heavy Duty Knuckleboom Loader and Bulk Trash Body, **4WD** Cab and Chassis, to be delivered as a turn-key vehicle. All necessary equipment shall be furnished and delivered new, complete and ready for use. All parts not specifically mentioned but which are necessary for the complete unit shall be supplied and installed by the vendor even though such work or material are not specifically outlined and shall conform in strength, quality of material and workmanship to the best practice known to the Industry.

***The bidder shall respond to each item listed in this specification in the space provided, indicating whether they meet or do not meet specification, and describe/clarify the proposed item or any deviation to the item. These pages and descriptions are to be included in the Bid Response. **Bidder will be considered non-compliant if response is not on these specifications.**

***It is the bidder's responsibility to verify with the knuckleboom loader and body vendor that the model being bid WILL work on a 4wd chassis. Do not assume that it will without verification from body vendor !!!

1. **MINIMUM SPECIFICATIONS - STANDARD EQUIPMENT CHASSIS CAB – 4WD**

The below requirements are based on a Peterbuilt chassis model 348 and specify the minimum standards sought by the City of Knoxville. Bidders may bid an alternate 4WD chassis as long as the minimum standards are met or exceed. Any deviation from the specifications must be explained in detail.

Item Number	Description	Meet Specification?	Description/ Deviation
Chassis			
1.1	Front Axle Load (lbs):14320		
1.2	Rear Axle Load (lbs)26000		
1.3	G.C.W. (lbs):40320		
1.4	Length (ft) 24		
1.5	Height (ft) 13.5		
1.6	Wheelbase (in): 256 Note: wheelbase may exceed 256 if needed to accommodate 4x4		
1.7	Overhang (in):124.8		
1.8	Fr Axle to BOC (in):69.8		
1.9	Cab to Axle (in):186.2		
1.10	Cab to EOF (in):311.0		
1.11	Overall Comb. Length (in):417		
1.12	10-5/8in Steel Rails 385-444in 10.625 x 3.45 x .313 Dimension, 1,776,000 RBM; Yield Strength: 120,000 psi.		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.13	Three-Piece Crossmembers		
1.14	Dana Spicer E14621 14,600 lb, 3.5in Drop Zert fittings on tie rod ends, king pins, & draglink ball joints.		
1.15	Tapered Leaf Springs, Shocks 14,600 lb		
1.16	Power Steering Sheppard SD110 - Power Steering Reservoir Frame Mounted		
1.17	Steel Hubs 11-1/4in bolt circle. Includes a supplier extended coverage up to 3 years / 350,000 miles for bearings & seals.		
1.18	Marmon-Herrington Front Axle 4x4		
1.19	Bendix Air Cam Front Drum Brakes 16.5x5 Includes automatic slack adjusters & outboard mounted brake drums.		
1.20	Gusseted Cam Brackets, Steer Axle		
1.21	Rear Axle - Dana Spicer S26-190D (with wheel differential lock) 26,000 lb		
1.22	Iron LMS Hubs Includes a supplier extended coverage up to 3 years / 350,000 miles for bearings & seals.		
1.23	Long Stroke Parking Brakes, Drive Axle		
1.24	Gusseted Cam Brackets, Drive Axle(s)		
1.25	SBM Valve Full trucks require a spring brake modulation (SBM) system for emergency braking application. This system requires an SBM valve and a relay valve with spring brakes on the rear axles. The SBM valve allows the foot valve to operate the rear axle spring brakes if a failure exists in the rear air system.		
1.26	Upsize Parking Brakes		
1.27	Heavy Duty Brake Drums, Drive Axle(s) Use with 16.5x7 Brakes		
1.28	Synthetic Axle Lubricant All Axles		
1.29	Single Drive Axle		
1.30	Bendix Air Cam Rear Drum Brakes 16.5x7 Includes Automatic Slack Adjusters & Outboard Mounted Brake Drums.		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.31	Ratio 4.56 Rear Axle		
1.32	Reyco 79KB Multi Leaf 26,000 Lb		
1.33	Reyco Helper Springs 4,500 lbs For use with Reyco 79KB suspension		
1.34	PACCAR PX-9 270@2000 GOV@2200 800@1300 (2013 Emissions) Includes alum flywheel housing, cruise control, and J1939 provisions (provides an interface point for the Electronic Service Analysis- ESA and other PACCAR approved diagnostic tools).		
1.35	Additional specifications: 120..Standard Maximum Speed Limit [LSL] 0....Expiration Distance 120..Hard Maximum Speed Limit 65...Maximum Accelerator Pedal Vehicle Speed 0....Accelerator Lower Droop 65...Maximum Cruise Speed 0....Cruise Control Lower Droop 252..Reserve Speed Function Reset Distance 0....Maximum Cycle Distance 10...Maximum Active Distance 0....Reserve Speed Limit Offset NO...Engine Protection Shutdown NO...Gear Down Protection 1400.Max PTO Speed NO...Cruise Control Auto Resume NO...Auto Engine Brake in Cruise 0....Expiration Distance YES..Enable Idle Shutdown Park Brake Set 5....Timer Setting YES..Enable Impending Shutdown Warning 60...Timer For Impending Shutdown Warning 35...Engine Load Threshold NO...Idle Shutdown Manual Override YES..Enable Hot Ambient Automatic Override 40...Low Ambient Temperature Threshold 60...Intermediate Ambient Temperature Threshold 80...High Ambient Temperature Threshold Engine Idle Shutdown Timer Enabled Remote PTO And Throttle Provision		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.36	Safety system shall not allow truck to travel over 10mph with PTO engaged.		
1.37	CARB Engine Idling Compliance - PACCAR PX-7, PX-9 and MX, Cummins ISL, ISM and ISX diesel engines will include the required factory installed serialized sticker on the driver's door to identify them as meeting the NOx idling standard.		
1.38	PACCAR 160 Amp Alternator with 12V Starter		
1.39	Vehicle to be governed for max vehicle speed of 65mph.		
1.40	PACCAR Premium 12V Starting Batteries 2000 CCA		
1.41	Speed Fan Clutch For Frequent Start/Stops		
1.42	18.7 CFM Air Compressor		
1.43	VGT Exhaust Brake		
1.44	Spin-on Fuel Filter/Water Separator, Unheated Frame Mounted. In addition to the fuel filter supplied with the engine.		
1.45	High Efficiency Cooling System. Low coolant level sensor warns of low coolant condition to prevent engine damage.		
1.46	Radial Seal, Dry Type Air Cleaner, Frontal Air Intake.		
1.47	Exhaust Single RH Horizontal DPF/SCR series under frame. Horizontal exhaust w/ tailpipe turned-out just ahead of the curbside rear tire.		
1.48	Allison 3000 RDS-P Transmission, Gen 5 - Allison 6-Speed, Close Ratio Gear) Forward Ratios: 1st-3.49, 2nd-1.86, 3rd-1.41, 4th-1.00, 5th-0.75, 6th-0.65 / Reverse Ratios: DR-(5.03) with Marmon brand 4x4 transfer case		
1.49	HD Driveline, 2 Midship Bearings		
1.50	Dash Mounted Single Acting Air PTO Control		
1.51	Allison FuelSense Basic		
1.52	Auto Neutral Activates With Parking Brake		
1.53	Dash Mounted Push Button Shifter		
1.54	Bendix AD-IS Air Dryer with Heater		
1.55	Aluminum Air Tanks		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.56	Tires & Wheels - FF: GY 16ply 295/75R22.5 G399A LHS FUEL MAX Dia. = 40.2 inches; SLR = 18.8 inches RR: GY 16ply 295/75R22.5 G399A LHS FUEL MAX Dia.= 40.8 inches; SLR= 19.1 inches		
1.57	FF: Accuride 22.5x8.25 Steel Wheels painted white RR: Accuride 22.5x8.25 Steel Wheels painted white		
1.58	26in Aluminum 50 Gallon Fuel Tank RH U/C - Includes steps for cab access.		
1.59	DEF Tank Mounted RH Under Cab - Standard DEF To Fuel Ratio 2:1 Or Greater		
1.60	Steel Battery Box LH Under Cab, Non-Slip Step		
1.61	Steel Styled Aero Bumper Chrome, Two Tow Pins		
1.62	Alum Cab 108in BBC Metton Hood w/Bright Crown Includes view window RH door and convex mirror over RH door.		
1.63	Severe Service Cab Package #1 – battery disconnect switch mounted in floor next to driver’s seat. Includes Aluminum side skins, aluminum rear skin, steel windshield mask, steel firewall, and steel front floor sheet on all cabs, and additional reinforcement structure on the back wall of the day cab.		
1.64	UltraRide Driver Seat - Air Ride, High Back, Vinyl		
1.65	(2) Person Passenger Seat - Non-Air Ride, Low Back, Vinyl		
1.66	Adjustable Steering Column – Tilt Only		
1.67	Interior Grey/Black - Includes charcoal instrument panels, glare-resistant gray dash, (2) power ports, molded door pads with in-mold color, gray molded back wall, 18” 4-spoke soft-touch steering wheel, soft- touch steering column cover, power passenger window, extruded rubber floor covering, header- mounted dome light, foot well lighting, integrated "dead pedal", (4) inside entry grab handles, (2) sunvisors, (2) cup holders and map bin in dash. SAFETY ORANGE SEATBELTS.		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.68	Day Cab Rear Window		
1.69	One Piece Curved Windshield		
1.70	Combo Fresh Air Heater/Air Conditioner With radiator mounted condenser, dedicated side window defrosters, Bi-Level Heater/Defroster Controls, 54,500 BTU/HR, and silicone heater hoses.		
1.71	Stainless Steel Mirrors 7x16 with Heat Element - Convex 8 Inch SS Mirror		
1.72	Air Horn 15in Painted Mounted under hood.		
1.73	ConcertClass Without CD, Includes BT Phone and Audio, AM/FM, WB, USB and MP3. Standard speakers.		
1.74	Plug-In Auto Reset Circuit Breaker in place of fuses in junction box.		
1.75	Electric Windshield Wipers With Intermittent Feature.		
1.76	Main Instrumentation Panel, Graphics Display Includes speedometer, tripodometer, tachometer with hourmeter and outside air temperature display, voltmeter, engine oil pressure, engine coolant temperature, fuel level, primary and secondary air pressure gauges. Includes standard warning light package: high water temperature, low oil pressure, and low air pressure warning lights w/audible alarms, high beam, turn signal, low fuel, parking brake, and ice warning indicators; seat belt reminder; rocker switches with long-life LED indicators; multi-function turn stalk with flash-to-pass feature (night mode flashes headlights and marker lights; day mode flashes headlights only), intermittent windshield wiper and headlamp beam control.		
1.77	(5) Marker Lights, Aero LED		
1.78	Yellow/white strobe light stick installed in grill		
1.79	Yellow LED strobe lights installed in headache rack and rear bumper		
1.80	On each side of vehicle, small yellow LED button strobe mid mounted in bed for side visibility.		
1.81	Emergency lighting controls in cab utilizing single factory auxiliary rocker switch.		

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Item Number	Description	Meet Specification?	Description/ Deviation
1.82	All emergency lighting shall be on one (1) 60amp resettable circuit breaker mounted in battery box.		
1.83	All lighting to be LED when available.		
1.84	Color Axalta Two Stage - Cab/Hood Base Coat/Clear Coat – WHITE for hood top, cab roof, fender. Black frame.		
1.85	Backup Alarm		
1.86	Backup camera installed in cab		
1.87	Exterior grab handles on both sides on the cab.		

2. MINIMUM SPECIFICATIONS – Knuckleboom Trash Loader and Trash Body

The intent of this specification to describe a 20' Knuckleboom Loader and trash body that is purposely designed for the collection of brush, limbs, leaves, and white goods. It shall be designed to be a one-person operation. The loader is mounted between the back of the 4WD chassis cab, and the front of the dump body. The loader utilizes a main boom, jib boom, extendable tip boom, and rotating trash bucket to lift and load material. The loader is stabilized through the use of a four-way adjustable stabilizer assembly. Material in the dump body is hydraulically unloaded via a single cylinder scissor hoist. These specifications are based on a Brush Hawg Standard C Model and represent the minimum standards sought by the City of Knoxville. Bidders may bid an alternate brand as long as minimum standards are met or exceed. Any deviation from the specifications must be explained in detail.

Item Number	Description	Meet Specification?	Description/ Deviation
General			
2.1	Unit shall be in current production and current year model, the manufacturer's printed literature including all specifications shall be submitted with the bid.		
2.2	Unit shall meet all Governmental Regulations, DOT, EPA etc.		
Loader Specifications			
2.3	The turret base sides, front, and back shall be constructed of ¼" plate. The turret base is attached to the chassis rails with two ½" mounting plates. These plates are secured to the frame rails using 20mm diameter Huck fasteners. Attachment of the turret base using U-bolts, or Grade 8 bolts is unacceptable.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.4	The lower turret base plate is machined to a minimum 1-13/16" thickness.		
2.5	The turret rotates on a heavy duty 30" diameter slewing ring bearing with gear teeth cut on the internal bearing ring, thus protecting the drive mechanism from the elements.		
2.6	The slewing ring bearing is driven by a 2-stage planetary gearbox powered by a low speed, high torque, disc-valve motor, producing an available turret rotate torque of 150,000 in-lbs. The hydraulic motor is equipped with integral, non-adjustable, cross port relief valves to protect the unit from shock loading while rotating the turret.		
2.7	Turret rotation is limited to 270° by means of positive mechanical stops to prevent loader operation over the truck cab.		
2.8	The upper turret base plate is 30" in diameter, and 1" thick after machining.		
2.9	The turret side plates are constructed of 1/2" plate, and the turret back is constructed of 1/2" plate.		
2.10	The main boom and tip boom pivot pins are 2" dia. bolts with locknuts. A hex keeper prevents the bolt from rotating.		
2.11	The main boom cylinder pins and tip boom cylinder pins are 2" dia CRR. The pins are secured by 1/2" bolts through 3/8" thick keeper plates. Cylinder pin bosses are 3" OD x 2" ID.		
2.12	Booms are of the single boom design to prevent axial rotation and bushing damage associated with twin boom designs.		
2.13	The main boom is constructed using single 10" x 10" x 5/16" wall square tubing with 1/2" side reinforcement plates. Designed to enhance below grade reach which is >9'6" (varies with chassis frame rail height) Twin Boom Designs are Unacceptable.		
2.14	The main boom pivot utilizes 2" ID replaceable bronze bushings with a lubrication provision.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.15	The main boom cylinder pin-off plates are ½” plate weldments, welded to both sides of the boom with a 3/8” thick reinforcing stiffener.		
2.16	The main boom to tip boom pivot is 1” thick plate, machined to ¾” at the connection point, and welded to both sides of the boom tubing with 4” OD x 2” ID DOM tubing bosses. Includes boom stop.		
2.17	The tip boom is constructed of a single ¼” wall, 6” x 8” structural tube with 3/8” plate reinforcement wrappers. Hoses inside a Hose Retract Box.		
2.18	The tip boom side plates are ½” thick, welded to both sides of the boom with 3” OD x 2” ID DOM tubing pin bosses.		
2.19	The tip boom extension is a retractable/extendable telescoping section that is housed within the tip boom assembly. Total length after extension is 20 feet.		
2.20	The tip boom extension boom is constructed of a single, ¼” wall, 5”x7” structural tube with ¾” plate welded to both sides of the boom for attachment of the bucket knuckle.		
2.21	The tip boom extension boom has a 4” x 6” aluminum bronze bearing plate attached to the top rear of the extension section. Two (2) 2” diameter aluminum bronze bearing pads protrude through holes in the bottom of the outer tube wrapper to provide a sliding surface for the end of the boom. Must incorporate wear pucks, no exceptions.		
2.22	All boom pivot points are equipped with replaceable 2” ID bronze bushings with grease provision.		
2.23	The bucket is of the heavy duty construction, 48” long, measuring 60” from side to side when fully opened.		
2.24	Ground clearance at the center of the bucket is a minimum of 24” when it is fully opened, and resting on level ground.		
2.25	Rotation of the bucket is accomplished with a hydraulic rotator motor allowing 360° continuous rotation.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.26	The bucket is opened and closed via (2) hydraulic cylinders. The hydraulic oil lines to the cylinders are routed through an integral swivel joint in the bucket rotator motor, allowing continuous rotation without hose damage. Includes ¼" bolt-on bucket cylinder covers.		
2.27	The bucket top plate is constructed of ¾" plate. The bucket tongs are constructed of 3/8" plate HRS with a 3/8" x 3" BOLT-ON, REVERSABLE, REPLACEABLE edge strip.		
2.28	The bucket tongs form a reverse curve to help avoid scalping and digging on grass lawns.		
2.29	The bucket contains (8) tongs – 4 per side. The bucket sides are constructed of 7 ga material. There shall be a swing brake incorporated into the bucket.		
2.30	The loader is equipped with 4-way adjustable hydraulic stabilizers. Each side has independent controls for the in/out and up/down adjustment.		
2.31	The outer stabilizer cross tube and outer stabilizer vertical tubes are constructed of 8" x 6" x ¼" wall rectangular tubing.		
2.32	The inner stabilizer cross tubes and vertical tubes are constructed of 7" x 5" x ¼" wall rectangular tubing. Stabilizer legs will be of appropriate length for 4x4 application. Leg extensions welded on to the stabilizer footpads will NOT BE ACCEPTED.		
2.33	The stabilizer footpads will be ¾" thick, ((2) 3/8" plates) - overall dimension - 10" x 11", connected to the pad brackets by a single 1" Grade 8 bolt/lock nut.		
2.34	The stabilizer vertical tubes are equipped with a powdercoated housing with six (6) clear strobing L.E.D. lights. Both sets of lights are wired to the same in-cab switch.		
2.35	Clutch-shift PTO's (Hot Shift) will be used where the chassis has an automatic transmission.		
2.36	All Clutch-shift PTO's (Hot Shift) will be provided with overspeed protection.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.37	Return filter is a top-of-the-tank mounted housing with a 5 Micron synthetic drop-in element. The filler cap is bayonet-style and is non-vented. The reservoir is vented through a replaceable screw-on breather which removes airborne particles 3 Microns and above. This breather will be installed in a ¾" NPT port located on top of the reservoir. The Hydraulic tank and system must incorporate a "drop in filter", No Exceptions. There must be an inline hydraulic cooler.		
2.38	Main boom cylinder 6" bore x 4" shaft x 34" stroke.		
2.40	Tip boom cylinder 4½" bore x 2½" shaft x 32" stroke.		
2.41	Tip boom extension cylinder 3" bore x 1 ½" shaft 48" stroke.		
2.42	Stabilizer in/out cylinders are (2) 3" bore x 1 ½" shaft x 22" stroke.		
2.43	Stabilizer up/down cylinders are (2) 3" bore x 1 ½" shaft x 22" stroke w/pressure holding valves.		
2.44	Trash bucket cylinders are (2) 3" bore x 1 ½" shaft x 7" stroke.		
2.45	Control valve is open center Parker V20 with a main relief valve set at 2,150 psi.		
2.46	Counter balance valves are installed on the main boom and tip boom cylinders to prevent free fall in case of a hydraulic failure.		
2.47	The hydraulic pump is a cast iron, gear-type, direct mounted to the power take-off, and producing 18.5 gpm @ 1,200 rpm. <u>NOTE TO BIDDERS: Hydraulic fluid in system shall be purchased from Certified Labs p/n XHYDFL.IS046. This allows compatibility with current fluid being used by City Fleet Services and prevent cross-contamination.</u>		
2.48	All hydraulic hoses are 2-wire braided hoses, with an abrasion resistant jacket, rated at 3,000 psi working pressure (with the exception of the pump suction hose which is of SAE100R4 construction).		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.49	The loader is equipped with dual "stand-up" operator stations located between the back of the chassis cab, and the front of the dump body.		
2.50	The control knobs are located at both control stations, and they are connected to a single valve bank via the control rod linkages.		
2.51	The control knob locations are the same on both sides of the unit for operator convenience.		
2.52	The stabilizer and dump body controls are centered between the control stations for safety.		
2.53	The loader will be equipped with a 24" "walk-through" feature that allows the operator to pass between the two stations without having to step down off of the unit. The operator can access both stations from the chassis cab without having to ever touch the ground.		
2.54	The control linkage assembly consists of 5/8" CRR control rods, 1/2" CRR handles with threaded control knobs, and MD Nylon control rod bearing blocks. The control rods are yellow zinc plated for corrosion resistance.		
2.55	The valve bank is centered on the rear side of the turret base assembly. It is attached to the control station "Z" frame which is top-hinged, allowing access to the valve for service. The control station "Z" frame is constructed of 1/4" formed plate.		
2.56	Driver side step from cab will be designed so the driver can transition from cab to working platform without stepping off the truck and back on. There should be sufficient grab handles to ensure three points of contact at all times.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.57	<p>The following control functions are located at both operator's stations:</p> <ul style="list-style-type: none"> Throttle Advance: On / Off Bucket: Open / Close Bucket Rotation: CW / CCW Tip Boom Extension: Out / In Turret Swing: CW / CCW Tip Boom: Retract / Extend Main Boom: Lower / Raise Center CS Outrigger: In / Out Center SS Outrigger: In / Out Center CS Outrigger: Up / Down Center SS Outrigger: In / Out 		
Dump Body			
2.58	Dump Body shall be 18ft long with 48 inch sides and 42 inch headboard.		
2.59	The dump body long sills are 8" x 11.5 lb/ft structural channel.		
2.60	The dump body crossmembers are 4" x 5.4 lb/ft channel. Crossmembers are on 12" center spacing.		
2.61	The dump body floor is 1-Piece 3/16" plate steel, continuously welded to the headboard and sides.		
2.62	The dump body bottom side rails match the crossmembers.		
2.63	The dump body top side rails are 3" x 4" x 3/16" structural tubing.		
2.64	The dump body sides are 10 GA.		
2.65	The dump body side posts are 3" x 6 1/2" x 10 GA, formed channel, and are set on 24" centers. Each side post has a bottom/side weep hole for moisture control.		
2.66	The dump body rear corner posts are 3" x 6 3/4" x 1/4", 4-way bend, formed channel.		
2.67	The dump body headboard construction matches the dump body side construction. There are (3) three posts on the headboard.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.68	The dump body rear door has 3" x 4" x 1/8" tubular framing with a single horizontal brace. Rear door construction matches dump body side construction and shall be a single panel. Twin swing doors are NOT acceptable.		
2.69	The dump body rear barn door lock the positive type. The door can be swung parallel to the side, and chained open for the unloading operation. The door has (3) greaseable hinges.		
2.70	The dump body rear door each has three (3) 1-1/16" CRR hinge pins with grease zerts.		
2.71	The dump body tarp rails are 1 1/4" x 3/16" flat bar welded down each side of the body.		
2.72	The dump body comes with a single safety prop.		
2.73	The dump body lights meet all federal highway standards, and are "pop-in" style for easy replacement. Lights are housed in a 12 GA formed bumper, welded to the bottom of the dump body. Surface-mount lights are not acceptable.		
2.74	The dump body comes with a fixed ICC bumper for underride protection.		
2.75	The dump body comes with a set of rear mud flaps.		
2.76	The dump body hoist is a single cylinder, scissors-type, rated at 15 tons. It will achieve a minimum 45° dump angle without the rear of the dump body touching the ground.		
2.77	All L.E.D. body lights.		
2.78	Required reflectors and tape.		
2.79	Mounting to be done at the factory by certified, body-mount specialists.		
2.80	Any chassis sent to the factory that does not meet the minimum chassis requirements will not be mounted.		
2.81	The loader and dump body will receive one coat of a automotive-grade, 2-part epoxy primer, followed by (2) coats of Sherwin Williams automotive-grade acrylic urethane finished paint. The underside of the dump body floor will be coated with Autobody Technologies, Inc. TRANSTAR TR4361 Quick Dry Rubberized undercoating or approved equal.		

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Item Number	Description	Meet Specification?	Description/ Deviation
2.82	<p>The loader lifting capacities are:</p> <p>9,785# @ 08 Feet 8,155# @ 10 Feet 6,355# @ 12 Feet 5,455# @ 14 Feet 4,555# @ 16 Feet 3,955# @ 18 Feet 3,535# @ 20 Feet 3,365# @ 20 Feet 8 Inches</p> <p>Note: All capacities are GROSS WEIGHTS, which include the weight of the bucket, and are based upon level, hard surfaces, with the stabilizers at their maximum extension.</p>		
2.83	“Boom over height” In-cab light and alarm.		
2.84	“Stabilizers down” In-cab light and alarm.		
2.85	Dual upper rear barn door strobe lights, amber.		
2.86	Dual upper rear barn door brake lights, red.		
2.87	All strobe lights.		
2.88	An integrated tool box approx. 18”x24”x96” shall be integrated in front of trash body. Frame or loader platform mounted tool boxes unacceptable. No exceptions.		
2.89	Body to be equipped with a DOT rear bumper. Rear bumper should not hit the ground when body is dumped to its fullest dump angle. CHEVRON-type striping to be applied to both sides, rear of body and completely across rear side of bumper. Color to be chosen by City of Knoxville.		

3. MINIMUM SPECIFICATIONS – TRAINING

Item Number	Description	Meet Specification?	Description/ Deviation
3.1	Minimum of eight (8) hours of operator orientation for safety, proper operation and operator daily maintenance.		
3.2	Minimum of eight (8) hours of technical and diagnostic orientation for mechanics/technicians.		

**City of Knoxville
Fleet Services
Heavy Duty Knuckleboom Loader,
Bulk Trash Body,
4WD Cab and Chassis**

Item Number	Description	Meet Specification?	Description/ Deviation
3.3	Training shall be conducted by a qualified Manufacturer's Representative at purchaser's location (Knoxville, Tennessee).		
3.4	Certificate of completion of orientation shall be provided for all operators who successfully complete the training.		
3.5	Winning bidder shall provide all diagnostic software. It shall be PC based and is to be the newest and most advanced version available. It shall include engine diagnostic software, body control diagnostic software, ABS diagnostic software. Any subscriptions to software shall be paid by winning bidder for a minimum of one year with the ability for the City to continue subscription. Any cables, USB interface, etc. required to use diagnostics shall also be provided.		

4. DELIVERY

Item Number	Description	Meet Specification?	Description/ Deviation
4.1	Vehicle shall be delivered complete, fully serviced, inspected for safety and safe operation, and ready to perform the work for which they are being purchased, with no less than 1/4 tank of fuel.		
4.2	Vehicle shall be serviced, inspected, and delivered from the successful bidders nearest service facility. Factory direct deliveries are not acceptable.		
4.3	<u>Delivery Location:</u> City of Knoxville Fleet Services 1400 Loraine St. Knoxville, TN 37921		
4.4	<u>Contact Information:</u> Contact Mr. Jeff Johnston to schedule delivery date and time. (865-951-3620)	NA	

**City of Knoxville
Fleet Services
Heavy Duty Knuckleboom Loader,
Bulk Trash Body,
4WD Cab and Chassis**

Documentation			
4.5	Winning bidder shall provide the manufacturer's statement of origin (MSO) when vehicle is delivered. The payment process will not begin until the vehicle is delivered, accepted and actual MSO has been received.		
4.6	The successful bidder shall supply two sets of operator's manuals, service manuals, parts books, wiring diagrams and applicable technical information for each machine purchased. CD versions are acceptable.		
4.7	Provide one "build sheet" per vehicle listing all parts used in assembling each vehicle. (If available)		
4.8	Provide manufacturer's on-line access to technical service bulletins, service information and recall notices throughout the service life of the vehicle.		
Miscellaneous			
4.9	No dealer emblems, decals, or other form of advertisement or identification shall be attached to the vehicle.		
4.10	Please state if a 12-month price lock would be honored to allow City of Knoxville to possibly purchase additional equipment.		

5. INVOICING

Mail or deliver invoice to:

City of Knoxville Fleet Services
Attn: Keri Collins
3409 Vice Mayor Jack Sharp Road
Knoxville, TN. 37914

**CITY OF KNOXVILLE
INVITATION TO BID**

KNUCKLEBOOM LOADER-4WD

Sealed bids, invited by the City of Knoxville, will be received by the Purchasing Agent of the City of Knoxville, in Room 667-674, City County Building; 400 Main Avenue; Knoxville, Tennessee, until 11:00:00 a.m. (Eastern Time) on May 4, 2017, at which time they will be opened and publicly read aloud and a contract awarded as soon thereafter as practicable.

BID SUBMISSION REQUIREMENTS

Bidders must furnish the following information in writing with their submission:

1. Bid Form showing bidder's name, address, quoted price, business license number, date of expiration of business license. A copy of the bidder's current business license may be submitted in lieu of providing the license expiration date.
2. Non-Collusion Affidavit
3. Iran Divestment Act Certification of Noninclusion
4. Option A or B from the Diversity Business Enterprise packet

INVITATION TO BID – INSTRUCTIONS AND CONDITIONS

1. Sealed bids will be received by the Purchasing Agent of the City of Knoxville in Room 667-674, City/County Building; 400 Main Avenue; Knoxville, Tennessee 37902 until May 4, 2017 at 11:00:00 a.m., at which time they will be publicly opened and read aloud and the contract awarded as soon as practicable. **No bid will be received or accepted after the above-specified time for the opening of bids.** Bids that arrive late due to the fault of U. S. Postal Service, United Parcel Service, DHL, FEDEX, any delivery/courier service, or any other carrier of any sort are still considered late and shall not be accepted by the City. Such bids shall remain unopened and will be returned to the submitting entity upon request.
2. The City of Knoxville reserves the right to reject any or all bids, to accept or reject any items thereon, to waive technicalities or informalities, to split orders if in the best interest of the City, to evaluate bids by various criteria, and to accept any bid which, in its opinion, may be for the best interest of the City.
3. Included in the Invitation to Bid is an affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this bid or any other bid. The Bidder will be required to execute and submit this affidavit with the sealed bid.
4. Each bid must be submitted in a sealed envelope, addressed to the Purchasing Agent, City of Knoxville, Room 667-674, City/County Building, 400 Main Street, Knoxville, Tennessee, 37902. Each sealed envelope containing a bid must be plainly marked on the outside as: "Knuckleboom Loader-4WD"
5. **NO CONTACT POLICY:** After the posting of this solicitation to the Purchasing Division's website, any contact initiated by any proposer with any City of Knoxville representative concerning this proposal

is strictly prohibited, unless such contact is made with the Purchasing Division representative listed herein or with said representative's authorization. Any unauthorized contact may cause the disqualification of the proposer from this procurement transaction.

6. **INCLEMENT WEATHER:** During periods of inclement weather, the Purchasing Division will enact the following procedures with regard to solicitations and weather delays:
 - If City offices are closed due to inclement weather on the date that bids/proposals/qualifications/letters of interest are due into the Purchasing Office, all solicitations due that same day will be moved to the next operational business day.
 - The City of Knoxville shall not be liable for any commercial carrier's decision regarding deliveries during inclement weather.
7. All bids must be made on the Bid Form supplied with the contract documents, and no interlineations, excisions, or special conditions shall be made or included in the Bid Evaluation Sheet by the Bidder. **Any bid on which there is an alteration of or departure from the Bid Form may be considered irregular and may be rejected.** All bids must be signed in full by the Bidder or Bidders in their business name or style when submitted and must show his or their complete address.
8. No bidder may withdraw his bid for a period of 60 days after the actual date of the opening thereof.
9. Prior to submitting their bids, bidders are to be registered with the Purchasing Division by setting up a Vendor Self-Service Account. Instructions for registering on-line are available at www.knoxvilletn.gov/purchasing.
10. **Bid submissions from un-registered bidders may be rejected.**
11. Payment for completed services delivered to and accepted by the City shall be at the contract price.
12. State makes or brand on each item. If quoting on other than the make, model, or brand specified, the manufacturer's name and catalog number must be given, along with warranty information and detailed specifications. Because the City is committed to environmentally sound practices, brands are expected to be procured with environmental responsibility in mind.
13. Time of delivery is part of the consideration and must be stated in definite terms; time of delivery is guaranteed by the bidder and must be adhered to upon award. If time varies on different items, the bidder shall so state.
14. All quotations must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
15. Samples of items, when required, must be furnished free of expense to the City and if not called for within fifteen (15) days from the date of bid opening, same will be disposed of in a manner deemed to be in the best interest of the City. Items shipped as a result of an Agreement to purchase (Purchase Order) must match the sample provided with Vendor's bid submission. The City of Knoxville will be the sole judge as to whether or not the shipped items match said supplied sample, and the City's decision will be final. Should shipped items not, in the City's judgment, be as represented by the sample provided, Vendor shall pay the City in full for all costs associated with returning shipped items to the Vendor. No restocking fee or other fees will be assessed against the City of Knoxville.
16. Bidders shall verify bids before submission, as bids cannot be withdrawn or corrected after being opened. Bids will be evaluated by unit price.

17. If federal excise tax applies, show amount of same and deduct. Bear in mind that the City is exempt from Tennessee sales tax.
18. Prices are considered FOB Knoxville unless otherwise stated in the Invitation to Bid.
19. By execution and delivery of a bid submission, the bidder agrees that any additional terms and conditions, whether submitted to the City purposely or inadvertently, shall have no force or effect.
20. Bidders must comply with the President's Executive Orders No. 11246 and 11375 which prohibit discrimination in employment regarding race, color, religion, sex or national origin. Bidders must not maintain or provide for their employees any facilities that are segregated on the basis of race, color, religion or national origin. Bidders must also comply with Title VI of the Civil Rights Act of 1964, Copeland Anti-Kick Back Act, the Contract Work Hours and Safety Standard Act, Section 402 of the Vietnam Veterans Adjustment Act of 1974 and Section 503 of the Rehabilitation Act of 1973, all of which are herein incorporated by reference.
21. All bidders must comply with Title VI of the Civil Rights Act of 1964, as codified in 42 U.S.C. 2000d. The successful bidder must follow Title VI guidelines in all areas including hiring practices, open facilities, insurance, and wages. The City of Knoxville reserves the right to review all compliance records by a contract compliance officer designated by the City.
22. No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Each request for such interpretation should be in writing addressed to **James Tucker, Senior Buyer** for the City of Knoxville, 400 Main Street, Room 667, Knoxville, TN 37902, or emailed to him at jtucker@knoxvilletn.gov. To be given consideration, such requests/questions must be received at least five (5) business days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted to the City's website at www.knoxvilletn.gov/purchasing. Submitting organizations are strongly encouraged to view this website often to see if addenda are posted. Failure of any bidder to receive such addendum or interpretation shall not relieve such Bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.
23. Attention of all bidders is directed to the set off provision contained in Article II, Section 24-33, entitled, "Debts owed by persons receiving payments other than salary", and Section 2-1049 entitled "Receipt of benefits from City contracts by council members, employees, and officers of the City" of the Code of the City of Knoxville.
24. Before a Purchase Order is issued, the submitting entity, if selected, **must** provide the City Purchasing Division with a copy of its valid business license **or** with an affidavit explaining why it is exempt from the business licensure requirements of the city or county in which it is headquartered. If a contract is signed, the contractor's business license shall be kept current throughout the duration of the contract, and the contractor shall inform the City of changes in its business name or location. Any Agreement to purchase resulting from this Invitation to Bid shall be governed by and construed in accordance with the substantive laws of the State of Tennessee and its conflict of laws provisions. Venue for any action arising between the City and the Vendor from the Agreement shall lie in Knox County, Tennessee.
25. In compliance with Tennessee state law, bids must be accompanied by a certification attesting that, to the best of the bidder's knowledge, the bidder does not engage in investment activities in Iran. The Iran Divestment Act of 2014 Certification of Noninclusion form may be found in this solicitation

document.

26. By acceptance and delivery of the Purchase Order resulting from the award of this Invitation to Bid, the Vendor agrees to the following:

Contractor shall defend, indemnify and hold harmless the City, its officers, employees and agents from any and all liabilities which may accrue against the City, its officers, employees and agents or any third party for any and all lawsuits, claims, demands, losses or damages alleged to have arisen from an act or omission of Contractor in performance of this Agreement or from Contractor's failure to perform this Agreement using ordinary care and skill, except where such injury, damage, or loss was caused by the sole negligence of the City, its agents or employees.

Contractor shall save, indemnify and hold the City harmless from the cost of the defense of any claim, demand, suit or cause of action made or brought against the City alleging liability referenced above, including, but not limited to, costs, fees, attorney fees, and other expenses of any kind whatsoever arising in connection with the defense of the City; and Contractor shall assume and take over the defense of the City in any such claim, demand, suit, or cause of action upon written notice and demand for same by the City. Contractor will have the right to defend the City with counsel of its choice that is satisfactory to the City, and the City will provide reasonable cooperation in the defense as Contractor may request. Contractor will not consent to the entry of any judgment or enter into any settlement with respect to an indemnified claim without the prior written consent of the City, such consent not to be unreasonably withheld or delayed. The City shall have the right to participate in the defense against the indemnified claims with counsel of its choice at its own expense.

Contractor shall save, indemnify and hold City harmless and pay judgments that shall be rendered in any such actions, suits, claims or demands against City alleging liability referenced above.

The indemnification and hold harmless provisions of this Agreement shall survive termination of the Agreement.

CITY OF KNOXVILLE

BID FORM

TO: Purchasing Agent
City of Knoxville
Suite 667-674
City/County Building
400 Main Street
Knoxville, TN 37902

Having carefully examined the specifications for the "Knuckleboom Loader-4WD" to open on May 4, 2017 at 11:00 a.m. and the other Contract Documents and addenda, we hereby propose to furnish the equipment as specified for the following sum:

BID: Total (includes shipping): _____

GUARANTEE of delivery no later than _____ days after the loader has been ordered.
(Bidder must initial) _____

Firm Name: _____

Official Address: _____

(By)

(Name Typed)

(Title)

Date _____

Terms _____

email address _____

Telephone _____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____

County of _____

_____, being first duly sworn, deposes and says that:

- (1) He is owner, partner, officer, representative, or agent of _____ , the Bidder that has submitted the attached Bid;
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bid nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, firm, or person to fix any overhead, profit, or cost element of the bid price or the bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Knoxville or any person interested in the proposed Contract; and
- (5) The price or prices quoted in that attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

Signed: _____

Title: _____

Subscribed and sworn to before me this ____ day of _____, 2____.

My commission expires: _____

IRAN DIVESTMENT ACT

Certification of Noninclusion

NOTICE: Pursuant to the Iran Divestment Act, Tenn. Code Ann. § 12-12-106 requires the State of Tennessee Chief Procurement Officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105. Inclusion on this list makes a person ineligible to contract with the state of Tennessee; if a person ceases its engagement in investment activities in Iran, it may be removed from the list. The State of Tennessee currently uses the State of South Carolina's list, available here:

[https://www.tn.gov/assets/entities/generalservices/cpo/attachments/List of persons pursuant to Tenn. Code Ann. 12-12-106, Iran Divestment Act-July.pdf](https://www.tn.gov/assets/entities/generalservices/cpo/attachments/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12-106_Iran_Divestment_Act-July.pdf)

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to T.C.A. § 12-12-106.

Vendor Name (Printed)	Address
By (Authorized Signature)	Date Executed
Printed Name and Title of Person Signing	

NOTARY PUBLIC:

Subscribed and sworn to before me this _____ day of _____, 2_____.

My commission expires: _____

DIVERSITY BUSINESS ENTERPRISE (DBE) PROGRAM

The City of Knoxville strongly encourages prime contractors to employ diverse businesses in the fulfillment of contracts/projects for the City of Knoxville.

The City of Knoxville's Fiscal Year 2017 goal is to conduct 3.33% of its business with minority-owned businesses, 9.21% of its business with women-owned businesses, and 45.5% with small businesses.

While the City cannot engage (pursuant to state law), in preferential bidding practices, the city does **strongly encourage** prime contractors to seek out and hire diverse businesses in order to help the city meet its goals as stated above. As such, the City encourages prime contractors to seek out and consider competitive sub-bids and quotations from diverse businesses.

For DBE tracking purposes, the City requests that prime contractors who are bidding, proposing, or submitting statements of qualifications record whether or not they plan to employ DBE's as sub-contractors or consultants. With that in mind, please fill out, sign and submit (with your bid/proposal) the following sub-contractor/consultant statement.

Subcontractor/Consultant Statement
(TO BE SUBMITTED IN THE BID/PROPOSAL ENVELOPE)

We _____ do certify that on the
(Bidder/Proposer Company Name)

_____ (Project Name)

(\$ _____)
(Amount of Bid)

Please select one:

Option A: Intent to subcontract using Diverse Businesses

A Diversity business will be employed as subcontractor(s), vendor(s), supplier(s), or professional service(s). The estimated **dollar value** of the amount that we plan to pay is:

\$ _____
Estimated Amount of Subcontracted Service

Diversity Business Enterprise Utilization			
Description of Work/Project	Amount	Diverse Classification (MOB, WOB, SB, SDOV)	Name of Diverse Business

Option B: Intent to perform work “without” using Diverse Businesses

We hereby certify that it is our intent to perform 100 % of the work required for the contract, work will be completed without subcontracting, or we plan to subcontract with non-Diverse companies.

DATE: _____ COMPANY NAME: _____

SUBMITTED BY: _____ TITLE: _____
(Authorized Representative)

ADDRESS: _____

CITY/STATE/ZIP CODE: _____

TELEPHONE NO: _____

CITY OF KNOXVILLE DIVERSITY BUSINESS DEFINITIONS

Diversity Business Enterprise (DBE's) are minority-owned (MOB), women-owned (WOB), service-disabled veteran-owned (SDVO), and small businesses (SB), who are impeded from normal entry into the economic mainstream because of past practices of discrimination based on race or ethnic background. These persons must own at least 51% of the entity and operate or control the business on a daily basis.

Minority: A person who is a citizen or lawful admitted permanent resident of the United States and who is a member of one (1) of the following groups:

- a. African American, persons having origins in any of the Black racial groups of Africa;
- b. Hispanic American, persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race;
- c. Native American, persons who have origin in any of the original peoples of North America ;
- d. Asian American, person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

Minority-owned business (MOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more minority individuals.

Woman-owned business (WOB) is a continuing, independent, for profit business that performs a commercially useful function, and is at least fifty-one percent (51%) owned and controlled by one (1) or more women.

Service Disabled Veteran-owned business (SDOV) is a continuing, independent, for profit business that performs a commercially useful function, owned by any person who served honorably on active duty in the armed forces of the United States with at least a twenty percent (20%) disability that is service connected. Meaning such disability was incurred or aggravated in the line of duty in the active military, naval or air service, and is at least fifty-one percent (51%) owned and controlled by one (1) or more service disabled veteran.

Small Business (SB) is a continuing, independent, for profit business which performs a commercially useful function and has total gross receipts of not more than ten million dollars (\$10,000,000) average over a three-year period or employs no more than ninety-nine (99) persons on a full-time basis.