

**CITY OF AUSTIN, TEXAS
PURCHASE SPECIFICATIONS
FOR
BRUSH LOADER BODY WITH CRANE AND GRAPPLE**

1. SCOPE AND CLASSIFICATION

- 1.1. It is the intent of these specifications to describe a body designed primarily for use as a hydraulic refuse loader and grapple machine. It shall be mounted behind the cab of a "City-owned" 2015 International 7500 SBA 6X4 60,000 GVW cab & chassis for loading of bulk waste into a body attached to the chassis. This specification shall be used in conjunction with the appropriate Bid Item Sheet.
- 1.2. To be used by the Watershed Department and Public Works Street & Bridge Department for the removal of brush.
- 1.3. The successful bidder is responsible for notifying the City if this chassis is deemed inadequate in any way. The successful bidder shall be fully responsible for furnishing a complete and fully operational unit even if something is omitted from this specification. All materials and workmanship, including things not specifically covered in this specification, shall conform to the character of the equipment and the purpose for which it is intended. All work shall be professionally and skillfully accomplished in accordance with the best trade customs and professional standards of work as generally recognized by trade standards.

~~2. FUNCTIONAL, PERFORMANCE, AND MATERIAL REQUIREMENTS FOR BRUSH BODY, CRANE, AND GRAPPLE FOR THE WATERSHED PROTECTION DEPARTMENT~~

~~2.1. CRANE: EPSILON S260L130 OR EQUIVALENT~~

~~2.1.1. CAPACITIES (Approximate)~~

~~Lifting Moment: 150,460 ft/lb
Capacity and Reach: 14,700 lb @ 10' — 9,800 lb @ 15'
7,290 lb @ 20' — 5,780 lb @ 25'
4,740 lb @ 30' — 4,020 lb @ 35'
3,490 lb @ 40'
Total Reach: 42' 8"
Rotation: 385 degrees
Weight: 6,520 lb
Crane Rating: Shall be at least EN 12999 H1/B4 rating (Proof of rating must be provided with bid)~~

~~Comply () / Comments _____~~

~~2.1.2. HYDRAULIC SYSTEM~~

- ~~2.1.2.1. All hydraulic components shall be compatible with at least 4,060 psi main relief pressure.~~
- ~~2.1.2.2. Pump: Tandem piston pump 2 X 24 gpm Rexroth A18FDO rated to 5,075 psi or equal.~~
- ~~2.1.2.3. Control Valve: Dual circuit Parker H170CF or equal.~~
- ~~2.1.2.4. Reservoir: At least 79 gallon capacity with breather/strainer cap, sight level gauge, pressure turn and suction filter.~~
- ~~2.1.2.5. Main Relief Pressure: At least 4,606 psi.~~

~~Comply () / Comments _____~~

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~~2.2. STRUCTURAL COMPONENTS~~

~~2.2.1. SLEWING SYSTEM~~

~~Solid double rack system running in an oil bath, with stroke dampening. Shall provide 385 degree rotation with 28,760 net ft/lb slewing torque.~~

~~Comply () / Comments _____~~

~~2.2.2. BOOM LINKAGE~~

~~Crane shall incorporate a linkage system between the main and outer boom to increase lift capacity and provide a near constant rate of movement for ease of control. Capacities shall remain constant from 0-10' elevation.~~

~~Comply () / Comments _____~~

~~2.2.3. EXTENSION SYSTEM~~

~~Extension cylinders, hoses, and pipes shall be located inside the boom tubes. No exposed hoses or piping on outer boom, rotator or grapple will be accepted. Boom shall be equipped with wear pads and adjustable guide blocks.~~

~~Comply () / Comments _____~~

~~2.2.4. CYLINDER PROTECTION~~

~~Main and outer boom cylinders shall be guarded to protect the cylinder rods from the load.~~

~~Comply () / Comments _____~~

~~2.2.5. BOOM EXTENSION MAINTENANCE~~

~~Hoses, pipes, and cylinder in the extension system shall be serviceable without dismantling the of the boom system.~~

~~Comply () / Comments _____~~

~~2.2.6. BEARINGS~~

~~All rotation points shall be equipped with bronze bushings with grease channels.~~

~~Comply () / Comments _____~~

~~2.2.7. STABILIZERS~~

~~H-frame design providing maximum stability and flexibility. Stabilizer leg shall have the capability of tilting to 45 degrees. Contracted length: 8' 6". Full width extended: 15' 4".~~

~~Comply () / Comments _____~~

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~~2.2.8. LOAD HOLDING VALVES~~

~~Main, outer, and extension cylinders shall be equipped with load holding valves.~~

~~Comply () / Comments _____~~

~~2.2.9. BOOM PROTECTOR AND ELECTRICAL INSULATORS~~

~~A boom protector fabricated from 3/4" steel tubing shall be mounted on boom to provide safety protection from electrical wires and trees. It shall measure approximately 60" long by 24" in diameter, with cross rods every 12". Electrical insulators shall be positioned between the boom and the boom protector.~~

~~Comply () / Comments _____~~

~~2.2.10. BOOM DIMENSIONS~~

~~Main: 22' 4" from centerline of rotation. Outer: 14' 7". Extension: 5' 7".~~

~~Comply () / Comments _____~~

~~2.3. CRANE CONTROLS~~

~~2.3.1. LOCATION AND DESIGN~~

~~Crane shall be equipped with top seat controls utilizing two joysticks and two foot pedals. Adjustable seat shall have a contact switch to prevent crane operation without the operator being seated. Controls shall activate lights, heated seat, engine start/stop, raise/lower rpm, horn, emergency stop, additional free switch, Hourmeter, and service indicator.~~

~~Comply () / Comments _____~~

~~2.3.2. LIGHTING~~

~~Four halogen lights shall be mounted on the boom, two at the control panel, and two on the outer boom. All lights shall be protected by steel guards.~~

~~Comply () / Comments _____~~

~~2.4. GRAPPLE: PRENTICE 42 SW HEAVY DUTY REFUSE GRAPPLE OR EQUIVALENT~~

~~Jaw Width Closed — 42"
Overall Height Closed — 50"
Overall Height Fully Open — 38"
Maximum Jaw Opening — 58.75"~~

~~Comply () / Comments _____~~

~~2.5. DUMP BED BODY~~

~~2.5.1. All steel extra heavy duty dump bed body 20' long x 8' wide.~~

~~2.5.2. Three inch tall crossmembers every twelve (12) inches.~~

~~2.5.3. 1/4" smooth plate steel deck welded to cross members.~~

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- ~~2.5.4. Super heavy-duty 60" high headboard behind the cab, with 60" high sides. Sides shall be 10-gauge smooth steel.~~
- ~~2.5.5. Rear door shall include an integrated grapple resting cradle. Door shall open using a single handle secured by a safety chain.~~
- ~~2.5.6. 3"x 5" uprights with drain holes shall be welded to the steel plate sides on 20" centers.~~
- ~~2.5.7. All body parts are welded into one integral unit.~~
- ~~2.5.8. Twin cylinder NTEA class "G" 70 ton hoist shall be installed. Hoist shall not add to the height of the dump body. Controls shall be in cab, within easy reach of the operator.~~
- ~~2.5.9. Dump body control must be interlocked with crane controls, preventing operation of the body when the crane is energized.~~
- ~~2.5.10. Two 24" high x 48" long all steel underbody tool boxes with drop down doors and heavy duty chains stays will be installed.~~
- ~~2.5.11. Install one 5-gallon water keg and holder on the curbside of unit.~~
- ~~2.5.12. Install two post type cone holders, located behind the rear wheels.~~
- ~~2.5.13. A tarp tie-down bar will be installed along the full length of the body.~~
- ~~2.5.14. All required FMVSS lighting shall be rubber mounted, and LED type.~~
- ~~2.5.15. Dump body shall be primed and painted inside and out. Underside of dump body shall be undercoated.~~

Comply () / Comments _____

3. FUNCTIONAL, PERFORMANCE, AND MATERIAL REQUIREMENTS FOR BRUSH BODY, CRANE, AND GRAPPLE FOR THE PUBLIC WORKS STREET & BRIDGE DEPARTMENT

3.1. CRANE: EPSILON M110L80 or EQUIVALENT

3.1.1. CAPACITIES (Approximate)

Lifting Moment:	79,660 ft/lb
Capacity and Reach:	7,810 lb @ 10' – 5,160 lb @ 15' 3,840 lb @ 20' – 3,010 lb @ 25'
Total Reach:	26' 2"
Rotation:	425 degrees
Weight:	4,450 lb
Crane Rating:	Shall be at least EN 12999 H1/B4 rating (Proof of rating must be provided with bid)

Comply () / Comments _____

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3.1.2. HYDRAULIC SYSTEM

- 3.1.2.1. All hydraulic components shall be compatible with at least 3,410 psi main relief pressure.
- 3.1.2.2. Pump: Tandem piston pump 2 X 18 gpm Parker F2-53/53 rated to 5,075 psi or equal.
- 3.1.2.3. Control Valve: Dual circuit Parker H130CF or equal.
- 3.1.2.4. Reservoir: At least 53 gallon capacity with breather/strainer cap, sight level gauge, pressure turn and suction filter.
- 3.1.2.5. Main Relief Pressure: At least 3,410 psi.

Comply () / Comments _____

3.2. STRUCTURAL COMPONENTS

3.2.1. SLEWING SYSTEM

Solid double rack system running in an oil bath, with stroke dampening. Shall provide 425 degree rotation with 19,910 net ft/lb slewing torque.

Comply () / Comments _____

3.2.2. BOOM LINKAGE

Crane shall incorporate a linkage system between the main and outer boom to increase lift capacity and provide a near constant rate of movement for ease of control. Capacities shall remain constant from 0-10' elevation.

Comply () / Comments _____

3.2.3. EXTENSION SYSTEM

Extension cylinders, hoses, and pipes shall be located inside the boom tubes. No exposed hoses or piping on outer boom, rotator or grapple will be accepted. Boom shall be equipped with wear pads and adjustable guide blocks.

Comply () / Comments _____

3.2.4. CYLINDER PROTECTION

Main and outer boom cylinders shall be guarded to protect the cylinder rods from the load.

Comply () / Comments _____

3.2.5. BOOM EXTENSION MAINTENANCE

Hoses, pipes, and cylinder in the extension system shall be serviceable without dismantling the of the boom system.

Comply () / Comments _____

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3.2.6. BEARINGS

All rotation points shall be equipped with bronze bushings with grease channels.

Comply () / Comments _____

3.2.7. STABILIZERS

H-frame design providing maximum stability and flexibility. Stabilizer leg shall have the capability of tilting to 45 degrees. Contracted length: 8' 6". Full width extended: 12' 8".

Comply () / Comments _____

3.2.8. LOAD HOLDING VALVES

Main, outer, and extension cylinders shall be equipped with load holding valves.

Comply () / Comments _____

3.2.9. BOOM PROTECTOR AND ELECTRICAL INSULATORS

A boom protector fabricated from ¾" steel tubing shall be mounted on boom to provide safety protection from electrical wires and trees. It shall measure approximately 60" long by 24" in diameter, with cross rods every 12". Electrical insulators shall be positioned between the boom and the boom protector.

Comply () / Comments _____

3.2.10. BOOM DIMENSIONS

Main: 12' 8" from centerline of rotation. Outer: 8' 4". Extension: 5' 2".

Comply () / Comments _____

3.3. CRANE CONTROLS

3.3.1. LOCATION AND DESIGN

Crane shall be equipped with top seat controls utilizing two joysticks and two foot pedals. Adjustable seat shall have a contact switch to prevent crane operation without the operator being seated. Controls shall activate lights, heated seat, engine start/stop, raise/lower rpm, horn, emergency stop, additional free switch, Hourmeter, and service indicator.

Comply () / Comments _____

3.3.2. LIGHTING

Four halogen lights shall be mounted on the boom, two at the control panel, and two on the outer boom. All lights shall be protected by steel guards

Comply () / Comments _____

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3.4. GRAPPLE: PRENTICE 42 SW HEAVY DUTY REFUSE GRAPPLE or EQUIVALENT

Jaw Width Closed – 42”
Overall Height Closed – 50”
Overall Height Fully Open – 38”
Maximum Jaw Opening – 58.75”

Comply () / Comments _____

3.5. DUMP BED BODY

- 3.5.1. All steel extra heavy-duty dump bed body 18' long x 8' wide.
- 3.5.2. Three inch tall crossmembers every twelve (12) inches.
- 3.5.3. ¼” smooth plate steel deck welded to cross members.
- 3.5.4. Super heavy-duty 51” high headboard behind the cab, with 51” high sides. Sides shall be 10 gauge smooth steel.
- 3.5.5. Rear door shall open using a single handle secured by a safety chain.
- 3.5.6. 3”x 5” uprights with drain holes shall be welded to the steel plate sides on 20” centers.
- 3.5.7. All body parts are welded into one integral unit.
- 3.5.8. Twin cylinder NTEA class “G” 70 ton hoist shall be installed. Hoist shall not add to the height of the dump body. Controls shall be in cab, within easy reach of the operator.
- 3.5.9. Dump body control must be interlocked with crane controls, preventing operation of the body when the crane is energized.
- 3.5.10. Two 24” high x 48” long all steel underbody tool boxes with drop down doors and heavy duty chains stays will be installed.
- 3.5.11. Install one 5 gallon water keg and holder on the curbside of unit.
- 3.5.12. Install two post type cone holders, located behind the rear wheels.
- 3.5.13. A tarp tie-down bar will be installed along the full length of the body.
- 3.5.14. All required FMVSS lighting shall be rubber mounted, and LED type.
- 3.5.15. Dump body shall be primed and painted inside and out. Underside of dump body shall be undercoated.

Comply () / Comments _____

4. SAFETY REQUIREMENTS

Selling dealer shall be responsible for compliance with all Federal, OSHA, and State of Texas safety standards, regulations, and laws that apply to this type of equipment.

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5. MANUFACTURER'S STATEMENT OF ORIGIN (MSO) AND INVOICING

An MSO and an original invoice to the unit(s) shall be provided at the time of delivery for each unit supplied. Unit(s) will not be accepted without these documents. NO EXCEPTIONS.

6. MANUALS

Concurrent with delivery of equipment ordered, the items listed below shall be supplied for each different type and size of vehicle, body, or item of equipment supplied. This includes the basic item as well as all accessory equipment installed. All of these manuals must be current, and must be furnished with the item(s) being delivered. Final and complete acceptance will not be made until all items listed are supplied, however, if the item is partially accepted, 5% of the unit bid price, but not less than \$500.00, will be withheld until all items bid are received.

- 6.1. Operator's Manuals – **Required** – Two (2) copies of manufacturer's standard operator's manual for each unit.
- 6.2. Parts Manuals – **Required** – Two (2) copies of manufacturer's standard parts manual for each unit.
- 6.3. Maintenance and Overhaul (Shop) Manuals - **Required** - Two (2) copies for each unit. These manuals shall provide complete lubricating and servicing instructions normally not expected of the operator, plus complete maintenance and overhaul instructions required for shop disassembly, inspection, repair, rework, testing, and reinstallation, and shall provide information on limits, tolerances, and torque values. Normally, these shall also include fully illustrated parts break-downs for all parts and components. Complete detailed schematics, drawings, and blueprints for all air, electrical, and hydraulic systems are required.

7. TRAINING REQUIREMENTS

- 7.1. Operator Training – **Required** – Shall be conducted by qualified instructors, for personnel assigned to operate this equipment. Such training shall be designed to instruct qualified City personnel in proper operating techniques and operator level maintenance, such as daily lubrication, inspections, fluid checks, adjustments, etc. The duration and type of operator training required may vary according to the type and complexity of the item specified. However, normally a briefing at the unit delivered, by a person fully qualified to operate that particular model machine, should suffice. Please state the duration and type of training to be conducted. State price per hour on Bid Sheet, Section 0600.

Comply () / Comments _____

- 7.2. Limited Maintenance Training - **Required** - This training shall be conducted by a factory service representative, maintenance technician, or sales person that is fully qualified and thoroughly familiar with the equipment being purchased, for automotive or heavy equipment mechanics assigned to maintain this equipment. Emphasis shall be on proper servicing and lubrication procedures, preventive maintenance, inspection, troubleshooting, disassembly, repair, and reassembly of major components of the unit supplied. The duration and type of training may vary according to the complexity of the equipment, and the familiarity of City personnel with such equipment. This training shall consist of a briefing at the equipment, and shall include a question and answer period. State exactly how the training will be accomplished, by whom, and estimated duration. State price per hour on Bid Sheet, Section 0600.

Comply () / Comments _____

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8. SAMPLES, INSPECTION, AND TEST REQUIREMENTS

- 8.1. Each unit shall be completely assembled, adjusted, serviced, clean, and ready for continuous heavy duty service. Servicing, adjustment, assembly, etc., shall be to the satisfaction of the City of Austin.
- 8.2. In addition, a thorough condition and specification compliance inspection shall be conducted by the supplier on each unit prior to delivery.
- 8.3. Upon receipt, each unit shall be inspected for condition and specification compliance by a City representative, prior to acceptance. If a unit is rejected for any reason, the selling dealer shall be required to pick up the unit at the point of delivery, accomplish necessary repairs, and return the unit to the original point of delivery. If desired, and if space is available, the repairs may be accomplished on City property. This will be at the discretion of the City of Austin.
- 8.4. All requests for approval of changes to the specification after construction has begun shall be directed only to the Manager of Fleet Acquisition, Finance and Administrative Services Department.
- 8.5. All materials and workmanship, including those things not specifically covered in this specification, shall conform to the character of the equipment, and purpose for which it is intended and work shall be professionally and skillfully accomplished in accordance with the best trade customs and professional standards of work, as generally recognized by trade standards.

9. LITERATURE REQUIREMENTS

Manufacturer's descriptive literature and drawings are **required** with each bid submitted.

10. DELIVERY REQUIREMENTS

Each unit shall be delivered to a place in Austin, Texas, designated by the City of Austin. The vendor shall notify the City before making delivery. Delivery **includes off-loading**. **Note:** The City does **not** have an off-loading ramp or equipment such as forklifts, cranes, etc., available for off-loading of new equipment.

11. WARRANTY REQUIREMENTS

Bidder is in agreement with the City's warranty terms as stated in the attached Section 0400 (IFB) Supplemental Purchase Provisions, Paragraph 6.

Please mark the appropriate line and sign below. Yes No

Authorized Signature