



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: 06/01/2017 PAGE 1 OF 1

DOCUMENT NUMBER: **445661**

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 06/16/2017 11:00:00 AM

ENVELOPE TO BE SEALED AND MARKED: **BRUSH COLLECTION EQUIPMENT**

Special Instructions:
 The equipment will be delivered to 1400 Loraine Street, Knoxville, TN. Direct all questions to jtucker@knoxvilletn.gov.

No.	Quantity	Description	Brand	Unit	Unit Price	Total	Applicable Discount
1	1 Each	Eleven (11) zip-on/zip-off custom flatbeds and knucklebooms, per attached bid specifications.					

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
INVITATION TO BID**

BRUSH COLLECTION EQUIPMENT

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 June 16, 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 June 16, 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: "Brush Collection Equipment"
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 "Brush Collection Equipment" to open on June 16, 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): _____/ea

GUARANTEE of delivery of prototype no later than _____ days after receiving the order.
(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 creditable 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.

City of Knoxville
Fleet Services
Flatbed, Boom, Plow

Background

It is the intent of these specifications to describe a 10' custom flatbed truck body with 50 ton, swivel-type rear pintle hook and receiver plate with an 18' detachable knuckleboom loader designed for the collection of brush, limbs, leaves, and other items picked up by the City of Knoxville Public Service Department. Also being requested is a Buyers brand 10' x 36' municipal snow plow or approved equal. Plow is to be installed on the truck. The chassis' have been pre-ordered and will be delivered directly to the winner of this bid to upfit as specified to achieve the goal of a turn-key final product. The loader shall be designed to safely load material into an attached trailer or an adjacent container and shall utilize a 10' main boom, 8' tip boom and rotating trash bucket to lift and load material. The detachable loader assembly shall also contain a two-way adjustable stabilizer assembly. The flatbed body shall have hydraulics available to a dump trailer (for use with or without the knuckleboom loader attached) and will have hydraulics available to other flatbed-mounted components used by the City of Knoxville (salt spreader, pothole patcher, etc.). This is referred to as a "zip-on, zip-off" system. Components need ability to be switched out within a 2 hour time frame.

Once the winning bidder is determined, then a pre-build meeting will be required between the City, the chassis vendor, at the time, place, and location of the City's choosing.

The chassis(s) will be delivered to the winning bidder's location as soon as they are built so bidders must be able to safely and securely accommodate the number of vehicles being requested in this bid at their location. The chassis model is a Freightliner 108SD. Once the first chassis arrives at the winning bidder's location, the City requests a single prototype/finished truck be delivered to the City of Knoxville location to approve before any additional trucks are assembled. Additionally, if the functionality of the prototype is not accepted by the City, as the type of equipment that meets the City's needs, then the City reserves the right to move to the next most responsive – low cost bidder for their prototype and subsequent purchases. In such an instance, the City would pay a fair and reasonable cost to the bidder for the un-accepted prototype.

The prototype must be delivered no later than 180 calendar days from the date that the successful bidder receives the chassis from the City. Time is of the essence due to the critical need of this equipment for City operations. As such, if the prototype is not delivered within the agreed to 180 days, then the City has the option to charge liquidated damages in the amount of \$250 per day for each day that the prototype is not delivered.

Bidders will be able to view the City-owned zip-on, zip-off equipment that will be mounted on the flatbed, if requested, by appointment.

The bidder shall address each of the bidding specifications listed in the subsequent pages in the space provided, indicating whether they meet or do not meet each specification. Additionally, bidders are to describe/clarify the proposed item or any deviation to each specification. These pages are to be included in the Bid Response.

**City of Knoxville
Fleet Services
Flatbed, Boom, Plow**

Bidders will be considered non-responsive if they do not state whether or not they meet each specification in the foregoing pages and describe their deviation(s) from the specifications, if any. Additionally, bidders are hereby advised that the City does not plan to accept deviations from the specifications listed in section 5.1 (boom length), 5.2 (tensile strength), and 5.5 (single boom design). Moreover, the City will not consider bids that do not provide the “zip-on/zip-off” functionality. Bidders who do not meet or exceed these specifications will be considered as non-responsive and their bids may be rejected..

1. SPECIFICATIONS – GENERAL

Item Number	Description	Meet Specification ?	Description/ Deviation
1.1	Unit(s) shall be in current production and current year model and shall include all components normally supplied by the manufacturer with the unit bid.		
1.2	Unit(s) being bid shall be supported for maintenance by a Dealer located within the City of Knoxville or one of the surrounding counties therein. Dealer shall have trained technicians and parts stock on hand to provide maintenance of “normal wear” items in a timely manner.		

2. FLATBED

Item Number	Description	Meet Specification ?	Description/ Deviation
2.1	The flatbed truck body shall have a 1” thick A-36 steel plate resting on top of the truck frame rails, extending from the end of the frame rails forward approximately 5 feet. This plate will have holes drilled to accept 1 1/8” diameter bolts for anchoring the detachable knuckleboom loader and other detachable equipment used by the City.		
2.2	This plate will be anchored to the chassis rails by 1/2” thick plate/flat bar welded and gusseted to the 1” plate and fastened to the frame rails with 20mm Huck fasteners (minimum of 5 per side). Attachment with tie-bolts is not acceptable.		
2.3	Forward of the 1” plate will be 4” tall tubular longsills. On top of the longsills and continuing rearward over the sides outboard of the 1” plate, 4” X 5.4# channel crossmembers will be utilized.		
2.4	The top of the flatbed will be covered with 3/16” steel diamond floorplate finished with a non-slip Linex (or equal) type coating.		

**City of Knoxville
Fleet Services
Flatbed, Boom, Plow**

Item Number	Description	Meet Specification ?	Description/ Deviation
2.5	A recessed area will be provided in the center of the flatbed, ahead of the horizontal 1" plate, for location of the hydraulic and electrical connections for the knuckleboom loader and other detachable equipment used by the City.		
2.6	A tubular framed cab-protective headboard will be provided. The lower portion will be covered with 11 gauge steel diamond floor sheet and the upper section covered with steel expanded metal to allow visibility from the rear cab window.		
2.7	A 1" thick steel plate will be vertically located at the rear of the truck frame and welded to both the frame rails and the 1" horizontal plate. This plate will have a swivel-type pintle hook and 2 safety chain "D" rings attached and will have a cut-out for recessed rear hydraulic quick couplers.		
2.8	The flatbed will have an access ladder at the left hand front corner and will have detachable hand rails for installation when the knuckleboom loader and other detachable equipment used by the City is attached.		
2.9	The flatbed will have LED lighting as needed to comply with FMVSS requirements plus LED stop/turn and LED amber strobe lights at the top in the headboard. Additional lighting will be attached to the knuckleboom stabilizer assembly to insure compliance with FMVSS lighting requirements when the loader is attached.		
2.10	A toolbox shall be mounted on RH side up under bed. Toolbox shall be as large as can be accommodated in the space.		
2.11	Bed step: Left front corner cut out to accommodate 2 steps, minimum of 4" wide, covered with extruded steel for non-slip surface, level with cab steps and handholds for operator ease of access and to allow operator to move from cab of truck to bed without stepping down.		
2.12	LED lightstick (Star Warning Systems part #DL1530WAW) behind grill		
2.13	Grapple travel rack installed on back of bed to match City of Knoxville's current zip on-zip off equipment.		

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Flatbed, Boom, Plow**

3. HYDRAULICS

All bidders must provide a detailed hydraulic schematic with bid. If schematic is not included, bid will be considered non-compliant.

NOTE TO BIDDERS: Hydraulic fluid in system shall be purchased from Certified Labs p/n HOCExtreme46. This allows compatibility with current fluid being used by City Fleet Services and prevent cross-contamination.

For informational purposes, below are the hydraulic specifications for the interchangeable City owned equipment:

- Dump Trailers: 15 gpm@2000 psi
- Salt Spreaders: 18 gpm@2000 psi
- Asphalt Patchers: 7 gpm@2000 psi

Item Number	Description	Meet Specification?	Description/ Deviation
3.1	The hydraulic pump will be driven from a clutch shift power take off (PTO).		
3.2	The hydraulic pump will be cast iron housing, roller bearing design, and directly coupled to the PTO with a 1"-15T splined shaft.		
3.3	A single valve assembly will be located on the truck unit to provide safety relief of hydraulic pressure and to direct hydraulic flow from the pump to either the grapple well hydraulic pressure line coupler (grapple) or to the rear hydraulic pressure line coupler (trailer, pothole patcher, salt spreader). This valve will also control the flow rate of hydraulic oil available to various functions.		
3.4	Controls for the PTO/hydraulics will be located in the truck cab. Two modes of operation will be available (stationary and mobile). All controls shall utilize the 6 factory upfitter switches,		
3.5	"Stationary mode" directs full flow of the hydraulic pump to the selected pressure coupler, but with PTO engaged truck is limited to 10mph if the engine speed exceeds 1400 RPM. Oil flow to the grapple hydraulic coupler will only be available in "stationary mode".		
3.6	In "mobile mode", only a portion of the pump flow is available to the rear hydraulic pressure line coupler but the PTO will remain engaged while the truck is travelling at 40mph (salt spreader operation). In "mobile mode", the hydraulic flow may be turned on and off while either still or traveling without shifting the PTO on and off (stop and start spreader operation at any time).		

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Fleet Services
Flatbed, Boom, Plow**

Item Number	Description	Meet Specification?	Description/ Deviation
3.7	Shall have a 50 gallon steel, frame mounted hydraulic reservoir with side mounted sight glass.		
3.8	A drop-in style return line filter assembly will be mounted on top of the reservoir. The drop-in element will be maximum 10 micron, synthetic media and high capacity.		
3.9	A 100 mesh in-tank suction strainer with bypass will be provided.		
3.10	A raised-neck bayonet style filler/breather cap with anti-splash provision will be installed on top of the hydraulic reservoir.		
3.11	A hydraulic cooler shall be installed on the return side with thermostatic controlled electric fan to increase air flow.		

4. TURRET

Item Number	Description	Meet Specification?	Description/ Deviation
4.1	The turret base will be welded and gusseted to a 1" thick bottom plate. This bottom plate will have drilled holes allowing for bolt on attachment to the 1" horizontal plate of the flatbed.		
4.2	The lower turret base plate is machined to a minimum of 1-3/16" thickness.		
4.3	The turret rotates on a heavy duty, minimum 26" diameter slewing ring bearing with gear teeth cut on the internal bearing ring, thus protecting the drive mechanism from the elements.		
4.4	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 at least 150,000 in-lbs.		
4.5	The hydraulic motor is equipped with integral, non-adjustable, cross port relief valves to protect the unit from shock loading while rotating the turret.		
4.6	Turret rotation shall be limited to 270° by means of positive mechanical stops to prevent loader operation over the truck cab.		
4.7	The upper turret base plate is 30" in diameter, and 1" thick after machining.		
4.8	The turret side plates are constructed of ½" plate, and the turret back is constructed of ½" plate.		

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5.11	The tip boom side plates shall be ½” thick, welded to both sides of the boom with 3” OD x 2” ID DOM tubing pin bosses.		
5.12	All boom pivot points are equipped with replaceable 2” ID bronze or hardened steel bushings with a lubrication provision.		
5.13	“Boom over height” in-cab light and alarm		

6. BUCKET

Number	Description	Meet Specification?	Description/ Deviation
6.1	The bucket shall be heavy duty construction, 48” long, measuring 60” from side to side when fully opened.		
6.2	Ground clearance at the center of the bucket shall be 20” – 24” when it is fully opened, and resting on level ground.		
6.3	Rotation of the bucket is accomplished with a hydraulic rotator motor allowing 360° continuous rotation.		
6.4	The bucket shall be opened and closed via (2) hydraulic cylinders. The hydraulic oil lines to the cylinders will be routed through an integral swivel joint in the bucket rotator motor, allowing continuous rotation without hose damage. Includes ¼” bolt-on bucket cylinder covers.		
6.5	The bucket top plate shall be constructed of ¾” plate. The bucket tongs are constructed of 3/8” plate with a 3/8” x 3” bolt-on, reversible, replaceable edge strip.		
6.6	The bucket tongs shall form a reverse curve to help avoid scalping and digging on grass lawns.		
6.7	The bucket shall contain (8) tongs – 4 per side. The bucket sides are constructed of 7 gauge steel.		

7. STABILIZERS

Number	Description	Meet Specification?	Description/ Deviation
7.1	The loader shall be equipped with 2-way adjustable hydraulic stabilizers. Each side will have independent controls for the in/out and up/down adjustment inside cab.		
7.2	The outer stabilizer cross tube and vertical tubes are constructed of a minimum 7” x 7” x 3/8”		

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Number	Description	Meet Specification?	Description/ Deviation
7.3	The inner stabilizer cross tubes and vertical tubes are constructed of a minimum 6" x 6" x 3/8"		
7.4	The stabilizer footpads will be 3/4" thick steel, ((2) 3/8" plates) - overall dimension - 10" x 11", connected to the pad brackets by a single 1" Grade 8 bolt/lock nut.		
7.5	The stabilizer vertical tubes are equipped with a powder coated housing containing two 6-LED strobing lights. Both sets of lights are wired to the same in-cab switch.		
7.6	"Stabilizers down" in-cab light and alarm		

8. KNUCKLEBOOM HYDRAULICS

Number	Description	Meet Specification?	Description/ Deviation
8.1	Main boom cylinder is min. 5" bore X 4" shaft X 34" stroke.		
8.2	Tip boom cylinder is 4 1/2" bore X 2 1/2" shaft X 32" stroke.		
8.3	Stabilizer in/out cylinders are (2) 3" bore X 1 1/2" shaft X 7" stroke.		
8.4	Control valve is open center with a main relief valve set at 2,150 psi.		
8.5	Dual "float" valves will be provided to allow turret swing and main boom up/down functions to "float" when the bucket is stowed in an attached dump trailer.		
8.6	Counter balance valves are installed on the main boom circuit and tip boom cylinder to prevent free fall in case of a hydraulic failure.		
8.7	The vertical stabilizer cylinders utilize dual pilot-operated check valves, preventing unwanted movement in the event of a hose failure and minimizing drift down of the stabilizers when the unit is parked for extended periods.		
8.8	All hydraulic hoses shall be 2-wire braided hoses, with an abrasion resistant jacket, rated at 4,000 psi working pressure (with exception of the pump suction hose which is of SAE100R4 construction). All hoses from valve to truck bed must be routed through the center of the pedestal.		
8.9	Must have a diverter valve to divert hydraulic oil from loader controls to dump trailer controls and quick couplers for hydraulic lines. All couplers shall be Dixon Hydraulic Couplers, part #s are: Truck: 6HF6 (female) H6F6 (male) Boom: 4AGF4-PV (female) AG4F4-PV (male) Relief for rotator: 3KF3 (female) K3F3 (male)		

9. CONTROLS

Number	Description	Meet Specification?	Description/ Deviation
9.1	The loader is equipped with dual “stand-up” operator stations with air joystick controls.		
9.2	The air joystick controls for loader functions shall be located at both control stations and shall be connected to a single valve bank via the control rod linkages. Stabilizer controls are located in the center between the 2 operator stations.		
9.3	The air joystick control locations are the same on both sides of the unit for operator convenience.		
9.4	The dual “float” valves will be located in the center, accessible to both operator stations.		
9.5	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 zinc plated for corrosion resistance.		
9.6	The valve bank is located inside pedestal for operator safety and ease of maintenance by allowing access to the valves for service.		
9.7	The following control functions are located at both operator’s stations: Throttle Advance: On/Off Bucket: Open/Close Bucket Rotation: CW / CCW Turret Swing: CW / CCW Tip Boom: Retract / Extend Main Boom: Lower / Raise		
9.8	The following control functions are located in the center between the two control stations: Driver Side Outrigger: In / Out Passenger Side Outrigger: In / Out Driver Side Outrigger: Up / Down Passenger Side Outrigger: Up/Down		

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10. MOUNTING AND PAINTING

Number	Description	Meet Specification?	Description/ Deviation
10.1	Mounting to be done at the factory by certified, body-mount specialists.		
10.2	Any chassis sent to the factory that does not meet the minimum chassis requirements will not be mounted.		
10.3	The loader will receive one coat of an automotive-grade, 2-part epoxy primer, followed by (2) coats of Sherwin Williams automotive-grade acrylic urethane finished paint. Paint color to be WHITE. The underside of the body floor will be coated with Autobody Technologies, Inc. TRANSTAR TR4361 Quick Dry Rubberized undercoating or equal type coating.		
10.4	Top of body floor shall be coated with non-skid black Linex coating or similar.		

11. SPECIFICATIONS – LOADER LIFTING CAPACITIES

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.

Remember: do not exceed 85% of vehicle tipping movement.

Number	Description	Meet Specification?	Description/ Deviation
11.1	The loader lifting capacities are approx.: 9,785# @ 08 Feet 8,155# @ 10 Feet 6,355# @ 12 Feet 5,455# @ 14 Feet 4,555# @ 16 Feet 3,955# @ 18 Feet		

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12. PLOW

Buyers SnowDogg "Muni Series" Reversible 10' Snow Plow or approved equal

Number	Description	Meet Specification?	Description/ Deviation
Minimum Moldboard Requirements:			
12.1	Quick mount level lift design to allow continuous level lift in any position		
12.2	Height of moldboard is 36"		
12.3	Length of moldboard is 10'		
12.4	12" integral shield moldboard		
12.5	Cutting path at 35degrees for the 10' length is 104"		
12.6	Unit shall consist of twin hydraulic reversing cylinders, rolled steel fully welded moldboard.		
12.7	10GA steel rolled moldboard with six (6) ½"x3" rolled ribs		
12.8	Each rib to be reinforced with a 1 ¼" steel bushing at each pivot point		
12.9	Trip stop at every rib to evenly space out trip force		
12.10	3" x 3" x ½" bottom angle with ½" x 3" gussets every 12"		
12.11	80" semi-circle to be 3-1/2" x 3-1/2" x ½" angle		
12.12	Top angle to have drain holes to allow moisture to escape		
12.13	Full length 3" x 3" x 3/8" structural channel horizontal braces for added rigidity		
12.14	Three (3) position attack angle adjustable to 5degrees, to 20degrees		
12.15	½" x 6" one piece powder coated cutting edge with standard punching		
Trip Assembly and Push Frame:			
12.16	Full moldboard trip with two (2) adjustable, external compression springs		
12.17	5/8" trip-spring anchor plates are continuous welded to the push frame providing greater strength		
12.18	3 ½" x 3 ½" x 5/16" x 96" structural steel tube push frame, two (2) ½" thick adjustable height running gear mounts, and two (2) ½" thick lift chain mounts		
12.19	Semi-circle is 3-1/2" x 3-1/2" x ½" angle welded to the push frame		

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Number	Description	Meet Specification?	Description/ Deviation
12.20	Four (4) moldboard-to-push frame pivot points with 1-1/4" bushings pinned to two 5/8" mounting ears with 1-1/4" plated pivot pins		
12.21	Twin 3" x 10" chrome plated hydraulic cylinders for heavy duty power reversing. Twin reversing cylinders to be located above the push frame to protect against road debris and ease of service.		
12.22	Plow-mounted adjustable cushion valve plumbed to cylinders. Valve to be adjustable (set at 2000psi), 10gpm and to have 1/2" SEA threads		
12.23	3 1/2" x 3 1/2" x 3/8" formed channel "A" frame supporting a 1-1/2" center reversing king pin mounted in a 2-1/4" tube with a 3/8" wall with grease fitting		
12.24	A-frame to be welded to a 1" x 5" x 33" base plate with a 1-1/2" pivot hole		
Paint:			
12.25	All metal surfaces to be SANDBLASTED to remove slag, splatter, oxide, and oil residue		
12.26	All surfaces to be high-pressure cleaned and degreased with phosphate solution. Moldboard is to be powdercoated orange. Push frame assembly and hitch components to be powdercoated black.		
Additional:			
12.27	5/8" wraparound curb guard		
12.28	12" x 3/8" 2-ply rubber deflector (belted) with mounting hardware		
12.29	Sight markers 3/4" x 28" fluorescent orange, nylon		
12.30	Carbide blades (3/4" x 6")		
12.31	Rubber blades (1-1/2" x 10")		
12.32	Plow running gear adjustable height, 2-1/2" structural steel tube housing with grease fitting, 1" screw adjustment with folding crank handle, 2" structural steel tube post with 1/2" x 5-3/4" diameter steel foot with multi-bolt pattern with steel casters		
12.33	Moldboard shoes		
12.34	12 volt electric hydraulic power unit. Power unit to be mounted in tool box located on RH side of truck with steel cover.		
12.35	Controls mounted in cab.		

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Number	Description	Meet Specification?	Description/ Deviation
12.36	Two (2) PTO settings: 1- Knuckleboom (limits truck speed to 10mph while PTO is engaged) 2- Spreader/Plow mode (limits to top speed of 40mph while PTO is engaged)		
12.37	Plow shall be attached to the vehicle by way of a quick disconnect mounting system.		
12.38	SnowDogg plow lights and mounting brackets shall be wired with a quick disconnect plug and mounted on front fenders of the truck, utilizing chassis factory wiring harness and connectors.		

13. TRAINING AND DELIVERY

Item Number	Description	Meet Specification?	Description/ Deviation
13.1	Training shall be conducted by a qualified Manufacturer's Representative at purchaser's location (Knoxville, Tennessee). Training shall cover operator orientation for safety, proper operation and operator daily maintenance, as well as technical and diagnostic orientation for mechanics/technicians.		
13.2	Turn-key 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.		
13.3	<u>Delivery Location:</u> City of Knoxville Fleet Services 1400 Loraine St. Knoxville, TN 37921		
13.4	<u>Contact Information:</u> Contact Mr. Jeff Johnston, Shop Manager, to schedule delivery date and time. (865-951-3620)	NA	
13.5	The payment process will not begin until the vehicle is delivered and accepted.		
13.6	The successful bidder shall supply any operator's manuals, service manuals, parts books, wiring diagrams and applicable technical information for units purchased. CD versions are acceptable.		

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Item Number	Description	Meet Specification?	Description/ Deviation
13.7	Provide a MANDATORY hydraulic diagram and electrical diagram (excluding chassis) PER UNIT. Payment will not begin until received.		
13.8	Provide one "build sheet" per unit listing all parts used in assembling each. (If available)		
13.9	No dealer emblems, decals, or other form of advertisement or identification shall be attached to the vehicle. This includes no dealer emblems on mudflaps.		
13.10	Please state if a 12-month price lock would be honored to allow City of Knoxville to possibly purchase additional equipment.		